Prescription writing: Generic or brand?

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The high cost of some medicines in India has made the treatment of many common and uncommon diseases unaffordable to the poor and a strain on the budgets of even middle-class citizens. For patients who suffer from diabetes or cardiovascular disease, and who may need certain medicines for months or even the rest of their lives, newer antidiabetic, anticoagulant, and other medicines may cost more than Rs. 100 a day, each; and for those diagnosed with multiple sclerosis, the cost of disease-modifying treatments (DMTs) may range from Rs. 30,000 to Rs. 100,000 a month, depending on the DMT. Clearly, the cost of some medicines, especially to poorer patients and those who require long-term or lifelong treatment, is a matter of concern.

Policymakers react to problems such as this in ways that are not always well thought out. As a simple example, the annual ritual of waiving farm loans is not a solution to the problem of farmer suicide.[1] Likewise, the encouragement of electricity-powered vehicles with a view to promote the use of renewable forms of energy does not take into consideration the many disadvantages that users face.[2]

Earlier this year, there were media reports that suggested that the Prime Minister was considering legal steps to make it compulsory for doctors to prescribe medicines by generic names rather than by brand names;[3,4] the reason, ostensibly, was that pharmaceutical companies were pricing their products beyond affordable limits. Here, it must be recognized that pharmaceutical companies are not charitable organizations; like all businesses, they exist to generate profits for their shareholders. Therefore, a reasonable margin of profit cannot be grudged, and a broader margin of profit on some drugs could be necessary to offset a narrow margin of profit on other drugs, or even a loss made on other drugs, where the other drugs are for niche indications, or are under price control. Readers may note that the margin of profit is not the difference between the cost of manufacturing and sales price; many direct and indirect costs need to be factored in (Box 1).

MEDICINES: COST TO CONSUMER

In this context, Singal et al.[6] described an interesting study. These authors compared branded and nominally branded generic versions of the same drug manufactured and formulated by the same company [see the next section and Box 2 for definitions of terms]. The drugs selected were cetirizine, fluoxetine, ciprofloxacin, lansoprazole, and alprazolam. At the retailer level, the mark-up for branded

Box 1: What constitutes the profit margin for a drug?
Maximum retail price minus the actual cost of the active pharmaceutical ingredient after factoring in expenses that include but are not limited to the following
- Cost of capital investments, including investments in land, buildings, machinery, furniture, hardware, software, and other moveable and immovable assets
- Depreciation in the value of the capital investments
- Cost of interest lost on monies sunk into capital expenditures
- Salaries and other employee benefits
- Direct and indirect taxes and related levies

The items listed in the previous point must be considered in the context of all of the arms of the business, including research and development, manufacturing, quality control, advertising, marketing, administration, legal, export, and others

Box 2: Suggested nomenclature for marketed drugs

**Branded drug:** A drug that is marketed under a trade name by the company that first brought the drug to the market, regardless of whether or not the patent on the drug has expired. Branded drugs are promoted by medical representatives to medical practitioners.

**Branded generic:** A drug that is marketed under a trade name by any company other than the company that first brought the drug to the market; this marketing usually happens only after the patent on the drug expires. Branded generics are promoted by medical representatives to medical practitioners. Sometimes, the same drug may be marketed by the same company under different trade names for different indications; this happens when the different indications are handled by different marketing divisions of the company, and retail pricing may vary widely between the trade names because of differences in the economics of the marketing divisions.

**Nominally branded generics:** Same as branded generics, except that these drugs are supplied to distributors and retailers but are not promoted by medical representatives to medical practitioners. Retailers use their discretion in supplying these drugs to patients when the prescription carries a pharmacological name.

**Generics:** Same as branded and nominally branded generics; this definition ensures conformity of the suggested nomenclature with international usage.

**Pharmacological generic:** A drug that is marketed under its pharmacological name. In popular parlance, such drugs are sometimes called “generic generics.”

