

**A STUDY TO INVESTIGATE THE
AVAILABILITY AND INVENTORY
MANAGEMENT OF ESSENTIAL
MEDICINES IN PUBLIC HEALTH
FACILITIES IN
JALOR, RAJASTHAN.**

Dissertation Submitted to



The IIHMR University, Jaipur

for the partial fulfilment for the award of the degree of

Master of Business Administration (MBA)

in

Pharmaceutical Management

By

Aastha Dwivedi

Under the Supervision and Guidance of

Saurabh Banerjee

2021

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DECLARATION BY STUDENT

I hereby declare that this dissertation titled A STUDY TO INVESTIGATE AVAILABILITY AND INVENTORY MANAGEMENT OF ESSENTIAL MEDICINES IN PUBLIC HEALTH FACILITIES IN JALOR RAJASTHAN is the bonafide record of my original research work. I declare that it has not been submitted to any other university or institution for the award of any degree or diploma. Information derived from the published or unpublished work of others has been duly acknowledged in the text.



(Signature)

Name of Student -Aastha Dwivedi

Date -

COMPLETION CERTIFICATION

CERTIFICATE

This is to certify that Aastha Dwivedi in partial fulfillment of the requirements for the award of the degree of MBA (Pharmaceutical Management from the IIHMR University, Jaipur has successfully completed her/his internship at HLPPT during March 22, 2021 to June 19, 2021.

Place:

Preceptor/Head of the Organization

Date:

Name of the organization

CERTIFICATE FROM FACULTY GUIDE AND SCHOOL DEAN

CERTIFICATE

This is to certify that dissertation titledis a record of the research work undertaken by Aastha Dwivedi in partial fulfillment of the requirements for the award of the degree of MBA (Pharmaceutical Management) from the IIHMR University, Jaipur under my guidance and supervision and his/her approach to the research study has been sincere, scientific, and analytical.

Faculty Guide

School Dean

IIHMR University, Jaipur
Jaipur

IIHMR University,

ABSTRACT

The main aim of establishing the list of medicine and defining essential medicine was to improve the availability of affordable medicine for economic weaker section of society, Rural and urban India have very different levels of access to health care. India has a well-developed public health system The Objective of the study was to investigate the availability of medicines and understand storage and inventory management in Public health facilities, in Jalore, Rajasthan. Primary data were collected in February and March 2021 to achieve the objective of the study. This was a quantitative study involving five CHC and ten PHC on random basis. A systemic tool was used to collect the data. After analysing the national list of essential medicines, state essential medicine lists and medicines given through national health programs, a list was prepared for survey. If drug present on day of survey than it was marked as available. In this study secondary research has been done from published journal and government documents. The overall availability of drugs were 69 percent in the PHC and 72 percent in the CHC level. Antihypertensives, analgesic and antibacterial were more than 70% .On the contrary, medicines such as anti-cancer and uterotonics were available in less than 40 % in public sector facilities. Ten of Six PHC had a dedicated storage space and facilities also follow FIFO method. The study also finds stock out of medicine which was not available at the time of survey , nearly 23% were out of stock from three to six month and almost 18% were out of stock from more than six months. The availability and use of essential medicines is influenced by a variety of circumstances like insufficient budgets, disturbed supply chain management, and lack of trust in the medicine quality. provided by the government facilities.

Keywords: Essential medicines, generic, procurement, inventory management, universal health care availability, public sector

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Thankyou

Aastha Dwivedi

MBA PM 11

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CHAPTER-1

INTRODUCTION

The main aim of establishing the list of medicine and defining essential medicine was to improve the availability of affordable medicine for economic weaker section of society. (Rituparna Maiti, 2015). Cost-effective essential drugs can treat or prevent the leading cause of death and disability. (Donela, 2010) A World Health Organization-described Essential Medicine is one that satisfies the priority needs of the population for health care. Drugs are selected in light of their public health significance, safety, effectiveness, and comparative cost-effectiveness. The national list of medicines includes the drugs that meet the basic requirements, so once a drug has been included it will be able to contribute to reducing the burden of disease. In addition to this, drugs are categorized on their needs and essentiality to be stored in primary, secondary, and tertiary healthcare facilities. National list of medicine should only contain single-dose drugs, not fixed-dose combinations unless that combination is rational. (Arpit Parmer, 2020) In 36 middle east country a survey was conducted and study finds that the public sector lacks generic drugs with compare to private health sector. Due to less availability of medicine at the government facilities it pushes the patient without medicine or purchase medicine from the private sector. (Donela, 2010). While the government covers around 20% of medicine costs in India, private healthcare spending is among the highest in the world. (Oberoi, 2014). In India, high healthcare costs have pushed a a significant proportion of households in poverty. Rural and urban India have very different levels of access to health care. Rural residents have far fewer options than city dwellers, who can choose between public and private providers. India have a wide public health system with community-based sub-centers. The health sub-center, which are frequently staffed by barefoot health workers, act as a bridge between the primary and community level health centers The village community's first point of contact with the medical officer is the Primary Health Care Center (PHC), which is meant to surve complete curative and preventive healthcare to the rural peoples, with a focus on the preventive health care. Community health centres (CHC) are well-equipped and primarily function as a first-referral unit, with diagnostic equipment and a consultant on staff. (Thorat)

In India, the efficiency of the drug procurement system, as well as related processes and policies, has a major impact on public sector medicine access. (Maulik Chokshi, 2015). In India, many healthcare plans such as Jan Aushadhi Scheme, Mukhyamantri Nishulk Dava Yojna, etc. provide free healthcare facilities, including medicine distribution (Dubeyb, 2020). India has announced to achieve universal health coverage, and many states in India are implementing policies to help achieve this goal. Rajasthan launched an ambitious universal access to medicines initiative in 2011 that used a centralized procurement and decentralized distribution model. (Sakthivel Selvaraj)

The Chief Minister of Rajasthan, launched the Rajasthan Mukhyamantri Nishulk Dava Yojana on October 2, 2011. The Chief Minister's Free Medicine Scheme (MNDY), formally known as the Mukhyamantri Nishulk Dava Yojana (MNDY), offers reliable, generic medicines at no cost to anyone and helps to alleviate the current nation's massive out-of-pocket healthcare expenses. The Rajasthan Medical Services Corporation (RMSC) was founded and provided the task of centralized purchasing, quality control, and medicine distribution to all of the state's health facilities. The Rajasthan government has made sure that people in the state have access to free medicines for 104 serious illnesses (India Manish Dev, 2021).

