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Review Article

Procurement and distribution of medicines in government hospitals of Tamil Nadu – An overview

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ABSTRACT

It is an established truth that the drug availability in the Indian public health system is always remaining as a problem. One can attribute many reasons like shortage of fund, inefficient indenting procedures, poor inventory management and others for the problem. Recognizing the shortage of medicines in government hospitals, many Indian states have introduced exclusive set ups for the purchase of medicines for the hospitals. They procure medicines through centralized pooled purchases. Kerala, Delhi, and Tamil Nadu governments were introduced such pooled procurement system for drug purchase. Tamil Nadu, a major state in India started a corporation styled as Tamil Nadu Medical Service Corporation (TNMSC) registered under the Companies Act 1956 in July 1994. With the help of a well-designed and scientifically planned scheme TNMSC could introduce many innovations and thereby revolutionize the public drug procurement system in the country. Articles about the drug purchase systems followed in hospitals are rare. In this article mainly focusing the procurements methods adopted by the Tamil Nadu State.

Keywords: Drug procurement; Drug distribution; TNMSC

INTRODUCTION

Medicines are perhaps the most important medical intervention in health care delivery systems. In order to redress the chronic non availability of essential medicines in most of the health facilities, the government of Tamil Nadu set up a government procurement and distribution agency, Tamil Nadu Medical Service Corporations Limited (TNMSCL). Procurement is one of the frontline areas in health care which is prone to corruption (Eva Ombaka 2009). In Tamil Nadu, until 1995 the responsibility to procure and supply drugs to government healthcare rests on Centralized Purchasing Committee (CPC) and it functioning under the chairmanship of Health Secretary (Mohanta *et al* 2010). CPC used to invite tenders. But CPC failed to meet the requirements of hospitals in a timely manner and result in the wastage of drugs. As a result of this the old system was completely dismantled. This paved the way for the setting up of Tamil Nadu Medical Services Corporation (TNMSC).

Tamil Nadu Medical Services Corporation (TNMSC)

TNMSC was incorporated under the Companies Act, 1956 on 01/07/1994 and commenced the functions of

purchase, storage and distribution of medicines from January 1995. Its primary objectives were to ensure ready availability of quality drugs and medicines in the government medical institutions throughout the state. (Revikumar KG 2008). The corporation used the concept of essential drug list propagated by WHO and also followed the use of generic name for each drug. TNMSC purchased drugs only from manufacturers and not through their agents and also followed open tender system.

Drug procurement policy

i. Assessment of quantity and list of drugs

TNMSC is entrusted with procurement and distribution of Drugs and Medicines, Surgical and Suture items to the Government Medical Institutions. TNMSC finalize the Essential Drug List for drugs, surgical and suture items every year by getting the requirements from the Government Medical Institutions situated throughout the State of Tamil Nadu and these requirements are placed in the Drug Committee Meeting convened in the month of November every year.

The Drug Committee consists of the following members

- i) Director of Medical Education
- ii) Director of Medical and Rural Health Services
- iii) Director of Public Health and Preventive Medicine
- iv) Director of Medical and Rural Health Services (ESI)

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- V) Director of Family Welfare
- vi) Director of Drugs Control
- vii) Chief Physician
- viii) Specialists and Surgeons

The Drug Committee scrutinize the items in the Essential Drugs, Surgical and Suture List purchased in the previous year and analyze the slow moving, nonmoving and outdated items and recommend for the deletion of these items. In addition, the committee also suggests including certain items of Drugs, Surgicals and Sutures suggested by the institutions based on the essentiality. Final list of Essential Drugs, Surgical and Suture items will be consolidated after the Drug Committee meeting and the specifications of each item will be arrived along with Pharmacopeia standards. The Drug Committee will also decide on the procurement of quantity for the essential drug list items by analyzing the last year purchase and utilization.

ii. Calling upon tenders

Tenders will be invited by giving advertisement in the leading all India level newspapers, Regional papers and tender bulletins. Subsequently the tender notifications will be issued to all the State Drug Controllers, Pharma Manufacturing Associations and Pharma publications to increase No. of participants and competitors. The tenders will be received upto the stipulated time in TNMSC and the technical bids will be opened in the presence of the Tenderers/Representatives and Tender Evaluation Committee. The technical bids were opened and scrutinized with the help of the check list by a team of officials drawn from the Director of Drug Control with the Pharmacist from the warehouses. Evaluations will be done in the presence of the Tenderers/Representatives and those who are not submitting the required documents will be intimated through a letter at the end of the technical bid opening.

