

Assessment on Quality of UPHMIS Through Supportive
Supervision, Sitapur District, Uttar Pradesh

By

Insu Maurya

*Dissertation submitted for the partial fulfillment of the
MBA Hospital and Health Management*

Academic year, 2016-2018



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TO WHOMSOEVER IT MAY CONCERN

This to certify that **Dr. Insu Maurya** student of MBA Hospital and Health Management from the IIHMR University, Jaipur has undergone internship training at **IHAT, Uttar Pradesh** from **5th February to 5th May, 2018**.

The candidate has successfully carried out the study designated to her during internship training and her approach to the study has been sincere, scientific and analytical.

I wish her all success in all her future endeavors.



Col (Dr) Ashok Kaushik

Dean, Academics and Student Affairs

The IIHMR University, Jaipur



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16/05/2018

Ref. No. IHAT/HR/CERT/2018-2019/26

Date 17 May 2018

CERTIFICATE

The certificate is awarded to

Dr. Insu Maurya

In recognition of having successfully completed her
Internship in the department of

Monitoring and Evaluation

and has successfully completed her Project on

**An assessment on quality of UPHMIS through supportive supervision,
Sitapur district, Uttar Pradesh
from**

Date - 5th Feb to 5th May

**Indian Health Action Trust,
U.P.T.S.U, Lucknow**

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

We wish her all the best for future endeavors



**Sr. HR Manager
IHAT, UPTSU, Lucknow**

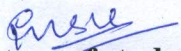


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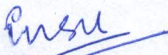
CERTIFICATE BY SCHOLAR

**This is to certify that all ethical issues have been considered
while collecting data for my “An assessment on quality of UPHMIS
through supportive supervision, Sitapur district of UP”**


Signature of student

CERTIFICATE BY SCHOLAR

This is to certify that the dissertation **An assessment on quality of UPHMIS through supportive supervision, Sitapur district, Uttar Pradesh**, submitted by **DR. INSU MAURYA** Enrollment No- **IIHMR-U/01/2016-18/0423** under the supervision of **Dr. MOHAN BAIRWA** for award of MBA in Hospital and Health of the University carried out during the period from **5TH February 2018** to **5TH May 2018** embodies my original work and has not formed the basis for the award of any degree, diploma associate ship, fellowship, titles in this or any other institute or other similar institution of higher learning.


Signature

ABSTRACT

Title:An assessment on quality of UPHMIS through supportive supervision, Sitapur district, Uttar Pradesh

Name of Author: Dr. Insu Maurya

Background:

Ensuring that routine visits and supportive supervision provide good quality information for informed decision making and planning in health systems remain a major priority in several countries and health systems. The lack of use of health information or use of poor quality data in health care and systems results in inadequate assessments and evaluation of health care and result in weak and poorly functioning health systems. Many developing countries are facing Problems with the building blocks of the health system with a weak Health Information System. Although the quality of data in the Uttar Pradesh health information system has been deemed poor and no research based evidence of the current state of data quality in the state as well as factors that may influence data quality in UPHMIS has been reported. This study explored and providing the data quality of UP health Information System generated from health facilities in Sitapur district, UP. This study was a descriptive study on a paper based data records in the Health Management Information System in Sitapur. A quantitative tool prepared by the state team to assess the quality of data. SWOT analysis has been done by observing during recording data and behavior of the stakeholders.

Objectives:

- To assess the quality of data being collected and entered in UPHMIS portal through matching with Supportive supervision round 1 and round 2.
- To assess the effectiveness of round 2 in comparison to round 1 Supportive supervision.
- To identify underlying causes of data errors in UPHMIS format by SWOT analysis.

Methodology: Descriptive study in Sitapur district, UP, supportive Supervision is conducted in 4 Block. Staff nurse, Pharmacist, Lab Technician, Assistant Research Officer, Health Education Officer, Block Program Manager, Data Entry Operator, were asked to show the records (source documents) to match with the portal data. 25 high priority districts are selected by GOI through composite score and after that each district have 4 TSU blocks (poor performing) and which is divided according to health index by TSU. Here I have Round 1 and Round 2 of SS visit,

Results: Increase in matched data in 2nd round due to availability of source documents and maintaining them by the staff nurse. MOI/c are serious have taken major steps to improve the quality of data which we can see in round 2. After round 2 also HR and Training register is not available at facilities and action has been taken against it to improve the data. In maintain JSSK register and quality all have successfully reached to 100%.

Conclusion:

- Shortage of competent staff, unavailability of JSSK register (diet, drop back, 102 and 108, Stock register, U-5 child (OPD & IPD) register, lack of adequate training of staff, and no validation after data collection and summary was not found in labour and referred registered.
- In second round 14 blocks shows >70% improvement.

Data variation and outliers can be reduce if nodal officers are trained by DME.

Acknowledgements

We express our deepest gratitude and appreciation to our Reporting Officer, Dr. Shivanand Chauhan, Team Coordinator, Dr. Arup Kumar Das, Lucknow, UP for providing me with an opportunity to work on this project. I am extremely thankful for his constant guidance, support and valuable suggestions during the project. It was a great learning experience to work with him.

I am also extremely obliged to all the MOI/c, BPM, DEO, Staff Nurse, Pharmacist, LT/LA of that block who supported me on the field. We would also like to express our thanks to other staff members for their strong support from office and during field visits.

Special gratitude to my Mentor Dr. Mohan Bairwa, who Guided me how to proceed further and see things from every one's perspectives.

Table of Contents

Chapter – 1. Introduction	8
1. UPHMIS	8
2. SUPPORTIVE SUPERVISION	9
3. Some other important message to communicate during meeting:	11
Chapter 2. Literature Review.....	13
Chapter 3. Aims, Rationale and Objectives of Study	18
Chapter 4. Methodology	19
Chapter 5. Results	21
Chapter 6. Discussion	28
Limitation:.....	29
Chapter 7. Conclusion.....	30
Annexures	30
Bibliography:	36

List of Figures

Figure 4 Box Plot of Matching Status.....	21
Figure 5 Scatter plot of Matching status of R1 and R2.....	22
Figure 6 Matching status of Human Resource of R1 and R2	23
Figure 7 Matching status of Training of R1 and R2	24
Figure 8 Matching status of Drugs and Supply of R1 and R2	24
Figure 9 Matching status of HIMS of R1 and R2.....	25
Figure 10 Matching status of Child Health of R1 and R2	25
Figure 11 Matching status of JSSK of R1 and R2	26

