Summer Training

At

VANI SANSTHA, Jaipur

(April 15,2020 – July 10, 2020)

A Report on

- **Gap analysis of Maternal and Child Health indicators across 10 PHCs in Rajasthan functioning under Vani Sanstha according to Pregnancy and Child Tracking Management System in one financial year (April 1, 2019 – March 31, 2020).**
- **Comparison of all the 10 PHCs in Rajasthan functioning under Vani Sanstha based on Maternal and Child Health Indicators in the duration of one financial year (April 1, 2019 – March 31, 2020).**

By

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Ref.No. VANI/EST/1757/2020-21

24th July 2020

To whomsoever it may Concern

This is certifying that **Dr. Astha Sharma** has successfully completed her internship from **15th April 2020 to 10th July 2020** with **VANI SANSTHA**. During her internship she worked under **"Gap analysis of MCHN indicators across TEN PHCs in Rajasthan functioning under VANI SANSTHA according Progress in PCTS Software in current year (1st April 2019 to 31st March 2020)"** Project Report.

She was found to be hard working and sincere during this period.

We wish her the very best in all her future endeavors.

Dr.Sunil Sharma
Director, VANI SANSTHA

VANI SANSTHA JAIPUR

ACKNOWLEDGEMENT

The internship opportunity I had with VANI SANSTHA was a great chance for learning and professional development. Therefore, I consider myself as a very lucky individual as I was provided with an opportunity to be a part of Vani Sanstha. I am also grateful to get a chance to meet so many wonderful people and professionals who led me through this internship period.

I respect and thank Dr. Sunil Sharma, the Director of VANI SANSTHA for providing me an opportunity to do the project work and giving all support and guidance which made me complete the project duly. I am extremely thankful to him for his support and guidance, though he had busy schedule managing the corporate affairs.

I would like to express my profound gratitude to my university mentor Dr Shweta Aggarwal for the supervision and guidance at every stage of the study who took keen interest on project work and guided all along, till the completion of project work by providing all the necessary information for developing a good system.

I am thankful to My Father Dr. Vinod Sharma and Mother Mrs. Swarnlata Sharma, who helped me in successfully completing my project work.

Last but not the least, I thank God for blessing me with such wonderful people around me.

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ABBREVIATIONS

ANC	Ante natal care
ANM	Auxiliary Nurse Midwife
ASHA	Accredited Social Health Activist
GDP	Gross Domestic Product
HBPNC	Home Based Post Natal Care
Hrs.	Hours
IEC	Information Education and Communication
IFA	Iron Folic Acid
IUD	Intra Uterine Devices
MCH	Maternal and Child Health
NABARD	National Bank for Agriculture & Rural Fund
OECD	Organization for Economic Cooperation and Development
PCTS	Pregnancy, Child Tracking Software
PHC	Primary Health Centre
PNC	Post-natal care
PPP	Public Private partnership
PW	Pregnant Women
SBA	Skilled Birth Attendants
TT	Tetanus Toxoid
UNICEF	United Nations Children's Emergency Fund
UPHC	Urban Primary Health Centre

OBSERVATIONAL LEARNINGS

INTRODUCTION

VANI is a well-known organization; Vani started working in the Kotputali block of the Jaipur for the issues of gender discrimination, malnutrition among children, societal restriction on overall development of girl child and lack of education among women and girls. The organization aims to address the concerns of poor farmers in the area. Smt. Vimla Devi a rural women social worker laid the foundation of Vani. The organization was registered under the society registration act 1958 in the year 1989. The organization started working towards the education of girls and children. After gaining experience, the organization started working towards the relevant concerns of the people. In 1995 organization started working for the children of Dausa district and other rural areas. The organization started providing training to the rural workers. In 2004 VANI headquarter was shifted to Jaipur. Vani works for the concerns of children and women education and in health sectors. It provides awareness to people about rights and fights against child labor and quality Education and Health**(*Vani Sanstha* | *Home*, n.d.)**.

Vision: "Socio-economic empowerment of the marginalized sections of the society through the overall development of human capital and thrusting on the sustainability of natural resources."

Mission: VANI facilitates assists and supports marginalized communities of the society by improving their capacities and ensure their decision making in the development process that leads to building their self-determination and moving towards achieving sustainable self-reliance.

VANI is running programs for health and hygiene program, child rights program, women empowerment program, natural resource management program. Health and hygiene program is running and facilitation of Ten UPHCs/PHCs in the targeted area of Ajmer, Baran, Bharatpur and Dholpur with health services for mother and child focus.

VANI is working for Child rights support to teacher education or quality education with Collaboration of UNICEF. For the women empowerment, the organization is providing self-employment through group-based activities with linking the NABARD, Jaipur.

PPP Mode

"People working together in a strong community with a shared goal and a common purpose can make the impossible possible." as said by Mr. Tom Vilsack is something, we should all focus on. Health, as we all know has various components like physical, mental, and social wellbeing and not merely the absence of any disease or ailment. To achieve a healthy nation, not only public sector but also the cooperation of the private sector is important.

This is when PPP model (Public Private Partnership) comes into function. The OECD (Organization for Economic Cooperation and Development) defines PPP as "long term contractual arrangements between the government and a private partner whereby the latter delivers and funds public services using a capital asset, sharing the associated risks."

The Asian Development Bank is assisting Government of India since 2006. Their main aim was to develop PPPs across the country through a programmatic joint PPP initiative. India currently has an overall health expenditure of 1.28% of GDP. This expenditure is very little as compared to what is required due to enormously increasing population of India. This makes it more important to indulge private firms in public sector.***(Bank, 2010)***

The main 3 challenges faced by health sector in India include:

- Accessibility and coverage in rural areas
- Ineffective management of existing infrastructure
- Inadequate number and quality of healthcare professionals

PPP model investigates both preventive and curative health. Preventive care is mainly the main goal for public sector and curative care for private sector. They can be evaluated using 4 criteria's: effectiveness, efficiency, equity, and financial stability.

VANI Sanstha is such a pioneer organization working for social development and awareness in different areas of Rajasthan and is working towards rights-based approach on issues like child labor, women empowerment and mother and child health etc. under PPP model. This report is based on the 10 PHCs/UPHCs working under Vani Sanstha and will be graded according to various Maternal and Child health indicators from top to bottom after undergoing proper methodologies of research.

Mode of Data Collection

- Data type: Secondary data of one financial year April 2019- March 2020
- Study duration: April 15,2020 – July 10, 2020
- Location of study: 10 PHCs functioning under Vani Sanstha in Rajasthan.

DISTRICT	BLOCK	NAME OF PHC
Bharatpur	Kaman	Andhwari
Baran	Atru	Badora
Dholpur	Rajakhera	Gopalpura
Bharatpur	Bayana	Kapuramaluka
Dholpur	Bari	Nagla Beedhora
Dholpur	Rajakhera	Samona
Dholpur	Bari	UPHC Bari City
Ajmer	Kishangarh	UPHC Chainpuria
Dholpur	Urban Units	UPHC Ondela Road
Dholpur	Urban Units	UPHC Sagarpara

Tool used to collect Data:

PCTS: Pregnancy, Child Tracking & Health Services Management System is an online software used as an effective planning & management tool by Medical, Health & Family Welfare department, Govt. of Rajasthan. The system maintains an online data of more than 13000 government health institutions in the state. The secondary data of all the 10 PHCs was collected using this tool.**(*PCTS - Pregnancy, Child Tracking & Health Services Management System*, n.d.)**

LITERATURE REVIEW

For the literature review, Google Scholar was searched. Articles were confined to last 20 years referring to various studies conducted across India. Keywords used for the search were gap analysis. Mother and child health indicators, India, rural, urban, PHC, UPHC etc. The papers with highest citation were selected.

According to a gap analysis study in maternal and child health services, conducted across states in India, it focused on rural and urban disparities. There were more gaps reported in central, eastern, and northern regions of India. Area specific focus was recommended to the policy makers and programme executors***(Kumar et al., 2013)***

Another study conducted across urban regions in various parts of India suggested that illiteracy, poor socio-economic status, and mass media exposure were a few reasons for inequalities in maternal and child health of urban population in India.***(Goli et al., 2013)***

A recent study showed that despite many efforts globally and nationally, still about 50% children are deprived of full immunization across 163 districts in India. Therefore, efforts should be made to ensure universal health coverage along with full immunization in India.***(Panda et al., 2020)***

A study conducted in various districts of Jammu and Kashmir stated that various disparities are accredited to poor socio-economic status is present. A target intervention is needed to improve the conditions in those districts.***(Mohiuddin & Hashia, 2012)***

An article on community intervention on MCH indicators across Haryana suggested that there was a significant reduction in geographical, socioeconomic and gender inequalities in MCH indicators in Haryana.***(Gupta et al., 2017)***

FINDINGS

- **EVALUATION OF PHCs BASED ON FOLLOWING MCH INDICATORS:**

1. Registration of Pregnant Women
2. Institutional Deliveries
3. Infant (Fully Immunized)
4. Sterilization
5. IUD Insertion

- **SCORES ACHIEVED BY PHCs:**

NAME OF PHC	SCORE
Andhwari	82%
Badora	37%
Gopalpura	39%
Kapuramaluka	44%
Nagla Beedhora	57%
Samona	24%
UPHC Bari City	30%
UPHC Chainpuria	32%
UPHC Ondela Road	20%
UPHC Sagarpara	26%

CONCLUSIVE LEARNINGS: The PHCs can achieve the targets for given MCH indicators with the collective contribution of Medical officers, manager, nursing staff, SBA ad other members of the PHC and the native people of that PHC.

