Gujarat Medical Services Corporation Ltd. -Analytical Study on its Working During the Last Three Financial Years of its Establishment

By

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Dissertation submitted for the partial fulfillment of the

MBA Pharmaceutical Management

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IIHMR UNIVERSITY

TO WHOMSOEVER MAY CONCERN

This is to certify that **Mr. Dheeraj Sonkhiya** student of MBA Pharmaceutical Management from The IIHMR University, Jaipur has undergone training at **Gujarat Medical Services Corporation Limited, Gandhinagar, Gujarat** 1th February, 2016 to 30th April, 2016

The Candidate has successfully carried out the study designated to him during internship training and his approach to the study has been sincere, scientific and analytical. The Internship is in fulfillment of the course requirements

I wish him all success in all his future endeavors.

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GUJARAT MEDICAL SERVICES CORPORATION LIMITED
(A Government of Gujarat Undertaking)

Date: 12/05/2016

The certificate is awarded to

Mr. DHEERAJ SONKHIYA

In recognition of having successfully completed his

Dissertation in the department of

Procurement (Drugs and Equipments)

and has successfully completed his Project on

Gujarat Medical Services Corporation Ltd. – An analytical study on its working during the last three financial years of its establishment.

From 1st February, 2016 to 30th April, 2016

At

Gujarat Medical Services Corporation Limited (GMSCL)

Gandhinagar, Gujarat, India

He comes across as a committed, sincere & diligent person who has a

Strong drive and zeal for learning.

I wish him all the best for future endeavors

GUJARAT MEDICAL SERVICES CORPORATION LTD. GANDHINAGAR GMSC

Managing Director, GMSCL
Managing Director
Gujarat Medical Services Corporation Ltd.
Gandhinagar

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CERTIFICATE BY SCHOLAR

This is to certify that the dissertation titled **'Gujarat Medical Services Corporation Ltd. – An analytical study on its working during the last three financial years of its establishment'** and submitted by Mr. Dheeraj Sonkhiya, Enrollment No **IIHMR-U/02/2014-16/0026** under the supervision of Dr. S.K. Puri for award of Pharmacutical Management of the University carried out during the period from 1st February 2016 to 30th April 2016 embodies my original work and has not formed the basis for the award of any degree, diploma associate ship, fellowship, titles in this or any other Institute or other similar institution of higher learning.

Signature
17/5/2016

Acknowledgement

It is my immense pleasure to express my thanks and obligations to all those who have given their support in working out this project.

First of all, I would like extend my sincere thanks to **Dr. Vipul Aggarwal IPS, Managing Director, GMSCL** and also too **Managers of GMSCL** for providing me an opportunity learn and develop professionally.

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To place on record, I owe a debt of gratitude to all my teachers for grooming me and my classmates for the inspiration needed to work with dedication and motivation throughout as an Intern at Gujarat Medical Services Corporation (GMSCL).

I hope that I can build upon the experience and knowledge that I have gained and make a valuable contribution towards the industry in coming future.

DHEERAJ SONKHIYA

MBA-Pharmaceutical management

Batch- 2014-2016

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List of Abbreviations

Term	Explanation
CMSO	Central Medical Stores Organization
GMSCL	Gujarat Medical Services Corporation Limited
DWH	District Warehouse
EMD	Earnest Money Deposit
SD	Security Deposit
PO	Purchase Order
QC	Quality Control
e-Aushadhi	Drug Management System
FD	Fixed Deposit
PDT	Pre-Dispatch Test
D & C	Drug and Cosmetic
RC	Rate Contract
DDC	Drug Distribution Counter
BDL	Baroda Drug Laboratory
MD	Managing Director
DDO	District Demanding Officer
HoD	Head of the Department
HQ	Head Quarter
NOSQ	Not of Standard Quality
LD	Late Delivery
CHC	Community Health Center
PHC	Primary Health Center

1. Introduction:-

With more than six Crores people and population density of 308 per sq. km. Gujarat has a vision and commitment to provide effective and quality health care to all with special focus on reaching the unreached and serve the underserved. One of the highest priority goals of Department of Health & Family Welfare is to make the health system of Gujarat more available, accessible, accountable, equitable, transparent and cost effective.

The objective is to reduce the MMR, IMR, Address adverse sex ratio, combat malnutrition with multi pronged strategy, effectively implement NHM programmes provide state of art health and medical education. Also it aims to provide free Quality drugs and modern Diagnostic facility at door step and enabling information and Communication Technology as a strategic resource, making it an integral part of Health Governance.

With the expansion of health care network in the state and increasing budgetary provisions, CMSO was transformed into Gujarat Medical Services Corporation, as per GR MSP/102012/58/G dated on 20 July 2012 as an autonomous body, to ensure timely procurement & distribution of drugs and medical equipment for all the State Health Institutions.

With the changes in the healthcare arena there was a felt need of developing new as well as upgrading the existing functioning and processes of CMSO, and consequently develop an institution supported with necessary infrastructure to make the system responsive to meet the objectives of the universal health coverage.

With the view to match the changing demands and pace of development in the sector, CMSO was transformed into **“Gujarat Medical Services Corporation Limited”** (GMSCL) as an autonomous body and was incorporated under companies act, for systematic procurement, inventory management, Management information system and to infuse professional management with establishment, development and strengthening the use of information technology in medical store organization.

GMSCL was established primarily to look after the procurement and supply of medicines and other hospital requisites for the government health care facilities in the state. The working of GMSCL during the first 3 years of its existence was studied and critically analyzed in the study. The situation prior to the establishment of GMSCL for a period of Four years was also studied and evaluated.

The study finds that GMSCL could improve access to medicines in the state during the study period. The quality and availability of medicines in government hospitals also increased considerably. GMSCL could introduce many innovations in its functioning and make the procurement scientific and transparent. Preparation of Essential drug list, modernization of warehouses is other progressive steps of GMSCL. The utilization of information technology in a unique manner helped to bring transparency in functioning and reduce unethical practices remarkably. It also helped to make its services fast in many aspects.

The Corporation deserves more support and encouragement from the State and Central Governments and other organizations. GMSCL also establish a market intelligence wing for conducting studies and evaluate its functioning, programmes, policies and other related activities that will further strengthen its functioning. The manner in which GMSCL is improving its functioning in the four years of its origin shows that the Gujarat model of Drug Policy is one of the best policies among all Indian states.

2. Need of the Study

One of the key components of access to medicine is reliable and sustainable supply chain management to procure and distribute required medicines and vaccines in a timely manner. Different models of procurement and distribution of medicines and other supplies are followed in different state of India. The model followed depends on industrial capacity, priority, demography and other factors. The efficiency of the procurement model can be estimated on the basis of level of decentralization/centralization, selection of medicines and medical supplies, tendering process (to include scope of competition, timeline, bidding process, evaluation and selection process, quality checks and penalty clause for supply default and quality default) and payment mechanism. Inefficiency in any component of supply in relation to access to medicines and can be observed through inadequate supply of medicines resulting in frequent stock-outs.

Procurement of medicines and medical supplies takes place at various levels, viz. at the level of the national government, state government, local government and autonomous bodies of national and state governments. In India, the management and control of communicable diseases and preventive services for these is under the preview of the national government and is implemented through various vertical programs called the national disease control programs. The procurement of medicines for the same is primarily carried out at a national level but we find that in some states funds are also routed through state procurement agencies for procurement of necessary medicines. While states such as Tamil Nadu, Kerala, Rajasthan and Gujarat follow a centralized procurement and decentralized procurement and distribution process with annual rate contracts.

Governance in the procurement process plays a critical role for optimum utilization of resources in the public health system. Given the technical complexity of procurement for pharmaceutical products where high variation in quality may result in serious adverse events with patients is desirable. The national and state governments adopt different models of procurement based on their priority, needs and administrative convenience.

At the state level, procurement systems vary in terms of autonomy of the procurement agency, level of decentralization, transparency and efficiency. Traditionally, procurement for medicines is done by the central medical stores department through annual rate contracts

(quality based) by most of the states in India. In this system of procurement, bidders are invited to quote for lowest rate for the list of medicines through an open tender process.

Tenders are scrutinized and sign the agreement with the respective departments for regular supply of medicines based on need from health facilities. Bidders quote the lowest rate to get empanelled with government supplies departments to increase their credibility in the private market. Many states such as Utter Pradesh and Bihar among others have such central medical stores departments under the department of health and family welfare responsible for procurement of medicines and other medical supplies.

