Pregnancy Child Tracking and Health Services Management System (PCTS) Gap Analysis
Rajasthan

Model Districts Health Project
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Introduction

Pregnancy, child tracking and health services management system is an online web based application launched on 15 Sept. 2009. Its new version as per Government of India guidelines has been made functional since 1st July 2010. The objective of PCTS is case specific monitoring of every pregnant woman and her child to reduce maternal and infant mortality. PCTS has been endowed with National Award for E- Governance (2011-12), best project under e-Health category (2010), The Manthan Award (2009). It has also been acknowledged by Data Quest magazine (spotlight) 2010. The software undoubtedly helps in maintaining an online directory of health institutions, automatic data consolidation, online trend analysis and has made data management more efficient to a large extent. Although the software is user friendly, the technology is unable to percolate at the lower levels. Discrepancies in data can be seen thus compromising the quality of data.

Objective

To improve the data quality, both Earth Institute and Dausa district officials undertook an initiative in July-August 2014 to:

- Identify gaps in data in PCTS - recognise and comprehend the various issues faced in PCTS pertaining to data entry and management at all the levels
- Formulate strategies for strengthening of the data based on the gaps identified and proposing possible need based solutions to resolve the concerns.

Methodology

Facilities were randomly selected and face to face interviews were conducted using an unstructured interview guide. 11 Auxiliary Nurse Midwives (ANM’s), 5 Information Assistants (IAs), 1 Block Data Entry Operator and 1 District Nodal Officer (DNO) were interviewed at 7 Sub-centers and 5 Primary Health centers. Various levels in the hierarchy enabled understanding the flow of data in PCTS and identify the gaps.

Flow of data in State

![Flow of data in State](image)
The Service Delivery Register (SDR) is filled by ANM. She uses this data to fill facility based forms 6, 7, 8 at SC PHC, CHC/DH level. They are uploaded in PCTS by the Information Assistant or Data Entry Operators. The last date for filling the form is the 10th of every month after which the data can’t be changed. The line listing (area wise reporting for catchment population for ANC, delivery and immunization) continues for the entire month which constitutes the line listing of the figures mentioned in Form 6.

The Form 6, 7, 8 are then checked at the block level by the Block Data Entry Operator, both manually and using Assan software to correct the discrepancies in the data. The discrepancies are made to be corrected at the respective facility. At the block level Form 9A is generated automatically.

Similarly at the district level Form 9 is generated automatically which includes the information from all the blocks. Also, through Assan software the information is uploaded in Health Management Information System (HMIS) which is checked by the DNO.

Gaps Identified at Different Levels resulting in data discrepancies

1. Level of ANM

In filling the SDR

- The SDR has 166 columns in the section 5 related to pregnancy and delivery. As a result ANM’s often leave some of the columns empty, compromising the quality of data. For example Figure 2 denotes the entries are missing in ‘Past Obstetric History’. These columns were not present in the older version of SDR thus the ANM’s are not properly aware about what details are to be filled.
- ANMs were unable to fill columns asking about the number of iron and folic acid tablets given and also differentiate between therapeutic and prophylactic dose.

![Figure 2](image-url)

In filling of form 6

- A section of form 6 requests number of live births to be included should be corresponding to the total of section on home and sub-center deliveries. However this fact is unclear and some ANMs were including the births conducted at ‘other facilities’ e.g. private, leading to data duplication and discrepancies.
- The total number of females registered for ANC services should be equal to the sum of TT1 and TT booster given while discrepancies have been noted in the form. (Figure 3)
Also the total number of registered females should be equal to the sum of IFA tablets given. However mismatch in this data can also be seen. (Figure 3)

**Difference in line listing**
- A difference in the figures quoted in the form 6 and their corresponding line listing (area wise reporting of pregnancy delivery immunization etc.) has been noticed.

**Classification of home deliveries**
- Some of the deliveries which are being conducted at home are being entered under those conducted by ‘Skilled Birth Attendants’. However on further probing it was found the Dhais who had conducted those deliveries were trained 5-10 years back. According to the GoI guidelines only ANM’s are considered to be SBA trained.

**Error in Last Menstrual Period (LMP)**
- Females in village often do not remember their LMP. Thus, sometimes the difference in delivery date and their LMP becomes more than 9 months and this entry is not accepted by PCTS.

2. Level of data entry operator

**Difference in line listing**
- The last date for filling the Form 6 is 10th of every month after which the information fed cannot be altered. The line listing however is open throughout the month and can also be filled later. Thus, the entries on the form are entered first to complete it. But whether the corresponding Delivery Line listing Report (DLR) or immunisation template is complete, if it has the line listing of all the figures mentioned in the form is checked at a later stage. It has been observed that the corresponding DLR or immunisation template does not have the line listing of all the figures mentioned in the Form 6.
**Difference in couple number**

- Each couple in PCTS is identified with a unique number. But, on filling of the Form 6 and 7 if the unique couple number varies the corresponding entries are not accepted by PCTS, and information from line listing is not completely entered. The variation in couple number can be due to mistake on the ANM’s part or an error by the one doing data entry. To further complicate matters there is no provision for the correction of previously entered wrong couple number. Thus, the error continues and proper line listing cannot be achieved.

3. Gaps in the software

- Parts of the software need to be re-defined to avoid taking in manual errors or miscalculations. In Figure 4 the number of sterilization done in male for the month of May is 0 while the number of NSV conducted (which is a method of male sterilisation) is 1. A similar discrepancy can be seen in case of female sterilisation as well.

![Figure 4](image)

- The delivery reports generated from Form 6, 7, 8 (Facility based) against line listing, in terms of percentage may be misinterpreted. For example in the following figure for Gullana SC the delivery is 1 as per form 6. However since delivery of the women who registered at the SC was conducted elsewhere, as per line listing the number of deliveries in the catchment area is 6. This is leading to line list percentage of 600. According to Form 8, the deliveries being conducted at the CHC are 70, but only 48 women were registered to the CHC and might have conducted the deliveries elsewhere. Thus, the line list percentage is low showing 68.57%. This can lead to misinterpretation of the results, especially in terms of assessing the facility performance and load.
  - However, if the percentages of delivery are calculated against ANC registration at that facility, a clearer picture can be obtained of the facility performance.
Another example observed was in Form 9A where 723 deliveries were conducted in accredited private hospitals in Mahwa block of Dausa. However, the number deliveries conducted till June 2014 in private institutions was noted as 815 and all these 815 private deliveries were given JSY payment. This gap in data could be due to software or a manual error and needs to be re-defined.

4. Gap at the MOIC level
- Checking of the Forms is also one of the responsibilities of the MOIC of the concerned facility. However, this is not being followed sincerely leading to errors in data. Therefore it is required to organise a training session for the higher level officials so that such gaps can be identified and corrective actions can be taken in a timely manner.

Actions Taken
- The Gap Report for PCTS was shared with the Dausa district officials and the State Demographer to highlight corrective actions to be taken.
- The State has released funds from NHM to organise training at district and block.
- Training is being planned to improve the data quality.