The current research is to determine availability of drugs in public health facilities of Jalor district of Rajasthan. This evidence will not only represent the current situation but will also be used to assess the effects of new procurement processes and their cost-effectiveness. This paper regulates the availability of necessary medicines at primary and community levels in the public health facilities in Jalor district. We also reviewed the drug inventory and storage arrangements in public health facilities.

CHAPTER-2

LITERATURE REVIEW

India's current public health agenda includes epidemiological changes (increased burden of chronic non-communicable diseases), demographic changes (increased elderly population), and environmental improvements. (Lakshminarayanan, 2011). Though India's economic growth has accelerated for the last decade, the country's healthcare system is at a fork in the road. Despite some notable successes in public health programs over time, In terms of overall health outcomes, India's health system is placed 118th out of 191 WHO member nations.. (K.V. Ramani, 2006)

The drug purchase price of the public sector is 0.27 to 0.48 times higher than the international reference price. However, these drugs are rare, with average availability ranging from 0% to 30% in the public sector. (Anita Kotwani, 2007).

The international reference price-IRP was 0.53-0.82 times the procurement price of the medicines. 41.3% and 23.2% drug was available in state government and MCD respectively. In three federally run tertiary care centres, the average mean supply of drugs was 49.3 percent.. (Kotwan, 2013).

Reducing the base price while leaving markups alone can enhance retailer and dispensing doctor revenues without lowering the price charged to end-users.. (Babar ZUD, 2007)

In India, there is unequal health status due to gender, income education level, demographic area, and occupation. Poor health status is related to poverty, female gender, low education level, and rural residence. In addition to health inequality, there are gaps in access to and use of health services between different population groups. The poorest quintile uses 10% of public subsidies, while the richest quintile uses 33%. Public subsidies. Nearly 72% of the total medical expenditure (THE) is paid by the family out of pocket (OOP). Direct health care expenditures caused approximately 32.5 million people to fall into poverty during 1999-2000, resulting in a 3.2% increase in poverty (Shankar Prinja, 2011).

Indian states have adopted various policies to reduce high extra-hospital expenditure (OOPE) and increase equity in the health system in order to achieve sustainable development goals. Fair Price Pharmacy Plan (FPMS) was created by West bengal, which is a model of public-private partnership, on other hand free drug programs in all public hospitals was introduced by Tamil Nadu and Rajasthan (Dutta, 2018)

According to a survey published the average availability of a selected basket of essential medicines in Bihar is 43%, Tamil Nadu 88%, 10% in Haryana, 12.5 % in Karnataka and 30% in Chennai.. (WHO)

CHAPTER-3

METHODOLOGY

STUDY SETTING AND SAMPLING

This is a quantitative study

The study was done in Jalor district , Rajasthan's. A total of ten PHC and 5 CHC healthcare facilities were chosen for the research. Five villages were chosen at random: Sanchor, Bhinmal, Jalor, Ahore, and Raniwara.

DATA COLLECTION

In February and March 2021, primary data were collected to achieve the objectives of the study. Baseline data included investigation of the availability, storage and management of stocks at different facility levels. The facility-level drug availability tool was used to determine the availability of essential drugs in the facilities. This method was used to collect information on drugs available at the time of the survey. The list of drugs studied was developed after analysing the National Essential Medicines List (NLEM), the State Essential Medicines List (EML) and drugs supplied through the National Health Program.

Data Analysis

Data was entered and analysed in Microsoft Excel. The availability of all drugs in a given treatment group was assessed during the study. Therapeutic groups have been developed for the drugs. If the drug is in stock on the survey date, it is considered available.

CHAPTER-4

RESULT

Storage and inventory management system of medicine.

The data analysis reveals and it can be concluded that when on being asked by Pharmacist out of ten only six PHC having a dedicated warehouse or storage space for the drugs and in CHC out of five only two facilities having storage space.

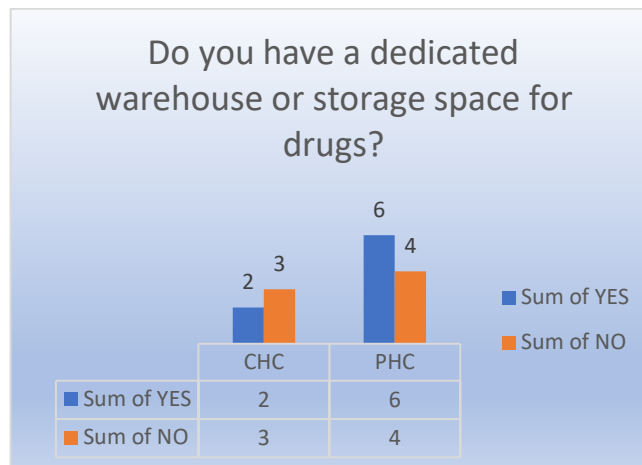


Fig - 4.1. Number of facilities having storage space for drugs .

From the data It is seen that only few facilities have arrange the medicine in systemic manner like in alphabetic or according to therapeutic groups

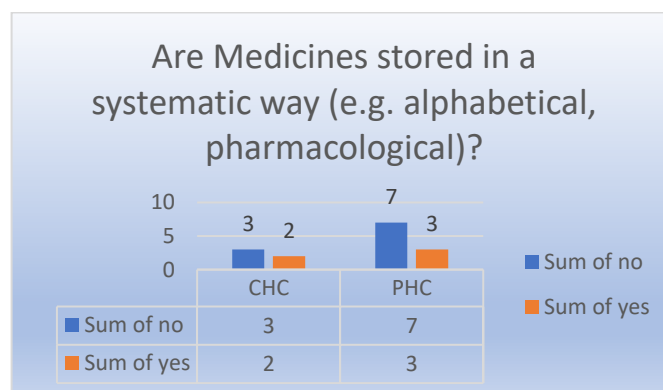


Fig 4.2 -Number of facilities stores medicine in systemic way.