States such as Tamil Nadu, Kerala, Rajasthan and Gujarat have set up an autonomous corporation for procurement and distribution of medicines and other medical supplies for all public health facilities to achieve economies of scale using its purchasing power and in the process of negotiate better with suppliers.

3. Review of Literature

Heinbuch (1995) described an approach to meeting the challenge of healthcare cost reduction through the hospital material management function. The work highlights the value of taking a proactive stance to meet the challenge of transferring technology across industry sectors.

Alverson (2003) discussed the importance of disciplined inventory management for hospitals, and suggested serious consequences of traditional hospital purchasing including lack of inventory control, missed contract compliance, excess inventory levels, frequent stock-outs and costly emergency deliveries, workflow interruptions, expensive rework, and increased health system labor requirements.

The literature on information technology (IT) provides some solutions to material management in the healthcare sector. Burns (2002) discussed aggregation of suppliers and their products through electronic catalogues, visibility of orders and materials, and efficiency in procurement.

Schneller and Smeltzer (2006) suggested that e-procurement systems can help to significantly reduce purchasing costs through the consolidation of supplier networks and creation of supplier partnerships. They also suggested that transaction and administration costs can be reduced through the use of ERP systems, which provide an automated and paperless format for information to flow throughout an organization.

4. Objectives

The aim of the study is to conduct a critical analysis of the working of GMSCL during the last three financial years of its functioning with the following objectives:

1. To study the medicine policy of the state of Gujarat.
2. To study the genesis and the process of establishment of GMSCL.
3. To study the medicine procurement system of the state of Gujarat before and after the establishment of GMSCL.
4. To study the medicine storage and distribution system of the GMSCL and compare with the situation prior to its establishment.

5. Research Questions

- What is the medicine policy of the state of Gujarat.
- How GMSCL was established and what steps were undertaken
- What is the medicine procurement system of the state of Gujarat before and after the establishment of GMSCL.
- What is the medicine storage and distribution system of the GMSCL and compare with the situation prior to its establishment.

6. Research Methodology

6.1 Research Design

Focusing the objective of the present study, a interview was done with the to collect data and information about the different Departments in GMSCL.

Considering the time constraints, the data was collected from GMSCL and Warehouses of GMSCL, Gandhinagar, (Gujarat) region of India.

Convenience sampling methods was used and personal interview methods.

Research design specifies the methods and procedures for conducting a particular study. A research design is the arrangement of conditions for collection and analysis of the data in a manner that aims to combine relevance to the research purpose with economy in procedure. Research design is broadly classified into three types as:

1) Exploratory Research Design
2) Descriptive Research Design
3) Causal Research Design

I have chosen the Exploratory research design.

Exploratory Research Design

Exploratory research study is also termed as formative research studies. The main purpose of such study is that of formulating a problem for more precise investigation or of developing a working hypothesis from an operational point of view. The major emphasis of such studies is of the developing of discovery of idea and insight.

6.2 Sample Design

A Sample Design is a definite plan for obtaining a sample from a given population. It refers to the technique to the procedure adopted in selecting items for the sampling designs are as below:

6.3 Sampling Method

- Non-probability sampling method : Convience Sampling.

6.4 Sample Technique

- Tabulation
- Graphical
- Percentage analysis

6.5 Data Collection

The collection of data process was conducted utilising all the available resources, including, official communications like orders, circulars and notifications, published literature both in scientific and non-scientific publications like newspapers, journals, magazines etc. and by conducting interviews and discussions with the various stakeholders and the public and patients.

The data were also collected from the officers and professionals associated with drug management, and the professionals including journalists and writers. The stake holders were selected to cover various aspects like policy framing, implementing, analysing and evaluating activities. Experts and professionals were interviewed to collect their opinions, observations and viewpoints. Representatives of various professional organisations, political parties, journalists and other media persons were also included for the interview. Apart from the organised interviews, a number of pharmacists, pharmacy storekeepers/store officers/store superintendents were also consulted for the study. The people were identified based on their works, writings, expressed opinion and willingness to share their views.

7. Organization Structure

Head of the Department of this Organization is the Managing Director of G.M.S.C.L. There are different branches working under the direct supervision of the Managing Director.

- **Drug Branch** – To carry out procurement of drugs.
- **Instruments Branch** – To carry out procurement of Medical Equipment and Instruments.
- **Computer Branch** – Computerization of G.M.S.C.L and Planning of G.M.S.C.L
- **Account Branch** – Payment of Bills, Preparation of Accounts.
- **Depot** – Storage and Distribution of drugs to 513 institutions of Gujarat State.
- **Quality Assurance Branch** – To ensure the quality of drugs.
- **Administrative Branch** – Establishment and Personnel work.
- **Market Intelligence Cell**- Market survey and doing study on recent trends in market

The Main Functions of GMSCL are as following:

- Procurement of essential, lifesaving quality medicines, surgical goods & Insecticides and their timely availability by creating highly decentralized storage capacity & distribution network.
- Procurement of quality medical equipment/Instrument and its maintenance for entire product life cycle.
- Establishment of Diagnostic Medical Service Centres foe early diagnosis & ease of treatment for beneficiaries.

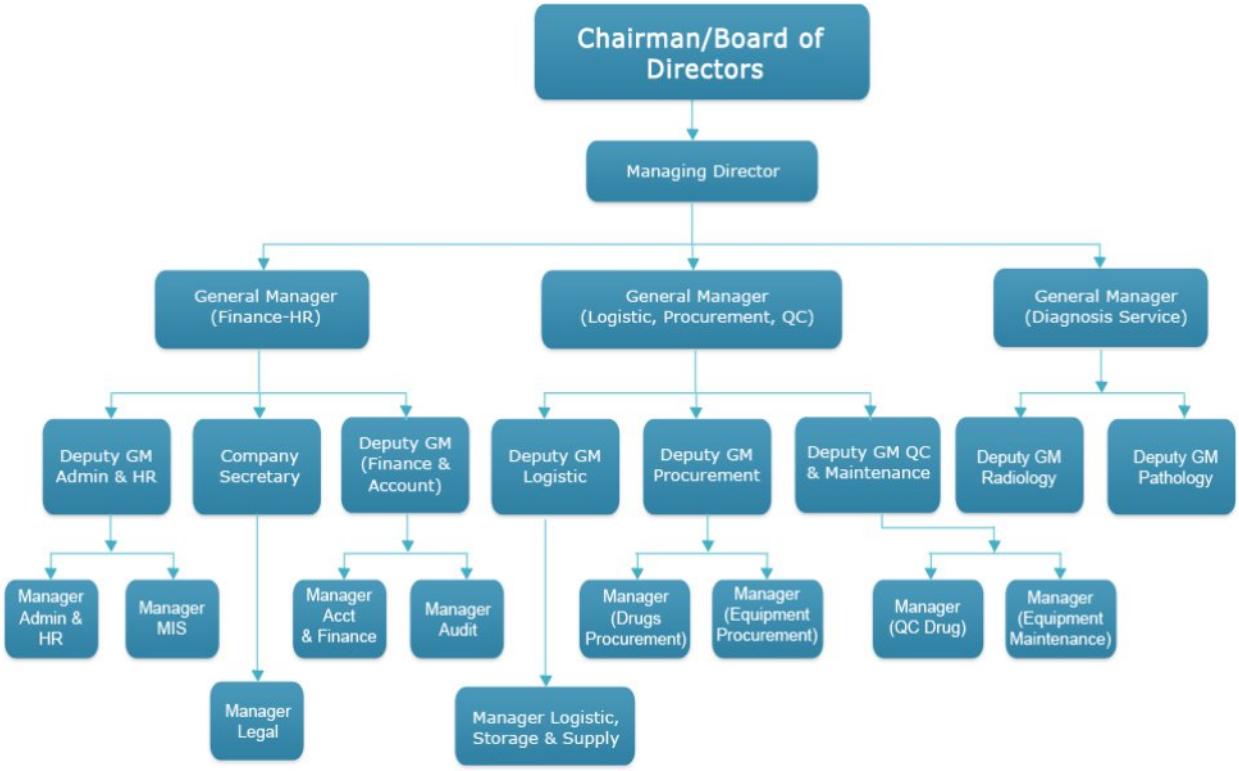

Figure -1: - Organogram of GMSCL

8. Result and Discussion

Procurement of Drugs:-

The erstwhile organization CMSO has been transformed to the GMSCL, procurement procedures and plans are already in place. But with a change in organization, some additions, alterations, or deletions are required to be accomplished in the procurement process to facilitate the functioning of GMSCL and to ensure quality services to the stakeholders i.e. Government healthcare institutions.

