



Evaluation of Medication Errors in Prescriptions Pediatric Patients Are Reviewed from the Prescribing Phase

Elsa Mahardika Putri^{1*}, Fendy Prasetyawan², Anis Akhwan Dhafin³
Universitas Kadiri

Corresponding Author: Elsa Mahardika Putri mahardika.elsa15@gmail.com

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ABSTRACT

Medication error is an error in the administration of drugs or the use drugs that endangers patients and is carried out by health workers, especially in terms of patient treatment services that can actually be prevented. The purpose of this study was to determine the percentage incidence of medication errors in the prescribing phases in the prescription of concoctions of pediatric patients. This study is a non-experimental study with an observational descriptive research design and the collection of prescription data using purposive sampling technique. The result of the research that has been carried out, the incidence of medication errors that most occur in the Sukorame Health Center Pharmacy Installation is in prescribing phase at 93%.

INTRODUCTION

Medication therapy errors, or medication errors, are events that can occur and result in the use of medication that is inappropriate or dangerous for the patient during treatment under the direction of a health worker, patient, or patient's family. Medication errors can be in the form of incorrectly writing a prescription by a doctor, incorrectly screening a prescription by a pharmacist, errors in preparing and administering drugs by a pharmacist, and errors in using drugs by patients (Firdayanti, 2020).

Medication errors can occur at every stage of the treatment process, including the prescribing phase, transcribing phase (prescription screening), dispensing phase (preparation and delivery of medication), and administration phase (use of medication by the patient). Reporting from the Institute of Medication (IOM) states that as many as 32–69% of medication errors are events that can actually be prevented (Indrasari, 2020).

A medication error, as defined by Minister of Health Regulation Number 11 of 2017, is an error in the administration of medication and medical equipment that puts the patient at risk of harm or injury. Therefore, a medication error is an occurrence that poses a risk to patient safety as well as harming the patient. Health professionals do this duty, particularly when providing patient pharmaceutical services (Ministry of Health, 2017).

In Indonesia, the prevalence of medication error incidents based on national data from the *Persi* (Indonesian Hospital Association) states that medication administration errors are ranked first at 24.8% of the top 10 incidents in hospitals that have ever been reported (Gloria, 2017).

A prescription for a concoction is a medication made by combining or varying the active ingredients. Usually, mixed medications are prepared in dosage forms that are liquid, solid, or semisolid. According to research by Hilandou (2008), mistakes made during reading prescriptions were shown to be the most common cause of medication errors in pediatric patients (3.1%). Concocted prescriptions have a higher risk of medication errors than non-concocted prescriptions, which is why this study was done. Because compound medications are frequently provided to young patients while taking dose appropriateness into account, this research focuses on pediatric patients.

THEORETICAL REVIEW

A concoction prescription is a medicine that is formed by changing or mixing active ingredients. Mixed drugs are usually formulated in liquid, solid or semi-solid dosage form. Prescriptions for compounded medicines are still widely used, this is due to adjusting the dose to the child's weight or age. There are several problems that can be caused by concocted prescriptions, including prescription drugs for children that can cause overdoses or underdoses. The use of inappropriate formulas can be given to children, the wrong composition is chosen and there are medicines that experience decreased stability (Wahyuni, 2019).

Medication error is a preventable event that causes medication services that are dangerous to patients while under the supervision of health workers (Oktianti, 2021).

According to The National Coordinating for Medication Error and Prevention (NCCMERP), medication errors include procedures and systems that include communication between medical personnel, drug prescribing, labeling, packaging and product naming, drug distribution, drug administration, education, monitoring and monitoring. drug use (NCCMERP, 2013).

Medication error in the prescribing phase is an error that occurs when writing a prescription. Because the abbreviations used in special prescriptions are artificial, misuse, misunderstanding and illegible abbreviations can lead to prescribing errors (Rahim, 2019).

Based on research conducted by Siahaan *et al* (2019), the total incidence of errors in the prescribing phase was 33.82%. The highest incidence of medication error in the Prescribing phase is found in the parameters of no address of the prescriber, no SIP of the prescribing doctor, no date of birth or age of the patient, no gender, no weight of the patient, no written diagnosis, no route administration with a total of 984 incidents each or 100% of the total internal medicine prescriptions and was caused by the unavailability of a data entry format or template on the computer or in the MIRSA Enterprise application

Likewise with research conducted by Maulida Astriani and Wempi Eka Rusmana (2021). The results of the research show that there are errors in several parameters that have the potential to cause medication errors. In the prescribing phase, there is no patient medical record number 100%, no birth date/age of the patient 91.64%, no patient gender 100%, no prescription date 49.87%, no doctor's initials 100%, and no drug dosage form 96.77%.

METHODOLOGY

This study uses a cross-sectional, descriptive observational research approach and is not experimental. Prospective data gathering was done. The study was conducted in Kediri City at the Sukorame Community Health Center's pharmacy installation. Prescriptions from pediatric patients who visited the Sukorame Community Health Center in February comprised the study's population. Ninety-six prescriptions from pediatric patients made up the sample.

RESULTS

Data analysis of medication error incidents at the Sukorame Community Health Center

This research was conducted by directly observing 96 prescriptions for pediatric patients.

