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To Examine the Models of Access of Medicine with Engagement of Pharmacist in Various Settings in Southeast Asian Countries

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EXECUTIVE SUMMARY

South East Asian (SEAR) countries have various models of access of medicine; however these models have not been able to guarantee medicine delivery to the patient. Due to which access of medicine become a major hurdle in South East Asian countries. The role of pharmacist and his capabilities in the community is the major problem in SEA region. SEARPharm investigate the current models of access of medicine in SEA region, which provides access to medicines by ensuring availability, affordability and physical accessibility. Each region has its own concept of access of medicines which is run by government and/or private sector. These models face many challenges due to illiteracy, poverty, corruption, affordability, shortage of medicine and health workers issues.

In **India** 3 models have been discussed the Rajasthan model: reaching the unreached, Tamil Nadu medical services corporation (TNMSC), and Low cost medicine initiative, Chittorgarh model district level interventions. Pharmacist plays an important role in education, awareness and in maintaining the supply chain and distribution.

Indonesia describes two models of access of medicines. One run by government and other by private sector. The role of pharmacist can be seen in education: promote rational use of medicine and in affordable prices, sustainable financing and supply system. According to National pharmaceutical standards for pharmacy services, pharmacy to patient ratio should be: 1:30 (1 pharmacy for 30 bed/patient), but. Current status in Indonesia is 1:10,000.

In **Sri Lanka** access of medicine is through government and private sector models. Government covers the institutions coming under the Ministry of Health, the State Pharmaceuticals Corporation (SPC), the Medical Supply Division (MSD) and the Regional Medical Supplies Divisions (RMSD), whereas in private sector the medicines are supplied by local manufacturers, importers and also by the State Pharmaceuticals Corporation (SPC) of Sri Lanka. The pharmacists are involved at the MSD level of the government and also in the private sector (importing agencies and manufacturers).

They are also involved in education and awareness through training programs, development of supply chain management, procurement, estimating, budgeting and finally dispensing.

Thailand covers two models of access of medicines: Pharmacist home visiting in Lam-Chabang district and Diseases screening and health promotion in community pharmacy, project with the National Health Security Scheme. The first model includes MTM which is the model of pharmacy service in community care that is a standard practice to consider in medication use of patient. MTM covers public and private sectors with collaboration, Lam-Chabang administrative organization, Lan-Chabang Hospital, Faculty of Pharmacy Silpakorn University, Faculty of Pharmaceutical Sciences Burapha University and one private sector, Thai Oil co. Ltd. Second model includes *public sectors*: National Health Security Office (NHSO) and The Community Pharmacy Association (Thailand) and *private sectors* pharmacies which has accredited from the pharmacy council of Thailand. Pharmacist plays an important role in Medication Therapy Management, in student training program and patient information by GIS technology in both models of access of medicines.

From various model of access of medicines in SEA region, it is recommended that for any model to become successful it should include:

- ✓ Organized medicine procurement, storage, distribution and dispensing system.
- ✓ Healthcare professionals (physicians, pharmacist, nurses and auxiliary healthcare workers) should counsel and spread awareness that generic medicines are as good as branded medicine in quality and available at low cost.
- ✓ The rate of medicines should be displayed prominently outside the stores and pharmacist should counsel and make patients aware about quality as well as low cost of medicines. Furthermore comparison of quality and rates between generic and branded medicine can also be displayed.
- ✓ The coverage should be at all levels of healthcare centers (Primary, secondary, tertiary) and involves private sector pharmacies as well.

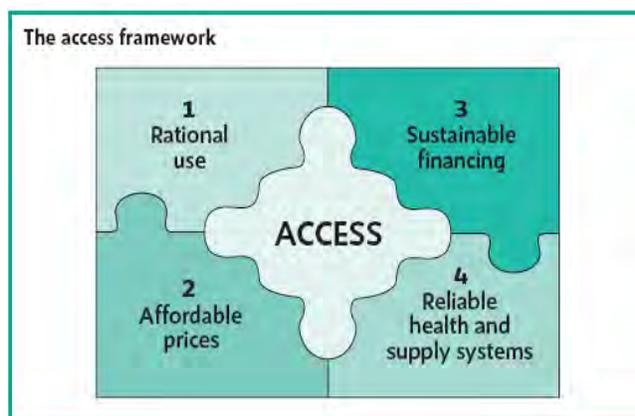
- ✓ The model should involve and empower people/patients participation.
- ✓ Presence of pharmacist should be there in pharmacy practice area for the improvement of new concepts regarding medicine procurement, storage, distribution and dispensing
- ✓ Pharmacist should ensure uninterrupted availability of essential medicines in hospitals at reasonable/low/affordable cost.

INDIA



Model 1: The Rajasthan Model - “Reaching the Unreached”

Under the UN initiative for Universal Healthcare Coverage, a healthcare system can serve at its best only with access to quality medicines and health products, which can be best ensured by proper selection and use, affordable prices, sustainable financing and reliable supply system. Access to medicine is a major hurdle in South East Asian countries due to several factors like illiteracy, poverty, corruption, affordability, medicine shortage and shortage of health workers. The various



models in practice, in different countries of the SEAR for access to medicine have not been able to guarantee medicine delivery to the patient. Pharmaceuticals (medicinal products, vaccines, contraceptives, diagnostics, devices and health supplies, etc.) constitute second highest item of expenditure after the manpower in any given health facility. There is an urgent need to put in place advanced and tangible policies that would ensure un-interrupted supplies of essential medicines, especially in low resource

settings. As pharmaceuticals are the link between the patient and health services, their availability or absence contributes to the positive or negative impact on health.

Background

As per the UN Charter and the Declaration of Alma-Ata, 1978, "Health for All", good quality healthcare is a basic human right of people and should be made available to all. In all advances under medical sciences, medicines have remained core in the healthcare and would continue to be the core; thereby it implies that access to essential medicines is also a basic human right of the people. Ironically a large section of population is still deprived not merely because there is any fundamental insufficiency of resources. As per WHO, world over about two billion people are unable to access to essential medicines mainly due to their high cost. This deprivation causes immense suffering, pain, fear and loss of life. As a result thousands of people die daily among them the vast majority are children below five years of age. As per WHO 65% of the Indian population lacks regular access to essential medicines. In spite of the remarkable success of Indian pharmaceutical industry, the provision of affordable medicines to people remains a great task. To meet health expenditure, three-fourths of the total out-of-pocket expenditure in the country is spent on buying medicines. In general, medicines are beyond the reach of most people, expenditure on medicines makes people poor, sickness leads to poverty, medicines are overpriced and beyond the reach of most people, there is differential drug pricing and promotion of non-essential drugs. Analysis of the list of top 300 selling brands in Indian market reveals only 38 % medicines falls under the National Essential Medicines List. Many brands which

comprise of non-essential drugs that are higher priced alternatives without a clear therapeutic advantage, and many drugs that are unnecessary, irrational and even hazardous are being promoted by the industry, permitted by the regulators, prescribed by the doctors and consumed by the patients.

India: 'Pharmacy of the Developing World'

India has one of the best developed pharmaceutical industries and produces about 20 per cent of the world's drugs. Over 500 manufacturing plants in the country have US FDA approval which is second only to US. Over 1000 companies are WHO GMP approved. India is among the top five producers of bulk drugs in the world, 3rd in (10% in global sales) terms of volume and 14th (1.5%) in terms of value. Patented drugs make up approximately 8% of total market sales in India and 92 % of Indian drugs market is out of patent. On account of providing highly significant proportion of cost-effective quality medicines under internationally funded programs in HIV/AIDS, Tuberculosis and Malaria and otherwise as well, India is regarded as the "Pharmacy of the Developing World". The irony is that this success has not translated in to availability or affordability of medicines for all in India. Pharmaceutical market in general, is free for all players and there is complete asymmetry about the pricing information. Although Hon'ble Supreme Court had directed the Union Government in 2003 to control the prices of all essential medicines, it took 10 years to issue new Drug Price Control Order (DPCO) in May 2013. It is not that the actual costs of the medicines are higher in the country, but the promotional activities of the industry have made the retail prices exorbitantly very high resulting in not only impeding the access to medicines (Table 1

and 2), but irrational promotion of not needed medicines. Prevailing problems and barriers in access to medicines are; most medicines are overpriced & beyond the reach of the majority, expenditure on medicines makes people poorer, differential drug pricing, prescription by brand name, and promotion of Non-essential drugs.

Table 1: Comparison of Wholesale and Retail Prices of Selected few Brands of Injection Amikacin in 2006

Name of the Drug Manufacturer	Branded Generic Name assigned by the manufacturer	Generic Name of the Medicine	Stockiest Price per Injection In Rs.	Printed MRP In Rs.
Cadila	Amistar 500	Amikacin 500 mg	8.00/-	70/-
German Remedies	Amee 500	Amikacin 500 mg	8.00/-	70/-
Wockhardt	Zekacin 500	Amikacin 500 mg	9.90/-	70/-
Alembic	Amikanex 500	Amikacin 500 mg	8.22/-	64.25/-
Intas	Kami 500	Amikacin 500 mg	8.13/-	60/-
Unichem	Unimika 500	Amikacin 500 mg	7.80/-	72/-
Ranbaxy	Alfakim 500	Amikacin 500 mg	8.50/-	70/-
Cipla	Amicip 500	Amikacin 500 mg	7.42/-	72/-

Table 2: MRPs Comparisons of the 3 Brands of Cetrizine Manufactured by the Same Manufacturer

Drug manufacturing company	Brand Name given by company	Generic Name	Rate for chemist for 10 Tablets (Stockiest price) in 2012	Printed MRP in 2012	Rate for chemist for 10 Tablets (Stockiest price) after DPCO 2013	Printed MRP after DPCO 2013
Cipla	Alerid	Cetrizine 10 mg	28.85	37.50	15.80	20.19
Cipla	Cetcip	Cetrizine 10 mg	1.88	33.65	2.36	19.01
Cipla	Okacet	Cetrizine 10 mg	1.84	27.50	2.36	19.01

Access to Medicines Models in India

India is country of countries. There are 33 federal states in India ruled by different elected governments of different political parties. Health is under concurrent list of Constitution of India. Both the central government as well as the state governments has roles in management of health with major expectations from state governments being implementation agencies at grass root levels. It would be beyond the scope of timelines and resources to study and discuss all prevailing models of access to medicines in India. Major initiatives started around mid-nineties years by the Delhi State, followed by the Tamil Nadu through autonomous corporation “Tamil Nadu Medical and Services Corporation” (TNMSC). The Rajasthan State has demonstrated 2 successful models, first on making medicines available through cost minimization, which was followed by free distribution of medicines scheme.