LIMITATIONS:

1. Due to COVID 19 pandemic, the workload on the staff members increased therefore field visits were not done during that period.
2. I was unable to visit the PHCs due to COVID 19 pandemic.

RECOMMENDATIONS:

Major actions for improvement that are needed to be taken among all PHCs include:

1. Use of IEC materials to educate people about importance of institutional deliveries.
2. Providing proper sanitation and cleanliness facilities at all PHCs.
3. Aware PW about the importance of 4 ANC check-ups.
4. The infrastructure of PHC Ondela Road and PHC Bari City are needed to be developed, and all healthcare facilities must be available at the PHCs.
5. All the provisions for proper TT or booster dose for PW and immunization of infants must be made.
6. Some volunteers must be chosen from the native citizens who can understand the problems faced by the common people in that area and inform the staff of PHC.
7. Proper provisions for the reporting of sterilization and IUD insertions should be made.
8. Retired ASHA and ANM workers can be asked to volunteer as there is increased workload due to COVID 19 pandemic situation.
9. HBPNC should be promoted and proper care of mothers should be taken.
10. Supply of MCH services must be optimum to meet the increasing demand in urban areas.

B. SPECIFIC PROJECT FINDINGS

Rationale: The purpose of this study was to identify the gaps in the MCH indicators, assess them and provide ways to improve those indicators and bridge those gaps. This is very important in achieving a decline in IMR and MMR rates.

The comparison of 10 PHCs according to various MCH indicators in the duration of one financial year was taken with a focus on those PHCs where the results were unsatisfactory. These results helped in providing appropriate recommendations for actions in those PHCs to achieve the desired targets in the future.

The study was further used by the organization for Program Monitoring and Evaluation.

Research question:

What recommendations can be given to improve the MCH indicators across 10 PHCs in Rajasthan functioning under Vani Sanstha?

Objectives:

1. To identify the gaps between the target vs achievement of all the MCH indicators across 10 PHCs under Vani Sanstha.
2. To rank all the PHCs according to the given MCH indicators.
3. To suggest ways of improvement in performance of PHCs according to the ranking done per indicator.

Research Methodology:

Study type: Descriptive study

Study area: 10 PHCs functioning under Vani Sanstha across Rajasthan.

DISTRICT	BLOCK	NAME OF PHC
Bharatpur	Kaman	Andhwari
Baran	Atru	Badora
Dholpur	Rajakhera	Gopalpura
Bharatpur	Bayana	Kapuramaluka
Dholpur	Bari	Nagla Beedhora
Dholpur	Rajakhera	Samona
Dholpur	Bari	UPHC Bari City
Ajmer	Kishangarh	UPHC Chainpuria
Dholpur	Urban Units	UPHC Ondela Road
Dholpur	Urban Units	UPHC Sagarpara

Duration of study: April 15,2020 – July 10, 2020

Indicators for gap analysis:

- The PHCs were analyzed on following indicators:

S. NO.	MCH INDICATORS
1	ANC registration against target
2	4 or more ANC check-up
3	% of pregnant women given 180 IFA tablets
4	PW receiving TT2 or booster
5	SBA attended Home deliveries
6	% of infants immunized by measles vaccine
7	Post-partum sterilization
8	IUD Insertion
9	Full immunization
10	Institutional deliveries

DATA COLLECTION TOOLS:

TOOLS USED:

PCTS (Pregnancy, Child Tracking & Health Services Management System) software.

Factsheets of every PHC

Telephonic interview of staff of each PHC.

MODE OF DATA COLLECTION:

Secondary data was collected from PCTS software, factsheets provided by the organization and staff interview.

DATA ANALYSIS TOOL:

MS Excel

EVALUATION RANGE: EXCELLENT > 120%.

VERY GOOD>100%

GOOD>80% TO <=100%

SATISFACTORY >60% TO <=80%

UNSATISFACTORY<60%

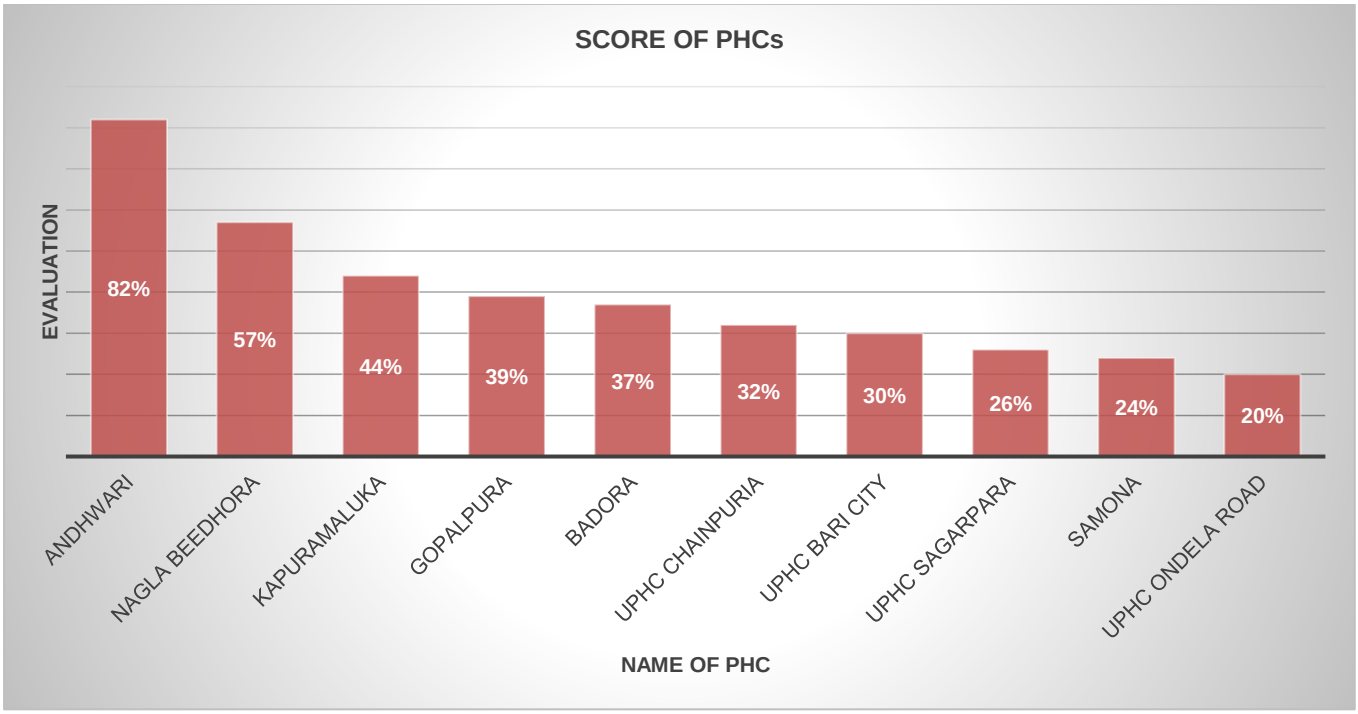
GAP ANALYSIS:

EVALUATION OF 10 PHCs: based on following main MCH indicators:

1. Registration of Pregnant Women
2. Institutional Deliveries
3. Infant (Fully Immunized)
4. Sterilization
5. IUD Insertion

NAME OF PHC	SCORE	EVALUATION
Andhwari	82%	GOOD
Badora	37%	UNSATISFACTORY
Gopalpura	39%	UNSATISFACTORY
Kapuramaluka	44%	UNSATISFACTORY
Nagla Beedhora	57%	UNSATISFACTORY
Samona	24%	UNSATISFACTORY
UPHC Bari City	30%	UNSATISFACTORY
UPHC Chainpuria	32%	UNSATISFACTORY
UPHC Ondela Road	20%	UNSATISFACTORY
UPHC Sagarpara	26%	UNSATISFACTORY

GRAPHICAL REPRESENTATION:



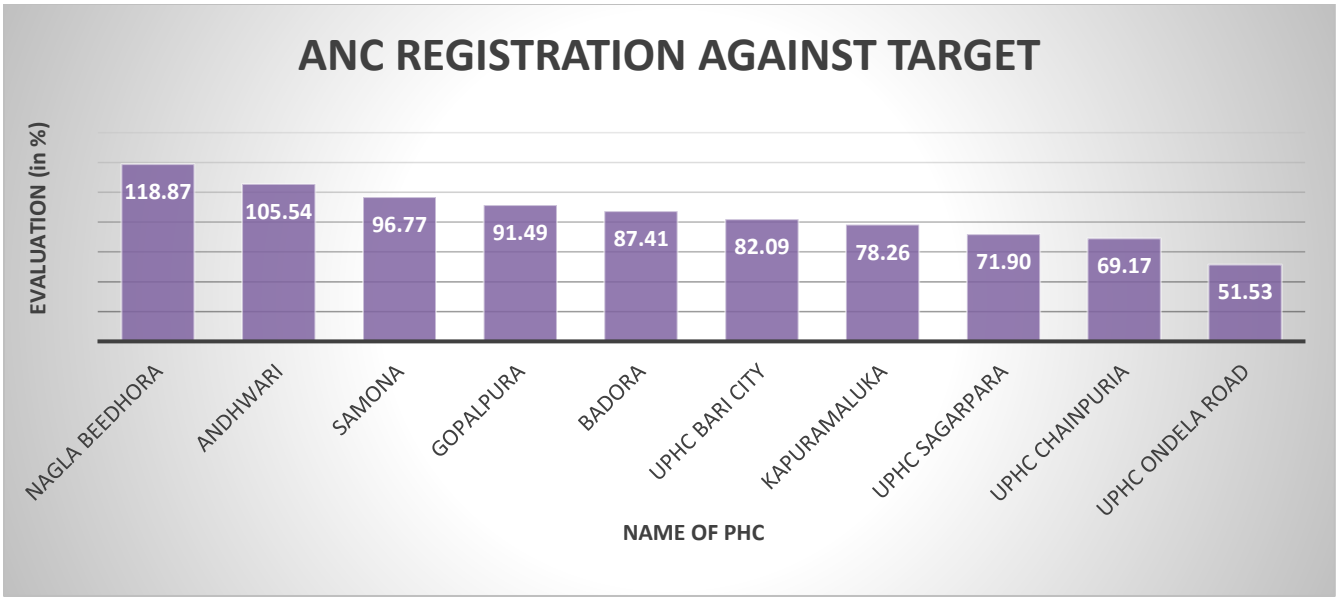
INTERPRETATION:

- This graph depicts the evaluation of the PHCs according to 5 major indicators as described earlier.
- Only, the performance of PHC Andhwari was found GOOD, rest all PHCs had UNSATISFACTORY performance.
- The unsatisfactory performance was because two major indicators: Performed sterilization and IUD insertion were not recorded into PCTS software by the staff of PHCs.

RANKING OF ALL THE PHCs ACCORDING TO 10 MAJOR MCH INDICATORS:

1. **ANC REGISTRATION AGAINST TARGET:** Antenatal care is provided to all the pregnant ladies and adolescent girls by skilled healthcare professionals for ensuring proper and healthy conditions for baby and mother during pregnancy.

GRAPHICAL PREPRESENTATION:



INTERPRETATION:

The above graph depicts ANC registration against target. The best performing PHCs are:

- PHC Nagla Beedhora
- PHC Andhwari
- PHC Samona

Conditions in UPHC Chainpuriya and UPHC Ondela Road are not as per expectations and urgent improvement is needed.

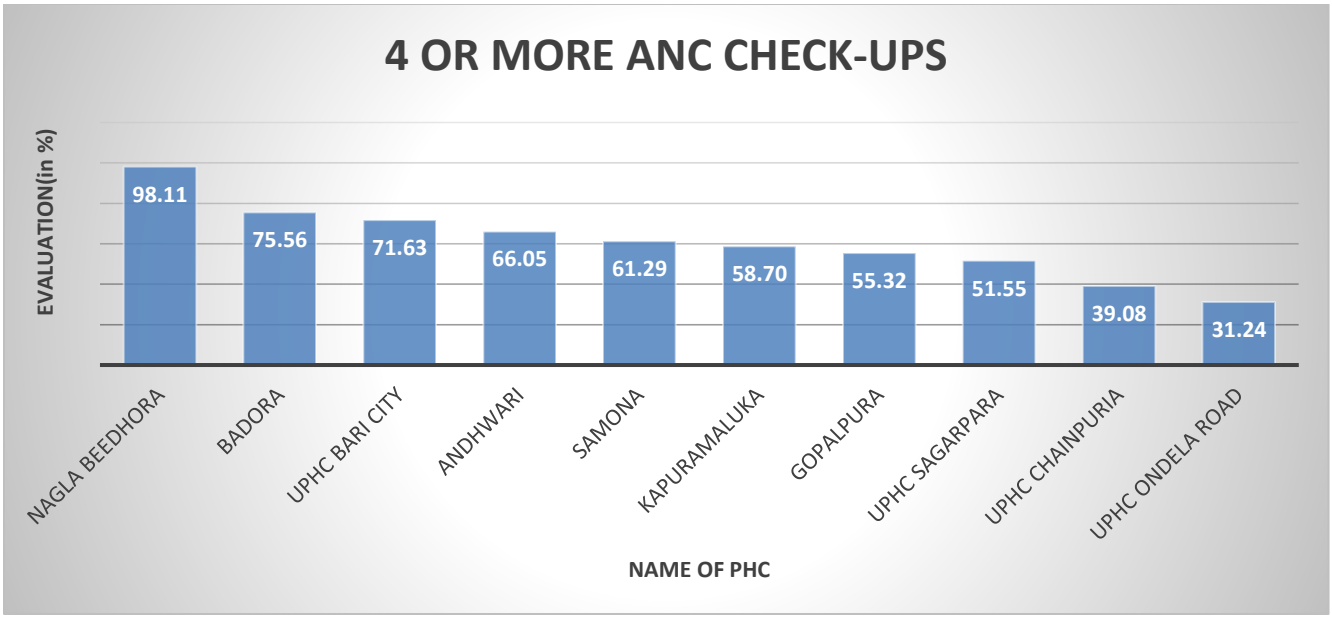
Performance exceeding 100% is because the achievement exceeds the target.

After telephonic interview, the main reasons identified were:

1. Increased number of migrant populations.
2. Tracking system at ASHA level was not satisfactory.
3. Hesitation due to male nurse staff among pregnant women.
4. Lack of motivation among PHC staff members.

2. **4 OR MORE ANC CHECK-UP:** Regular visits for ANC checkups for 4 or more times is mainly needed to track the growth of fetus in the womb. It also helps in establishing a contact between the nurses and the pregnant woman.

GRAPHICAL REPRESENTATION:



INTERPRETATION:

The above graph depicts 4 or more ANC visits to a PHC. The top performing PHCs are:

- PHC Nagla Beedhora
- PHC Badora
- UPHC Bari City

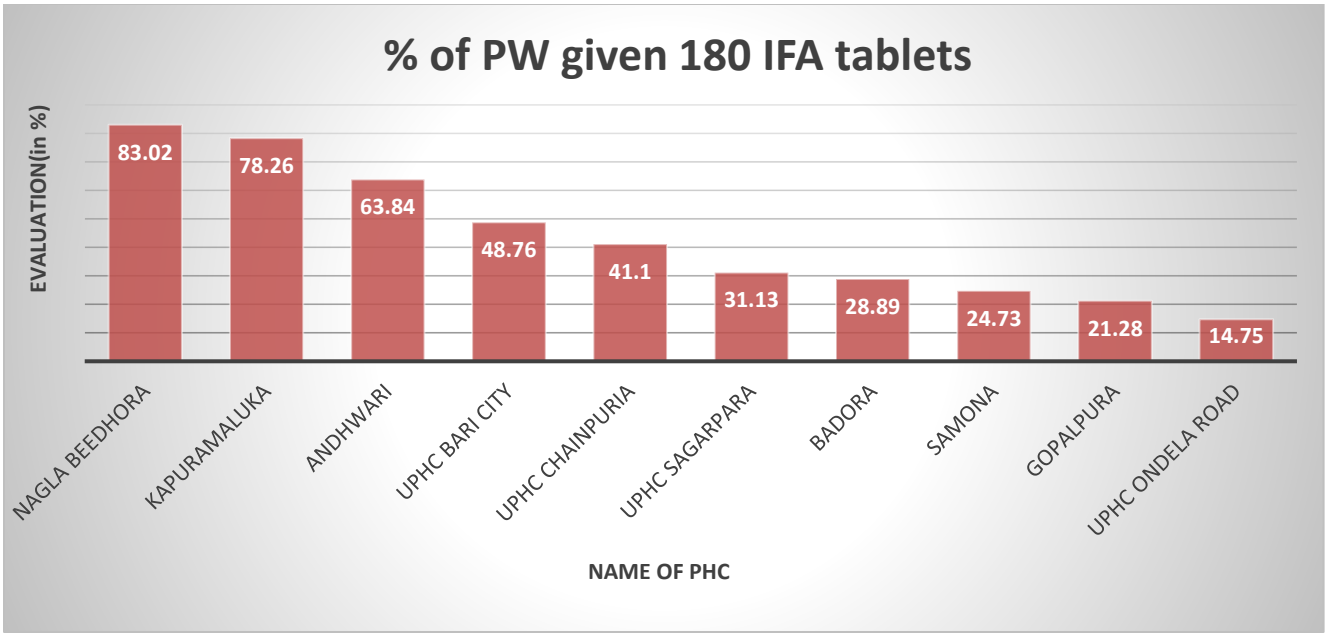
UPHC Chainpuriya and UPHC Ondela Road had poor performances.