50% of PHC and 100% CHC has responded that they directly store the medicine on the floor

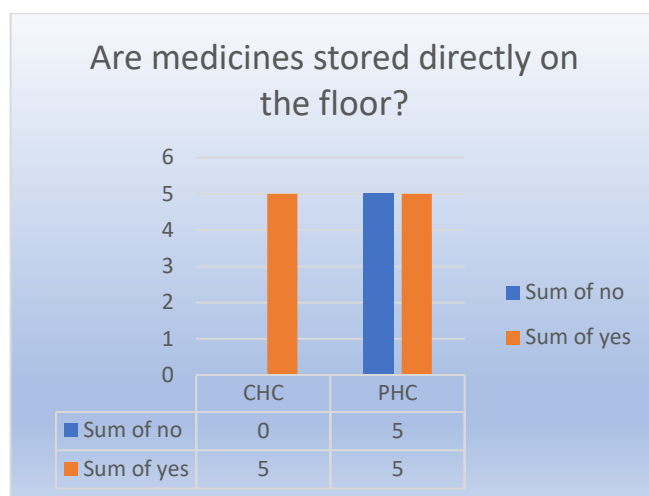


Fig-4.3 Is medicine store directly on floor?

70% of health facilities of jalor follows the systemic inventory management.

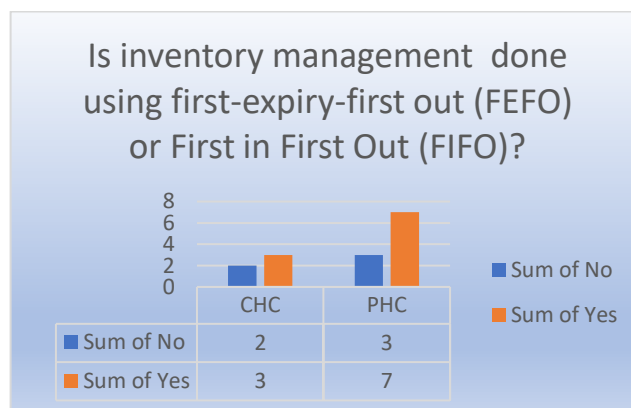


Fig-4.4 inventory management done using first-expiry-first out (FEFO) or First in First Out (FIFO)?

Table 4.1- Some key indicators of storage condition and Inventory management

Indicator	Health facilities	YES	NO	Total
Do you have a dedicated warehouse or storage space for drugs?	PHC	6	4	10
	CHC	2	3	5
Are medicines stored directly on the floor?	PHC	5	5	10
	CHC	5	0	5

Are Medicines stored in a systematic way (e.g. alphabetical, pharmacological)?	PHC	3	7	10
	CHC	2	3	5
Is inventory management done using first-expiry-first out (FEFO) or First in First Out (FIFO)?	PHC	7	3	10
	CHC	3	2	5

Availability of medicine

The overall availability of drugs was 69 percent in the PHC and 72 percent in the CHC. Anti-helminthic/anti-parasitic, antihypertensive, antispasmodic, antiemetic, and uterotonic drugs account for over 70% of all available drugs.

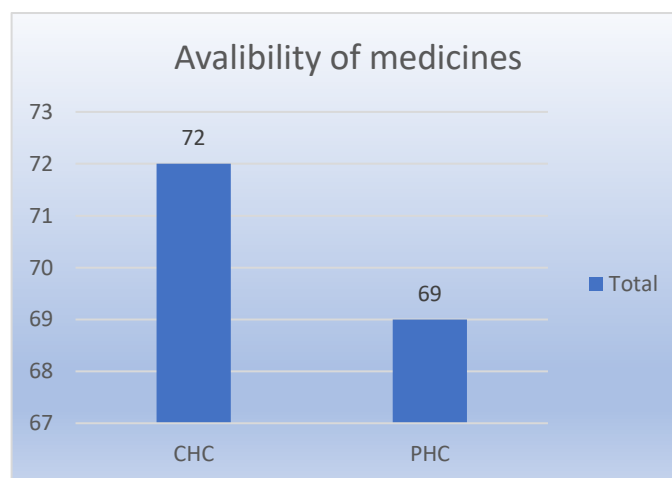


Fig 4.5 Availability of medicine

Anti-cancer, thrombolytic, and endocrine-related drugs, on the other hand, were only accessible in less than 10% of cases. On the day of the investigation, the hospital was stocked with hypoglycemic medications, antidepressants / antipsychotics, and asthma medications.

