AWARDS SCHEME FOR EXEMPLARY IMPLEMENTATION
OF e-GOVERNANCE INITIATIVES

Health & Family Welfare Department

Government of West Bengal

Category:- 'EXCELLENCE IN GOVERNMENT PROCESS RE-ENGINEERING'

AWARDS SCHEME FOR EXEMPLARY IMPLEMENTATION OF e-GOVERNANCE INITIATIVES

I. NAME OF CATEGORY- 'EXCELLENCE IN GOVERNMENT PROCESS RE-ENGINEERING'

1.   **Coverage – Geographical and Demographic** ()

   (i) Comprehensiveness of reach of delivery centres,

All blocks of West Bengal

   (ii) Number of delivery centres

450

   (iii) graphical

   (a)National level – No of State covered
   (b) State/UT level- No of District covered
   © District level- No of Blocks covered
   Please give specific details:-

1 (One)
18 (Eighteen)
193 (One Hundred Ninety Three)

Store Management Information System (SMIS) of the Department of Health and Family Welfare, Government of West Bengal is a system that has been targeted to re-engineer the entire business process related to procurement, inventory management, issue and bill processing of drugs, equipments, and hospital consumables.

In West Bengal the main drug procuring agency is the District Reserve Store (DRS). These DRSs are spread all over the State of West Bengal and have presence in all districts. There are some more drug, equipment, and hospital consumables procurements that happen at the points of Medical colleges & Hospitals (MCH), District Hospitals (DH), Sub-Divisional Hospitals (SDH), State General Hospitals (SGH) and Block Primary Health Centers (BPHC). The direct beneficiary of the Store Management Information System (SMIS) is the procuring units such as DRS, MCH, DH, SDH and SGH and the indirect beneficiaries of the same system are the BPHCs and the PHCs (Primary Health Centers) which receives drugs and consumables from DRSs.

In West Bengal there are 341 BPHCs, 55 SDH/SGH, 12 Medical colleges and hospitals, 18 district reserve stores that act as the delivery point of drugs and equipments for the ailing

patient in the remotest areas of West Bengal.

(iv) Demographic spread (percentage of population covered)

Store Management Information system software is a web enabled software system and is accessible to all health facilities across the State upto the level of PHC.

2.   Situation Before the Initiative (Bottlenecks, Challenges, constraints etc with   specific details as to what triggered the Organization to conceptualize this project):

Background:

Department of Health and Family Welfare Government of West Bengal followed a De-centralized mechanism of Drug Procurement – Storage and Distribution since 1992. In this model of Functioning, CMS (Central Medical Store) is responsible for definition of Essential Drug List (EDL) which we term Catalogue Drugs, they are also responsible to select venders(Manufacturers) and to finalize Rate Contract for the entire financial year, by means of Tendering procedure. District Reserve Store under CMOH and Other De-Centralised Hospital Units must procure the Drugs from these selected vendors in the approved rate.

Being decentralized, the state level management was in dark in policy making, fund allotment and ensuring emergency stock at the district level.

Initiatives Taken:

In the year 2011, a major step has been initiated in the form of development of the online centralized software based system (Store Management Information System) to streamline the entire process of procurement, storage and distribution of Drugs. At each DRS Modern Warehouse has been constructed with collapsible storage racks, and walk in cooler, to facilitate easy storage   and FEFO disposal of Drugs. Along with the infrastructure computerized DRUG MANAGEMENT INFORMATION System has been developed, to ensure a flawless system, encompassing the entire Inventory Management.

Objectivity in designing the Software System:

To define a system, that will enable all the Units – CMS, DRS, De-centralized Stores, Hospital

Units to carry out their daily activity vide on-line transaction with the system that will bring in :
- – Transparency
- – Accuracy
- – Speed
- – Objectivity

This system must have capability to reconcile data at every level ie Hospital Level, District level State Level.

Benefit of the Computerized System
- This system will integrate all the DRS functionality ensuring:
- GO's Utilization Report and Analysis is possible.
- On-Line Stock
- Store Leger will reflect all types of transaction done with the Items
- Pipe-line Stock (items ordered pending delivery)
- Expiry Date wise stock
- Vendor Rating
  - o Performance Rating
  - o Quality Rating
  - o Price Rating
- Networked DRS will enable DRS to view the Stock Position of Other DRS and request for Stock Transfer in case of Emergency.
- Demand Analysis and effective utilization
- Effective MIS (Management Information System) can be enhanced once the System is Implemented in its fullest capacity

3.   **Extent of Process re-engineered** (Processes that have been re-engineered, services which depend on these processes, analysis/re-design of Process workflows – before (As-Is) and after (To-Be) re-engineering; changes in activities and their sequencing; level of automation (Extent of computerization in terms of number of services computerized, Extent to which steps in each service have been ICT- enabled) #)

