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Comparative Analysis of Maternal Health and Delivery Care Indicators between NHFS 1, 2, 3 and 4

By

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ABSTRACT

Comparative Analysis of Maternal Health and Delivery Care Indicators between NHFS 1, 2, 3 and 4

Background:

Health care services during pregnancy, childbirth and after delivery are important for the survival and wellbeing of both the mother and the newborn. Antenatal care (ANC) can decrease the wellbeing dangers for moms and their children by checking pregnancies and screening for intricacies. Delivery at a health facility, with skilled medical attention and hygienic conditions, reduces the risk of complications and infections during labor and delivery.

Several rounds of national health surveys have generate immense measure of information in India since 1992 which help to feature issues that need thoughtfulness which help to highlight issues that need attention to improve the usefulness of the surveys in monitoring changing trends in India's disease burden.

The utilization of maternal medicinal services is restricted in India notwithstanding a few automatic endeavors for its change since the late 1980's. The utilization of maternal human services is commonly designed on financial and social forms. In any case, there is no reasonable point of view about how financial contrasts after some time have contributed towards the utilization of maternal medicinal services in India

Objectives of the Study:

General Objective:

1. To compare Maternal Health and Delivery Care Indicators between NFHS 1, 2, 3 and 4 at National Level and chosen States level.

Specific Objectives:

1. To Assess Antenatal Care amongst pregnant women in NFHS 1,2,3 and 4 surveys at National and chosen States level

2. To Analyse the trends of Delivery Care amongst pregnant women in NFHS 1,2,3 and 4 surveys at National and chosen States level

Methodology:

This study is based on the data collected during National Family Health Surveys between time period from 1992 to 2016 where in each surveys were carried out at a different time period i.e. NFHS 1 (1992- 93), NFHS 2 (1998-99), NFHS 3 (2005-06) and NFHS 4 (2015-16). 4 types of questionnaires were used to collect data

- Household Questionnaire
- Women's Questionnaire
- Man's Questionnaire
- Biomarker Questionnaire

In this study we will be comparing the data collected through Women's Questionnaire* which is provided in user friendly formats on the government website.

*Website link: http://rchiips.org/NFHS/NFHS4/schedules/NFHS-4Womans.pdf

Hence in this study External Secondary Data was used on the Maternity and Delivery Care indicators of pregnant women and compared on national and chosen state level.

The indicators chosen are:

	Maternal and Delivery Care Indicators chosen
1	Mothers receiving Antenatal Care
2	Mothers whose last birth was protected against Neonatal Tetanus.
3	Mothers who consumed IFA (Iron Folic Acid) when they were pregnant.
4	Institutional Births.
5	Deliveries conducted by Skilled Health Professionals

The data is compared at state level within states from each zone:

Zone	State
North	Rajasthan
Central	Uttar Pradesh
East	Orissa
North-East	Assam
West	Gujarat
South	Karnataka

The analysis of the data was done by graphs using MS excel.

Results of the Study:

NFHS–4 results for 2015–16 obviously demonstrate a noteworthy change in a portion of the urgent populace and wellbeing markers since the last review in 2005– 06 (NFHS 3. The NFHS-4 provides data on the usage of safe parenthood administrations like antenatal care (ANC) delivery care to all births and the circumstance of maternal wellbeing in India and its states has enhanced notably finished the most recent decade..

For instance,

- Institutional births: Increased by 40 %age points
- Utilization of antenatal care by mothers (at least four ANC visits for their last birth) . increased by 14 %age points

This expansion is steady with the Government of India's drives of NRHM (now NHM), especially conspires like JSY and JSSK which enhanced the scope of ANC, PNC, and institutional conveyances in states in NFHS-4.

The southern states are observed to be in an ideal situation as far as all the maternal wellbeing pointers, though Northern and Eastern states shrouded in NFHS-4 are lingering behind regarding maternal wellbeing markers. Provincial urban differentials are likewise clear. Albeit maternal social insurance administrations should be reinforced in rustic territories, more open maternal human services administrations are expected to enhance the wellbeing states of mothers and their infants all through the nation.

ACKNOWLEDGEMENT

Internship is successful largely due to the effort of a number of dexterous people who have always given their valuable advices or lent a helping hand**.** I express my heartfelt appreciation to my institute **International Institute of Health Management Research, New Delhi** for providing me a platform to gain enough knowledge and skills in different aspects of hospital and health management.

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A million thanks to all my friends in IIHMR, New Delhi without their cooperation; the training would not have been successful. Also, I thank all staff members of the school and institute for being so helpful all the time and making this an unforgettable experience. At the end, I would like to thank my family for the blessings and my friends for being a constant source of inspiration to me in successful completion of my project.

Dr. Supriya Agnihotri

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ABBREVIATIONS

NFHS - National Family Health Survey

USAID- United States Agency for International Development

GOI- Government of India

IIPS- International Institute for Population Sciences

ICDS- Integrated Child Development Sciences

MOHFW- Ministry of Health and Family Welfare

ANC- Antenatal Care

SBA- Skilled Birth Attendant

IFA- Iron Folic Acid

TT- Tetanus Toxoid

JSY- Janani Suraksha Yojna

JSSK- Janani Suraksha Shishu Karyakram

NRHM- National Rural health Mission (NHM- National Healthy Mission)

CHAPTER 1: INTRODUCTION

Wellbeing data gathering is an essential piece of any wellbeing framework, however is regularly frail in low wage nations, tormented by low quality information that are insufficient for illuminating wellbeing approach.

Populace based studies are a priceless wellspring of wellbeing data. A key point of these reviews is to give astounding information to strategy advancement and program arranging, checking and assessment. Populace based studies have been utilized widely to accumulate data on richness, mortality, family arranging, maternal and kid wellbeing, and some different parts of wellbeing, nourishment and human services in India.

In this report, we evaluate National Family Health studies directed in India since 1992 that were intended to give data on wellbeing pointers at subnational levels.

The National Family Health Survey (NFHS) is what might as well be called statistic and wellbeing reviews done in numerous nations around the globe. It is a huge scale study led in a delegate test of family units all through India. The study gives state and national data to India on different parameters like ripeness, newborn child and tyke mortality, the act of family arranging, maternal and kid wellbeing, regenerative wellbeing, sustenance, pallor, use and nature of wellbeing and family arranging administrations. The initial three rounds of the NFHS were intended to give state level information, yet the fourth round i.e. NFHS-4, with considerably bigger example measure, created evaluations of most markers for each of the 640 areas in India.

This Survey has now begun giving key data on a few new points, for example, HIV/AIDS-related conduct, states of mind toward family life instruction for young ladies and young men, utilization of the Integrated Child Development Services (ICDS) program, men's inclusion in maternal care, and medical coverage

Each progressive round of the NFHS has two particular objectives:

a) To give basic information on wellbeing and family welfare required by the Ministry of Health and Family Welfare (MOHFW) and different organizations for approach and program purposes

b) To give data on essential rising wellbeing and family welfare issues.

National Family Health Survey (NFHS) is led under the stewardship of the Ministry of Health and Family Welfare (MOHFW), Government of India (GOI)

The Ministry of Health and Family Welfare (MOHFW), Government of India (GOI) assigned the International Institute for Population Sciences (IIPS) Mumbai as the nodal office in charge of giving coordination and specialized direction to the study. IIPS worked together with various Field Organizations (FO) for study usage. Each Field Organization was in charge of directing review exercises in at least one states secured by the NFHS.

Technical assistance for the NFHS was provided mainly by ORC Macro (USA) and other organizations on specific issues. Assistance for HIV is provided by NACO and NARI.

The National Health Family Survey is funded by:

a) USAID, DFID, The Bill and Melinda Gates Foundation

b) UNICEF and UNFPA

c) MOHFW and GOI

NFHS-1: (1992-1993)

The first National Family Health Survey (NFHS-1) was an important component of the project to strengthen the survey research capabilities of the Population research Centres (PRCs) in India, launched by the Ministry of Health and Family Welfare (MOHFW), Government of India, New Delhi, in 1991. The MOHFW designated the International Institute for Population Sciences (IIPS), Mumbai, as the nodal agency for providing co-ordination and technical guidance for NFHS-1. The data collection for the NFHS-1 in each state was undertaken by the field organizations, selected for this purpose, in collaboration with the PRCs of the respective state. The East-West Center, Honolulu, Hawaii, USA and Macro International, Calverton, Maryland, USA provided technical assistance for all of the survey operations. Funding for the NFHS-1 was provided by the United States Agency for International Development (USAID), New Delhi. UNICEF and Plan International provided the weighing scales for the survey.

Interviews were conducted with a nationally representative sample of 88,562 households and 89,777 ever-married women in the age group 13-49, from 24 states and the then National Capital Territory of Delhi (which later attained statehood) using uniform questionnaire, sample design and field procedures. The main objective of the survey was

to collect reliable and up-to-date information on fertility, family planning, mortality, and maternal and child health. Data collection was carried out in three phases from April 1992 to September 1993. The NFHS-1 was a major landmark in the development in the demographic database for India.

NFHS 2: (1998-1999)

The second National Family Health Survey (NFHS-2), conducted in 1998-99, is another important step to strengthen the database further for implementation of the Reproductive and Child Health approach adopted by India after the International Conference on Population and Development

Responsibility for data collection was entrusted to 13 reputed organizations in India, including some Population Research Centre's. As in the earlier survey, the principal objective of NFHS-2 is to provide state and national estimates of fertility, the practice of family planning, infant and child mortality, maternal and child health and the utilization of health services provided to mothers and children. In addition, the survey includes information on the quality of health and family welfare services and provides indicators of the status of women, women's reproductive health, and domestic violence.