A brief description of these 2 initiatives is as under:

Addressing “Availability of Quality Generic Medicines” in Rajasthan

A. Evolution based on medicines wholesale prices and printed retail prices information

Efforts to provide medicines at affordable prices to improve access to medicines in Rajasthan started as a pilot project as early as in 2006 in one of the district “Jhalawar” in Rajasthan (out of 33 districts) by Dr Samit Sharma, the then newly appointed Indian Administrative Services officer as Sub Divisional Magistrate. Incidentally, he was a post-graduate pediatrician turned into an administrator. This was an “*Evolution to establish fair price medicine shops*” as the “Chittorgarh Model” when he became the District Magistrate into a district level initiative for “Making medicines affordable” through Fair Price Medical Shops. HE devised a mechanism to bring down prices of medicines and common surgical items to its minimum, so that even the poor can afford them. Medicines were procured by generic names based on prevailing wholesale prices using transparent open tender system and dispensed through Cooperative Medical Stores. It was basically a district wide chain of fair price medicine shops which serve OPDs and Indoor patients of Government Hospitals and also general public at dispensaries & primary healthcare centers (PHCs). These low cost drug and surgical items sale outlets are not subsidized, they were self-sustainable as they generated enough revenues and no external aid was required. The purpose of the initiative was to reach the unreached, i.e. to make medicines affordable to everyone, especially the poor, asset less and disadvantaged section of the society to reduce out of pocket expenses of people on health, to increase the accessibility of drugs, to decrease expenditure from the state exchequer by bringing down the government employees health care reimbursement bills and also the pensioners medical fund expenses and to promote rational use of drugs by minimizing prescription of unnecessary drugs by adopting Essential Drugs List and Standard Treatment Guidelines (For example – A pneumonia patient who may not able to purchase injection Amikacin 500 mg as it is sold in the market at about Rs.70 (printed maximum retail price, MRP) whereas its wholesale price was about Rs. 7 only and this injection could be supplied at Rs. 8 to 10 through Cooperative Medical Shops instead of Rs. 70 (i.e. printed MRP). Thus, many more patients could afford treatment and many more lives could be saved). This was facilitated by adopting transparent open tender system for drug procurement, making available almost all commonly prescribed drugs at low cost, ensuring strict quality control and monitoring, establishing district wide chain of low cost shops covering the

rural areas to make them accessible to all, convincing doctors amicably to prescribe by generic names, checking prescription of unnecessary drugs, which costs a lot and persuading private chemists (Pharmacies) to offer generic drugs for sale. This successful model was further adopted by another 17 districts of the Rajasthan. This innovative approach has been widely applauded under national television network by the Bollywood celebrity Amir Khan's show "Satyamev Jayate". Thus, medicines and surgical items were available at unbelievably low prices; much below the printed market rate i.e. MRP as per illustrative lists as under Table 3:

Table 3: Comparison of Chittorgarh Cooperative Store Sale Rate with MRP Printed on pack/strip

Generic Name of Drug	Unit	Chittorgarh Cooperative Store Sale Rate (Rs.)	MRP Printed on pack/strip (Rs.)
Albendazole Tab IP 400 mg	1 tablet	1.37	25
Alprazolam Tab IP 0.5 mg	10 tablets	1.75	14
Arteether 2 ml Inj	1 Injection	11.72	99
Amlodipine Tab 5 mg	10 tablets	3.12	22
Cetirizine 10 mg	10 tablets	1.5	35
Ceftazidime 1000 mg	1 Injection	64.9	370
Atorvastatin Tab 20 mg	10 tablets	22.59	170
Diclofenac Tab IP 100mg	10 tablets	2.75	25
Diazepam Tab IP 5 mg	10 tablets	1.9	29.4
Amikacin 500 mg	1 Injection	8.67	70

S.N	Name of Surgical item	Printed MRP	Rate to the Patient
1	Blood Administration Set	43	12.3
2	I.V.Cannula 18	63	7.48
3	I.V. Set	50	6.61
4	Surgical Gloves	40	7.3

Treatment cost of most illnesses falls sharply, for example see the cost difference in treatment common cold (5 days):-							
When medicines are prescribed by brand name and purchased from chemist shop				When medicines are prescribed by Generic name and purchased from Coop. Store			
Qty of medicines required	Name of drug	Rate per 10 tabs	Cost (no. x rate)	No.	Name of drug	Rate per 10 tabs	Cost (no. x rate)
10 tab	Ciprofloxacin 500	60.54/-	60.54/-	10 tab	Ciprofloxacin 500	12.85/-	12.85/-
10 tab	Nimesulide	25/-	25/-	10 tab	Nimesulide	2.12/-	2.12/-
5 Tab.	Cetirizine	35/-	17.5/-	5 Tab.	Cetirizine	1.50/-	0.75/-
Total			103.04/-	Total			15.72/-

A. Addressing "Availability through Free Drugs Distribution in Rajasthan through MNDY" through a Policy declaration (Political will) and establishment of Rajasthan Medical Services Corporation (RMSC)

Under National Rural Health Mission (NRHM), the central government asked all state governments to set up Logistics and supplies system in lines of TNMSC. Many states

have initiated working on this kind of framework with and without modifications. The Rajasthan State on western border of India has taken a great leap in this direction. Recognizing the need to address crucial roadblocks on the way to providing affordable, good quality and timely healthcare to people, the Government of Rajasthan announced the scheme for providing commonly used essential generic medicines and general health supplies free of cost to all patients visiting government health facilities. It was launched on Mahatma Gandhi's Jayanti (Birthday) i.e 2nd October, 2011 with title “*Mukyamantri Nishulk Dawa Yojana (MNDY)*” i.e. Chief Minister Free Drug Distribution Scheme (CMFDDS). 607 medicines, 73 surgical items and 77 different kinds of sutures along with 71 products directly supplied by the Government of India, as prescribed by doctors are being made available free of cost to all kind of patients visiting public health facilities. The benefits under the aegis of MNDY have been extended to the entire 70 million population of the state (irrespective of any economic status). The annual cost burden to State is just INR 3000 million (1 USD= INR 65). Under this scheme constitution of an autonomous centralized procurement agency for transparent procurement of quality health products was a major initiative. Major components of this scheme are

ESSENTIAL COMPONENTS OF FREE MEDICINES SCHEME		
S.no.	To make drugs available in govt hospitals	To change prescription behavior of doctors
1.	Establishment of autonomous centralized procurement agency: Rajasthan Medical Services Corporation (RMSC)	Sensitization and orientation about rational use of drugs (RUD).
2.	Identification of drugs and health products for free essential drug list (EDL) through a “Technical Advisory Committee (TAC) of experts	Write prescription on self-carbonated prescription slips

3.	Procurement through a two-bid transparent e-tendering process (Quality and price)	Diagnosis must be written
4.	Drug Warehouse at every district	Write Generic / Salt names
5.	Empanelled laboratories for quality testing	Use out of Essential Drug List
6.	System for transportation of drugs	Follow Standard Treatment Guidelines
7.	System for storage and distribution of drugs in all hospitals	Constitution of Drug and Therapeutics Committee (DTC).
8.	e-Aushadhi Software for Inventory management	Prescription Audit
9.	Transparent and prompt payment system	Computerized drug dispensing up to PHCs

Major initiatives under above components are:

1. Establishment of Rajasthan Medical Services Corporation with well-defined cells for Procurement (e-tender), Supply (purchase orders), Logistics (storage, distribution & transportation), Quality Control (testing and issue), IT (inventory control) and Finance (payments, etc) under the command of Dr Samit Sharma with proven track record for improving affordable access to quality medicines as Managing Director of RMSC.

2. Identification of drugs and health products for free essential drug list (EDL) through a “Technical Advisory Committee (TAC) of experts which has identified Drugs (607), Surgical (73), and Sutures (77) for free distribution and Criteria for inclusion are Efficacy, Safety, Suitability and Cost effectiveness.
3. A two-bid open transparent tendering process allows only manufacturer / Importer to participate provided it have an annual turnover more than Rs 20 Cr., GMP Certificate, 3 years market standing for the product, and the Firm or product should not be blacklisted/debarred/convicted. Now e-procurement is mandatory. Information of rate contract (RC), tender conditions, supplier contact details are available on website www.rmhc.nic.in for all visitors.
4. Procurement is mainly by generics only. However, if quantities ordered are insufficient for minimal batch size, branded drug can be supplied at generic prices after hiding MRP.
5. While orders for supply are issued centrally by the RMHC, but supplies are received at District Drug Warehouses (DDW) in “Quarantine Area” from where supplies are transferred after quality testing to Sub stores of Medical College Hospitals, District Hospitals, Community Health Centre, Primary Health Centres for onwards issue to Drug Distribution Centres (DDC) at OPDs/IPDs, OTs/Wards/Injection room. All DDWs have well defined storage capacities, including cold storages (walk in coolers, ILR, deep freezers) etc. with strict compliance to First Expiry First Issue (FEFO).
6. To ensure efficacy of generic medicines a three Step quality checking system has been adopted, viz. (i) Check at procurement level (Strict parameters for selection of reputed supplier companies as a prequalification), (ii) Check at supply level – Acceptance of drugs only with QC passed batch release certificate (COA) -QC passed test report of each batch supplied along with the invoices, without which goods not accepted in warehouses and (iii) Check at issue level – Pre-release quality assurance, i.e. Stock quarantined, Samples sent to QC cell, Retesting of all batches of drugs after masking manufacturers details with coding in Govt. approved empanelled labs for quality parameters of Identity, Purity, Strength and other specified

tests whichever is applicable as per pharmacopoeias. After receiving the test reports of coded samples and decoding by QC cell only quality passed stocks are released for distribution of supplies.

7. A total number of 17527 Drug Distribution Centers (DDC) have been equipped with required shelves/racks, refrigerator, computer with printer, stationary, Pharmacist and Informatics assistant.
8. e-Aushadhi Software for Inventory management is a complete Supply Chain Management Solution for drugs, surgical items and sutures which provides inventory management at all DDWs and at sub stores / DDCs of Medical College Hospitals, District Hospitals, CHCs and PHCs and is implemented across 5139 locations spread across the state. It provides detailed information from the stage of procurement of the drug to its consumption by the end users. Key features of e-Aushadhi facilitates online annual demand submission, online purchase order generation to suppliers, provision to maintain expiry date/shelf life, provides details of Quality control, ability to track drug inventory online, ability to generate customized reports, facilitates inter-warehouse transfer of drugs, alert generation in different colours for expired drugs, re-order level and maintains daily stock ledger of drugs, etc.
9. Transparent and prompt payment system allows payment of all stakeholders through NEFT/RTGS, internet banking in instant manner and Supplier payment especially against supplies through e-Aushadhi Software and deposits by any stake holder through CBS of PNB & through e-deposit.
10. On an average an annual outlay of Rs 3000 million (\$ 1 = Rs 65 Approx.), Is sufficient to cater the needs of 70 million populations.
11. Number of medicines being made available at healthcare institutions is according to level of the healthcare facility, viz. Medical College & attached Hospitals (550-600), District Hospital (350-450), CHC (175-250), PHC/Dispensary (75-150), Sub-centre (20-30).

By adopting above initiatives, the price monopoly of drug manufacturers is broken by procuring drugs by tender system with the benefit of the “Economies of Scale” wherein

procurement of medicines at lowest rates can be ensured due to the bulk central purchase orders. Due to bulk/ pooled procurement purchase, easy and quality oriented transparent tender procedures, the State government has saved on time and money. The Table 4 clearly illustrate comparison of the procurement prices by RMSC and prevailing MRPs of equivalent selected medicines at the time of launch of the MNDY scheme and current scenario on few selected medicines.

