Brief Overview of Antibiotic Sales as Prescription Drug in Marketplace

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Abstract

As an online trading platform, marketplace offers a wide range of pharmaceutical products that can be accessed easily and quickly. In fact, it is easy to find some prescription drugs, such as antibiotics in marketplace even without a doctor's prescription. This study aims to describe antibiotic sale as prescription drugs through the marketplace in 2022. This study used a descriptive approach that was carried out prospectively using observation sheets with a technique of total sampling data collection in June 2022. The results showed that there were countless numbers of antibiotic sales as prescription drugs through the marketplace, including the antibiotic class of tetracycline, penicillin, quinolones, cephalosporins, aminoglycosides and other groups. The dosage of drugs sold in the marketplace was provided in the forms of solutions, powders, tablets, capsules, injections, and ointments. The type of antibiotic that is most widely sold is pharmaceutical product with a trademark. All accounts that sell antibiotics in the marketplace are illegal accounts that do not have an official license to sell prescription drug products.

Keywords: *Marketplace, Antibiotics, Prescription Drugs.*

INTRODUCTION

Today, e-commerce as an online trading platform (marketplace) has seen a considerable rapid growth, as seen from the fact that this platform offers all human needs at almost effortlessly. Indonesia is a country with a notable escalation in e-commerce transaction, as observable through the emergence of some major online marketplaces, such as Shopee, Tokopedia, Lazada, Bukalapak, Blibli and others (Eka & Anna, 2020).

There are no particular differences between online shops and online marketplaces, since both are classified as e-commerce type. E-commerce refers to an application to have online buying and selling activities through the internet, particularly certain websites or applications. (Farki, 2016), Marketplace is an electronic product marketing platform that brings together many sellers and buyers to transact with each other (Apriadi, 2017).

(S) is one of the most popular e-commerce applications or online marketplaces that has gained the status as the brand with top-of-mind awareness among customers. The presence of the Health feature, which sells pharmaceutical products in this marketplace, is made after passing several standard policies of (S). Such standard policies include the requirement that the types of drugs sold must have an official distribution permit (BPOM), and that all types of drugs distribution is only allowed when it has met the applicable legal provisions.

The rise of drug sales in the marketplace (S) has made some unscrupulous traders to sell prescription drugs, even without using a doctor's prescription and without paying attention to the standard requirement of the sale of pharmaceutical products. In fact, it is easy to find drugs that do

not meet these standards circulating through unlicensed manufacturers. Article 30 Paragraph 5 of the Health Law requires every health facility to have a permit before distributing drugs, and thus any drug distribution without a permit can be categorized as illegal (Evita, 2020).

Prescription drugs (listed as G = gevarlijk = dangerous) are powerful drugs which requires doctor's prescription, generally marked with a red K with a black border on the drug packaging. However, currently, there has been an uncontrolled sale of drugs through online marketplace, which will likely lead to potential drug abuse by the public. Such condition is projected to cause a more serious harm to humans' health, which may subsequently lead to the fallen victims.

Antibiotics are classified as prescription drugs that can only be obtained with a doctor's prescription at pharmacies. The use of this drug without the appropriate dose and its warning can harm the body. The Centers for Disease Control and Prevention in the USA states that there is about 50 million unnecessary prescriptions out of 150 million prescriptions each year. A previous research revealed that 92% of Indonesians do not have proper use of antibiotics (Rahayu, 2011). The most important mechanism of antibiotics is the inhibition of protein synthesis, which destroys bacteria and prevents their growth, as seen in chloramphenicol, tetracycline, aminoglycosides, macrolides and lincomycin. In addition, some antibiotics also act against cell walls (such as penicillins and cephalosporins) or cells (polymyxins, polyene substances) (Tjay, 2007).

Obat Obat Penting (Important Drugs) written by Tjay and Raharja (2007) classified antibiotics into 8 groups, namely: penicillins, cephalosporins, aminoglycosides, tetracyclines, macrolides & lincomycin, quinolones and other groups (Tjay, 2007).

RESEARCH METHOD

Tool
This study used an observation sheet as the main tool.

Materials
The materials used in this study were the data contained in the observation sheets that have been collected.

Population & Sample
The population and sample in this study were all accounts in the marketplace (S) that were screened by the keyword antibiotics with terms of delivery from the Greater Jakarta area and by entering the account with star+ category. The data were collected with a total sampling technique.

Research Flow
Data were collected by direct observation on the marketplace (S). It was conducted by logging in to the web/marketplace application (S), and entering the keyword "antibiotics" for delivery terms for the Greater Jakarta area for the star+ account category in the search field. In the subsequent step, the number of the accounts that were screened by the keyword were then calculated and listed on the observation sheet, which describes the details about the seller's account, the fact whether they sell antibiotics or not, antibiotic name, antibiotic class, antibiotic dosage form and types of generic antibiotics/trademarks being sold. Furthermore, the data were processed and presented in the

form of a diagram with a percentage (%). The conclusion was drawn once the observation was complete.