Another feature of NFHS-2 is measurement of the nutritional status of women. Height and weight measurements, which were available only for young children in the earlier survey, were extended to cover all eligible women in NFHS-2. In addition, ever-married women and their

children below age three had their blood tested for the level of hemoglobin, using the Hemo-Cue instrument.

The survey covers a representative sample of about 91,000 ever-married women age 15-49 from 26 states in India who were covered in two phases, the first starting in November 1998 and the second in March 1999. The survey provides state-level estimates of demographic and health parameters as well as data on various socioeconomic and programmatic dimensions, which are critical for bringing about the desired change in demographic and health parameters. One important feature of NFHS-2 is the data on the nutritional status of women and children collected by carrying out blood tests for hemoglobin levels in addition to the measurement of their height and weight.

NFHS 3: (2005-2006)

The National Family Health Survey (NFHS-3) of 2005-2006 is the third in a series of national surveys; earlier NFHS surveys were carried out in 1992-93 (NFHS-1) and 1998-99 (NFHS-2). NFHS-3 funding was also provided by the United States Agency for International Development, the Department for International Development (United Kingdom) and the United Nations Population Fund, and the Government of India. Assistance for the HIV component of the NFHS-3 survey was provided by the National AIDS Control Organization and the National AIDS Research Institute.

In NFHS-3, 18 research organizations conducted interviews with more than 230,000 women age 15-49 and men age 15-54 throughout India. NFHS-3 also tested more than 100,000 women and men for HIV and more than 200,000 adults and young children for anemia. Fieldwork for NFHS-3 was conducted from December 2005 to August 2006.

NFHS 4: (2014-2015)

In 2014-2015, India implemented the fourth National Family Health Survey (NFHS-4). Like its predecessors, NFHS-4 was conducted under the stewardship of the Ministry of Health and Family Welfare, coordinated by the International Institute for Population Sciences, Mumbai, and implemented by a group of survey organizations and Population Research Centers, following a rigorous selection procedure. Technical assistance for NFHS-4 was again provided by ICF International, USA with the major financial support from the United States Agency for International Development and Ministry of Health and Family Welfare, Government of India.

In addition to the 29 states, NFHS-4 included all six union territories for the first time and provided estimates of most indicators at the district level for all 640 districts in the country as per the 2011 census.

NFHS-4 sample size is expected to be approximately 568,200 households, up from about 109,000 households in NFHS-3. This yielded a total sample of 625,014 women and 93,065 men eligible for the interview. In this households information on 265,653 children below age 5 was collected in the survey using Computer Assisted Personal Interviewing (CAPI) on mini-notebook computers.

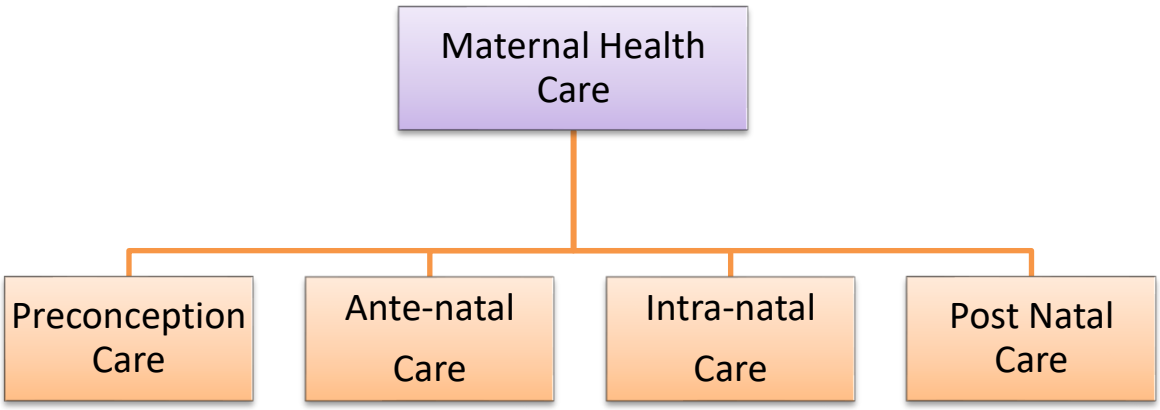
NFHS-4 provided updates and evidence of trends in key population, health and nutrition indicators, including HIV prevalence. Moreover, the survey covered a range of health-related issues, including fertility, infant and child mortality, maternal and child health, perinatal mortality, adolescent reproductive health, high-risk sexual behaviour, safe injections, tuberculosis, and malaria, non-communicable diseases, domestic violence, HIV knowledge, and attitudes toward people living with HIV. The information enabled the GOI to provide national and international agencies to monitor and evaluate policies and programs related to population, health, nutrition, and HIV/AIDS.

MATERNAL HEALTH

Pregnant ladies in the childbearing time frame (15-49 years) constitute around 25% of the populace. Youngsters then again constitute around 40% to 45% of the populace in creating nations. This gathering is portrayed by relative high mortality and grimness rates.

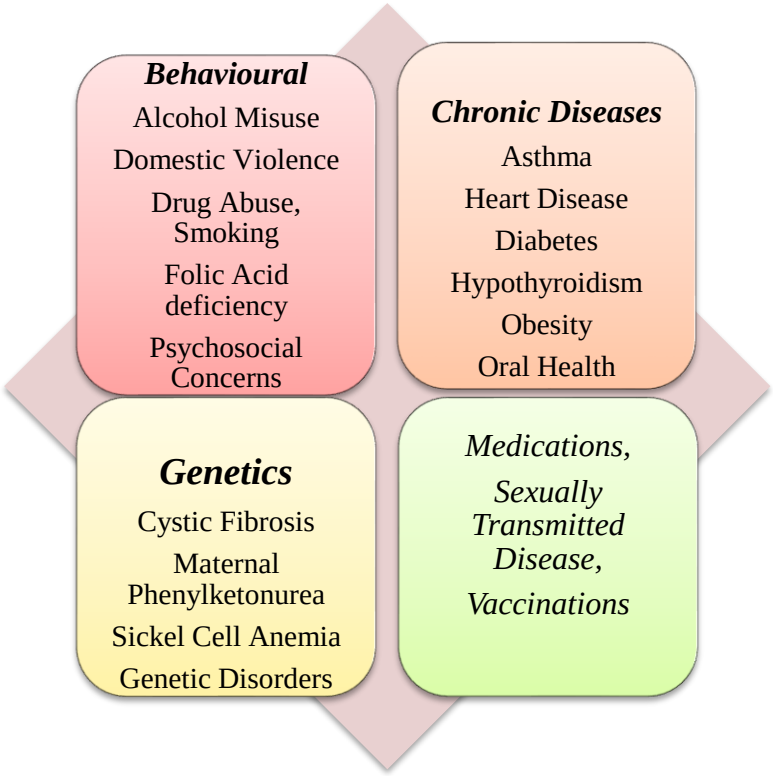
99% of every single maternal passing happen in creating nations. Maternal mortality is higher in ladies living in country territories and among poorer networks. Youthful teenagers confront a higher danger of entanglements and demise because of pregnancy than other ladies. In the MDGs fifth suggestion of them was (Improve maternal wellbeing)

In the vicinity of 1990 and 2015, maternal mortality overall dropped by around 44%. In the vicinity of 2016 and 2030, as a component of the Sustainable Development Goals, the objective is to diminish the worldwide maternal mortality proportion to under 70 for every 100 000 live births. The maternal mortality proportion in creating nations in 2015 is 239 for each 100 000 live births versus 12 for every 100 000 live births in created nations.



PRE-CONCEPTION CARE:

Is defined as a set of interventions that aim to identify and modify biomedical, behavioral and social risks to the woman's health or pregnancy outcome through prevention and management. Certain steps should be taken before conception or early in pregnancy to maximize health outcomes.



ANTENATAL CARE:

The general objective of antenatal (prenatal) care is to prepare the mother both physically and psychologically to give birth to a healthy new born (favourable outcome of pregnancy) and to be able to care for it"

The four-visit ANC model outlined in WHO clinical guidelines:

First visit: 8-12 Weeks

- Confirm pregnancy and EDD, classify women for basic ANC (four visits) or more specialized care.
- Screen, treat and give preventive measures. Develop a birth and emergency plan.
- Advice and counsel.

Second visit: 24-26 weeks

- Assess maternal and foetal well-being.
- Exclude PIH and anemia.
- Give preventive measures.

- Review and modify birth and emergency plan.
- Advice and counsel

Third visit: 32 weeks

- Assess maternal and foetal well-being.
- Exclude PIH, anemia, multiple pregnancies.
- Give preventive measures.
- Review and modify birth and emergency plan.
- Advice and counsel.

Fourth visit: 36-38 weeks

- Assess maternal and foetal well-being.
- Exclude PIH, anemia, multiple pregnancy, mal-presentation.
- Give preventive measures.
- Review and modify birth and emergency plan.
- Advice and counsel.

INTRA- NATAL CARE:

Normal delivery is defined as a process of delivery of a single foetus and other products of conception within 24 hours, through the normal birth canal and without complications."