List of Tables

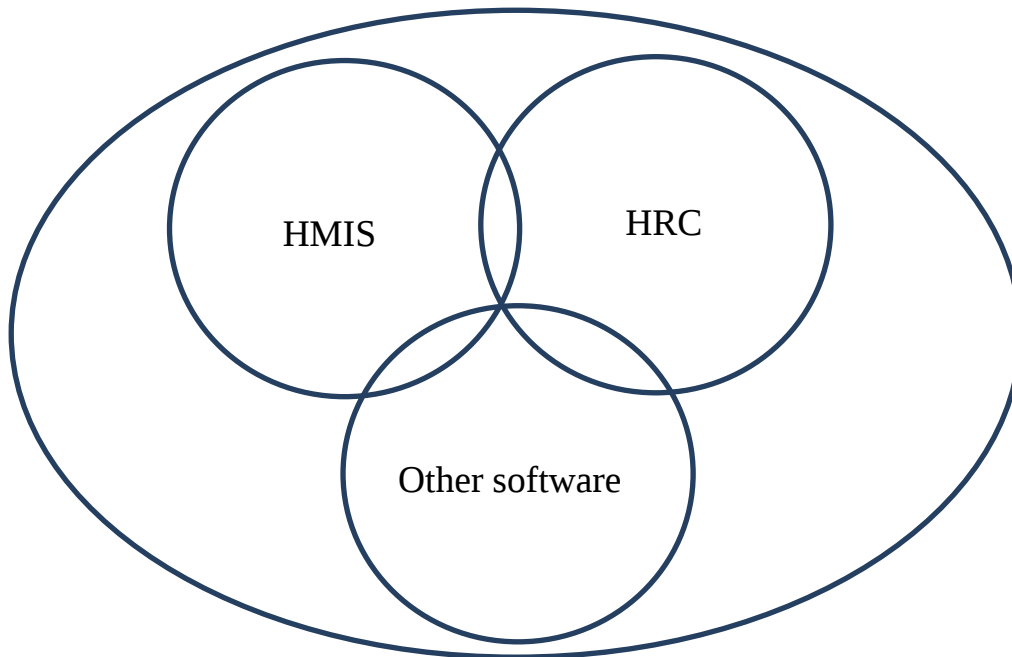
Table 1 Literature Review in tabular form	13
Table 2 Perfect Match of Blocks of Barabanki Zone in Round 1 and Round 2	21
Table 3 Percent matched in round 1 in different elements present in the format.	22
Table 4 Percent matched in round 2 in different elements present in the format.	23

List of Symbols and Abbreviations

PHC	Primary health center
CHC	Community health center
SC	Sub center
UPTSU	Uttar Pradesh technical support unit
HMIS	Health management information system
UPHMIS	Uttar Pradesh Health management information system
BPM	Block program manager
DPM	District program manager
DEO	District entry operator
MOI/C	Medical officer in charge
DPM	District program manager
BCPM	Block community program manager
ARO	Assistant research officer
HEO	Health education officer
SN	Staff nurse
NM	Nurse Mentor
SS	Supportive Supervision
BPHC	Block Primary health center
BCHC	Block Community health center
MO	Medical officer
AYUSH	Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy
LT/LA	Lab Technician
ANM	Auxiliary nurse midwife
JSSK	JananiShishu Shuraksha Karyakaram
JSY	Janani Shuraksha Yojana
PW	Pregnant women
DH	District Hospital
RMNCH+A	Reproductive maternal newborn and child health plus adolescent

Chapter – 1. Introduction

1. UPHMIS



- UPHMIS is integrated portal for all data sources like Government of India portal, manual program reporting (MPR).
- Data will be imported from GOI HMIS portal to UPHMIS, and allow other program like MPR and HRC portal to enter directly to the instance.
- Integrated data set will be generated and analyzed from UPHMIS portal.
- Dashboard and GIS map will be populated through UPHMIS portal.

Flow of information and Process in UPHMIS portal:

In 1st phase:

- UPHMIS will be pulled HMIS portal data.
- Manual reports (MPR) & HRC data will be directly entered on UPHMIS instance

In 2nd phase:

- HR and other national program data will be pulled from HRMS and other portal in UPHMIS

UPHMIS portal include HMIS (health management information system) portal, HRMS, National program portal like RNTCP, NBVDCP, IDSP, NLEP, NBCP etc., from DH(District Hospital) MPR, HRC, other RMNCH+A services are imported.

Process of data entry of CHC/PHC*/SC* include:

Data is collected from each department of facilities and after validation by MOI/C, ARO, and BPM data is entered in the UPHMISportal by operator.

After importing data, we can integrate dashboard and analyses data for further use in decision making.

Purpose of importing other portal data into UPHMIS portal.

- UPHMIS portal is a single platform to view all relevant data.
- Comprehensive HMIS system is for capturing all data requirements of different programs going on in the state
- Minimize the manual and duplication of data in portal.
- Data visualization for review and planning are “HMIS bulletin, dashboards & dynamic reports”.

Indicators required for driving decision are input indicators which is availability and quality and output indicators which is service utilization and outcome indicator like mortality morbidity etc.

Strategy for Data quality:

1. **Analysis and use of HMIS, GOI SS, Survey, and program monitoring:** Only analysis has to be done for identification of gap in program status and quality and prepare an action plan.
2. **Strengthening, analysis and use of UPHMIS:** Efforts have to made to strengthen the UPHMIS in all 25 HPDs and start using the data in gap analysis during review meeting
3. **Capacity Building for CMO/ACMO and DDM:** Capacity building of district level program manager and DDM will be planned for data analysis and use

2. SUPPORTIVE SUPERVISION

Supportive supervision is a facilitative approach to supervision that promotes hand hold support, joint problem-solving and communication between facilitator and participant

Objective:

1. To validate and reduce the data element reported as blank and zero
2. To validate the data of some critical data element requires for frequent analysis
3. To develop the capacity of block facility staff for providing the hand hold support to lower facility (SC and PHC)

Supportive supervision for improvement of data quality:

- **Gap Identification:** Through gap identification we get to know which data element/section in the format is not matched with source register either left blank or entered zero in the format. Gaps are due to error in compiling source register and also in understanding data elements during reporting.
- **Problem Solving:** First step to correct the data, which is entered in the period from 25 to 30 of every month in the UPHMIS portal, second step to add additional column in record book, third change the process of compiling the data by giving responsibility to individual person, fourth every SN, MOI/C, BPM, pharmacist, should have clarity on each data element.
- **Capacity building:** Make it sustainable, so that this whole process remains same for certain months, share the gaps with MOI/C after the SS visit, and discuss the reasons of gap, and orient staff on data element definition, and explain the process to conduct a SS in other facility.

Components of SS tool in Checklist

1. General Details
2. Government official's participation during supportive supervision (not necessary)
3. Validation of Critical data element
4. Summary of validation of Critical data element
5. Validation of zero and blank data element
6. Comment/Suggestion

There are separate Checklists for DWH, DMH and CHC/BCHC/BPHC.

Methodology of Supportive Supervision visits

- Day 0 - Identification of Poor Performing Facility
- Day 0 to 1 - Meeting with district officials to orient about the concept and method
- Day 1-3 - Visit to Facility for Supportive Supervision
- Day 4 - Feedback meeting with all district and block officials

Identification of poor performing facility:

- The poor performing block facilities is identified based on following data quality indicators selected for UPHMIS campaign
 - ✓ % of non-blank data element
 - ✓ % of non-zero data element
- 3 block facilities are selected from each of the 75 districts
- 1 DWH is selected by default from each of the district (Combined hospital if DWH is not available)
- This exercise has already completed by state and the list is shared

Supportive Supervision to facility:

1. Pre visitPreparation
2. During visit at facility
3. Post visitfrom facility

Pre Visit Preparation

Understand every data element of tool

Fill the prefill section of SS tool (value as per UPHMIS) as per data given in soft copy and facility identifier

