UNDERSTANDING CHALLENGES AND BARRIERS OF HMIS DATA QUALITY: A STUDY IN FOUR SUB-CENTERS OF 25 HIGH PRIORITY DISTRICTS IN UTTAR PRADESH STATE

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Introduction

A Health Management Information System (HMIS) is a system that integrates data collection, processing, reporting, and use of the information necessary for improving health service effectiveness and efficiency through better management at all levels of health services.

In India- A DIGITAL INITIATIVE under National health Mission, Ministry of Health and Family welfare, Government of India (GoI) - the need for an information base, one of the core strategies of the "Strengthening capacities for data collection, assessment and review for evidence based planning, monitoring and supervision". As a step in this direction, the Ministry is established a dedicated Health Management Information System (HMIS) portal for all Public Health related information. The HMIS web portal was launched in October, 2008 to enable capturing data from both public and private institutions in rural and urban areas across the country.

Objective

-To understand the levels and trends of HMIS data quality of selected RMNCH indicators

-To identify the reasons for data quality issues of the selected health indicators

Methodology

- Research Approach– Mixed Method
- Research Design– Sequential Explanatory Study
- Sample Area– HMIS– 6948 SCs, HMIS_SS– 5331 SCs.
- Sample size– Two SCs (good and poor) in one Block from Two District
- Source of Quantitative Data– HMIS Portal & HMIS Supportive Supervision
- Source of Qualitative Data– In-depth interview with semi structured open-ended questionnaire
- Sampling Technique– Probability Purposive [HMIS portal data score is "Not reported in 12 month=0", "Not reported in 6-12 month=1", "Not reported in 1-5 month=2", and "Reported in all month=3" & HMIS supportive supervision data as "No source=0", "source but not matched=1", "Matched=2".

  Sorted as '0-6'(<30%) is poor performance, '7-15'(>30% and<80%) is Modest performance, '16-20'(>80%) is good performance.]
- Quantitative Data Analysis- Data-> Verify and Coding in STATA -> Tabulate-> Interpret.
- Qualitative Data Analysis– Content analysis for similarities.

Research Question	Method
1.What is the variation of reporting status of SCs across 25 HPDs on selected indicators ?	The downloaded data from the HMIS portal is analyzed to understand the district level variations in the reporting status
2.What is level of discrepancies in the HMIS reporting between reported portal data and its source documents (facility records & registers)?	The HMIS Supportive supervision data , generated by IHAT, is used for analyzing the level of discrepancies between facility record and HMIS reported data
1.What are facilitators or barriers for a SC ANM to generate and report good quality data? - Motivation, perceived risk, benefit, etc.	Based on the analysis a qualitative in depth interview is conducted in two good performing and two poor performing SCs using a in depth interview tool
2.What are the systemic challenges - good and poor performing Sub-Centers.	The systemic is challenges and opportunities to improve the data quality is also captured through an interview with the MOIC

Determinants of data Quality Issues

Facilitators/barriers For SC ANMs-

Understanding- ANMs are not using the valid registers for day to day data entry of service delivered due to complex elements in registers.

Motivation- There is no verbal appreciation and recognition given for ANMs performance.

Systemic Challenges-

Understanding-The elderly and low educated ANMs are understand the elements at time of training but after, retention from training is a challenge for those ANMs.

Supervision- Lack of effective supervision for the using of valid register.

System Level- The HMIS format change/added elements and provide with English language is a challenge for SC and Block level.

Motivation- The less motivation has been seen from immediate supervisor to AROs for HMIS data quality. Manipulation of data from supervisor could lead to demotivation the employee performance and quality of data.

Feedback- Effective feedback not given from MOIC level for misreporting/over reporting to some ANMs for improve the data quality.

Submission of data- Completely and Timely data sometimes not provide by SCs. Complete data issues mostly for elderly ANMs.

Recommendation

- Use the local language HMIS(Hindi) format to avoid misunderstanding.
- Continuous training or support should be provide as per Minutes and observation takes from ARO for data quality issues of SC ANMs and others responsible employee for HMIS reporting if needed and more focus to the issues faced by elderly with low educated ANMs and provide training accordingly.
- -Encourage/give advice to the all data provider individual for day to day entry to avoid backlogs(should be short time between collection and transmission the data). And should be increase the level of supervision for the use of valid register.