Objectives of intra-natal care: safety of mother and foetus by helping the pregnant to have a normal delivery, and providing emergency services when needed, determination of place of birth, with a well-organized back up system

Some of the High Risk Deliveries are:

Table 1.1

Mother	Delivery	Foetus
Toxaemia of pregnancy	Prolonged labour	Prematurity
Diabetes mellitus	Breech presentation	LBW
Age < 20 years	Cord prolapse	Foetal distress
Age > 35 years	Multiple pregnancy	Meconium stained liquor amniotic fluid
Parity 5 +	Premature rupture of membranes	

POST NATAL CARE:

Provide postnatal care to mother in first 24 hours for every birth:

- Delay facility discharge for at least 24 hours.
- Visit women and babies with home births within the first 24 hours.

Provide every mother and baby a total of four postnatal visits on:

- First day (24 hours)
- Day 3 (48–72 hours)
- Between days 7–14
- Six weeks

Care of mother after delivery:

- Postpartum examination
- Medical care
- Follow up
- Health education

- Family planning services
- Psychological and social support

CHAPTER 3: METHODOLOGY

RESEARCH OBJECTIVES:

General Objective:

1. To compare Maternal Health and Delivery Care Indicators between NFHS 1.2.3 and 4 at National Level and chosen States level.

Specific Objective:

2. To Assess Antenatal Care amongst pregnant women in NFHS 1,2,3 and 4 surveys at National and chosen States level

3. To Analyse the trends of Delivery Care amongst pregnant women in NFHS 1,2,3 and 4 surveys at National and chosen States level

Methodology:

Data selected for the study is provided by large-scale, national, population-based household surveys on health indicators in India from 1992 to 2016 called the National Family Health Survey (NFHS)

Table 1.2

Survey and Sample Size for major health surveys in India, 1992-2016		
Survey NFHS	**Survey years**	**No. of households in the sample**
NFHS-1	1992–1993	88,562
NFHS-2	1998–1999	91,196
NFHS-3	2005–2006	1,09,041
NFHS-4	2015–2016	6,01,509

There were various types of Respondents and indicators on which the National Family Health Survey was based upon. There were some changes in the types of respondents across these surveys over time. Ever-married women were surveyed in all rounds of National Family Health Surveys. NFHS-3 and NFHS-4 also included never-married women. The ever and/or currently married women interviewed in all surveys were of reproductive age; however, the age boundaries for inclusion varied both across surveys and between different rounds of the same survey. Women up to 49 years of age were selected as respondents in all rounds of NFHS; the lower age limit for NFHS-1 was 13 years, which was raised to 15 years during subsequent rounds.

Table 1.3

Survey	**Women**	
	Respondent	**Key Indicators**
NFHS-1	Ever Married Women 13-49 years of age	Birth history, Maternal and Child Health, Family planning and fertility preferences, Birth History, Child Mortality, Women and Husband's background characteristics, Women's Employment status

NFHS-2	Ever Married Women 15-49 years of age	Birth history, Maternal and Child Health, Family planning and fertility preferences, Birth History, Women's autonomy and Domestic Violence, Quality of health, STI's and HIV/AIDS
NFHS-3	Ever Married Women 15-49 years of age Never Married Women 15-49 years of age	Birth history, Maternal and Child Health, Family planning and maternity preferences, Birth History, Child Mortality, Women and Husband's background characteristics, Women's Employment status, Women's autonomy and Domestic Violence, Quality of health, STI's and HIV/AIDS, NCD's and behavioural risk factors, Use of ICD's, Marital and Sexual relationship and living arrangements
NFHS-4	Ever Married Women 15-49 years of age Never Married Women 15-49 years of age	Birth history, Maternal and Child Health, Family planning and maternity preferences, Birth History, Child Mortality, Women and Husband's background characteristics, Women's Employment status, Women's autonomy and Domestic Violence, Quality of health, STI's and HIV/AIDS, NCD's and behavioural risk factors, Use of ICD's

From 246 to 868 questions from NFHS 1 to 4, more than 90.5% of questions were about maternal and child health and reproductive health. Questions on antenatal care, delivery and postnatal care, birth history and family planning were included in all surveys with the exception of postnatal care in NFHS-1

The Reports compiled by the NFHS-1, 2, 3 and 4 surveys is available of the public domain/ government websites. Hence the data collected is an External Secondary data

In the present study we have included data on Maternal Health Indicators from all the NFHS surveys till date i.e. NFHS-1 (1992-93), NFHS-2 (1998-99), NFHS-3 (2005-06) and NFHS- 4 (2015-16) at National level and chosen state level.

The states chosen for data analysis are:

1. Uttar Pradesh
2. Rajasthan
3. Gujarat
4. Karnataka
5. Orissa
6. Assam

The Maternity Health and Delivery Care Indicators selected for the study are:

1. Registered Pregnancies for which the mother received Mother and Child Protection Card (MCP)
2. Mothers receiving Antenatal Care (ANC)
3. Mothers whose last birth was protected against Neonatal Tetanus.
4. Mothers who consumed IFA (Iron Folic Acid) for 100 days or more when they were pregnant.
5. Institutional Births.
6. Deliveries conducted by Skilled Health Professionals.

Chapter 4 : Brief Introduction about the indicators:

1. Registered Pregnancies for which the mother received Mother and Child Protection Card (MCP):

   Pregnancy enlistment is critical for enhancing assessments of maternal and perinatal mortality since results can be purposely taken after. Pregnancy enlistment and checking has turned into a critical part of statistic information gathering. Observing pregnancy helps in the early enrollment of births however above all in catching stillbirths, premature births and neonatal passings. Pregnancy checking begins with the enrollment of the pregnancy. At the point when these pregnancies are enrolled, information section happens and arrangements of every single pregnant lady by bunches are delivered.

2. Mothers receiving Antenatal Care (ANC):

   Antenatal care (ANC) alludes to pregnancy-related human services, which is normally given by a specialist, an ANM, or another wellbeing proficient. In a perfect world, antenatal care should screen a pregnancy for indications of intricacies, distinguish and treat prior and simultaneous issues of pregnancy, and give exhortation and advising on preventive care, slim down amid pregnancy, conveyance mind, postnatal care, and related issues. In India, the Reproductive and Child Health Program goes for giving no less than three antenatal registration which ought to incorporate a weight and circulatory strain check, stomach examination, inoculation against lockjaw, press and folic corrosive prophylaxis, and paleness administration (Ministry of Health and Family Welfare, 2005). Ladies who got antenatal think were gotten some information about the

care supplier, the planning of the primary antenatal care visit, the aggregate number of visits, the strategies led as a component of their antenatal care, and the exhortation given to them.

3. Mothers whose last birth was protected against Neonatal Tetanus:

Neonatal tetanus is caused by disease of the new conceived (normally at the umbilical stump) with lockjaw living beings. Neonatal lockjaw is most normal when the conveyance happens in an unhygienic situation and non-disinfected instruments are utilized for cutting the umbilical string. Lockjaw commonly creates amid the first or second seven day stretch of life and is lethal in 70 to 90 percent of cases (Foster, 1984) Neonatal lockjaw is a preventable illness, nonetheless. Two measurements of lockjaw toxoid antibody given to the pregnant lady one month separated amid early pregnancy are almost 100 percent compelling in avoiding lockjaw among infants (and among moms).

As per the National Immunization Schedule, a pregnant lady ought to get two measurements of lockjaw toxoid infusion, the primary when she is four months pregnant and the second when she is 20 weeks pregnant (Central Bureau of Health Intelligence, 1991)

4. Mothers who consumed IFA (Iron Folic Acid) when they were pregnant:

Essential components of antenatal care incorporate the arrangement of iron supplementation for pregnant moms, two measurements of lockjaw toxoid immunization. Press inadequacy sickliness is the most widely recognized small scale supplement lack on the planet. It is a noteworthy danger to safe parenthood and to the wellbeing and survival of newborn children since it adds to low birth weight, brought

obstruction down to disease, weakened intellectual advancement, and diminished work limit.

5. Institutional Births:

Institutional conveyances are conveyances that happen in a wellbeing office. It is a critical factor to decrease maternal and neonatal mortality. Conveyances under sterile conditions is ok for the mother and in addition the new conceived.

6. Deliveries conducted by Skilled Health Professionals:

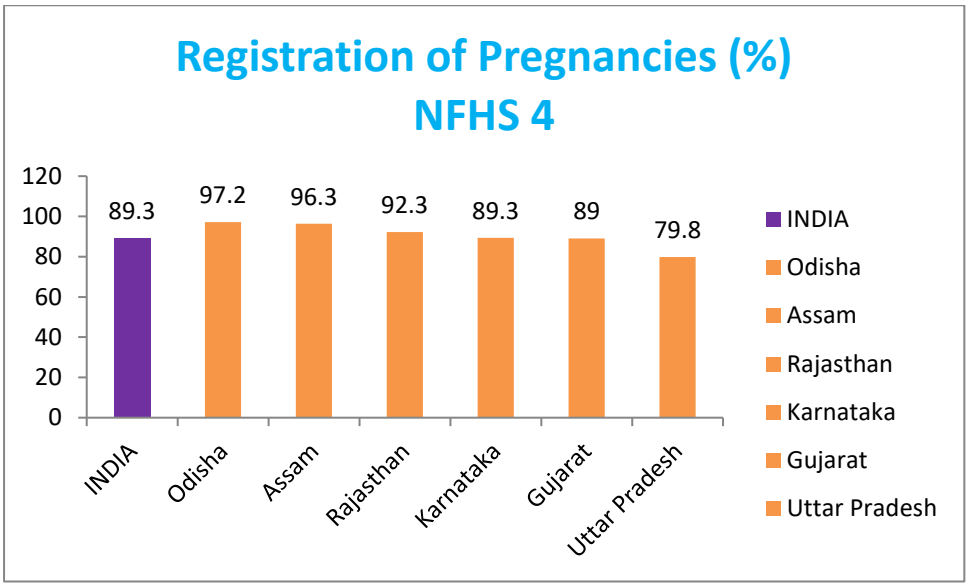
Births conveyed with the help of specialists, helper nurture maternity specialists, medical attendants, maternity specialists, and woman wellbeing guests. Help amid labor can impact the birth result and the strength of the mother and the infant. A gifted chaperon can oversee difficulties of pregnancy and conveyance or allude the mother or potentially the infant to the following level of care.