Table 4: Procurement / Tender Price Comparison of Selected few Generic Medicines procured by the Rajasthan Medical Services Corporation (RMSC) with few corresponding Branded Drugs in 2012

S.no.	Name of Drug	Pack Size	RMSC Tender Price (Rs.)	Equivalent Popular Brand	Pack Size	MRP (in Rs.)
Analgesic, Antipyretic & Anti-Inflammatory Drugs (pain relievers)						
1	Diclofenac Sodium Tablets IP 50 mg	10 Tabs strip	Rs 1.24	Voveran (Novartis)	10 Tab Strip	31.73
				Dicloran (Lekar)		23.43
Anthelmintics (Medicines for worms infestations)						
2	Albendazole Tablets IP 400 mg	10 Tabs	Rs. 6.28	Zental (GSK)	10 Tab	175.00
Anti Infective Drugs / Antibiotics (to treat infections)						
3	Azithromycin Tablets IP 500 mg	10 Tabs	Rs 58.80	Azithral (Alembic)	10 Tabs	308.33

Anti-Neoplastic & Immunosuppressant Drugs + Palliative Care						
4	Paclitaxel Injection IP100mg	16.7 ml vial	Rs 338.66	Mitotax (Dr. Reddy)	16.7 ml vial	4022.00
				Innotaxel (Innova)		4500.00
Cardiovascular Drugs (Medicines for Heart ailments)						
5	Atorvastatin Tablets IP 10 mg	10 Tab Blister	Rs 2.98	Atrova (Zydus)	10 Tab Blister	103.74
6	Clopidogrel Tablets IP 75 mg	10 Tab strip	Rs 6.10	Clopigrel (USV)	10 Tab Strip	215.50
Antidiabetic Drugs						
7	Glimepiride Tablets IP 2 mg	10 Tab strip	Rs 1.95	Amaryl (Aventis)	10 Tab strip	117.40
Psychotropic Drugs						
8	Diazepam Tablets IP 5 mg	10 Tab strip	Rs 1.30	Valium (Abbott)	10 Tab strip	30.22
9	Alprazolam Tablets IP 0.5mg	10 Tab Blister	Rs 1.47	Anxit (Micro)	10 Tab Blister	25.80
				Alprax (Torrent)		25.33

Behavior change of health providers and public education

Change prescription behavior of doctors

AS per WHO it is not only increasing access but also implementing rational use of drugs that makes the access truly holistic. Not only the EML has been implemented well in the state, but there has been education and supervision to ensure that all doctors prescribe EML drugs by generic name. Policy for rational use of medicines and prescribing rational treatment is in place and various orders have been issued by the Government to all facilities requesting that carbon copy prescriptions be used, one copy for the patient and one for the facility, diagnosis be written on all prescriptions which should be signed by the doctor, drugs be prescribed by generic name from essential drugs with due regard to STGs, Drug and Therapeutic Committees be established in all large hospitals, prescription audit be done by the DTCs to ensure appropriate use of medicines, “No to MRs” – avoidance of perverse financial incentives, use of non-essential drugs be justified by the concerned doctor, patients be counseled and dispensing be monitored.

Sensitization and orientation about rational use of medicines (RUM)

Pursuant to launch of MNDY an initial resistance to change in the prescribing pattern was felt on behalf of the doctor community deployed at public health institutions; therefore seminars, conferences and review meetings were held regularly at state, zonal and district level to sensitize the doctors towards rational use of drugs. All 33 districts have been covered by a core team of RMSC. To dispel the apprehension of doctors on quality, it was shared that most Big Pharmas are not the original manufacturers, but they source their supplies through contact manufacturing, eg. Torrent, Zydus Cadilla, Indico, IPCA, Micro Lab, Mankind, Lupin, Abott, Wokhardts, Piramal Healthcare, Sun, Cipla, Intas, Sanofi Aventis gets products manufactured by Akums (with over 800 Cr. turnover) and same manufacturing company is RMSC supplier. Therefore, there is no compromise on quality issue. Further, the State has developed and published guidelines for RUD (Rational Use of Drugs) for rational prescribing with a provision for

Prescription audit. One of the major roles that the Drug and Therapeutic Committees have to play is to undertake prescription audit in order to identify prescription errors and undertake corrective action at the institution. Prescription audit and feedback consists of analyzing prescription appropriateness and then giving feedback; involving peers in audit and feedback (peer review) is particularly effective. Prescription audit is undertaken to see if the treatment of a specific disease is in accordance with guidelines – the percentage of prescribing encounters in accordance with standard treatment guideline).The DTCs have to identify the % of prescriptions not in accordance with the STGs, number of cases where counseling was done and number of case where action has been initiated. The circular issued states that in case of defaulters –

- Step 1- Counseling by Unit head and DTC members has to be done
- Step 2 -Written advice to the concerned doctor by Controlling officer with copy to the department
- Step 3-Case may be referred to Principal Secretary Medical & Health /Med. Education for disciplinary action.

Awareness Generation in Public

There has been extensive education of the public through IEC interventions such that patients now know that they are entitled to receive free medicines from the health facilities. The RMSC has a monitoring and evaluation unit, which operates a help-line. Patients are free to call this number if they do not get medicines from the facilities. RMSC encouraged NGOs like “Prayas” with support of Action Aid with technical support to organize various meetings/seminars, etc. such as: (i) Two days state level workshop on Right to Free Treatment and MNDY, Rajasthan, (ii) Development of Monitoring tools and IEC material, (iii) Divisional Level Workshops on Right to Free Medicine (6)

1. Two days district level workshops on Right to Free Treatment (6 in numbers))
2. Public Hearing on Mukhya Mantri Nishulk Dawa Yojana

Major empowerment of public was encouraged by the following discussions:

1. Basic understanding of right to health and health equity
2. Health care scenario in the country and in Rajasthan
3. Out of pocket expenditure on treatment and its consequences
4. Drug market in the country
5. Regulation of drug prices
6. Difference between generic and branded medicines
7. Free medicines announcement by the govt., its significance and how it can increase people's access to health care services
8. Best models of free medicines in the country
9. What are the major challenges in the operationalisation of free medicines in the state
10. Role of civil society organizations and the community in its operationalisation.
11. Tools and concepts for the monitoring of free medicine services in public health care facilities

Impact of Free Drug Scheme (MNDY in Rajasthan)

MNDY has Improved the availability of essential drugs, reduced the cost of treatment, occurrence of catastrophic illnesses which require hospitalization because large number of patients who do not seek treatment till it gets very serious for non availability of money will begin availing health care, Save patient from heavy load of unreasonable and unnecessary drugs which are the cause of rising drug resistance and other iatrogenic morbidities and money so saved can be used to improve nutrition and condition of other social determinants of health in the country. This ambitious scheme has been lauded not only at the national level but acclaimed recognition at international platforms as well. As a result the Corporation has witnessed visitors from number of states, NGOs as also from the WHO and the World Bank. The impact can be briefly put together as:

- 1. Increase in access and equity of the underserved and Reached out to the unreached**

After implementation of scheme, number of outdoor and indoor patients has increased significantly at government hospitals. Since the launch of the scheme the total number of beneficiaries – 106.8 million Patients and more than 200,000 patients are being benefitted every day. Before MNDY patient's attendance was about 4.4 million which now stands over 8 million per month.

2. Decrease in out of pocket expenditure

There is huge amount of reduction in out of pocket expenditure in the treatment of common man as all costly medicines are being provided free of cost. Every day more than 2 Lac patients are being benefitted with an average cost per patient being around Rs.15. Otherwise the cost of drugs purchased from the market could have cost around Rs.300 to 500.

3. Source of Youth Empowerment and Employment

On implementation of this scheme a sizable youth have got employment, around 1500 Pharmacists been recruited permanently under this scheme and 3600 Computer Operator and Information Assistant have been engaged on contract.

4. Increase in Numbers of Girl Child treated

After implementation of the Scheme there is a substantial increase in number of girl child (upto age of 6 years) coming for treatment to Government Hospitals. This will help improve gender ratio by aiding "Save the girl child" programme.

5. Savings to Government

After one year of RMSC it was reflected that centralized procurement has resulted in enormous savings to the state government as follows -

- Amount spent on costly medicines by RMSC- approx. INR 5070 million.
- Market price of these medicines – approx. 30000 million

- Savings of approx. Rs. 24930 million to the State Government which can be spent on developmental works or creation of other community facilities.

6. Smiling patients & and thousands of lives saved

The MNDY scheme has succeeded in ensuring that essential generic medicines are available free of cost to patients in all public health facilities. Procurement and distribution of medicines are efficiently managed and EML drugs are prescribed by generic name by all prescribers. There remains the challenge of irrational use of essential medicines for which a coordinated approach involving many different stakeholders is needed.

External Evaluation by WHO and PHFI

A baseline evolution study has been jointly commissioned by the WHO and Public Health Foundation of India (PHFI) of this free medicines scheme as external and independent initiative. In total 157 healthcare facilities sampled of which 112 were public (various levels) and 45 were private facilities across 10 districts of the state. 160 medicines under different therapeutic category from EDL were identified and segregated based on availability of such drugs at different levels of care. Data from a random sample of prescription slips were captured on the day of the facility visit (roughly 20-30 slips per facility) for prescription audit. During the survey analysis two parameters were estimated;

- Average number of medicines prescribed per encounter
- Proportion of generics, antibiotics, injections, fixed drug combinations and syrups prescribed.

S No.	Indicators	Quantity / Percentage
1	Average no. of medicines per encounter (prescription slip)	3.29
2	Percentage of medicines prescribed by Generic name	98.29
3	Percentage of Antibiotics prescribed	28.9

4	Percentage of Injections prescribed	7.1
5	Percentage of Prescription slips with Syrup prescribed	9.3
6	Percentage of Prescription slips with Vitamins prescribed	3
7	Percentage of single drugs prescribed as against fixed drugs	89.02

Availability of medicines in Rajasthan (on survey day): To analyze the availability and stock-outs of medicines, 112 government facilities across 10 districts of Rajasthan were surveyed using a structured questionnaire and the findings were:

	PHC (%)	CHC (%)	DH (%)
Baran	74.8	72	82
Barmer	64.9	63	72
Bharatpur	77.8	75	83
Bikaner	85	82	85
Chittorgarh	67.4	65	87
Churu	67.8	66	93
Jaipur	69	67	85
Jhalawar	71.2	69	99
Karauli	76.1	74	99
Udaipur	59.5	58	91
All Districts	71	69	88

Overall this WHO and PHFI Study findings have revealed:

Reduction in Out of Pocket Expenditure (OOP) and increased per capita health expenditure: the per capita health expenditure before the free-MNDY scheme was estimated to be Rs. 5.70 which now stands close to Rs. 50

Increased Utilization of Public Health facilities: Another positive spin-offs from this initiative is the rapid increase in outpatient visits and considerable increase in inpatient admissions

Decreased Absenteeism: as medicines are available free now, absenteeism appears to have reduced considerably, putting pressure on the health system infrastructure to improve further

Ensured Availability of Medicines

Positive influence on prescription/ dispensing patterns

Sound Quality Assurance System

Efficient Procurement Processes and Fair Procurement Prices at RMSC

Robust e-Aushadhi Application Software

Pitfalls and Challenges of the Journey so far

Geographical spread of the state 342,239 Sq. Km. and large distances - PHC up to 150 km from district HQ (DDW)

Population- 70 million population - longer waiting times (Increase in both OPD IPD patients after MNDY/MNJY schemes)

Cold chain maintenance (in summer temperature rises up to 51 °C)

High patient load in tertiary care centers and shortage of Doctors/Pharmacists

A common myth amongst public that “generic” drugs are less effective.

Poor confidence of doctors on generic drugs due to lack of scientific evidence of their quality and efficacy.

Issues related to pilferage, breakage, deterioration, drugs becoming obsolete etc.

Lack of checks and control of quality at various levels of supply chain.

Failure to generate realistic annual demand and non submission of timely indent.

Unforeseen epidemics of swine flu, malaria, dengue, Chickengunia, scrub typhus etc

Sub optimal storage conditions of drugs at institutions and space constraint at DDWs in earlier days.

To maintain un-interrupted supplies at all levels due to delays by Pharmaceutical manufacturers, fluctuation in dollar rupee value and alternate supplier for each drug are often not available.

In nutshell, RMSC motto is “All Essential Medicines at all Public Health facilities at all times so that no human being dies for want of medicines. This scheme has been conferred India Healthcare Award 2012 by the Government of India. Its e-Aushadhi web based software application for stock and inventory management is being replicated under Nation Wide Roll Out in other States in India, such as Maharashtra, Punjab, Orissa, Andhra Pradesh & Telangana, Gujarat and Madhya Pradesh, besides CMSS (Centre Medical Supply Services, New Delhi). Adoption of the same by other States, like Jammu & Kashmir, Jharkhand, Bihar, Uttar Pradesh, Chhattisgarh and Himachal Pradesh is under discussion.