Meet with district officials to conduct joint visit

The data for the month of Aug 17 to be considered for SS

Pre inform the block about SS

During Visit

- Spend full day at facility for SS (5~6 hour)
- Meet and explain status of data quality and purpose of visit to MO I/c, BPM, BARO
- Start SS process with BPM and BARO in a separate room
- Go through each of the element of tool and request the concern staff to join with register
- Validate the data element with source register/observation with the help of concern person
- Identify the reason for any discrepancy between reported data and actual status
- Share the discrepancy with concern person and provide the suggestive method of correction
- Discuss the identified issues with BPM/ BARO on data element requires correction
- Correct identified gap on portal and record on tool
- Share the findings with MO I/c and discuss the plan for SS to lower facility by BPM/ BARO

Post Visit

- Check the completeness of the tool
- Collect the SS tool from government officials
- Confirm timing and participation of feedback meeting with district officials
- Prepare summary slide (table of not matching for critical data element, status and improvement in zero/blank, major challenges and suggestive solution for feedback meeting and to share with DM)
- Meet with DM and share the findings

3. Some other important message to communicate during meeting:

- **Proper Format distribution-** It has been observed that some of the blocks have not properly distribute the UPHMIS facility format to facilities. It is to inform that each of SC level format is printed in double copy- one for ANM and one for submission at block. So three such formats in double copy must be given to SC
- **Use of UPHMIS raw data for HMIS Bulletin-** We have again started the preparation of HMIS bulletin from the month of Aug 17. The data for HMIS bulletin will be download from UPHMIS raw data. So it is essential to import all the corrected HMIS excel file in UPHMIS to avoid any discrepancy
- **Update DP-** Many of facilities have not entered their DP status (Yes/No). So ensure to update DP status as per the KPI list and do not make any change till the official inclusion or exclusion of DP.

Chapter 2. Literature Review

Table 1 Literature Review in tabular form

Author/citation	Type of study	Sample	Purpose	Key findings
Adedapo adejumo, An Assessment of Data Quality in Routine Health Information Systems in Oyo State, Nigeria.	cross sectional descriptive study taking a retrospective	sampling involved 4 stages: Stage 1 LGA Selection, Stage 2 Health Facility Selection, Stage 3 Data Element Selection, and Stage 4 Selection of key informants.	to assess the data quality in routine information systems in Oyo State Nigeria and to identify the factors that influence data quality to improve the use of routine health information for making decision.	1. Incomplete data was found in aggregated data reported from daily patient encounters in monthly summary forms as well as the electronic database (DHIS). 2. Inaccuracies in the reported values with discrepancies between facility register recounts, summary form values and the values in the DHIS. 3. Quality issues were also worse for data elements that had multiple disaggregations making their collection and reporting more complex.
Health management information system strategic plan 2013 – 2017 Ministry of health Bophelo			1. To strengthen the coordination and management of the health information system so that improvement in data management can be seen 2. To strengthen data analysis, dissemination and use of data.	1. To update Legal Framework governing HMIS data collection, processing, dissemination and use 2. To enforce by authority for the Health Providers particularly the Private Sector to report on health data to DHMTs in districts of residence To adopt a

				National Personal Identifier Code to improve data linkage and quality at hospital and health centre levels 3.To define critical indicators, data Sets in format and responsibilities of staffs. 4.To establishment a robust central level data warehouse with capacity to respond to the information needs and data sharing for various stakeholders. 5. To define and enforce roles and Standard Operation Procedures (SOPs) for data collection and sharing between providers and users . 6.To establish District M&E Teams in GOL, Red Cross and CHAL hospitals to facilitate the inception of Clinical Information Systems
Moazzam Ali, Yoichi Horikoshi Pakistan Health Services Academy. Maternal and Child Health Project Pakistan Institute of Medical Sciences, Islamabad- Situation analysis of health		review of available literature was undertaken and data collected for almost all health information systems being currently present in Pakistan in the health sector. Published and	1. To do a situational analysis of the Health Management Information System (HMIS) system in Pakistan, highlighting strengths and weaknesses in the system.	1. lack of information on management issue. 2.Poor data quality. 3.Lack of timely reporting and feedback. 4.Inadequate information usage. 5.Lack of universal launch of HMIS.

management information system in Pakistan Pakistan J. Med. Res. Vol1.4 I fu'0.2, 2002		unpublished documents including government reports, peer review journals and other literature such as local journals are a source of information for this paper.	2. To review the present status of the GIs in the health information system in Pakistan .	
Dr Hari Kumar S- Evaluation of Health Management Information Systems - A study of HMIS in Kerala	descriptive cross-sectional study	115 respondents from 26 sub-centres, 12 primary health centres, six blocks, two districts and the state level office.	To determine the technical, organisational and behavioural determinants that affect the Health Management Information System processes and performance in Kerala using the PRISM framework.	1.An evaluation done in the district health information systems in Kenya found low rates for accuracy (30%) and completeness (19%). 2.Over-reporting of immunisation figures have also been reported in a study from Mozambique with higher values of 44 percent and 72 percent for BCG and measles respectively. 3.The overall level of use of information in meetings is only 35 percent. Even though the level of discussion on HMIS findings is high, the discussion on data quality is low.
Arfan Arshad Department of Information System KICT, International Islamic University Malaysia, Mohamad Fauzan Noordin	An exploratory qualitative research methodology	Hospital “A” employs 1025 healthcare professionals with a total count of 1800 employees and staff in its 36 departments and is one of the oldest	To perform a comprehensive and in-depth overall analysis of existing healthcare management information systems implemented in	1.The working capability and performance of systems which can improve by dealing professionally with internal and external factors. 2.Increase in

Department of Information System KICT, International Islamic University Malaysia, Roslina Bint Othman Department of Library & Information System, KICT, International Islamic University, Malaysia- “A Synthesis on SWOT Analysis of Public Sector Healthcare Knowledge Management Information Systems in Pakistan”		public sector healthcare organizations in Southeast Asia. Hospital B employs 1225 healthcare professionals with a total count of 2100 employees and staff in its 32 departments with its roots being older than 70 years The hospital was overcrowded with a significant number of in-patients (A>30000, B>25000 per year) and out-patients (A>1000000, B>900000 per year).	public sector organizations of Pakistan. 2) To identify and define Strengths of the existing HKMIS under study. 3) To evaluate weaknesses and possible influential factors. 4) To discover better opportunities to improve the working capability and performance of public sector HKMIS. 5) To identify and evaluate the possible threats that lead to failure of HKMIS.	population of developing countries and deteriorating conditions of healthcare and non-availability of healthy environment. So, HKMIS at public sector healthcare organization is under extreme constant pressure to deal with loads of healthcare data and information along with its processing and provision for decision making. 3.taking benefit of prevailing opportunities also helps improvise the working capability and performance of the HKMIS.
Lippeveld T, Sauerborn R, Bodart C, World Health Organization. Design and implementation of health information systems . Geneva: World Health Organization; 2000.				1.The core components of the information system have been described as the development of indicators based on needs, data collection, transmission, processing and analysis, which all lead to information use. The health information system allows organizational members to track their progress routinely in meeting organizational objectives, including patient

				management objectives for which data cannot be collected.
The role of supportive supervision on outcome of immunization program- a randomized field trial from Georgia Mamuka DjibutiEmail author, George Gotsadze, Akaki Zoidze, George Mataradze, Laura C Esmail and Jillian Clare Kohler BMC International Health and Human Rights20099(Suppl 1): S11	pre-post experimental research design	sample size of 300 PHC providers in each study group would be sufficient to detect at least 10% higher proportion of providers with updated job descriptions in the intervention group with 90% power and an unadjusted type-1 error of 5%.		

