

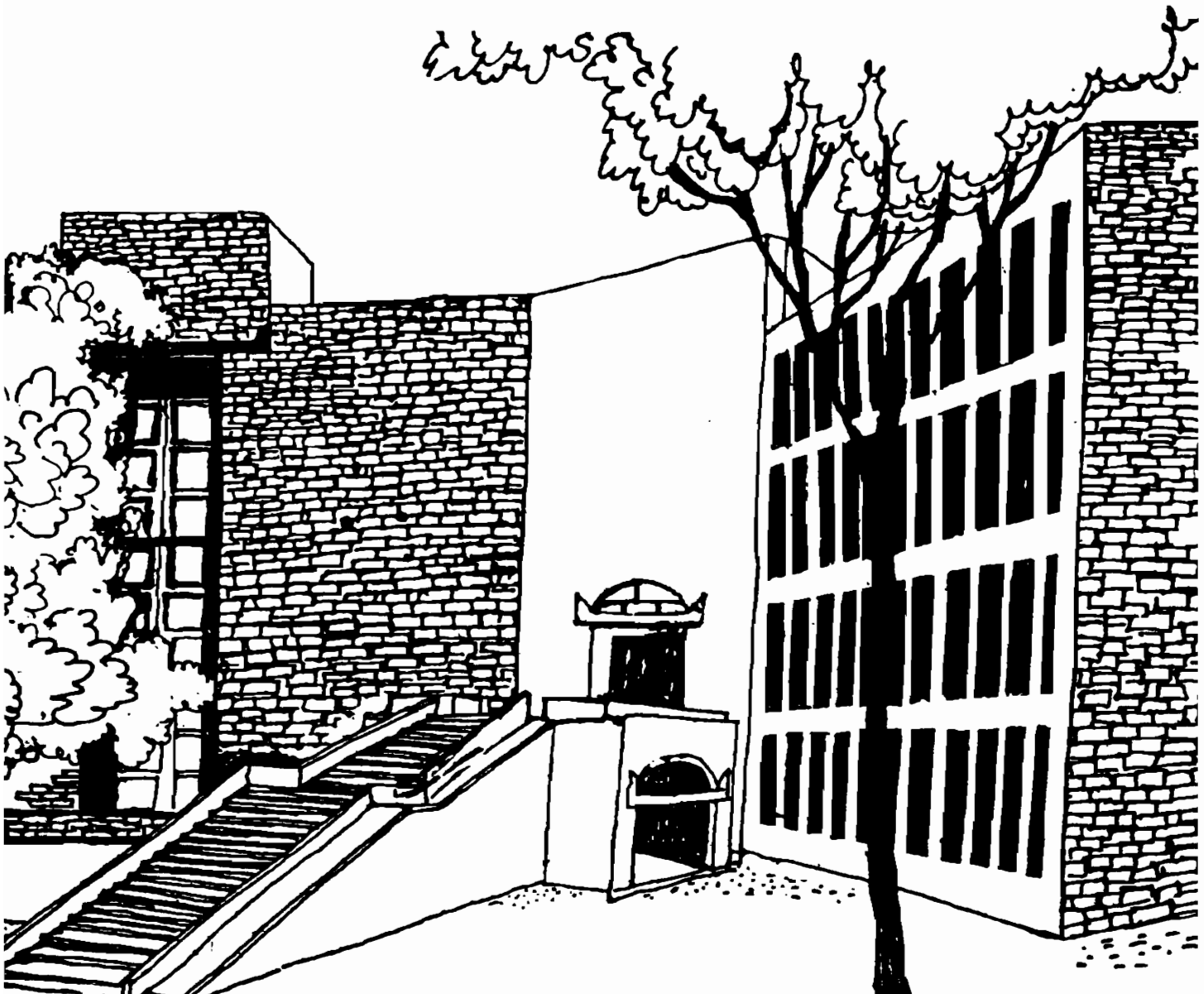


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Abstract

India has developed a large infrastructure for primary health care (PHC) unfortunately this infrastructure has not delivered results expected out of it. More and more clients are moving away from public to private health care. One of the reasons for this is under funding of the PHC system especially in relation to medicines. This paper tries to measure this under funding for medicines in PHC in five states based on available information and compares the per capita medicine allocation to what some of the government and semi-government organizations spend on medicines for their own employees. This comparison is very shocking as it shows that PHC system get 6-9 rupees per capita per year for medicines including expenditures on medicines at CHC, district hospitals and medical college hospitals. While government spends 62-1000 rupees per capital per year on its own employees. Paper also list other problems in management of medicine supplies in the PHC system finally the paper argues for higher level of allocation for medicines in PHCs to make PHC system more effective.

How many Rupees worth of medicine does one need? Comparison of medicine budgets in PHCs and expenditure on medicines for government employees.

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Introduction:

India has developed a massive and impressive infrastructure of more than 20,000 PHCs and 130,000 sub-centers to provide primary health care. In spite of these investments in the health sector, the results are not very impressive except in the state of Kerala. Mortality and morbidity have only slowly declined. Short-comings and problems with the PHC system in India are well known. It is the general impression that more and more people are going to the private sector for obtaining basic curative health services. This impression is supported at least from National Family Health Survey data on diarrhoea treatment and fever/cough treatment¹ and from recent data from UNICEF supported Multi-Indicator Cluster Survey in Gujarat². The declining popularity of government doctors is in spite of the fact that most of them in the government health care facilities are better qualified than private sector. One of the reasons for this lack of faith in the government system could be that the medicines supplied from the PHC system are inadequate and/or of poor quality leading to the people being dissatisfied. What can be provided through the PHC system is dependent on how much money is allocated for medicines. India has adopted the Primary Health Care approach since 1978 in which provision of essential drugs is one of the key components³. How much money for medication an average person needs would vary from country to country and within a country. But there has to be some minimum level of allocation for medicines below which it may be considered inadequate in a given country. In India there is no national policy on how much money should be provided on per capita basis for medicine within the PHC system. Each state provides different amount of medicines to the PHCs.

