

# RAPID ASSESSMENT OF HMIS STRENGTHENING PROJECT IN BIHAR



Summary of Findings and Way Forward



United Nations Population Fund - UNFPA

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This rapid assessment was conducted internally by UNFPA and IIMR. The methodology was decided in an internal brainstorming meeting and tools were developed to investigate project achievements in terms of improving knowledge of the health functionaries on various data elements of the Health Management System (HMIS). The field work for gathering data was undertaken by the project staff during June – July, 2011. The summary report has been prepared at UNFPA HQ, New Delhi, which provides interpretation of the data and brings out the lessons learned and the way forward. The efforts of all those involved in this process are gratefully acknowledged. Any further queries may be directed at the following email ID –

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## Summary of Findings and Way Forward

### 1. Background

The HMIS strengthening project is being implemented by IIHMR in collaboration with the State Health Society, Bihar, with the financial support of UNFPA since October 2009. The project undertook various activities such as development of training materials, conducting training sessions of grassroots functionaries at health Sub-Centre and at Block levels on HMIS formats and providing handholding support during monthly review meetings. In order to judge whether the project has achieved the expected outputs, a rapid assessment was conducted during mid 2011. Specifically, the study examined the effectiveness of training towards improving the quality of HMIS data in terms of its completeness, timeliness and correctness and recommended specific areas that should be focused upon in the future course of project implementation.

### 2. Methodology

Under this rapid assessment, a random sample of 81 Health Sub-Centre across 9 districts (one from each zone) was selected. Three PHCs and three health sub-centres were selected randomly using distance criteria. Structured interview tools were developed for eliciting information from ANM, Data Entry Operator, Block Health Manager (at the PHC level) and from M&E Officer (at the district level). Besides this, a semi-structured format was used to interview Medical Officers, Civil Surgeons and Regional Directors on various aspects related to HMIS and the feedback mechanism. In addition, data obtained from the state HMIS web-portal was also analyzed to judge changes in the data quality parameters over a period of time, before and after the implementation of the project.

### 3. Major findings

The salient findings based on primary and secondary data are summarized as under –

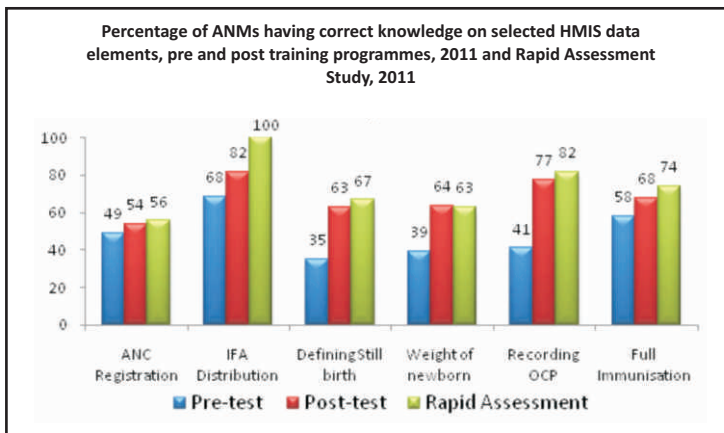
#### 3.1 Completeness of Training Activities

- All planned training programmes for health functionaries were completed and 459 such training programmes were organized. Majority (94 percent) of these programmes were conducted during November 2010 – January 2011;
- Around 19 thousand functionaries were targeted for training on HMIS, against which 93 percent (around 17.9 thousands) were covered;
- 97.5 percent of the ANMs respondents under this assessment study had received the training, while 89 percent of DEO, BHM and DPM in the sample had undergone training sessions;

- Almost all the categories of the respondents perceived these trainings as useful. On further probing on the specific aspects of the usefulness of training, around half of the ANMs reported that it enhanced their understanding of various data elements and cleared doubts in filling revised HMIS reporting format. Around half of the BHM reported that timeliness has improved due to the training while one third of them opined that the training helped them in clearing many doubts on various data elements.

### 3.2 Assessment of knowledge on data elements

- The analysis of pre and post test assessment scores from the training programmes of around 10 thousand participants indicated that the knowledge of various data element improved due to the trainings. Such improvements were found in range of 15 – 34 percent on various data elements amongst grassroots functionaries. Similarly, improvements were also found among those participants who had attended training programmes conducted at the district level;
- Out of the six data elements, on which knowledge was tested, 74 percent of the ANMs were able to correctly respond to two data elements (i.e. reporting about registration of ANC cases and weighing of the newborn), and 83 percent correctly mentioned for one of the data element (i.e. reporting about still birth data element). For remaining three data elements (counting of fully immunised children, reporting on IFA tablets and number of women using OCP), more than 91 percent had correct knowledge. Overall, 86 percent of the ANMs had correct knowledge on these six data elements;



- Among data entry operator, correct reporting of these selected data elements were comparatively lower and less than 75 percent correctly reported on three data elements.

