ScienSage

Journal of Advanced Scientific Research

Available online through http://www.sciensage.info

ISSN
0976-9595
Research Article

IRRATIONAL PRESCRIBING OF MEDICINE AND INCREASING BURDEN OF MEDICAL COST: A CHALLENGE FOR POOR HOUSEHOLD IN ACCESSING HEALTH IN INDIA

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ABSTRACT

Medicine is one of the most critical contributors to life expectance. However, essential medicine is the foremost cause of death and disability in developing countries that can be prevented, cured, and improved with cost-effective essential medication. Besides this, thousands of people don't have access to essential medicine. The majority of the people spent their huge share of income on medicine, which traps them into a vicious circle of poverty. The huge prescription of medication is a leading cause of treatment delay. Further, essential medicines save lives and enhance the health of the population but only when they are accessible at an inexpensive, reasonable, and affordable cost and used properly. Despite certain policy measures and programs, a huge chunk of the population doesn't have access to essential medicine, and this remains the pivotal public health issue in India. The availability of harmless, effective, affordable, and quality medicines for all is one of the most important targets for sustainable development goals. For acquiring universal health coverage, access to safe, effective, and affordable essential medicine is a paramount aspect. The main aim of this paper is to examine the significance and factors of irrational prescription. It also analyzes the trends of the burden of medical cost and its socio-economic impact on households. This paper is based on a secondary date. It is estimated that by improving access to existing essential medicines and vaccines, about 10 million lives per year could be saved. The studies revealed that as much as 25%–70% of overall health expenditure in developing countries is spent on medicines whereas, around 10% of health expenditure in most high-income countries is consumed by medicines. In India, medicines consumed a higher share of total health expenditure, over 43%. However, several studies depict that more than three lakh crore rupees that households spent on health, and about 42% of the total out-of-pocket expenditure (OOP) went in the procurement of medicines. Moreover, households spent around 28% of the OOP spending in private hospitals, and this constitutes 62.6% of the total OOP health spending in India, both government and private sources.

Keywords: Expenditure on medicine, Out-of-pocket Expenditure, Irrational medicine, Essential medicine.

1. INTRODUCTION

Medicines are a vital source for reducing pain and illness, especially for those who are residing far from the healthcare system. The reason behind this is very obvious. The contributions of medicines are most important in healthcare systems. Medicines enhanced the health indicators and reduced the burden of disease, but it is possible only when they are affordable and accessible for all. In contemporary times there has been a substantial debate on the rising price of the medicines that creates hindrance in the path of accessibility to health. Hence, the majority of people cannot afford medicine due to the high cost. They account for a substantial amount of total health expenditure in India. However, millions of people in developing countries delay medical treatment due to the burden of health expenditure. The main concern here is that the rising medical cost of the inappropriate prescription of medicines [1]. These have a tremendous socio-economic impact on the household. Unreasonable use of drugs is a menace that the healthcare system is confronting all over the globe. Such irrational practices are very harmful and deteriorate health care delivery. They create barriers for the poorer patients and the outcome in the already limited resources that may have been useful for catering to other health-related needs. Subsequently, we realized that there is a need to talk about the rational use of medicine that uplift the health indicator in particular and the health care system in general.

The "rational use of medicine" promotes the healthcare system and increases accessibility, and reduces the burden of health care costs on a poor household. In India,

most people pay full price on medicine from their own pocket because of the inappropriate health insurance courage. The World health organization (WHO) report revealed that more than half of all prescriptions are inappropriately prescribed, dispensed, or sold. Furthermore, about 50% of patients are failed to take the right drugs. The use of irrational medicines is mostly evident in third world nations that deteriorate the healthcare system because of the less attention towards the implementation of drug price policies. The excessive use of irrational medicines deteriorates the potential to access essential medicine. The essential medicines play the leading role in reducing mortality and morbidity rates and are only easily accessible, affordable, qualitative in nature, and used correctly.

Moreover, india has gained many achievements in various health indicators as compared to earlier times, but still the absence of essential medicines persists as a grave public health concern. Additionally, that creates various problems in the path of sustainable development goals.