After telephonic interview, the main reasons identified were:

1. Proper follow – ups were not performed by ASHA.
2. People preferred district hospitals instead of PHCs.
3. Referrals by PHCs due to complex conditions in pregnancies.

3. **% OF PW GIVEN 180 IFA TABLETS:** All PW should be supplemented with 30 tablets of Iron Folic Acid for 6 months of duration i.e. total 180 tablets. This is done to prevent PW from iron deficiency anemia.

GRAPHICAL REPRESENTATION:



INTERPRETATION:

The above graph depicts percentage of PW who were provided with 180 tablets of Iron Folic Acid.

The top performing PHCs were:

- PHC Nagla Beedhora
- PHC Kapurmaluka
- PHC Andhwari

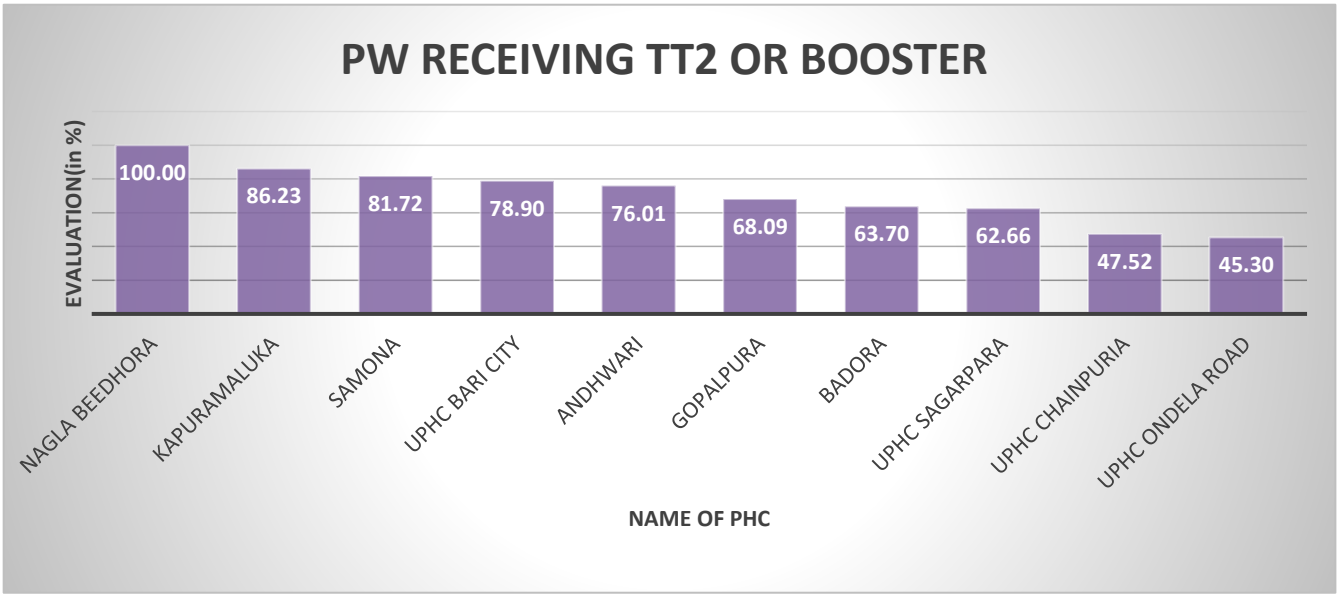
All other PHCs had a poor performance.

After telephonic interview, the main reasons identified were:

1. Less number of MCHN days due to COVID-19 pandemic.
2. Lack of motivation among PHC staff members.
3. Distribution of IFA tablets was not managed properly.

4. **PW RECEIVING TT2 OR BOOSTER:** Tetanus toxoid is given to pregnant women as soon as pregnancy is detected, and booster doses are given at a later stage. This is done to prevent PW from tetanus, though the chances are less but if tetanus is detected, it is fatal.

GRAPHICAL REPRESENTATION:



INTERPRETATION:

The above graph depicts percentage of PW receiving tetanus toxoid injection and booster doses. The top performing PHCs are:

- PHC Nagla Beedhora
- PHC Kapurmaluka
- PHC Samona

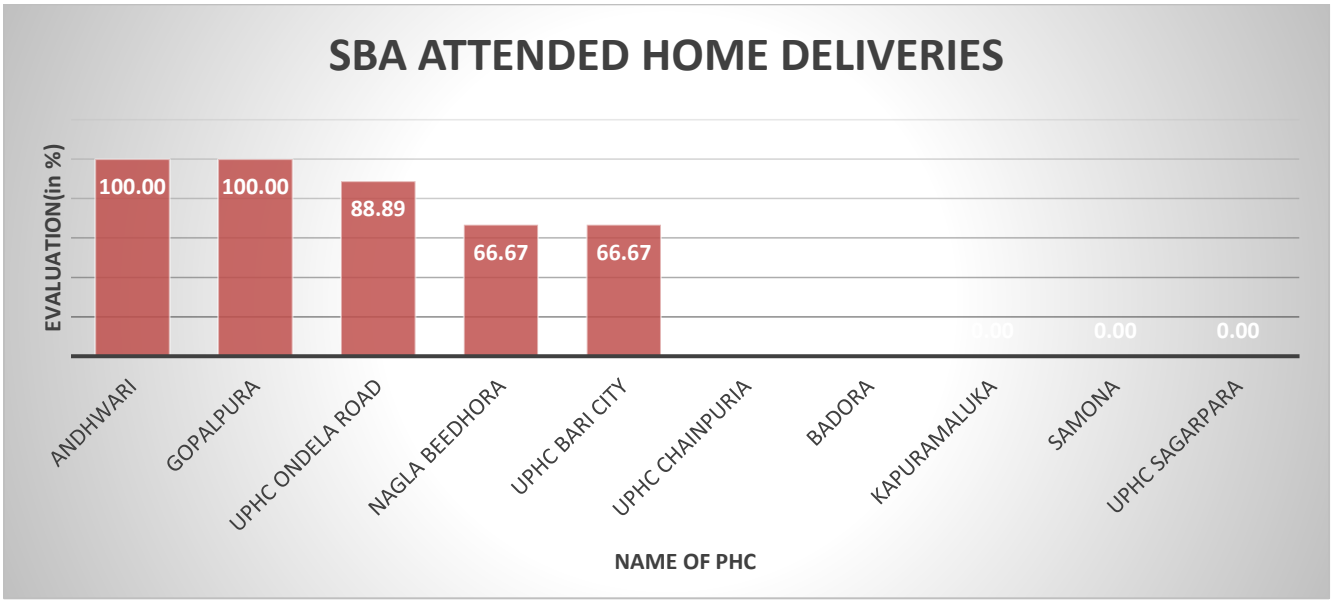
UPHC Chainpuriya and UPHC Ondela Road had performances below expectations and need urgent improvement.

After telephonic interview, the main reasons identified were:

1. Less number of MCHN days due to COVID-19 pandemic.
2. Lack of motivation among PHC staff members.
3. Record was not maintained and updated properly.

5. **SBA ATTENDED HOME DELIVERIES:** In home deliveries, it is essential that the skilled birth attendants are available and assist during delivery.

GRAPHICAL REPRESENTATION:



INTERPRETATION:

The above graph depicts percentage of deliveries attended by SBA.