Before (As-Is) reengineering	After (To-Be) reengineering
Fund management:-	**Fund management:-**
Orders were generated from the office of the procurement authority and the bills were processed at the accounts department. In absence of any online system the coordination between these two departments were difficult	After administering the on line system of Store management, fund gets logically debited against generation of purchase order and before disbursement of bills the accounts department may check the logical

which leads to huge outstanding bills every year.	balance. Outstanding bills are processed in more logical manner. This leads to decrease in the number of total outstanding bills.
Procurement: Since there was no restriction of procurement of any item, there were chances of over or less procurement. In case of less procurement, stock out happened frequently and in the case of over procurement, the item tends to pile up in the store leading to expiry of stock and wastage of items.	**Procurement:** As discussed earlier there is one restriction of procurement in the form of – " Before generation of purchase order this should be ensured that there is sufficient fund and the total stock (stock in hand and pipeline stock) is less than one fourth of the expected annual consumption."- the chance of over procurement of any item has been eliminated and in the case of less stock the system of alarm generation has been developed.
Issue: Issues were not restricted against indents. There was a tendency of force issue of the slow moving items. This creates imbalance between actual indent and issue leading to wastage of drugs.	**Issue:** Issues have been restricted against indent. The force issue is stopped and maintaining balance between indent and issue wastages have been minimized.
Quality: The circulation of findings of the report of the quality control report took too much time; most of the time drugs were consumed even before the adverse result gets circulated.	**Quality:** Arrangement of proper testing of drugs has been made in time bound manner through NABL certified and state based Laboratories. In case of randomly generated samples sent to selected Laboratories found not of standard quality, the issue of drugs is automatically blocked and payment is not allowed to be made out

	of the system..
Vendor portal:	**Vendor portal:**
The purchase orders were sent to the vendors through postal system which delays the delivery of items. As the bill payment status and payment information were not available to the vendors, they lost interest in further supply, which tends to stock out of some items.	Introduction of the on-line system enables the enlisted vendors to receive orders through e-mail at once the order generates. The vendors are also aware of the bill status or payment status through the web portal linked with the departmental web site. Lag time between order generation and delivery has become much less.

4.   Strategy Adopted

(i)) Details of base line study done,

(ii) Problems identified,

(iii) Roll out/implementation model,

(iv) Communication and dissemination strategy and approach used.):

5.   **Technology Platform used-**

 (i)   Description

 (ii) Interoperability

 (iii) Security concerns

 (iv) Any issue with the technology used

 (v)   Service level Agreements(SLAs) (Give details about presence of

SLA, whether documented, whether referred etc. #)

6. **Citizen Centricity** (Give specific details on the following#)
   (i) Impact on effort, time and cost incurred by user,

Since inception in 2011, the Store Management Information System (SMIS) happens to be a useful tool to the Health administration in terms of providing excellent citizen centric performances.

The system show remarkable achievement in the field of fund utilization, drug distribution, store management, reduction in outstanding bills and vendor coordination. The system has eliminated paper processing for reporting and information sharing purposes.

The report of any stock out situation, degraded quality, unutilized fund, and payment delay are brought into the notice of the health administration immediately through this system. The problems are sorted out in no time with the intervention of the authority.

Purchase order, goods receipt status, bill processing status and payment status are available online to the vendor in a completely automated process. The outstation vendors feel comfortable with the transparency of the whole system and that reflects in their performances in delivery of item in proper time.

The active user of the system are the district health authorities, who issues orders and receive goods through this system and the vendor who delivers the items and receive payments. Moreover state health administration is the important passive user, playing the role of the management. Through this system, personal contact between users of the system has been minimized leading to reduction in involvement of cost and time.

(ii) Feedback/grievance redressal mechanism,

There is in-built feedback mechanism in the system. The active users such as district health authorities can report grievances, problems and suggestions through the reporting mechanism. The state health administration addresses the administrative issues immediately and technical issues with the supervision of Information Technology wing of the department.

(iii) Audit Trails,

The following audit norms are incorporated in the system :

1. Restriction to the consumption entry depending upon the last year's GRN made with an increase of 10%.

2. The limit of purchase power norms of the concerned health facilities as per delegation of financial power per order at a time.

3. In built system for calculating the Liquidated damage in the form of penalty clause for delay in supplying beyond the stipulated time period by the vendors.

4. The system will not allow bill processing without the Goods Received Note (GRN) made.

5. The system will not allow bill processing if the samples fail in the quality assurance test batchwise.

(iv) Interactive platform for service delivery,

The vendors, another important user of the system are also able to report grievances and suggestions through vendor portal. The state health administration addresses the issues with immediate effect.