Limitation

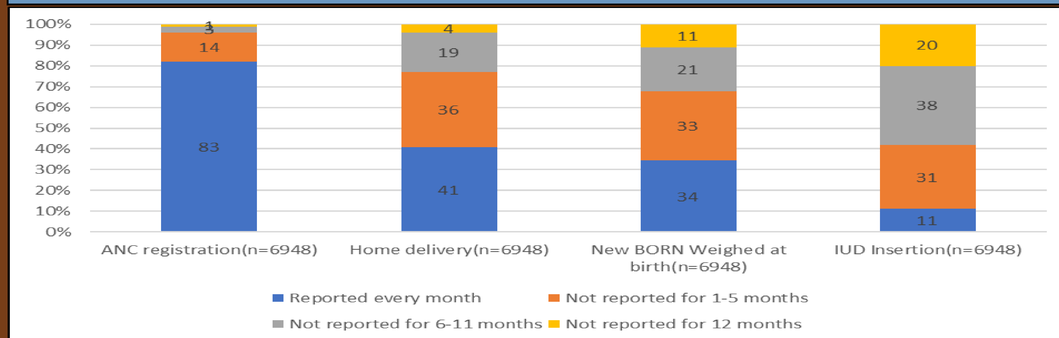
-It is a time bound study.

-Sample is taken small and its not represent the study universe

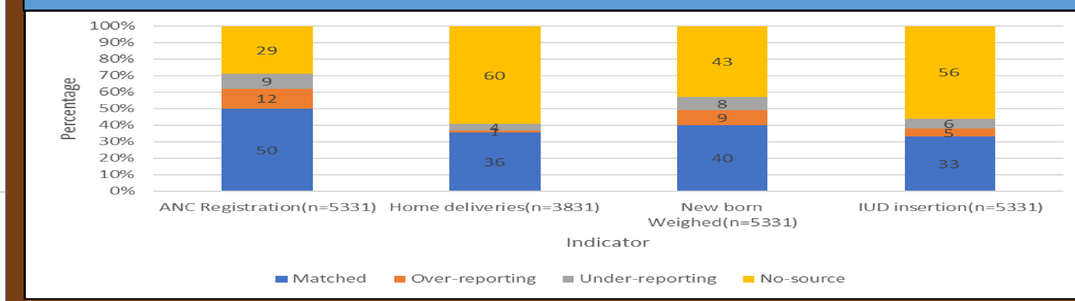
-The responses were recorded as narrated by the participants was subjective.

Results

Data Reporting Percentage of Sub-Centers of 25 HPDs on selected RMNCH Indicators, 2016-17



Data Audit in selected RMNCH indicators,, April 2015-Aug 2016



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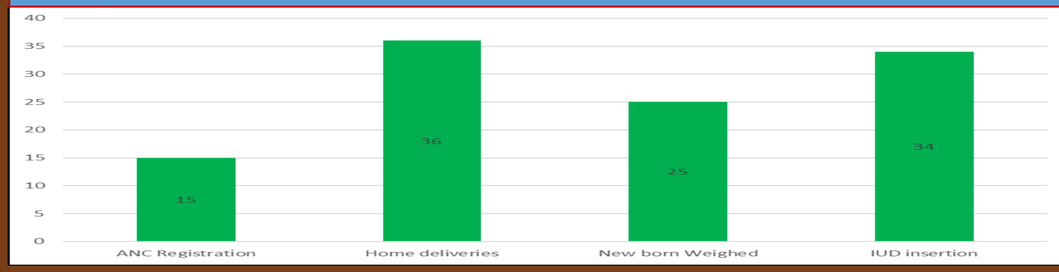
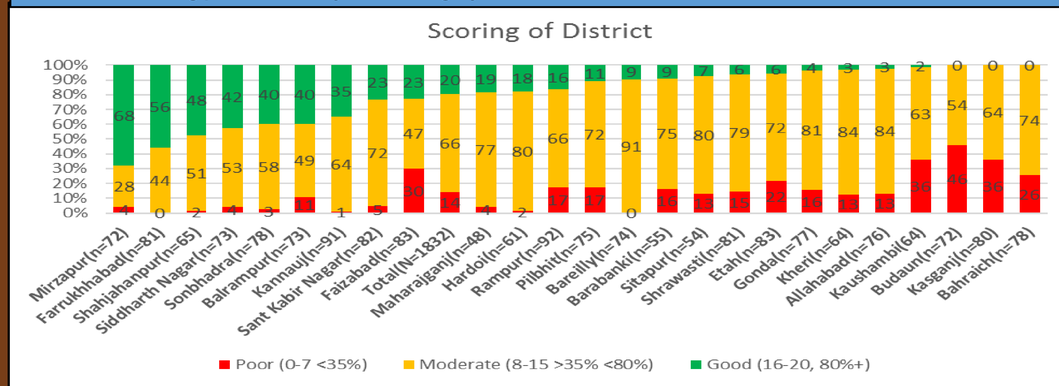


Sub-Centers Scoring performance by three Category of 25 HPDs-



Conclusion

-Facility use personal documents, hence their lack of results into improvising the data quality and this can be associated with errors of capturing less of the required or more of the variables.

-The methods could be reproducible on a larger scale and could aid in development for data quality improvement. We believe bigger studies with large samples could unfold these issues in details.