

## Prescribers Views on Generic Medicines: A Study on Knowledge, Attitude and Practice

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### Abstract

**AIMS AND OBJECTIVES:** Present study was undertaken to achieve following objectives: to evaluate knowledge, attitude and practices of physicians regarding use of generic medicines and to identify key areas, which may act as hurdle to mass scale use of generics and provide recommendations to reduce the same. **MATERIALS AND METHODS:** It was a cross sectional, prospective, questionnaire based study. The study participants were doctors and interns working at NKP Salve Institute of Medical Sciences, Nagpur, (MS), India. A total of 125 subjects participated in the study including 55 junior residents, 35 interns, 15 senior residents and 20 academicians, out of which 84 were males and 41, were females. **RESULTS:** Overall response rate was 100% i.e. all 125 recorded their responses. In the knowledge category of questionnaire, almost all participants believed that generic medicines contain same active substance as the innovator medicine (98.4%). Overall, responses in favor of generic medicines was less, amongst which academicians were more in favor as compared to others and interns gave least favorable responses. **CONCLUSION:** The present study shows that participants had good amount of knowledge about generic drugs. However this was not reflected in prescription rates, thus exposing a cliff between knowledge with attitude and practices.

**Keywords:** Generics, Knowledge, Attitude and Practices.

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### Introduction

Rational use of medicine/s (RUM) is defined as receipt of drug/s by the patient, which are apt for the concerned clinical condition with corresponding apposite doses for passable period of time at feasible costs.<sup>[1]</sup> These aspects are fulfilled by use of generic drugs. Nowadays, unreasonable use of drugs is increasing due to variety of factors like dearth of knowledge amongst the patients, pressures on physicians by the patients, commercial approach by the physicians while prescribing, money spinning persuasive activities by activities by the pharmaceutical companies and lack of execution of stringent laws and regulations to

curb such activities.<sup>[2]</sup> The ever increasing health care costs continue to pose a grave threat to health care systems throughout the world. World Health Organization (WHO) reports that nearly 80% of total health care expenses are shared by out-of-pocket payments.<sup>[3]</sup> Therefore it will be a fruitful exercise to reduce this expenditures to minimum possible levels without affecting quality of health care.<sup>[4]</sup> In developing country like India, all the above mentioned quality assurances have to be fulfilled on a mass scale, making its implementation more vigorous task. But this can be achieved mostly through large scale use of generic drugs.<sup>[5]</sup> Conventionally, as a recompense to invention of innovator drug, that company is allowed a patent of marketing

snootiness, after the expiry of which other companies can manufacture and market that product as generic counterpart of the innovator drug, provided that bioequivalence of generic drug with that of innovator drug is proved. Generic drug is said to be bioequivalent with that of innovator drug, if the safety and efficacy of the former is nearly same as that of later.<sup>[6,7,8]</sup> Going by this way, generics can be considered as equally safe and effective as that of innovator drugs.<sup>[7,9]</sup> With this background, it is anticipated that generics would be used on a large scale, but physician's attitude poses a major setback to their large scale use. Therefore it is important to know the attitudes and perceptions of physicians regarding use of generics in view of identifying key areas which pose hindrance to use of generics.<sup>[10,11]</sup> Many studies have shown that compliance of patients on generic drugs was far more better as compared to their brand name counterparts.<sup>[12,13]</sup> Hence the present study was planned with the intentions to evaluate knowledge, attitude and practices of physicians regarding use of generic medicines and to identify key areas, which may act as hurdle to mass scale use of generics and provide recommendations to reduce the same.

## **Materials and Methods**

It was a cross sectional, prospective, questionnaire based study. The study was initiated after taking approval from Institutional Ethics Committee (IEC). The study duration was of 6 months. The study participants were doctors and interns working at NKP Salve Institute of Medical Sciences, Nagpur, (MS), India. A total of 125 subjects participated in the study including 55 junior residents, 35 interns, 15 senior residents and 20 academicians, out of whom 84 were males and 41, were females. The questionnaire was pre-validated with group of 15 people, comprising of non-participating doctors, interns. Total of 40 questions were finally included to identify the level of Knowledge, Attitude and Perceptions (KAP) of all study participants, out of which 13 questions were given to know the knowledge, 13 for testing attitude and 14 for perceptions regarding rational use of medicine.