After preliminary evaluation the tender documents will be once again scrutinized in the Head office for the specifications etc. In case of any discrepancy noticed during the subsequent scrutiny letters will be issued to the tenderers to submit the clarifications/additional documents.

The manufacturing premises of the tenderers who are participating 1st time in the TNMSC tender and those who were empanelled previously in TNMSC are compulsorily inspected for the compliance of Good manufacturing practices and for their production capacity. Inspection team will be constituted with the officials from Drug Control and end user departments such as Director of Medical Education and Director of Medical and Rural Health Services. The teams will be sent for inspection to the manufacturing premises with a check list for verification of the GMP compliances and capacity of the tenderer. On the recommendations of the

Inspection team the tenderer will be considered for the price bid opening.

Those tenderers who were short listed on technical bids evaluation and on the inspection of the manufacturing premises will be called for price bid opening. The tenderers will be requested to come along with copies of the price quoted for the items and this shall be circulated among the competitors during the price bid opening. Tenderers are also requested to submit the soft copy of the price along with the price bid of the tender. After opening of the price bid the soft copies will be fed into the Computers and the print outs were taken and verified with the documents submitted.

The provisional L1 rates for all the eligible items will be arrived at on the same day, of the price bid opening and Provisional L1 rates will be published in the Website and in the Notice board of TNMSC. The L1 tenderers will be called for price negotiations as per the Tamil Nadu Transparency in Tenders Act. After finalization of the L1 rates, the L1 rates and the list of tenderers will be placed in the Tender Committee of the Board for verification and recommendation to the Board for approval.

After Board's approval, letters will be issued to the L1 tenderers for execution of agreements and deposit of Security amount. Subsequently, letters also issued to the tenderers who are participated in the tender and request them to send their willingness for matching the L1 rate. The tenderers are also requested to indicate the matched items in the schedule of the agreement. The matched suppliers will be kept as reserve, in case of any additional requirement and in case of exigency, orders will be issued to the matched tenderers.

If any drugs which are not approved by the Tender Committee and the Board for various reasons retenderers will be invited for those items and the same will be placed once again in the Tender Committee and the Board for approval as per the value of the item. (TNMSC, www.tnmsc.com 2012)

iii. Procurement of drugs

The essential drugs and surgicals are classified as fast moving and slow moving items. This decision has been taken to have more concentration on the fast moving items. The purchase orders will be placed once in two months for the fast moving items and for the slow moving items orders will be placed twice in a year.

TNMSC always have 4 months physical stocks in its 25 Warehouses and 2 months stocks in pipeline for all the drugs. The Purchase order quantity will be arrived at, by taking immediate previous 12 months consumptions, stock available in warehouses and pipeline stocks. The orders generation is system based and are verified by the Assistant Manager (Purchase) and Manager (Purchase) and put up for approval of the Managing Director through the General Manager. After the approval of the Managing Director the purchase orders

will be placed and sent to the Suppliers through E-mail and hard copy by courier. The stocks in the warehouses and their utilizations are closely watched on day to day basis by the Assistant Manager (Purchase). After receipt of Purchase Orders the suppliers are requested to upload the confirmation of receipt of the Purchase order within 3 days from the date of placing the order. The suppliers are also requested to indicate the schedule of supply by e-mail or Fax within 7 days from the date of receipt of the order so as to have a better plan of action on the movement of drugs.

As per the tender conditions the supplier has to supply at least 20% of the ordered quantity within 30 days from the date of the purchase order and to complete at least 70% supply before 60 days. If any defaulted on the above condition, subsequent orders will be placed with the matched supplier or with the next tenderer at higher rate. The difference of cost will be deducted from the L1 tenderer. These conditions are incorporated to ensure timely supply of the drug and there by TNMSC also cater the needs of the institutions in time and after assessing the quantity of the drugs.