### 3.3 HMIS data quality

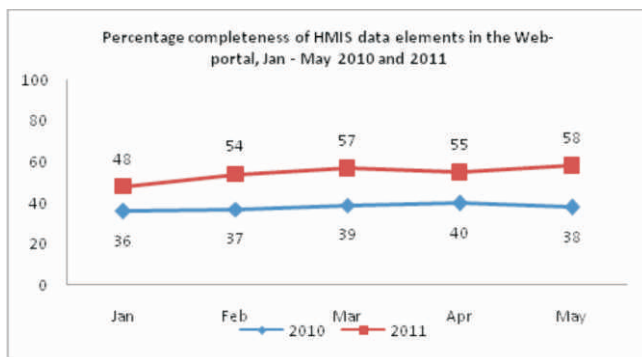
The coverage of ANC cases registered by the ANMs in the sample was compared to the expected level of achievement (ELA) for the year 2011-12 based on the population covered by the health Sub-Centre. The analysis indicated that 68% of the ANC cases against the ELA were registered through HMIS.

One of the objectives of the project is to improve data quality, which has been judged from three dimensions i.e. completeness, timeliness and correctness of compilation and reporting of HMIS information at different levels. In order to make effective use of HMIS data it is important that all reporting units provide complete data without leaving any of the relevant data element blank and ensure that the reports are submitted timely to provide immediate feedback. Last, but not the least, reporting of correct data is essential to make any meaningful inferences.

The assessment of each of these dimensions of data quality is based on the analysis of both, secondary and primary data. The information obtained from the web-portal for two time points, before and after the project implementation and primary data gathered from interviewing various cadres of health functionaries have been analysed.

#### ■ **Completeness**

- The secondary data analysis indicated that completeness of the data elements in the HMIS reporting for the state as a whole, which was 38 percent (for the period Jan – May 2010) increased to 54 percent for the same period in year 2011, registering an improvement of just 16 percentage points in one year;
- Completeness of entries in various registers by the sampled ANM till July 2011 was examined. It was found that 64% of the ANMs had updated entries till July 2011 in their daily diaries, while the percentage of them having updated entries in Routine Immunisation, MCH / MCTS and Family Planning registers were 58, 53 and 39 respectively. The entries in these registers were found lagging behind by about one – two months among those ANMs who had not updated their records;
- Only around 15 percent of the data entry operators reported problems of incompleteness of the reports submitted by the ANMs.



(Source: <https://bihardhis.nhsrc-hmis.org>)

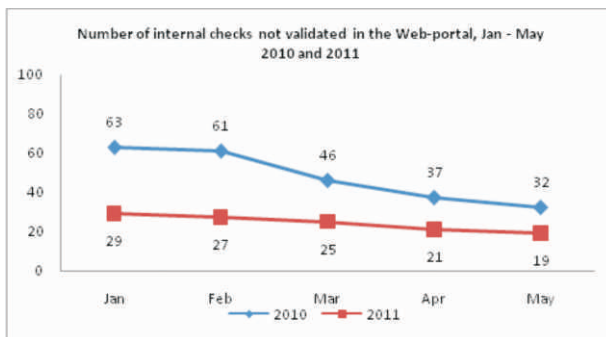
## ■ **Timeliness**

- The analysis of the dates on which reports were submitted by the ANMs for the last month preceding the survey, indicated that all ANMs had submitted their monthly report within the stipulated time;
- Two third of the Civil Surgeons (CS) and half of the District Project Manager (DPM) and Regional M&E Officer interviewed in the survey said that they discussed timeliness of reporting and data uploading most commonly during review meetings. The percentage of district M&E Officers mentioning this aspect was comparatively lower at 16 percent.

## ■ **Correctness**

- The correctness of data elements at the sub-centre level was assessed by physically comparing 17 data elements recorded in the registers and their compilation in the monthly report of the ANMs in the sample. Such verification helped assessing coherence of the information recorded in registers and their compilation in the monthly formats. The highest coherence was observed regarding the number of Oral Pills cycles distributed for a period (month) that is 66.7 percent, which suggests that one third of the ANMs wrongly compiled their report on this data element. On the other hand lowest coherence was found for the number of pregnant women received 3 ANC checkups (34.7%), thereby indicating that two third of the ANMs had wrongly compiled this data element;
- 85.2 % of BHM and 74.1 of DEO mentioned that they perform data correctness and completeness check before uploading it on the web portal;
- Around 19 percent of the BHMs interviewed, reported facing problems in compilation of block reports due to incorrect data submitted by the ANMs;
- The web-portal has provision of undertaking validation checks by which internal consistency of HMIS data is undertaken. Whenever any of the

consistency checks and validation rules are not fulfilled, the package generates error logs on monthly basis. For the period January - May 2010, on an average 48 percent of the consistency check rules were not validated by the computerized system, which was decreased to 24 percent for the same period of the year 2011;



(Source: <https://bihardhis.nhsrc-hmis.org>)

The overall quality of HMIS data submitted by ANMs can also be judged with the responses from BHM and DEO, who are directly handling their reports for compilation purposes. Half of the BHMs and DEOs (around 48 percent) reported facing problems in compilation of HSC data, either due to incompleteness or inaccurate data submitted by the ANMs.