(v) Stakeholder consultation

The Store Management Information System helps to build up a feel good relation between vendor and management through this interactive setup.

There is a process of collection of stakeholders suggestion and incorporation of the valuable and effective suggestions in the forthcoming tender.

7. **User convenience** (Give specific details about the followings #)
   (i) Service delivery channels (Web, email, SMS etc.)

The information available through Store Management Information System is real time and available on the web portal.

The stakeholders such as Health & FW Department at the state head quarter, Reserve store authority at Districts and the vendors at different parts of the country can access the relevant portion of the information any time round the clock.

(ii) Completeness of information provided to the users,

Being a total online system there is no provision of data entry and hence the user gets complete

information in all respect.

(iii) Accessibility (Time Window),

The system is hosted at the central server room at Swasthya Bhawan and accessed round the clock.

(iv) Distance required to travel to Access Points

The information being available online they need not to travel any distance at all.

(v) Facility for online/offline download and online submission of forms,

No need of downloading. This is entirely on line system and paperless till the submission of bills.

(vi) status tracking

Status are being regularly monitored at the Hospital Administration branch, Central Medicine Store and Transport, Drug & Equipment wing of the Secretariat.

8.   **Efficiency Enhancement** (Give specific details about the following #)
   (i)   Volume of transactions processed

Transactions	2011-2012	2012-2013	2013-2014	2014-2015 upto July
Order	20908	40451	66198	12405
GRN	18419	33832	54765	10692
Indent	39322	103154	106607	36380
Issue	35677	95323	98301	33335
QC	162	1462	2086	717
Bill	0	30250	49292	6654
No of Unit joined	536	922	973	987

(ii) Coping with transaction volume growth

The central web hosting arrangement has been augmented with external storage and blade servers.

(iii) Time taken to process transactions,

(iv) Accuracy of output,

(v) Number of delays in service delivery

9.   **Cost effectiveness** (Give details about impact on cost incurred w.r.t.

overhead cost, direct and indirect cost, man days/man hour required to do a job etc.#)

Financial involvement in implementation of the system:-

Overhead cost: The entire system of SMIS has been hosted from Swasthya Bhawan IT infrastructure. The IT infrastructure has been developed in Swasthya Bhawan during the year 2004. Numbers of IT enabled applications like Web sites of different branches, mail server, appointment portal, profiles of medical officers, vehicle management system, is being hosted from Swasthya Bhawan IT Set up. Hence the overhead cost for set up and maintenance of IT infrastructure of the Health & Family Welfare Department's head quarter at Swasthya Bhawan are shared among hosting of such applications.

A team of outsourced professionals are engaged in maintenance of all those activities, segment which may be considered as the indirect cost incurred in implementation and maintenance of SMIS.

The Health and FW department has the connectivity throughout the District Hospitals and Medical colleges. The SMIS operates to that level through this connectivity only incurring no direct cost. At sub-divisional level and state general hospitals uses broad band or wireless services based internet connectivity to access the SMSI portal. Here the direct cost incurred is the cost of rental charges for internet usage only.

On the other hand after implementation of the system it has been observed that the following cost effectiveness has directly benefited the entire drug management scenario.

a) Zero cost of communication: Through this SMIS portal the stakeholders get access of the information like generation of orders, delivery of materials, issue of items, position of stock, status of payment etc. Since

this information are available online, the cost of information sharing like fax, courier charges has reduced remarkably and tending towards nil.

b) Proper usage of plan head budget allotment: Since the procurement of drugs and other materials needs a through planning prior to generation of purchase orders, the plan head budget has been utilized properly and it appears that the wastage of allotment reduced at all level.

c) Reduction in testing charges: The system of SMIS is centralized drug management system; it restricts sending of duplicate drugs for quality check. It reduces huge amount of testing charges and also reduces the time taken for quality check.

d) Decline the amount of drug wastages: Since the system has been so designed that every issue needs an indent, force issue has been eliminated. It reduces the wastage of unnecessary items at the indenting units. Further as the consumption of the lower units reflects in the next year expected consumption, the same in turn reduces the chance of unnecessary procurement also.

Since the implantation of the system thus proved to be a cost effective solution for the entire supply chain management of the drug, equipments and other hospital consumables.

It appears the system will deliver more cost benefits as it rolls at all the units.

10. **Capacity Building and Organizational Sustainability** (Give details about hiring skilled staff, imparting training etc.#)

At present Store Management Information System (SMIS) is under operation with the handholding support of the outsourced manpower.

An agency, selected through open tender has been entrusted with the job of

maintenance and handholding support of the SMIS.

The system has been hosted from Swasthya Bhawan data center at the head quarter. The data center has been manned with software developers of the out sourced agency. Every operational unit such as DRS, MCHs have been manned by support person from the outsourced agency for handholding support to SMIS.