However, monitoring the menace of irrational medicine use is realized to be the most vital concern for promoting healthcare services and favorable for the sustainable use of the resources. A study reveals that as much as 25%-70% of overall health expenditure in developing countries is spent on medicines. Around 10% of health expenditure in most high-income countries is consumed by medications [2].

According to World Health Organisation, in developing and transitional countries, in primary care, less than 40% of patients in the public sector and 30% of patients in the private sector are treated as per standard treatment guidelines [3].

A survey carried out by Hill AM, Barber MJ, & Gotham D, on estimated costs of production and potential prices for the WHO essential medicines list in 2018, which depicts that in low-income and middle-income countries (LMICs), only 58% of essential medicines are available in the public sector, and 67% in the private sector, according to surveys of pharmacies. Drugs account for a quarter of all health expenditures globally and 100% of health expenditures for about half of households in Low-income and middle-income countries [4]. In India, around 50–65% of the population don't access medicines [5].

Almost 70% of Indians' overall medical expenses are out-of-pocket, and 70% of those expenses are on drugs alone. However, out-of-pocket expenditure pushed 34 million people below the poverty line in India [6].

As Almarsdottir and Traulsen point out, "industrialized countries can, to some extent, afford medicines that are new and expensive, whereas most developing countries will have to be very restrictive and keep to essential drug lists. Both these decisions can be viewed as rational in the light of each country's economic situation". However, the growing health care spending in most developed countries has reignited debates that perhaps even in these rich nations, the EML concept may still be very applicable and highly essential [7].

1.1. Irrational prescribing and corruption

The increasing corruption and growing destructive practices in the medical domain depict a paramount need to initiate a sold mechanism that will safeguard the public health needs. Irrational prescribing refers to prescribing that fails to conform to a reasonable standard of treatment. The irrational prescribing consists of five ways: under-prescribing, over-prescribing, incorrect prescribing, extravagant prescribing, and multiple prescribing. Under-prescribing indicates the occurrence where the vital medicines are not specified, or an inadequate dose or treatment spell is delivered. This can happen when, for instance, an insufficient weight-based dosage is directed in patients such as children [8].

Van den Heuvel *et al*. carried out a study among Dutch general practitioners, which revealed that 65% of patients, prescribing physicians after thorough consideration decided not to prescribe a specific medication. Under-prescribing can pay to substantial morbidity and mortality, while it vestiges an area of medicine use that has involved less consideration. Wauters *et al.,* for example, has described a strong link between under-prescribing and misuse with hospitalization and death among a cohort of community-dwelling elderly people aged 80-120 years [8].

Over-prescribing refers to the cases where a medicine that is not indicated is prescribed, or if indicated, the duration of treatment is too long, or the quantity of medication given to patients exceeds the amount required for the current course of therapy. For instance, this can include giving twenty-one days course of an antibiotic for a minor infection that requires just seven days of treatment, or when an antibiotic is prescribed in the first place for a suspected viral infection [8]. Incorrect prescribing also happens when a medicine is given for the improper diagnosis, the prescription is arranged inadequately, or modifications are not made to incorporate the patient's co-existing medical, genetic, or

environmental conditions. Extravagant prescribing is said to have occurred when a prescriber issues a more luxurious medicine when a less lavish one of comparable safety and efficacy exists, or where a prescriber treats a patient symptomatically instead of tackling the underlying severe condition. An example may include writing an unnecessarily expensive cough mixture when it presents no documented extra benefits from commonly available cheaper options.

However, the above types of irrational prescribing happen in different frequencies across regions of the world. The WHO has outlined some commonly encountered patterns of irrational prescribing. Some of the widely observed patterns include the excessive use of injections, multiple drug prescriptions, the excessive use of antibiotics for treating minor acute respiratory infections (mostly viral in origin), and the use of minerals and tonics for managing malnutrition. This list is not exhaustive and highlights the extent to which the inappropriate use of medicines remains a global challenge. The main reason for all the above said prescribing is profit maximization. All these irrational prescribing led to out-of-pocket health expenditure. The inappropriate prescribing decimates the poor household's socio-economic condition and traps them into a vicious circle of poverty from which they can never come out [8].