### 3.4 Assessment of feedback mechanism

- The Zonal Officers (ZOs) of the project along with regional M&E Officers have organized workshops in around 55 percent of the districts (21 district out of 38) to institutionalize HMIS monthly review meetings at district and PHC levels. Efforts to organize such workshops are on and all the districts are expected to be covered by August 2011. The review meetings in the respective zones are being attended by the ZOs to support and provide necessary guidance. Major findings on the current status of the review and feedback mechanisms are described below -
- As per guidelines issued by State Health Society Bihar (SHSB), Block Health Managers (BHM) together with MO/IC, are responsible for all HMIS activities and they should be holding monthly review meetings at the PHC regularly. The findings suggest that only 44 percent BHM had conducted HMIS review meeting so far. Among these BHMs, only half have discussed HMIS related issues in all the meetings organized during a given month, while rest discussed only once a month;

- At the district level, primary role of M&E Officer is to review and provide feedback on HMIS. The assessment study found that around one third of them had conducted such review meetings and among those, majority had conducted these only once a month. Half of them emphasized on data correctness and one third discussed on the weak areas of reporting and completeness of the monthly reports during these review meetings;
- The ANMs were asked about their participation in the meetings organized at the PHC level. Almost all of them reported attending meetings at the PHC, however, on probing further on this, only one quarter of the ANMs reported that at least one meeting organized in their respective PHCs, during a given month is devoted for HMIS review. Among those who mentioned about such fixed meeting schedule for HMIS review, majority were satisfied with the proceedings;
- Around 89 percent of the CS and district M&E officers said that they have received feedback on HMIS reporting from higher authorities. At sub-district levels, comparatively lower percentage of BHM (77 percent) reported receiving such feedback from the district officials;
- Majority of the officials interviewed at different levels in the selected districts said that they had provided feedback to lower level officials and this figure varied between 77 and 89 percent.

### **3.5 Assessment of use of HMIS data by different level of functionaries**

- Around 88 percent of the MO/IC and one third of the CS reported that they had used HMIS data for programme monitoring purposes;
- Among district M&E officers, 88 percent reported that they used HMIS data for various purposes such as providing specific comments on registers and reports, undertaking field visits and carrying ongoing capacity building on common deficient areas;
- Majority of the BHM (89 percent) reported that analysis of HMIS data helped them to decide about their field visits plans for providing specific comments on registers maintained by the ANMs and on their monthly reporting. Around three fourth of the BHM also said that such an analysis helped them to undertake capacity building activities on specific aspects;
- Encouragingly, three fourth of the Regional Dy. Directors (RRD) had started using HMIS data to review progress of the programme, though one quarter of them felt that the data quality still remained as cause of concern. They also opined that validation checks should be installed at all levels to improve the data quality of HMIS.



### 3.6 Other Relevant Issues toward Strengthening HMIS

Findings on some of the issues which are closely related to strengthening of HMIS in the state are outlined below -

#### ■ **Compilation of HMIS report by ANMs**

- The assessment study found that majority of the ANMs had sufficient quantity of registers, and only a meagre percentage of ANMs (2 percent) reported not having enough number of registers. Around 11 percent of the ANMs did not have not having enough quantity of monthly formats for compilation of the reports, which form the base for HMIS monthly reporting;
- Around 94 percent of the ANMs felt that they have proper understanding of the data elements of HMIS;
- Only few ANMs reported that their doubts on HMIS were not cleared by the higher levels officials.

#### ■ **Availability and Use of new HMIS formats**

One of the objectives of the project was to advocate for making the new NRHM formats available at all the levels, particularly at the HSC and PHC levels to maintain data uniformity. The findings on these issues are summarized below -

- The use of new formats of HMIS used at the sub-centre levels were reported by 80 percent of the respondents including MOIC and BHMs. The information matches with the one generated by all ZOs of the project in their respective zones that around 84 percent of the health sub-centre had new NRHM format for reporting;
- On the other hand, 76 percent of the ANMs in the assessment study reported the use of new HMIS formats;
- Regarding sufficiency of the stock of printed HMIS formats for more than three months, the findings indicated that around one quarter of the ANMs and district M&E Officers reported sufficient stock of formats, particularly, at sub-centre, while around one third of the respondents at the block level (MOIC and BHM) said the same.