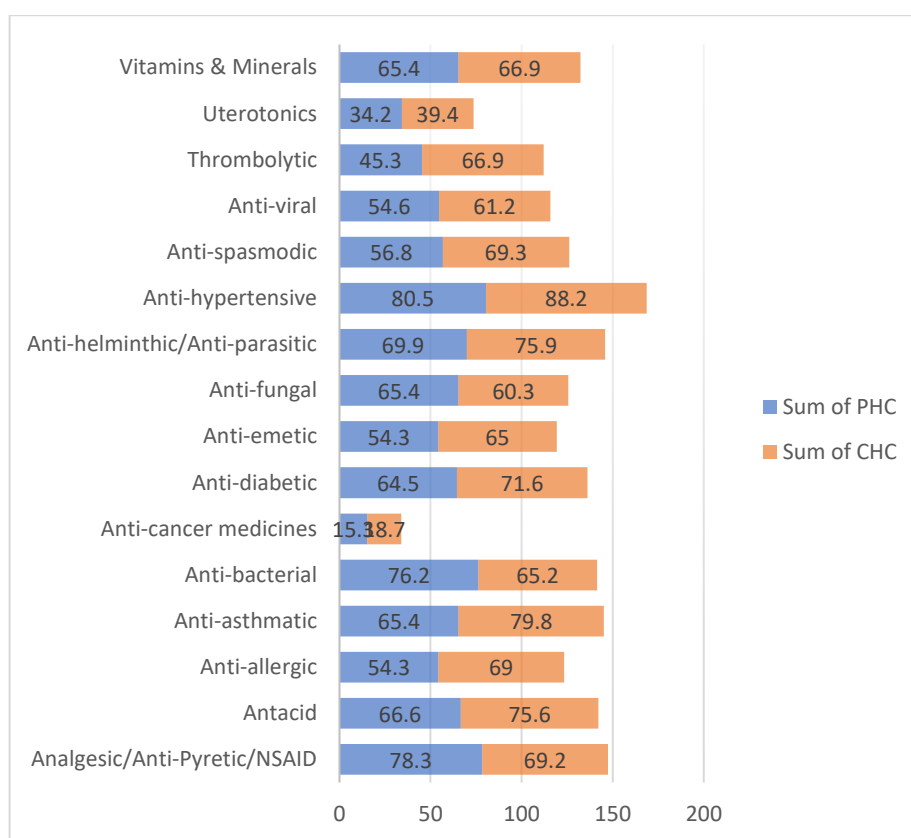


Fig 4.6 Percentage drug availability by therapeutic category in public health facilities

Sr.no	Drug category	PHC	CHC
1.	Analgesic/Anti-Pyretic/NSAID	78.3	69.2
2.	Anti-bacterial	76.2	65.2
3.	Anti-allergic	54.3	69
4.	Vitamins & Minerals	65.4	66.9
5.	Anti-asthmatic	65.4	79.8
6.	Antacid	66.6	75.6
7.	Anti-helminthic/Anti-parasitic	69.9	75.9
8.	Anti-fungal	65.4	60.3
9.	Anti-spasmodic	56.8	69.3
10.	Anti-emetic	54.3	65

11.	Anti-hypertensive	80.5	88.2
12.	Anti-diabetic	64.5	71.6
13.	Thrombolytic	45.3	66.9
14.	Anti-viral	54.6	61.2
15.	Uterotonics	34.2	39.4
16.	Anti-cancer medicines	15.3	18.7

Table-4.2 Percentage drug availability by therapeutic category in public health facilities

Stock out

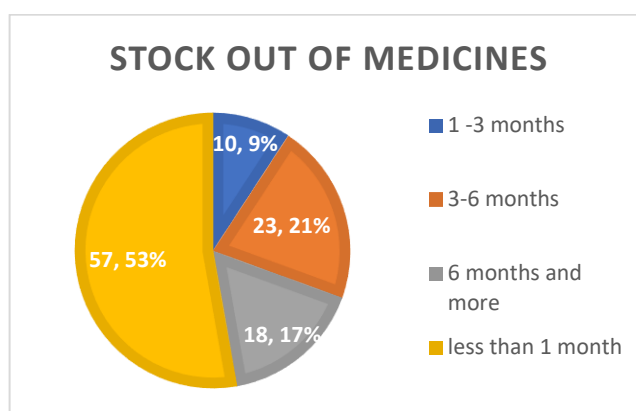


Fig -4.7 Percentage of out of stock of medicines.

The study also finds stock out of medicine which was not available at the time of survey. From the data it was seen that 57% were out of stock from last one month, nearly 23% were out of stock from three to six month and almost 18% were out of stock from more than six months.

CHAPTER-5

DISCUSSION

In a working health system, essential drugs must be available at all times., according to the WHO definition. It is useful to use the government to fulfill the class of effective intervention, the government improves the provision of essential drugs, the government creates the availability of pharmaceuticals in public health . Rajasthan started providing free drugs to public health. From 1994, Tamil Nadu Medical Services have been a simple and transparent purchase, storage and transparent buying, storage and distribution processes. As a result of these efforts, essential drugs that are not frozen at a very low price are currently available and illogical drugs and non-scientific fixing with illogical medications have been pushed. They have shown that it is not difficult to get the support of physician practitioners to improve the processing approach and reduce the financial burden of patients.. (Bhargava, 2013)

Public health facilities are the main source of medicine for the poor and the provision of free medicines is essential to achieving universal health care, the availability of medicines in the public sector is essential. must be increased and drug stocks need to be increased. Medicines need to be stored in all facilities. .All Indian state has its process for procuring drugs, and to achieve universal health coverage, various drug procurement methods have been introduced in Tamil naidu (mixed procurement system), Kerala (centralized system), Punjab, and Haryana (decentralized system), and Rajasthan (decentralized system). Every state's medicine procurement scheme has its own set of advantages and disadvantages (Manjeet Kaur, 2020)

In 2012, India's health spending was 4% of GDP, with the public sector accounting for just one-third of it. (india, 2004-2005) Out-of-pocket spending continues to be a significant driver of health spending, with medicine expenditures accounting for nearly 70% of the OOP burden. (Shankar Prinja)

The unavailability of drugs is another significant source of patient dissatisfaction. (Andaleeb S, 2007)

In Bihar, 43 percent of an essential drug basket was available, 88 percentage in Tamil Nadu. (Selvaraj S, 2010)

Patients have to buy medicines from private pharmacies due to lack of essential drugs in government sector,. With certain medicines, only one brand of the medication is available, which is typically the most expensive. (Kotwan, 2013)As a result, patients have no choice but to purchase the expensive branded medication, resulting in catastrophic drug costs.

Other studies have recorded regular stock-outs and lack of medicines in the government sector an due to many reason such as underfunding, inadequate forecasting, ineffective procurement/distribution mechanisms in the supply chain, and prescribing activities that result in prescriptions for medicines not available in the public health system. (Cameron A, 2009)

Increase the drug budget and develop a list of STG and essential drugs. Based on STG and EML used in primary care and different levels of care, EML-based drug procurement and distribution is a way to increase the supply of essential drugs in the public sector. Nominal acquisitions, reliable, open and responsible acquisition and distribution systems, the use of complex IT systems, and the capabilities of local suppliers; supporting laws and regulations improve prescription procedures, as well as continuous system monitoring and evaluation.

CHAPTER-6

CONCLUSION

Increasing the efficiency of drug supply in the public sector is a reliable and long-term way to reduce private health expenditure.

