## HOW TO IMPROVE THE USING OF GENERIC DRUGS? A REVIEW

Zulfiayu Sapiun<sup>1)</sup>, Nurwigya Mohamad Putri<sup>2)</sup>, Paulus Pangalo<sup>3)</sup>, Vyani Kamba<sup>4)</sup>

1, 2, 4 Department of Pharmacy, Polytechnic of the Ministry of Health Gorontalo
3 Department of Nurisng, Polytechnic of the Ministry of Health Gorontalo
email: zulfiayu@poltekkesgorontalo.ac.id

#### **ABSTRACT**

The use of generic drugs in developing countries is still low. This is influenced by people's knowledges, perceptions, and attitudes towards generics which are also still low. Medical advisor and candidate of medical advisor need to be given good knowledge of generic drugs that they are expected to provide communication, information, and education actively about generic drugs. In mature healthcare systems, both pharmacists and physicians support the use of generic drugs and offer them to all patients regardless of socioeconomic status. A lack of trust in manufacturers and the quality of the generic drugs affects how pharmacists and physicians consider generic drug use in less mature healthcare systems. The government policy on replacing branded drugs with generic drugs is one solution to increase the use of generic drugs.

Keywords: Generic, drug, perception, health workers

## INTRODUCTION

In everyday life people cannot be separated from the use of drugsbecause medicine is a very important element in organizing health. Most medical interventions using drugs, therefore, the availability of drugs is needed when it is needed in types and quantities that are sufficient, real efficacy and good quality [20].

Drugs circulating in the community that are marketed by the pharmaceutical industry are available in the form of patent medicines and generic drugs.

Generic substitution is one mechanism of curtailing prescription drug expenditures. Limited information is available about the potential savings associated with generic substitution. Although broad substitution of generic drugs would affect only a modest percentage of drug expenditures, it could result in substantial absolute savings [5].

## LITERATURE STUDY

Patent drugs are drugs that are first marketed by producers who find a com-

pound or active substance of a drug through a research process. Such drugs are generally protected by patents with a range of time between 20-25 years since the drug compounds were discovered and patented. During patent protection, this type of drug may not be made by other manufacturers, unless there is a special agreement. The drug is relatively new and is still in the patent period, so it does not yet exist in its generic form and circulating is a trademark of the patent holder (Anonymous, 2008).

Generic drugs are drugs with the official name *International Non Propietary Names (INN)* that have been determined in Indonesian pharmacopoeia or other standard books for the nutritious substances they contain [23], [2].

This generic drug is one of the pharmaceutical preparations that has fulfilled the pharmacopoeia requirements and goes through the manufacturing process according to Good Manufacturing Practices (CPOB) and its manufacture is monitored

by the Food and Drug Supervisory Agency (BPOM)

This generic drug is a drug that if the patent name expires, then other pharmaceutical companies can produce and market the drug. Based on the Permenkes 68 year of 2010, generic drugs are classified into 2 groups, namely generic drugs and branded generic drugs. (Anonymous, 2010).

#### USE OF GENERIC DRUGS

In Indonesia, a country with a fairly low economic level compared to the United States, the use of generic drugs is only about 7% while in the United States it is around 50% of its use [24], and in 2014 it was 84% [11]. Based on these data, it is clearly visible differences in the level of public satisfaction with the use of generic drugs and patent medicines. This difference occurs actually not solely due to the low quality of the generic drug itself but the lack of education to the public about generic drugs so that people do not have any infomation about the generic drug itself.

# KNOWLEDGE, PERCEPTION, AND COMMUNITY ATTITUDES TO GENERIC DRUGS

The public often assumes that generic drugs are drugs of low quality. Lack of community knowledge about generic drugs is the main factor that makes this drug underutilized.

In Indonesia, 31.9 percent of households had heard or known about generic drugs nationally. 82 percent of RTs have the perception of generic drugs as cheap drugs, 71.9 percent of government program drugs, 42.9 percent of generic drugs have the same efficacy as branded drugs and 21.0 percent of OG are drugs without trademarks. Sources of information on generic drugs in urban and rural areas were mostly obtained from health workers (63.1%). (Ministry of Health of Indonesi, 2013).

Study in Gorontalo found that among nursing students in the Poltekkes Kemenkes Gorontalo, had good knowledge and very good perceptions of generic drugs [21].

There is the influence of the level of knowledge on the attitudes of the public in the selection of generic drugs in the district of Magetan and there is no influence income status on public attitudes in the selection of generic drugs in the district of Magetan Magetan [13].