GMSCL centrally procures generic drugs for health care Institutions of Gujarat State Through e-tendering process. Tenders are advertised in the widely published newspapers. (Gujarati and English.)

Initially the corporation has completed the process of preparing purchase and procurement manual of its own as per the norms of the CMSO with the objective to have flexibility in purchases, at competitive rate and will follow transparent procedure. The quality of drugs will not be compromised at any stage. The New achievements are:-

- Procurement policy has been revised.
- Procurement of EDL items has been centralized.
- Local level purchase by using GMSCL rate contact is restricted.
- Committee has been formed for scrutiny of Drug tenders.

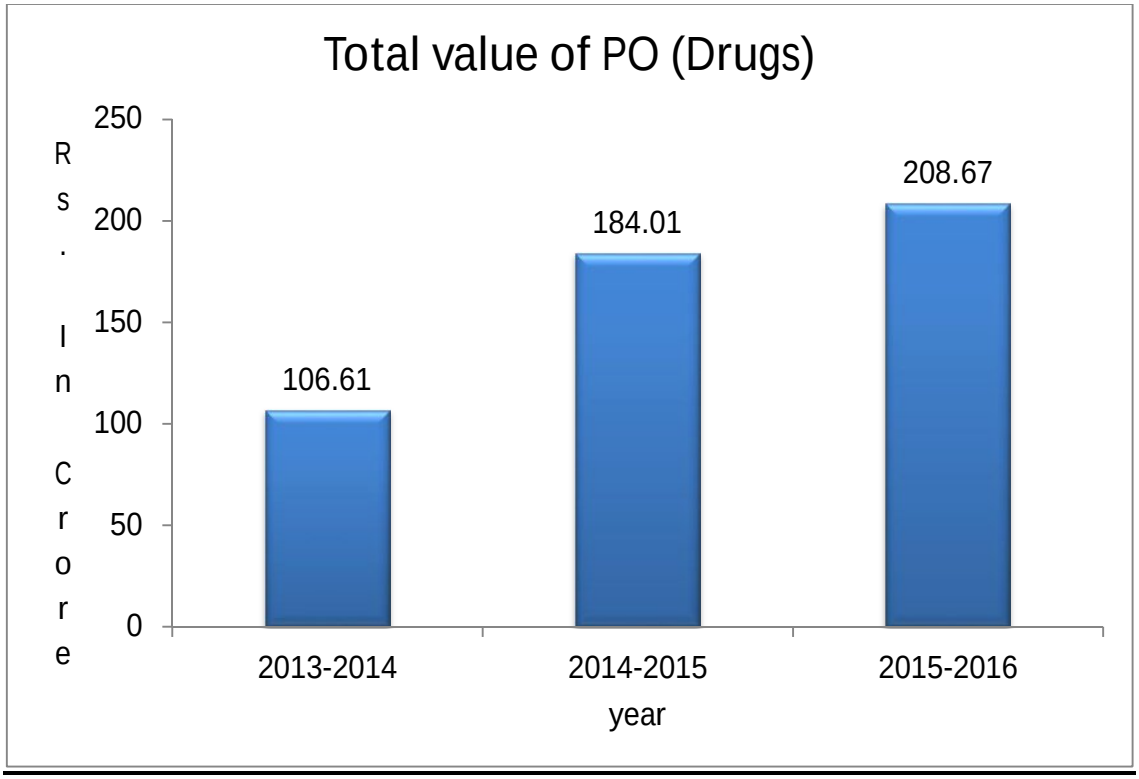

Figure -2: - Total value of PO (Drugs)

Essential drug list

Essential medicines, as defined by the World Health Oraganization (WHO) are, "those drugs that satisfy the health care needs of the majority of the population; they should therefore be available at all times in adequate amounts and in appropriate dosage forms, at a price the community can afford."

In Alma- Ata conference (1978), it was realized that access to essential drugs is vital for preventing and treating diseases affecting millions of people throughout the world. The action plan for providing access to essential drugs to all the people was established in the year 1981 by World Health Oraganization (WHO).

Taking the initiative forward, the Gujarat Medical Services Corporation Limited has come up with a list of Essential Drugs for the State of Gujarat containing a list of drugs that are to be procured and supplied to all the concerned healthcare facilities, irrespective of their inclusion in any other healthcare programme.

First official EDL was published in the year 2004-2005, and since then, this list has been updated every year to keep in pace with the changing technology and requirements.

The EDL list to be utilized by all the medical and para-medical personnel of all the healthcare facilities of Gujarat is prepared by rigorous and regular brainstorming sessions with experts from various departments and specializations with a commitment to update the list every year.

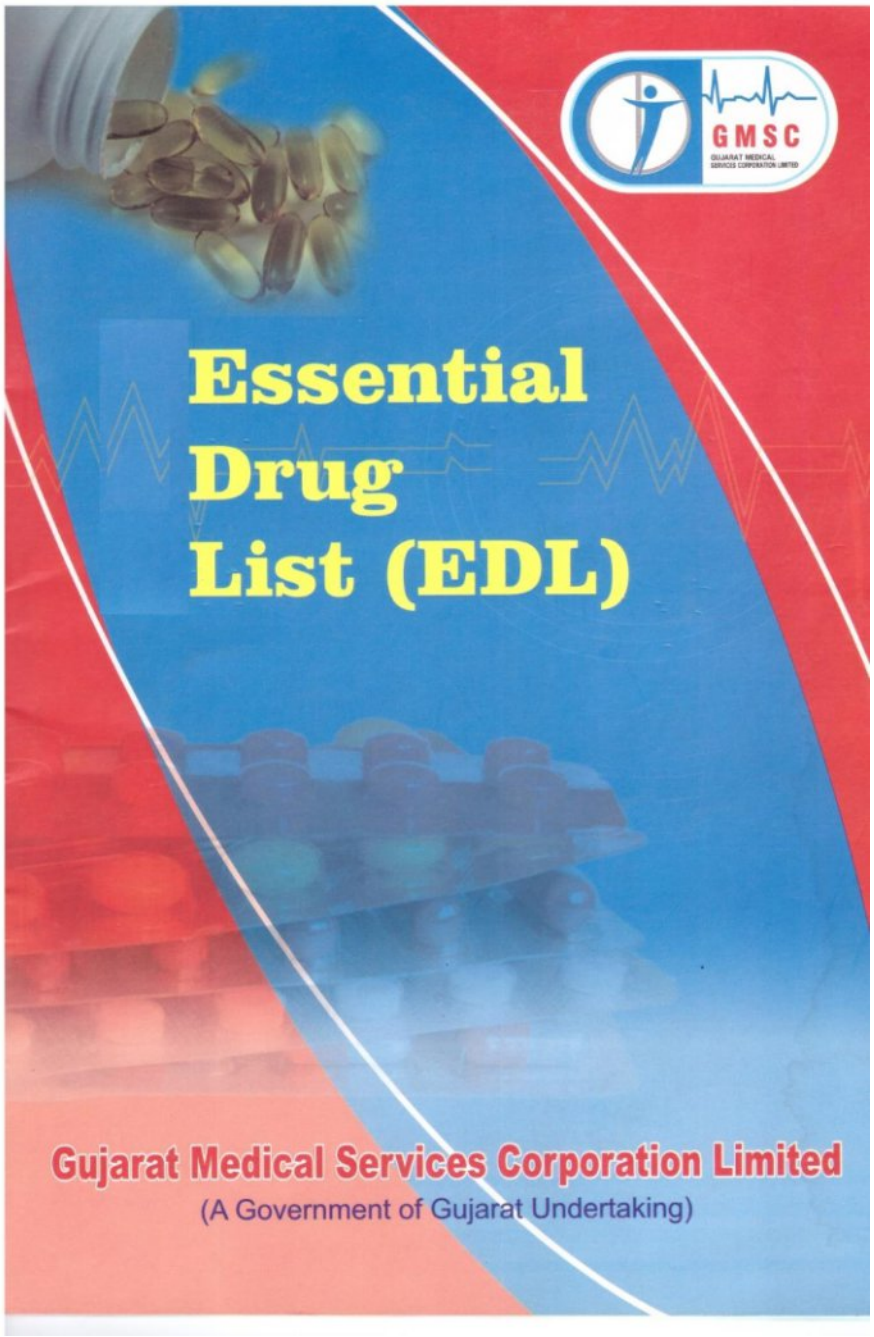

Figure -3: Essential Drug List

A Committee consisting of Professors of various clinical disciplines including medicine, pharmacology, experts and the managing director of GMSCL was constituted to finalise the essential drug list. After detailed discussions and deliberations, based on the morbidity pattern and the prevailing diseases calendar in different parts of the state, the Committee finalized an essential drug list consisting of 575 generic medicines in 2016-2017.

