

Government of Andhra Pradesh Family Welfare and Health Information and Monitoring System (FHIMS)

Introduction

Family Welfare and Health Information and Monitoring System (FHIMS) project is related to computerisation of the health, medical and family welfare services at various levels. The project is executed by CMC Ltd for Medical, Health and Family Welfare Departments, Government of Andhra Pradesh. The Directorate of Health implements various national health programmes (like TB, malaria, leprosy, blindness etc.) and monitors the administrative activities of the department. The Commissioner of Family Welfare implements various programmes relating to family welfare, inclusive of mother and child health care and family planning services in the entire state of Andhra Pradesh.

Evolution of FHIMS

The basic health services given to the citizen in rural areas is through Primary Health Centres (PHCs) and at the sub-centres by MPHA (Multipurpose Health Assistants Male and Female). The MPHAs-Female play a key role in delivering various services related to antenatal care, immunisation and family planning apart from health programmes of the Department of Health and Family Welfare.

In the present system, several diaries and registers are maintained to monitor health statistics and delivery of services. The manual system takes long time in performing these activities. To improve the efficient services of MPHAs and take the benefits of IT solutions in health care delivery systems to rural population, the Department of Health and Family Welfare under Government of Andhra Pradesh has felt the need to evolve an effective strategy to capture basic health care data related to citizens correctly at the point of generation and to maintain proper records, reports, feedback and evaluation of the various projects/programmes (like TB, malaria etc.) undertaken by the department. This resulted in the evolution of FHIMS.

Scope of the Project

The scope includes system study, design, development, implementation, training and handholding for the various application software modules at Primary Health Centre (PHC), District Medical and Health Office (DM&HO), Commissioner of Family welfare office (CFW) and Director of Health Office (DH).

Functionality covered by FHIMS application are as follows:

- Name-based system for monitoring family welfare activities
- Revised National Tuberculosis Control Programme (RNTCP)
- National Leprosy Eradication Programme (NLEP)
- National Program for Control of Blindness (NPCB)
- National Anti Malaria Programme (NAMP)
- School Health Programme
- GE/cholera/Diarrhea monitoring
- Disease statistics
- Personnel Information System
- Stores Monitoring System
- Infrastructure and equipment
- Monitoring of vehicles
- Budget Monitoring System

- Joint programme with associated institutions

The detailed functionality is covered as part of Annexure - I

As part of Phase –I the Software implemented at 67 PHCs of Nalgonda District.

As part of Phase – II the software replicated in rest of State i.e. 22 Districts (1365 PHC)

Benefits of the Project

- Provides the MPHA/MO and others with information that allows him/her to facilitate more effective service to the villages within him/her responsibilities
- Eliminates duplicate and inconsistent records
- Provide up-to-date and accurate information to the officers at higher level to monitor and enhance the performance of the department
- The system helps in the effective analysis of the data flowing up from the grass root level (MPHA) to the Top brass (CFW and DH)
- Lessen the burden of record maintenance at all levels and thus empower the department to concentrate on delivering quality health care
- Capture health care data at the habitation level in electronic form thereby ensuring the accuracy and reliability

Architecture of FHIMS

FHIMS is based on decentralised client-server architecture in order to facilitate independent functioning of all the units. Information will flow from lower units to higher units. But, senior officers consolidate information at higher units from time to time for analysis and decision-making.

Pentium servers are located at the District Head office and the State head office, the grass root level operation are done on a Pentium processor client which will be running on Windows environment with Oracle as database. The application is developed on Microsoft Visual Basic. The connectivity between Head office server and the client at the PHC would be based on Ethernet LAN using dialup lines.

ANNEXURE – I

The detailed scope of the modules identified for FHIMS Project is :

- 1) **Name-based system for monitoring family welfare activities.** The module primarily focuses on the collection of name-based information of people under various Family Welfare & Health monitoring programmes. The name-based information is collected in accordance with the formats prescribed in the identified registers. The registers include antenatal cases, high risk cases, child immunization, eligible couples, birth and PNC & maternal deaths, etc. Provision for collecting statistical information under some Health monitoring programmes is also envisaged. This module will generate monitoring reports and schedules for various identified activities of ANM & MO.
- 2) **Revised National Tuberculosis Control Programme (RNTCP).** The proposed system would facilitate recording the name-based information about suspect and positive cases at PHC, follow-up of suspected cases for microscopic results, detailed information about positive cases, follow-up of positive cases for treatment. The system also maintains the details of DOT providers. The system provides exception reports like non-traced/non-treated patients besides providing reports based on the pre-defined output formats for monthly/quarterly/annual reports on statistical information.