It is important to increase the amount of money spent on medicines. For scientific inventory management and real-time inventory management, transparent centralized purchasing, decentralized distribution mechanisms, powerful computer systems were used. State governments have evaluated their procurement processes to ensure efficiency and taken appropriate actions to increase availability.

The availability and use of essential medicines is influenced by a variety of circumstances. throughout the government facilities, including insufficient budgets, disturbed supply chain management, frequent inventories, and lack of trust in the medicine quality. provided by the government facilities. Patients should be made more aware of the prices and quality of generic medicines. They can save their money or, at the very least, purchase it within their means. Doctors and pharmacists should be encouraged to prescribe generic medications. Patients in rural India have been found to have greater access to drugs if they are available at lower cost, and they tend to purchase generic medicines.

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Annexures
QUESTIONNAIRE

1.Type of facility

a-PHC

b-CHC

2. Do you have dedicated warehouse or storage space for drugs?

a.yes

b.no

3. Is there a method in place to control temperature (e.g. roof and ceiling with space between them in hot climates, air conditioners, fans, etc.)?

a.yes

b.no

4.Is there cold storage in the facility?

a.yes

b.no

5.Are medicines stored directly on the floor?

a.yes

b.no

6,Are Medicines stored in a systematic way (e.g. alphabetical, pharmacological)?

a.yes

b.no

7.Is inventory management done using first-expiry-first out (FEFO) or First in First Out (FIFO)?

a.yes

b.no

9.Is this medicine are available at your facility

ESSENTIAL MEDICINES LIST				
S.N o.	Availab le Y/N	Name of drug	Pack Form	Category
1. ANALGESIC, ANTIPYRETIC & ANTI- INFLAMMATORY DRUGS				
	Opioid Analgesics			
1		Tramadol capsule 50 mg	10 Cap	CHC
2		Tramadol Injection 50 mg/ml	2 ml Amp	CHC
3		Pentazocine Injection 30 mg/ml	1 ml Amp	CHC
4		Naproxen Tablet IP 500 mg	10 x 10 Tab Blister	CHC
5		Naproxen Tablet IP 250 mg	10 x 10 Tab	CHC
	Non-Steroidal Anti Inflammatory Drugs & Antipyretics			
6		Aspirin Tablet IP (Gastro-resistant) 150 mg	14 x 10 Tab	PHC
7		Aceclofenac and Paracetamol Tablet 100 mg + 325 mg	10 Tab	PHC
8		Diclofenac Gel: Diclofenac diethylamine , Methyl salicylate , Linseed oil and Menthol 1.16%+10%+3%+ 5%	20 gm	PHC
9		Diclofenac Sodium and Paracetamol Tablet 50 + 325 mg	10 Tab	PHC
10		Diclofenac Tablet (SR) 100 mg	10 Tab	PHC
11		Etoricoxib Tablet 90 mg	10 x 10 Tab	CHC

12		Etoricoxib Tablet IP 120 mg	10 Tab	CHC
13		Ibuprofen and Paracetamol Tablet 400 mg + 325 mg	10 Tab	PHC
14		Ibuprofen Tablet 200 mg	10 Tab	PHC
15		Ibuprofen Tablet 400 mg	10 Tab	PHC
16		Ibuprofen Oral Suspension 100 mg/5ml	60 ml	PHC
17		Indomethacin Capsule 25 mg	10 Tab	CHC
18		Mefenamic Acid Tablet 500 mg	10 Tab	PHC
19		Paracetamol Injection 150 mg/ml	2 ml Amp	PHC
20		Inj Diclofenac Sodium aqueous 75mg/ml 1ml Size, IV & IM use	1 ml amp	CHC
21		Paracetamol infusion IP 1% w/v 100ml Size	100 ml bottle	CHC
22		Tab. Ketorolac 10 mg	10 X10	CHC
		Muscle Relaxants		
23		Chlorzoxazone, Diclofenac sodium & Paracetamol Tablet 250mg+50mg+325 mg	10 Tab	PHC
2. ANTIALLERGICS & DRUGS USED IN ANAPHYLAXIS				
		Corticosteroids		
24		Betamethasone Tablet 0.5 mg	10 Tab	PHC
25		Betamethasone Sodium Phosphate Injection 4 mg/ml	1 ml Vial	PHC
26		Dexamethasone Injection 8 mg/2ml	2 ml Vial	PHC
27		Dexamethasone Tablet 0.5 mg	10 X 10 Tab	PHC
28		Hydrocortisone Sodium Succinate Injection 100 mg base / vial	Vial	PHC
29		Methyl Prednisolone Sodium Succinate for Injection 500 mg	Vial	CHC
30		Prednisolone Tablet 5 mg	10 Tab	PHC
31		Prednisolone Tablet 10 mg	10 Tab	PHC

32		Prednisolone Tablet 20 mg	10 X 10 Tab	CHC
Antihistaminics & Drugs used in Anaphylaxis				
33		Adrenaline Injection 1 mg/ml	1 ml Amp	PHC
34		Hydroxyzine Tablet 25 mg	10 X 10Tab	PHC
35		Pheniramine Injection 22.75 mg/ml	2 ml Amp	PHC
36		Promethazine Syrup IP 5 mg/ 5ml	60 ml Bottle	PHC
37		Promethazine Injection 25 mg/ml	2 ml Amp	PHC
38		Promethazine Tablet 25 mg	10 Tab	PHC
39		Anticold Syrup: Phenylephrine HCl , Chlorpheniramine maleate, and Paracetamol 2.5 mg+ 1 mg+125 mg/5ml	30 ml Bottle	PHC
40		Cetirizine, Phenylephrine& Paracetamol Tablet 5 mg + 10 mg + 325 mg	10 Tab	PHC
41		Cetirizine Syrup 5 mg/ml	30 ml	PHC
42		Montelukast 10 mg + Levocetirizine 5mg Tablet	10x10 Tablet Strip	PHC
3. ANTI- INFECTIVE DRUGS				
	Antibacterials			
	Aminoglycosides			
43		Amikacin Injection 100 mg	2 ml vial	CHC
44		Amikacin Injection 250 mg	Vial	CHC
45		Amikacin Injection 500 mg	2 ml vial	PHC
46		Gentamycin Injection 80 mg/2ml	2 ml Amp	PHC
	Betalactam			
	Penicillins			
47		Amoxycillin Capsule 250 mg	10 Cap	PHC