The top performing PHCs are:

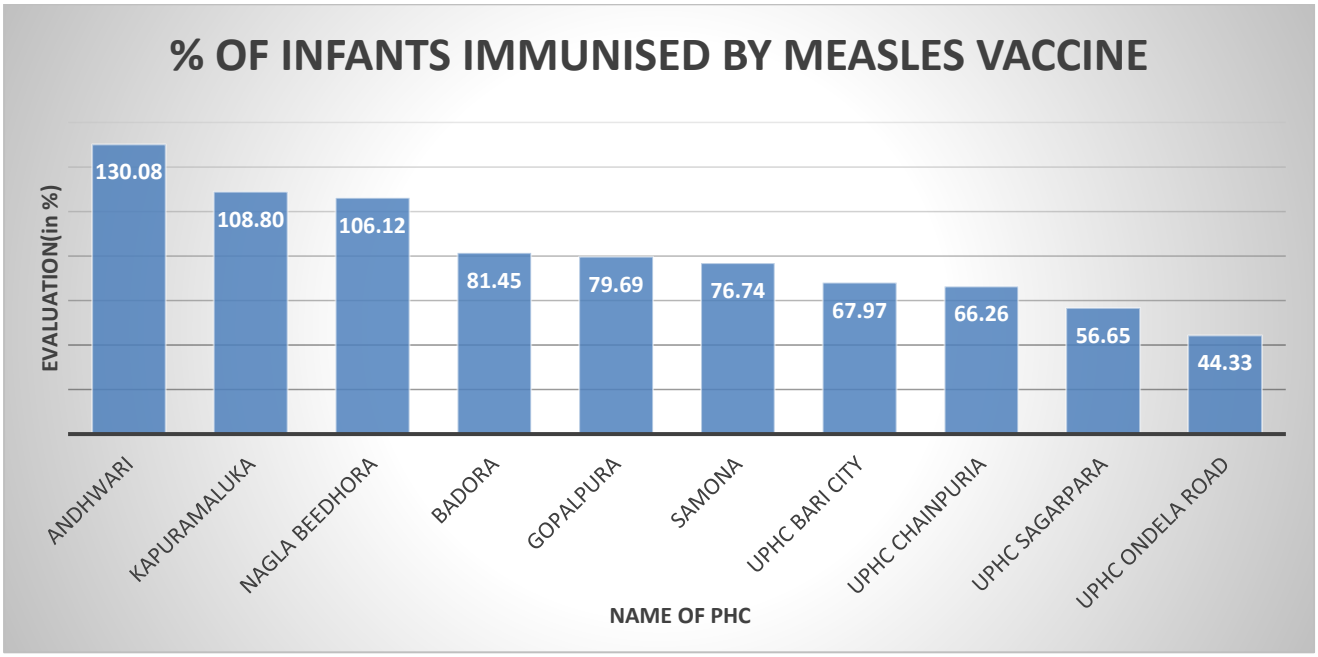
- PHC Andhwari
- PHC Gopalpura
- UPHC Ondela Road

The reasons why UPHC Chainpuriya, PHC Badora, PHC Kapurmaluka, PHC Samona and UPHC Sagarpara have zero percentages are:

1. UPHC Sagarpara and UPHC Chainpuriya had 100% missing deliveries. No home deliveries or institutional deliveries occurred there.
2. PHC Badora had total 4 home deliveries, all of which were not attended by SBA.
3. PHC Kapurmaluka and PHC Samona had 0% home deliveries. They had major portion of deliveries missing and others were institutional deliveries.

6. **% OF INFANTS IMMUNIZED BY MEASLES VACCINE:** Measles vaccination is given to the infants at 9 or 12 months of age to prevent infants from measles.

GRAPHICAL REPRESENTATION:



INTERPRETATION:

The above graph depicts percentage of infants immunized by measles vaccine.

The top performing PHCs are:

- PHC Andhwari
- PHC Kapurmaluka
- PHC Nagla Beedhora

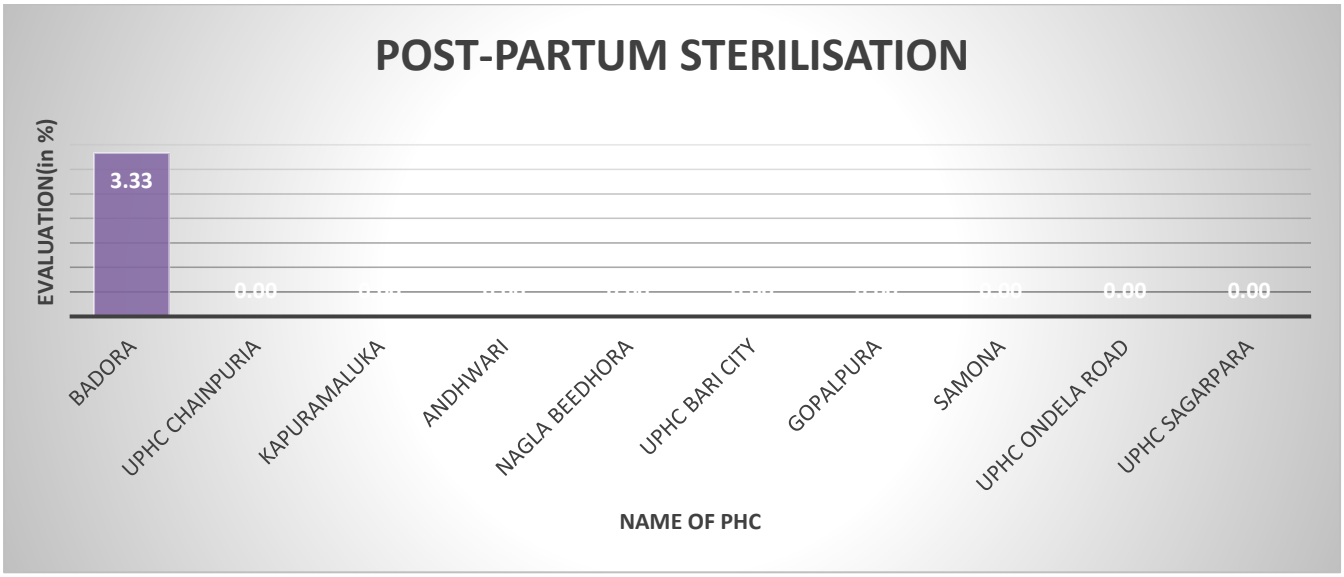
UPHC Sagarpara and UPHC Ondela Road were not able to perform as per the expectations and urgent improvement is needed in these PHCs.

After telephonic interview, the main reasons identified were:

1. Less number of MCHN days due to COVID-19 pandemic.
2. Lack of motivation among PHC staff members.

7. **POST-PARTUM STERILIZATION:** This procedure is performed just after the delivery of the baby. The fallopian tubes are cut and ligated together. This is a method of permanent birth control.

GRAPHICAL REPRESENTATION:



INTERPRETATION:

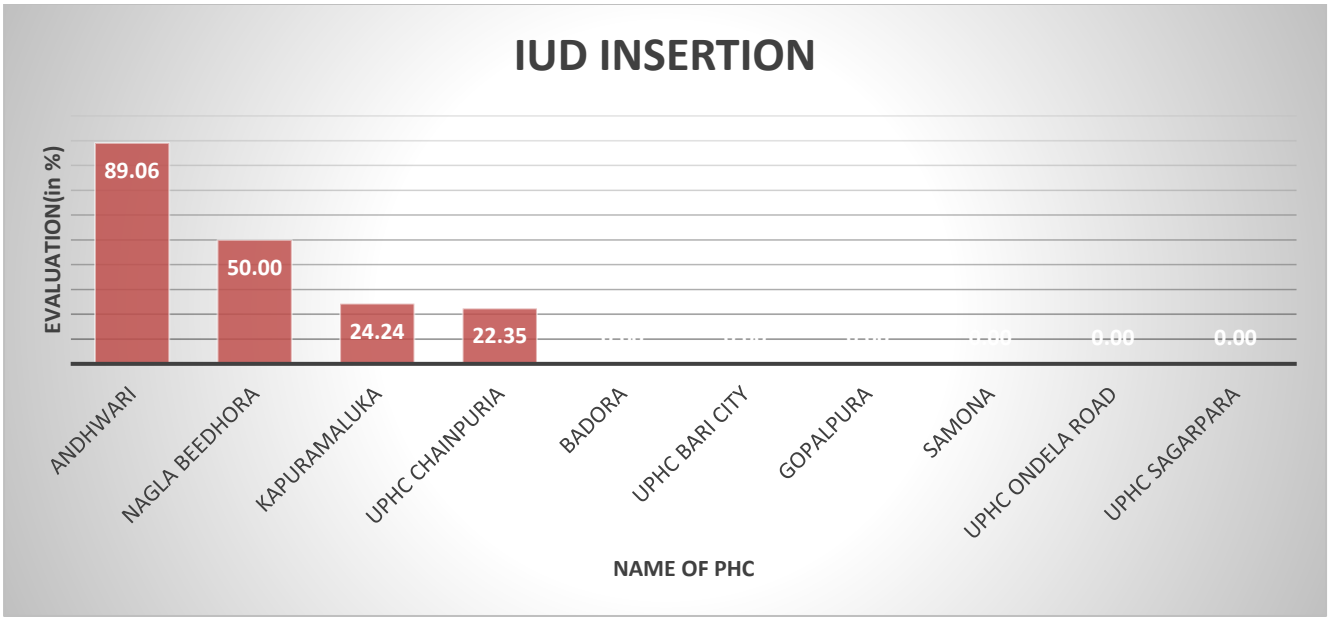
The above graph depicts % of women undergoing post-partum sterilization.

The results are poor in all PHCs due to following reasons:

1. Proper record maintenance is not done with respect to post-partum sterilization.
2. Complex procedures like these are referred to district hospitals as facilities are not available at PHCs and UPHCs

8. **IUD INSERTION:** Intra- uterine devices are inserted in uterus as a measure of birth control. They prevent pregnancy for next 10 years approximately.

GRAPHICAL REPRESENTATION:



INTERPRETATION:

The above graph represents the percentage of women undergoing a contraception method called IUD Insertion.