In case of any drug for which the consumption has been reduced in a particular area and if the drug is not required by them, the drugs will be transferred to the required warehouse and also letters will be sent to the concerned institutions and hospitals and ask them to utilize the drug. By this methodology, the expiry of the drugs in the warehouses is avoided. The same way in the case of any excess drawal of the drugs from the warehouses are also monitored, in case of any epidemic situation, the requirements will be met out immediately by making inter warehouse transfers.

Once, in a fortnight, the short expiry drugs lying in the warehouses within 6 months are taken and are analyzed for their movements. Letters will be sent to end users such as Superintendents, Joint Director of Health Services, and Deputy Director of Health Services etc to convene a Drug Committee Meeting to utilize the drugs in their Hospitals. If any other Hospital in the State requires the short expiry drug, those drugs are transferred to the needed warehouses and try to utilize them before expiry. If it is not possible to utilize the drug within the period, a letter will be sent to the suppliers and request them to replace the quantity with the fresh batch of the longer shelf life.

iv. Quality parameters

As soon as the drugs are received in warehouses of TNMSC from the suppliers, the corrugated boxes were numbered and same will be fed into the computer system. Three samples were drawn from 1/3 of the boxes from the supplies from each batch as per the random numbers selected by the system. The three samples drawn were sent to the Quality Control department in the Head office.

The samples are received in the Head office from all the warehouses, common batch of each item are eliminated, the tablets and capsules are removed from the strips and blisters, labels of vials, ampoules and bottles are removed and coded with the secret number and sent to 3 different Empanelled Laboratories for analysis.

The Empanelled Laboratories are requested to analyze the drugs as per the Pharmacopeial specifications such as.

I. Tablets & Capsules

- i) Identification
- ii) Disintegration test
- iii) Dissolution test
- iv) Uniformity of the weight
- v) ASSAY, etc.

II. Injectables

- i) Identification
- ii) pH sterility
- iii) Pyrogeon Test.
- iv) BET Test and other related substance, etc.

As soon as the reports were received from the Empanelled laboratories, the results are up-dated to the warehouses through E-mail. Any sample sent to the Empanelled laboratories fails in quality, the results will be confirmed with the other Empanelled laboratories/ Government Analyst before taking final decision. If the drug fails in ASSAY or any other parameters, immediately letters will be issued to the warehouses to freeze the stock and ask them to remove from the main stock and kept separately until it is cleared by the Quality Control department. If the Empanelled Laboratories/Government Analyst confirms the failure of the drug supplied by the supplier, the stocks will be returned to the supplier. After 30 days of the letter for return of stocks, if the stocks are not taken by the Supplier and lying in the warehouses, penalty of 2% per week will be levied on the value of stocks in the warehouse till it is destroyed by TNMSC (90 days).

In case of any failure reported by the Government Analyst on the samples drawn by the Drug Inspectors from the Storage points (hospitals) immediately a letter will be communicated to the Warehouse in-charges to stop the issue of the product and also request them to retrieve the drug supplied to the hospitals. The Warehouse in-charge will in turn issue letters to each and every Institution where the batch has been supplied for retrieval of the drugs and request hospitals to collect the stocks from the wards and sub stores and inform the Warehouse in-charge about the quantity available over phone and send back the stocks within two days from the date of receipt of the letter. The

Table 1: Price difference of medicines - Tamil Nadu experience (Veena R et al 2010)

Comparison of Prices before and After TNMSC in rupees					
Year / Drug	Pyrazinamide tablet 10 x 10	Cloxacillin capsule 10 x 10	Norfloxacin tab-let 10 x 10	Atenolol tablet 14 x 10	Ciprofloxacin tablet 10 x 10
1992 – 94 (Pre TNMSC)	135	158.25	290	117.12	525
2002-03 Post TNMSC	62.8	72.6	51.3	14.68	88
Source: TNMSC					

value of the quantity returned to the supplier will be deducted from their bills and depends on the nature of failures of the product, the product/Company will be blacklisted after following due procedures.