48		Amoxycillin Capsule 500 mg	10 Cap	PHC
49		Amoxycillin Trihydrate Dispersible Tablet 125 mg	10 Tab	PHC
50		Amoxycillin Oral Suspension (Dry Syrup) 125 mg/5ml	30 ml Bottle	PHC
51		Amoxycillin and Cloxacillin Capsule 250 mg + 250 mg	10 X 10 Cap strip	PHC
52		Amoxycillin and Potassium Clavulanate Tabs 500 mg + 125 mg	10 Tab	PHC
53		Amoxicillin and Clavulanic acid Injection 600 mg	Vial	CHC
54		Amoxicillin and Potassium Clavulanate Injection 1.2 gm	Vial	CHC
55		Amoxycillin & Clavulanic Acid Syrup 200 mg + 28.5 mg / 5 ml	30 ml	CHC
56		Ampicillin Capsule 500 mg	10 Cap	PHC
57		Ampicillin Injection IP 500 mg	Vial	PHC
58		Benzathine Benzylpenicillin Injection IP12 Lac units	Vial	PHC
59		Benzathine Benzylpenicillin Injection 6 Lac units	Vial	PHC
60		Cloxacillin Sodium Injection 500 mg	Vial	CHC
61		Tab. Amoxycillin 250 mg+Calvulanic Acid 125 mg IP Each Film Coated Tab Conatin Amoxycillin Trihydrate IP 250 mg & Potassium Clavulanate IP 125 mg	10X10	CHC
	Cephalosporins			
62		Cefixime Tablet 100 mg	10 X 10Tab	CHC
63		Cefixime Tablet 200 mg	10 Tab	CHC
64		Cefixime Oral Susp (Drops) 25 mg/ml	10 ml Bottle	CHC

65		Cefotaxime Injection 1 g	Vial	CHC
66		Cefotaxime Injection 250 mg	Vial	CHC
67		Cefpodoxime Dispersible Tablet 50 mg	10 Tab	CHC
68		Ceftriaxone Injection IP 1 g/vial	Vial	PHC
69		Ceftriaxone Injection 250 mg	Vial	PHC
70		Ceftriaxone Injection IP 500 mg/vial	Vial	PHC
71		Cefuroxime Tablet 250 mg	10 Tab	CHC
72		Cephalexin Capsule 250 mg	10 X 10 Cap Blister	PHC
73		Cephalexin Capsule IP 500 mg	10 X 10 Cap Blister	PHC
74		Cephalexin Oral Suspension (Cephalexin Dry Syrup) 125 mg/ 5ml	30 ml Bottle	PHC
75		Cephalexin Tablet (DT) 125 mg	10 Tab	PHC
76		Tab.Cefadroxil 250 mg	10X10	CHC
77		Tab.Cefadroxil 500 mg	10X10	CHC
	Macrolides			
78		Azithromycin Tablet (DT) 100 mg	3 Tab	PHC
79		Azithromycin Tablet IP 250 mg	3 Tab	PHC
80		Azithromycin Tablet 500 mg	3 Tab	PHC
	Quinolones			
81		Ciprofloxacin Injection 200 mg/ 100 ml	100 ml Bottle	PHC
82		Ciprofloxacin Tablet 250 mg	10 Tab	PHC
83		Ciprofloxacin Tablet 500 mg	10 Tab	PHC
84		Levofloxacin Tablet 250 mg	10 Tab	CHC
85		Norfloxacin Tablet 400 mg	10 Tab	PHC
86		Ofloxacin Tablet 200 mg	10 Tab	PHC
87		Ofloxacin Suspension 50 mg/5 ml	30 ml Bottle	CHC
88		Ofloxacin Injection 200mg / 100 ml	100 ml	CHC

			Bottle	
89		Ofloxacin and Ornidazole Tablet 200 mg + 500 mg	10 Tab	PHC
90		Tab. Levofloxacin IP 500 mg (Each Film Coated Tablet contains Levofloxacin Hemihydrate IP 500 mg)	10X10	CHC
	Other Anti Bacterials			
91		Clindamycin Capsule 150 mg	10 Cap	CHC
92		Clindamycin Capsule 300 mg	10 Cap	CHC
93		Doxycycline Capsule 100 mg	10 Tab	PHC
94		Nitrofurantoin Tablet 100 mg	10 Tab	PHC
	Anti Amoebic			
95		Metronidazole Injection 500 mg/ 100 ml	100 ml Bottle	PHC
96		Metronidazole Benzoate Oral Suspension 100 mg/ 5 ml	60 ml Bottle	PHC
97		Tinidazole Tablet IP 300 mg (Film Coated)	10 X 10 Tab Blister	PHC
98		Tinidazole Tablet IP 500 mg (Film Coated)	10 X 10 Tab	PHC
	Anthelmintics			
99		Albendazole Oral Suspension 400 mg/ 10 ml	10 ml Bottle	PHC
100		Diethylcarbamazine Tablets IP 100 mg	10 X10 Tab	PHC
	Anti Fungals			
101		Clotrimazole Cream IP 2% w/w	15 gm Tube	PHC
		Clotrimazole Vaginal Tablet 500 mg	Single Tab	PHC
102		Fluconazole Tablet 150 mg	10 Tab	PHC
103		Griseofulvin Tablets 125 mg	10 x 10	CHC