This paper analyses the medicine allocation on per capita basis in various government PHCs and compares them with allocations or expenditures on medicines for employees in few semi-government and government organizations. The paper brings out the discrepancy between the per capita medicine allocations in the PHC system and the medicines required for an average man. Finally, showing that PHC medicine budgets are woefully inadequate, it argues for higher allocations for medicines in the PHC system in India.

Methodology:

Here we have collected information from some states regarding medicines allocation to the PHCs and then worked out the per capita allocation in that

state for medicines using the norm of population coverage by the PHCs in that state. These data are collected from various sources based on personal inquiry with reliable state level or district level officers, or PHC medical officers from that state. The information on medicine budget for PHCs in Gujarat, Maharashtra and Himachal Pradesh was obtained from state level officers, while for Madhya Pradesh it is from PHC medical officer. The information for UP is from paper by Ramarao et al. There may be some variation in the reliability of the information from various sources but they indicate the allocations for medicines per PHC in those states.

To estimate the cost of medicines that would be required for an average person per year we have taken financial allocations or expenditures on medicines for some government and para-governmental organizations where data could be easily available. These data are collected from Indian Institute of Management, Ahmedabad (an autonomous educational institute governed by rules similar to that of central government.), Indian Space Research Organization (ISRO, which is a central government organization) in Ahmedabad, Indian Railways (which is also a government organization), and Employees State Insurance Scheme (ESIS, an government run health insurance for employees of the organized sector) in Gujarat. These data should be taken as indication of the general level of expenditure on medicines per employee. This would serve as basis for estimating how much government spends on medicines for its own employees. This could be taken as a measure of how much money is required for medicines per person per year. These two sets of data are compared to arrive at the estimate of under funding of PHCs for medicine.