## **Results**

Overall response rate was 100% i.e. all 125 recorded their responses. In the knowledge category of questionnaire, almost all participants believed that generic medicines contain same active substance as the innovator medicine (98.4%), while 64% had the knowledge that generic drugs are marketed after expiry date of innovator product is over. 63.2% believed the fact that generic medicines need to have proven bioequivalence as that of innovator product in order to obtain permission for marketing, while 36.8% were of opposite view. 68% were aware of Indian medical regulation act to prescribe generic drugs as maximum as possible. 82.4% were not aware of Jan Aushadhi scheme by government of India to set up generic stores across the country. 57.6% believed that generic drugs are interchangeable with innovator drugs, while 73.6% knew about the price difference between generic and brand name drugs (Table-1).

In the questionnaire for testing attitude towards use of generic medicines various opinions regarding same were recorded, out of which majority were against the ideology of generic medicines as safe option for brand name drugs and majority believed that generic drug testing process should be made more vigorous. However 90.4% were of the opinion that training programs should be conducted to increase the awareness regarding use of generic drugs amongst the physicians. 67.2% opined that patients should not be allowed to have choice between a generic drug and brand name drug. Less than half of the participants believed that incentives should be given to increase the use generic medicines on a large scale (43.2%). Only 52.8% believed that importance of generic drugs should be taught during early part of doctor's training, while majority of them believed that there should be an online reference system for viewing all available generic medicines on national level (Table- 2).

**Table- 1: Responses regarding knowledge of Generic Drugs**

Sr. No.	Questions/Statements	Responses in %	
		Yes/True	No/False
1	Generics intended to be used same as innovator	98.4	1.6
2	Generics marketed after expiry of innovator	64	36
3	Preclinical and clinical study essential for generics	74.4	25.6
4	Bioequivalence necessary for generics approval	63.2	36.8
5	Awareness of Indian medical regulation act 2002	68	32
6	Awareness about Jan Aushadhi by government of India.	17.6	82.4
7	Generics are intended to be interchangeable with branded drugs	57.6	42.4
8	Generics are tool for reducing health expenditure.	90.4	9.6
9	Awareness about price differences between generics and branded drugs	73.6	26.4
10	Knowledge about all generics available in the market	59.2	40.8
11	Generics should be in same dosage form as their innovator counterparts	43.2	56.8
12	Knowledge about bioequivalence studies	68.8	31.2

**Table- 2: Responses of participants regarding their attitude towards generics**

Sr. No.	Questions/Statements	Responses in %	
		Yes/True	No/False
1	Opinion regarding generics in context of-		
	a. not safe as innovator	17.6	82.4
	b. not as effective as innovator	35.2	64.8
	c. onset of action is late	11.2	88.8
	d. do not follow GMP guidelines in manufacturing	16.8	83.2
2	Training programme essential to increase awareness about generics	90.4	9.6
3	There should be generic store in every hospital	93.6	6.4
4	Patient should have the liberty to choose generics over innovator	32.8	67.2
5	Generics are more affordable than brand name drugs	90.4	9.6
6	Generics of only local reputed companies are safe	63.2	36.8
7	Incentives should be paid to doctors for prescribing generics	43.2	56.8
8	Generics are meant only for poor	15.2	84.8
9	Confidence should be built in patients to use more generics	68.8	31.2
10	Importance of generics should be taught in early part of doctor's training	52.8	47.2
	Use of generic terminologies be promoted in educational presentations	66.4	33.6
11	National level generics online reference should be made available	80.8	19.2
12	Testing of generics should be made more vigorous	77.6	22.4

**Table- 3: Responses of participants regarding practices related to generic drug use.**

Sr. No.	Questions/Statements	Responses in %	
		Yes/True	No/False
1	Do you prescribe generics?	52.8	47.2
2	Do you prescribe generics in all diseases?	31.2	68.8
3	Read any article on safety and efficacy off generics v/s brand drugs	25.6	74.4
4	Switching to generics may change the outcome of therapy	35.2	64.8
5	Should generic drug substitution be allowed in place of brand drugs	63.2	36.8
6	Factors considered while prescribing drugs-		
	a. Availability of drugs in pharmacies	92.8	7.2
	b. Price of medicine	61.6	38.4
	c. Efficacy and safety profile of drug/s	82.4	17.6
	d. severity of illness	70.4	29.6
	e. economic profile of the patients	64	36
	f. nature of hospital i.e. public/private/government	67.2	32.8
	g. lucrative gifts offered by pharmaceutical companies	11.2	88.8
	h. pressure from patients to prescribe low cost medicines	3.2	96.8
7	Do you prescribe generics from all local manufacturers?	56	44
8	Do medical representatives influence your prescription?	15.2	84.8
9	Are you comfortable if pharmacist changes branded drug prescribed by you?	25	75
10	You prescribe branded drugs because their names are easy to memorize.	40	60
11	Which medical representatives give you frequent visits-		
	a. Branded drug companies	97.6	
	b. generic drug companies	2.4	
12	Are you hesitant to prescribe generics in some therapeutic class?	89.6	10.4
13	Do your personal experience with medicines influence prescription?	80.8	19.2
14	Patient's demands influence your prescriptions?	4	96