In the USA, a vast majority of Patients (83%) reported that their doctors should "always" or "usually" prescribe a generic drug to them when one was available. Slightly more than one-third (37%) reported that they preferred taking a brandname drug, and about two-thirds of respondents (68%) thought Americans should use more generic drugs. Ninetyfour percent of respondents reported being "very comfortable" or "somewhat comfortable" asking their physicians to write prescriptions for generic drugs if one is available (95%), while 97% (95%) reported being "very comfortable" or " somewhat comfortable"taking a generic drug prescribed by their physician. Of the 1,442 patients with valid addresses, 933 responded (65% response rate) and 753 took the full survey. A vast majority (83%) agreed that physicians should prescribe generic drugs when available, and 54% said they had not asked their physicians to prescribe a brand-name drug over a generic in the past year. Most respondents considered generic drugs to be effective (87%) and safe (88%) as their brand-name co-terparts, and to have the same side effects (80%) and active ingredients (84%). Non-Caucasians were more likely than Caucasians to request a brand-name drug over a generic (56% vs 433%, p <0.01), and were also more skeptical of generic drugs' clinical equivalence (43% vs. 29%, p < 0.01 [10].

Proceeding of IICSDGs 2019 ISSN: 2654-8690, Vol. 2, Desember 2019

In Brazil, of the 5000 participants, 51.3% were women, 40.2% were white, 48.6% were between 15 and 34 years of age, and 52.3% had income of less than two minimum wages (US\$627.78). In terms of the use of GDs, 44.6% of the participants were taking or had taken GDs in the past three months, with the highest figures among the elderly (61.1%) and female (49.2%) populations. Regarding perceptions, 30.4% of the respondents considered GDs less effective than BDs; provided the same price, 59% would prefer BD, and 45.8% agreed that physicians prefer to prescribe GDs. The most negative perceptions about GDs were observed lower income, elderly among nonwhite populations [15].

The knowledge and perception of generic medicines found remain low in Hongkong [12].

# **DISCUSSION**

Opinions of generic medicines have improved but some mistrust remains, most particularly in the patient group where there appears to be a strongly held belief that less expensive equals lower quality. Acceptance of generics appears to be higher in consumers with higher levels of education while patients from lower socioeconomic demographic groups, hence generally having lower levels of education, tend to have greater mistrust of generics. A key factor in improving confidence in generic products is the provision of information and education, particularly in the areas of equivalency, regulation and dispelling myths about generic medicines (such as the belief that they are counterfeits). Further, as patient trust in their physician often overrules their personal mistrust of generic medicines, enhancing the opinions of physicians regarding generics may have particular importance in strategies to promote usage and acceptance of generic medicines in the future [3].

The used of generic drug can be increased from health worker. Sumber informasi tentang OG di perkotaan maupun perdesaaan paling banyak diperoleh dari tenaga kesehatan (63,1%). Oleh karena itu masih sangat perlu promosi mengenai obat generik secara strategik terutama di era Jaminan Kesehatan Nasional [9].

In Australia, the medical students in Australia need to be better taught about issues relating to generic medicines and generic prescribing. Modi- fying existing curricula to include educa- tion about generic medicines will be a critical strategy towards promoting rational use of generic medicines by med- ical practitioners [7].

In Lebanon, the majority of community pharmacists were supportive of generic drug substitution in general but not of the current implementation of the policy in Lebanon. Findings revealed implementation challenges at the provider, patient, and system level which are hindering attainment of the policy objectives. The key lessons derived from this study can be used for continuous improvement of the policy and its implementation [4]. volume penggunaan obat generik dapat meningkat seiring dengan meningkatnya kesadaram masyarakat terhadap kualitas obat generic [18].

and pharmacists were Physicians aware of the cost-saving function of generic drugs and their role in improving global access to drugs. Nevertheless, marked differences were observed between countries when studying physicians' and pharmacists' perceptions of the available generic drugs. In less mature healthcare systems, large variations regarding, for example, control routines, bioequivalence require- ments, and manufacturer standards were reported. A lackof reliable information and mistrust in the efficacy and quality were also mentioned by these participants. In the most developed healthcare systems, the participants trusted the quality of the generic drugs

and did not hesitate to offer them to all patients regardless of socioeconomic status. In general, pharmacists seemed to have better knowledge of the concept of bioequivalence and generic drug aspects than physicians [6].

Research Handayani (2010) said that public perception of generic drugs is not a low use of generic drugs, but it is caused by the low level of public knowledge about generics themselves. Education is very influential on knowledge. A society that has good education, is able to absorb and understand the knowledge it receives, the better one's education is, the easier it is to absorb and understand the knowledge it is received[14].