CHAPTER 5 - RESULT

1. Registered Pregnancies for which the mother received Mother and Child Protection Card (MCP):

Percentage of women who had a live birth in the five years preceding the survey who registered the pregnancy for the most recent live birth; and among registered pregnancies, the percentage by the timing of the registration and the percentage who received a Mother and Child Protection

Card (MCP Card) was 89.3% at National level with 97.2% being the highest for Odisha and 79.8% being the lowest for Uttar Pradesh amongst the chosen states. (NFHS-4)



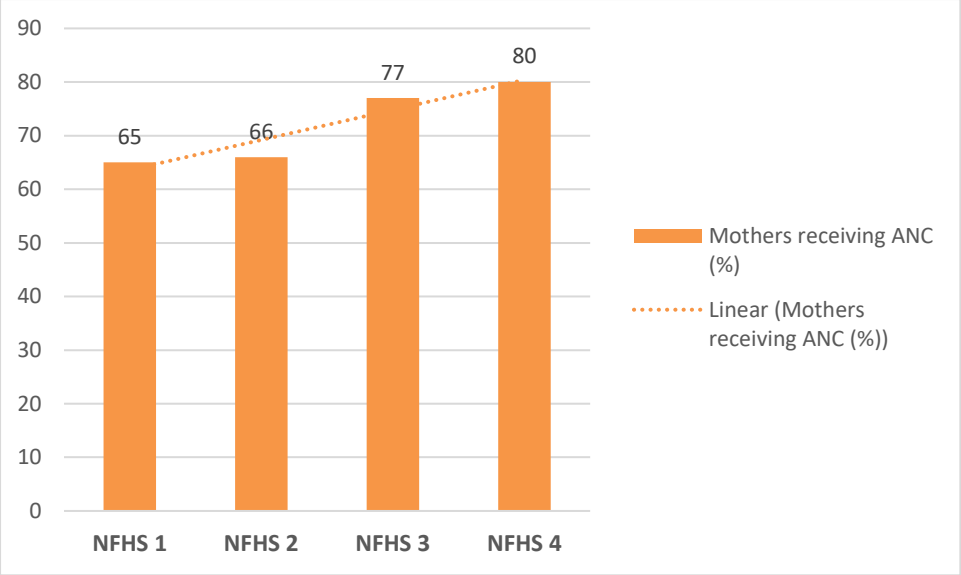
Graph 1.1

No data was available for NFHS 3, 2 and 1*

But looking at the graph we can interpret that most of the pregnant women are aware with the importance of registration of the pregnancy for early registration of births of the new born.

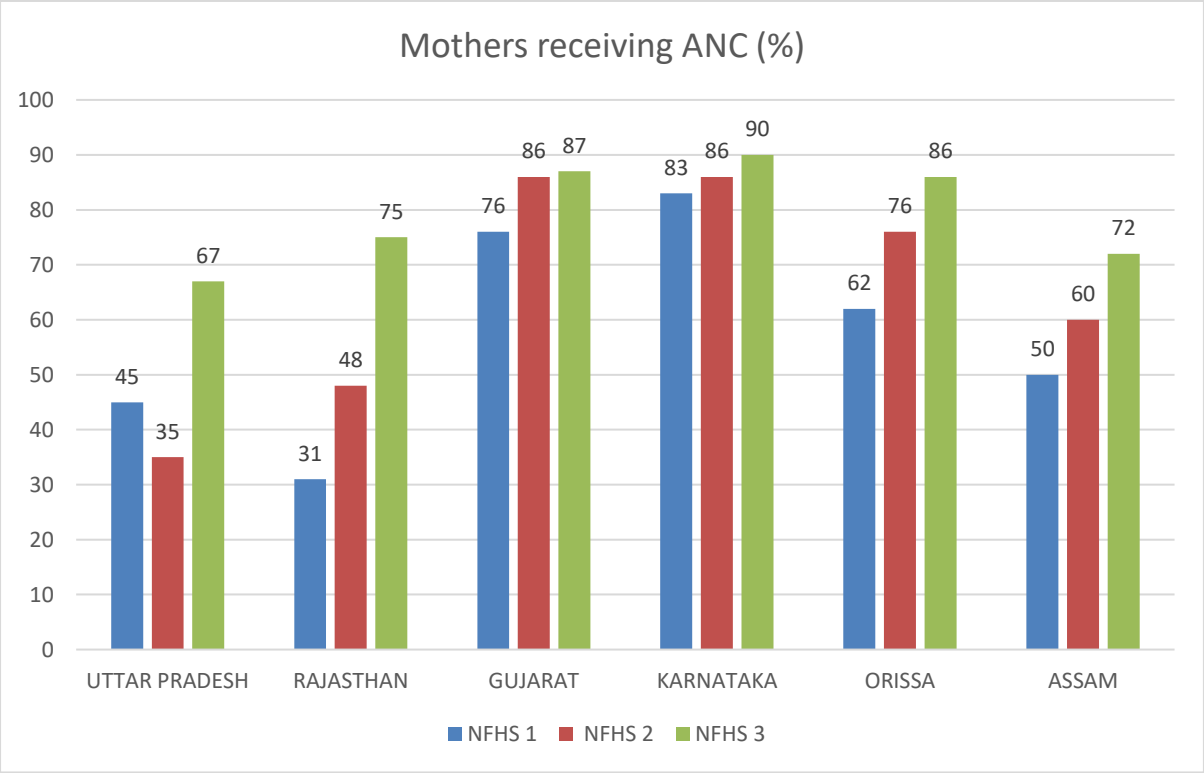
2. Mothers receiving Antenatal Care:

Utilization of antenatal care services for the most recent birth among ever-married women increased substantially over time from 65 % in NFHS-1 to 80 % in NFHS-4



Graph 2.1

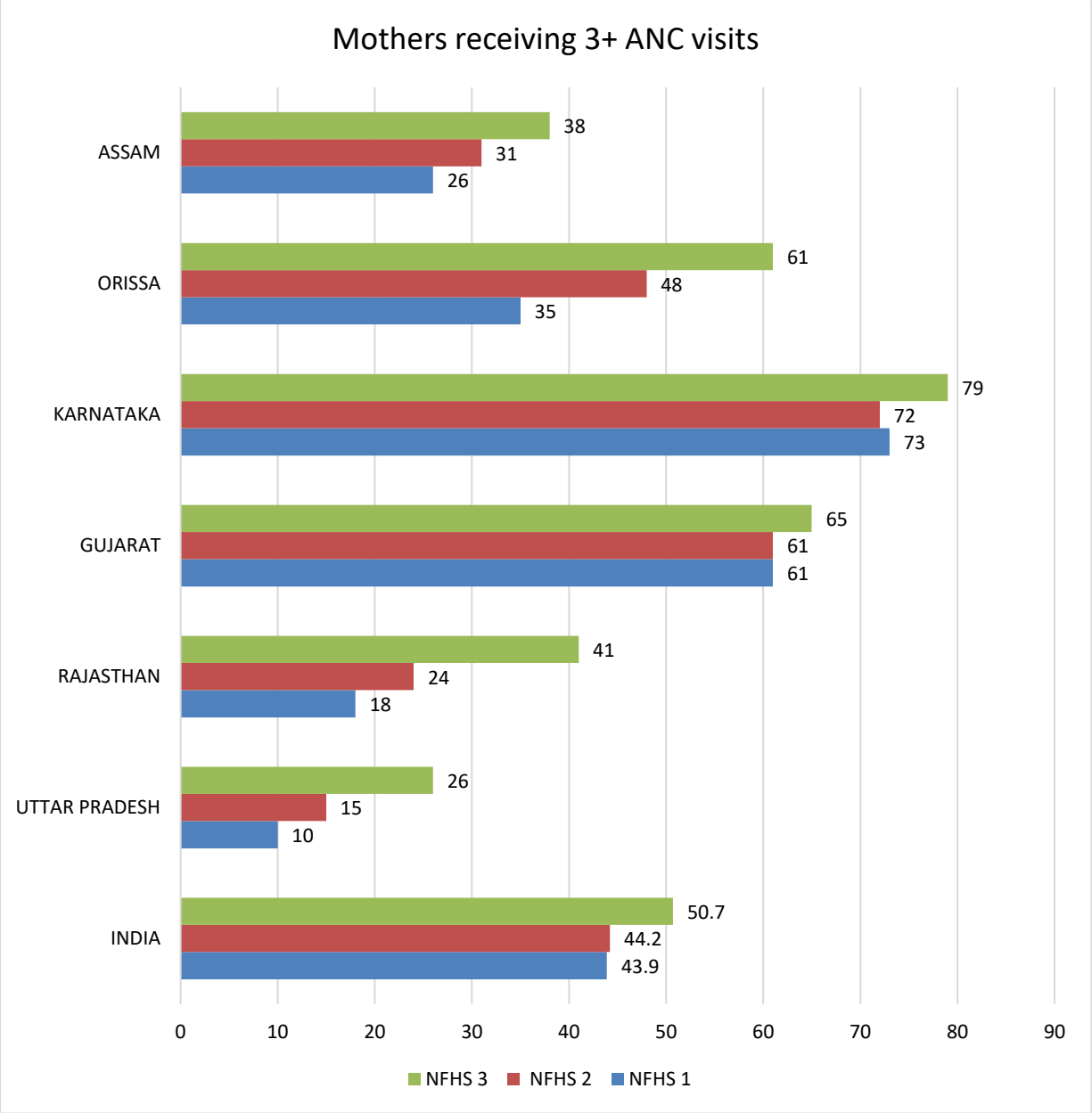
Looking at the trends at state level:



Graph 2.2

According to NFHS -3, among women who gave birth in the five years preceding the survey, 75% received antenatal care from a health professional. Despite substantial coverage of ANC for mothers from 31% in NFHS 1 to 75% in NFHS 3, only 4 in 10 women in Rajasthan received atleast 3 ANC visits for their last birth in past 5 years.
Similarly in UP, 67% of women received ANC coverage that is only one in four women (merely 27%) in Uttar Pradesh received at least three antenatal care visits for their last birth in the past five years.

Maximum increase in ANC coverage is seen in Rajasthan. There has been a gradual but good increase in coverage for Karnataka (from 83% in NFHS 1 to 90% in NFHS 3) and Gujarat (From 76% in NFHS 1 to 87 % in NFHS 3)



Graph 2.3

*Data unavailable for NFHS 4

Despite improvements in the coverage of antenatal care for pregnant mothers,

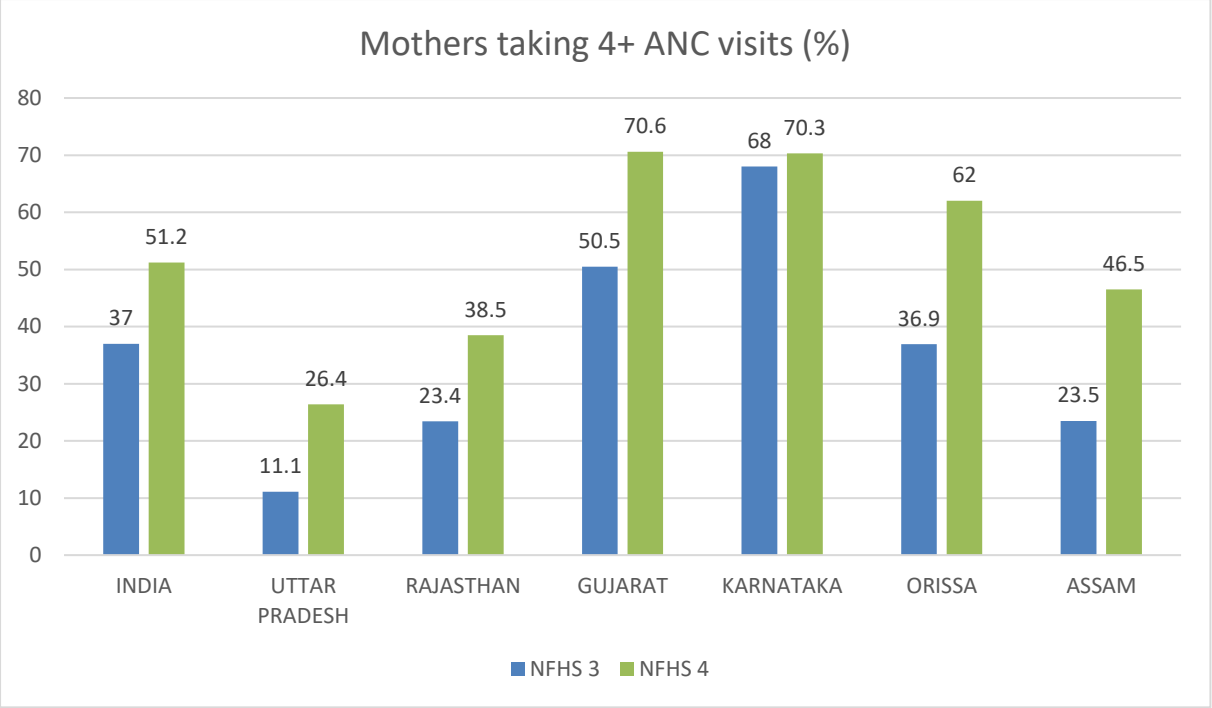
- ***Only 4 in 10 women in Rajasthan received at least three antenatal care visits for their last birth in the past five years***

- ***Only one in four women in UP and Assam, received at least three antenatal care visits for their last birth in the past five years.***
- ***Almost two-fifths of pregnant women in Orissa did not receive three or more antenatal care visits for their last birth.***
- ***Gujarat continues to lag behind the southern and other western states in the proportion of women who receive at least three antenatal care visits during pregnancy.***
- ***Karnataka has the highest coverage amongst all i.e 79% in NFHS 3***

The utilization of antenatal care services differs greatly by state. Karnatak and Gujarat, Orissa- perform well on indicators, UP, Rajasthan - low on ANC indicators. 80% Mothers of Karnataka state had 3+ visits with UP ranking lowest with just 27% mothers 3+ ANC visits

Number and Timing of Antenatal Care Visits:

The World Health Organization recommends that all pregnant women should have at least four antenatal care (ANC) assessments by or under the supervision of a skilled attendant (World Health Organization, 2006).



Graph 2.4

*Data unavailable for NFHS 1 and NFHS 2

At National level, 51 percent of pregnant women had four or more ANC visits, an increase from 37 percent in NFHS 3.

Similarly a good increase in women going for 4+ ANC visits is in Orissa (from 23% in NFHS 3 to 47% in NFHS 4) and Orissa (from 37% in NFHS 3 to 62% in NFHS 4)

Gujarat and Karnataka shows a good coverage of women making 4+ ANC visits almost 70-71%, much above the national average of 51%

It was analyzed that the antenatal coverage depends on the following factors:

- Older women are much less likely than younger women to have received antenatal care
- Antenatal care declines sharply with birth order

- Antenatal care increases sharply with education
- It is more common amongst mothers residing in urban areas than in rural areas
- Antenatal care increases sharply with the household's wealth index

In summary, antenatal care utilization in India varies greatly by state. For some indicators the variation ranges from only marginal coverage to almost complete coverage. For example, the percentage of women who had three or more antenatal care visits ranges from only 26% in UP to 83% in Orissa.

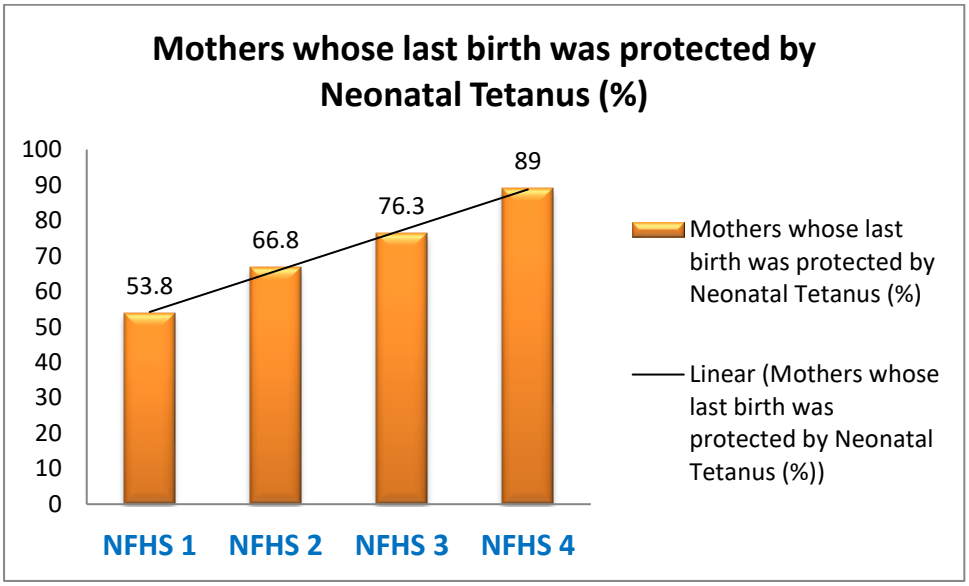
In general, the southern and western states and some of the northern states perform uniformly well. Rajasthan, Uttar Pradesh are large states that perform uniformly poorly. The performance of states in the Northeast Region is mixed.

3. Mothers whose last birth was protected against Neonatal Tetanus.

Tetanus is an important cause of death of neonates in India. In NFHS, each mother who had a live birth during the four years prior to the survey was asked whether she was given an injection in the arm to prevent her and the baby from getting tetanus and if so, then how many times did she receive the injection.