RMSC was awarded the e-Governance award for e-Aushadhi application on 12th Feb 2013 in 16th National e-Governance Conference.

Conclusion and Way forward

The analysis of the procurement prices under RMSC with prevailing and permissible market prices shows huge possibilities for improving affordable access to quality medicines even if it cannot be provided free to all. Foregoing Tables 1 to 4 and Table 5 clearly reveals that costs of making safe and effective quality medicines are not high, but they have been made expensive by overpricing to satisfy the greed of the vested interests and to accommodate irrational promotion. Utilization of the available appropriate and accurate pricing information supported by technical expertise, strong political support and clear administrative approaches coupled with proper educational, managerial and regulatory interventions can successfully bring a positive change towards enhancing affordable access to quality medicines toward Universal Access to Health. Clear transparent pooled procurement with proper distribution network for safe

and effective medicines is always possible. All people should get Safe and Effective medicines. A LONG WAY TO GO...to fill the Information Gap

Table 5: Procurement / Tender Price Comparison of Selected few Generic Medicines procured by the Rajasthan Medical Services Corporation (RMSC) with corresponding few Branded Drugs in 2014

SN	Name of the Medicine	Pack size	RMSC Procurement Price Rs.	DPCO 2013 Ceiling Price Rs	MRPs of Selected brands Rs
1.	Cetirizine Tablets 10 mg	10x10	7.7	192	Cetzine Rs 201.6, Alerid 190.1, Zyncet 190.1, Zyrtec Rs 190
2.	Cefixime Tablets 100 mg	10x10	119.77	818	Zifi Rs 495, Taxim O Rs 807.5
3.	Cefixime Tablets 200 mg	10x10	225.51	1196	Taxim O Rs 1255.7, Ziprax 1152.5
4.	Diclofenac Sodium Tablets 50 mg	10x10	9.15	207	Dicloran Rs 204.7, Reactin 205
5.	Ofloxacin Tablets 200 mg	10x10	65.49	521	Oflox Rs 514.5, Zenflox Rs 375, Oflo mac Rs 514.5
6.	Ceftriaxone Injection 1 g	1 Vial	12.13	58.94	Monocef 61.84

7.	Amlodipine 5 mg Tablets	10x10	8.23	301	Amlogard Rs 297, Amtas Rs 312.9, Stamlo Rs 297, Amlopress Rs 315.6, Amlopin Rs 297.2
8.	Clopidogrel Tablets 75 mg	10x10	47.74	1066	Plavix Rs 1053.1, Clopigrel Rs 1053.2, Deplatt Rs 470, Clopivas Rs 474.5
9.	Atenolol Tablets 50 mg	10x14	17.51	308	Aten Rs 304.22, Tenolol Rs 305.2, Atecard Rs 322, Tenormin Rs 319.9, Atenova Rs 299.88
10.	Domperidone Tablets 10 mg	10x10	11.15	240	Domstal Rs 237.7, Motinorm Rs 230, Domperi Rs 325.5, Dodom Rs 237.7, Dom DT Rs 237.3
11.	Glibenclamide Tablets 5 mg	10x10	8.44	102	Daonil Rs 100.8, Euglucon Rs 95
12.	Alprazolam Tablets 0.5 mg	10x10	9.14	214	Anxit Rs 211, Trika Rs 211, Alprax Rs 211
13.	Losartan Tablets 50 mg	10x10	30.2	457	Losar Rs 479.9, Tozar Rs 451.5, Losacar Rs 480, Losium Rs 283.6
14.	Azithromycin Tablets 500 mg	10x3x 3	386.93	1962.9	Azithral Rs 2056.5, Azee Rs 1941.3, Aziwok Rs 1935,

					Zithrox Rs 1938, Zathrin Rs 1935 (for 90 tablets)
15.	Enalapril Tablets 5 mg	10x10	12.08	315	Envas 310.8, Enace Rs 330.3, Enam 296.6, Nuril 310.8 for 10x10 Tabs
16.	Atorvastatin Tablets 10 mg	10x10	26.1	628	Atorva Rs 659.4, Tor Rs 659.6, Atorec Rs 620.5, Tonact 650.6
17.	Paclitaxel 260 mg Injection	43.4 ml Vial	646	13900.15	Mitotax Rs 9588, Cansure Rs 10000
18.	Imatinib Tablets 400 mg	10x10	1,911.48	28529	Imatib (Cipla) Rs 29935.6 Veenat (Natco) Rs 26550, Zealata (Ranbaxy) Rs 28170
19.	Glimepiride 2 mg	10x10	12.9	Not in DPCO	Amaryl Rs 1386.6

Various Study Team Visits by Countries and Agencies, notably-BPPI, Gurgaon, Deloitte, Delhi, NGOs Assam, Guwahati, North Korea Team of Govt. Officials, Nepal – Centre for Labour and Social Studies, UNFPA, USAID, Group-B Officers of Central Secretariat Services from Institute of Secretariat Training & Management, Department of Personnel & Training, Government of India, Open Society Foundation have shared their encouraged interest in the scheme. The Government of India has asked all state

governments to adapt Rajasthan Model with or without modification in their states. Various States governments' teams, viz; Jammu & Kashmir, Himachal Pradesh, Haryana, Gujarat, Uttar Pradesh, Madhya Pradesh, Bihar, Jharkhand, Chatisgarh, Tripura, Maharashtra, Karnataka, Andhra Pradesh (including Telangana) and Uttarakhand have either visited Rajasthan or have invited Rajasthan team for replicating substantially similar scheme in their states.

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3. Roy Chaudhury, Ranjit, Gurbani NK; Enhancing Access to Quality Medicines for the Under-served, DSPRUD-WHO Annamaya Publishers, New Delhi, 2004
4. Roy Chaudhury, Ranjit, Gurbani NK; Making Medicines Affordable-Studying WHO Initiatives, Anshan, Tunbridge, Wells (UK) and Annamaya Publishers, New Delhi, 2004
5. Universal Access to Medicines India – A Baseline Evaluation of the Rajasthan Free Medicines Scheme, World Health Organization 2014
6. Gurbani NK, Access to Quality Medicines: Rajasthan Model – Reaching the Unreached, Pharma Times; 47 (2), 18-24, 2015
7. <http://www.rmssc.nic.in/>

Model 2: Tamil Nadu Medical Services Corporation (TNMSC)

1.0 Background

Medicines account for a sizeable share of overall health expenditure in India. Due to a poor public health system, household in India are increasingly bearing the burden of catastrophic health expenditure, with drugs accounting for a major share. In order to improve access to medicines by ensuring availability, affordability and physical accessibility to quality generic essential medicines, there is a need to introduce a more cost-efficient and effective system of pooled procurement of medicines for public hospitals along with establishment of in-house drug retailers in public hospitals.

2.0 Goals and objectives:

- i) Provide essential medicines to the patients.
- ii) Procurement and distribution of essential drugs
- iii) Designing of IT architecture ensuring supply chain management.

Details about source of information collected and publication/s related to model/s:

- a) Dinesh Narayanan. Tamil Nadu Medical Services Corporation: A success story. Forbes India magazine. 30 July 2010.
- b) Lalitha N. Essential Drugs in Government Health care: Emerging model of procurement and supply working paper No 161. Gota, Ahmadabad. 2005.
- c) Poornalingam R. Drug Management in Government Sector: The Tamil Nadu model. Essential drugs monitor. WHO.1996; 21:10-11.
- d) Access to Medicines. Initiatives in Policy making and delivery of drugs – A case study of Tamil Nadu. Gujarat institute of development research. Report submitted to World Bank. 2003.

- e) Poornalingam R. Drug Management in Government Sector; the Tamil Nadu Model. International experience in rational use of drugs. College of public health, Chulalongkorn University, Bangkok, Thailand. 1998; 3:97-120
- f) PrabalVkram Singh. Replicating Tamil Nadu's drug procurement model. Economic and political weekly. 2012; 18(39):26-29.

4.0 Innovativeness in the model

- 4.1. The passbook system introduced by the TNMSC was a real innovation. The passbook system was already in practice in banking system. Hence this system helped to make the hospitals aware of their budget utilization at any point of time. Every year all hospitals, clinics, poly clinics and other health centers in government were given two pass books showing the budget allotment for the year. One pass book is retained with the institution and the other with the warehouse. The name and value of the drug issues were entered in the pass book followed by making entries in the computer systems that authorities can easily find the stock and movement of the items and monitor the proper utilization of the budget allocation.
- 4.2. Publication of number of small, pocket size books like pharmacist hand book for promoting and generating awareness about essential medicines among patients/consumers.
- 4.3. Solving the issue of counterfeit and substandard medicines in government hospitals through the process avoiding intermediaries i.e. they purchase drug directly from the manufacturers and not through their agents in the supply medicines. The manufacturers were supposed to have good manufacture practicing certificate and market standing for at least three years.

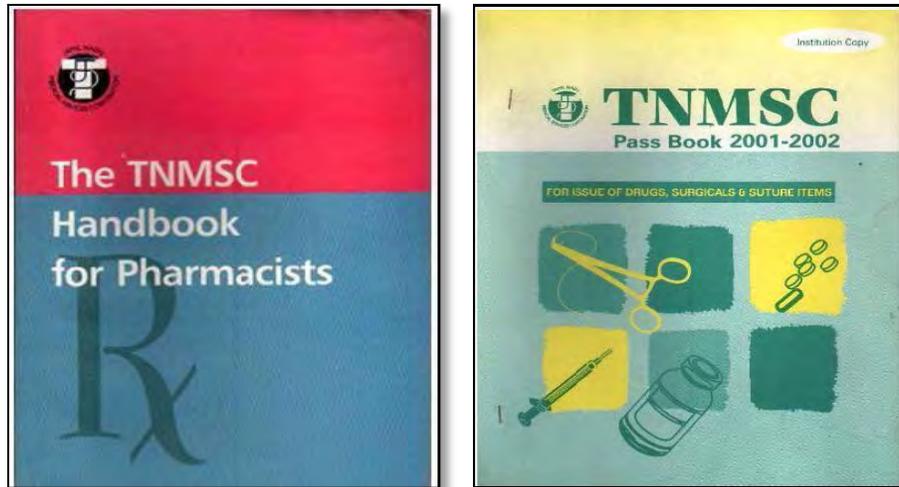


Fig no.1: A) TNMSC hand book for pharmacist, B) Pass book for issue of medicine

5.0 Operating/operated in public or private sector

Public sector

6.0 Sustainability: Funding source

The model was funded by State (province) government and administrative assistance was provided by Central (federal) government.

7.0 Oversight mechanism

TNMSC organized by state (province) government along with health secretary of government of Tamil Nadu and technically qualified contractual staff for the purchasing essential drugs and delivered them to district warehouses by the help of supplier in required quantities.