They have also conducted a 'VED' analysis (a well accepted inventory control technique used in medicine management) and listed the items into three categories - Vital, Essential and Desirable. Only very few combination drugs were included in the list and the concept of single drug ingredient was adopted by the Committee at the time of finalising the list.

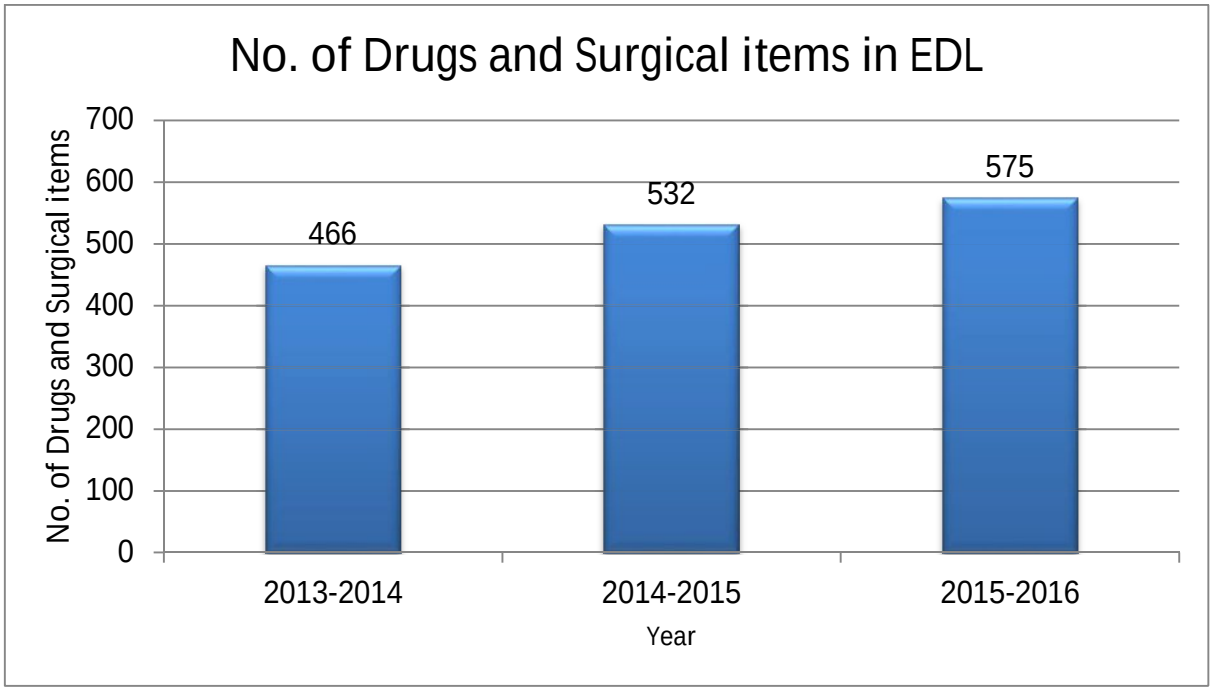

Figure -4: No. of Drugs and Surgical Items in EDL

Standard Treatment Guidelines

The *Rational Use of Medicines* results into a more effective treatment at an affordable cost. Essential Drugs List (EDL) and the Standard Treatment Guidelines (STG) are an important component of promoting Rational Use of Medicines. Gujarat Medical Services Corporation Limited under the auspices of Department of Health and Family Welfare, Government of Gujarat finalizes EDL and has undertaken the task to develop STG for the State. The objective is to improve the availability of quality drugs at each health facility and to achieve maximum public health improvement using available resources. B. J. Medical College and Civil Hospital, Ahmedabad has been instrumental in the preparation of the STG.

A large number of experienced clinicians have contributed in the preparation of these guidelines. The manual begins with a brief introduction to the concept of *Rational Use of Medicines* along with its important components. This is followed by chapters on common diseases and emergency conditions which may be general to all specialties. Remaining chapters describe frequent clinical conditions in each specialty, for example ENT, Psychiatry, Obstetrics and Gynecology etc. The format of the guidelines includes important salient features, diagnostic tests followed by non-pharmacological, pharmacological treatment plan and patient education, if applicable. Medicines are mentioned in generic names and choice is based on the balanced criteria of efficacy, safety, suitability and cost.

This manual will be useful as ready reference for the health care providers and supply management staff. We hope this manual will help in pursuance *Rational Use of Medicines* of the objectives of and make the treatment more specific and effective. We thank all the experts for sharing their valuable time and expertise in developing the book.

Figure 5: Standard Treatment Guidelines

Procurement of Equipment

The objectives for Equipment Procurement of GMSCL are:

- To procure modern era optimum quality Equipment at competitive rates and to follow transparent procedures.
- To meet the Equipment Purchase of different Primary, Secondary and Tertiary Healthcare Institutions.
- To follow quality parameters for diagnosis, technology and research to provide best healthcare services in Gujarat.

  To meet these objectives, GMSCL has incorporated few transformations in its scope of work:
- GMSCL floats tenders through e- tendering process, on receiving indent by the various departments through n Procure online services.
- In addition to e-tendering, GMSCL also does additional advertising of tenders in Newspapers and on GMSCL website
- The general specifications for all the Equipment are decided by various Medical experts so as to allow maximum vendor participation in the tendering process.
- Pre-bid meeting is organized for Single Quantity of Equipment worth Rs. 50 lacs and more or if the total tender value is Rs. 1 crore and more.
- Primary and Technical scrutiny is carried out, following the tender terms and conditions, finalized by GMSCL. A demonstration session is also conducted by GMSCL at the time of Technical Scrutiny to see the live specimen of the equipment &check its functioning.
- After technical scrutiny, Commercial bid is opened by the competent authority, assessing the financial aspects of the quotations.
- Once the vendor is finalized, acceptance of Tender and acceptance letter is issued and purchase order is placed to supply the indented equipment to the consignee.

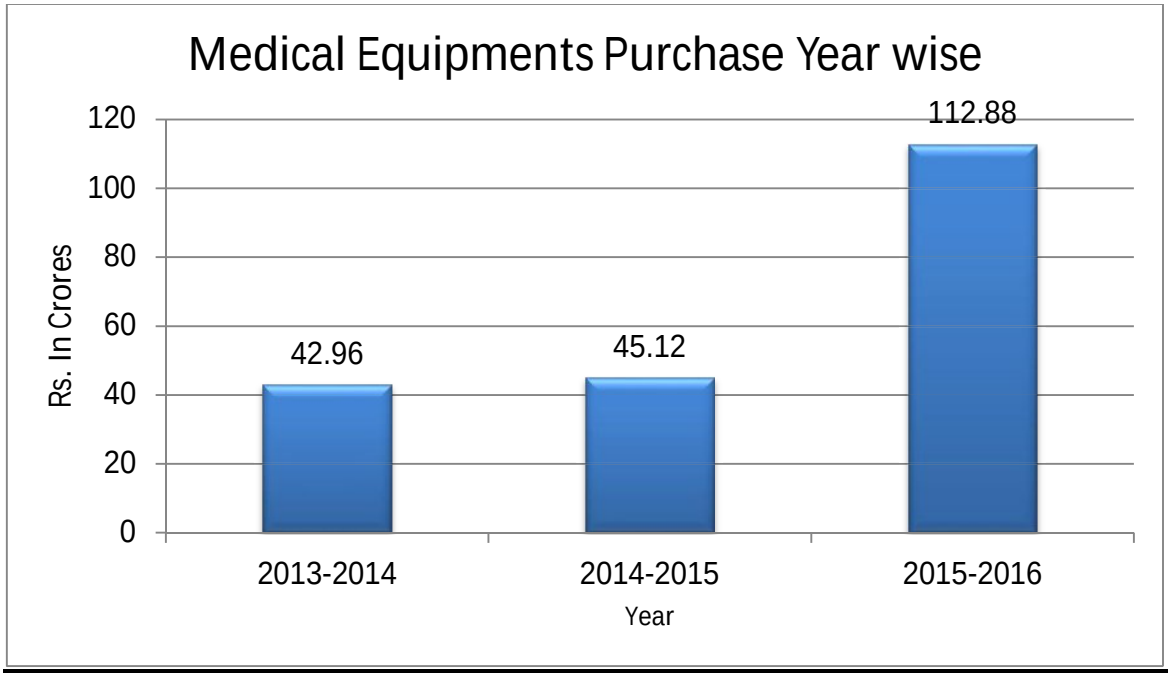

Figure 6: Medical Equipments Purchase Year wise

Drug distribution System:-

The GMSCL created a chain of warehouses with all required facilities to provide reasonably good storage conditions including 'cold place' for the storage of items. Warehouses were established at 7 Locations. At present, the GMSCL has 7 warehouses in the state and they cover the 33 districts. All the warehouses are of uniform design and structure.

