

What it Costs to Provide Medicines to All Sick Persons in India

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Expenditure on medicines constitutes the biggest component in overall health care expenditure. According to the NSS (National Sample Survey) 55th Round 1 on consumer expenditure, it has been found that out of total expenditure in health care, 77% expenses in rural areas and 70% in urban areas are incurred on medicines alone. It also revealed that poor families have to spend even larger amount on medicines. There are some other shocking findings such as nearly 23% of India's total population never seeks any treatment because of their inability to pay², between 1999-2000 about 32.5 million people fell below poverty line just after a single hospitalization³ and about 40% of those hospitalized even once were forced to borrow money or sell assets to meet the costs of medication⁴. This has been observed that even if patients are able to receive a free consultation at a government clinic, they are often forced to pay out-of-pocket for the medicines prescribed for their illness. Medicines purchased by patients from the local chemist can be between 2 to 40 times more expensive than the bulk prices offered to retailers, private hospitals, nursing homes and government agencies for same medicines. There are very few states in India where medicines are provided free by the state to its citizens. Most states have very small budget for medicines and even that budget is not spent fully or used for medicines which are not required so much. For instance Rajasthan has budget of less than Rs. 6 per capita when the requirement is several folds more. Even after purchase of medicines by the Government agencies, many of the times they just expire lying in the go downs of state or district.

Owing to no price control regime for almost on all medicines in India, it is legally possible to sell medicines at any cost which pharmaceutical companies may decide. Similarly, prescription of unreasonable and unnecessary medicines by medical services providers at all levels is also rampant. Ironically, medicines which are unnecessary are the most expensive amongst all the prescribed medicines. Sale of drugs at exorbitantly high prices by the pharma companies and doctors prescribing unnecessary expensive drugs is a lethal combination and put patients and families especially from poor background in a very disadvantaged situation. In this context, it is quite important to undertake an exercise which may provide indicative computation to know that how much it would cost to provide medicines to all sick persons in India based on current morbidity pattern. Such an exercise may provide information for allocation of required funds and how should they be allocated.

Based on the experience of Chittorgarh Generic Medicine Project, a computation has been attempted to ascertain what amount of financial allocation is required if all sick persons of India would have full access to rational treatment for their different ailments. It is essentially based on the cost of treatment through standard treatment procedure by using quality generic medicines. One illustrative list of procurement and sale costs of different medicines required for most of the diseases can be seen at http://chittorgarh.nic.in/Generic_new/generic.htm. Chittorgarh Generic Medicine Project initiated by the District Administration in April 2009 is a unique venture of its kind initiated with careful planning, precision and participation of different stake holders. To initiate the process, a committee was constituted comprising of the doctors from different specialties of the Government district hospital. The mandate of

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the committee was to draw a list of medicines in their generic names which are required to treat all different kind of diseases in the district. The committee drew a list of generic medicines required for treatment of different diseases by them after consulting wide range of doctors in the district. Once the complete inventory list of required medicines with their generic names was ready, a tentative list of well established pharmaceutical companies which produce them was prepared and their area sale managers were contacted to get their offer price list of medicines in branded generic category. The district cooperative society then was asked to further negotiate the rates and procure these drugs. The cooperative was also asked by the district administration to establish generic medicines shop in different hospitals.

The listing of diseases is drawn from the list of most commonly prevalent diseases in India through International Classification of Diseases round 10 and Rajasthan Standard Treatment Guidelines 2006 – Medical, Health & Family Welfare Department, Government of Rajasthan. The actual prevalence of diseases is based on the data collected by the National Commission on Macroeconomics & Health, World Health Organization documents and reports from national Sample Survey Organisation(NSSO), National Family Health Survey(NHHS) and District Level Health Data (DLHS)and from other secondary sources e.g. Park Text Book of Preventive & Social Medicine. The computation of cost of treatment is an indicative exercise and it is possible that there are large variations depending on the state taxes, pharmaceutical companies and purchase negotiations. The current computation is done based on the sale prices of drugs in Chittorgarh Upbhokta Bhandar shops located in District Hospital, Chittorgarh. The computation also takes into account the gravity of the health problems and appropriate institutions for its management to evolve a rational system of morbidity burden. Therefore, listing of diseases has been organized according to morbidities treatable at primary health institutions, community health centres, i.e., first referral units and district & higher health facilities.

The computation provides estimates on the treatment cost per episode of a disease, its national prevalence in India and thereby total episodes of the disease in a year and its total approximate cost. Based on this estimate, an allocation of about rupees 335 billion is required annually to ensure medicines to all people of this country, however, only about 60 billion is required annually to treat all sick persons who do not require any hospitalization. It is hoped that once the access to medicines for out patients is ensured irrespective anybody's ability to pay, the morbidity load which requires hospitalization would reduce substantially.