In NFHS1, Fifty-four percent of births were to mothers who had received two or more doses of tetanus toxoid vaccine which was significantly higher in urban areas as compared to rural areas.

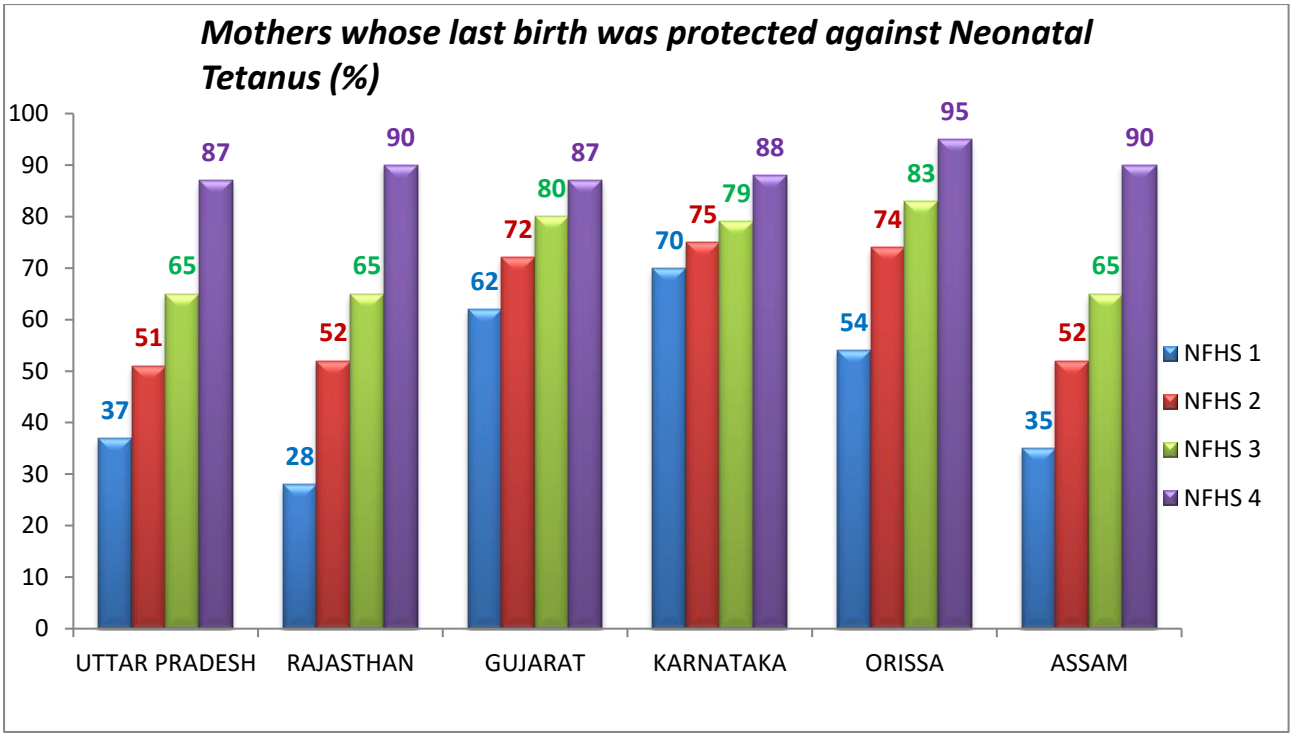
The proportion of mothers who received two or more tetanus toxoid injections during their pregnancies rose from 55 % to 67 %, 76% and 89% between NFHS-1 to NFHS 2, NFHS 3 and NFHS 4 respectively



Graph 3.1

Looking at the trend at state level, Rajasthan showed a very significant improvement in Tetanus toxoid coverage from 28% in NFHS 1 to 90 % NFHS 4 followed by Assam from 35% in NFHS 1 to 90 % in NFHS 4 and Uttar Pradesh with toxoid coverage of 37 in NFHS 1 pushing up to 87% in NFHS 4.

The trend shows increase in toxoid coverage from NFHS 1 to NFHS 4 in every state.



Graph 3.2

Overall there has been a good toxoid coverage amongst states as per NFHS 4 data.

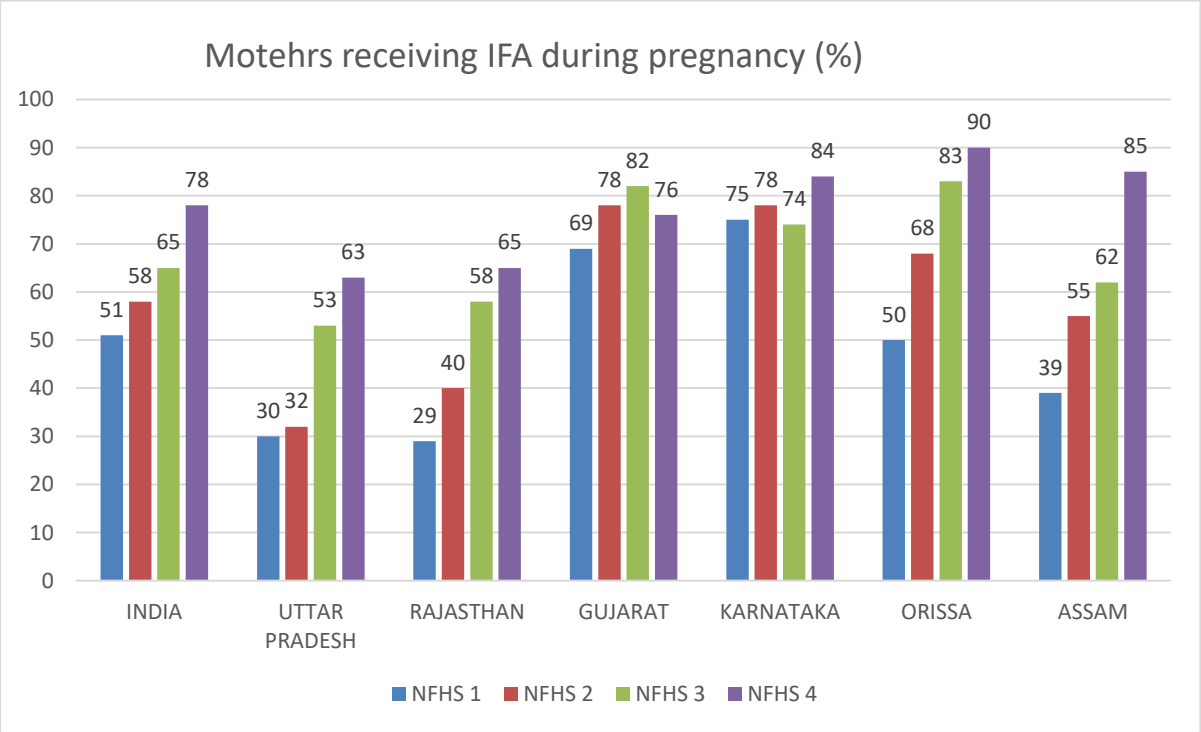
Almost all the states toxoid coverage lie close to the national toxoid coverage of 89%

Toxoid Coverage depends on various factors:

- Increases with Education Level of the Women
- Is higher in Urban areas as compared to rural areas
- Is low for older mothers or mothers of higher-order births (six or more)
- Mothers in households in the lowest wealth quintile

4. Mother's receiving Iron and Folic Acid Supplements:

Iron deficiency anemia is the most common. Micro-nutrient deficiency in the world. It is amajor threat to safe motherhood and to the health and survival of infants because it contributes to low birth weight, lowered resistance to infection, impaired cognitive development, and decreased work capacity



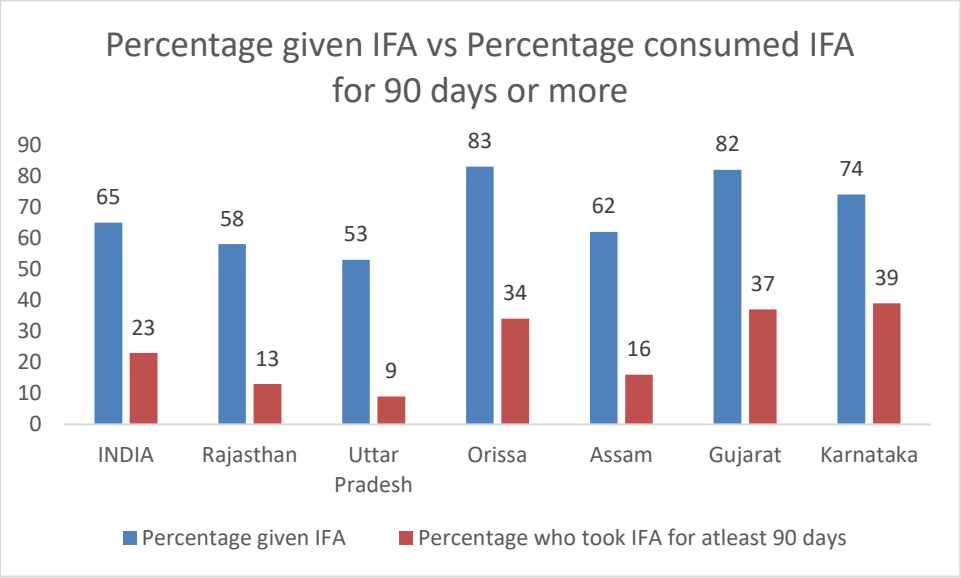
Graph 4.1

Comparing at National level, the percentage of mothers receiving IFA has gradually increased from 51% to 58%, 65% and 78% during NFHS 1, 2, 3 and 4 respectively.

