

## Profile of Antibiotic Use in ENT Polyclinic at Siti Rahmah Islamic Hospital Padang in 2018

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### ABSTRACT

The purpose of this study was to analyze the profile of antibiotic use in the ENT polyclinic at Siti Rahmah Islamic Hospital Padang in 2018. This study used a qualitative type of research with categorical descriptive analysis and a cross sectional research design. This approach was used to find out the magnitude of the problem from the Profile of Antibiotic Use in the ENT Poly at the Siti Rahmah Islamic Hospital Padang in 2018. The population that was the target of the study were patients using antibiotics in the ENT poly. Based on the description of the profile of antibiotic use in the ENT polyclinic at the Siti Rahmah Padang Islamic Hospital in 2018, it can be concluded that: 1) The majority of antibiotic users are women; 2) The majority of antibiotic users are 26-45 years old; 3) The majority of diagnoses were tonsillitis; 4) The majority of antibiotics are cefixime; and the majority of drug dosage forms are tablets.

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### 1. Introduction

ENT disease is a disease that is often found in Indonesia and is often found in the community. For some people, many do not know the symptoms of ear, nose, throat disease. Several types of diseases commonly found in the community are: tonsillitis, pharyngitis, nasopharyngeal cancer, nasal polyps, sinusitis, diphtheria, vertigo and others (Tong et al., 2015). Medically, the community is not trained so that if they experience symptoms of the disease they are suffering from, they may not necessarily be able to understand the ways to overcome them (Palandeng et al., 2014). Symptoms that can actually be treated early become a more serious disease due to lack of knowledge.

Symptoms of disease in the ear, nose and throat are if the voice is hoarse and painful when speaking or swallowing then the disease is contract ulcers (painful sores on the mucous membrane where the vocal cords are), pharyngitis has symptoms: fever, pain when speaking or swallowing, sore throat, neck pain and swollen lymph nodes (Farokah, 2007). In the management of a disease, the use of antibiotics is to prevent or treat infection. Antibiotics need to be considered considering the possibility of therapy failure, one of which is antibiotic resistance. Antibiotics are a class of compounds, both natural and synthetic, which have the effect of suppressing or stopping a biochemical process in organisms, especially in the process of infection by bacteria (Sakka et al., 2011).

The administration of antibiotics in conditions that are not caused by bacteria is commonly found in daily practice, both in puskesmas (primary), hospitals, and private practice. Prescribing antibiotics by doctors in conditions that are not caused by bacteria is still widely found both in hospitals and private practice until now (Raju & Selviani, 2012). The selection of antibiotics must be based on information about the spectrum of bacteria that cause infection, results of microbiological examinations, pharmacokinetic and pharmacodynamic profiles of antibiotics and affordable prices. Factors that need to be considered in giving antibiotics in terms of the clinical condition of the patient are emergency or non-emergency, patient age, renal insufficiency, liver function disorders, granulocytopenia and blood clotting disorders (Vogan et al., 2000).

The use of antibiotics is now a lot to treat a disease caused by a microorganism. This happens because the ability of antibiotics to treat and prevent infectious diseases has caused a tremendous increase in their use (Abasaeed et al., 2009). Antibiotics are used inappropriately or irrationally for unnecessary diseases and there is a tendency for antibiotics to be purchased over-the-counter or without a doctor's prescription, as a result

there has been the development of bacteria that are resistant to antibiotics (Loikas et al., 2013).

Antibiotic resistance has become a worldwide problem. According to the WHO in 2012, more than 50% of medicines are prescribed and made incorrectly, many medicines being prescribed when they are not needed. Rational use of drugs has contributed to the high quality of health services. Irrational use of drugs will carry risks and lead to wastage of drug supplies in the health care system (Krzeski et al., 2001).