1.2. Issues accountable for the irrational use of medications

There are so many factors that are responsible for the irrational prescribing or use of medicines. These factors can be outlined in numerous stages of the medicine use cycle. They can be generally categorized into those deriving from patients, prescribers, workplace (health system), supply system (including industry influences), regulation, drug information, or misinformation, or a mixture of these factors [9]. Unaware patients who may have the insight that a pill exists for every illness can utilize excessive pressure on health providers to prescribe medicines, even when this is not needed. Patient's impact in the prescription of various drugs, such as antibiotics, has been widely recognized. Regarding prescriber-related factors, irrational prescribing can rise as a consequence of numerous internal or external factors. For example, the prescriber may absence suitable training, or there may be insufficient continuing education, causing in the dependence on out-dated prescribing practices, which may have been learned while under instruction.

There are also practices by pharmaceutical companies that are seen to enhance irrational prescribing. For instance, pharmaceutical sales representatives visit doctors who have been found to increase the prescription of the promoted drug and decrease competitor products' market share. There is evidence to support those pharmaceutical sales representatives often exaggerating their product efficacy while questioning the competitor brand's integrity and may even encourage off-label use. Irrational Prescribing According to the WHO, irrational prescribing is a "disease," which is difficult to treat-prevention is, however, possible (WHO, 2001) [8].

1.3. Pharmaceutical firms and medics in india

According to India's planning commission, the pharmaceutical companies promote the irrational use of medicines; they invest almost 25% on its yearly revenue on sale enhancement alone compared to an insignificant 7% on the research and development in 2008-09. They don't bother about the quality of the product but an only surplus. So this needs a reliable mechanism that can control this illegal practice that is very harmful for the population. There is a significant nexus between the pharma and the doctors, pharmacist contact to the doctors that give more than 50% share on the unwanted prescribing, so they do the same for money. For controlling this, menace Medical Council of India has formed a law that states that any doctor who will accept freebies in the form of a gift, cash or travel facility, etc. from pharma companies should be given punishment. The Ethics Committee passes this law and subsequently agreed by the Union Ministry of Health and Family Welfare, which led to the amendment to the MCI (Professional Conduct, Etiquette and Ethics) Regulations, 2002.

In India, mostly the health care market is controlled by the majority of independent doctors who are employed and run private health clinics. The efforts made by the Medical Council of India about to tackle the freebies are confined only in paper and not have any substantial effect on the unlawful practice of doctors like receiving bribe from the pharma companies [1]. In India, 86% of the rural population and 82% of the urban population were not covered under any medical insurance scheme [10].

Dr. Sanjeev Chhibber, a Senior Cancer Surgeon in Delhi and the President of the Naua Daur Party, say that doctors sometimes prescribe unnecessary investigations because of the kickbacks they receive from pharmacies and laboratories equipment seller and sundry other medical "brokers" [11].

1.4. Impediments for health enrichment

- **Unequal access-**All over the world, about 30% of people don't have consistent access to essential medicines. But this figure is above the global average (50%) in the poorest parts of Africa and Asia.
- **Health improvements** - In many third world countries, public spending on health is deficient like in India, which led to the deteriorating public health sectors, which is the primary source of treatment of the majority population.
- **Medicine financing** - In the developed countries, around 70% of medicines are publicly subsidized, wherein low- and middle-income countries, 50% to 90% of drugs are paid for by patients themselves. In India, 70% of patients pay the medical bill from themselves.
- **Treatment costs** - high costs of treatments with new essential medicines for tuberculosis, HIV/AIDS, bacterial infections, and malaria will be unaffordable for many low- and middle-income countries like India [12].

1.5. Objectives

- To examine the affordably and accessibility of essential medicine.
- To analyze the burden of medicines cost and impact on socio-economic conditions on households.
- To put forth the strategies for tackling the irrational use of medicine.