			Tab Strip	
	Anti Viral			
104		Acyclovir Tablet 200 mg	10 Tab	CHC
105		Acyclovir Tablet 800 mg	10 Tab	PHC
106		Acyclovir Suspension 400 mg/ 5ml	60 ml Bottle	CHC
4 DRUGS AFFECTING BLOOD				
	Antihypertensive			
107		Amlodipine Tablet IP 2.5 mg	10 Tab	PHC
108		Amlodipine Tablet 5 mg	10 Tab	PHC
109		Atenolol Tablet 50 mg	14 Tab	PHC
110		Atenolol Tablet 25 mg	14 Tab	PHC
111		Diltiazem Tablet 30 mg	10 Tab	CHC
112		Enalapril Maleate Tablet 10 mg	10 Tab	PHC
113		Enalapril Maleate Tablet 5 mg	10 Tab	PHC
114		Enalapril Maleate Tablet 2.5 mg	10 Tab	PHC
115		Labetalol Tablet 100 mg	10 Tab	PHC
116		Labetalol Hydrochloride Injection 20 mg/ 4ml	4 ml Amp	PHC
117		Lisinopril Tablet 2.5 mg	10 Tab	CHC
118		Lisinopril Tablet 5 mg	10 Tab	CHC
119		Lisinopril Tablet 10 mg	10 Tab	CHC
120		Losartan Tablet 25 mg	10 Tab	PHC
121		Losartan Tablet 50 mg	10 Tab	PHC
122		Amlodipine and Enalapril Maleate Tablet 5 mg +5mg	10 Tab	CHC
123		Losartan Potassium & Amlodipine Tablet 50 mg + 5mg	10 Tab	CHC
124		Losartan Potassium & Hydrochlorothiazide Tablet 50 mg + 12.5mg	10 Tab	PHC
125		Amlodipine and Lisinopril Tablet 5mg +5 mg	10 Tab	CHC
126		Amlodipine and Atenolol Tablet 5 mg +50 mg	10 Tab	PHC

127		Methyldopa Tablet 250 mg	10 Tab	PHC
128		Metoprolol Tablet IP 25 mg	10 X 10 Tab	PHC
129		Metoprolol Succinate Tablet (Extended Release) USP 50 mg	10 X 10 Tab	PHC
130		Nifedipine capsule 5 mg	10 Cap	PHC
131		Nifedipine Tablet (Sustained Release) 10 mg	10 Tab	PHC
132		Propranolol Tablet 40 mg	10 Tab	PHC
133		Ramipril Tablet / Capsule 2.5 mg	10 X 10 Cap	CHC
134		Telmisartan Tablet IP 40 mg	10 X 10 Tab	PHC
5. DERMATOLOGICAL DRUGS				
	Antifungal			
135		Miconazole Nitrate Cream 2%	15 gm Tube	PHC
136		Clotrimazole Mouth Paint (Clotrimazole 1% w/v) 1%	15 ml	CHC
137		Ketoconazole Cream 2%	15 gm Tube	PHC
138		Powder Clotrimazole 1% w/w 30 gm	30 gm bottle	CHC
	Antiviral			
139		Acyclovir Cream 5%	5 gm Tube	PHC
6.GASTRO INTESTINAL DRUGS				
	Antacid			
140		Antacid Liquid	60 ml Bottle	PHC
	Anti-Ulcer			
141		Omeprazole Capsule 20 mg	10 Cap	PHC
142		Pantoprazole Injection 40 mg	Vial	CHC

143		Pantoprazole & Domperidone SR Capsule 40 mg+ 30 mg	10 Cap	PHC
144		Ranitidine HCL Injection 50 mg/2ml	2 ml Amp	PHC
145		Ranitidine Tablet 150 mg	10 Tab	PHC
146		Ranitidine Tablet 300 mg	10 Tab	PHC
	Abdominal colic & Antispasmodic			
147		Dicyclomine Injection 10 mg/ml	2 ml Amp	PHC
148		Dicyclomine Hydrochloride Oral Solution IP10 mg/5ml	30 ml Bottle	PHC
149		Dicyclomine Hydrochloride and Activated Dimethicone Suspension 10mg + 40mg per ml	10 ml bottle	PHC
150		Dicyclomine and Paracetamol Tablet 20mg + 325mg	10 X 10 Tab Blister	PHC
151		Drotaverine Tablet 40 mg	10 Tab	PHC
152		Drotaverine Hydrochloride Injection 40 mg/2ml	2 ml Amp	PHC
153		Drotaverine & Mefenamic Acid Tablet 80 mg + 250 mg	10 X 10 Tab	PHC
154		Hyoscine Butylbromide Tablet 10 mg	10 Tab	CHC
155		Hyoscine Butylbromide Injection IP 20 mg/ml	1 ml Amp	PHC
	Antiemetic			
156		Metoclopramide Injection 10 mg/2ml	2 ml Amp	PHC
157		Metoclopramide Tablet 10 mg	10 Tab	PHC
158		Metoclopramide Syrup 5 mg/ 5ml	30 ml Bottle	PHC
159		Domperidone Oral Drops 10 mg/ ml	10 ml bottle	PHC
160		Domperidone Suspension 5 mg/ 5ml	30 ml Bottle	PHC
161		Ondansetron orally Disintegrating MD Tablet 4 mg	10 X 10 Tab	PHC

162		Ondansetron Injection 2 mg/ml	2 ml Amp	PHC
163		Tab Doxylamine Succinate 20 mg & Pyridoxine Hydrochloride 20 mg (Each Enteric Coated Tablet contains Doxylamine Succinate USP 20 mg & Pyridoxine Hydrochloride IP 20 mg)	10 X 10 Tab	PHC
164		Inj Prochlorperazine mesylate 12.5mg/ml 5ml Size	5 ml	DH
7 HORMONES, OTHER ENDOCRINE DRUGS				
	Antidiabetics			
165		Biphasic Isophane Insulin Injection 30 / 70 (30% Soluble Insulin & 70% Isophane Insulin) 40 IU / ml	10 ml Vial	PHC
166		Isophane Insulin Injection 40 IU / ml	10 ml Vial	PHC
167		Soluble Insulin Injection 40 IU / ml	10 ml Vial	PHC
168		Glibenclamide Tablet 5 mg	10 Tab	PHC
169		Gliclazide Tablets IP 40 mg	10 x10 Tab	PHC
170		Glimepiride Tablet 2 mg	10 Tab	PHC
171		Glimepiride Tablet 1 mg	10 Tab	PHC
172		Glipizide Tablet IP 5 mg	10 X 10 Tab	PHC
173		Metformin Tablet 500 mg	10 X 10 Tab	PHC
174		Pioglitazone Tablet IP 15 mg	10 X 10 Tab	CHC
175		Metformin Hydrochloride SR Tablet 1000 mg	10 Tab	PHC
176		Glipizide and Metformin Hydrochloride Tablet 5 mg + 500 mg	10 Tab	CHC
177		Glibenclamide and Metformin Hydrochloride (SR) Tablet 5 mg + 500 mg	10 Tab	CHC
178		Metformin Hydrochloride (SR) and Glimepiride	10 Tab	PHC