Education in the health sector is an activity or effort to deliver health messages to the public, groups, or individuals. The purpose of the message is that they can get better knowledge about health [16].

Research conducted by Sapiun, Slamet, Husain, and Banne in Hospitals in Gorontalo City showed a change in the 3 aspects after the patient was educated by nurses, pharmacists, and collaboration between nurses and pharmacists [21].

The using of generic drugs can be increased with interchangeable the originators with generic drugs. Generic drugs should be interchangeable with originators in terms of quality and efficacy. With relative lower prices, generic drugs are playing an important role in controlling health expenditures and ensuring access. However, the wide- spread understanding of "cheap price equals low quality" has a negative impact on the acceptance of generic drugs. In China, medical doctors doubt the effi- cacy and quality of generic drugs manufactured domestically. To address these concerns, the Chinese State Council released a policy in 2016 to eninterchangeability sure the by evaluating the quality and efficacy of generic drugs. It intends to make up a missed lesson in the regulation to be in line with interna- tionally accepted practices. Generic drugs firms, depends on the availability of appropriate comparators, should conduct either comparative bioequivalence studies or full scale clinical trials. The re-evaluation will be implemented in a stepwise approach with the essential medicines covered in the first step. The policy could achieve several benefits by increasing confidence on the Chinese produced generic drugs, upgrading regulatory standards, streamlining the Chi- nese generic drug industry and creating a healthy competition market. Nevertheless, enormous challenges remain in enlarging the capacity to review applications, selecting appropriate comparators, ensuring the capacity of domestic clinical research sites, and achieving the acceptance of re-evaluated generic drugs [8].

In Saudi Arabia, among the 178 participants in the physicians' survey, 76% and 47% reported that they are knowledgeable about the terms "generic" and "bioequivalence" respectively, while 44% reported that they are able to explain bioequivalence to their patients. Approximately 52% of physicians reported that local generics should be substituted for brands if suitable for the case. The low market shares of local generics medicines attributed to low prescription rates is significantly more among senior-level physicians working in governmental hospitals. Low level of knowledge about generic drugs among physicians was the strongest predictive factor for low prescription [19].

The decision to substitute should be made on an individual basis by the physician and an informed patient. Unendorsed or undisclosed substitution at the pharmacy level should be discouraged.

# **CONCLUSION**

Generic drugs are generally seen as an important instrument for achieving better equity and access to drugs. In mature healthcare systems, both pharmacists and physicians support the use of generic

Proceeding of IICSDGs 2019

ISSN: 2654-8690, Vol. 2, Desember 2019

drugs and offer them to all patients regardless of socioeconomic status. A lack of trust in manufacturers and the quality of the generic drugs affect how pharmacists and physicians consider generic drug use in less mature healthcare systems. Education of physicians and pharmacist is crucial to enable a better understanding of generic versus branded drug use.

# **REFERENCES**

- [1] Bank Dunia. (2008). Berinvestasi dalam Sektor Kesehatan Indonesia: Tantangan dan Peluang untuk Pengeluaran Publik di Masa Depan.
- [2] Barlas, Y. (1996). Formal aspects of model validaty and validation in system dynamics. System Dinamics Review. 12 (3).
- [3] Dunne, S. S., & Dunne, C. P. (2015). What do people really think of generic medicines? A systematic review and critical appraisal of literature on stakeholder perceptions of generic drugs. *BMC Medicine*, *13*(173). https://doi.org/10.1186/s12916-015-0415-3.
- [4] El-jardali, F., Fadlallah, R., Morsi, R. Z., Hemadi, N., Al-gibbawi, M., Haj, M., ... Akl, E. A. (2017). Pharmacists views and reported practices in relation to a new generic drug substitution policy in Lebanon: a mixed methods study. *Implementation Scinece*, 12(23), 1–13. <a href="https://doi.org/10.1186/s13012-017-0556-1">https://doi.org/10.1186/s13012-017-0556-1</a>.
- [5] Haas, J. S., Phillips, K. A., Gerstenberger, E. P., & Seger, A. C. (2005). Article Potential Savings from Substituting Generic Drugs for Brand- Name, 1997–2000.
- [6] Hartmann, E. T. K. (2015). A Systematic Review of Physicians 'and Pharmacists 'Perspectives on Generic Drug Use: What are the Global Challenges? Appl Health Econ Health Plicy, 13(Suppl.1), 35—