Based on the experience of Chittorgarh Generic Medicines Project which led to significant reduction in out of pocket expenditure in health care , the author argues that the State should ensure free treatment to all as this will lead to fundamental changes in the manner treatments are currently administered in India. State provided free treatment would lead to

- Promotion of rational medication because the providers will not be able to establish any nexus with the pharmaceutical companies for gifts and commissions.
- Reduction in catastrophic illnesses because the persons who have been avoiding seeking treatment till the disease turn serious would begin to report early. This will significantly reduce occurrence of severe morbidities.
- Reduction in iatrogenic illnesses. This has gained new importance with the rise of newer kinds of viruses, like NDM1, owing to indiscriminate and irrational use of antibiotics and poor hygien

- Money saved from medicines will appropriately be used by the families in buying nutritious food, secured housing and improving sanitation.

Allocation of Rs. 60 billion is not a big amount as the current Government in its political manifesto has committed to increase the health budget from current 0.9% of India's GDP to about 3%. Allocation of 60 billion would not increase the allocation to even 1.5%. The Government of India therefore should make this provision through legislation without any further delay.

The accompanying tables of computation are divided in three sections: Diseases which can be treated at primary health centres – these are generally of the nature which does not require hospitalization. The second sheet is for the diseases which can be treated at the first referral units such as CHCs and then a list of diseases which require more specialized attention and can be treated at district or higher level hospitals.

1. Treatment Cost of Diseases Treatable at Health SubCentres and Primary Health Centres					
	India Population 2010 (Rural) (Projected) = 844,740,000				
Level	Diseases	Per unit Cost of drugs	Approx number of cases per lakh population	Approx no. of cases in India	Total Cost of Drugs
Childhood diseases	Immunization	10	2,402	20,288,097	205,745,652
	Acute Respiratory Infections: Pneumonia	6	3,120	26,354,238	149,154,445
	Diarrhoea: with some dehydration	13	3,120	26,354,238	355,545,023
	Diarrhoea: with severe dehydration	52	312	2,635,424	136,883,928
	Dysentery	1	312	2,635,424	2,041,663
Maternal diseases	Antenatal care	156	2,402	20,288,097	3,163,677,192
	Abortions	283	49	416,576	117,947,472
	Female Sterilization	284	431	3,644,160	1,034,346,718
	Vasectomy	34	22	182,208	6,203,433
	IUD Insertion	-	566	4,781,701	-
	Oral contraceptives	1	787	6,645,156	5,313,466
	Condoms	1	1,595	13,473,450	10,773,371

	Postnatal care	78	2,402	20,288,097	1,585,928,677
Blindness	Blindness due to refractive error & low vision	27	263	2,224,001	59,058,784
Leprosy	Paucibacillary	110	37	312,199	34,355,258
	Multibacillary	665	19	164,239	109,299,602
Tuberculosis	New Sputum Positive	235	356	3,006,681	707,996,293
	New Sputum Negative	203	347	2,929,586	594,135,306
	Treatment after default/Retreatment/Failure	471	36	306,775	144,594,568
	Extrapulmonary	203	73	616,755	125,081,117
Vector borne diseases	Malaria: P.falciparum	9	74	628,165	5,676,098
	Malaria: P.vivax & P.ovale	7	112	942,247	7,010,792
	Kala Azar	101	2	13,354	1,343,703
Others	RTIs/STIs	124	450	3,800,570	472,779,488
	Minor injuries including falls	93	2,167	18,306,873	1,695,188,967
	Other minor ailments	5	24,211	204,517,108	941,433,150
	Snake Bite	125	361	3,051,145	381,135,363
Total Cost					12,052,649,528
High-lighted in yellow are not included in costing as these are already available free.					6,129,935,980

Net Cost						5,922,713,547
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2. Cost of Medicines and Other Procedures Carried Out at Referral Units/Community Health Centres					
Level	Diseases	Cost of drugs Rs	Approx number of cases per lakh population	Approx no. of cases in India	Total Cost of Drugs Rs
BASIC (CHC)					
Inpatient Tt					
Childhood diseases	Birth asphyxia	162	25	211,185	34,236,045
	Neonatal sepsis	496	25	211,185	104,759,819
	Low birth weight (Bwt 1500-1800g)	337	99	836,293	281,825,003
	Low birth weight (Bwt 1800-2500g)	-	570	4,815,018	-
	Acute Respiratory infections: Severe Pneumonia	931	322	2,720,063	2,533,433,307
	Normal delivery	-	2,108	17,807,119	-
	Puerperal sepsis	232	18	152,053	35,209,226
	Septic abortion	232	5	42,237	9,780,341
	Ante partum hemorrhage	279	12	101,369	28,326,356
	Postpartum hemorrhage	143	21	177,395	25,320,710
	Eclampsia	162	25	211,185	34,278,831
	Obstructed labour	241	32	270,317	65,185,626
	Remaining Caesarean sections	241	92	777,161	187,408,674
	Severe anemia	1,424	248	2,094,955	2,982,403,153
Blindness	Cataract blindness	69	452	3,818,225	265,291,786