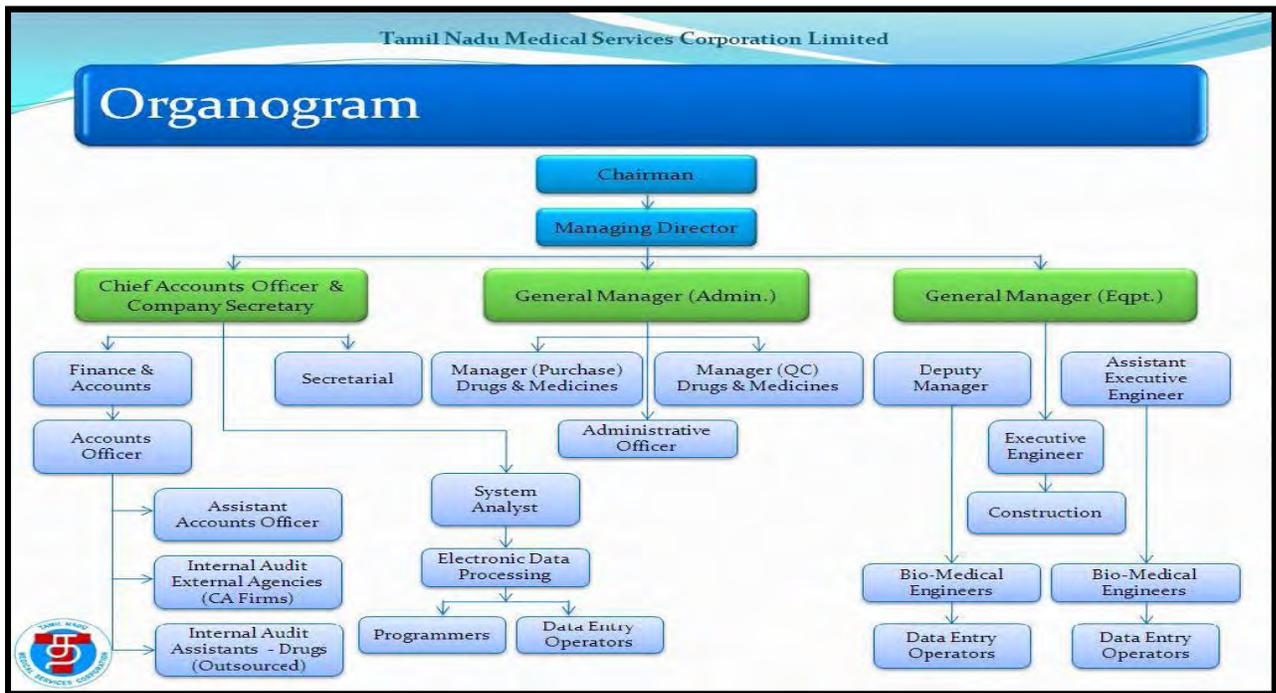


Fig.1: Organizational structure of TNMSC

Source: International journal of pharmaceutical and chemical sciences ISSN: 2277-5005

8.0 Geographical coverage

Tamil Nadu with an area of 130058 sq. km (50,216 sq. miles), population of 7,21,38,958 and population density of 555 ranks 6th in population and 11th in area among Indian states. There are 41 medical colleges (19 govt. and 22 private), 27 district hospitals, and 100 referral hospitals. Public sector is dominant in health care and owns above 70 percent of the hospitals in the state. However this model is availing in all the public health care centers.

9.0. Quality of the model: key aspects of access covered

9.1. TNMSC 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 Tamil Nadu.

9.2. TNMSC is the Nodal Agency which caters to the needs of government Medical Institutions of the state (province) for drugs through its open tender system.

9.3. Procurement: The drugs required for the Govt. Institutions are finalized by high level Drug Committee meeting every year. The rates & tender are floated. Board of TNMSC for approve the tenders and agreements are executed with the supplier for the items Purchase orders are placed as per the requirement of the institutions.

9.4. Storage: TNMSC maintain 4 months physical stocks of all essential drugs in its 25 drug warehouses situated through out the State. Two months quantity is ensured in pipeline to replenish the stocks drawn by the hospitals.

9.5. Quality control: The quality of drugs are ensured by drawing samples from each batch supplied by the supplier and sent to the empanelled laboratories for analysis. After ensuring the quality of the drugs supplied to the warehouses, the drug is distributed to the hospitals for use.

9.6. Facility provided: TNMSC warehouses are provided with double refrigerated Cold storage facility and uninterrupted cold chain are maintained at 2° to 8°C temperature maintenance of potency of the Vaccines and Serums.

10.0 Outreach and impact

10.1. *Outreach*: The sharp fall in procurement prices leads to cost reduction hence saving almost 30% saving in annual medicine bill.

10.2. Impact: a) Number of Indian states (provinces) like Assam, Andhra Pradesh, Karnataka, Kerala, Rajasthan, Orissa, Bengal, Chhattisgarh, Gujarat and Punjab started adopting the basic features of TNMSC model. In such a way that the Andhra Pradesh in 1998 has notified the A.P Health and Medical Housing and Infrastructure Development

Corporation (APMHIDC) as the nodal agency for undertaking centralized drug procurement.

- b) Many states (provinces) like Maharashtra, Madhya Pradesh, and Bihar etc. are in the process of adopting the TNMSC model.
- c) The TNMSC started acting as consultant or a nodal agency for establishing a procurement system for many states (provinces) one such example is Rajasthan.

11.0 Involvement of pharmacist in different stages: conceptualization, development and oversight

11.1 Conceptualization: No

- 11.2 Development:
- a) Education and awareness
 - b) Maintaining the supply chain and distribution

11.3 Oversight:

12.0 Advantages and pitfalls

12.1. Advantages: The TNMSC was set up for ensuring uninterrupted availability of essential medicines in government hospitals at reasonable/low/affordable cost.

12.2. Pitfalls: Limited numbers of essential medicines delay the inclusion of new medicines until the selection group meets and decides to include in the list.[Reidenberg MM, 2009], finally limiting the ability of physicians to prescribe drugs not in specific EML (essential medicines list).

12.3 No new concept regarding medicine procurement, storage, distribution and dispensing since 2000, due to lack of expertise pharmacist in pharmacy practice.

13.0 Recommendation for improvement

- a) The rates should be displayed prominently outside the stores. Pharmacist should counsel and makes patients aware about quality as well as low cost of medicines.
- b) More expertise pharmacist in pharmacy practice area for the improvement of new concepts regarding medicine procurement, storage, distribution and dispensing.

Model 3: Low cost medicine initiative, Chittorgarh district level interventions

1.0 Background

Drug prices play a significant role in the access to medicines. From a position of high drug prices in the pre-1970s era in India, rapidly growing domestic drug companies aided by effective drug policies are now capable of indigenously producing both bulk drugs and formulations, to a large extent. This has resulted in a situation in the country, where relatively speaking, drug prices are presently among the lowest in the world. However, policy changes in the 1990s reduced the coverage of drug price control from about 90% of the market in late 1970s to about 10% of the market in 1995. Taking advantage of lax regulations on drug pricing, the pharmaceutical industry has been able to reap high margins through complex price setting activities. It has been observed that the price of a therapeutically similar drug could vary around 1000% between the most expensive and the cheapest brands (Sengupta A, 2008). Further, the variation between the market and procurement price of similar drugs could range anywhere between 100% to 5000% (Sakthivel S, 2005).

Generic substitution is a key policy for ensuring access to affordable essential medicines which should be adopted by more countries. The use of generic medicines has been steadily rising not only in developing countries but also in developed countries as a result of economic pressure on health budgets. Many countries are using different measures to increase the market share of cheaper generics to control health budgets. Many of the current “blockbuster” drugs are nearing the end of their patent term and, over the next few years, it is to be expected that the market share of generics will continue to rise further (King and Kanavos, 2002).

One of the solutions for making medicines affordable to people is to make available only essential generic drugs at lower prices, as we knew that the actual cost of most of the drugs is very low. But, unfortunately they are not available to patients at low rates because of three obstacles:

- Monopoly in the drug market: The doctors prescribe medicines by brand name of a particular drug company. This prevents competition and creates monopoly in the drug market and enables the drug company to put a very high MRP.
- High MRP is printed on the drugs; the chemists charge the same amount from the patient.
- Consumers are not aware that the actual cost of production of most of the drugs is very low.

2.0 Goals and objectives: Low-cost medicines initiative

- i) Broke the Monopoly in the drug market: Pursuing doctors to prescribe by the salt name and to make arrangements to sell medicines below the MRP at government drug counters along with making consumers aware.
- ii) Government Cooperative Medical Stores and Lifeline Drug Stores (run by RMRS) provide low-cost medicines of well reputed companies: Medicines which are commonly used by the patients and prescribed by doctors were listed after discussions with various medical specialists.

2.1 Strategy to achieve the objectives: a) Organizing a committee of doctors for consultation for recommendation of drug and companies.

b) The tender to announce which include 564 generic medicines. Cooperative store will be invited bids to purchase the drugs of these companies from the local stock lists at competitive prices.

c) The medicines are then sold at 20% profit margin to the patients. Pricelists to be displayed outside the cooperative stores to advertise the rates and educate the patients.

d) Awareness generation: Doctors to sensitize by organizing discussions as well as training of co-operation pharmacists was carried out.

3.0 Details about source of information collected and publication/s related to model/s

a) Making Medicines Affordable: Reaching the Un reached. Documentation by Dr. Samit Sharma, Collector & District Magistrate, Chittorgarh, Rajasthan.

b) <http://chittorgarh.nic.in/Generic_new/generic.htm>.

c) <<http://chittorgarh.nic.in/generic/Drugs23.03.2009.xls>>.

4.0 Innovativeness in the model

a) Training programme for the pharmacist to spread education and awareness among consumer/ patients.

b) Display of price list of generic medicines to the consumer/patients through retail outlets

c) Use of local electronic and print media by pharmacist to show the comparison of quality and rates between generic and branded medicine.



Fig. 1: Source for Photos: Making Medicines Affordable: Reaching the Unreached

5.0 Operating/operated in public or private sector: Public sector.

6.0 Sustainability/funding source

The model was funded by State (Province) government and administrative assistance was provided by Central (Federal) government.

7.0 Oversight mechanism

The state (province) government issued various circulars/orders, directing all government doctors to use generic names, instead of brand names. Quality control officer (Physician) assisted by a Pharmacist from state regulatory agency (Drug Inspector) to ensure the display of price list outside the pharmacy.

8.0 Geographical coverage

Chittorgarh city is located in the southern part of the state (Province) of Rajasthan, in India. Total population of the Chittorgarh 1,802,656. Six Pharmacies in Chittorgarh were made available low cost medicine along with one government district hospital (Secondary Healthcare) Internal Patient Department.

9.0 Quality of the model: key aspects of access covered

9.1 Procurement: Procurement and supply at Pharmacies were strictly from the companies which were selected by a team of doctors to produce good quality drugs. Tender was floated for these medicines which included 564 generic medicines. Pharmacies sent indent from the local stock list for purchasing of medicines from selected pharma companies.

9.2 Price: The price reduction was about half to one tenth of the market rate. The medicines were sold at 20% profit margin to the patients, the profit goes to the cooperative department which makes the project self-sustainable.

9.3 Awareness: a) Pricelists were displayed outside the pharmacies to advertise the rates and educate the patients.

b) Training programs: Training for pharmacists was carried out to educate and aware consumers about the quality of generic medicines at affordable prices.

10.0 Outreach and impact

10.1 Outreach: Low-cost generic medicines were made available at six government pharmacies, the cost of medicines were reduced to more than half in most cases and this price-fall came down to the extent of one tenth of the prevailing market rate. The

choice of low-cost drugs was made available to the consumer, market competition ensured that private medical shops also reduced their prices.

10.2 Impact: The impact of the initiative was that even private pharmacies announced availability of low priced generics medicine.



Fig. 2: Source for Photos: Making Medicines Affordable: Reaching the Unreached.

11.0 Involvement of pharmacist in different stages: conceptualization, development and oversight:

11.1 Conceptualization: No

11.2 Development: a) Education and awareness through training programs

b) Development of supply chain and distribution

11.3 Oversight: Pharmacist from state regulatory agency (Drug Inspector) ensured the display of price list outside the pharmacy.