- 45. <a href="https://doi.org/10.1007/s40258-014-0145-2">https://doi.org/10.1007/s40258-014-0145-2</a>.
- [7] Hassali, M. A. A., Stewart, K., & Kong, D. C. M. (2008). A national survey on knowledge and perceptions of senior medical students in Australia about generic medicines. *Medical Journal of Australia*, 188(2), 123–124.
- [8] Huang, B., Barber, S. L., Xu, M., & Cheng, S. (2017). Make up a missed lesson-New policy to ensure the interchangeability of generic drugs in China. *Pharmacology Research & Persperctives*, 5(3), 3–5. <a href="https://doi.org/10.1002/prp2.318">https://doi.org/10.1002/prp2.318</a>
- [9] Kemenkes RI. (2013). Riset Kesehatan Dasar 2013. Jakarta.
- [10] Kesselheim, A. S., Gagne, J. J., Pharm, D., Sc, D., Franklin, J. M., Ph, D., ... Ph, D. (2014). Variations in Patients 'Perceptions and Use of Generic Drugs: Results of a National Survey, 609–614. <a href="https://doi.org/10.1007/s11606-016-3612-7">https://doi.org/10.1007/s11606-016-3612-7</a>.
- [11] Kesselheim, A., Gagne, J., Eddings, W. (2016). Prevalence and **Predictors** of Generic Drug Skepticism Among Physicians: Results of a National Survey. JAMA INternal Medicine, 176(6), 845-848. https://doi.org/10.1001/jamainternme d.2016.1688.Author
- [12] KH Poon. (2019). Branded versus generic drug use in chronic disease management in Hong Kong. *Hong Kong Med*, 25, 167–169.
- [13] Mohtar, & Sutrisna, E. M. (2014). Influence The Level of Knowledge Perception of Generic Drugs in Magetan Sub-District. Muhammadiyah Surakarta.
- [14] Muhtar., (2014). Pengaruh Tingkat Pengetahuan Terhadap Persepsi Masyarakat tentang Obat Generik di Kecamatan Magetan Kabupaten Magetan, Jurnal Universitas Muhammadiyah Surakarta.

- [15] Nardi, E. P., Ferraz, M. B., Pinheiro, G. R. C., Kowalski, S. C., & Sato, E. I. (2015). Perceptions of the population regarding generic drugs in Brazil: a nationwide survey. *BMC Public Health*, *15* (117). <a href="https://doi.org/10.1186/s12889-015-1475-1">https://doi.org/10.1186/s12889-015-1475-1</a>
- [16] Notoatmodjo, Soekidjo., (2011). Kesehatan Masyarakat. Pt Rineka Cipta: Jakarta
- [17] Permenkes No. 068 tahun 2010 tentang kewajiban menggunakan obat generik di fasilitas kesehatan.
- [18] Prabowo, A., Budisantoso, & Vanany, W. (2012). Analisis kebijakan penggunaan obat generik di Indonesia serta dampaknya pada biaya belanja obat masyarakat (studi kasus pada obat penyakit diabetes menggunakan pendekatan sistem dinamik). *Teknik*, *1*(1), 592–594.
- [19] Salhia, H. O., Ali, A., Rezk, N. L., & Metwally, A. El. (2015). Perception and attitude of physicians toward local generic medicines in Saudi Arabia: A questionnaire-based study. Saudi Pharmaceutical Journal,

- 23(4), 397–404. <a href="https://doi.org/10.1016/j.jsps.2015.01.014">https://doi.org/10.1016/j.jsps.2015.01.014</a>
- [20] Sambara, J. (2007). Pola Penggunaan Obat Berlogo di Rumah Sakit.
- [21] Sapiun, Z. (2015). Were Nursing Student Apreciate Generic Medicine In *International Nursing Conference AIPNEMA*. Gorontalo: Slemba Medica.
- [22] Sapiun, Z., Slamet, N. S., Husain, F., & Banne, Y. (2018). Effect of education on improvement of attitude to generic drugs, an experimental study to in-patient at aloei saboe hospital in gorontalo city, Indonesia. In *ACM International Conference Proceeding Series* (pp. 133–136). <a href="https://doi.org/10.1145/3301879.3301">https://doi.org/10.1145/3301879.3301</a>
- [23] Tjay, T.H., dan Rahardja, T. (2007). *Obat-Obat Penting*. Jakarta: PT. Elex Meida Komputindo.
- [24] Wibowo, A. (2009). Cerdas Memilih Obat dan Mengenali Penyakit. Jakarta: PT. Lingkar Pena Kreativa. Hal 47-48