### 4. **Summary and Conclusions**

The project had been successful in organising all planned training programmes and more than 95 percent of the target participants were trained on various aspects of the HMIS. The training programmes for grassroots level health functionaries focused on imparting knowledge on various data elements and its correct compilation procedures so as to improve data quality generated through the monthly reporting system. The pre and post assessment of training programme indicated that the knowledge of the participants increased in the range of 15 – 34 percent on various

data elements of HMIS. The retention of knowledge among ANMs was judged on six data elements. Around 86 percent of them were able to correctly answer these six data elements in the rapid assessment study, though only 74 percent of ANMs could correctly answer two of the data elements.

On data quality aspect, ANMs in the sample area had registered only 68 percent of the ANC cases against the expected level of achievement. Further, three elements of data quality, completeness of monthly reports in terms of all data elements, timely submission of the monthly report and submitting accurate data were probed in this assessment. Completeness of data elements on the State web-portal increased only by 16 percentage points (from 38 to 54 percent) during 2010 to 2011 which is less than the expected level considering the amount of efforts devoted under this project. Physical examination of records of ANM revealed that 64 percent had updated entries in their daily diaries and 58 percent for immunisation registers, while for other registers the entries lagged behind by one to two months.

Though all the ANMs were found to have submitted their last month's report within the stipulated time, the correctness of data judged by coherence between registers and compilation in monthly report indicated that 67 percent of them had correctly compiled the numbers of women provided with Oral Pills, which was highest level of coherence out of 17 data elements compared and verified in this assessment study. On the other hand, around two third of the ANMs had committed mistakes regarding compilation of 3 ANC information for their monthly reports. Half of the Block Health Managers and Data Entry Operator faced problems in compilation of Health Sub-Centre data at the PHC level either due to incompleteness or inaccuracy of the data submitted by the ANMs.

The project had made efforts to institutionalize the review and feedback mechanism at all levels. The findings indicated that less than half of the BHMs in the sample and only one third of the district M&E Officer had conducted HMIS review meetings so far. Almost all ANMs reported that they participate in PHC meetings, but only quarter of them said that at least one of the meetings during a month had been fixed for HMIS review. While most of the Civil Surgeons and M&E Officers at the district level mentioned that they have received feedback on HMIS from higher authorities, comparatively lower percentage of BHM (77 percent) at sub-district level indicated the same. This finding calls for further strengthening of review and feedback mechanism at the district and sub-district levels. The data generated from HMIS were used for tracking programme progress by the Regional Dy. Directors. District and block level officials also used this data for deciding about their field visits and undertaking ongoing capacity building activities on specific data elements.

Around 76 percent of the ANMs in the study mentioned that they were reporting in the new HMIS formats, while only around one quarter of them and district M&E Officers indicated that they have sufficient stock of formats for the next three months.

## **5. Lessons Learned and Way Forward**

### **5.1 Ongoing capacity building Vs one-time training:**

It has been less than a year that the ANMs in the entire state have been trained in HMIS through a one-time two-day training programme. The assessment of their knowledge and practice indicated that they still face problems in some of the data elements and gaps continue to exist in the accurate compilation of records into monthly formats. Usual challenges associated with a one-time training programme, are visible in this case too, which calls for ongoing capacity building, particularly surrounding some of the data elements. Therefore, continuous interaction with ANMs with hands-on training on their own records and compilation, needs to be taken up for improving their knowledge and thereby translating this into better quality of HMIS data in the state.

### **5.2 Strengthening review and feedback mechanism:**

The support provided by the project towards the review and feedback mechanism has just been started, which is under implementation for less than six months. Since these activities are to be undertaken compulsorily once a month at every level, it will require some time. This would require hand holding support for inculcating the habit of organising such review and feedback meetings based on the analysis of HMIS data by the block and district level officials. Further, this will also require demonstration and hand-holding support for conducting meaningful review meetings by these officials, therefore, it is important to devote focused time for structuring HMIS review meetings and get it institutionalized.

### **5.3 Building analytical capacities of the middle level managers:**

The structured training programmes for middle and higher level management officials have not yet been initiated under this project. Building such capacities among managers had been originally envisaged under the project, so that they could track programme performance and provide evidence based feedback for improving programme implementation. Towards this attempt, only a draft module was prepared under the project and no attempt was made to pre-test or use it for capacity building of the managers. Thus, concerted efforts are needed to build analytical capacities of the health managers, which will help them to conduct meaningful and structured HMIS review meetings on a regular basis.

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