There are arrangements of monthly classroom based training to accustom the stakeholders with the new developments and operational aspects of SMIS.

Apart from the class room based training the resident support persons always provide handholding support to the end users.

It has been planned to withdraw the support person in periodic manner after the departmental internal resources are fully capable of operating the system.

11. **Accountability** (Give details about, impact on transparency of process, fixing responsibilities etc. #)

In order of making the entire system accountable to every level of operation has dependency over the system. Like, Only system generated supply order are acceptable to the vendors, Order cannot be generated with sufficient fund in hand, without generation of Indent, Issue cannot be made, without GRN (Goods receipt) bills cannot be processed etc.

Further, since the vendors are the important part of the entire supply chain management system, vendors were given access to the system through vendor portal. Through this portal vendor can have an idea of yearly consumption of drug, generation of order, supply of material, different stages of processing the bill etc.

12. **Innovation** (Give details on the extent to which re-engineered process is unique, compared to other common process re-engineering efforts, impact on number of steps required, identification and removal of bottlenecks/Irrelevant steps etc. #)

13. **Appropriate Delegation** (Give details on whether a team involving employees from all levels has been deployed for the project implementation and maintenance, can employees be held accountable for their actions, etc. #)

The process of Online SMIS has phenomenal success to the drug management of Health & Family Welfare Department, GoWB.

It has been achieved through the dedication of all levels of human resources who have been directly in indirectly involved in the entire process.

In this process CMS (Central Medicine Store), the State level drug procurement management authority prepares the rate for different drugs, list of supplier and arrange for quality check. They also arrange for making the rate available for procurement through the portal of SMIS.

The Audit Accounts & Verification wing of the Directorate arrange for allotment of fund and making the same available at the SMIS portal.

The district drug procurement authority generates orders based on priority and availability of fund. Receives the goods and sends a portion of the drug for quality check.

The accounts wing of the district drug procuring authority receives the payment and arrange for payment.

The entire stages of operation from order generation and bill payment is available to the vendors through vendor portal.

The transport, Drug and Equipment Branch of the Department monitors the overall functioning of the entire system.

The Information Technology Cell provides necessary technical support, traing for seemless operation of the Store Management Information System.

14. **Result Achieved/ Value Delivered** to the beneficiary of the project-(share the results, matrices, key learning's, feedback and stakeholders statements that show a positive difference is being made etc):

(i)   To organization

The system is already started showing results. The rate schedule of the catalogued drgus is finalized by the Central Medical Stores through e tender and put to the software with the name of the approved vendors vis-a-vis the approved rate.

The budgetary allotment is also put to software in favour of the procuring authorities. The procuring authorities i.e. the health facilities across the state do generate order as per their

quarterly consumption with the availability of allotment in the system.

The vendors get an access to the order through 'vendors' portal' as soon as it is generated and supply is made. The system does not allow short expiry.

Payment is processed through the system and vendor gets an access to the process of payment in every stage. Finally, E payment is made. The system allows the distribution of drugs is made through 'FEFO'. In the year 2013-14,96% of the payment is processed through the system. The enhance the confidence of the procuring authorities to generate order, make the GRN with the receipt of goods and process the payment since all these are system driven. The vendors are also expressed satisfaction because of allotment-bound order and 100% e payment. Availability of drugs have also been increased. Quality assurance plan has been maintained through the system.

(ii) To citizen

With the introduction of the system, the drug availability at the level of health facilities upto the level of PHC has been remarkably increased and the patients are getting medicine in the OPD, emergency and IPD and their out-of-pocket expense out of drug has been minimized to a greater extent.

(iii) Other stakeholders

Vendors plays an important part of this system. Once the rates of drugs, equipment and consumables are finalized through e tender, the name of the approved vendors alongwith the rate of the medicine are put to software. The vendors are getting the orders on line. As soon as materials are received by the respective store of the health facilities, the system certifies proper GRN. Payments are processed through the system and the concerned vendors has an access to the stages of processing of payment. The system is transparent and accountability are ensured to make vendors comfortable.

15. Extent to which the Objective of the Project is fulfilled-(benefit to the target audience i.e.G2G, G2C, G2B, G2E or any other, size and category of population/stakeholder benefited etc):

G2G and G2C

16. Adaptability Analysis

(i) Measures to ensure adaptability and scalability

(ii) Measures to ensure replicability

(iii) Restrictions, if any, in replication and or scalability

(iv) Risk Analysis

17.   Comparative Analysis of earlier Vs new system with respect to the BPR, Change Management, Outcome/benefit, change   in legal system, rules and regulations

18.   Other distinctive features/ accomplishments of the project:

1.   2.   3.