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Mini Review

Impact of Medicine Prices on Economic, Clinical and Health Related Outcomes

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Abstract

Medicine prices are important determinants of its affordability and accessibility. If the patients have to buy the medicine out of pocket, then the economic status of the patient becomes very important. Patient must choose between health and money. The government across the world have to deal this problem how to make the medicine affordable. Many a time subsidy is given on medicine prices. However, it has been proved counter productive and not successful. New scheme in India is found to be working where in Govt sponsored retail out lets which sell generic medicine at affordable prices is daunting the private manufacturer with price challenge and is also competing for medicine prices in the market. Affordable medicines are improving the quality of life by better clinical out comes and patient satisfaction.

Keywords: *Medicine Prices; Clinical Outcomes; Patient Satisfaction*

Introduction

Medicines are important in disease management especially in chronic conditions like Hypertension and Diabetes. Regular consumption of the medicine has become the routine practice of many patient's world wise. However, the cost of the medicine plays an important role in its accessibility and affordability. Usually health insurance companies won't cover the reimbursement of money for medicines hence most of the medicines are to be paid by out of pocket expenses model. As an exception to the above some medicines are distributed free of cost to the patients by the government as disease has a huge socio-economic burden like Tuberculosis, HIV and leprosy. If not treated, the patients act as spreading agents or carrier of diseases making healthy people to become diseased with infection. Hence the government had invested in preventive public health me. assures and distributing free medicines to the affected patients. Thus, by doing so the Governments want to prevent the spread of disease and protect the public from contracting these diseases on large scale. The direct investment in other diseases like non-communicable disease is missing as these conditions are not spreading to other patients. For example, Cancer, Asthma, Diabetes and Hypertension. Hence it is left to the patients to buy from open market and manage their disease conditions.

The patients who are suffering from conditions where government support is missing are at great disadvantage as they are made procure medicines in open market. Due to lack of control over the prices of medicine, many a time same medicines are available with the range of prices. It becomes questionable, how come medicines are available at different prices. Is the brand medicine available at high price is superior quality and vice versa? The medicine weather it is branded or generic should be of same quality as both the products

should comply with minimum standards prescribed in pharmacopeia. Hence differences in prices is a manufacturer gimmick and does not add a quality input and claim a higher price by the patients. What usually in practice is the marketing experts of manufacturer contact the prescriber and strike a deal to promote the prescription of their brand even the brand is expensive than available generic medicines in the market. As the patient never questions the prescriber over the price of the medicine, he usually buys the expensive medicine as it is recommended by their doctor.

The manufacturing of medicine is in the hands of private investors whose prime interest is to maximize the profits and return on investment. They are obliged by the government that they balance between the profits and public welfare. They do not become too greedy and start exploiting the public by charging exorbitant prices for the medicine. The governments after observing the predatory behavior of pharma industry regarding prices of medicine, must step in to control the medicine prices in their own countries. In Developed countries like USA, Europe and Canada, promoting generic medicines as alternative to expensive branded medicine. Enacting various laws and regulations for price control of biologics. However, in developing countries like India, government has enacted various laws and regulations under the ambit of Essential Commodities Act of 1955, Drugs price control orders 1966, was enacted. Its objective was to prevent the manufacturer of medicine charging exorbitant prices for medicine. There were several Drugs Price Control Orders enacted like DCPO 2013 and recently DPCO 2019. DPCO 2019 aims to strike a balance between Consumer interests and manufacturer profits.

However, Government of India, has also come out with its own generic versions of medicines which are sold in Jan Aushadhi Kendra, which is making greater impact on accessibility and affordability of medicine in the country. Modus of operandi of Jan Aushadhi is completely managed by Bureau of Pharma PSUs of India (BPPI, Under Department of Pharmaceuticals, Govt of India). The Vision of Jan Aushadhi is to bring down the health care expenditure of every patient, by providing quality generic medicines at affordable prices. BPPI has roped in the public sector pharmaceutical industry to manufacture medicine for Jan Aushadhi out lets. The Jan Aushadhi has established its own supply chains and are sold only in dedicated medicine shops [1-3]. See table 1 for prices of Jan Aushadhi medicines.

Sl. No	Medicine	Unit	Therapeutic group	Jan aushadhi/lowest price (INR)	Open market price/brand name (INR)	Difference in price
01	Amikacin 250 mg inj. IP	2 ml vial	Anti-infective	11.35	37.00 (bloc in)	25.65
02	Amoxicillin 500mg + Clavulanic acid 125mg film coated tablets	6's	Anti-infective	52.24	120.00 (abclox-cv)	67.76
03	Amoxicillin 500 mg capsule IP	10's	Anti-infective	26.25	72.15 (acmox)	45.9
04	Azithromycin 500 mg film coated tablet IP	3's	Anti-infective	25.98	75.00 (aicin)	49.02
05	Cefixime 200 mg film coated tablet IP	10's	Anti-infective	44.63	150.00 (acfix)	105.37
06	Cefoperazone 500mg + Sulbactam 500 mg IP	vial and wfi	Anti-infective	31.61	200.00 (acmetum)	168.39
07	Cefoperazone 1gm Inj. IP	vial	Anti-infective	31.2	244.00 (cefaperacin)	212.8
08	Cefotaxime 250 mg + Sulbactam 125mg Inj.	vial and wfi	Anti-infective	18.59	24.00 (augtax)	5.41
09	Ceftriaxone 1gm + Tazobactam 125 mg Inj.	vial and wfi	Anti-infective	44.46	118.80 (baricef-t)	74.34