The Director of Drugs Control is also requested by TNMSC that in case of any Not of Standard Quality report of any drug, on the sample drawn from the Hospital / Institution by the Drug Inspectors, additional samples may be drawn from the same drug (different batch Nos.) or other drugs supplied by the same company from different locations in the State, to verify the quality of the drugs during storage TNMSC also drawing samples from the batches of drugs lying in the Warehouses, more than 6 months and the same were analysed to counter check the stability of the drugs during storage period.

v. Vaccines & serums

The supply of vaccines and serums are allowed to be distributed to the hospitals as per the clearance of CDL, Kausuli. In addition to this, samples of the Vaccines were drawn from the warehouses randomly and sent to the laboratories for analysis. In case of any adverse reactions reported in the Hospitals during administration of any Vaccines, Serums or any Injectables, the Warehouse in-charges are requested to act immediately and to inform the same to the Head Office over phone and freeze the drug and retrieve all the stocks from the Hospitals. TNMSC also taken steps to verify the cumulative ASSAY value of each drug so as to keep watch on the supplier that they are keeping the strength of the drug on the upper limits.

Indian medicines could meet the world products in quality. However they are the lowest priced in the world. In spite of all such positive aspects the medicines are not affordable to the ordinary Indian society (All India Drug Action 2008).

Impact of TNMSC model in the country

Influenced by the success story of the TNMSC, many other states in India adopted the system either as such or with modifications for the purchase of medicines. The Andhra Pradesh in 1998 have notified the A.P Health and Medical Housing and Infrastructure Development Corporation (APMHIDC) as the nodal agency for undertaking centralized drug procurement (R.Poornalingam 1996). The APMHIDC has estab-

lished a central procurement system for the entire hospitals in the state under the control of i) director of medical education, ii) director of health and iii) commissioner of A.P Vaidya Vidhana Parishad (APVVP). They have emulated many components of the TNMSC like, central drug stores in all districts (warehouses), pass book, quality control and computerization. The budget of medicines for each hospital will be allotted every year by the concerned head of the department. A number of other Indian states like Karnataka, Kerala, Rajasthan, Orissa, Bengal etc. adopted the basic features of TNMSC model. Madhya Pradesh which promoted Rogi Kalyan Samitis at the hospitals in 1973 revised the scheme in 1999 aim-ing to solve some of their drug related issues.

CONCLUSION

A number of medicine procurement methods are practiced in various places and situations, both in government and private. The TNMSC model is the best public procurement model in India and it can advantageously incorporate certain positive aspects of the Delhi model and make it worth emulating for the entire states and territories in the country. India can project the TNMSC as a national model and help other countries particularly the developing ones in the world to adopt the positive aspects of it for implementation with necessary alterations or modifications.

REFERENCES

- All India Drug Action Network. Campaign Group for Rational Drug Therapy and Policy. India. 2008.
- Eva Ombaka. Current status of medicines procurement. Am J Health-Syst Pharm. 2009;66 (Suppl 3): S 20-8.
- Guru Prasad Mohanta, Veena R. Medicines procurement practices in public sector. Ind. J. Hosp. Pharmacy 2010; 47(5): 78 – 80.
- Poornalingam.R Drug Management in Government Sector : The Tamil Nadu Model. Essential Drugs Monitor.WHO. 1996; . 21. 10-11.
- Revikumar KG, Miglani BD Text Book on Pharmacy Practice, Career Publications, Pune, India. 2008.
- Sujay Shetty : Budget 2010: A Pharma and Biotech Perspective. Pharma Bioworld March 2010; 51.

Tamil Nadu Medical Services Corporation (TNMSC), [Online], Available: [http:// www.tnmsc.com](http://www.tnmsc.com). [Accessed: 15 August 2012]

Veens R, Revikumar K G *et al.* Emerging trends in medicine procurement in government sector in India - A critical study *International journal of Research in Pharmaceutical sciences* 2010;1(3): 372-381.