Each warehouse is staffed with four pharmacists, one data entry operator and four helpers who help in loading and unloading operations. On receipt of new stock, appropriate entries are made in the computer about the stock arrived on that day, existing stock, pending quantity to receive, drugs distributed to various centers, expiry dates of different batches, total stock in warehouse, and drugs with batch number sent for quality control (QC) checks. Distribution schedules were given to the hospitals to enable them timely deliveries.

The warehousing and material transport system planned and adopted by GMSCL is much better and more scientific compared to other medical corporations. Medicines from the manufacturers are received and stored in the Regional warehouses for delivery to the hospitals. Medicines are issued to the medical college hospitals four in a month and to the general hospitals and district hospitals twice in a month. CDHO/ADHO/CHC hospitals and others receive medicines once in a month. Emergency supplies are affected as per the need.

For each hospital the budget allotment is notified by the GMSCL and recorded in the passbooks. All the Regional warehouses and head office are connected through online network (e- Aushadhi) for monitoring to check position and details regarding quality control and quality assurance process.

The new warehouses under construction are very much modern, scientific and technically designed. The GMSCL initiated serious steps for improving infrastructure of warehouses and material transport system by the beginning of 2012. They have also planned to modernise their warehouses which were made available to them by the state government in all the 33 districts of Gujarat.

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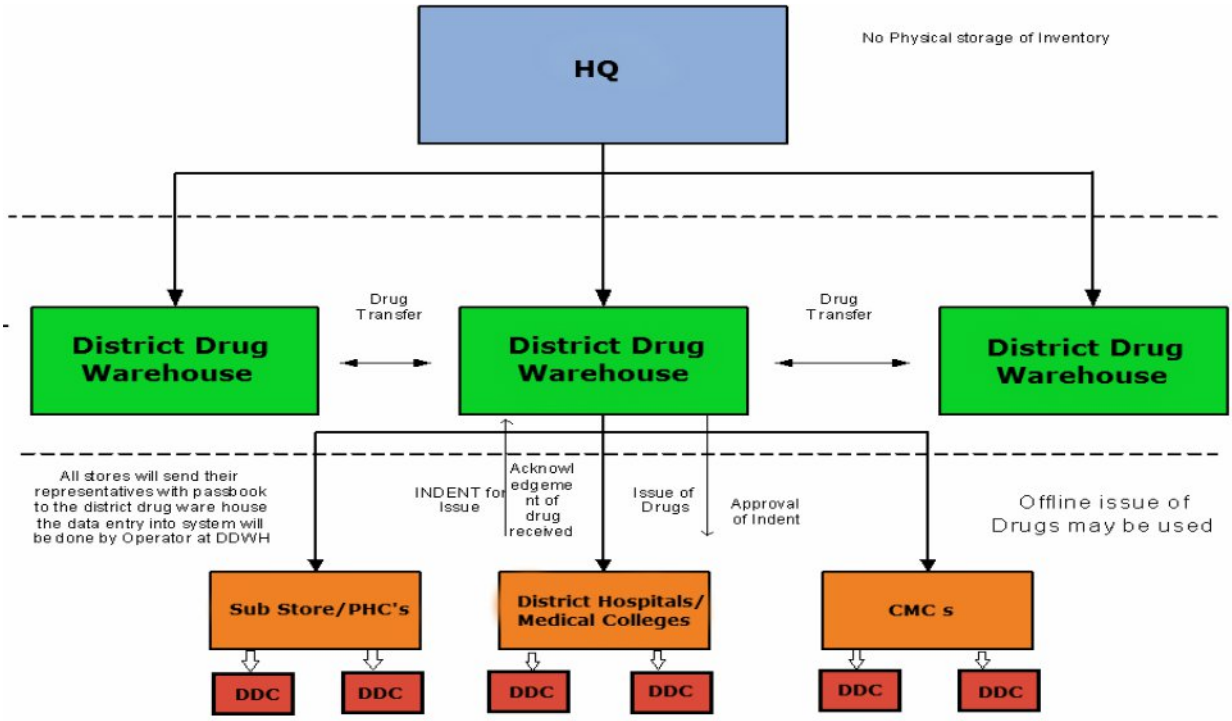


Figure 7 : Flow of Drug Distribution

GMSCL introduced the ‘first expiry first out’ (FEFO) practice for picking and dispensing process of medicines in their warehouses. This in turn helped to introduce FEFO as an inventory control technique throughout the government hospitals in Gujarat. All transactions including generation of material receipt certificate and inward goods register were maintained through a paperless Information Technology (IT). It enabled proper logistical management information system (MIS) which was supported by periodical physical verifications. Every day, e- Aushadhi generates various reports including brief executive summary to enable officers for stock monitoring, forecasting, procurement and distribution

Modernization of drug warehouses is taken upon a war footing to plan, design, build and operate scientifically designed warehouses catering to the growing future demands of storage management, inventory management and fleet management by utilizing modern rake and stack mechanisms, modern packaging techniques, barcode readers and Global Positioning System(GPS)enabled transportation vehicles. The new warehouse design captures all the elements required for the efficient storage of drugs by considering all the climatic factors of the state.

Figure 8: Warehouse

Figure 9: Storage area in warehouse

In the process of modernising the warehouses, on March, 2016 the GMSCL opened other modernised warehouse in Vadodara and Rajkot with facilities for ‘cool’ and ‘cold’ place storages, quarantine for received items waiting for quality control test reports, computerised racking facility, humidity control room, bar coding for inventory control and expiry management and advanced fire fighting utensils. They have started the works for well designed ware houses in a planned manner in other centers.