FINDINGS AND DISCUSSION

The research conducted on 2-5 June 2022 on marketplace (S) which were screened with the keyword antibiotics with a delivery filter for the Greater Jakarta area and Star+ accounts, resulted in 58 seller accounts.

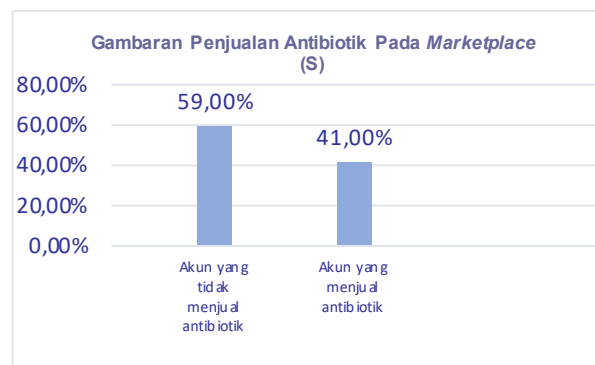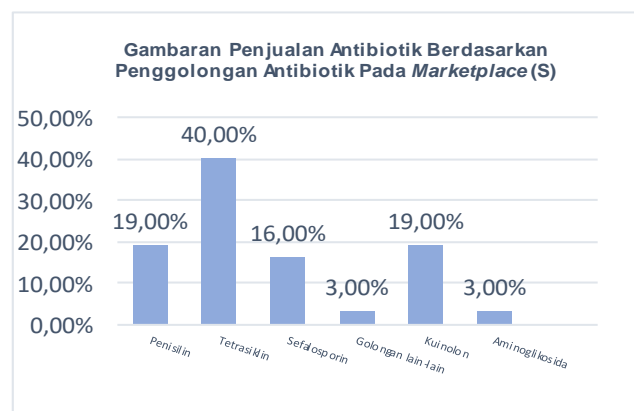**A. Sale Characteristics**
1. Antibiotic Sales

Figure 1 Characteristics of Antibiotic Sales

Antibiotics are classified as prescription drug, which requires doctor's prescription. Decree of the Minister of Health Number 02396/A/SK/VIII/1989 determines that prescription drugs is classified in G list = gevarlijk = which is dangerous).

2. Sales by Antibiotic Classification

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Figure 2 Characteristics Based on Antibiotic Classification

In Indonesia, there are 6 classes of antibiotics (75%) out of a total of 8 classes of antibiotics, which include penicillin, tetracycline, cephalosporin, other groups, quinolones, and aminoglycosides. Antibiotics are used to treat various types of infections caused by germs or also for infection prevention, for example in major surgery. It is also prophylactically given to patients with joints and artificial heart valves, and it is also provided before tooth extraction (Tjay, 2007).

In general, the prescription of antibiotic in Indonesia is pretty high and rather improper, which will likely to increase the incidence of resistance. Resistance cannot be eliminated, but it can be slowed down through rational use. This requires effective control policies and programs (Dirjen Binfar & Alkes, 2008).

3. Sales by Dosage Form

Gambaran Penjualan Antibiotik Berdasarkan Bentuk Sediaan Antibiotik Pada *Marketplace* (S)
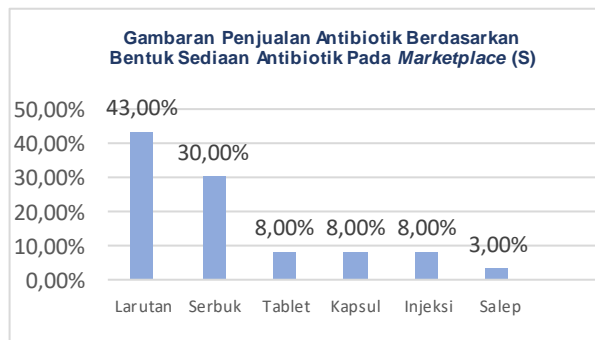
Figure 3 Characteristics Based on Dosage Form

The most widely sold dosage form of antibiotic is solution/drop preparation, which is mostly used for treatment of animals. The dosage form of the drug is related to the way it is used, and thus many will choose solution over other forms because it is much easier to use.
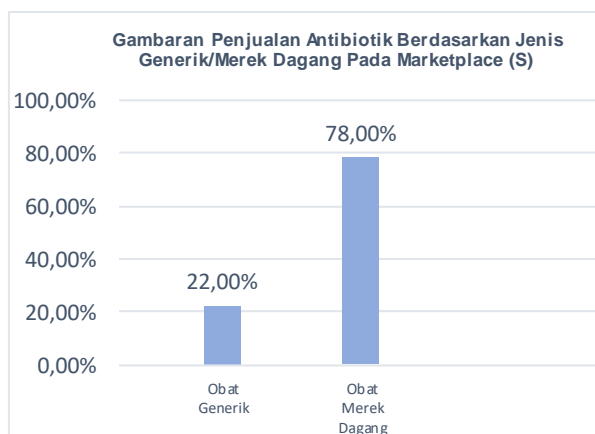
4. Sales by Generic/Trademark Type of Antibiotics

Gambaran Penjualan Antibiotik Berdasarkan Jenis Generik/Merek Dagang Pada Marketplace (S)

Figure 4.2.4 Characteristics by Generic Trademark/Trademark

The most widely sold type of antibiotic drugs are trademark drugs. The widelyheld assumption consider that generic drugs are cheap drugs with lower quality than trademark drugs. The lack of information related to generic drugs in the community has led people to prefer products with branded trademarks to be the first choice in their use (Abdullah, 2019).