		Tablet 500 mg + 1 mg		
179		Metformin Hydrochloride (Sustained Release) and Glimepiride Tablet 500 mg + 2 mg	10 Tab	PHC
180		Glimepiride, Pioglitazone and Metformin Hydrochloride (SR) Tablet 2mg + 15mg + 500mg	10 X 10 Tab	PHC
181		Gliclazide and Metformin Tablet 80 mg + 500 mg	10 Tab	PHC
182		Tenalogliptin Tablet 20 mg	10 x10 Tab B	PHC
8 DRUGS ACTING ON UTERUS				
183		Isoxsuprine Injection 5 mg/ml	2 ml Amp	PHC
184		Isoxsuprine Tablet 20 mg	10 Tab	PHC
185		Methylergometrine Injection 0.2 mg/ml	1 ml Amp	PHC
186		Methylergometrine Tablet IP 0.125 mg	10 x 10 Tab Strip	Sub center
187		Misoprostol Tablet 200 mcg	10 Tab	Sub Center
188		Mifepristone Tablet 200 mg	Single Tab	PHC
189		Oxytocin Injection 5 IU/ml	1 ml Amp	PHC
190		Natural Micronised Progesteron Soft gelatin Capsule 200 mg (Each Soft Gelatin Capsule contains Progesteron IP 200 mg)	10X10	DH
191		Tab Cabergoline IP 0.5mg (Each Uncoated Coated Tablet contains Cabergoline IP 0.5mg)	10X10	DH
192		Inj Human Chorionic Gonadotropin IP 5000 I.U.	Vial	DH
193		Leuprolide Acetate depot 3.75 mg	Vial	MCH
194		Leuprolide Acetate depot 11.25 mg	Vial	MCH
9. DRUGS ACTING ON THE RESPIRATORY TRACT				
	Anti asthmatic			
195		Aminophylline Injection 25 mg/ml	10 ml Amp	PHC

196		Beclomethasone Inhalation 200 mcg/ dose	200 metered doses Container	PHC
197		Budesonide Nebulizer Suspension 0.25 mg/ml	2 ml Amp	PHC
198		Budesonide Rotacap 200 mcg	30 Capsule (Rotacaps)	PHC
199		Ipratropium Bromide Nebulizer Solution 250 mcg/ml	15 ml vial	CHC
200		Ipratropium Rotacap 40 mcg	30 Capsule (Rotacaps)	CHC
201		Salbutamol Tablet 4 mg	10 Tab	PHC
202		Salbutamol Inhalation 100 mcg/ dose	200 metered doses	PHC
203		Salbutamol Nebuliser Solution 5 mg/ml	10 ml Vial	PHC
204		Salbutamol Tablet 2 mg	10 Tab	PHC
205		Salbutamol Syrup IP 2 mg/5ml	100 ml Bottle	PHC
206		Terbutaline Sulphate Tablet IP 2.5 mg	10 X 10 Tab	CHC
207		Theophylline and Etophylline Injection 50.6mg + 169.4mg	2 ml Amp	PHC
208		Theophylline and Etophylline Tablet 23mg + 77mg	10 Tab	PHC
209		Theophylline Tablet (SR) 400 mg	10 X 10 Tab Blister	PHC
210		Formoterol & Budesonide Rotacap 6 mcg+ 200 mcg	30 Capsule (Rotacaps)	CHC
211		Tab. Acebrophylline 100 mg	10X10	CHC
10. VITAMINS & MINERALS				

222		Ascorbic Acid Tablet 500 mg	10 Tab	PHC
223		Calcium Gluconate Injection 10%	10 ml Am	PHC
224		Caium & Vitamin D3 Suspension (Each 5 ml contains Calcium Carbonate equivalentvto elemental Calcium 250 mg + Vitamin D3 -125 IU)	100 ml Bottle	PH
225		Calcitriol Capsule 0.25 mcg	10 Cap	CHC
226		Cholecalciferol Granules 60,000 IU /1gm	1 gm Sachet	CHC
227		Iron and Folic Acid Syrup Each 5 ml contains Ferrous Fumerate equivalent to elemental iron 100 mg, Folic Acid 500 mcg	100 ml bottle with Dropper	PHC
228		Iron Sucrose Injection 20 mg/ml USP/BP 20 mg/ml (for IV Use) Each ml contain : Ferric hydroxide in compls with Sucrose equivalent to elemental Iron 20 mg	5 ml Amp	PHC
229		Mecobalamin Injection 500 mcg/ml	1 ml Amp	CHC
230		Multivitamin Drops Each ml Contains Vit-A- 3000 IU, Vit D3- 300IU, Vit-B 1-1mg, Riboflavine Phosphate Sodium- 2 mg, D- Pantenol- 2.5 mg, Niacinamide - 10 mg, Pyridoxine HCL - 1 mg, Cyanocobalamin 1 mcg, Lysine HCL 10 mg	15 ml Bottle with dropper	PHC
231		Multivitamin Tablets NFI Formula Sugar Coated.Vit A 2500 IU	10 X 10 Tab	PHC
232		Pyridoxine Tablet 10 mg	10 Tab	CHC
233		Thiamine Tablet 100 mg	10 Tab	CHC
234		Vitamin A Solution 1 Lac IU/ml	100 ml bottle	PHC
235		Vitamin B Complex Injection NFI	10 ml vial	PHC

236		Methylcobalmin Tablet 500 mcg	10 x 10 Tab	PHC
237		Methylcobalmin Tablet 1500 mcg	10 x 10 Tab	PHC
238		Vitamin D3 Oral Solution 60000 IU	5ml Glass bottle	PHC
239		Multi vitamin Syrup	100 ml	CHC