10	Ceftriaxone 250 mg Inj. IP	vial and wfi	Anti-infective	11.8	30.00 (aacef)	18.2
11	Cephalexin 500 mg capsule IP	10's	Anti-infective	51.34	157.22 (ceff)	105.88
12	Ciprofloxacin 500mg film coated tablet IP	10's	Anti-infective	22	75.00 (abact)	53
13	Levofloxacin 500 mg film coated tablets IP	10's	Anti-infective	35.74	89.00 (ab-cin)	53.26
14	Meropenem 1gm inj IP	vial and wfi	Anti-infective	255.41	3255.00 (adi-penem)	2999.59
15	Ofloxacin 200 mg film coated tablets IP	10's	Anti-infective	14.8	72.00 (biofast)	57.2
16	Vancomycin 500mg iv infusion IP	vial and wfi	Anti-infective	90.82	389.00 (vancomate)	298.18
17	Calamine lotion 100 ml	100ml bottle	Anti-infective	19.52	175.44 (allsuth)	155.92
18	Povidone iodine 7.5% solution IP	500 ml bottles	Anti-infective	105.44	155.00 (alphadine)	49.56
19	Glibenclamide 5 mg tabs IP	10's	Anti-diabetic	5.00	18.50 (diolin)	13.5
20	Glimepiride 2 mg tabs IP	10's	Anti-diabetic	2.89	45.00 (diagraph)	42.11
21	Gliclazide 80 mg tabs IP	10's	Anti-diabetic	16.86	66.50 (euclide)	49.64
22	Insulin inj IP 40 IU/ml	10ml vial	Anti-diabetic	118.61	145.00 (actrapid)	26.39
23	Metformin hydrochloride 500 mg tabs	10's	Anti-diabetic	4.4	40.00 (alnamet-sr)	35.6
24	Pioglitazone 30 mg tabs IP	10's	Anti-diabetic	11.55	43.10 (g-tase)	31.55
25	Telmisartan 40 mg IP + Amlodipine 5mg tabs	15's	Anti -hypertensive	15.16	83.32 (amlopres-tl)	68.16
26	Diltiazem tab 30 mg	10's	Anti -hypertensive	7.8	22.70 (dilticard)	14.9
27	Propranolol tablets IP 40 mg	10's	Anti -hypertensive	4.95	36.00 (albeta-sr)	31.05
28	Ramipril 5mg + Hydrochlorothiazide 12.5mg tablet IP	10's	Anti -hypertensive	9.1	118.00 (cardiopril-h)	108.9
29	Metoprolol 25 mg tabs IP	10's	Anti -hypertensive	3.98	34.00 (actocard)	30.02
30	Spironolactone 25 mg tabs IP	15's	Anti -hypertensive	24.06	30.00 (aldactone)	5.94
31	Ramipril 5 mg tabs IP	10's	Anti -hypertensive	6.93	82.43 (cardace)	75.5
32	Telmisartan 40 mg tabs IP	10's	Anti -hypertensive	7.61	69.33 (arbitel)	61.72

Table 1: *Discrepancy in medicine prices in Indian Market.*

Conclusion

Jan Aushadhi Scheme is an innovative scheme of public distribution of prescription medicine directly to consumers. The cost of prescription medicine increases due to marketing expenses and other overhead expenses incurred by a private individual manufacturer. The expenses are to be compensated by patients. All these expenses are minimized in the Scheme of Jan Aushadhi in table 1. We find the range of prices between Jan Aushadhi medicines and brand medicine. Undoubtedly the Jan Aushadhi Prices are low in cost so affordable by the poor patient. The medicines are so affordable that even patient below poverty line can purchase and use. The major obstacle faced in generic medicines acceptability by the doctors. Due to their commitments and conflict of interest they are not writing the prescription for generic medicine. They are still preferring the brand medicine. The Govt of India insisting that all prescription should be written in generic names. The govt is also thinking of making a rule to allow the pharmacist to substitute the brand medicine with available generic medicine. The patients can buy for their medicines as they are affordable. The doctors, pharmacist and other stake holders join their hands in making this scheme successful as it helps the poor patients. Assurance regarding quality of medicines should not be issue, as Government it self making medicines and dispensing in dedicated out let.

The quality of medicine for Jan Aushadhi is maintained by controlling the manufacturing process. All the medicines sold in Jan Aushadhi outlets are manufactured in public sector and well-established private industries. Bureau of Pharma PSUs of India (BPPI) has entered into a contract with 154 WHO-GMP certified pharmaceutical manufacturing companies for procuring quality generic medicines and other surgical & consumables to be sold under PMBJP. There are right now as many as 5,322 Jan Aushadhi (PMBJP) Kendra are functional in the country. Although subsidies and price control are there for Tuberculosis, leprosy and HIV are covered under national missions of central government. One of the diseases which has not been addressed is the issue of cancer. Anti-cancer drugs are very expensive and beyond the reach of common man. Recently Govt announced discount for the anti-cancer drugs which is useful for cancer patients. The cancer should also be treated par with other diseases and it should be included in the policy of TB, Leprosy and HIV.

Newer drugs like Biologics like monoclonal antibodies are very much in demand. The monoclonal antibodies are devoid of severe ADR unlike conventional chemotherapy or radiation therapy. They do not cause much damage to physical wellbeing of the patients. Due to their high cost, it is not in use in developing countries. There should be a policy to regulate the price of biologics. The patients in developing and developed world should be able to use the newer drugs which are better alternative for curing the diseases.

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