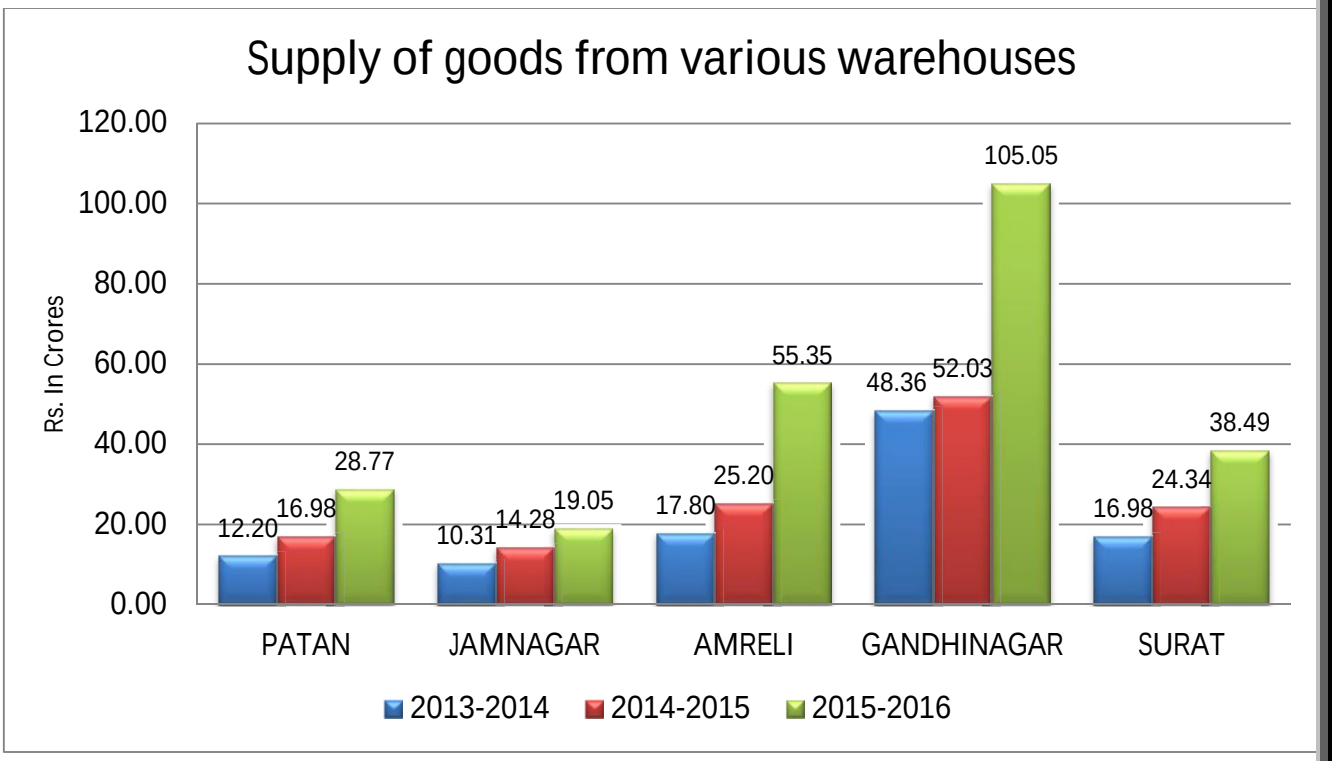


Figure 10: Supply of Goods from various warehouses

Previously An online web-based application named Drug logistics Information and Management System (DLIMS) has been developed by NIC integrating various inter-related activities of the Centre Medical Stores Organization Office. This application is in operational since December 2006 at Gandhinagar. It provides some selected features for the Direct Demanding Officers (DDO) spread all over the state. DLIMS has plays an important role in monitoring various Govt. sponsored National Programmes such as Anti-Malaria, School Health, Epidemic, Nirmal Gujarat, Anti Rabies, Medical Camps etc.

These modules have been appreciated by "Silver Award" for National e-Governance, 2008-09 for specific sector Award: Health by Government of India.

Now supply chain management or inventory management at GMSCL is managed by a web based application of ***e- Aushadhi***. Each and every warehouse and public health facility to which GMSCL provides medicines is connected through this interface.

Figure 11: e- Aushadhi web portal

This interface can:-

1) Monitor Drugs information
2) Define the items into Groups, Sub groups, Categories, Codification of Drugs.
3) Automatic Indent generation as per planning
4) Maintain expiry Date / Shelf life for an item
5) Search items using a number of search criteria
6) Transfer of Drugs among Drug Warehouses
7) Drug Distribution to Patients with all statistical Data about Drugs, Doctors
8) Define and maintain various levels of Stores
9) Link all drug warehouse hierarchically
10) Maintain control (such as quantity tracking) on stocks and their replenishment.
11) Reserve items within District WH / CHC / PHC.
12) Record transactions while moving items from one location to another.
13) Alarming Expiry Drugs, SMS facility at all level
14) Dash Board Facility for the Senior Management.

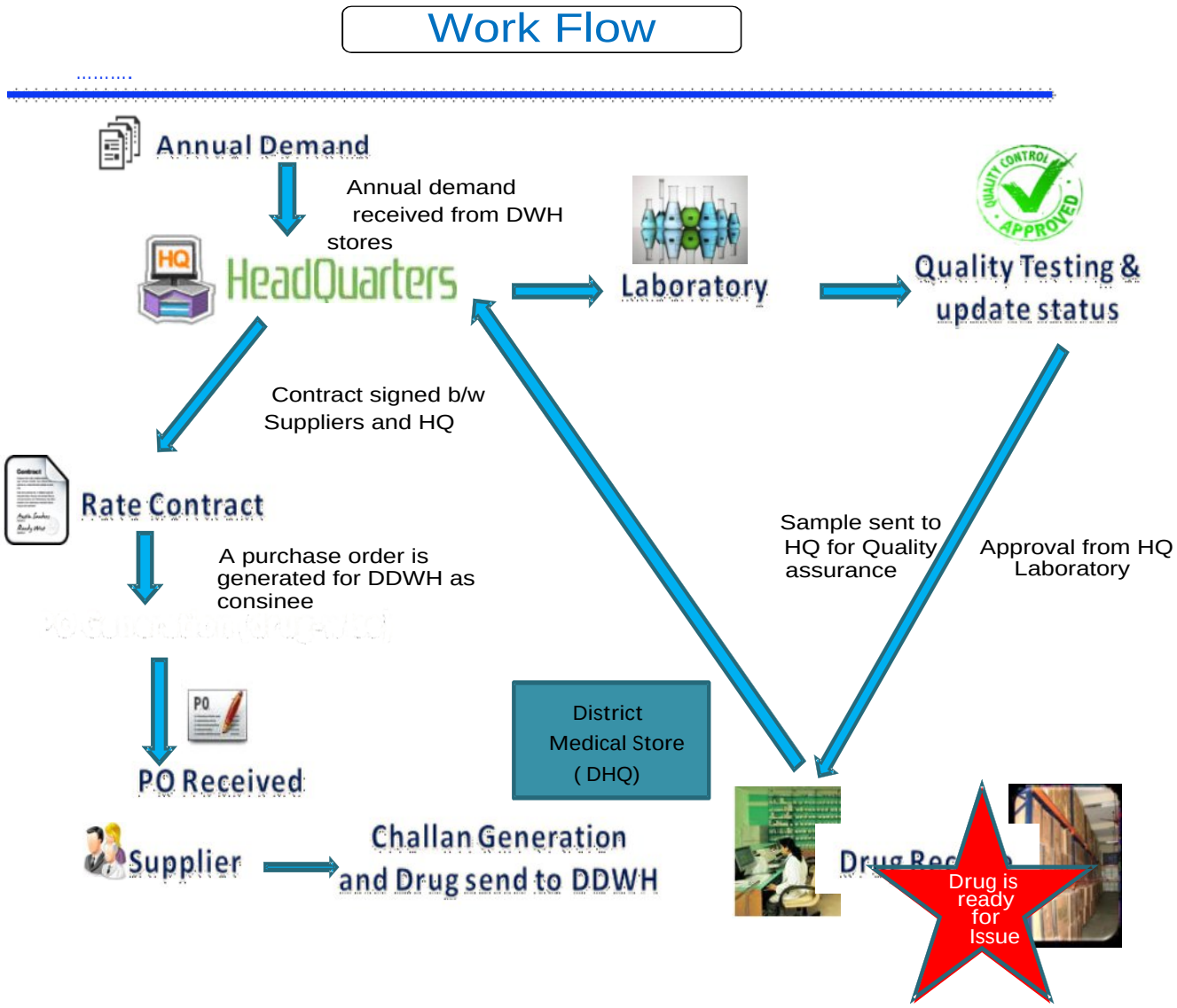


Figure 12: Workflow of e- Aushadhi

It is no wonder that this application has increased the efficiency of the GMSCL supply chain system by decreasing the wastage of medicines and decreasing the time taken for indenting and tracking the availability of medicines in the state.

e- Aushadhi provides connectivity between 7 warehouses in the states and real time information on the availability of medicines.

It is no wonder that this application has increased the efficiency of the GMSCL supply chain system by decreasing the wastage of medicines and decreasing the time taken for indenting and tracking the availability of medicines in the state.

e- Aushadhi provides connectivity between 7 warehouses in the states and real time information on the availability of medicines.

Sr. No.	Name	District Cover
1	Adalaj	Ahmedabad, Anand, Dahod, Gandhinagar, Kheda, Panchmahal, Surendranagar, Mahisagar
2	Amreli	Amreli, Bhavnagar, Junagadh, Botad, Gir-Somnath
3	Jamnagar	Jamnagar, Kutch, Porbandar, DevbhumniDwarka
4	Patan	Banaskantha, Mehsana, Patan, Sabarkantha, Aravalli
5	Surat	Dang (Ahwa), Navsari, Surat, Tapi, Valsad
6	Vadodara	Vadodara, Bharuch, Chhota-Udaipur, Narmada
7	Rajkot	Rajkot, Morbi

Table 1:- Available Drug Warehouses

Upcoming Warehouses

- Bharuch
- Bhuj
- Godhra
- Himmatnagar
- Valsad
- Dahod

Quality Assurance of Drugs

GMSCL assures quality of drugs supply to all Health Institutions of Gujarat Government. This is assured by pre-dispatch testing and testing as per Drugs and cosmetics Act 1940 & rules there under. Thus GMSCL keeps watch on the quality Drugs supply to the Government Health Institutions.