The high prevalence of self-medication with antibiotics was found in adults (44%) and children (34%) by various factors studied in Saudi Arabia. Percentage of self-medication with antibiotics found in India (18%), Sudan (48%), and Jordan (40%).<sup>39</sup> A study conducted in Brazil showed that 74% of the 107 pharmacies visited, including those registered by Municipal Health Secretary, selling antibiotics without a doctor's prescription. Especially for the Southeast Asia region, the use of antibiotics is very high even more than 80% found in many provinces in Indonesia. Data from the Ministry of Health of the Republic of Indonesia (2011), Indonesia is ranked 8th out of 27 countries with a high burden of drug immunity against Multidrug Resistance (MDR) germs in the world. According to research, 92% of Indonesians do not use antibiotics properly.<sup>8</sup> The results of the Antimicrobial Resistant in Indonesia (AMRIN-Study) study proved that from 2,494 individuals in the community, 43% of *Escherichia coli* were resistant to various types of antibiotics, including: Ampicillin, Co-trimoxazole and Chloramphenicol.

Antibiotic-resistant germs have been found throughout the world, namely Methicillin-Resistant *Staphylococcus Aureus* (MRSA), Vancomycin-Resistant Enterococci (VRE), Penicillin-Resistant *Pneumococci*, *Klebsiella pneumoniae* which produce Extended-Spectrum Beta-Lactamase (ESBL), Carbapenem-Resistant *Acinetobacter baumannii* and Multiresistant *Mycobacterium tuberculosis*.

## 2. Methods

This research uses qualitative research with categorical descriptive analysis and cross sectional research design. This approach was used to find out the magnitude of the problem from the Profile of Antibiotic Use in the ENT Poly at the Siti Rahmah Islamic Hospital Padang in 2018. The population that was the target of the study were patients using antibiotics in the ENT poly.

The sample of this study were patients who used antibiotics who visited the ENT poly at Siti Rahmah Padang Islamic Hospital in 2018 who met the inclusion criteria and exclusion criteria, as follows: 1) Inclusion criteria in this study were: a) In the medical records of patients diagnosed disease in the ENT clinic; b) The medical record contains complete data regarding gender, age, diagnosis, and the type of antibiotics that are often used; 2) Exclusion criteria in the study were: a) Incomplete medical record data; and b) Lost medical record data. The sample selection in this study used a simple random sampling technique. The type of data used in the study is secondary data.

The stages of the study were carried out as follows: a) Subject selection was carried out by collecting all medical record data of patients using antibiotics at the ENT poly at Siti Rahmah Islamic Hospital Padang in 2018; b) Conducting observations focused on gender, age, diagnosis, types of antibiotics, and the most drug dosage forms given to patients at the ENT polyclinic at Siti Rahmah Islamic Hospital Padang in 2018; c) Make immediate records related to the variables to be studied; d) Taking documentation with the camera; and e) Perform data processing and data analysis. The data that has been obtained from medical records is then processed and analyzed using a computer using descriptive statistical methods so that the frequency and percentage of antibiotic use profiles in the ENT poly at Siti Rahmah Islamic Hospital Padang in 2018 are obtained.

## 3. Result and Discussion

### 3.1 Description of Research Respondents

The results showed that the distribution of the frequency of antibiotic use in the ENT polyclinic at the Siti Rahmah Islamic Hospital in Padang based on the categories of gender, age, diagnosis, type of antibiotics, dosage forms that are often used can be described as follows:

**Table 1.**  
Frequency distribution of respondents based on various categories

Category		f	Percentage
Gender	Male	26	28.9
	Female	64	71.1
Age	5-11 year	7	7.8
	12-25 year	25	27.8
	26-45 year	30	33.3
	46-65 year	22	24.4

	Category	f	Percentage
	>65 year	6	6.7
	Ca nasofaring + secondary infection	1	1.1
	Acute Rhinitis	16	17.8
	OE AD AS	17	18.9
	Acute Faringitis	3	3.3
	OMA AD AS	1	1.1
	OMSK	11	12.2
Diagnosis	Oomikosis + secondary infection	5	5.6
	Paraotitis	2	2.2
	Polip nalase – Acute Rhinitis	1	1.1
	Rhinosnusitis	4	4.4
	Sinusitis	6	6.7
	Suspect nodul mola	4	4.4
	Tonsilitis	1	1.1
	Amoxicilin	3	3.3
	Cefadroxil	1	1.1
Types of Antibiotics	Cefixime	67	74.4
	Cipofloxacin	13	14.4
	Clindamisin	1	1.1
	Sefuroksim	1	1.1
	Tarivid Otic	4	4.4
Drug dosage forms that are often used	Syrup	5	5.6
	Tablet	81	90.0
	Guatatae	4	4.4