At state level, Gujarat, Karnataka, Assam and Orissa have coverage higher than the national average of India which is 78% during NFHS 4.

While on the other side states like UP and Rajasthan lie below the national average. During NFHS 3, in Rajasthan, 58% of women received IFA but only 13% consumed it for 90 days or more. Similarly in UP, 53% received IFA but only 9% consumed it all.

Even coming to high coverage states like Gujarat and Orissa only 37 % and 34 % on mothers actually consumed IFA for 90 days or more.



Hence we can say that no matter how high the coverage is, but the percentage of women actually consuming the dose is half or even below the percentage receiving it

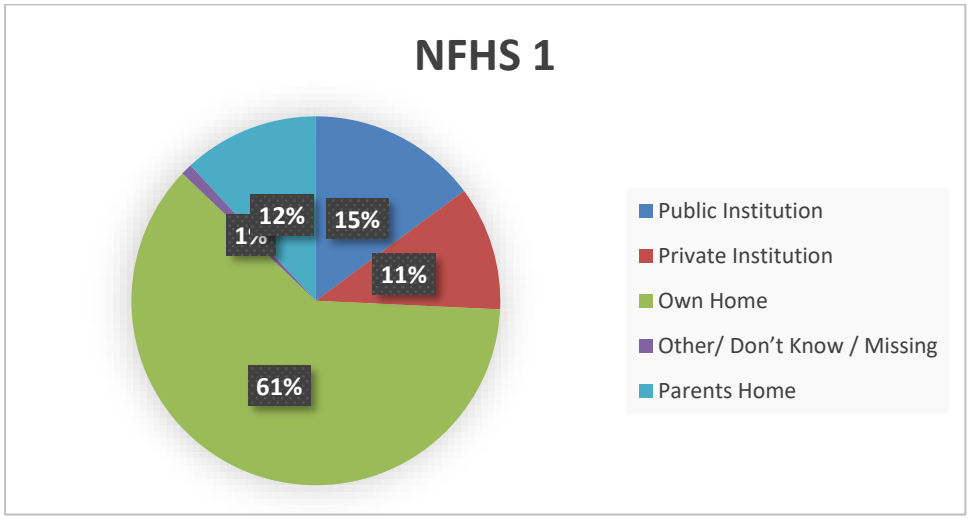
IFA coverage also depends on various factors:

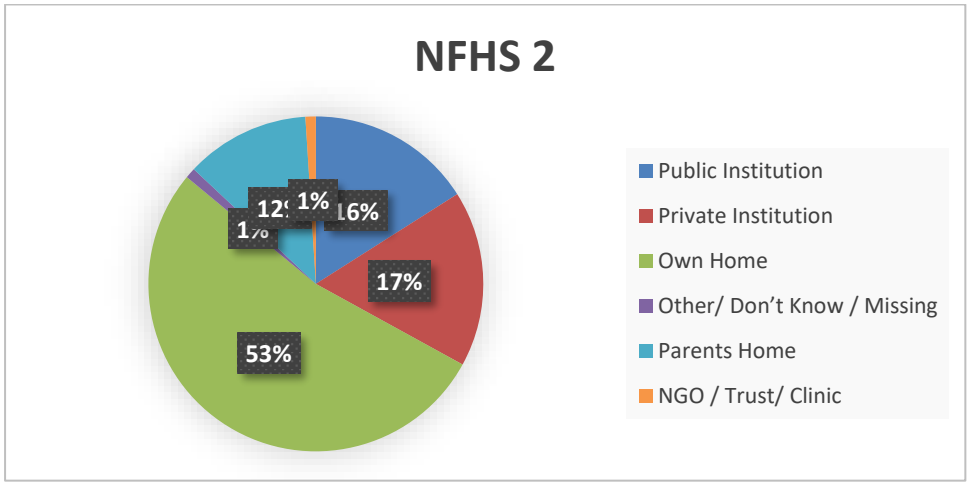
- It is well below average for older women
- It is also low in women with fourth or higher-order births,
- It reduces amongst women with no education, Muslim women, and women in households in the lowest wealth quintile.
- IFA coverage is also lower in rural areas than in urban areas.

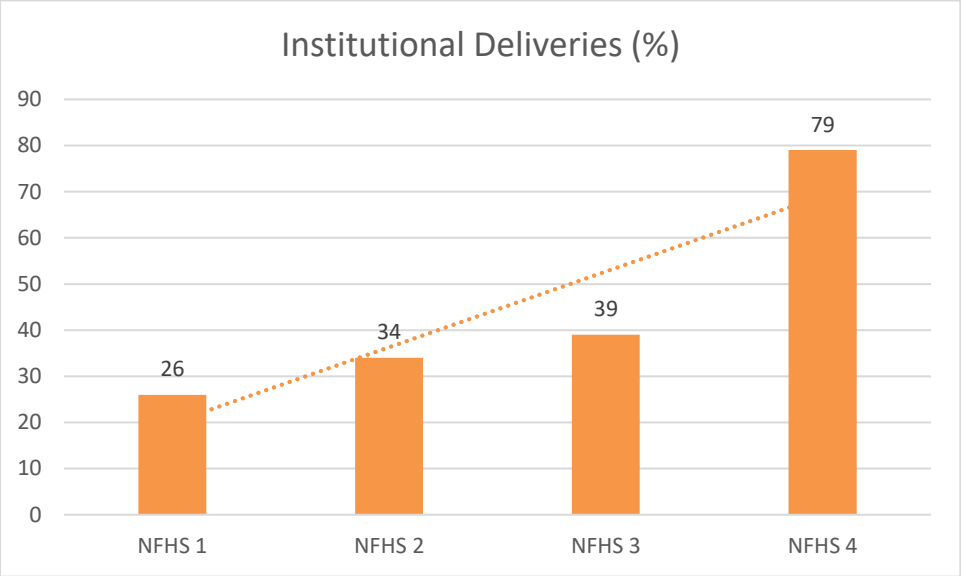
5. Institutional Deliveries:

It is important to encourage deliveries in proper hygienic conditions under the supervision of trained health professionals.

It constitutes of deliveries in Public institutions, Private institutions and NGO/ Trust or Clinic.







Graph 5.1

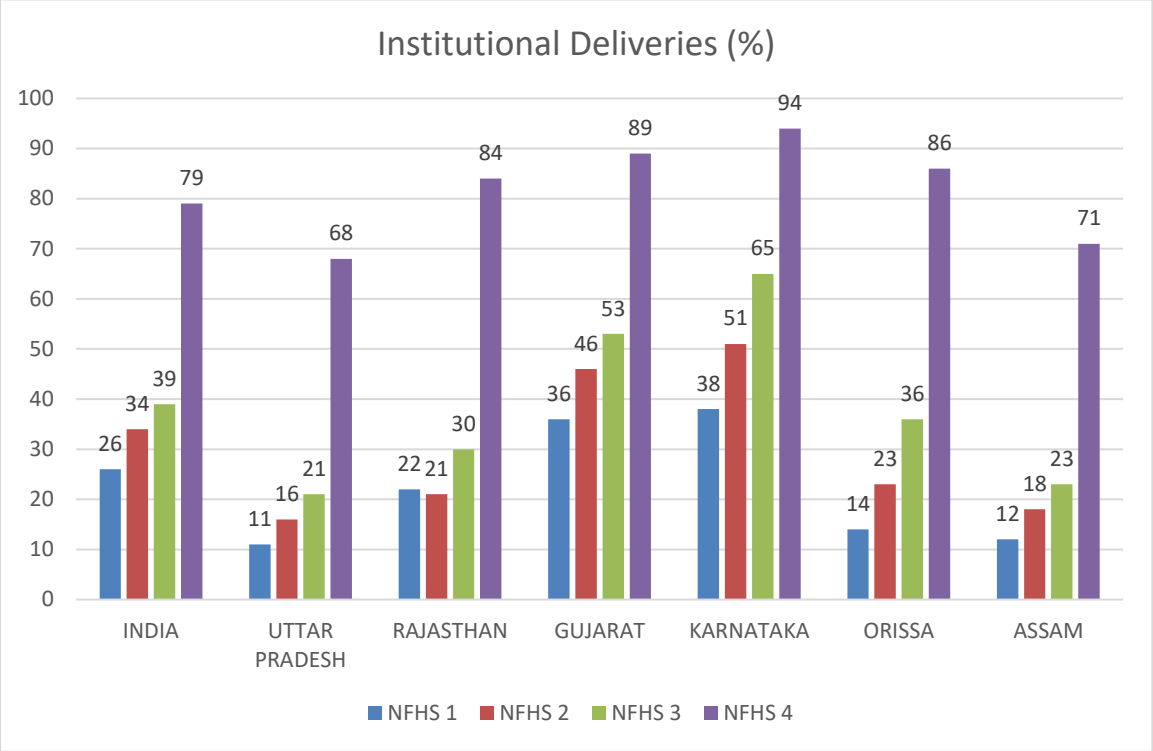
The percentage of births to ever-married women that were delivered in health facilities in the three years preceding the survey increased steadily from 26 % in NFHS-1 to 34 % in NFHS-2 and 39 % in NFHS-3. But during NFHS 4, it remarkably rose to 79%

During NFHS 1, 2 AND 3, almost less than 40 percent of births in India took place in health facilities. But during NFHS 4, after an interval period of almost 10 years, with the percentage of deliveries increasing to 79% more births are occurring in health institutions.

