PROGRAM MANAGEMENT INFORMATION SYSTEM

Providing real-time data to enable decisions on service delivery improvement

BACKGROUND & NEED

Every program needs an efficient management information system (MIS) to monitor, control, and steer the program. The Challenge Initiative for Healthy Cities (TCIHC) initially collected program data from active cities using paper forms at different levels. Five data input forms were devised to evaluate facility readiness and family planning uptake, along with the community reach data.

1. UPHC Static Report (FPA fills this to capture the provider details of UPHCs)
2. Daily Activity Report (FPA fills this while coaching ASHAs and record the reach (number of eligible women reached) and quality of reach in terms of age, parity and FP use status of women reached)
3. Service Delivery Activity Report (SDAR) (Field Program Assistant (FPA) fills this to capture stock inventory and FP uptake by service delivery sites)
4. Site Readiness Form / (Field Program Coordinator (FPC) fills this to assess readiness of the UPHC to provide FP services)
5. Supportive Supervision Form (FPC fills this to examine the quality of ASHA coaching status)

The forms were collected at the state level as well as centrally (at national level) for overall collation and analysis. This process was cumbersome and prone to data entry errors, causing delays in analysis and evidence-based program actions. Finally,

these completed paper forms had to be physically moved from one level to another, also creating unnecessary paper records.

It became evident that there was a need for an effective, real-time program management information system (PMIS). The objective of this PMIS was to inform 'how far, how fast, and how well' The Initiative progressed towards expected outputs and take decisions rapidly.

OPERATIONALIZING PMIS

Before designing the digital platform to collect field-based data, the paper based input forms were revised based on the program need and further tested in some selected cities. These input forms were designed to provide both objective and comprehensive information related to program implementation to facilitate quick decision making. Data quality or data completion issues were resolved at this stage of field-testing.

Out of five paper based input formats, two forms i.e. SDAR and FPA DAR were created online. These online forms were created in June 2018 and piloted in four of the five initial cities from July to September 2018. One master database comprising some key identifying fields (state, city, UPHC, ANM, ASHA, slum name, slum population) along with program staff such as FPCs and FPA was prepared for all 508 UPHCs and mapped online for mobile based data capturing.

Some feathers of the PMIS:

- robust, yet adaptable to respond to the emerging needs of the project;
- able to record achievements and diagnose gaps;
- uses innovative, technology driven cost-effective methods;
- enables easy access to real time data to all level of project staff;
- encourages use of data at all levels of project implementation

After the completion of successful pretesting and mapping, the entire PMIS was then operationalized in all 31 Cities once in October 2018.

In addition to these five input forms, field program service assistants (FPSAs) also used a facility based quality assessment checklist from October 2018 in paper format to assess the quality of family planning services provided at the UPHC. Later this checklist was also made online with a separate Dashboard in the same PMIS platform.

STREAMLINED TRACKING & ANALYSIS OF PROGRESS

The online PMIS automatically generates crisp and precise reports that were easily accessible to all managers at various levels through a dashboard. The dashboard reports showed performance standards for each Expected Level of Achievement (ELA) and were analysed based on the appended criteria:

1. **Green for achievement level of >90% & above;**
2. **Yellow for achievement in the range of 70-89%%;**
3. **Red for achievement at levels below <70%.**

SPECIFIC SUCCESSES OF PMIS

The online PMIS yielded the following results:
1. Provides real-time data and records the time of data entry
2. Information entered into the system is precise and avoids unnecessary delays or corrections, as inputs are selected from a drop-down list
3. Does not allow for incomplete data to be uploaded
4. The system captures the geographic location of data entry points
5. Eliminates the printing, transportation and security costs related to paper forms, as well as salary costs of data entry operators
6. Positive environmental impact by saving paper

PSI has developed an online monitoring mechanism (accessible on computer as well as through mobile application) with project specific input forms and dashboard. The application supports both offline and online data capture.

Once a form is filled, it goes through two levels of supervisory verification within a defined timeline, and is then uploaded to the portal. The data gets aggregated at different levels (service delivery point, city, state and overall) and visualized through dashboard. The system allows query-based analysis.

The system is currently accessed and operated simultaneously by about 450 TCIHC team members in 31 cities, which includes field-based staff and managers at various levels. With the PMIS data and dashboard, the program team can facilitate meaningful discussions with Chief Medical Officers / Chief Medical & Health Officer / Chief District Medical Officer (CMO/CMHO/CDMO) and other government functionaries. This also helps to improve government officials' understanding of their city's performance on various data points and supports comparison with their own health management information systems.

LESSONS LEARNT

1. A real-time technology based PMIS has improved timely management of supplies and commodities.
2. The stock inventory section captured the status of each contraceptive method for each UPHC on a weekly basis (through a stock inventory section integrated within Service Delivery Activity Report) ensured that facilities had enough stock to cater to clients especially on fixed day static service or family planning days.
3. PMIS helped analyse the growth of family planning indicators at urban primary health centres. This sort of analysis is being used by CMO/CMHO/CDMO to motivate all other cities to progress on family planning.
4. PMIS is used as a diagnostic tool by City managers and that allowed managers to easily note which areas needed corrective action and which were performing well, and to share the information with the field program team of FPC and FPA. This motivated the team to learn, adapt, and replicate successful practices, take prompt action on mid-course corrections, and drive program priorities.

MAJOR CHALLENGES RELATED TO PMIS

The systems team experienced the following challenges with this process:

1. FPAs needed regular support and handholding to use and become familiar with the PMIS technology. Regular training sessions had to be organized, in addition to direct one-on-one guidance from MIS teams throughout the program.
2. Multiple operational and compatibility issues with MIS applications and the variety of personal mobile devices, as separate mobiles were not provided to team members under the program.

Master sheet requires regular updating to remap ASHA and ANM level changes happening at field level for smooth data entry at FPA level.