- 3) **National Leprosy Eradication Programme (NLEP).** In the national leprosy eradication programme, the assistant paramedical officer of PHC collects details of positive cases (for which name based information will have to be maintained), treatment/follow-up of positive cases, other statistical data related to the prevalence of disease and programme implementation. The reports include exception reports based on the treatment and monitoring besides the statutory statistical reports identified for this programme.
- 4) **National Program for Control of Blindness (NPCB).** The ophthalmic assistants at PHC maintain a register with details of suspected / probable patients with cataract and other eye problems. The proposed system captures and maintains name-based information for the effective follow-up of the patients. Outputs of the proposed system include reports for name-based follow-up and monitoring.
- 5) **School Health Programme.** The field staff/medical officer of the PHCs regularly examines the government school children. Apart from summary data, it is envisaged to capture the details of children who are referred for further check-up and treatment. The facility for follow-up for such referral cases will also be part of the proposed system. The output formats, which are identified, include summary reports, reports related to exceptions and referrals as well as the follow-up of such cases.
- 6) **National Anti Malaria Programme (NAMP).** The inputs start at PHC level by the laboratory technician. The information flows to the District Malaria Officer through Health Inspector/Malaria Inspector placed at PHC level and the Health Supervisor who works at sub-unit level. There are various reporting formats prescribed by the Government of India in which the information flows from the most peripheral level i.e. village to the state level. During preliminary discussions, it was proposed to computerise important formats like MF4, MF5, MF6, MF7 and MF9 for monitoring of the programme. It was also decided to include some more output formats that will depict analytical result of the statistical data collected.
- 7) **GE/CHOLERA/DIARRHOEA/JE Monitoring.** It is identified that Andhra Pradesh State is endemic, with epidemic spells for gastroenteritis and JE. As part of this programme, data on the incidence of disease is collected on daily/weekly/monthly basis at PHC/Sub-centre level. The output formats include statistical reports based on the inputs captured. The reports will be provided daily/weekly/fortnightly/monthly in the identified formats. Additional reports based on the identified threshold values for forecasting/early warning shall also be part of the system.
- 8) **Disease Statistics.** As part of the disease statistics, data is to be collected based on the list of diseases identified under the APERP programme. Input formats have been identified for this purpose and reports are to be produced in suitable formats at various levels.
- 9) **Personnel Information System.** The proposed module would help in maintaining the details of personnel to cater to the needs of the department. The functionalities that are covered by the system are employee details, transfers, training details, specializations, long leaves recording, recording of punishments/memos along with reports for indicating vacancy positions, employees eligible for promotion to a particular post and training requirements.
- 10) **Stores Monitoring System.** The stores and inventory control module helps in maintaining the stock position for the medicines, consumables and other important items handled both at DM&HO and PHC level. The functionality includes receiving drugs and other identified items (in case of DM&HO the material is received from central drug purchase centre and other sources, whereas the PHC receives material from DM&HO). The consumption of material is recorded at these places. The module will help in monitoring the requirement, availability, re-

order levels and consumption of various medicines, consumables and other identified items. Suitable reports on the materials required, received, disbursed, consumed & to be re-ordered will be generated by this module.

- 11) **Infrastructure and Equipment.** The module will cater to the needs of the department to monitor the status of and to maintain the infrastructure and equipment available, deployed and required at the offices of the DM&HO, PHCs and sub-centres. It is envisaged to produce reports to monitor the availability/status of various essential equipment and buildings.
- 12) **Monitoring of Vehicles.** The proposed system will capture the complete details of the vehicles, which are under use by the department at various levels. The details include registration number, manufacturing year, govt. owned/private owned, allotted to which unit and programme / scheme, the condition of the vehicle, repairs undertaken and the expenditure incurred on repairs and fuel. The system also caters to transfer of vehicle from one unit to another or one program to another and both. The reports for listing various vehicles owned, hired by department and used under a specified scheme will form a part of this module.
- 13) **Budget Monitoring.** The module envisages the monitoring of budget provision, release and expenditure at PHC and DM&HO. CFW and DH provide separate budgets under identified heads. The identified heads are POL, TA/DA, electricity, telephone and rents, etc.
- 14) **Joint Programmes with Associated Institutions.** This module will help the department to maintain the list of various identified Institutions. These institutions can be private, NGO, government hospitals, etc. These institutions may be providing support for the programmes/schemes (Arogyaraksha, Sukhibhava, etc.) promoted by the department. A facility to record such information and the statistical information of the beneficiaries under these schemes from various institutions will also be provided along with suitable reports.