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Original Research

Predictors of generic substitution: The role of psychological, sociodemographic, and contextual factors

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Abstract

Background: Escalating pharmaceutical costs have become a global challenge for both governments and patients. Generic substitution is one way of decreasing these costs.
Objective: The aim of this study was to investigate factors associated with patients' choice between generic drugs and innovator drugs.
Method: The survey was conducted in June 2013, 1000 people from across Poland were chosen as a representative population sample. The outcome (a preference for generics/a preference for innovator pharmaceuticals/no preference) was modeled by multinomial logistic regression, adjusted for several variables describing patients' sensitivity to selected generic features (price, brand, and country of origin), to third-party opinions about generics (information on generics in the mass media, opinions of health professionals (i.e. physicians, pharmacists), relatives/friends), as well as patients' personal experiences and income per household.
Results: The results supported the predictive capacity of most independent variables (except for patient sensitivity to the country of origin and to the information on generics in the mass media), denoting patients' preferences toward generic substitution. Patient sensitivity to recommendations by physicians, generic brand, and household income were the strongest predictors of the choice between generic and innovator pharmaceuticals ($P < 0.001$). The probability of choosing generics over innovator drugs was significantly higher among respondents with the lowest income levels, in those who were indifferent to generic brand or their physician's opinion, as well as in respondents who were sensitive to recommendations by pharmacists or attached a greater value to a past experience with generics (their own experience or that of relatives/friends).
Conclusion: In consideration of the foregoing, awareness-raising campaigns may be recommended, supported by a variety of systemic solutions and tools to encourage generic substitution.

Keywords: Generic substitution; Generic drugs; Opinions; Patients; Poland

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Introduction

The amount of money spent worldwide on prescription medicines will continue to rise, reaching over $1 trillion in 2017 (a projected increase of $205–$235 billion within five years).[1] On average, pharmaceutical spending in 2012 accounted for nearly one-fifth of total health expenditures across EU member states. As such, pharmaceutical spending was the third largest spending component of health expenditures, second only to the costs of inpatient and outpatient care. Total pharmaceutical spending across the EU approached €200 billion in 2012.[2] However, there are considerable variations in per capita pharmaceutical spending across EU countries. In Poland, per capita pharmaceutical expenditure accounted for €234 in 2012.[3] Poland is ranked second among all European countries in terms of quantitative consumption of pharmaceuticals. Prices of pharmaceuticals in Poland are estimated to be some of the lowest in Europe, yet many studies reveal that as many as 30% of patients in Poland do not take all of the drugs prescribed to them, simply because they cannot afford to.[4] This can, at least to some extent, be explained by high patient co-payment levels for pharmaceuticals, and the fact that approximately 18% of all reimbursed drugs in Poland are not subject to the co-payment regime.[5]

The Act of 12 May 2011 on the reimbursement of medicines, food products of special nutritional purpose, and medicinal devices,[6] is the legal framework for the public funding of drugs in Poland. Under the terms of this act, spending on drug reimbursement is capped at no more than 17% of the total annual budget allocated to the National Health Fund (NFZ). Another feature of Poland's drug reimbursement system is patients' participation in pharmaceutical costs. The prices at which reimbursed drugs are fixed are negotiated between the Ministry of Health and manufacturers. The reimbursement system is a relatively complex one, at least from a patient's point of view – the final price of a pharmaceutical is determined not only by the negotiated price, but also according to certain percentages and limits for public subsidy set by the Ministry of Health. For many years now, generic pharmaceutical products hold a place in national pharmaceutical policy; however, under the current reimbursement model in Poland, co-payments from the National Health Fund are identical for innovator drugs and for generic drugs. With the current reimbursement caps, price differences between innovator versus generic drugs are covered by patients.

Generics are between 20 and 30 % cheaper than their innovator equivalents, which means patients' spending on pharmaceuticals is lower whenever generic substitution is possible and chosen over innovator drugs.[7] Increasing generic substitution is postulated as a remedy for financial shortfalls in health care systems generated by pharmaceutical expenditure and for the problem of access to drugs affecting some groups of patients. According to IMS Health, the more savings a country is able to generate through the uptake of generics, the better its ability to support innovation in the drug market.[1] This assumption is also reflected in the Healthcare Strategy of the Polish Ministry of Health, which is intended to optimize the use of medicinal products and to rationalize the cost of pharmaceuticals. EU pharmaceutical policy has already been taking this direction.[8] In absolute terms, spending on pharmaceuticals to an extent depends on local pharmaceutical pricing and reimbursement regimes in the EU. Still, according to EGA and IMS estimates, the EU saves over €30 billion annually by the use of generic medicines.[9,10] According to data from the Research Centre for Pharmaceutical Care and Pharmacoeconomics, generics offer cost-cutting opportunities (from 27 to 48%), as yet unexplored across the EU.[11] Despite the upward trend over the past decade in the share of generics in many local pharmaceutical markets, generics still account for less than 40% of the drug market in Norway, Italy, Belgium, Austria, Greece, versus above 68% in Poland,[12] Germany, Denmark, and the United Kingdom.[12,13]

In real terms, generics can be divided into three categories: branded generics distributed under a proprietary label, such as Simvasterol (marketed as simvastatin by the Polish pharmaceutical company Polpharma), semi-generics (drugs marketed under the name of the manufacturer featuring the name of the active substance), such as Azithromycin-ratiopharm 500 (azithromycin by Ratiopharm), and non-branded generics (marketed under their International Nonproprietary Name (INN), such as Tramadol (tramadol distributed by Synteza, a Polish company). In Poland, branded generics are the most common. Costing much more than non-branded generics, branded generics may be said to contribute less to advancements in treatment or improved access to drugs (in Poland, the mean price of a branded