



## Original Research Article

## COMPARISON OF GENERIC AND BRANDED DRUGS ON COST EFFECTIVE AND COST BENEFIT ANALYSIS IN A TERTIARY CARE TEACHING HOSPITAL

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**ABSTRACT**

**Background:** The significance of encouraging the adoption of less expensive generic substitutes for name-brand medications is highly contested. Although generic medications have been shown to be just as effective at treating ailments as brand name medications, there has been much discussion about their bioavailability, or the amount of the medication that reaches its site of action. As assumed in this analysis, many specialists still think that brand-name and generic medications are equally feasible and bioequivalent options for successful pharmacological therapy.

**Material and Methods:** The costs of several branded and generic medications were contrasted. Forty widely used medications from several classifications that are available in both branded and generic variants with the same concentration, dosage form, and combination.

**Results:** Out of the 40 medications chosen, the average cost of 37 branded medications was more than that of their generic counterparts. Three generic medications were more expensive on average than branded ones. The mean cost difference between branded and generic medications ranged from less than 10% to more than 72%.

**Conclusion:** The majority of branded medications were much more expensive than generic ones, and prescribing branded medications was linked to patients not completing their therapy as directed by their physician.

**Keywords:** Branded drugs, Cost-analysis, Generic drugs, Mean costs and Pharmacoeconomics.

### INTRODUCTION

Pharmaceutical purchases account for a significant portion of healthcare expenditures. This spending is anticipated to increase dramatically due to advancements and improvements in the healthcare industry.<sup>[1]</sup> One of the main reasons for the high cost of medication is believed to be the prescription of branded medications by medical experts. The customer bears the cost of the manufacturer's medicine research, production, storage, marketing, distribution, and other expenses.<sup>[2]</sup> The price difference between branded and generic versions of the same medication can range from less than two times to more than one hundred times.<sup>[3]</sup> Generic versus patented drugs and the other is a drug's "brand name" (proprietary name) against "non-

proprietary name," or generic name, are two ideas that need to be grasped.<sup>[4]</sup> A pharmaceutical company's original product is called a branded medication. The business is granted the sole right to produce and distribute medications for a predetermined amount of time. No one else is able to manufacture the same medication during this time. Generic medicine is a copy of the original branded product that is sold after the patent period or other exclusive rights have expired. As a result, it is thought to be inexpensive.<sup>[5,6]</sup> International standards are followed in the manufacturing of both branded and generic products. The color, shape, taste, smell, and other characteristics of generic products might vary depending on the brand name under which they are sold as well as the fillers, binders, and lubricants they contain. Therefore, a

generic can be sold as a branded generic or under a non-proprietary name. As a result, the product can be marketed by the producer in a manner akin to that of the proprietary product.<sup>[7]</sup> An expert group determines the non-proprietary name of the medication's active ingredient, which is recognized globally.

Prescribing generic medications entails recommending medications made by other businesses once the innovator company's original drug's patent has expired. It is frequently misunderstood to refer to the generic or non-proprietary name of a medication.<sup>[8]</sup> The unethical marketing strategies used by pharmaceutical corporations to obtain more prescriptions from physicians raise the cost of the medications, making them unaffordable for the average person.<sup>[9]</sup> The primary goal of generic prescribing is to lower the cost of pharmaceuticals.<sup>[10]</sup> Our goal was to determine the wisdom of prioritizing generic over branded prescriptions by comparing the prices of many widely used branded and generic medications.

## MATERIALS AND METHODS

This was a prospective observational study conducted in the department of Pharmacology, World College of Medical Sciences Research and Hospital, Jhajjar in collaboration with the clinical department. The study was approved by study institute ethics committee. The costs of several branded and generic medications were contrasted. Forty widely used medications from several classifications that are available in both branded and generic variants with the same concentration, dose form, and combination. For comparison, medications from several groups were included, including non-steroidal anti-inflammatory drugs, antacids, anti-hypertensives, anti-diabetics, antibiotics, medications for bronchial asthma, and cough syrups. Both the most expensive and least expensive brands were taken into account. Indian Drug Review, pharmaceutical brochures, and pharmacies were used to compare prices. The percentage difference between the mean costs of branded and generic medications was computed, along with the mean of all accessible branded and generic medication prices.

## RESULTS

Forty medications in all were chosen for examination. Out of 40 medications, 15(37.5%) had a 10%–30% price gap between branded and generic versions. About 19(47.5%) medications had price differences between 30 and 78%, and 6(15.0%) medications had price differences more than 78%. Two (5%) branded medications are less expensive than generic medications, while 37 (92.5%) branded medications are more expensive than generic medications. The average cost of generic

medications is 12 rupees, whereas branded medications range in price from 30 rupees to 124 rupees. The mean cost difference between branded and generic medications ranged from less than 10% to more than 72%.