12.0 Advantages and pitfalls:

12.1 Advantages: Generic drugs were procured and made available at reduced prices to all users of the Government's health facilities.

They were made available at various locations in the district improving access to low cost medicine to the masses.

12.2 Pitfalls: Low scale, only six pharmacies were covered in entire Chittorgarh town and one Government district hospital IPD made available low cost medicines.

13.0 Recommendation for improvement:

a) Healthcare professionals (physicians, pharmacist, nurses and auxiliary healthcare workers) should counsel and spread awareness that generic medicines are as good as branded medicine in quality and available at low cost.

b) The model should cover more public sector pharmacies; all level of health care centers (Primary, secondary, tertiary) and involves private sector pharmacies as well.

INDONESIA



Model 4: MODEL OF ACCESS TO MEDICINES IN INDONESIA

by Alui Sani

Background:

Various models of medicine access in South East Asian (SEAR) countries have not been able to guarantee medicine delivery to the patient. For these reasons, SEARPharm would like to investigate the current models, find inefficiencies, analyze major hurdles and recommend an acceptable mechanism.

Goals and Objectives:

- To assess, collect and gain information on Indonesia's current system on access to medicines
- To identify current Model of Access to Medicine in Indonesia through Desktop Research and Interview)

Source of Information:

Indonesian Regulations on access to medicines as following:

- Law Number 36, 2009 on Health

- Minister of Health Decree No. 28 in 2014 on Guidelines for Implementation of National Health Insurance
- Minister of Health Decree No. 35/2015 on Pharmaceutical Standard of Services for Pharmacy
- Minister of Health Decree Number 328/Menkes/SK/IX/2013 on National Formulary
- Minister of Health Decree Number 189/Menkes/SK/III/2006 on National Medicines Policy
- Minister of Health Decree Number 131/Menkes/SK/II/2004 on National Health System
- Peraturan Menteri Kesehatan RI No 167/Kab/B.VII/72 Tahun 1972 Tentang Pedagang Eceran Obat.
- Keputusan Menteri Kesehatan RI No 1331/MENKES/SK/X/2002 Tahun 2002 Tentang Pedagang Eceran Obat.
- [Http://www.kompasiana.com/Lingkaranterlarang Perusahaan Farmasi MedRep – Praktisi Kesehatan dalam Dunia Distribusi Obat](http://www.kompasiana.com/Lingkaranterlarang-Perusahaan-Farmasi-MedRep-praktisi-kesehatan-dalam-dunia-distribusi-obat), 25 November 2014 diperbaharui, Juni 2015.
- BPJS Kesehatan Pentingkan Kualitas Fasilitas Tingkat Pertama 20/01/2015, <http://bpjs-kesehatan.go.id>
- Geography of Indonesia, www.indonesiapoint.com
- Budiono and Suzanne Hill, 2014, Report of Pharmaceutical Sector Review for Health Sector Review

Interview:

- Mrs Engko M Sosialine, Apt: Director of Public Medicines, Directorate General of Pharmaceutical Services and Medical Devices ,Ministry of Health

Regulation and policy for improving access to medicines

Government of Indonesia acknowledged the importance of improving access to medicines particularly essential medicines. Availability, fair distribution, affordability and the assurance of safety, efficacy and quality of medicines as one of sub system in National Health system as Minister of Health Decree in 2004. Following National Health System is National Medicines Policy stipulated in 2006 underline that supply of essential medicines is the obligation of the government in health service institution not only public but also private health facilities.

National Medicines Policy stated that access to medicines influenced by 4 primary factor: rational use of medicines, affordable price, sustainable financing and health care system and reliable on supply. Based on the above factors there are many regulations and policies have been developed and implemented to improve access to medicines.

Promoting rational use of medicines:

Indonesia has the National Essential Medicines List (NEML/ DOEN), revised every 3 years. DOEN is the list legally sets the minimum requirement of medicines to be provided by Primary Care facilities. Since 2014, Indonesia has introduced and implemented the National Health Insurance started in January 2014. In support the implementation of National Health Insurance, MOH has devised and endorsed a National Formulary with a Ministerial Decree. National formulary is a comprehensive list of medicines that should be made available at health facilities and is the reference or guideline for doctor, pharmacist, nurse, and other health workers for medicines use in Health Insurance system. It listed the product by name and the level of health facilities that the type of medicines should be provided. The revise of national formulary will be based on experts review. Despite NEML, the health professional also should refer to the Standard Treatment Guidelines (STGs) to ensure promote the rational use of medicines.

Affordable prices, sustainable financing and supply system

Procurement, supply of medicine and source of budget for procurement of medicines is complex and involving many different levels. Procurement of essential medicines or for basic care is undertaken at district level. Province and National/central level also can procure called as buffer stock. Buffer stock can be ordered by district once there is stock out at district level. However the availability was various depend on the budget available every year. Program medicines for instance medicines for HIV, TB, Malaria, MCH, Mental Health has been procured by Central Level (DG of Pharmaceutical and Medical Devices) with close coordination with the program. For transparency of bidding process of procurement, the government has implemented an e-purchasing mechanism. This system is established with the National Body for Procurement (LKPP).

DG of Public medicines every year collection the annual needs of medicines (RKO) from District (Pharmaceutical unit/installation) and hospital. Based on the needs, the Pharmaceutical Industry or whole seller should sign contract with LKPP for a fiscal year for the agreement to provide the medicines as per the capacity of industry. The name of vendor/supplier/industry, name of medicines and price are available on line through e-catalog. The 'e-catalog' of medicines (see <https://katalog-buku.lkpp.go.id/e-katalog-obat/>) This is a web-based list that specifies product, by brand, and publishes the price so that it can be used for procurement. It is based on the National Formulary (for medicines) but suppliers elect to bid to have their products included (or not). So not all products in the National Formulary are included in the e-catalog. The e-catalog and e-purchasing mechanism have been implemented since 2012 with some improvements every year.

The medicines have procured annually stored at district/ province/central warehouse called pharmaceutical installation (IFK). A pharmacist (if available) appointed to manage the supply of medicines. Medicines procured at district level will be distributed to Primary health care facilities and medicines procured at National or central level will be distributed to province and district or health facilities such as hospital. Government provides budget through National Budget (APBN), DAK (Special Allocation of Fund) and

even the district or province have their additional funding from local government for procurement of medicines. Hospitals can directly purchase medicines using the 'e-catalog' system. The challenge in e-purchasing is some hospitals were not submit their annual needs of medicines (RKO) but they did the e-purchasing mechanism. It will affect to the number and type of medicines available in online procurement. The purpose of RKO is to have the estimation number and type of medicines should be produced by industry and industry can estimate their producing capacities.

Innovativeness in the model

There are at least two models of medicine access in Indonesia. First is the government sector and second is the private sector. The supply of medicines for government sector has been explained above. Many improvements still needed in order to improve the availability, prevent stock out and even increase public knowledge for access to medicines. The government starts the National Health Coverage on July 2015 and since then the number of participants has reached 168 million. The system used to access medicine based on "Rujuk Balik" system. This system regulates the method of patient referral and access of medicine. Health facilities are classified into 3 categories those are primary level, advanced level and sub-specialist level. The primary level of health facilities can be "PUSKESMAS", private practitioners and dentist who collaborate with the BPJS (the government body for managing the national health coverage/insurance) and type D hospital (a hospital with less than 50 beds with 4 specialist of medical doctor). Currently, there are 9.805 Puskesmas, 4.143 private practitioners, 3.889 clinics, 1011 dentist and 8 type D hospitals involving in JKN. Puskesmas is the frontline of the government health facilities. Each sub district in Indonesia has Puskesmas which provides various public health programs, ranging from health promotion, immunization, sanitation, etc and primary health care services to the community.

Community can go to the Puskesmas, clinics, type D Hospitals and private practitioners to get help of their minor illness. Patient who visit the Puskesmas, could get the medicine directly. Meanwhile patient who seek the private practitioners could get the

medicine from the Pharmacy who has collaboration or appointed by the BPJS. Patient who cannot be treated in the Puskesmas will be referred to the advanced level health facilities and again if the health problem not resolved will be referred to the sub specialist hospitals for instance cardiovascular hospital, pulmonary hospital, cancer hospital, etc. Once the patient has been discharged, the medicine supply can be got from the pharmacy. Further, the pharmacy claim the drug expenses to the BPJS office. The verification also conducted in the process of reimbursement. Below is the figure 1- of referral services under National Health Insurance system:

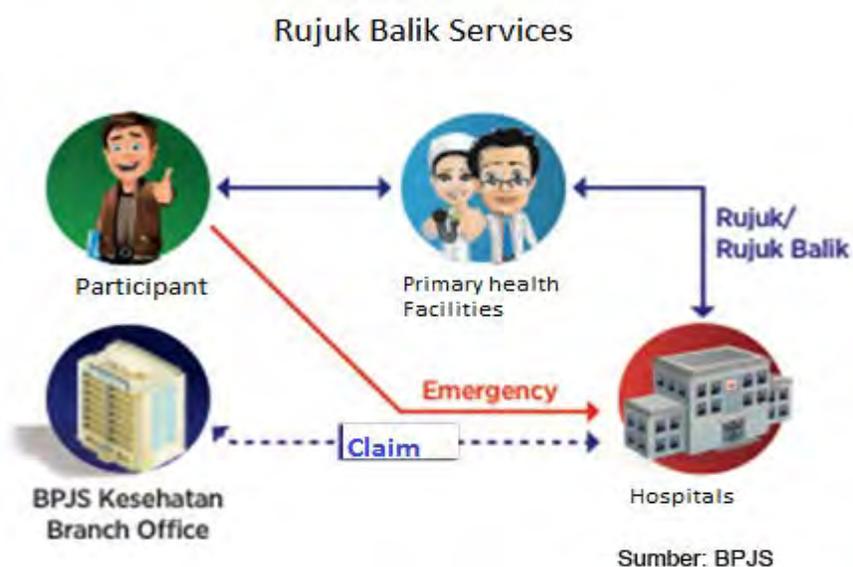
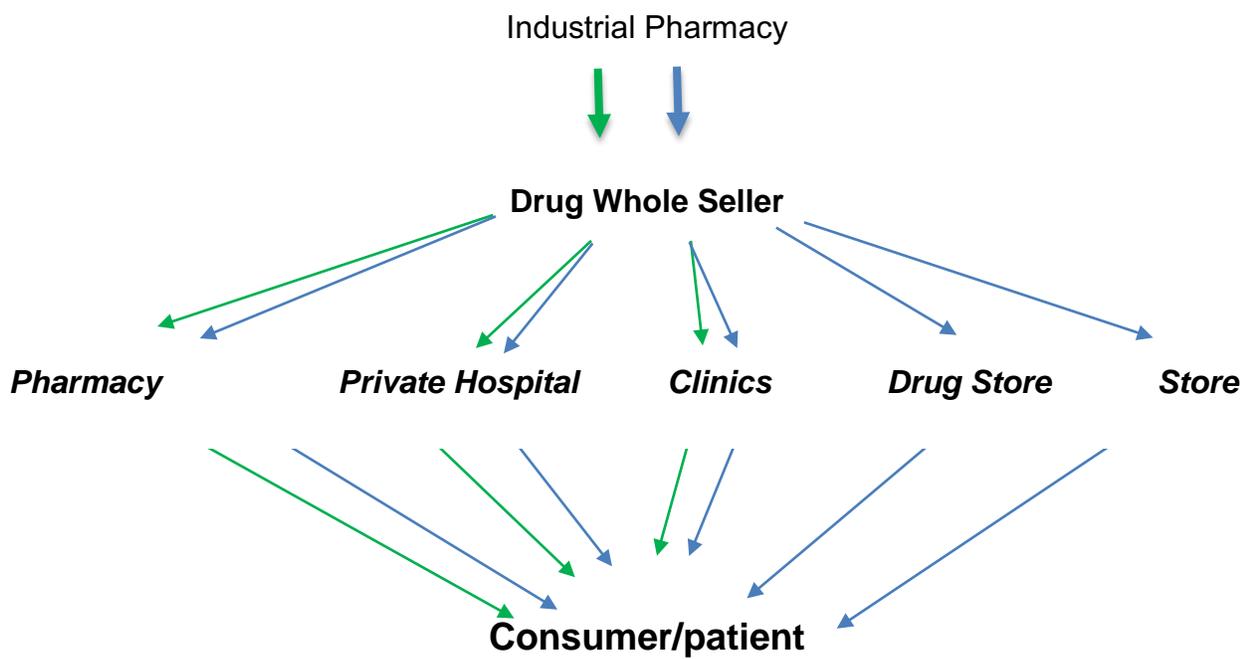


Figure 2: Supply chain of medicines

This system has been awarded by ISSA (International Social Security Association) as a good practice: Implementing the program “Rujuk Balik” for Better Access and Better Quality Health Care. Rujuk Balik is regulated by UU no. 40 Tahun 2004. Again the supply of medicines used E-catalog and e purchasing mechanism. E catalog is a price list of 796 generic and brand generic medicines from around 100 pharmacy manufacturers (<http://e-katalog.lkpp.go.id>). Pricing of e-catalogue based on tender and negotiation made by LKPP (the government body for procurement).