Wherein more than half the births used to take place in the woman's own home or parents' home during earlier phases of NFHS.

Earlier there were a substantial proportion of women and men in India are not convinced about the need to have a delivery in a health facility. It suggested the need to inform parents and families more about the benefits of delivering in a health facility and to help overcome traditional attitudes and other hurdles that discourage institutional births. As a result of which

Looking at the states,



Graph 5.2

Almost 100 % of births in Karnataka were delivered in a health facility.

Almost every state has has a percentage higher than the National average percentage of 79% except Uttar Pradesh with percentage as low as 68% as compared to 94% in Karnataka

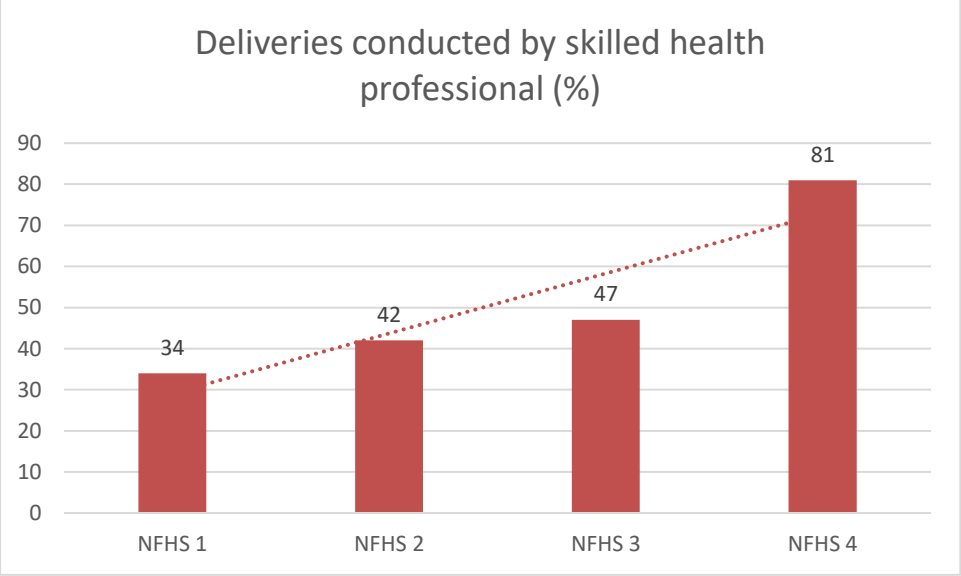
In Rajasthan, after a steady increase from 12% in NFHS 1 to 30 % in NFHS 3, the highest increase in percentage is seen directly to 84%.

In Assam and Uttar Pradesh, where the percentage was less than half the national average in NFHS 3, the percentage of deliveries in health facility has rose to almost equal to the national average in NFHS 4.

Looking at Orissa, we can see a drastic increase in percentage of deliveries occurring in health institutions (from merely 14% in NFHS 1 to 86% in NFHS 4)

6. Deliveries conducted by Skilled Health Professionals:

Obstetric care from a trained provider/ professionals during delivery is recognized as critical for the reduction of maternal and neonatal mortality. Births delivered at home are more likely than births delivered in a health facility to be assisted by a health professional.



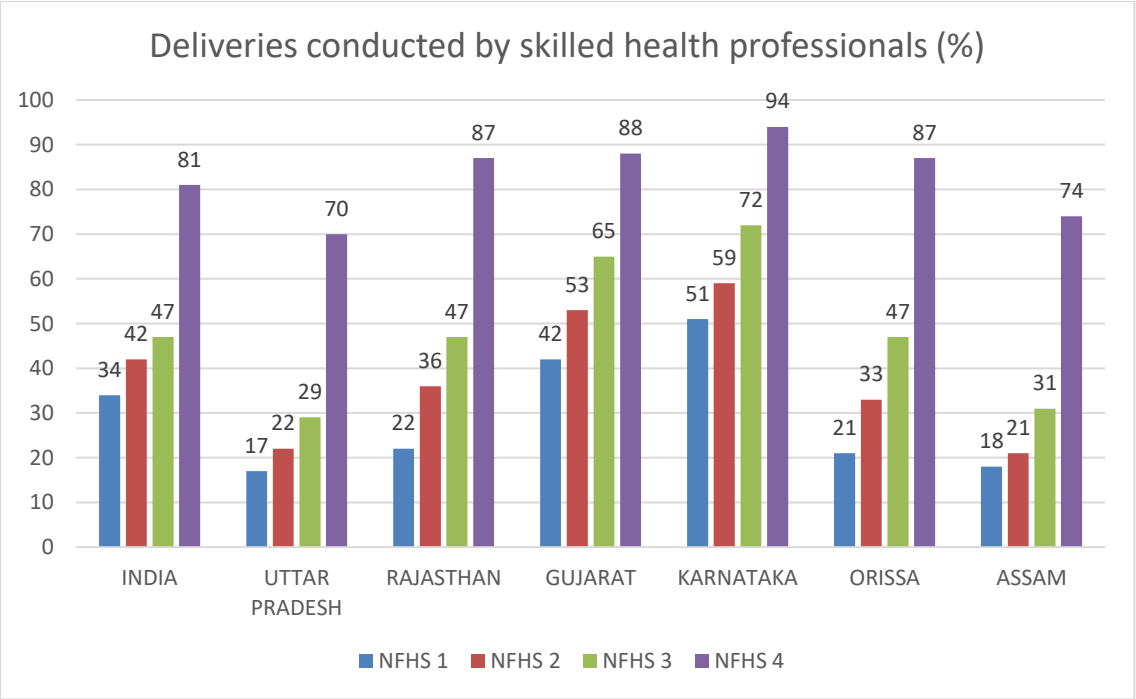
Graph 6.1

Deliveries conducted by skilled health professionals also rose to a new level from NFHS 1 to NFHS 4 i.e from 34 % in NFHS 1 to more than double i.e 84% in NFHS 4.

The rate of growth is almost similar to that of increase in percentage of institutional deliveries as both are relatable.

NHFS 4 statistics show that 8 in 10 deliveries in India is conducted by a skilled health professional

Looking at the state level,



Graph 6.2

An examination of the performance of each state on the different safe motherhood indicators shows that several states consistently perform well below the national average on each indicator

Amongst all the states, the percentage of deliveries conducted by skilled professionals have been below the national average for UP, Rajasthan, Orissa and Assam during NFHS 1, 2 and 3. While on the other hand, only Gujarat and Karnataka showed percentage above the national average

But after an interval period on 10 years between NFHS 3 and NFHS 4, almost every state shows substantial improvement by crossing the national average of 81% except Uttar Pradesh and Assam.

Institutional Deliveries depend on various factors:

- It is high for young mothers (20-34 years if age)
- Institutional deliveries among mothers who had four or more antenatal care visits are more than two and a half times as common as births to mothers who had 1-3 antenatal care visits
- Institutional births increase with pregnancy complications
- It is low for women belonging to scheduled caste, scheduled tribe, or other backward class
- It decreases as birth order.
- Increase sharply with the mother's education
- It also increases with household wealth index due to heightened awareness of the benefits of professional medical care.

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CHAPTER 6 – CONCLUSION

NFHS– 4 comes about for 2015– 16 unmistakably demonstrate a noteworthy change in a portion of the vital populace and wellbeing pointers since the last review in 2005– 06 (NFHS 3).

The NFHS-4 gives data on the use of safe parenthood administrations like antenatal care (ANC) conveyance watch over all births and the circumstance of maternal wellbeing in India and its states has enhanced extraordinarily finished the most recent decade.

For example,

- Institutional births: Increased by 40 percentage points

- Utilization of antenatal care by moms (no less than four ANC visits for their last birth) expanded by 14 percentage points

This expansion is predictable with the Government of India's drives of NRHM (now NHM), especially plots like JSY and JSSK which enhanced the scope of ANC, PNC, and institutional conveyances in states in NFHS-4.

The southern states are observed to be in an ideal situation as far as all the maternal wellbeing pointers, though Northern and Eastern states canvassed in NFHS-4 are lingering behind regarding maternal wellbeing markers. Rustic urban differentials are additionally obvious. Albeit maternal social insurance administrations should be fortified in provincial territories, more available maternal human services administrations are expected to enhance the wellbeing states of moms and their infants all through the nation.

India has gained extensive ground in the use of antenatal care, institutional conveyances yet at the same time a couple of issues should be tended to by arrangement producers and program administrators

To begin with, the present levels of a large number of the previously mentioned populace and wellbeing pointers are unfortunate and there is abundant extent of further upgrades.

Second, there stays enormous imbalance by states, districts (rustic/urban), financial gatherings (training, rank and class) and sex.

In this manner, the national wellbeing reviews loan some assistance to the administration to design systems for enhancing wellbeing circumstances in a specific state. They unite global and national offices and also trusts to control medical problems of the debilitated populace through financial arranging. The reviews establish the very framework of a nation's general wellbeing and prosperity.

The above discoveries will undoubtedly help the approach creators pay enough regard to touchy issues requesting prompt consideration with the goal that the nation additionally sets out on another excursion of being both sound and effective.

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