Source: data proceed

Based on table 1, it can be concluded that of the 90 patients at the ENT polyclinic, the most gender was female, namely 64 people (71.1%) at the Siti Rahmah Padang Islamic Hospital based on gender in 2018.

Furthermore, 90 patients in the ENT poly, the most age were 26-45 years, namely 30 people (33.3%) at the Siti Rahmah Padang Islamic Hospital based on age in 2018. While 90 patients in the ENT poly, the most diagnosis was tonsillitis, which was 18 people. (20.0%) in Siti Rahmah Islamic Hospital Padang by age in 2018.

While 90 patients were in the ENT poly, the most type of antibiotic was Cefixime, namely 67 people (74.4%) at the Siti Rahmah Islamic Hospital in Padang based on age in 2018. 82 people (90.0%).

Based on research from 90 patients at the ENT polyclinic, the most gender was female, namely 64 people (71.1%) at Siti Rahmah Islamic Hospital Padang based on gender in 2018. The results of this study are in line with previous research conducted by Setiawan (2014) In the ENT Polyclinic at the University of Muhammadiyah Malang Hospital, the results showed that the most patients were women, namely (65.95) and Predani's research (2017) on chronic suppurative otitis media patients at the ENT-KL polyclinic of Sanglah Hospital in 2013 obtained the most patients were women, namely ( 56.5%).

Research by Vogen et al (2000) Pennsylvania found that from 16 patients with sinusitis in their study, nine patients (56.3%) were found and seven patients (43.7%).45 Krzeski (2001) Poland, in his research on 157 sinusitis sufferers, 88 women (56%) and 69 men (44%).v Nasution (2007), in his study of 30 patients, 18 women (60%) and 12 men patients (40%).

The results of this study are not much different from previous studies which found the most women group compared to men. The large number of female sufferers is possible because there are more women who come for treatment and in general women are more concerned with complaints of illness and come for treatment more quickly. The use of antibiotics is more given to women than men. This is in accordance with Schroder's (2016) study, which found that women aged 16 to 54 years received significantly more prescriptions for cephalosporin and macrolide antibiotics than men, and a study according to Loikas et al., 2013 where the largest gender difference in the prevalence of drug use was for antibiotics. (265.5 patients/1000 women and 191.3 patients/1000 men) followed by thyroid therapy (65.7 patients/1000 women and 13.1 patients/1000 men) and antidepressants (106.6 patients/1000 women and 55 patients). ,4 patients/1000 men). The reason for this discrepancy cannot be fully explained by medical reasons.

Based on research from 90 patients at the ENT polyclinic, the most age was 26-45 years, namely 30 people (33.3%) at Siti Rahmah Padang Islamic Hospital based on age in 2018. The results of this study are in

line with previous research conducted by Posumah (2013) at RSUP PROF. Dr. RD Kandou Manado for the period January 1, 2011–December 31, 2011, the results showed that the most age of patients with clinical suspicion of maxillary sinusitis was at the age of 30–44 years, namely (40%) and Nasution's study (2007) obtained the highest age at 37–46 years (33 years), .3%).

The results obtained by the researchers showed that most of the ages were almost the same and not much different from other researchers. From the data above, it was found that most of the patients were adults. Dalimunthe's research (2010) states that this may be due to the fact that the adult age group is an active age group and is often exposed to pollutants or irritants that may cause or exacerbate ENT problems, so that more patients with the adult age group come for treatment. hospital.