PERFORMANCE AS PER DRUGS & COSMETICS ACT 1940				
Sr No	Name of Activity	Achievement in 2013-14	Achievement in 2014-15	Achievement in 2015-16
1	Number of sample (drugs) taken(by Manager (QC))	789	692	584
2	Number Of Not Standard Drugs	118	71	41
3	General circular for Not of Standard Drugs	28	15	10
4	Recovery Order (Rs in Lac.)	85,66,893	47,25,399	80,40,248
5	Replacement (in Rs)	13,51,553	1,00,322	6,88,345
6	Number of Firm Debar	10	14	8

Table 2:- Performance of QC

Testing as per the Drugs & Cosmetics Act 1940

- Drugs Inspector of GMSCL draws the samples from all depots of corporation and looks after statutory provisions as per the Drugs & Cosmetics act 1940 & rules there under.
- This procedure is followed after the receipt of the drugs to GMSCL, which provides another check point related to the quality of the drugs.
- Drugs Inspectors of Food & Drugs Control Administration also draw the samples from supplies made to Health Institutions.
- Based on sub standard report of the drugs, recovery/replacement process is under taken,
- The same is informed to all direct demanding officers by circular.
- As per the policy of corporation, debarring process is followed.
- The name of debarred firms is also published on the website of GMSCL.

Several layers of quality checking mechanism are in place under GMSCL. The first procedure is detailed in the tender document, wherein the technical bid conditions ensure that the medicines supplied by the manufacturer are of good quality and supplied on time. The penalty clauses are clearly lays conditions for shelf life of the medicines purchased.

In compliance with the quality policy, GMSCL has blacklisted many companies for procurements, mainly because of substandard quality. Publishing the list of blacklisted parties on the website of the GMSCL indicates the level of transparency in the procurement process and concerns of GMSCL for getting quality medicines. Such practices also keep suppliers alert about maintaining quality and timely supply of medicines to maintain their market standing.

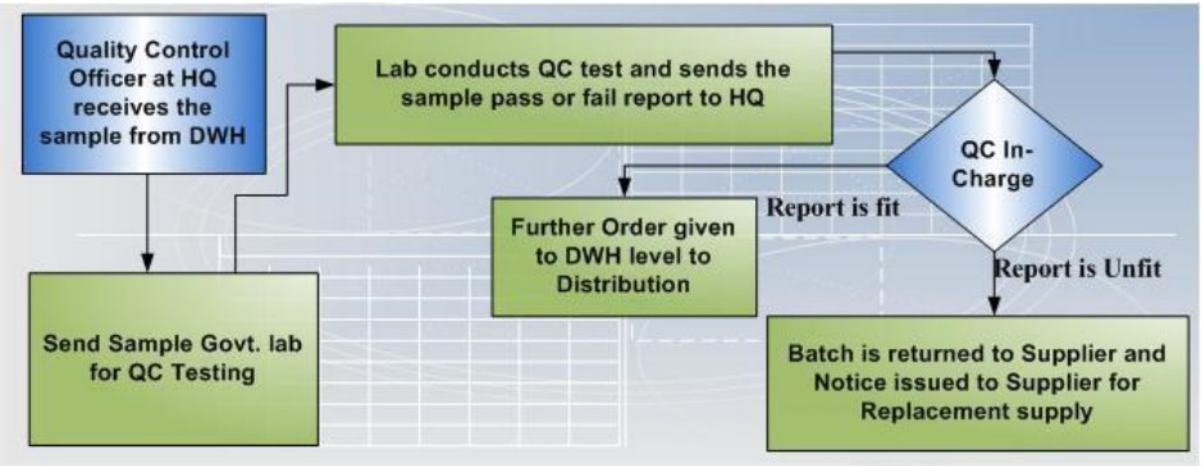


Figure 13: Process flow of QC

The second and most important process of quality assurance is undertaken once the medicines are received at the warehouse. Samples from supplies are drawn randomly from each batch and sent to the head office in Gandhinagar. The quality control department then mixes the entire sample and undertakes the process of removing /hiding the identity of the manufacturer and encoding the formulations by assigning secret codes. These are then sent to laboratories for analysis. The laboratories analyse the medicines using pharmacopeia specifications and suitable test protocols. Upon receipt of reports, generally via electronic media, the medicines are released into the health system.

Pre-dispatch testing

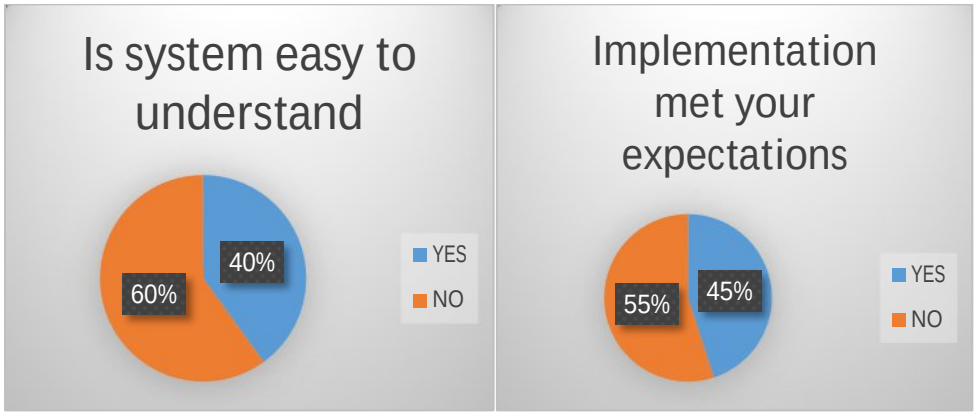
- Under pre-dispatch testing all the batches are tested by Govt. Lab before distribution.
- Pre-dispatch testing is carried out only in one DWH.
- The Quality Control Officer at HQ receives the sample from DWH.
- QC officer compile all the sample as per the batch details and send a letter, sample Govt. lab for QC testing
- The lab conducts QC test and sends the sample pass or fail report to HQ for further course of action.
- The Quality Control Officer analyze the report, if concerned officer found that report is fit for use then further order given to DWH level to distribute the quarantine quantity of Medicines to next level for further utilization of Medicines.
- In case the QC report declares a batch to be NOSQ (Not of Standard Quality), the batch is returned to supplier and notice issued to supplier for replacement supply.

Sr No	Name of Activity	2013-14	2014-15	2015-16
1	Number of sample (drugs) taken	3178	4675	9722
2	Number Of Not Standard Drugs	154	67	55
3	General circular for Not of Standard Drugs	12	12	10
4	Recovery Order (Rs in Lac.)	4.09	20.07	19.30

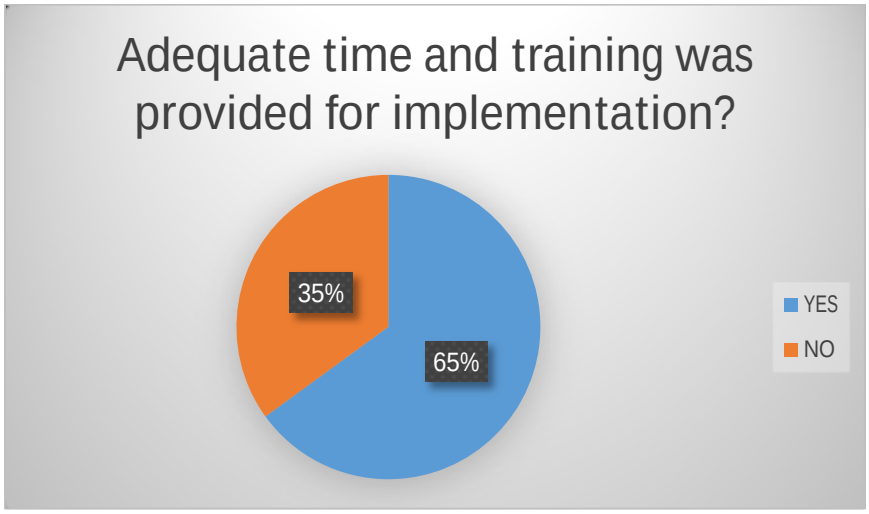
Table 3: Pre dispatch testing

Once the medicines arrive at the warehouse with expiry date, the warehouse in charge records these in a register in accordance with the Drugs and Cosmetics Act. Later on, these records are computerized to make them available online. The new medicines are kept in a quarantine area till the time the testing report arrives, which is also done through this platform.