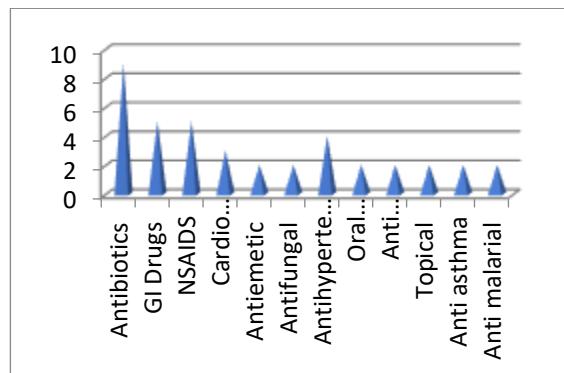


Figure 1: Shows the commonly used branded and generic drugs

The most popular medications in WCMSRH, Jhajjar, India, are shown in Figure 1 and have been chosen for this investigation. Of the forty medications chosen, nine (22.5%) were antibiotics and five (12.5%) were NSAIDs. Five (12.5%) were GI tract-acting medications, such as anti-spasmodic, anti-diarrheal, and ulcer-protective medications. Three (7.5%) were cardioprotective, four (7.5%) were antihypertensive, two (6%) were anticonvulsants, and two (4%) each were topical, antiemetic, anti-fungal, oral hypoglycemic, anti-malarial, and anti-asthmatics. The most popular medications in WCMSRH, Jhajjar, India, are shown in Figure 2 and have been chosen for this investigation. Out of 40 generic medications, about 27 belong into the 1–10 rupee range, and 2 belong into the >50 rupee range. About five of the most expensive branded medications are in the 1–10 rupee range, and seventeen are in the >50 rupee category. Twelve of the branded medications with the lowest prices fall into the 1–10 rupee range, while nine fall into the >50 rupee range.

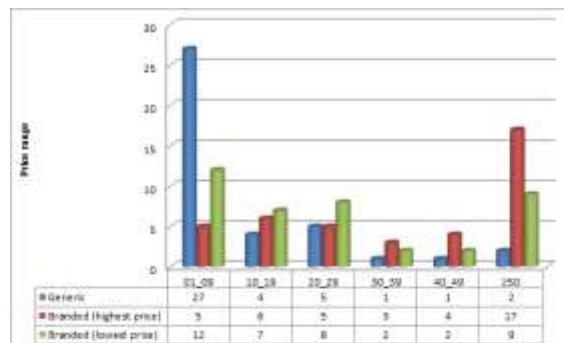


Figure 2: Amount of drugs belonging to various price range

The average price difference between branded and generic medications. The average cost of all generic medications was approximately 12.2 rupees, while

the average cost of branded medications was approximately 29.8 rupees for the least expensive and 123.4 rupees for the most expensive. The average cost of branded medications is higher than the average cost of generic medications. This suggests that the author should give generic medications to those from lower socioeconomic classes. The mean cost difference as a percentage. Of the forty medications, fifteen (37.5%) have cost differences between 10 and 38%, nineteen (47.5%) have cost differences between 38 and 78%, and six (15.0%) have cost differences more than 78%.

## DISCUSSION

The study's final results clearly show that, which is in line with earlier findings, the mean cost of 92.5% of branded medications was higher than the mean cost of generic medications.<sup>[11]</sup> Drug prescriptions will undoubtedly rise as the healthcare industry develops. An increasing number of non-communicable diseases, such as diabetes, hypertension, autoimmune diseases, and rheumatological disorders that require long-term care, are being recognized at a young age due to increased health awareness and the availability of specialists at grassroots levels and in small towns. Early diagnosis necessitates longer therapy, which raises the cost of prescription drugs. This part of medication prescription is specifically addressed by pharmacoeconomics. It addresses a drug's effectiveness in treating a condition in relation to its rates in addition to its actual cost. By definition, generic medications are the same as branded ones in terms of efficacy, safety, strength, and bio-equivalency.<sup>[12]</sup> Generic medications are comparatively less expensive than branded medications. Despite this, a lot of treating doctors hardly ever write prescriptions for generic medications.<sup>[13]</sup> Physicians and occasionally even patients believe that generic medications are less effective since they are less expensive. This is one of the reasons why doctors typically do not prescribe generic medications.<sup>[14]</sup> Patients may become confused by differences in the size, shape, color, and name of the medication, especially if they have been using hypertension or anti-diabetic medications for a long time.<sup>[15]</sup> Additionally, there are instances when it is truly necessary to stick with a certain brand of medication, such as phenytoin, because switching brands may result in variations in the drug's bioavailability, which may then cause undesirable changes in the drug's serum levels.<sup>[16]</sup> However, it is crucial to utilize generic medications wherever possible, particularly in cases of acute illness. Treatment costs may be lowered by using generic medications. Patients' fears can be lessened by informing them that they might be given drugs that are same but have different tastes, looks, or names. Instead of pursuing physicians,

pharmaceutical companies now supply generic medications to pharmacies at extremely low prices, with MRPs authorized by the government. These pharmacies are therefore free to sell the medication at their own expense.

## CONCLUSION

In conclusion, the results of this study show that, especially from the perspective of drugs selection, doctors have a responsibility to reduce costs by prescribing the least expensive medication and, in the event that a specific brand is unavailable, including the generic names of the medication in parenthesis. All pharmacies and medical stores must be required by regulation to carry generic versions of every drug needed.

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