Access of medicine at private has not significant change. People could get the medicine from licensed drug store, apotek (Pharmacy), Clinic and private hospital. The government, through “Keputusan Menteri Kesehatan RI No 1331/MENKES/SK/X/2002, regulate that a licensed drug store could sell the OTC drugs. A technician pharmacist is taking responsible in licensed drug store. Unfortunately, people in Indonesia could buy an OTC drugs not only in licensed drug store but also in illegal market or stores without licensed as drug store. Prescribed drugs including narcotics and psychotropic drugs could only be got in the apotek/pharmacy, clinics and hospital.



Green line: OTC and prescribed drugs

Blue line: OTC drug

Apoteker/Pharmacist involve in all sectors of health facilities. The number of pharmacist needed is now increasing, since the regulation that PHC/Puskesmas should have at least one apoteker, hospital type D need 3 apoteker. Number of Pharmacist needed for Type B and A hospital is based on ratio of the patient. As the National pharmaceutical

standard for pharmacy services, the ration of patient and pharmacist is 1:30, 1 pharmacy for 30 bed/patient). Currently, the ratio of apoteker and Indonesian people is 1:10.000.

Indonesia is a country with 17,508 Island (6000 inhabited) and stretches from 6 08'N latitude to 11 15' S latitude, and from 94 45' to 141 05'E longitude. Total area of Indonesia is 1.919.440 sq km (land area: 1.826.440 sq km; water: 93.000 sq km).The geographical is unique and Indonesia area is wide with many island. In remote area especially in the borders and Small Island, the access of medicine and health services is still a problem. Therefore, health facilities in remote area and Small Island should be improved. The government has offered a good remuneration, however, it has not look attractive. Further, a compulsory working in remote area for fresh graduate (practitioners, nurse and pharmacist) to be implemented before they could practice in the city.

SRI LANKA



Model 5: Model of Medicine Access in Sri Lanka

by Vindya Pathiraja

(a) Background:

Access to medicines is vital to the attainment of the highest possible standard of health by all. In Sri Lanka both public and private sectors are involved in providing health care to the people. Supply of medicines to the population is also shared by both these sectors.

The total population of Sri Lanka is 20.3 million and the total land area is 62 710 Sq. Km. The population distribution of Sri Lanka is as follows; 18.3% in the Urban Sector, 77.3% living in the Rural Sector and the remaining 4.4% living in the Estate Sector. Sri Lanka is divided into 9 provinces with a total of 25 administrative districts. Of these districts, Colombo is the most densely populated (3417 people per sq. km) district followed by Gampaha (1711 people per sq. km) district while Mulativu (38 people per sq. km) and Mannar (53 people per sq. km) are the most sparsely populated districts.

As described above, currently there are two main models of supply medicines to the entire Sri Lankan population, namely the state and the private sectors. The State Pharmaceuticals Corporation (SPC) of Sri Lanka is the procurement agency for state sector health institutions. The quantities and specifications are based on the consolidated estimates prepared by the Medical Supplied Division (MSD) which is the central organization responsible for supplying medicines to the entire health sector institution. The consolidated estimates are prepared taking into consideration the requirements of each institution. The procurement of SPC is based on a worldwide tender procedure. All medicines supplied through the government institutions are free of

charge. Sri Lanka's closest neighbor India has a vigorous pharmaceutical industry and is a good source of low-cost pharmaceuticals. Having a ready supplier of affordable pharmaceuticals in close proximity has helped Sri Lanka to supply low-cost items to its population.

In the private sector supply system the medicines are either imported or locally manufactured and distributed through private supply chains, about 85% imported and 15% are manufactured. Pharmaceutical manufacturing industry in Sri Lanka is small, there are 12 manufacturers including one government owned facility and the number of products produced as at June 2014 was 131.

(b) Goals and objectives:

To provide the total population with good quality medicines at the lowest possible cost

(c) Details about source of information collected and publication/s related to model/s.

1. Manual on management of drugs, second revision 2008, Ministry of Health care & Nutrition).
2. Immunization handbook, third edition, Epidemiology unit, Ministry of Health, Sri Lanka).
3. (http://fhb.health.gov.lk/web/index.php?option=com_phocadownload&view=category&id=27&Itemid=150&lang=en).
4. (<http://www.doh.gov.ph/national-tuberculosis-control-program>).
5. (<http://www.aidscontrol.gov.lk/web/index.php?lang=en>)

(d) Innovativeness in the model

Sri Lanka does not practice a strict referral system for patient care. People have access to government health institutions distributed throughout the island for their requirement of medicines. This system based on the WHO Essential Medicines Concept prevailing from 1960,s is working well. However improvements are necessary to improve this model.

(e) Operating/operated in public or private sector

The medicine supply system includes both public and private sectors.

(f) Sustainability: Funding source

Funds for the supply of medicines to the government sector are allocated from the annual health budget. In addition there are foreign agencies such as the Global Fund and some non-government organizations

(g) Oversight mechanism

The medicines supply system of Sri Lanka is functioning through 2 main models namely the government and the private sectors. As per the law any medicine distributed in Sri Lanka should have market authorization from the National Medicines Regulatory Authority including the government

Government sector

The key players in this model are the institutions coming under the Ministry of Health, the State Pharmaceuticals Corporation (SPC), the Medical Supply Division (MSD) and the Regional Medical Supplies Divisions (RMSD).

The MSD is responsible for the consolidation of annual requirements of drugs for the institutions of the government sector. National indents so developed are passed on to the SPC for procurement. The drugs so procured are sent to the MSD by the SPC for storage and distribution to all the institutions. With regards to the tuberculosis control activities of the entire country functions under the Deputy Director General, Public Health Services (DDG/PHS) within the Ministry of Health. The program is headed by the Director / National Program for Tuberculosis Control and Chest Diseases (NPTCCD), and is functions through a network of district chest clinics, branch chest clinics, chest

hospitals and chest wards in close co-ordination with the general health services. Directly Observed Treatment (DOT) is one of the important elements of the internationally recommended strategy for TB control.

Private sector

Medicines to the private sector patients are supplied by local manufacturers, importers and also by the State Pharmaceuticals Corporation (SPC) of Sri Lanka. Any patient can go to a private hospital or a pharmacy and purchase the drugs which are mentioned in a valid prescription.

The State Pharmaceutical Corporation (SPC) whose retail sales are done via “Osu Sala” is a one stop shop for medicines. Osu Sala has outlets in all major towns and cities in the country and is the place where patients can buy most high value items and drugs are available on prescription at the most reasonable price.

Private pharmacies, wholesalers are inspected by the Drugs inspectors of the Ministry of Health. In addition, price control officers of the Consumer Affairs Authority conduct inspections to ensure that they follow the regulations with regard to pricing.

(h) Geographical coverage

Entire country

(i) Quality of the model: key aspects of access covered

These models are functioning well and the entire population has access to essential medicines because both the systems are complementary.

(j) Outreach and impact

Most of the time the availability of medicines to patients who is in need of drugs

(k) Involvement of pharmacist in different stages: conceptualization, development and oversight

11.1 Conceptualization: Yes, the pharmacists are involved at the MSD level of the government and also in the private sector (importing agencies and manufacturers)

11.2 Development: In each and every point a pharmacist is involved especially in Education and awareness through training programs, Development of supply chain management, procurement, estimating, budgeting and finally dispensing.

(l) Advantages and pitfalls

Advantages

The main advantage is the good distribution network of both the sectors.

- Identification of need of pharmaceuticals and increasing financial allocation for those
- The regularization of the distribution of medicine to the hospital network in order to avoid intermittent shortages
- Offering equitable access with a pricing mechanism that ensures affordability through the introduction of legislation requiring the prescription of generics

Pitfalls

The main pitfall is the quality problems of the drugs and other than that,

- Underutilization of the smaller institutions and overcrowding and over-utilization of major health institutions is common.
- The Provincial and Regional Directors decide on the respective allocations to the institutions under their purview, on the recommendations of the Provincial Drug Review Committees.
- Over-prescribing, pilferage and wastage.

(m) Recommendation for improvement

Medical Supplies Division has recently developed an Information Management System with the intention of coordinating with all health institutions and also with the institutions such as Regional Medical Supplies Divisions and the National Medicines Regulatory Authority.

This system needs to be further improved by providing necessary resources including human resources such as pharmacists to all health institutions.

THAILAND



Model 6: Pharmacist home visiting in Lam-Chabang district

by Budh Sitrakool

Background

Thailand has become to elderly society that shows the number of elder people are increasing. People who age from 60 years were 10 million in 2014 and to be increasing. (National statistical office Thailand, 2014). The most incidences of health problems in ageing community is non-communicable diseases (NCDs). Medication Therapy Management (MTM) is a one model of pharmacy service in community care that is a standard practice to consider in medication use of patient. The process of MTM is initial from medication review, action plans to solve medication-related problem/s, referral, follow-up and record. So that, It have to do as a team in health profession such as pharmacist, physician, nurse, and community care workers. The home visiting has worked in secondary care hospital many pieces of research shown that pharmacist can find out medication problems and solutions for improvement medication therapy. However, the pharmacy home visiting has not covered in all areas and it should be adapt a role in each site. The model in Lam-Chabang district is a home visiting by healthcare team and pharmacist/s to do MTM services. The model has collaborated of 5 partners with district's hospital, local administrative organization, private sector (CSR-

Thai oil co.ltd), and 2 schools of pharmacy (Silapakorn Univeristy and Burapha University).

Goal and Objectives

1. To initiate pharmacy service in community care with MTM model in the area.
2. To generate health networking in a district.
3. To increase accessibility of people in pharmacy service and reduce medication-related problems.

Detail about source of information collected and publication/s related to model

1. Tunpichart S. Effectiveness of pharmacist home health care for type 2 diabetes in Bangkok metropolitan: a community based study. Available from: <http://thesis.grad.chula.ac.th/current.php?mode=show&id=4989694220>.
2. <http://dailynews.co.th/article/312579>

Innovativeness in the model

Pharmacist Training program

Pharmacists in area have training in medication therapy management from experts in clinical and community care. The programme is included clinical screening in chronic disease as DM, Hypertension and other severe symptoms, medication reviews and method of referral and patients counselling which run by the pharmacy schools. It is a practice-based training and case discussion with healthcare team and social worker of the local administrative organization.