The top performing PHCs are:

- PHC Andhwari
- PHC Nagla Beedhora

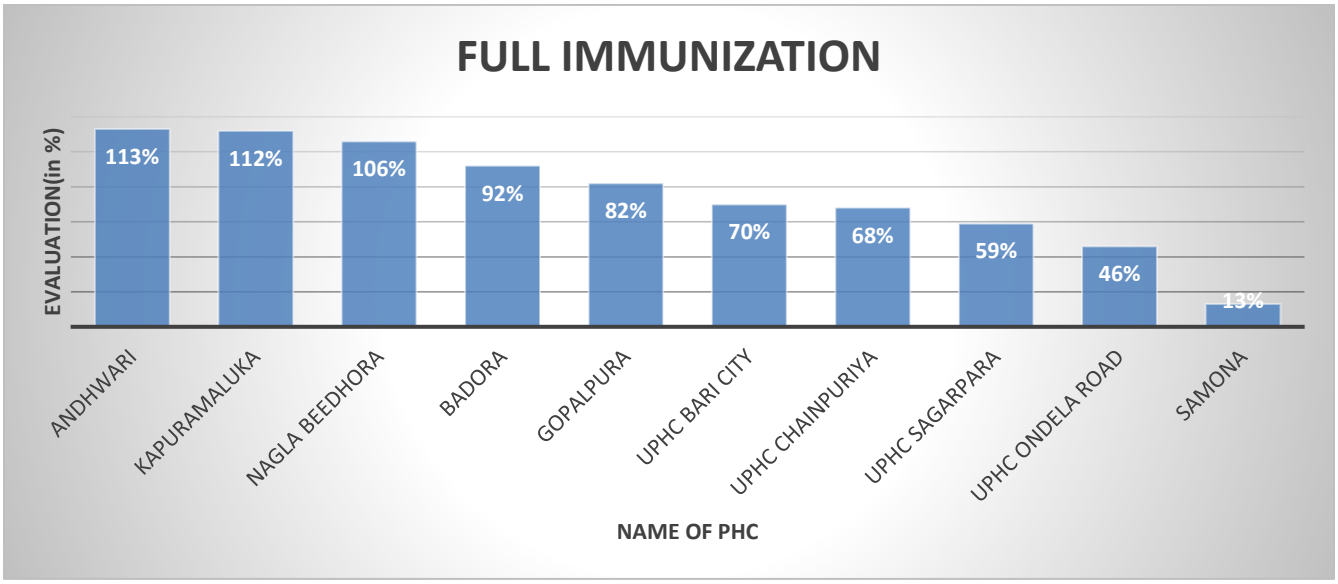
All the other PHCs had their performances below expectations.

After telephonic interview, the main reasons identified were:

1. They did not have proper facilities and infrastructure required for IUD Insertion.
2. Records were not maintained properly.
3. People preferred private hospitals over PHCs and UPHCs for birth control procedures.

9. **FULL IMMUNIZATION:** A child is said to be fully immunized if he has received one dose of BCG, three doses of OPV and DPT each, two doses of rotavirus vaccine and one dose of measles vaccine. (WHO guideline)

GRAPHICAL REPRESENTATION:



INTERPRETATION:

The above graph depicts the percentage of infants fully immunized.

The top performing PHCs are:

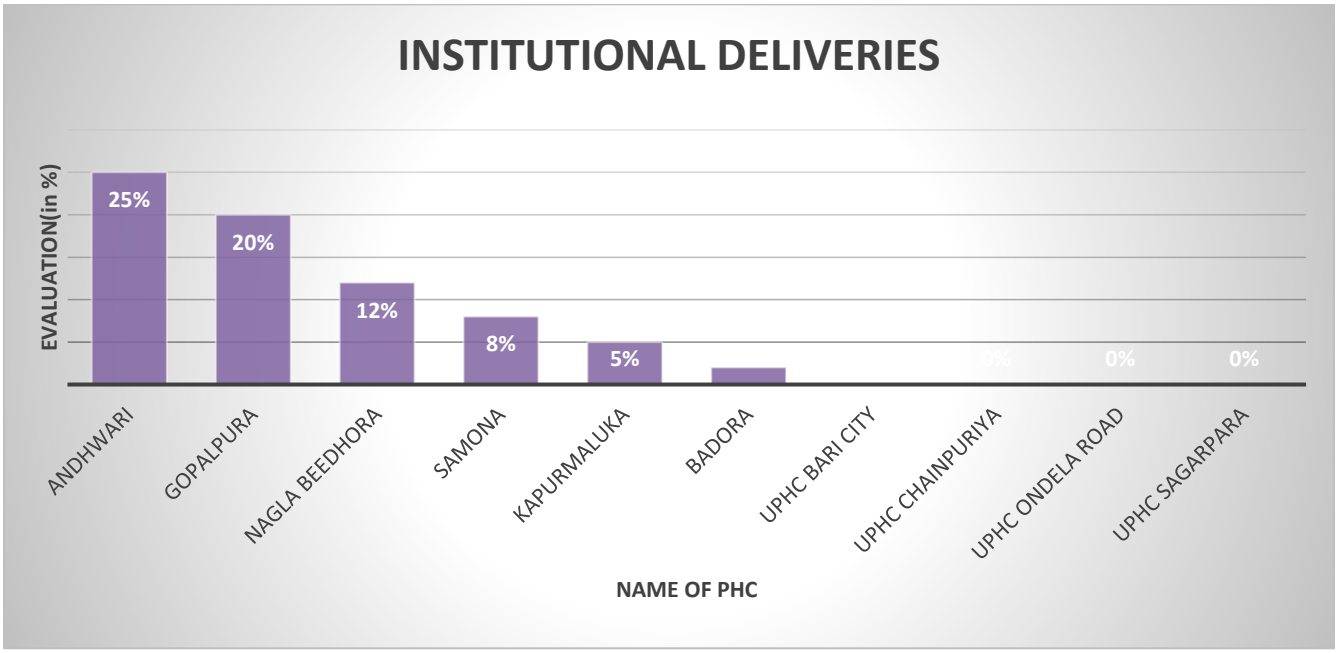
- PHC Andhwari
- PHC Kapurmaluka
- PHC Nagla Beedhora

An interesting observation was made: all PHCs had a good performance except PHC Samona.

After telephonic interview, the main reason identified was:
Though they had good performance with respect to this indicator, but they failed to maintain a proper record and upload it on the PCTS software.

10. **INSTITUTIONAL DELIVERIES:** Deliveries occurring at an institution like PHC or UPHC are counted as institutional deliveries.

GRAPHICAL REPRESENTATION:



INTERPRETATION:

The above graph depicts % of deliveries occurred at any PHC or UPHC.

All the PHCs had a poor performance.

After telephonic interview, following reasons were identified:

1. First pregnancy and complex cases were usually referred.
2. UPHC Bari City has no infrastructure for performing deliveries. They are running UPHC in a school building.
3. People prefer private hospitals for deliveries due to better facilities available.

RECOMMENDATIONS:

S. NO.	GAPS IDENTIFIED	RECOMMENDATIONS
1	Absence of proper tracking and recording system for recording the indicators.	Proper and timely tracking and recording of indicators should be done.
2	Lack of motivation among health workers.	Motivational training to all the health workers and staff members should be given.
3	Hesitation among PW for ANC check-ups due to male staff nurses.	ANC check-ups should always be performed by female staff nurses.
4	Loss of follow ups for ANC check-ups	Follow-ups should be done at regular interval of time.
5	Proper and timely headcount surveys were not performed	Headcount surveys should be done at regular interval of time and should be recorded in a proper manner to track migrant population.
6	Data recoding for IFA tablets distribution was not managed properly.	Data for IFA tablets distribution should be recorded and managed properly.
7	Lack of awareness of importance of IFA in PW	Increased awareness by using IEC materials.
8	Absence of proper infrastructure at PHC Ondela Road and PHC Bari City	Provisions of improving the infrastructure facilities should be made.
9	Higher rates of missing deliveries	Provisions should be made to record missing deliveries as well
10	No provisions for counting migrant population were made	Proper provisions for recording migrant population should be made.
11	Post-partum sterilization facilities are not available at PHCS.	Post-partum sterilization facilities should be made available at the PHCs.
12	IUD insertion facilities were unavailable at PHCs.	IUD Insertion facilities should be provided for family planning.
13	The recording of data for Full immunization was not done properly in PHCs.	proper recording of data should be done for full immunization.

GENERAL RECOMMENDATIONS:

1. Providing proper sanitation and cleanliness facilities at all PHCs.
2. Aware PW about the importance of 4 ANC check-ups.
3. Some volunteers must be chosen from the native citizens who can understand the problems faced by the
   common people in that area and inform the staff of PHC.
4. Retired ASHA and ANM workers can be asked to volunteer as there is increased workload due to COVID
   19 pandemic situations.
5. HBPNC should be promoted and proper care of mothers should be taken.
6. Supply of MCH services must be optimum to meet the increasing demand in urban areas.