Based on research from 90 patients at the ENT polyclinic, the most diagnosis was tonsillitis, namely 18 people (20.0%) at Siti Rahmah Islamic Hospital Padang based on a diagnosis in 2018. Chronic tonsillitis is the most common disease of all ENT diseases. Based on epidemiological data of ENT disease in seven provinces in Indonesia, the prevalence of chronic tonsillitis is 3.8%, the highest after acute nasopharyngitis 4.6%. Farokah's research (2007) Incidence of chronic tonsillitis at Dr. Hospital. Kariadi Semarang 23.36% and 47% of them are aged 6–15 years.<sup>52</sup> While Sakka's research (2010) at Dr. Wahidin Sudirohusodo Makassar the number of new visits with chronic tonsillitis from June 2008–May 2009 was 63 people.

Tonsils and adenoids hypertrophy that causes airway obstruction during sleep with hypoventilation of the alveoli and hypoxia at night can interfere with physiological and psychological effects. Symptoms include daytime drowsiness, reduced attention, reduced weight and decreased intellectual function. Management of chronic tonsillitis is divided into two, namely conservative and operative. Conservative therapy is carried out to eliminate the cause, namely infection, and overcome disturbing complaints. If the tonsils enlarge and cause airway obstruction, severe dysphagia, sleep disturbances, abscess formation, or are not successful with conventional treatment, then tonsillectomy surgery is necessary. Based on research from 90 patients at the ENT polyclinic, the most type of antibiotic was Cefixime, namely 67 people (74.4%) at the Siti Rahmah Islamic Hospital Padang based on the type of antibiotic in 2018.

This study is not in line with previous research conducted by Bestari (2012) in pediatric patients with ARI at the Outpatient Installation of RSUD "x" in 2010 obtained as many as 42% of patients using the type of drug cefadroxil in the treatment of sinusitis. in the treatment of pharyngitis and sinusitis of pediatric patients at the inpatient unit of Dr. R. Soetijono Blora in 2016 obtained results (8.47%) using cefixime and Dianingati's research (2015) on the analysis of the suitability of prescriptions for national health insurance patients with WHO prescribing indicators 1993 in outpatient pharmacy installations at Ungaran Hospital for the period January - June 2014 The results obtained were as much as (2.70%) the use of antibiotics, the type of cefixime drug.

Cefixime is an antibiotic used to treat bacterial infections of the ear, respiratory tract, and urinary tract infections. This oral medication contains cefixime trihydrate in tablet and syrup form. Cefixime drugs will inhibit the proliferation of bacteria, but not with viruses. Therefore, cefixime is not needed to treat viral infections, such as the flu. This is in accordance with the research conducted by Fuhakka and Virolainen (2006) that the efficacy and safety of cephalosporins in the treatment of patients with various kinds of infections such as Group A Streptococcal pharyngitis, sinusitis, otitis media, bronchitis, pneumonia or bronchopneumonia, urinary tract infections and acute gastroenteritis are generally clinically recovered after treatment with cephalosporins

Based on research from 90 patients at the ENT polyclinic, the most types of antibiotics were tablets, namely 81 people (90.0%) at the Siti Rahmah Islamic Hospital Padang based on drug dosage forms in 2018. The results of this study are in line with previous research conducted by Widyastuti (2012) regarding the Prescribing Profile of Drugs at the Surgical Clinic of Batusangkar Hospital, the results obtained that the most widely prescribed dosage forms were tablets of 83.46%, capsules of 11.33%, syrup of 4.17%, ointments of 0.89% and injections of 0.15%. The tablet dosage form is more practical and easy to use at home for outpatients. The advantages of tablet preparations are that it can mask the unpleasant taste of the drug, ease of dosing, the nature of the tablet is easy to carry, adequate stability, economical compared to other dosage forms and easy to administer and good reception for all patients.

#### **4. Conclusions**

Based on the description of the profile of antibiotic use in the ENT polyclinic at the Siti Rahmah Padang Islamic Hospital in 2018, it can be concluded that: 1) The majority of antibiotic users are women; 2) The majority of antibiotic users are 26–45 years old; 3) The majority of diagnoses were tonsillitis; 4) The majority of antibiotics are cefixime; and the majority of drug dosage forms are tablets.

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