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generics in terms of retailer purchase price versus maximum retail price (MRP) was 25%–30%; for the nominally branded generics, this mark-up was far higher at 201%–1016%, giving the retailer (but not the company) an enormous margin of profit. The MRP of branded generics was 0%–41% higher than that of the nominally branded generics. To the extent that the drugs were tested, branded and nominally branded versions met regulatory standards for drug content. However, no testing for impurities was performed.

There are several observations that stand out from the results of this study.\[6\]

1. For nominally branded generics, retailers make large profits. However, this may be necessitated by a lower turnover rate; and it may be inevitable, because retailers also have indirect costs, such as those listed in Box 1, and will need larger margins of profit on some products to offset lower margins of profit on others.

2. For branded generics, pharmaceutical companies make large profits. However, this may not be so if the manufacturing, quality control, and related costs differ between branded and nominally branded generics. Such a scenario could well be possible, for example if branded generics are of export quality, meeting international regulatory standards, whereas nominally branded generics meet only the domestic regulatory standards.

3. Branded and nominally branded drugs are similar in content of the active pharmaceutical ingredient.

4. It is unknown whether branded and nominally branded generics differ in matters related to quality control, such as the presence of impurities.

A further complication on the subject of cost of medicines to consumers is the often commented upon pharma–physician nexus, a troubling state of affairs. Some doctors are reported to receive substantial incentives from pharmaceutical companies to prescribe the products of these companies. When the prescriptions are for branded generics that are similar in price to other branded generics, the patient is financially impacted only to the extent that these incentives are hidden costs in drug pricing. When the prescriptions are for expensive branded generics, or for the even more expensive brands [Box 2], then patients suffer greater financial exploitation.\[7-9\]

The issues considered in this section are real problems, and one way of addressing them would be to move prescriptions from expensive brands to low-cost generics.

**BRAND VERSUS GENERIC: DEFINITIONS**

As important as the definition of profit [Box 1] is the definition of what is brand and what is generic [Box 2]. There is no controversy that a drug is a brand when it is marketed under a trade name by the company that holds the patent on the drug; this is applicable even if the patent on the drug has expired. As a slight digression, sometimes, a company that held the original patent may sell the drug along with the patent to another company, and some drugs may in this way pass through several hands before they reach the market. Vilazodone is an example of one such drug.\[10\] In such cases, the brand is the version that belongs to the company that first brought the drug to the market.

There is also no controversy that a drug is a generic when it is supplied, usually in bulk and to hospitals, under a pharmacological name rather than a trade name. Where controversy arises is on what to call a drug that is supplied under a trade name by a company that is not the originator company, after the patent on the drug has expired.

In most parts of the world, especially in developed countries, this controversy does not exist. The drug marketed by the patent holder is de facto the brand, and all other versions of the same drug, marketed by one or more other companies (once the patent on the drug expires), are generics. Given that multinational pharmaceutical companies generally do not venture into the generic market space, and given that Indian pharmaceutical companies have few to no original drugs in the market, this means that all or almost all drugs marketed in India by multinational companies are brands, and all or almost all drugs marketed in India by Indian companies are generics.

So why is there a controversy? The reason is that social activists in India refer to all drugs as brands unless they are marketed under pharmacological names. Astonishingly, the Medical Council of India (MCI), which over a decade ago issued a notification that doctors in India should preferably prescribe drugs by their generic name, does not have a definition for what a generic drug is. The authors of this editorial have in their possession a copy of a response from the MCI (Ref No. MCI-7(10)/2014-RTI/161673 dated December 24, 2015; handwritten numerals presented as deciphered) to a Right to Information (RTI) application which indicates that the MCI does not have a definition for what constitutes a generic drug. In the RTI response, the MCI instead provides a web reference for the term in a World Health Organization glossary that no longer exists.