2. MATERIAL AND METHODS

The paper is based on both primary and secondary data. The researcher collected data from different sources such as National and International reports, newspapers, Books, Research Articles, journals, magazines, etc.

3. RESULTS AND DISCUSSION

3.1. Expenditure on Medicine and Health Prerequisite

There is a significant disparity between the cost of medicine and health needs in the world. About 16% of the world's population living in high-income countries accounts for over 78% of global expenditures on medicines. The proportion spent on drugs is higher in low per capita income countries. On average, 24.9 % of Total Health Expenditure is spent on drugs, with a wide range from 7.7% to 67.6% [13].

Table 1 demonstrates that there is a minute increase in government spending on health as 22.5% in 2004-05 and 29 % in 2014-15. There is an increase of almost 7% in the said period. It also revealed that the share of out of pocket payment as the percentage of total health expenditure slightly decreases to 69% in 2004-05 and 62.6 % in 2014-15, which reveals around 7% percent of the reduction in OOP expenditure. This depicts that there is a close relationship between public spending on health and the decline in the burden of OOP expenditure. As government spending increase in health (7%), the burden OOP payment decreases as the same percentage (7%).

As per the National Health Accounts (NHA) reports, the high cost of medicines is the vital economic burden on the household that snatches the basic necessities by the majority of low-income families. This survey depicts that more than three lakh crore rupees that families spent on health, and about 42% of the total out-of-pocket expenditure (OOP) went in the procurement of medicines. Households spent around 28% of the OOP spending in private hospitals that constitutes 62.6% of the total OOP health spending in India, both government and private sources [14].

Table 1: Tends in Key Health Financing Indicators for India across NHA Round

Indicator	NHA 2004-05	NHA 2013-14	NHA 2014-15
Total Health Expenditure (THE) as a percent of GDP	3.9	4	4.2
Total Health Expenditure (THE) Per capita (Rs.)	1201	3638	3826
Government Health Expenditure (GHE) percent of THE	22.5	28.6	29
Out of Pocket Expenditures (OOPE) as a percent of THE	69.4	64.2	62.6

Source: National Health Account, 2014-15

A case published in the Hindustan Times (Hindustan Times, Dec 11, 2017) about a private hospital (Fortis Hospital) in Gurgaon which revealed that a girl of seven years old who was suffering from dengue admitted to this hospital, and later on she died, the doctors said to the family that to pay the bill a sum of over 16 lakh, that was shocking for them [15].

Thus, it is analyzed from this case that how a low-income family experiences catastrophic expenditure that shatters the entire family's socioeconimc and health condition.

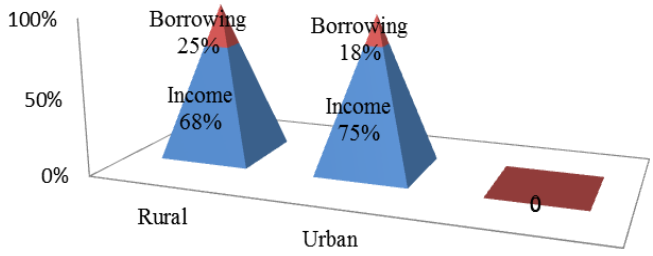
Tables 2 reveals that out-of-pocket spending is very high (43%) on medicine. It shows that the OOP payment is more elevated in private hospitals (28.50%) than in Government hospitals (7.42%). Diagnostic tests also account for a higher amount (6.81%) transportation and emergency rescue (6.26%). The burden of OOP payment decimates the socio-economic life of households. The financial burden on health is the crucial cause of treatment delay in India. CK Mishra, (Former Union health secretary) at a conference organized by National Institute of Public Policy (NIPFP) said that "OOP, when catastrophic, results in seven crore people falling back into poverty line," [16].