Vector borne diseases	Malaria: complicated	210	40	337,896	71,093,116
Additional services				-	-
Otitis media	Chronic otitis media	48	3,000	25,342,200	1,204,393,123
Diabetes	Without insulin	581	2,065	17,443,881	10,136,801,477
	With insulin	3,730	885	7,475,949	27,884,585,536
Hypertension	With diet & exercise	-	857	7,239,422	-
	With one drug	32	1,714	14,478,844	462,286,310
	With two drugs	319	857	7,239,422	2,306,136,637
Others	Chronic Obstructive Pulmonary Disease	161	1,461	12,341,651	1,992,061,016
	Asthma	579	2,330	19,682,442	11,397,220,389
	Major surgeries		438	3,699,961	-
	Accidents/ Major injuries		438	3,699,961	-
	Counselling for psychiatric care	-	6,993	59,072,668	-
Total Cost					62,042,036,480
OPD Cost (35 % of total cost)					21,714,712,768

3. Cost of Medicines and Other Procedures Carried Out at District and Higher Hospitals						
Level	Diseases	Cost of drugs Rs	Approx number of cases per lakh population	India Population 2010 (Project.)	Approx no. of cases in India	Total Cost of Drugs Rs
Secondary care (DH)				117 crores		
Cardiovasc. disease	Coronary artery Disease: incident cases	420	283		3,311,100	1,389,407,755
	Coronary Artery Disease: prevalent cases	3,396	3,353		39,230,100	133,237,070,940
	Rheumatic heart disease	113	72		842,400	94,782,131
Hyper-tension	Acute Hypertensive stroke	2,407	118		1,380,600	3,323,005,901
Cancers	Breast cancer	343	11		128,700	44,164,074
	Cancer of cervix	6,310	10		117,000	738,282,308
	Lung cancer	463	2		23,400	10,823,268
	Stomach cancer	3,909	3		35,100	137,191,948
Mental diseases	Schizophrenia: without hospitalization	738	289		3,381,300	2,494,587,888
	Schizophrenia: with hospitalization of 10 days in 5%	713	15		175,500	125,154,666
	Mood/Bipolar disorders: without hospitalization	1,879	1,543		18,053,100	33,919,503,820
	Mood/Bipolar disorders: with hospitalization of 10 days on 5%	1,877	81		947,700	1,778,515,989
	Common mental disorders	1,292	2,030		23,751,000	30,679,463,588
	Child & adolescent Psychiatric disorders	728	2,517		29,448,900	21,448,105,052
	Geriatric problems including dementia	5,082	406		4,750,200	24,139,038,613
	Epilepsy	1,305	913		10,682,100	13,936,550,246
Others	Major injuries & emergencies (50%)		438		5,124,600	-
	Other major injuries (50%)		438		5,124,600	-
Total Cost						267,495,648,187
OPD Cost (20% of total cost)	OPD Cost (20 % of total cost)					53,499,129,637

4. Requirement of Funds for Treatment of All Ailments as Outpatients in India (Based on Burden of Disease)	
	Cost (Rs.)
At health Sub Centres and Primary Health Centres	5,922,713,547
At Referral & Community Health Centres (35% of total load as OPD)	21,714,712,768
At District & Higher Hospitals (20% of the total load as OPD)	53,499,129,637
Total Cost	81,136,555,953
Total Population of India 2010 (Projected)	1,170,000,000
Total cost of drugs in OPD care	81,136,555,953
Per Capita Cost required in a year	69
App. per capita requirement after removing allocations done through national programmes	50
<i>Costing is based on treatment through standard procedures by quality generic drugs procured at lowest possible rates in bulk through open tender process</i>	

5. Requirement of funds for treatment of all ailments in India (based on burden of disease)	
	Cost (Rs.)
At health Sub Centres and Primary Health Centres	5,922,713,547
At Referral and Community Health Centres	62,042,036,480
At District and higher hospitals	267,495,648,187
Total Cost	335,460,398,214
Total Population of India 2010 (Projected)	1,170,000,000
Total cost of drugs in OPD & IPD care	335,460,398,214
Per Capita Cost required in a year	287
App. per capita requirement after removing allocations done through national programmes	

Requirement of funds for 57 crore citizens of India per year	
<i>Costing is based on treatment through standard procedures by quality generic drugs procured at lowest possible rates in bulk through open tender process</i>	