Chapter 3. Aims, Rationale and Objectives of Study

Project title:

An assessment on quality of UPHMIS through supportive supervision in Sitapur district of Uttar Pradesh.

Rationale:

“Lack of management, effective supportive supervision and feedback provision” focusing on HMIS data quality and information use practice and only 14% were able to interpret the findings and use the information for finding gaps and in decision making. Evaluation should be integral part of HMIS to identify weakness and continuous improvement. Hence the “current study planned to assess the percentage matched, quality and completeness of data.

Research Questions:

What are the factors that affect the quality of UPHMIS processes and performance in Sitapur District, Uttar Pradesh?

Objectives:

- To assess the quality of data being collected and entered in UPHMIS portal through matching with Supportive supervision round 1 and round 2.
- To assess the effectiveness of round 2 in comparison to round 1 Supportive supervision.
- To identify underlying causes of data errors in UPHMIS format by SWOT analysis.

Operational definition:

HMIS: HMIS format (tool) helps in “gathering, aggregating, analyzing and use of information for taking actions” to improve performance of health systems.

UPHMIS: UPHMIS is integrated portal for all data sources like Government of India portal, Health report card, Manual program reporting (MPR).

The Mandate of HMIS and UPHMIS: To ensure there is a continuous flow of good quality disaggregated data on health of populations and health care services to assist in local planning, program implementation, management, monitoring and evaluation.

UPHMIS SS Visit: Supportive supervision is done to check the data quality from the source document.

Quality: Quality is a set of attributes of a service and characteristics of a product or service that bear on its ability to satisfy stated or implied needs.

Chapter 4. Methodology

Study Design: Descriptive Study

Study Duration: Supportive supervision is done during a period of 3 months i.e. from February 2018 to May 2018.

Study Location: Supportive Supervision is conducted in 4 Blocks of Sitapur District in Uttar Pradesh. Total population of Sitapur is 4.84 lakhs (88.16% population lives in rural area) with population growth is 23.88%, sex ratio is 888 per male the avg. sex ratio in India is 940 (census 2011). Critical indicators like ANC checkup in 1st trimester (22.7%), Full ANC visit (1.1%), institutional delivery (67.8%), full immunization (44.8%) etc. (NFHS-4)

Study Population: Staff nurse, Pharmacist, Lab Technician, Assistant Research Officer, Health Education Officer, Block Program Manager, Data Entry Operator, were asked to show the records (source documents) to match with the portal data.

Sampling: 25 high priority districts are selected by GOI through composite score and after that each district have 4 TSU blocks (poor performing) and which is divided according to health index by TSU. Here I have Round 1 and Round 2 of SS visit,

Inclusion criteria: 4 blocks are Technical support unit blocks (TSU) which was decided by the state according to performance and poor health indicators (ANC registration, 4 ANC visits, full immunization, institutional deliveries etc.).

Data Collection Instrument: Checklist has been prepared to collect and match the data from the facilities by state.

Data Collection Procedure: Primary data is collected in CHC (Behta, Biswan, Mahmoodabad and Khairabad) by structured checklist given by the state. We inform the MOI/c before coming to audit and ask the Staff nurse, Pharmacist, Lab technician, BCPM, BARO to bring source register and data have to match with the source document to check the quality. State provided us supportive supervision format in the checklist (hard copy) we mention elements like human resource, training of staff, HMIS (Institutional delivery, still birth, full ANC checkup, PPIUCD, allopathic OPD, full immunization, etc.), Under-5 OPD & IPD data and JSSK data is matched or need to be corrected and secondary data collected from Bahraich,

Barabanki, and Faizabad, block, by other DMEs UPHMIS SS visit and previous monthly reports from UPHMIS portal.

Data Entry:After data collection, all the issues are discussed with the MOI/c and wrong data is directly corrected on the UPHMIS portal in the presence audited person and also portal have validation rule that are applied after entering the data and supportive supervision data entry is done after the audit directly in the online format on supportive supervision portal and submitted on the same day.

Statistical Methods:SWOT and data Analysis is done in STATA software and Excel.From SWOT analysis, after reading articles and thorough observation in the field, I mentioned factors which are responsible for quality of data and in data analysis matching status is shown that which indicators are matched and what are the reasons.

Ethical consideration: The respondents all belong to the Sitapur Health Services Department and foreseeing the possibility of them being held responsible for whatever information they are divulging, strict privacy and confidentiality with regard to all records and data were maintained.

The individual and personal details were not recorded in any form during the verification of the data.

Chapter 5.Results

Table 2 Perfect Match of Blocks of Barabanki Zone in Round 1 and Round 2

District	Facility	% of Data Matched in R1	% of Data Matched in R2
Bahraich	BPHC Shivpur	76.79	84.82
Bahraich	BPHC Chittaura	31.25	57.14
Bahraich	BPHC Mahsi	25.89	76.79
Bahraich	BCHC Motipur Mihinpurwa	57.14	86.61
Barabanki	BCHC Jatabarauli	87.50	95.54
Barabanki	CHC Ghunghter	91.07	93.75
Barabanki	BCHC Sirauligaupur	72.32	84.82
Faizabad	BCHC Bikapur	75.89	29.46
Faizabad	BCHC Rudauli	65.18	73.21
Faizabad	BPHC Masaudha	76.79	66.96
Faizabad	BCHC Sohawal	87.50	94.64
Lakhimpur Kheri	PHC Isa Nagar	63.39	81.25
Lakhimpur Kheri	CHC Phardhan	61.61	75.89
Lakhimpur Kheri	BPHC Phool Behar	47.32	55.36
Sitapur	BCHC Behta	77.68	83.04
Sitapur	BCHC Khairabad	79.46	72.32
Sitapur	BCHC Biswan	84.82	91.96
Sitapur	BCHC Mahmoodabad	80.36	90.18

Table shows percent matched with source document in Round 1 and Round 2 during supportive supervision. Most of the blocks is showing high matching status in 2 round. As they have started maintain the registers and in Bikapur CHC percentage reduces as it can be due to unavailable HR during reporting time or data entered wrong by data operator.

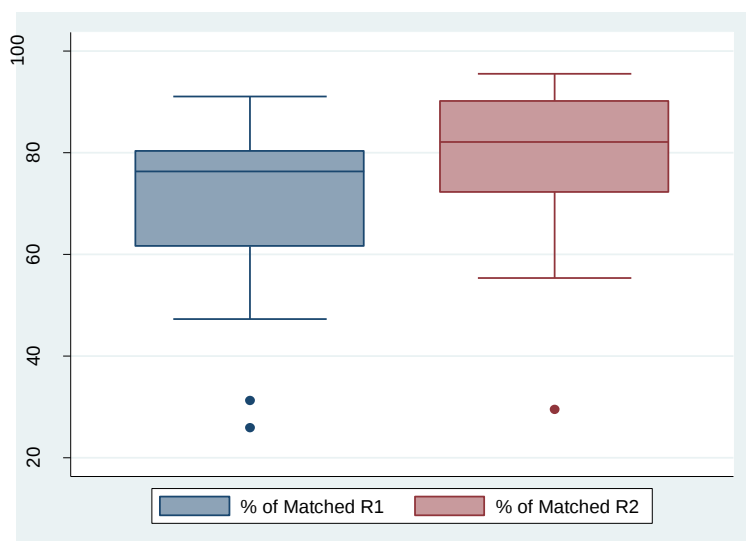


Figure 1 Box Plot of Matching Status

This Box plot graph shows deviation of curve and scattered of data in round 1 and round 2. If we plot a graph of normal distribution than in round 1 curve is deviated towards left side means curve is right skewed and in R2 median is at 2 and 3 quartiles, means scattering of data and outliers is less in compare to R1. In R2 median is at centre means interquartile range is equally distributed and graph shows normal distribution and the bottom whisker is much longer than the top whisker and the line raising to the top of the box.