Table 2: Items wise share of Out-of-Pocket spending on health by household

Items	Household OOP Spending (Rs crore)	Percentage of OOP payment
Pharmacies	1,30,451	43.13%
General hospitals - Private	86,189	28.50%
General hospitals - Government	22,429	7.42%
Medical and diagnostic laboratories	20,610	6.81%
Providers of patient transportation & emergency rescue	18934	6.26%
Offices of general medical practitioners	15,760	5.21%
Providers of preventive care	4,225	1.40%
All Other ambulatory centres	1,645	0.54%
Other health care providers not elsewhere classified	1,210	0.40%
Retail sellers and Other suppliers of durable medical good & medical appliances	559	0.18%
Other health care practitioners	412	0.14%
Total	3,02,424	100.00%

Source: National Health Account, 2014-15, NSSO &Hindustan Time, 11 Dec, 2017.

There is no clear evidence about the medical cost of irrational medicine. But the NHA & NSSO provides only the general value of medication, which is high as compare to other medical goods. The vital concern in the healthcare sector is the high cost of drugs/medicine and endorsing high prized non-generic medicine. There is no matter for consumers if these medicines are essential, but they prescribed non-essential drugs, which are the primary source of income loss of poor households. This depicts that there is a need for strong regulation on pharmaceutical firms [17].

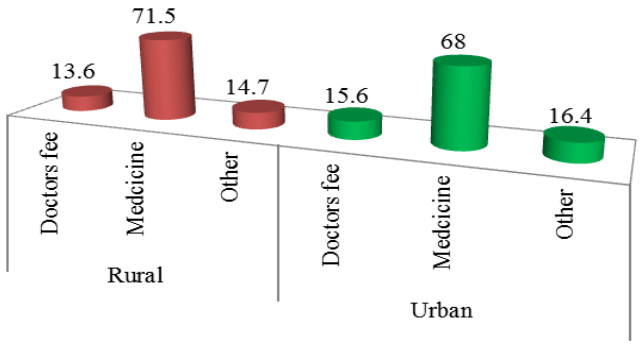


Source: NSSO, 2014.

Fig. 1: Region wise percentage distribution of source of money for medical treatment of households

Fig.1 reveals that rural households paid 68% of medical treatment by income and 25% through borrowing. In comparison, the urban households spent 75% of income on medication, which is higher than rural households, and borrowing 18% that is less than rural households.

It is analyzed that the ratio of borrowing in rural households is higher by 7% than urban households. This indebtedness in rural households due to medical treatment decimates the socio-economic life in India.



Source: NSSO, 2014.

Fig. 2: Percentage distribution of Total expenditure on households on different items