CONCLUSION:

Even after increasing the health expenditure in India, the PHCs are not able to achieve their targets. The main gaps identified were lack of motivation among PHC staff members, inability to maintain proper records and poor infrastructure. After proper recommendations addressing all the gaps, there will be a significant improvement in the performances of the PHCs. These recommendations were incorporated in Program Monitoring and Evaluation by Vani Sanstha. The next gap analysis that will occur after the end of this financial year (April 1, 2020 – March 31, 2021) and we are optimistic to find improvement in the performances of all the PHCs.

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PART B

COURSE REPORT ON

HEALTH ECONOMICS AND FINANCING

PRESENTED BY

DR. ASTHA SHARMA

GUIDED BY

DR. SHWETA AGGARWAL

COURSE DESCRIPTION:

The primary goal of this course on “HEALTH ECONOMICS AND FINANCING” is to provide knowledge, skills and basic economic arguments that considered to be very important in discussions about health policy options and choices in developing countries.

COURSE OBJECTIVES:

1. To explain the key economic concepts and the principles which are relevant to health financing and provision.
2. To understand the main functions of health systems and the specific challenges facing such systems in developing countries.
3. To critique different tools for measuring equity and efficiency and understand how they can be used to guide health policy and programming.
4. To provide knowledge regarding the global health policies with present and upcoming trends.
5. To apply the necessary economic concepts and skills to produce and estimate health policies and plans from an equity and efficiency perspectives.
6. To display written and verbal skills in consolidating and objectively assessing public policy and public funding debates, especially from an equity perspective.

LEARNING METHODOLOGY:

1. Reading material
2. Video Lectures

COURSE CONDUCTED BY: UNICEF Agora platform

COURSE CONTENTS:

The course comprises of 10 modules:

MODULE 1: COURSE ROADMAP: OVERVIEW

- **ECONOMICS:**

Economics starts from the basic premise that the resources are scarce but wants are unlimited. Choices are therefore needed to be made in the allocation of those resources. This principle of scarcity is at the core of all areas of economics including health economics.

- **HEALTH ECONOMICS:**

Health economics is about how scarce healthcare resources can be allocated to get the most from these resources. It is all about making choices to employ resources in a way that maximizes a chosen objective.
Healthcare policy assists in the study of health initiatives, funding for resources and the quality of public services offered to multiple communities.
It is concerned not only to economists but also to those involved in the planning, management and delivery of health services and programmes.

- **HEALTHCARE FINANCING IN LOW- AND MIDDLE- INCOME COUNTRIES:**

The purpose of healthcare financing is to ensure sufficient health expenditure (relative to income at the state, local and household levels) and efficient distribution of financial resources to various types of public and private health services (McIntyre 2009).
The goal is currently beyond the reach of many low- and middle- income countries. Globally, there is a significant gap between the needs of countries in terms of healthcare funding and their actual health spending. MICs and LMICs have higher disease burden and fewest resources for financing health services.
Health economics address a few important questions:

1. Can government spend more on healthcare resources?
2. How can resources be better targeted to stimulate demand from target population?
3. How can the measures of efficiency be used to attain better value for money?

- **WHAT DETERMINES DIFFERENCES IN PROGRESS AMONG COUNTRIES?**

Professor McKee states that there is no “magical bullet” solution to the strengthening of health systems and that funding is a essential but not plenty condition. The Good Health at Low Cost (GHLC) study (Balabanova et al. 2010) concludes that the following factors are responsible:

1. Leadership with a vision.
2. Strong, consistent institutions.
3. Taking advantage of catalytic events such as independence.

4. Understanding the problems and using appropriate and context specific solutions.

- **THE GOAL OF UNIVERSAL HEALTH COVERAGE:**

UHC is explained by WHO as “access to key promotive, preventive, curative and rehabilitative health interventions for all at an affordable cost”. (WHO 2005)

In recent years, UHC was regarded as a core component of sustainable development and poverty depletion, as well as a hallmark of government commitment in improving the wellbeing of all citizens and redressing social inequities. Another benefit of UHC as a policy objective is its focus on access to all health services.

- **CHALLENGES FACED BY HEALTH SYSTEMS:**

There are many health system constraints including:

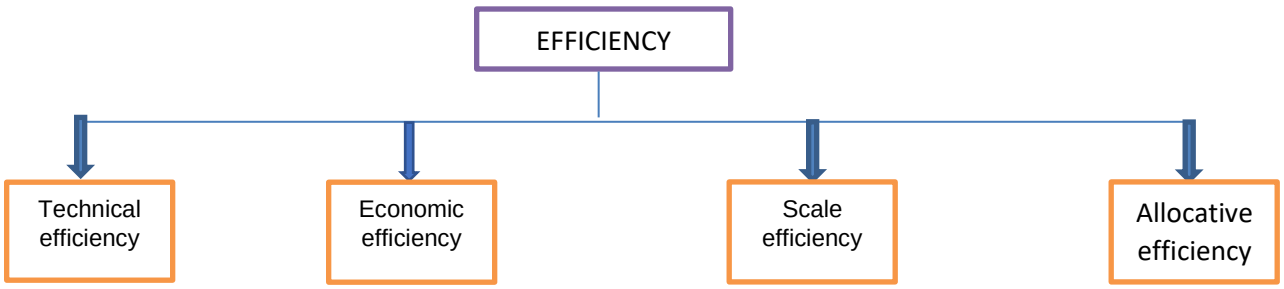
1. Human resources
2. Financing
3. Drugs and supply system, and the
4. Generation and use of information

MODULE 2: KEY PRINCIPLES FOR HEALTHCARE FINANCING AND DELIVERY: EFFICIENCY AND EQUITY: -

- **EFFICIENCY:**

Efficiency establishes a relationship between inputs and outputs, which can be measured in terms of cost and benefits. Efficiency describes elevating benefits with the available capital or reducing costs for a given level of benefit.

TYPES OF EFFICIENCY:



1. Technical efficiency: more output cannot be produced without using more of at least one input. The resources available must be used to maximum advantage.

2. Economic (or productive) efficiency: choosing different combinations of resources until maximum value is obtained for a given cost. Economic efficiency in healthcare allows for the estimation of the relative benefit for money of interventions with closely comparable outcomes.

3. Scale efficiency: Efficiency of the scale refers to the possible efficiency gain from the optimum size of a health service or system. In other words, producing at an output level such that average cost is minimized.

4. Allocative efficiency: Concerning the tools we use to generate the goods and services we need, and on which we put the highest importance.

- **EQUITY:**

Equity is concerned with fairness and justice. It is subjective as it means different things to different people and different communities. In healthcare, it means equal access for healthcare services to all.

TYPES OF EQUITY:

1. HORIZONTAL EQUITY: guarantees fair treatment of individuals in similar circumstances.

Horizontal equity is characterized in 3 ways:

a. Fair access with fair needs to the healthcare.
b. Fair healthcare use for fair needs.
c. Equal healthcare expenses for same needs.

2. VERTICAL EQUITY: Treating people differently is perceived when the degree of need between them varies.

MODULE 3: HEALTH SYSTEM FUNDAMENTALS:

- **HEALTH SYSTEM:**

According to WHO "A health system consists of all organizations, people and actions whose primary intent is to promote, restore or maintain health." (WHO 2007).

- **OBJECTIVES OF HEALTH SYSTEM:**

The WHO's framework on health systems (2010a) defines their objectives as follows:

1. Improving people's health status, families, and neighborhoods.
2. Protecting against financial ill-health effects.
3. Protecting health of the community against threat.

4. Enabling people to engage in actions that impact their wellbeing and the health system.

- **FUNCTIONS OF HEALTH SYSTEM:**

1. **Delivering personal and non-personal medical services (or provisions):**
   It refers to a production process where inputs (staff time, drugs, equipment's, etc) are combined to deliver a series of health service interventions.These can be for personal health services directed at the individual or non-personal services directed and the population as a whole.

2. **Financing services:**
   This includes:

a. Collecting revenues in the form of taxes, insurance premiums, out of pocket payment, donations Chrome non-governmental organisations or donor transfers.
b. Pooling funds so that financial resources are no longer tied to a contributor and contributors share financial risk.
c. Purchasing health services through the allocation of funds to institutional or individual providers
d. Mechanisms to promote fair financing such that individuals are protected against financial ruin.

3. **Resources generation:**
   The availability of resources such as people, equipment, research and the broader infrastructure are critical for health services distribution. A crucial function of the health system is to allocate resources across key inputs to ensure that services are available.

4. **Providing overall "Stewardship" of the health system:**
   Stewardship means the general overseeing of the health sector and specifically relates it to the role of government in choosing priorities and allocating resources as well as regulation within the health sector.

- **FINANCING OF HEALTH SYSTEMS:**

1. In most low-income countries, out of pocket payments tend to be regressive but are a key source of revenue for the health sector.
2. No country relies solely on one financing mechanism but on a mix of taxes, insurance payments and out of pocket payments.