The limitation of the data in terms of reliability are well recognized. More reliable data will be preferable at any time. But this limitation of the data does not seriously affect the main conclusion of this study as the magnitude of the difference between the per person allocation for medicine in the PHC and for government employees is so large that even an one hundred percent error in any estimate does not alter the conclusions.

Results:

Data collected from some states on medicine budget for PHCs is shown in table 1. It also shows the average population of the PHC, and per capita allocation for medicines. It is observed from the table 1 that in these states the PHC has an allocation of only about 1-3 Rupees (3-8 US cents) per person per year for medicines. In addition to these amounts, the PHCs also receive some medicines such as those for TB, leprosy, anemia, contraceptives for family planning program and vaccines for immunization program and sub-centers also receive some medicines every year under National Health Programs from the central government. These medicines, vaccine and contraceptives which are not taken into account in this calculations as they are difficult to quantify. Some of these are also supplied free to the government and para government health organizations for their employees.

Table 1 Allocation for medicines at the Primary Health Care Center in various states of India.

State	Medicine allocation per PHC per year Rs.	Pop. Per PHC	Per capita allocation in Rs.
Gujarat	50,000	30,000	1.66
Maharashtra	40,000	30,000	1.33
HP	64,000	20,000	3.2
UP	17,000 to 20,000	100,000	0.17 to 0.2
MP	12,000	28,000	0.43

Table 2 shows data collected from some government and semi-government organizations on allocation or expenditure for medicines for their employees. These numbers are collected from various sources and there are some specific inclusions and exclusions for each organization as per their policies which are indicated in the notes at the bottom of the table. Hence these numbers are to be interpreted indicative of the magnitude of expenditure on medicines for the people covered by the organization. The total medicine expenditure may be even more than what is shown here.

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Table 2: Medicine allocations for government and semi-government employees.

Organization	Nature of Organization	Approximate medicine budget or expenditure per year	Persons covered (employees & family)	Per capita medicine allocation or expenditure Rs/ cap/year
Indian Space Research Organization. (Ahmedabad)	Central govt.	1,00,00,000	10,000	1000 *
Indian Institute of Management, Ahmedabad	Autonomous, Central Govt support	10,00,000	3000	333 + medicines directly given by doctors in the dispensary @
Indian railways	Central government support	50,00,00,000	80,00,000	62.5 #
Employees State Insurance Scheme in Gujarat	For employees of organized private sector industries	NA	NA	33 (allocations of Rs 165 Per employee) **

Notes: * In ISRO dispensed medicines and reimbursement of prescriptions are included for all levels of care.

@ In IIM this covers all levels of care but excludes vitamins, tonics & nutritional supplements; this figure is only reimbursement of medicines, it does not include medicines dispensed at the dispensary.

This includes all medicines, but may be an underestimate as many railway men have no access to railway's health facilities are they are far away from such facilities.

** In ESIS this includes all level of care, ESIS purchases medicines in bulk and supplies them. It is assumed that each employee has 5 family members.

Discussion:

Comparison of Table 1 and 2 clearly indicates that there is great disparity among money allocated for medicines in the government PHC system and money spent on medicines for the government employees. The PHCs get medicine allocation of Rs 1-3 per person per year, while the government spends from Rs 66 to 1000 per employee per year on its own employees for medicines. While making this comparison, some caution is required. The PHC medicine budget does not include free medicines given by central government under National Health Programs. It also does not include medicines given at the sub-center, CHC, and the district hospital and the medical college hospital which are higher level of care where cases are referred from PHCs. Medicine allocations of these levels are not available for other states but figures from Gujarat indicate that even if these figures are added to the PHC medicine budget it makes only some difference. For example a sub-center covering a population of 5-6,000 gets medicines worth Rs. 2000 which is Rs 0.33 per capita, CHC covering a population of 200,000-300,000 has an annual medicine budget of Rs. 200,000-300,000 which comes to about Rs 1 per capita per year. The district hospital covering population of about 2 million has medicine budget of Rs. 2 million which comes to Rs 1 per capita. Medical college hospitals' medicine budget averages to Rs 3-4 per capita if you take in to account the population covered by them. Thus total medicines given in the PHC system including CHC, District Hospital and Medical College Hospital will not be more than 6-9 Rs per capita per year. This is much less than the lowest allocation per employee for medicines in government organizations we have data on, which was Rs 62 per capita per year. Compare to the highest spending on medicines in government which is 1000 Rs. The PHC allocation is very very inadequate. It may be true that in government organizations with high medicine expenditure, there may be substantial use of medicine for employees which may be unnecessary from rational point of view. But on the other hand government employees are by and large a more healthy lot than the general public in rural areas as they all are medically examined before employment, they are in their adult ages, they get good wages, have better nutritional status, live in urban areas, in well developed housing colonies where water and sanitation etc. are good. On top of that they are educated and have very easy access to health care, hence should be better able to take care of their health and hence should require much less medicine than the population covered by PHC system which is poor, under nourished, rural, with bad water and sanitation situation. Taking these facts in to account the gap in medicine allocation in the PHC system and that for government employees looks even worse.

Data from other secondary sources also indicate that medicines allocations have not received the priority that it needs in the health system. Data from west Bengal quoted in a World Bank report showed that even at higher levels such as rural secondary level care and urban secondary and tertiary level care, only 5-12% of the budget is devoted to "materials and supplies" which includes drugs, dressing materials and other consumables. This was similar to diet charges and less than even office and other expenses indicating that

even at higher levels the importance to drugs in the health system is low⁴. An indirect evidence of low allocation for medicines at higher levels in the government health system comes from the plethora of chemist's shops just outside the public hospitals in most places in India. In many public hospitals, due to inadequate allocation for medicines and supplies patients are given prescriptions and they have to buy medicines from the open market at much higher rates than what the government could have bought at bulk rate.

Comparing our findings of per capita allocation for drugs in PHC system which is roughly 6-9 Rs. Or 15-20 US cents to the international per capita expenditures on medicines produces even more shocking picture. Per capita expenditures on pharmaceuticals in Asia in 1990 was \$ 12 or Rs 216 and it was \$137 or Rs 2466 in developed market economies⁵. Annual per capita drug expenditure varies substantially from highest of \$ 412 in Japan to lowest of \$ 2 in Bangladesh and Mozambique. In India, the per capita expenditure on drugs is estimated to be \$ 3 in 1990 which comes to Rs 54⁶. International comparisons are further complicated by the fact that medicine prices also vary a lot between countries. But comparison with international figures highlights the fact that allocation in the Indian PHC system is very very meager and highly inadequate. A study by RamaRao et al in UP showed that just to include treatment for women's reproductive tracts infections (RTI) which is just one of the many components of Reproductive and Child health services in the PHC system, the medicine budget will have to be doubled at the PHC level even after making very conservative estimates of prevalence and assuming low (15%)utilization of services. Her model shows that the additional variable costs per PHC, which includes costs of medicine and lab tests, assuming high prevalence and high utilization (65%) of RTI services, would be of the order of Rs 4.8 lakhs per year or roughly Rs 4.8 per capita⁷. This is about 20 times the current budget of medicines in the PHCs.

The problem of medicines in PHCs is quite complex and inadequate allocation for medicines is just one aspect of it. The other problems we have observed are inappropriate medicines being purchased. For example Ampicillin, Tetracycline and Sulfa are still being bought when newer and better and cheaper substitutes such as Amoxycillin, Doxycycline and Co-trimoxazole are available. Many of the drugs from the WHO's essential drug list are not available and some of the non-essential drugs are purchased. There is no systematic analysis of disease pattern before purchasing of drugs. Second major problem is purchasing procedures which prefers suppliers with cheapest quoted rate for medicines and without any reasonable quality control system, which leads to substandard medicines being purchased. Review of rate contracts done by Government of Gujarat showed that almost all contracts were with little known producers and none of the large well known and reputed companies were included in the list. Another major problems is logistics and inventory management. Mismanagement in this area leads to frequent 'stock outs' and excess stocks at some places. Finally, most medicines are purchased in bulk packing where tablets are not individually packed, hence there is substantial wastage at