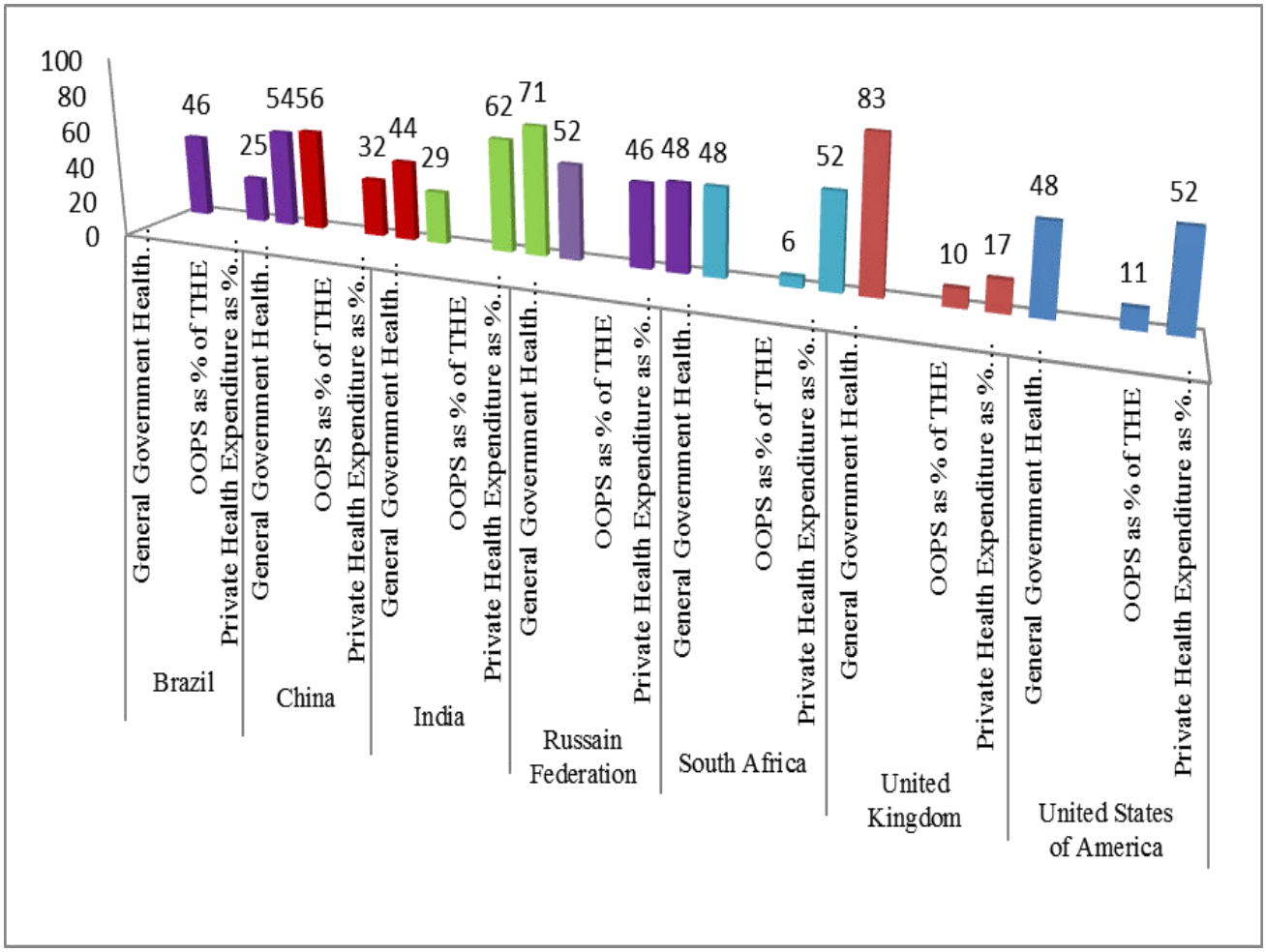
Fig. 2 reveals that medicine is the only single medical good on which rural households spent over 71%, while urban households spent 68%, which is slightly lower than rural households. However, the higher ratio of out-of-pocket expenditure on medicine by rural households creates an obstacle in accessing health care services. Besides, it further escalates the intensity of treatment delay that leads to more severity of the disease.

Moreover, rural households spent around 15% on the diagnostic tests, while urban households spent 16% on the same items. Thus, it demonstrates that good health remains a dream for most of the population in rural and urban areas in India. Only those can buy well-being who have socially, economically, and politically well sound.

3.2. International Comparison

Further, Indian spends only 1.1% on health as a percentage of GDP in 2014-15. National Health Policy (2017) set an objective of increasing this figure to 2.5% of GDP by 2025.

Fig. 3 also depicts that among the entire above-said nation, the public spending on health is very low (29%) in India, OOP payment (62%), and private spending on health (71%) are very much high as compare to other nations as mentioned earlier. It further shows that India has the highest OOP expenditure in the world.



Source: NSSO 2014-15 & Hindustan Time, 11 Dec, 2017.

Fig.3: Comparison of Key Health Financing Indicators for BRICS, US, UK For 2014

It is analyzed that in the United Kingdom, public spending is very high among all the mentioned nations, which also reduced OOP expenditure. Therefore, India needs to increase public expenditure on health, and then there is a possibility in OOP payment reduction.

4. CONCLUSION

The increasing corruption and growing destructive practices in the medical domain depict a paramount need to initiate a sold mechanism to safeguard the public health needs. Failure of the government to tackle this

menace creates more opportunities for private sectors in marketing medicines. It further creates challenges in choosing costly medicine for chronic disease, particularly cancer diseases. Thus well-being is an asset for the countries socio-economic and political elevation. Therefore, there is a vital need to design strategies to mend affordable access to essential medicines under the current health care reform.

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