In practice related questionnaire half of the participants prescribed generic medicines, out of which only few of them prescribed the same for all diseases (31.2%). More than half (63.2%) of the participants believed that substitution of generic drugs over branded drugs should be allowed. While recording the factors which are taken into account by the physicians while prescribing medicines to the patients, maximum preference was given to availability of the drug (92.8%), followed by efficacy and safety profile of the drug (82.4%), seriousness of the illness and nature of hospital i.e. public/private/government (70.4 and 67.2% respectively), economic profile of the patient

(64%), and least considered amongst all was pressure from the patients to prescribe low cost medicines (3.2%). 84.8% believed that medical representative's information regarding branded drugs did not influence their prescriptions, while majority disagreed that they prescribed brand name drugs because their names are easy to remember (60%). 89.6% hesitated to prescribe generics in some therapeutic class due to concerns of their safety and efficacy. 80.8% believed that personal experiences with drugs influenced their prescribing habits. Overall, responses in favor of generic medicines was less, amongst which academicians were more in

favor as compared to others and interns gave least favorable responses (Table- 3).

## Discussion

In the present study, majority had a considerable amount of knowledge regarding generic drugs, but this was not translated into their percentage of prescribing generic medicines, which was lower than the expected values. Similar findings were observed in other studies conducted in rest of the world.<sup>[5,14]</sup> The norms and regulations laid down by regulatory bodies for approval of marketing of generic drugs are stringent enough in terms of bioequivalence demonstration between generic and innovator drug to warrant similar action of generics as that of innovators drug.<sup>[6]</sup> Majority of our study participants were aware of this fact. Majority of the participants knew that generic drugs are envisioned to be used interchangeably with innovator and that by doing so, there will no alteration in aftermath of the treatment, which was in accordance with findings of other similar studies.<sup>[14,15]</sup> However major apprehension in knowledge part was that maximum participants were unaware of Jan Aushadhi scheme of government which plans to set up generic drug stores across the country. Government agencies must make it a point to organize various programs on a mass scale to increase its awareness, even with the help of media, maybe also involving film actors and actresses to ensure mass participation in public domain. Interestingly, major chunk of participants were of the view that incentives should not be given in order to increase the use of generics and that locally made generics are far better than other manufactured generic drugs. Above two questions were deliberately included in the quest to find actual reasons of not prescribing of generic drugs, after the authors identified gaps in knowledge and practice regarding the same, after obtaining the results of pilot study on 16 participants. One more interesting finding that came to light through this study is that majority believed that generics are manufactured under Good Manufacturing Practices (GMP) guidelines, but same majority of them were of the view that generics testing should be more vigorous, hinting towards disparity in responses and uncertainty regarding their favorable attitude towards use of generics. Maximum accomplices

believed that switching to generics would alter the course of treatment. Amongst the factors affecting prescription practices availability of generics in pharmacy was most common factor, and this shortcoming should be rectified as early as possible, since this is an avoidable hindrance to use of generic drugs. But this factor cannot be held responsible solely, for low prescribing, since pharmacies keep those products, which are generally prescribed by doctors to avoid wastage of stock. Majority believed that they prescribed more of branded drugs, because their names were easy to memorize. In the present study, we found out that patient's demand of medicines did not influence doctor's prescribing habits, which was different from the findings of other such study.<sup>[3]</sup> Overall response rates were not corroborating with that of knowledge and attitude in terms of comparatively low prescribing rates of generics. Amongst the classes, most favorable responses for generics use were seen in academicians, and least in interns. Therefore, interns and junior residents should be subjected to more and more awareness programs for increasing use of generic medicines.

## Conclusion

The present study shows that participants had good amount of knowledge regarding generic medicines. However this was not reflected in prescription rates, thus exposing a cliff between knowledge with attitude and practices. Major concern was awareness, which should be increased through regular Continued Medical Education (CMEs) and workshops. Also Jan Aushadhi scheme should be re launched with more media coverage and other mass awareness campaigns. Lastly, a national generic directory should be made available on the internet, so that physician is always aware of the information of the generic drug he desires to prescribe.

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