EKAVACH – COMPREHENSIVE PRIMARY HEALTH CARE APPLICATION IMPLEMENTATION

1. Need/Rationale:

Information Communication Technology (ICT) revolution brought opportunities and challenges to strengthen the Health Information Management ecosystem. The opportunity brings n number of ICT Implementations throughout the Public Health Service Delivery Structure to strengthen and modernise the Health Information Management Systems using the existing ICT. Due to unequal availability of IT and communication infrastructure, the process of ICT Implementations has been limited to national, state and divisional / region levels leaving behind majority of field health workers living in remote / rural areas. Even those with access do not get maximum benefit from ICT advancements due to inadequacies in data quality and lack of data utilization. Many ICT Applications are operational at different levels of health service delivery points majorly at health facilities in vertical siloes. The replications of ICT System Implementations also generate replicated and inconsistent data in huge size.

Therefore, state need to make deliberate efforts to address constraints threatening to increase technology gap between public health facilities and field level health workers by setting up required IT Infrastructure as portable computing and communication devices as Tablet and Smart Phones, connectivity and appropriate operational guidelines. So an effort is made to equalize the all stakeholders of the public health service delivery structure in terms of availability of computing and communication power with connectivity. A uniform ICT System implementation envisaged so that it can be molded to the work flow of the field level health workers, generates implementation follow-up and monitoring layers at health facilities as well as provides base data/information for micro level planning and budgeting for various programs. Comprehensive Primary Health Care Application Platform is one of the major components of the Uniform ICT System Implementation which also includes Hospital Management Information System covering the secondary, tertiary and advance health care services.

The CPHC Application Platform provides operational functionality starting from field level health worker ASHA and above upto respective Health Facility level. The CPHC Application layer establishes the population base for micro level planning, implementation, follow-up and monitoring of the health services delivery at community level. The population based direct community level approach improves data quality and utilization should be instituted to ensure that CPHC Application has positive impact on people's health.

2. Description of the model:

The CPHC Application – eKavach is work flow based application platform which have both interfaces as web and application. Application user gets the application interface relevant to its cadre and work profile. Application information seamlessly flows within the service delivery hierarchy from bottom to top for community to health facility and from top to bottom for health facility to community. Application works in integration of the Hospital Management & Information Management Application at health facility level in bi-directional information exchange mode.

Applications population survey layers works as base data of community for micro level plan, implementation, follow-up and monitoring of various RMNCHA+ and NCD etc. programs. Application enablement with ABDM provides functionality to generate ABHA ID online/offline.

3. Human Resources (Existing and/or New):

As eKavach Application is a work flow based system so it's implementation from field level health workers to health facility and administrative units involves existing human resources. The respective human resources with respect to their respective cadre, category and work profile gets application interface accordingly. A detailed landscape of human resources involved in the application implementation is as below:

Stage of HR Involvement	HR Involve	Functional Profile
State level Implementation Committee	Nominated Directorates & NHM Officials	Nomination on the basis of complete the representation from major programs for policy and planning
State Level Technical Committee	Nominated Directorates & NHM Officials	For technical implementation requirements
Administrative User	NHM, Divisional Officials, District Officials and Block Officials	For Application Master Data configuration, User management & administration
Master Trainers & Support Activity	NHM, Divisional Officials, District Officials and Block Officials	Programe managers/consultants
Administrative Cadre	Directorates, NHM, Divisional Officials, District Officials and Block Officials	Medical & Non-Medical Officials at every level involve in program implementation & monitoring
End User - ASHA	ASHA	Field Health Worker

End User – ANM	ANM	Field Health Worker
End User - CHO	CHO	Field/Facility Health Worker & Master Trainer

4. Capacity Building Strategies:

The CPHC Application – eKavach implementation enables officials/users involved skill up gradation in two staged process. At first level ICT skills for operating the portable devices as Tablets and Smartphones of the respective users has been build. In stage two eKavach module specific training has been given in virtual and hybrid mode. Other than above eKavach Application have specific modules as Training Tracker and Learning Management System, which provide facility for micro level training plan and execution, access to different type of learning content as audio, video, text, animation etc. and provisioning of Quizes for assessment. Other than that application have configurable logic for specific categories of user's to complete certain level of practice in training environment than qualified for production system.

5. Evidence of Effectiveness:

At present eKavach Application has been rolled out in entire state with its Web interface (https://ekavach.upnrhm.gov.in) and two app interfaces, one for end users as eKavach App and second for monitoring and review as State of Health – UP. Application has 5979 number of administrative users for master configuration, user management and process management. Application have 1,99,135 total number of end users registered consisting 159215 ASHA, 29,764 ANM and 10,156 CHO.

State has run beneficiary line list based more than 08 drives regarding Indradhanush Survey, JE Vaccination Coverage, Nutrition Status, IMI 4.0, ABHA ID Creation, Safe Motherhood, IDCF, NDD Campagin (Boys & Girl), Vitamin A & RI, Oral Health (No. of People get screened) etc. through eKavach Application and have registered/screened/updated information of total 165,97,315 (One sixty five lacs and ninety seven thousand three hundred fifteen) individual beneficiaries.

In month of July 2022 state rolled out Family Health Survey modules in entire state and till time we have surveyed total 8,61,971 number of families having 43,98,129 number of family members and created 3,18,238 number of ABHA ID for them.

6. Cost:

The eKavach Platform is built on the MEDPlat Platform designed and developed by M/s Argusoft Pvt. Ltd. NHM-UP inked Non-Financial tripartite MoU with M/s Argusoft and SEWA

Rural for implementation of eKavach Platform in state of Uttar Pradesh. NHM-UP owns the Application, bearing the hosting cost at state end. Portable devices as tablet and smart phone are already provided to end users/field health workers with their respective data cost.

7. Summary of lessons and challenges:

The eKavach Application implementation initiates from community level by family health survey through respective field health worker to upward facility level. Implementation of mobile application for real time data collection through field health worker is a major challenge but establishing the training, hand holding and support layer through their coworkers is a tested solution.

8. Potential for scale:

The eKavach Application is planned with all standard cross application integration, Aadhar vault, ABDM compliances for ABHA ID and health information communication and following system and data security.

In future eKavach Application interface may be developed as uniform user interface for all data/information to be collected and reports to be viewed by in backend integrating it with all respective IT Systems. The case enables eKavach Application user to submit data for all programs through one interface.

As the eKavach Application have unique family id with respective family members ABHA ID tagged with their geo location so health information from community based beneficiary to health facilities at primary, secondary, tertiary and advance level may be referenced as well as treatment/follow-up health information of the patient will be shared with community based health workers for further health care.

9. Partners involved in implementation:

State is utilizing various health partners with there presence at division and district levels for training of Master Trainers, Training of End Users, follow-up and monitoring of training and family health survey. At state level partners are involved in the creation of Training content in form of audio/video/text/animation etc. and documentation/SoPs of the process for development/change management and implementation.