For the sake of clarity, we suggest a simple nomenclature that is suitable for use in India [Box 2]. This nomenclature already has some support in literature. Readers interested in a more detailed discussion on how the concept of generic drugs is operationalized across the world may refer to the work of Alfonso-Cristancho et al.\[13\]

**MEDICAL COUNCIL OF INDIA AND OTHER OFFICIAL NOTIFICATIONS**

Clause 1.5 of the Indian Medical Council (Professional Conduct, Etiquette, and Ethics) Regulations, 2002, stated:...
as follows: “Use of generic names of drugs: Every physician should, as far as possible, prescribe drugs with generic names and he/she shall ensure that there is a rational prescription and use of drugs.” This clause encouraged the prescription of generic drugs but did not forbid the prescription of brands.

The clause was modified on September 21, 2016 (No. MCI-211(2)/2016(Ethics)/131118) and notified in the Gazette of India on October 08, 2016; the modification read as follows: “Use of generic names of drugs: Every physician should prescribe drugs with generic names legibly and preferably in capital letters and he/she shall ensure that there is a rational prescription and use of drugs.”

The MCI circular No. MCI-211(2)(Gen.)/2012-Ethics/145183 dated November 22, 2012 and January 18, 2013 had called upon doctors practicing medicine to prescribe drugs with generic names, as far as possible. However, after the modification of Clause 1.5, the MCI circular No. MCI-211(2)(Gen.)/2017-Ethics/104728 dated April 21, 2017 threatened doctors found violating Clause 1.5 of the Ethics Regulations with suitable disciplinary action by the concerned state medical council or by the MCI.

In Karnataka, the Department of Health and Family Welfare (DHFW) issued a circular requiring all doctors working in government hospitals run by the DHFW and the Medical Education Department to prescribe generic medicines. The circular stated that action would be taken against doctors who did not adhere to norms under the Karnataka Civil Services Rules and under the Medical Council of India Act.[14]

None of these official directives provide a definition for the term “generic drug” or prohibit the inclusion in the prescription of a trade name of a branded generic. Therefore, these directives are ambiguous and do not serve their intended purpose.

PREScribing BY A PHARMACOLOGICAL NAME: CONCERns

Assume for the moment that the MCI and the government spokespersons intend doctors to prescribe drugs by their generic names where “generic” is broadly defined as in Box 2. In that case, it would become illegal for a brand to be prescribed. How can multinational drug companies be permitted to market their brands in India if doctors in India are not allowed to prescribe these brands? The situation becomes paradoxical and is bad in law.

In a more restricted context, if the MCI and the government spokespersons intend doctors to prescribe drugs only by their pharmacological names (pharmacological generics), the situation becomes worse; pharmacists would then have the liberty to dispense drugs according to their preferences (which doctors are presently being accused of), and a pharmacist–pharma nexus may replace the doctor–pharma nexus.[15,16] Hence, a pharmacist may dispense a brand, a branded generic, a nominally branded generic, or a pharmacological generic depending on his/her ethical standards, and perhaps depending on which version offers the highest margin of profit. There is a clear conflict of interest evident. A further problem would arise if the patient fails to respond or suffers an unexpected adverse effect with a version of drug chosen by a pharmacist, especially when the choice is a pharmacological generic, and it would not be clear whether the treatment failure or the adverse effect is due to the drug itself or to the dispensed version. In the case of an adverse event, particularly a serious adverse event, who would take the responsibility for legal liability - the doctor or the pharmacist? Each can justifiably implicate the other, and there is no way to resolve the impasse.

In this context, readers must keep in mind the known problems that India has with fake medicines.[15,16] Whereas there is evidence to suggest that generic medicines are as good as branded medicines with regard to bioequivalence and therapeutic equivalence,[17-20] this evidence applies only to generic products that have passed through quality assurance programs, including those manufactured in plants that have a Good Manufacturing Practice certification.[13] Many branded generics in India are marketed by companies that have a US Food and Drug Administration (FDA) approval for the product as well as the manufacturing plants; there is therefore an assurance of quality control. This is more than can be said for pharmacological generics which may be suspect on counts of inadequate/excess content of active ingredient, presence of impurities, or both.[21]

MAKING MEDICINES AFFORDABLE: SOLUTIONS

The primary purpose of the brand versus generic debate is to make medicines available at an affordable price to the people who need them. There are many solutions available for the affordability problem, each with its own limitations. Bringing drugs under restrictive price control, such as where the final price is capped at 100% above manufacturing costs [Box 1], could drive drugs out of the market,[22,23] which company would want to market products that generate little to no profits?