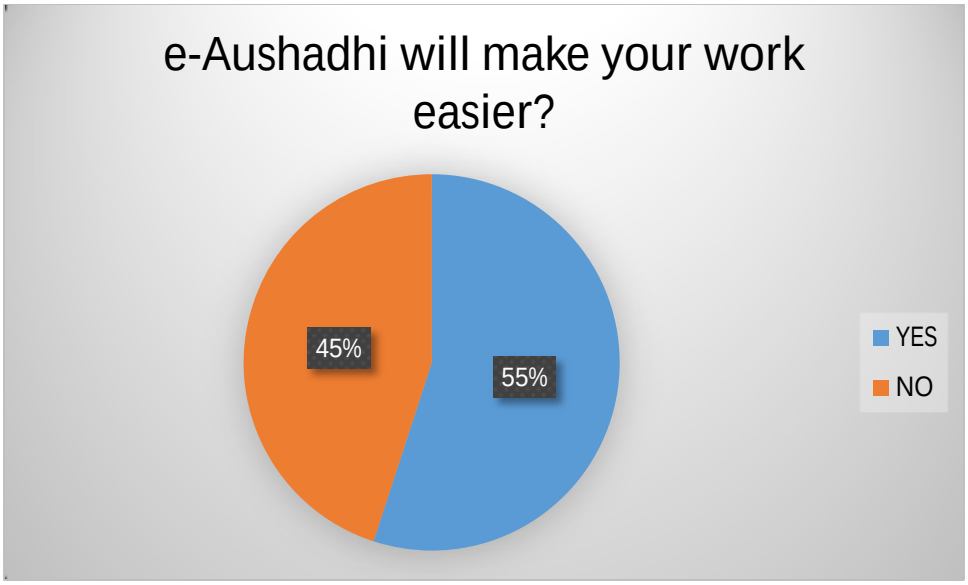
PRIMARY DATA ANALYSIS



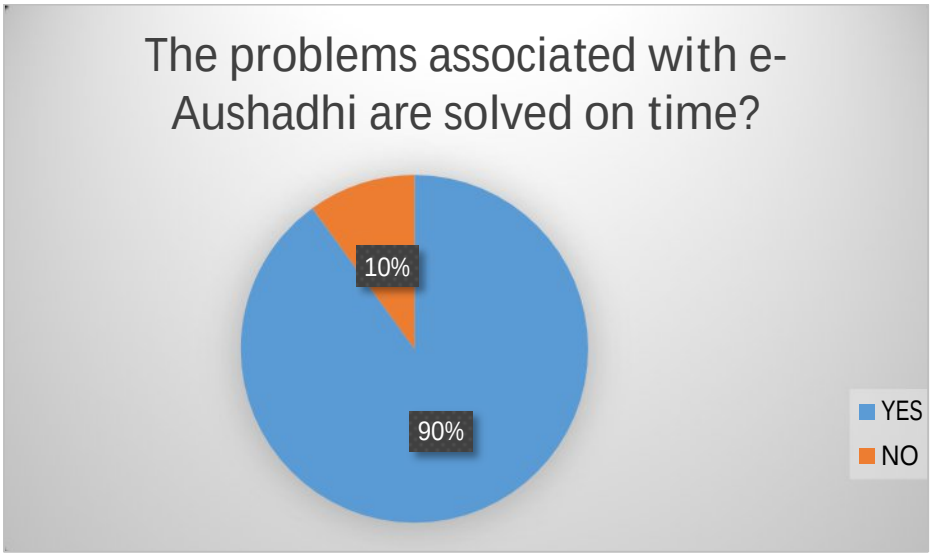
- This graph represents that approximately 55-60 percent of sample size taken agrees that system is easy to under understand and has met their expectations but 40-45 percent disagrees.



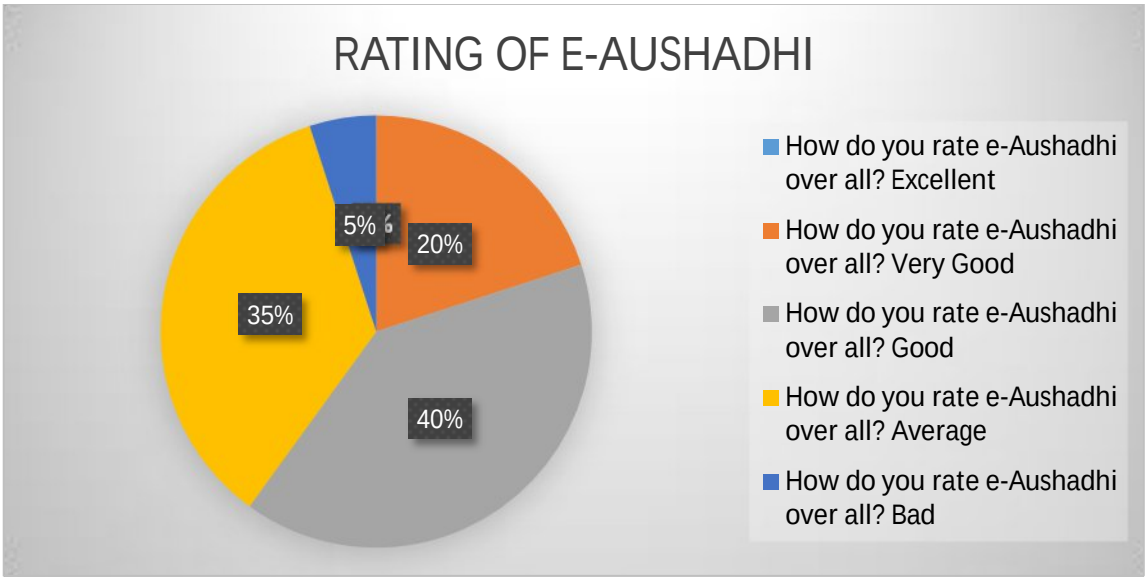
- The graph represents that 65 percent of sample size taken agree that appropriate and adequate training related to usage of e-Aushadhi application has been provided but 35 percent does not agree



- The graph shows that 55 percent of sample size agrees that e-Aushadhi will make their work easier and 45 percent says that it will not.



- The graph shows that 90 percent of sample size taken agrees that the issues associated with e-Aushadhi application are resolved on time but 10 percent does not agree.



- The graph shows that 40 percent of sample size taken rated e-Aushadhi as good while 35 percent rated it as an average software overall.

9. Conclusion

Compared to the earlier system, the GMSCL could make wonderful changes in the drug situation in Gujarat within three year so fits existence both in making the medicines available in government hospitals and ensuring their quality. GMSCL could introduce and popularize the concepts of good warehousing and storage practices in drug store management in Gujarat. The starting of community pharmacies for open market sales of medicines is a unique feature of Gujarat drug policy. The manner in which the community pharmacies are designed and established is worth emulating. The community pharmacies and their working are very much professional and scientific both in structure, appearance and functioning.

The GMSCL is purchasing most of the medicines at an economic rate incorporating the concepts of cost minimisation principles of pharmacoeconomics. There is considerable difference between the open market price and rate fixed by GMSCL. The Corporation needs mode support and assistance from the State and the Central Governments to initiate activities like research studies and other innovations in the field.

Supply chain automation of the drug management system provides an accurate view of state of drugs warehouse and inventories across the state.

Information Technology is a very important step in streamlining the Supply Chain Management of the any organization. Through Information system (e-Aushadhi), the process can be made more transparent and chances of data manipulation and wrong information can be prevented.

e-Aushadhi can help in streamlining the process of inventory management and can brought more transparency in the system. Different users at all levels have a better and much more accurate view of the state of drugs warehouse and inventories across the state. Though there are many hindrances related to the implementation of e-Aushadhi such as proper infrastructure is not available to support the application at many levels which needs to be noticed and rectified.

10. Recommendation

A team of committed and dedicated officials of GMSCL could introduce many innovations in the system that helped to revolutionize drug procurement in the state. The state of Gujarat adopted TNMSC, RMSC model in 2012 after serious discussions and analysis of the issues. The Gujarat Medical Services Corporation Ltd (GMSCL) could introduce certain innovations within a period of three years of its establishment that are worth emulating by other Indian states. The state of GMSCL to introduce many new concept/s in matters related to medicine procurement, storage, distribution and dispensing after 2013.

GMSCL has succeeded in promoting access to medicines in the state and to popularise the concept of quality assurance in medicines. The corporation is also promoting the growth and development of the domestic pharmaceutical industry. It has made possible the procurement of cost effective medicines in right quantities at right time in the right manner. GMSCL tries to extend maximum possible benefit other poor sections of the society in healthcare with the available budget. It also helps to eradicate the issue of counterfeit and substandard medicines in government hospitals to ascertain extent.

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