MODULE 4: DEMAND, SUPPLY AND MARKETS: APPLICATIONS TO HEALTH SECTOR: -

- **DEMAND:**

Demand refers to the quantity of a specific good consumers want at a given price. For most goods, the higher the price, the list of that good people will want to buy; the lower the price, the more is the quantity demanded. This relationship is called Demand curve.
Demand for any good is derived from several factors:

a. price
b. income

c. price of other goods
d. tastes or preferences

Demand for health services is a **derived** demand.

- **SUPPLY:**

Supply is defined as the amount of a particular product that manufacturers are able to sell at a given price. Only a few suppliers are willing to sell it when a good is sold at a low price so the quantity supplied is low. More suppliers are willing to sell the good at a high price and therefore the supply is high.
The Supply curve illustrates the relationship between the market price and the quantity supplied

- **MARKET EQUILIBRIUM:**

A situation where the quantity supplied matches the quantity demanded is called market equilibrium. A change in one aspect of the market (for e.g. supply) will have ripple effects throughout the whole market.

- **PERFECTLY COMPETITIVE MARKET:**

There are various conditions for a perfectly competitive market:

a. Homogeneity: the product of the market must be more homogeneous it means that the good must be standardized and mostly indistinguishable from one seller to the next.
b. Many buyers and sellers: the market must be made up of many buyers and sellers to be perfectly competitive.
c. No barriers to entry and exit: resources must be mobile within the market. Potential suppliers must be able to enter a market if a profitable opportunity to do so exists.
d. Complete information: Information must be readily available to both buyers and sellers.

- **ELASTICITY:**

Elasticity measures the changes in quantity demanded in response to the fluctuations of other factors.

- **DEMAND AND SUPPLY SIDE BARRIERS TO HEALTH SERVICE ACCESS:**

1. DEMAND SIDE:

a. Means of transport available
b. Information on healthcare services / providers
c. Education
d. Household resources and willingness to pay
e. Opportunity costs
f. Cash flow within society
g. Households' expectations
h. Low self-esteem and delayed or lack of referral assertiveness
i. Community and cultural stigma
j. Lack of health awareness

2. SUPPLY SIDE:
a. Location
b. Availability of qualified staff, services / Providers
c. Staff motivation, interpersonal skills, and level of trust
d. Non integration of health services
e. Exclusion from services or lack of referral assistance
f. Costs of services
g. Complexity of billing systems preferences

A focus on supply side constraints to providing services would not be sufficient to ensure maximum usage and fair distribution of services. It is essential to examine the demand side barriers faced by the people who are using these services.

MODULE 5: FAILING MARKETS- THE ROLE OF STATE AND NONSTATE ACTORS IN HEALTH: -

- **WHY USE PRIVATE HEALTH PROVIDERS:**

Reasons for consulting private sector providers:

a. Better geo-accessibility
b. Very less waiting time
c. Overtime or more opening hours
d. Good staff and drug availability
e. More privacy, which is essential for social stigma carrying diseases like TB and STIs
f. The impression that private service providers being more considerate, caring and attentive to customer complaints.
g. For certain environment, the belief that private providers are technologically superior quality of treatment.

- **THE PRIVATE SECTOR:**

The private sector describes any non-government or state activities and includes both the for profit and non-profit sectors.

Privatization describes the process by which non state or non-government players become more involved in the financing and provision of services.

- **PUBLIC-PRIVATE MIX: -**

The public private combination is used to define the position of the public and private sectors (both profit and non-profit) in the provision and funding of health services in the country concerned.

- **ROLE OF STATE AND NON-STATE ACTORS:**

a. Government intervention in Healthcare is necessary to minimize the impact of market failures and reduce inequities
b. The state can act as provider, financial and regulator of services as well as a stable environment

c. Both public and private sectors have a role to play in financing and provision of services in most health systems.

MODULE 6: MEASURING EQUITY - TOOLS AND THEIR APPLICATIONS:

- **EQUITY ANALYSIS:**

  Health equity analysis can be defined as the study of inequalities between different population groups in terms of health outcomes, healthcare utilization, subsidies, and payments. (O' Donnel et al. 2008).

- **TOOLS AND APPLICATIONS:**

  Equity analysis provides us with that **tools** to explain the following questions:

a. What are the overall disparity patterns and scope in the country?
b. How large and persistent are the gaps in access to services and in outcomes?
c. How do trends and outcomes differ across populations groups and regions?
d. What is the equity impact of subsidies or other policy changes?
e. Are existing patterns of financing regressive or progressive?

- **SIGNIFICANCE:**

- Equity analysis involves describing the patterns, trends, and scope of inequities across different population groups or changes in equity resulting from policy change.
- Equity analysis incorporates a range of different techniques to look at health outcomes, Healthcare utilisation and healthcare payments across different social and socio-economic groupings.
- Data for equity analysis has become more readily available in the form of regular, large - scale national surveys such as DHS and MICS.
- Equity analysis can range from simple bivariate stratification to a variety of more complex methods depending on the question being addressed.

MODULE 7: MEASURING EFFICIENCY: TOOLS AND THEIR APPLICATION: -

- **EFFICIENCY:**

  The goal is to optimize benefits with the available resources or to reduce costs for a given level of profit.

  Using economic evaluation, efficiency is analyzed.

- **ECONOMIC EVALUATION:**

  It is the comparison or analysis of alternates present (Drummond et al. 2005).
  Main steps involved in this are:

a. Framing the evaluation and identifying alternatives for comparison
b. Identification, quantification, and assessment of the necessary resources
c. Identify, measure, and evaluate health effects and equate them with costs.

MODULE 8: HEALTH SYSTEM FINANCING – CREATING FISCAL SPACE FOR HEALTH: -

- **FISCAL SPACE:**

  Fiscal space is defined as "the room in a government budget to provide additional resources for a desired purpose without jeopardizing the governments financial position or economic stability" (Heller 2005).
  Increasing fiscal space means making additional resources available to fund priority government programs.

- **NEED TO INCREASE FISCAL SPACE:**

  The main reasons why there is a need to increase Fiscal space are:

  a. There is a shortage of fiscal resources to fund social and economic activities
  b. There is a competition for resources as the government expenditure is needed for health, education, water sanitation, housing, defense, and social and economic infrastructure.
     Increased resources and needed to ensure sustainability of financing for social and economic programs.

- **HOW CAN GOVERNMENT INCREASE FISCAL SPACE FOR HEALTH?**

  According to the World Bank's framework, the five main ways of increasing fiscal space are: (Tandon and Cashin 2010)

  1. Conducive macroeconomic conditions: Economic growth increases the ability to raise taxes. Additional revenues may be collected by tax incentives or by stepping up tax administration, which in turn may contribute to increased government spending on health.
  2. Restoring health priorities within government
  3. Introducing or raising earmarked taxes for health
  4. Increase of specific grants for the health sector and foreign aid
  5. Increasing efficiency of existing government health program.

MODULE 9: HEALTH SYSTEM FINANCING – PURCHASING HEALTH SERVICES: -

- **CONTRACTING IN HEALTH SERVICES:**

  A contract is an exchange of promises between 2 or more parties to do, or refrain from doing, an act which is enforceable in a court of law. In economics, contracts are saying to mediate all forms of exchange.
  Contractual relationships increase efficiency in 3 ways:

  a. More provider competition increases supply side technological efficiency.
  b. Structural rewards of the contract enhance efficiency
  c. Contracting mechanism itself encourages trading openness and hey decentralization of management obligation hey which has beneficial effects in terms of performance.

- **PERFORMANCE BASED FINANCING:**

  In contrast to inputs or working processes, it is a technique that structures the contracting arrangement around the outputs.

  Performance contracts set target outputs for individuals or organizations; allocation of monetary or non-monetary incentives when the goals are achieved. PBF is thus a way of motivating people and organizations or a way to increase their work efficiency.

MODULE 10: THE BIG PICTURE – MACROECONOMIC CONSIDERATIONS: -

- **MACROECONOMICS:**

  Macroeconomics looks at the economy's production and functioning as one-the bond between economic growth, productivity, employment, and inflation.

  On the other hand, microeconomics studies, the choices at the individual or firm level.

- **MEASURING ECONOMIC GROWTH:**

  It may be defined as the changes in made by the country in its level of production.

  GDP is one indicator used to examine the size or output of an economy. GDP is the cumulative amount of the goods and services that are generated in a nation over one year.

  GDP per capita is the total GDP divided by the population of the country.

  Gross domestic income or GDI measures the income from all economic activities that take place within our country including wages, profits, rents, and interests.

  Gross national income (GNI) is concerned with calculating the production from economic activities performed by people and a country's forms regardless of where the operation takes place.

- **INFLATION:**

  Inflation refers to the general rising price through time, which results in the decrease of the value of money food stop

- **KEY MESSAGES:**

a. Macroeconomic factors will affect population groups differently. They are likely to negatively impact the poor disproportionately more.
b. It is important to consider what the distributional consequences of macroeconomic changes and policies are.