A more recent and perhaps more viable initiative is to set the maximum price of a drug to the weighted average price of each brand that holds >1% of the market share of the product; here, weighing is based on the market share of the respective brand.[24] A limitation of this strategy is that an average of high prices is still high, and so the needs of poorer segments of the society will remain unserved.

As already discussed in the previous section, the suggested shifting to the prescription of pharmacological generics is
a flawed idea. Having a public–private healthcare system [Box 3], as at present, has not succeeded in providing adequate care in the governmental arm and bleeds all but the very rich in the private arm.

We have a simple solution that we believe can work. As an optional step, through appropriate notifications, prescriptions can be mandated to include, in parentheses, the pharmacological name of the drug. As a necessary action, the government can run pharmacies that stock pharmacological generics that meet defined quality assurance criteria; existing and new Jan Aushadi stores[24] can take up the challenge. As an optional action, patients can fill their prescriptions at such stores. Legislation may be required here because, at present, pharmacists do not have the discretionary powers to make substitutions.[6] The biggest challenge is for the government to ensure quality control not only at the time of initial approvals of the pharmacological generics but also as part of an ongoing exercise, much as is routinely conducted by the US FDA; companies that default should be heavily penalized, again as is done by the US FDA.

If this solution is implemented, the government will take the responsibility of quality assurance and the patient will take the responsibility of opting for government-guaranteed quality. Doctors and pharmacists both move out of the picture and neither can be indicted for either patient exploitation or dispensing of substandard drugs. Such government leadership would offer a long-standing solution to the challenges that arise in a capitalist society (see below).

CONCLUDING NOTES

Instead of trying to understand and address the fundamental issues involved, political groups have jumped into the fray, demanding, for example, that doctors in government and government-aided hospitals prescribe generic medicine, and that boards be erected, stating the difference in costs between branded and generic medicines.[25] Such maneuvers are usually political postures that seek to score brownie points by seeming to be pro-people.

Capitalism has its limitations but is superior to socialism as a philosophy of state if only because capitalism provides the incentives for innovation, development, and hence a better quality of life. Preventing exploitation through arbitrary pricing has a role, as was recently shown in India when government action resulted in a dramatic lowering in the prices of coronary stents.[26] Such regulatory action can also do harm, as is already evident in India because high-quality stents, which were more expensive, may be withdrawn from the market[27] and because newer, high-quality stents may not be introduced in the country for reasons of economic unviability.[28] Unofficial sources indicate that high-quality stents are already hard to obtain. Thus, eligible patients cannot exercise their right to pay for quality.

India already has a pharmaceutical environment that is strongly dominated by branded generics rather than by brands; in fact, branded generics support 90%–96% of the Rs. 1 lakh crore pharma market in India.[3,24] This contrasts with many other countries, particularly in the developed world, where the pharmaceutical environment is dominated by brands, and where health care is possible only through expensive insurance coverage.[29] Medicines are, therefore, far more affordable in India than in such other countries. However, the market is very competitive, and over-regulating this market could result in its collapse. If industry is regulated into noncompetitiveness and nonprofitability, it will implode; interest and investment in the industry will diminish, leaving behind a market that is bereft of quality because such is all that can survive the contraction of profit margins.

Given the difficulties inherent in the circumstances, it appears that the government, like the MCI, may now encourage doctors to write both generic and brand names of the prescribed medicine;[30] however, what is meant by “generic” remains an undefined matter.

Has the brouhaha ended? For the time being, perhaps. For one, the subject is no longer in the news. For another, government officials have admitted that, because there are many legal and technical challenges, doctors will not be prohibited from prescribing branded medicines.[3] It remains likely, though, that the matter will once again be raised sometime in the future when the opportunity for political gains presents itself. One hopes that this editorial will be remembered at that future occasion. It is time that the matter was once and for all laid to rest.

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