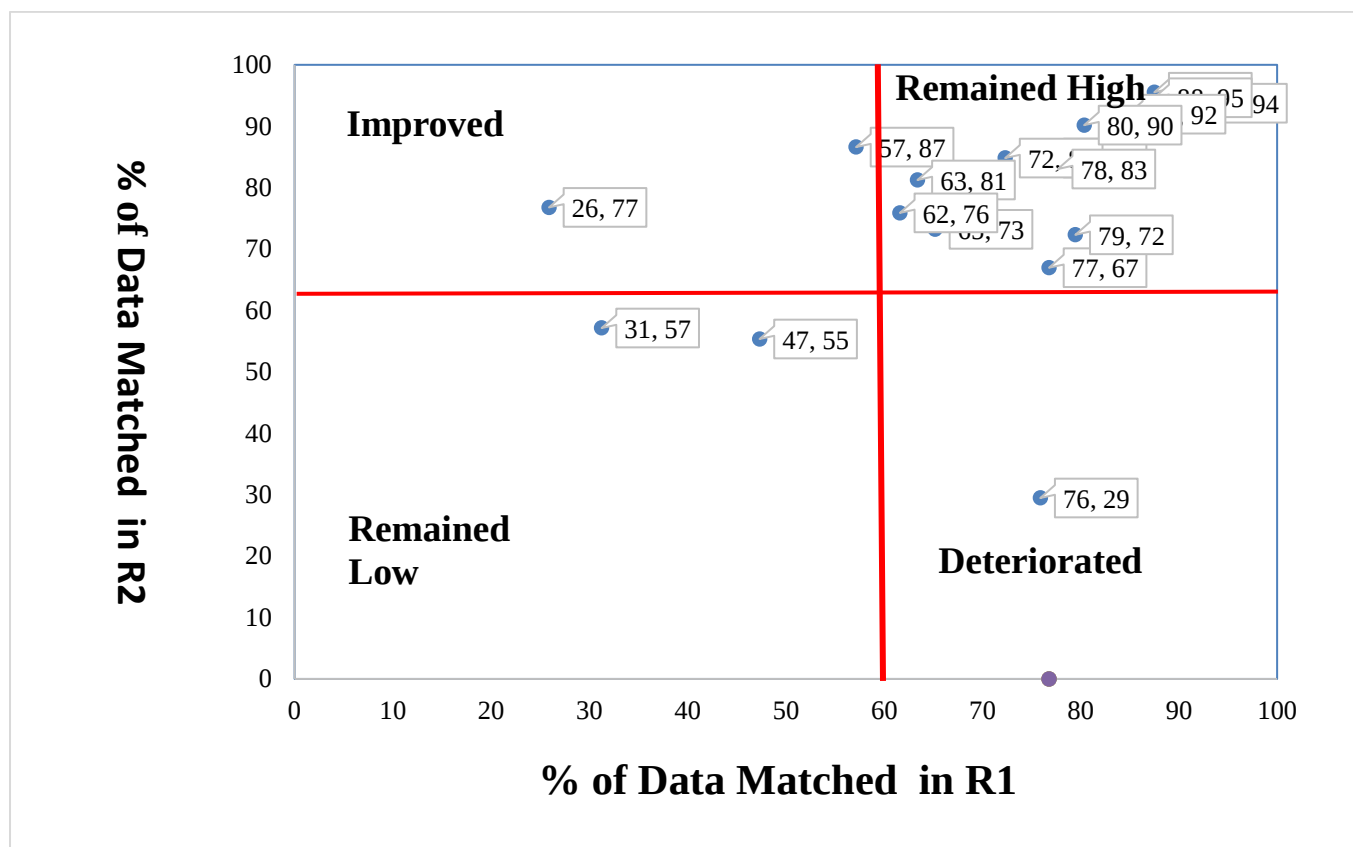


Figure 2 Scatter plot of Matching status of R1 and R2

This graph shows how many are in category of Improved, remained high, remained low and deteriorated according to matching status, scattered graph helps us to take decision who needs more improvement.

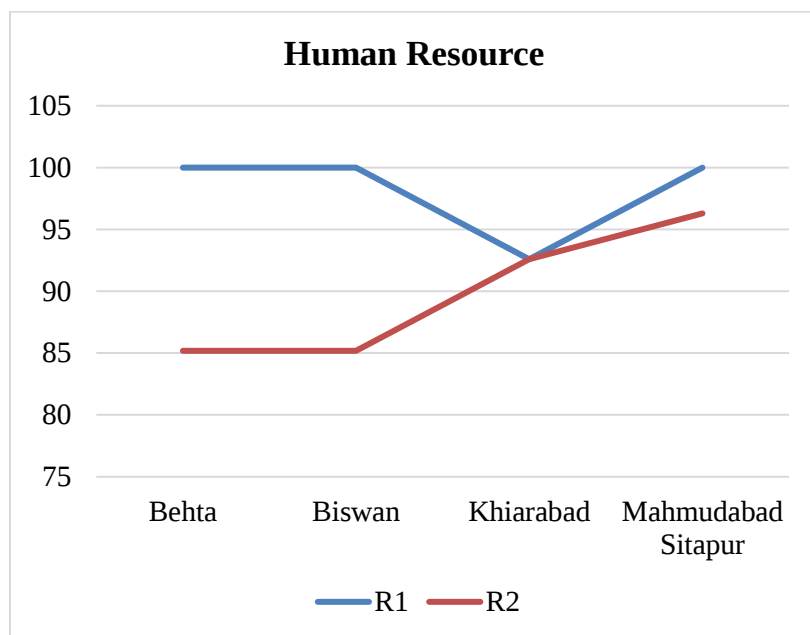
Table 3 Percent matched in round 1 in different elements present in the format.

Block	Human Resource	Training	Drugs and Supply(Availability)	HMIS	Child Health	JSSK
Behta	100	100	87	72	73	17
Khیارabad	93	82	61	89	73	100
Biswan	100	100	48	94	100	100
Mahmudabad Sitapur	100	100	83	72	73	33

Tables shows matching status of elements in different blocks, huge variation in data as they haven't filled the format. Very low data matched with source registered in JSSK.

Table 4Percent matched in round 2 in different elements present in the format.