B. Regulation of Online Drug Sales

1. Marketplace (S) Regulation

Any user accounts that violate the marketplace (S) regulation related to the selling of illegal goods can be subject to sanctions product deletion or account blocking. In this case, the marketplace (S) itself has made policies/regulations related to the problem and carried out supervision. It is proven by the blocking of the account (D*F_) which was no longer found when the researcher reviewed it a week later.

2. Regulation of the Distribution of Pharmaceutical Preparations

Article 20 paragraph 1 Regulation of Minister of Health No.30 Year (2017) concerning the second amendment to Regulation of Minister of Health No.1148/MENKES/PER/VI/2011 regarding the implementation of drug distribution by PBF and PBF branches only based on an order signed by the pharmacist holding the SIA, the pharmacist in charge or TTK in charge of drugstores by stating SIPA, SIKA or STRTTK.

The distribution of pharmaceutical preparations can experience several problems, which in fact result in the circulation of counterfeit and illegal pharmaceutical preparations, as found in this study, namely drug sales through an online marketplace, (S). This can lead to the presence of Original but Fake drugs due to the wrong distribution system.

3. Prescription Drug Regulation

Prescription Drugs Ordonation is regulated in the Prescription Drugs Act (St. Number 419 dated December 22 (1949)). Article 3 paragraph (1), which explains that the distribution of drugs/medicinal ingredients G, which deviates from the prescriptions of doctors, dentists, veterinarians is prohibited. Article 8 paragraph (2) states that the distribution of drugs/drug ingredients of G list to consumers may only be in a certain amount. A maximum imprisonment of 6 months or a maximum fine of 5,000 guilders for those who violate Articles 3 and 8 are described in Article 12 paragraph (1) and they may not trade in prescription drugs for a maximum period of 2 years.

Decree of the Minister of Health Number 02396/A/SK/VIII/1989, stipulates that prescription drugs (G list = is gevarlijk = dangerous), which indicates that the distribution of this drugs must be based on a doctor's prescription, marked with a red letter K with a black border on the drug packaging.

The discovery of the circulation of prescription drugs of antibiotics online in the marketplace (S) has violated the policies of the marketplace itself, and violated the Regulation of the Food and

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Drug Supervisory Agency Number 8 of 2020 concerning the supervision of drugs and food that are circulated online

4. Consumer Protection Regulation

Prescription drugs, including antibiotics, must be obtained with a doctor's prescription. As a matter of fact, the purchase of prescription drugs of antibiotics through the marketplace (S) can actually be done without using a doctor's prescription, indicating that they are sold freely. At the time of purchase, consumers do not get PIO regarding information on the rational use of pharmaceutical products, which should be received by consumers should when buying medicine. This condition certainly violates the regulation, as stated in the Law of the Republic of Indonesia No. 8 of 1999 concerning consumer protection article 4(a) which reads "the right to comfort, security, and safety in consuming goods and/or services" and article 4 (c) namely the right to correct, clear, and honest information regarding the condition and guarantee of goods/services.

4. Veterinary Drug Regulation

Circulation of antibiotic drugs for animals should not be arbitrary, and thus the government has regulated it in the Regulation of Minister of Agriculture No. 16 of 2021 concerning Field Studies and Supervision of Veterinary Drugs Article 27 paragraphs 1 and 2 regarding the supervision of antibiotics for therapeutic classes & mixing of antibiotics in animal feed carried out by the Drug Supervisor Animals and Feed Quality Supervisor. Article 70 (b & c) stipulates that the use and mixing of feed with antibiotics that are not in accordance with the veterinarian's prescription and do not have a responsible veterinarian will be subject to administrative sanctions in the form of a written warning.

In this study, it was found that the seller's account of antibiotic type of veterinary drugs did not meet the standards and rules set by the government. However, the existing regulations have not been able to regulate the sale of veterinary drugs online, because these regulations only apply to drug sellers in petstores/veterinary clinics that operate offline.

CONCLUSION

From this observation, this research concludes the following:

1) There are countless numbers of e-commerce accounts that sell antibiotics in the marketplace (S),
2) Classes of antibiotics sold include tetracycline, penicillin, quinolones, cephalosporins, other groups and aminoglycosides,
3) The drugs in the marketplace (S) are sold in the dosage forms of solutions, powders, tablets, capsules, injections, and ointments,
4) The most widely sold type of antibiotic is drug product with a trademark.
5) The government must immediately reform the laws/regulations on prescription drugs.
6) Existing laws are too old and inflexible for the condition today (digital age).

SUGGESTION

From this finding, it is expected that other researchers can conduct further research regarding the sale of antibiotics as prescription drugs in the marketplace/other social media.

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