People's Health information programme

The private sector, Thai oil co. Ltd has funding informatics system of the service. The program uses as a family folder by GIS method. It has benefited from service in family

data and medication reviews from each visiting. However, the medical ethic data still be collected in Lam-Chabang hospital, the district hospital.

Pharmacy practice site for pharmacy students

More than pharmacists' service this area has been a practice site of pharmacy students from pharmacy schools. The student will learn as a pharmacy training and try to practice in area with pharmacist preceptor. The students have to interpret patient data and run on medication management therapy process for solving medication problems of their patients that include follow-up and referral between community and the hospital.

Operating/operated in public or private sector

Both public and private sectors with collaboration, Lam-Chabang administrative organization, Lan-Chabang Hospital, Faculty of Pharmacy Silpakorn University, Faculty of Pharmaceutical Sciences Burapha University and one private sector, Thai Oil co.ltd.

Sustainability: Funding Source

Fund from each partner responsibility, and mainly is government funding

Oversight mechanism

The district hospital collects and save a patient provides and allow the persons to access.

The private sector is a centre of system to summarise outcome of service.

The pharmacy schools are control academics and research the clinical outcome and pharmacists' role.

Geographical coverage

People in Lam-Chabang district hospital service area, Chonburi province, Thailand

Quality of the model: key aspect of access covered

- People can access pharmacy service and access appropriated medicine
- Solution gap of service as seamless care between community and hospital service.

Outreach and impact

Patients: People in area can access pharmacy service and use appropriated medicine include improve medication adherence to take medications.

Health professionals: Pharmacists who work in this area have opportunities to improve and up to date their knowledge and public health skills. The healthcare team can discuss and work together to solve health and medication problems for patients.

Involvement of pharmacist in different stages:

Conceptualization: Medication Therapy Management

Development: Pharmacists and pharmacy student training program

Patient information by GIS technology

Oversight: 5 Partners in collaboration

Advantages and pitfalls

Avantages: Patients can access pharmacy service and medication suddenly to reduce medication-related problems.

Using GIS technology to collect data and use in service that could be shown epidemiology data and demographic data for assessment community problem and service outcome

Pitfalls:

Funding has provided from organizations which are local institute and limited budget for sustaining.

Recommendation for improvement

The model should have central funding from central government and empower people to participate any problems. Moreover, It should have more organization as tertiary care hospital for improvement referral system and engage medication data.

Model 7: Diseases screening and health promotion in Community pharmacy, Project with The National Health Security Scheme

by Budh Sitrakool

Background

The health system in Thailand is not a full prescribing system. People can access to medicine by self-care in drug store under the Drug Act, B.E. 2510 (1967). It means patients can give medicines and healthcare products from pharmacies. Thai Nation statistic present percentage of patient self-care was 26.7% from 2010 increased to 38.3% in 2014. Thailand pharmacy council try to increase standard drug store by accreditation named “Quality Pharmacies”. And, the government announced Good Pharmacy Practice (GPP) law for all drug store have to improve their service. The Community Pharmacy Association (Thailand) has collaborated with National Health Security Office (NHSO) to initiate screening system and health promotion in community pharmacy in Bangkok. Now it provides in the large provinces for example Chonburi province, Kornkane province and more. The model as a one of universal coverage service fund from NHSO and take in pharmacies where passed quality pharmacy accreditation.

Goal and Objectives

1. To initiate pharmacy service in community pharmacies together with NHSO in universal coverage scheme.
2. To develop an optional way for accessing to quality medicine by pharmacies.

Detail about source of information collected and publication/s related to model

1. Dhipayom, T., et al. Opportunistic screening and health promotion for type 2 diabetes: an expanding public health role for the community pharmacist. 2013. J Public Health (Oxf) 35(2): 262-269.
2. Khumsikiew J., Arkaravichien W., Honsamoot D., Sangkar P., Diabetes and Hypertension Screening by Accredited Community Pharmacy in KhonKaen Under a Pilot Project with The National Health Security Scheme, Srinagarind Med J 2009; 24(3)

Innovativeness in the model

Community pharmacy service scheme

Pharmacist/s in pharmacies where accredited from the pharmacy council of Thailand screening and give health education or counseling to people who walk in the drug store with symptoms or disease as Metabolic syndrome, Vaccination for children, Asthma and/or COPD, contraceptive pills and Sexually Transmitted Infections (STDs).

Pharmacists training and activities from

Pharmacists are trained in screening technique and counseling skill included data collection of each activity from the Community Pharmacy Association (Thailand) . The pharmacies will give media display and documents for health screening and referral from to hospital.

Operating/operated in public or private sector

Public sectors: National Health Security Office (NHSO) and The Community Pharmacy Association (Thailand).

Private sectors: Pharmacies which has accredited from the pharmacy council of Thailand

Sustainability: Funding Source

Funding from National Health Security Office (NHSO), government.

Oversight mechanism

NHSO is a majority organization for funding and setup the process of service. The Community Pharmacy Association (Thailand) has selection criteria of pharmacies that take screening activities and encourage quality pharmacies where has potency to be service site.

Geographical coverage

The model is vary of each country in Thailand which depends on the area have voluntary quality pharmacies. Around 80 pharmacies in Bangkok, 5 stores in Chonburi, 7 in Khonkane, totally around 200 pharmacies.

Quality of the model: key aspect of access covered

- People can give screening disease and health promotion in mainly health problem in community.
- Patients are included in universal coverage or others health insurance of them.

Outreach and impact

The collaboration of NHSO and the pharmacies association can improve patients' accessibility in medical service from universal coverage scheme and other health insurance.

Pharmacies where has a service can increase opportunity in reputation and quality of service to people that be added value of pharmacy business.

Involvement of pharmacist in different stages:

Conceptualization: Disease screening and health promotion

Development: Pharmacists knowledge and skills from training

Development pharmacy to qualify as quality pharmacy accreditation.

Oversight: NHSO and The Community Pharmacy Association (Thailand)

Advantages and pitfalls

Avantages

Patients given an opportunity for health screening early have diseases and can be included in appropriated health insurance suddenly.

Pitfalls

The model has no many pharmacies to provide in all country and most pharmacies in Thailand are not to accredited in quality pharmacy as required.

Recommendation for improvement

The model should implement in all area and adding to a policy of the pharmacy council to promote pharmacies accreditation that should not assessment but improves quality of pharmacy to achieve the accreditation criteria. Moreover, the Universal coverage scheme should implement more pharmacy services such as medication refills in any pharmacies.

Terms of Reference

SEARPharm forum will co-ordinate the activities of The National professional associations of pharmacists in SEAR and also provide a link between the associations and the federation of the international pharmacists. In addition it will provide technical assistance to the national associations and WHO-SEARO.

The specific deliverable would be:

To examine the models of access of medicine with engagement of pharmacist of in various settings in Southeast Asian Countries.

Primary objective of the project is to collect information on such models to come out with learnings or pitfalls of these models and improve medicine use by consumers using role of pharmacist to access of medicine and develop a profile for pharmacist as a healthcare professional.

Access to medicine is a major hurdle in South East Asian Countries. Ministries of Health are constantly evaluating models for Access of medicines to their population. The resource persons are expected to describe examples of Models (current and previous) which are/were deployed in their countries for streamlining procurement, inventory management, distribution and dispensing. Bring out lessons learned and make suggestions for improvement.

A panel member discussion titled “Improving access to medicines”, during SEARPharm forum seminar held in Bangkok in February, 2015 focused on two of these models with

presence of pharmacist and their contribution. Four Panel members from Thailand, Indonesia, Sri Lanka and India made a 10 min presentation on the subject. A working group was constituted to appoint resource person from six countries to analyse these models and make recommendations.

FRAMEWORK

Background: Access to medicine is a major hurdle in South East Asian countries due to several factors like illiteracy, poverty, corruption, affordability, medicine shortage and shortage of health workers. The problem is further compounded due to lack of acceptance of pharmacist and his capabilities in the community.

Ministries of Health are constantly evaluating models for access of medicines to their population. However, invariably the role of pharmacist is either absent or marginal. Therefore, it is necessary to mainstream the pharmacist in the healthcare delivery systems. Extending the role of pharmacist in national medicine policy and implementing good pharmacy practices to build capacity of pharmacists can improve access to medicine. Then only the governments would recognize the place of pharmacist in healthcare systems.

The various models in practice, in different countries of the SEAR for access to medicine have not been able to guarantee medicine delivery to the patient. The project intends to investigate the current models, find inefficiencies, analyze major hurdles and recommend an acceptable mechanism.

1. Selection of resource person:

- a) Eligibility: Pharmacist/Pharmaceutical Scientist/Public health/ others
- b) The Member organization (MOs) needs to identify and suggest resource person/expert who has worked/knowledge of 'Models of access on medicine.' The resource person is expected to describe examples of current or previous models which are/were developed in their country for streamlining procurement, inventory management, distribution and prescription. Bring out lesson learned and suggestions for improvement.
- c) Honorarium for the resource person: USD \$150

2. Collection of information (Desktop research and personal interviews) references and case studies of models of "access to medicine."

3. Suggested heads for collecting information on models of “access to medicine:

- a) Background
- b) Goals and objectives
- c) Details about source of information collected and publication/s related to model/s.
- d) Innovativeness in the model
- e) Operating/operated in public or private sector
- f) Sustainability: Funding source
- g) Oversight mechanism
- h) Geographical coverage
- i) Quality of the model: key aspects of access covered
- j) Outreach and impact
- k) Involvement of pharmacist in different stages: conceptualization, development and oversight
- l) Advantages and pitfalls
- m) Recommendation for improvement

Timeline for the project

Actions	Description	Deadline	Remarks
Formation of working group (WG) Chair: TC, NG, TBD	ExCo Meeting, Bangkok	Feb, 2015	Complete
Panel Discussion	SEARPharm Forum seminar	Feb, 2015	Complete
Identification of Resource Persons (RPs)	CV of RPs by MOs to WG	30 th Jun, 15	
Submission of desktop research to SPF Secretariat	Mail: searpharmforum@hotmail.com	20 th Jul, 15	
Workshop to deliberate the models	At Jaipur (12-13 th July), Colombo (1-2 nd Aug), Bangkok and Jakarta	30 th Aug, 15	
Interim report of working group		15 th Sep, 15	
Progress report of the Project	At Dusseldorf, FIP Annual Congress	2 nd Oct, 15	
Final Report of the Project		1 st Nov, 15	

*Working group (WG): Chair: Teera Chakajnarodom (Thailand), Nirmal Gurbani (India),
Nurul Falah (Indonesia)*



South East Asian FIP-WHO Forum of Pharmaceutical Associations

Promoting Pharmacists Role in WHO's Health Agenda
South East Asia Region of WHO

SEARPharm Forum is FIP Forum of National Pharmaceutical Organisations in collaboration with WHO Regional Office for South East Asia. Its secretariat is based in Delhi.

Our Objective is to encourage and support a dialogue and collaboration among national and regional pharmaceutical associations in the South-East Asia region of WHO and WHO SEARO by:

- Improving health in the South-East Asian region by development and enhancement of pharmacy practice (Good Pharmacy Practice)
- Encouraging the Implementation of pharmacy service and pharmacy practice projects by national pharmaceutical associations
- Supporting WHO-policies and goals
- Integrating appropriate WHO policies into undergraduate, post graduate, and continuing education programs in pharmacy
- Formulating policy statements on health issues
- Combating the production and distribution of counterfeit medicine and sale of medicine by people who are not qualified

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