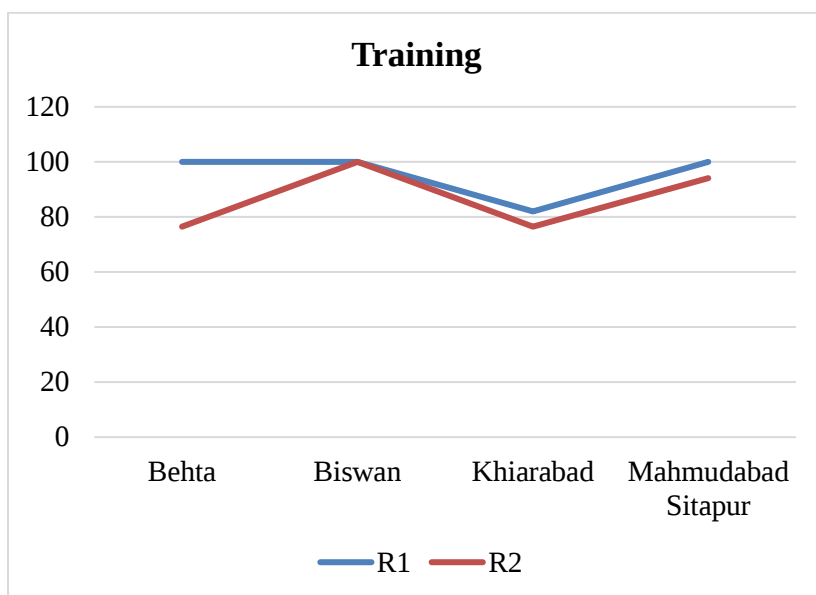
Block	Human Resource	Training	Drugs Supply(Availability) and	HMIS	Child Health	JSSK
Khیارabad	93	76	43	72	82	92
Mahmudabad Sitapur	96	94	91	72	100	100
Biswan	85	100	91	94	100	100
Behta	85	76	74	100	91	100



Graph shows percentage matched in R1 and R2. Less percentage matched in round 2, as the doctor is present in CHC on contractual basis but haven't shown on portal. Most of the MOI/c have confusion whether contractual doctors should be recorded on the attendance basis or on payment basis.

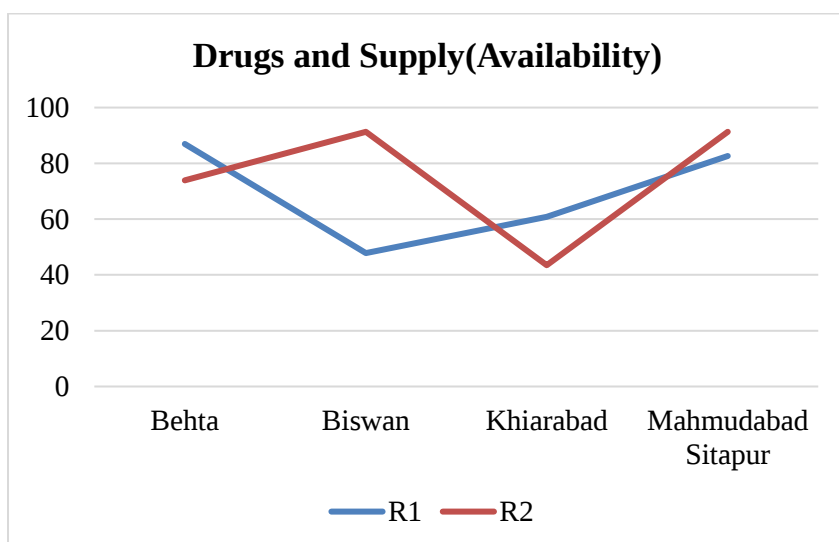
In most of the CHC electronic system has been started so most of them don't have source documents for the attendance register. Because of this they are not able to show the source document of attendance register during SS visit.

Figure 3 Matching status of Human Resource of R1 and R2



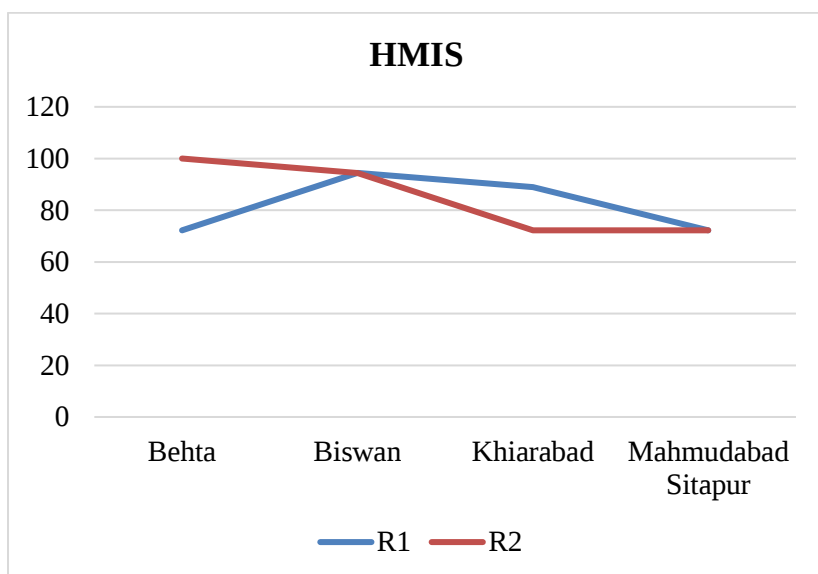
Graph shows percentage matched in R1 and R2. Less percentage matched in round 2 due to wrong data of training in register in CHC Behta, Khairabad and Mahmudabad. Total no of staff and total staff trained not matched, they need to update the information in register. Trained not matched, they need to update the information in register.

Figure 4 Matching status of Training of R1 and R2



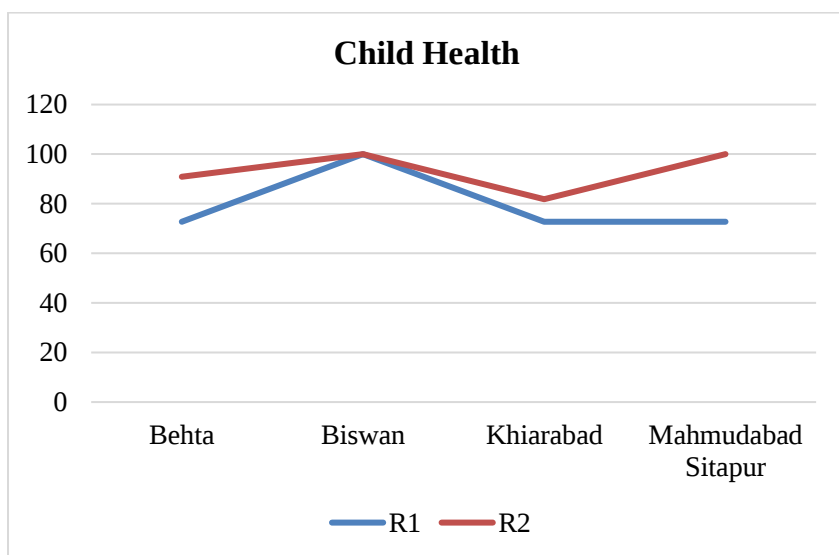
Graph shows percentage matched in R1 and R2. Less percentage matched in Biswan in drug and supply. Pharmacist get confused and he didn't enter the closing balance of stock in UPHMIS and they have mentioned adequate in HMIS data but when matched with source register it showed inadequate.

Figure 5 Matching status of Drugs and Supply of R1 and R2



Graph shows percentage matched in R1 and R2. Less percentage matched in Khairabad as nodal staff nurse was absent during the reporting and data collected by Block program manager was wrong and didn't matched with the source document during visit. In Biswan staff nurse has started mentioning summary at the end, so that in the absence of staff anyone can easily collect data from Labour register, but ANC register is still a major concern as it is not maintained at facility.