periphery. Improper prescribing practices and lack of proper explanation to the patients leads to further wastage and misuse of medicines in the PHC. All these factors combined with inadequate allocation for medicines makes the PHC medicine system highly inefficient and ineffective. This leads to lack of faith in the PHC system by the community. Thus underspending in medicines makes the PHC system defunct and under-utilized.

Conclusion:

This paper presented data from three relatively well developed states and two under developed states of India on allocation for medicines at PHC level and medicine expenditures for government employees in some organizations. Allocations for medicines in PHC are 0.17 to 3.2 Rs per capita in various states. Even after adding medicine allocations for higher levels of care such as CHC, district hospital and medical college hospital the total allocation comes to 6-9 Rs in the state of Gujarat which is economically well developed state. In comparison the government organizations spend between 62- 1000 Rs. Per capita per year on medicines for its employees. Thus the comparison showed that government spends 10-100 times higher on medicines for their own employees as compared to allocation for medicines for the citizens under the PHC system. It is acknowledge that some of the high expenditure on medicine in the government organizations may be unnecessary, but still the study shows how inadequate the allocation for medicine are in the PHC system. The allocation for medicines in the PHC systems is also very less as compared to average expenditure on medicine reported in India. It is very clear from the data that the allocation for medicines in PHCs is very less as compared to medicine probably required for providing good health care. As the difference between allocation for medicine in government PHC system and that for government employees is so high that limitations of the data are unlikely to affect the validity of the conclusions drawn.

Low allocation for medicines could be compared to having an army without ammunition! Problem of low allocation for medicines is compounded by improper management of the medicines budget leading to further problems with regards to availability of right medicines in the PHC system. One of the important reasons for loss of credibility of the government health services is due to lack of adequate medicines in the PHC system at almost all levels. Staff salaries are regularly updated and adjusted for inflation but medicine budgets are rarely increased in the PHC system and hence people have to purchase medicines from outside. Increasing costs of medicines have rendered them out of reach for most poor people.

Low allocation for medicines is a major problem of government health policy. Serious attention needs to be paid to this issue if the credibility and effectiveness of the PHC system is to be built up in India. The government should plan to increase the medicine allocation substantially, at least 5 to 10 times in the next 3-5 years, if it is committed to health of the people, especially the poor. Unfortunately there is no indication of realization of such a vital issue even in the new Reproductive and Child Health Program. ■

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References:

- ¹ Mavalankar DV. (unpublished). NFHS data has been further analyzed by us and it shows that more than 60% of mothers took their children with fever/cough or diarrhoea to private sources of care.
- ² Results of 1996 multi-indicator cluster surveys in Gujarat at a glance. April 1996. UNICEF. Page 1.
- ³ Park K. Park's textbook of preventive and social medicine, 14th edition, Banarasidas Bhanot. Jabalpur, 1995, P. 26.
- ⁴ India: New directions in health sector development at the state level: An operational perspective. Report no. 15753-IN, February 11, 1997. Population and Human Resources Division, South Asia Country Department II. The World Bank. P 49
- ⁵ Managing drug supply. Management Sciences for Health & WHO. Kumarian Press. 2nd edition. west Hartford. 1997. Pg. no. 611.
- ⁶ World Bank. World Development Report. 1993, Investing in Health. Oxford University Press. P.145
- ⁷ RamaRoa S. Townsend JW. Khan ME. A model of costs of RTI case management services in Uttar Pradesh. Technical Paper. The Population Council. Asia and near east operations research and technical assistance project. New Delhi. Nov. 1996.

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