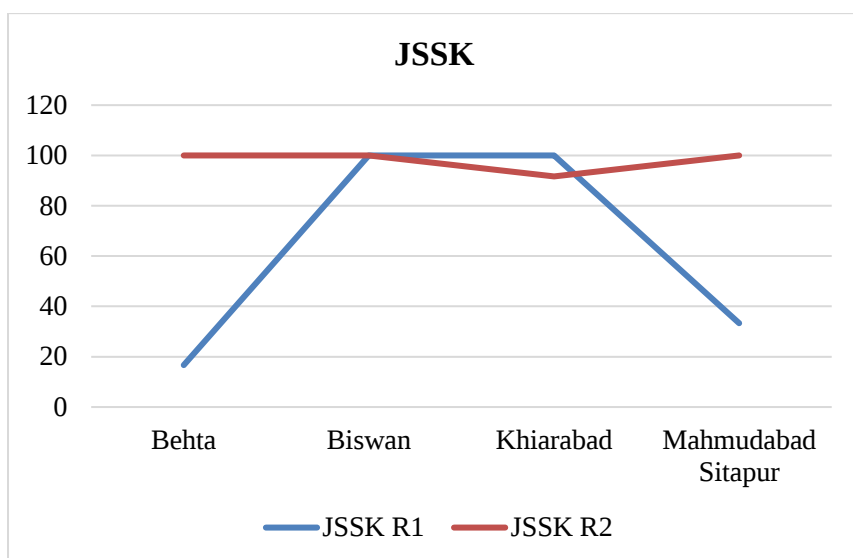
Figure 6 Matching status of HIMS of R1 and R2



Graph shows percentage matched in R1 and R2. Improvement has shown in reporting of Under-5 outpatient and inpatient children.

MOI/c has now started separating the U-5 child data from total OPD and IPD and also they are giving data of pneumonia and diarrhoea cases.

Figure 7 Matching status of Child Health of R1 and R2



Graph shows percentage matched in R1 and R2. In JSSK we can see the drastic changes in data. As staff nurse has started maintaining the diet and drop back register, but still drugs and consumables data is reported low and source register for drugs under JSSK is hard to find.

Figure 8 Matching status of JSSK of R1 and R2

- In 7 blocks Matching was poor but percentage increased in 2nd round due to availability of source documents and maintaining them by the staff nurse and staffs have taken responsibility to fill the format.
- MOI/c are serious after the meeting with district team and have taken major steps to improve the quality of data which we can see in round 2.
- After round 2 also HR and Training register is not available at facilities and action has been taken against it to improve the data.
- In maintain JSSK register and quality all have successfully reached to 100%.

SWOT analysis of UPHMIS process:

Internal Factors – Strengths identified:	
1.	Human Resource available
2.	Policy in existence, governing HMIS
3.	Decrement in data and medical errors
4.	Documentation and Source register

5.	Better safeguarding and improved confidentiality of sensitive information
6.	Improved reporting from few months
7.	Trained SN improved source register that reduces the possible causes of data loss
8.	Functional IT infrastructure
9.	Modified reporting structure according to need

Internal Factors – Weaknesses identified:	
1.	There is communication gap between stakeholders
2.	Shortage of competent staff
3.	Training of Staff nurse, Pharmacist, Lab Technician to understand defined elements and enter data correctly in source register
4.	Definition not clear to each stakeholder
5.	Lack of flow of communication in hierarchy
6.	Lack of accountability and transparency
7.	Lack of interest and professional in learning new systems
8.	MOI/c are poor in defining the indicators in validation meeting
9.	Maintaining of Source documents and complete documentation in some block only

External Factors – Opportunities Identified:	
1.	Completeness of UPHMIS format
2.	Improvement in data reporting and entering on time
3.	Training programs and facilities
4.	consolidation of health records
5.	Validation meeting after data reporting between staff
6.	Continuous use of information and improving data quality
7.	Motivating SN, Pharmacist, LT, BPM
8.	Improving element knowledge and support of stakeholders

External Factors – Threats Identified:	
1.	Unavailability of data on time in portal
2.	Manipulation of data
3.	Not taking responsibility for filling form
4.	Poor governance
5.	transfers and postings of professional staff
6.	anyone can access portal
7.	change is not easily acceptable by stakeholder

To overcome from our weakness all the Staff Nurse, Pharmacist, Lab technician should make good coordination with other members Issues and problems of each working members should reach to MOI/c. and S/he should conduct a meeting with all members and discuss the SOPs of HMIS and UPHMIS format, and solve the problem of identification of cases and data entry and most imported one person should be appointed from each department to collect the data from source register. Where HR sections are full they are lagging due to training and no interest in learning and grabbing new things. Before importing data to the portal MOI/c must conduct a validating committee and check the quality of the data i.e. numerator should meet the denominator. And discuss why outliers and data are fluctuating.

And already District have validation committee, just they need to strengthen and take strong decision on fluctuation of data. They should inspect whether data is and verified strict action should be taken after conducting Supportive supervision by government official.

Chapter 6. Discussion

- A good data produces complete, accurate, and timely information for DME to use as a basis for making appropriate decisions that contribute to the quality, expansion and sustainability of their programs and organizations. For information to influence management in an optimal way. it has to be used by decision makers at each point of the management spiral.
- Unavailability of register and wrong entry of data in UPHMIS portal is major concern because due to this quality of data has been decrease.

- Taking responsibility for reporting is a challenging part because understanding the meaning of data elements and entering into right column is a challenge. Entering data and reporting into right format can increase 70% data quality.
- After data collected should be verified by the MOI/c/ BPM/ ARO/ HEO, so that error and fluctuation of data be reduced.
- To overcome from our weakness all the Staff Nurse, Pharmacist, Lab technician should make good coordination with other members Issues and problems of each working members should reach to MOI/c. and S/he should conduct a meeting with all members and discuss the SOPs of HMIS and UPHMIS format, and if not able to understand the format or definition given in the format, BPM and MOI/c should be given one-day training by DME.

Solve the problem of identification of cases and data entry and most important one person(nodal) should be appointed from each department to collect the data from source register and parts of HMIS and UPHMIS format should be segregated according to nodal officer so that error can be reduce while collecting data.

Quality of data can't be increased until they will take the responsibility and will make summaries of all outcome on 20th of every month in their source register and this should be checked by the MOI/c to maintain the consistency and transparency in the data.

- Where HR sections are full they are lagging due to training and no interest in learning and grabbing new things. They should be trained or make the nodal officer to a responsible person.
- Before importing data to the portal MOI/c must conduct a validating committee and check the quality of the data i.e. numerator should meet the denominator and discuss why outliers and data are fluctuating, make sure format is completely filled and cross check the elements with other elements like referral, sent home healthy and death should be equal to total arrival of in labour and not in labour.
- And already District have validation committee, just they need to strengthen and take strong decision on fluctuation of data. They should inspect whether data is and verified strict action should be taken after conducting Supportive supervision by government official.
- Hard copies of HMIS and UPHMIS format should be present in every facilities and minutes of meeting as this shows data is validated by the MOI/c.

Limitation:

- Primary data is only from 4 blocks of Sitapur district and secondary data from 16 blocks of different districts.
- Critical Data elements are covered under supportive supervision visits.

Chapter 7. Conclusion

- Shortage of competent staff, unavailability of JSSK register (diet, drop back, 102 and 108, Stock register, U-5 child (OPD & IPD) register, lack of adequate training of staff, and no validation after data collection and summary was not found in labour and referred registered.
- In second round 14 blocks shows >70% improvement.

Data variation and outliers can be reduce if nodal officers are trained by DME.

Annexures



Supportive Supervision Tool for Strengthening of Data Quality (UPHMIS and HMIS)

Instruction note- This tool is applicable for district hospital and block level facility (CHC, BPHC) only

A. GENERAL DETAILS	
DESCRIPTION	CODE
DISTRICT NAME & CODE: _____	
BLOCK NAME & CODE: _____	
FACILITY NAME & CODE: _____	
DATE OF VISIT: _____	DD MM YY
TIME OF START OF SS: _____	HH MM
TIME OF END OF SS: _____	HH MM
Data reviewed during SS for the month of _____	MM YY
WHO ALL ARE THE MEMBERS OF SS TEAM VISITED TO THIS FACILITY?	DARO A DPM B DDM C HMIS OPERATOR C TSU PERSON D Other E IF OTHERS (SPECIFY) _____
NAME & DESIGNATION OF POINT PERSON	
NUMBER OF ANM IN BLOCK (EXCLUDING BLOCK FACILITY). Write NA for DH	
TOTAL NUMBER OF VACANT SC IN THE BLOCK. Write NA for DH	

B. Government officials participation during supportive supervision visit		
S.NO.	DESIGNATION	POSITION (AVAILABLE-1 / VACANT-2/NA-3)
1	CMS / MOI/C	
2	Hospital Manager/ BPM	
3	Block ARO	
4	BCPM	
5	Staff Nurse posted at labor room	

B. Government officials participation during supportive supervision visit		
S.NO.	DESIGNATION	POSITION (AVAILABLE-1 / VACANT-2/NA-3)
6	Pharmacist	
7	HEO	
8	Computer Operator	

C. VALIDATION OF CRITICAL DATA ELEMENT (Write appropriate code as applicable)				
S. No.	Data Element Name	Value as per UPHMIS/ HMIS	Value as Per Source Document/ Observation	Matched.....1 Corrected.....2 Not Able to Correct.3 Source Register not available.....4 Not Able to Audit....5 Not Applicable.....6
1	Section A - Human Resource			
1.1	Gynecologist & Obstetrics – Regular			
1.2	Gynecologist & Obstetrics – Contractual			
1.3	Anesthetists – Regular			
1.4	Anesthetists – Contractual			
1.5	Paediatrician– Regular			
1.6	Paediatrician– Contractual			
1.7	MBBS male MO - Regular			
1.8	MBBS male MO - Contractual			
1.9	MBBS female MO - Regular			
1.10	MBBS female MO - Contractual			
1.11	Medical officer AYUSH- (Male) – Regular			
1.12	Medical officer AYUSH- (Male) – Contractual			
1.13	Medical officer AYUSH- (Female) – Regular			
1.14	Medical officer AYUSH- (Female) – Contractual			
1.15	Staff nurse – Regular			
1.16	Staff nurse – Contractual			
1.17	ANMs - Regular			
1.18	ANMs - Contractual			
1.19	ASHA sangini approved in block (applicable for block facility only)			
1.20	ASHA sangini working in block (applicable for block facility only)			
1.21	ASHA approved as per PIP (applicable for block facility only)			
1.22	ASHA filled against approved (applicable for block facility only)			
1.23	ASHA trained in induction Module (applicable for block facility only)			
1.24	ASHA trained in Module 6 & 7- Round 1 (applicable for block facility)			
1.25	ASHA trained in Module 6 & 7- Round 2 (applicable for block facility only)			
1.26	ASHA trained in Module 6 & 7- Round 3 (applicable for block facility only)			
1.27	ASHA trained in Module 6 & 7- Round 4 (applicable for block facility only)			

C. VALIDATION OF CRITICAL DATA ELEMENT (Write appropriate code as applicable)				
S. No.	Data Element Name	Value as per UPHMIS/ HMIS	Value as Per Source Document/ Observation	Matched.....1 Corrected.....2 Not Able to Correct.3 Source Register not available.....4 Not Able to Audit....5 Not Applicable.....6
3.23	Beds available			
4	HMIS data elements (imported on UPHMIS portal)			
4.1	Number of PW received 4 or more ANC check ups			
4.2	Number of PW having Hb level<7 (tested cases)			
4.3	Number of PW having severe anaemia (Hb<7) treated			
4.4	Number of Institutional Deliveries _Including C-Section			
4.5	C-section			
4.6	Out of total institutional deliveries number of women discharged within 48 hours of delivery			
4.7	Live birth (Male + Female)			
4.8	Still Birth			
4.9	Female Sterilization (total of all method)			
4.10	PPIUCD			
4.11	Children aged between 9 and 11 months fully immunized –Total (Male+Female)			
4.12	Special Newborn Care Unit (SNCU Admissions) –Total Inborn			
4.13	Special Newborn Care Unit (SNCU Admissions) –Total Outborn			
4.14	Number of deaths occurring at SNCU			
4.15	Infant deaths within 24 hrs(1 to 23 Hrs) of birth			
4.16	Infant Deaths up to 4 weeks (1 to 28 days)- Total			
4.17	Infant Deaths Between 1 month (more than 28 days) and less than 12 months- Total			
4.18	Child Deaths between 1 year and less than 5 years- Total			
4.19	Maternal Deaths (15 to 49 yrs.)- Total			
4.20	Allopathic- Outpatient attendance			
4.21	Inpatient (Male + Female for both adult and child)			
5	Child Health			
5.1	OPD- Children (up to 5 year)			
5.2	OPD- Diarrhea (2 month to 5 year)			
5.3	OPD- Pneumonia (2 month to 5 year)			
5.4	IPD- Children (up to 5 year)			
5.5	IPD- Diarrhea (2 month to 5 year)			
5.5	IPD- Pneumonia (2 month to 5 year)			
5.6	Received Gentamycin - Children (up to 5 year)			
5.7	Received Gentamycin - Pneumonia (2 month to 5 year)			

SECTION	NAME OF SECTION	PERSON RESPONSIBLE	DESIGNATION
A	Human Resource		
B	Training		
C	Availability of RMNCH+A drugs, supplies and equipment as per 5x5 matrix		
D	Performance Indicator		
E	Process Indicator		

Write each of the identified issues and suggestive action plan in detail identified during the visit and summarize the findings on the action plan table given in section G

[illegible]

Age Group	Percentage
18-24	10%
25-34	15%
35-44	20%
45-54	25%
55-64	30%
65-74	35%
75-84	40%
85+	45%

G. ACTION PLAN (TO BE DEVELOPED AND SHARED WITH MO I/C or CMS)

Summarize the findings in the table below based on overall findings for further sharing and finalization with MO I/c or CMS.

Write action plan such as, a) Register to be modified like addition of new column, b) New Register need to be added with name of register, c) Orientation plan for data element definition issues etc.

#	Identified issue	Action Planned/Taken	Issue resolved (Yes/No)	Person responsible- Name & Designation (if Action Planned)	Timeline (Write "done" if completed during visit)
1					
2					
3					
4					
5					
6					
7					

Signature of SS team member:

Signature of CMS or MO I/c (as applicable):

Team Member 1:

Date:

Team Member 2:

Date:

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