Table 1. Data on the incidence of medication errors at the Sukorame Community Health Center

Medication Error Incident Phases	Total Recipe	Medication Error		No Medication Error	
		n	%	n	%
Prescribing	96	89	93	7	7

 phase

From table 1 of 96 prescriptions for pediatric patients who were evaluated as meeting the inclusion and exclusion criteria at the Sukorame Community Health Center, there were 89 medication errors with a percentage of 93%.

one of the medication errors that occurs is in the prescribing phase, in this research conducted at the Sukorame community health center, there are 14 indicators that will be assessed, namely illegible prescription writing, no prescription writing date, incomplete or no medical record number, no name of the doctor who wrote the prescription, no doctor's SIP number, doctor's initials, wrong or unclear patient name, incomplete or missing patient weight, incomplete or missing patient age, unclear drug name, incomplete or missing drug concentration, incomplete or no dose given (amount), incomplete or no dosage form.

Based on research data, it was found that the most common medication errors occurring in the prescribing phase were no name of the prescribing doctor, no doctor's SIP number, no dosage form, no dosage concentration, no weight or age of the patient.

Table 2. Analysis of medication error data in the prescribing phase at the Sukorame community health center

Indicators	Total Recipe	Medication Error		No Medication Error	
		n	%	n	%
No doctor's practice permit (SIP) number	96	58	60,41	38	39,58
No name of the prescribing doctor	96	32	33,33	64	66,66
Incomplete or no concentration of the preparation	96	29	30,20	67	69,80
Incomplete or missing patient age	96	14	14,58	82	85,41
Incomplete or missing patient weight	96	8	8,33	88	91,67
Incomplete or no dosage form	96	7	7,29	89	92,70
Incorrect or unclear patient name	96	4	4,16	92	95,83
There is no prescription date	96	2	2,08	94	97,92
Incomplete or missing medical record number	96	2	2,08	94	97,92
Doctor's initials	96	1	1,04	95	98,96
The prescription writing is illegible	96	0	0	96	100
The name of the drug is	96	0	0	96	100

Indicators	Total Recipe	Medication Error		No Medication Error	
		n	%	n	%
unclear					
Incomplete or no dose administered (amount)	96	0	0	96	100
Incomplete or no duration of description	96	0	0	96	100

Based on the Republic of Indonesia Minister of Health Decree Number 129/Menkes/SK/1/2008 concerning Minimum Hospital Service Standards which states that there are no incidents of medication administration errors amounting to 100%. As well as in Minister of Health Regulation Number 58 of 2014 concerning Pharmaceutical Service Standards and supported by Minister of Health Number 74 of 2016 concerning Pharmaceutical Service Standards in

The Public health center stated that the administrative requirements when reviewing prescriptions are that they must include the name of the doctor, the doctor's SIP number and the initials of the doctor writing the prescription. (Minister of Health regulations, 2016).

DISCUSSION

Study which is done in Public health center Sukorame It was found that 33.33% of doctors' names were absent or not listed and 60.41% of doctors' SIP numbers were not included. This incident is also in line with research conducted by Firdayanti with research results of 82.21% for prescriptions that did not include a doctor's name while 7.63% for prescriptions that did not contain a doctor's SIP number. (Firdayanti, 2020). It is important to include the doctor's name and the doctor's SIP number on the prescription because it is necessary to ensure patient safety, namely that the doctor concerned has the right and is protected by law in providing medical therapy to patients.

No name or SIP number included doctor due to pharmacy installation Public health center Sukorame ask to receive a prescription from the doctor who works below shaded by the Sukorame Community Health Center and does not accept prescriptions from other external health racialities. According to Minister of Health Regulation Number />2014 regarding the Community Health Center stated that Public health center health personnel standards for general practitioners as many as 3 people and dentists as many as 2 people. (Permenkes, 2014). However, based on data from the Puskesmas profile book Sukorame has 2 general practitioners and 2 dental specialists works at the Sukorame Community Health Center. Minimum number of doctors with a larger number of patients causing several doctors who do not include the doctor's name or SIP number

Then there was an error in the prescription for a pediatric patient Sukorame Community Health Center because there is no concentration of preparations as large as 30.20%. These results are similar to research conducted by Susanti is 39%. (Susanti, 2013). The concentration of the preparation is a very important part of the prescription, if there is no concentration of the preparation there is a big chance of causing errors because there are several medicines that

have varying concentrations of the preparation. Writing the amount and dosage of medication must be written clearly and precisely to avoid administration errors, because the dosage of the medication itself is the amount or size that is expected to produce a therapeutic effect on the body experiencing the disorder. (Marasabessy, 2021).

In research conducted at the Sukorame Community Health Center, it was found that incomplete prescriptions with an indicator of no weight were 8.33%, while for prescriptions that did not include the patient's age it was 14.58%. The aspect of age and weight is one of the important things in prescriptions, especially in pediatric prescriptions, because it is used as a basis or reference for calculating doses and dosage forms that are suitable for patient treatment.

Error because there is no dosage form in the prescription pediatric mix at the Sukorame Community Health Center was 7.29%. Without dosage forms, it is very bad for patients because shape selection preparations are adjusted to conditions and patient comfort. Drug routes and dosage forms, the drug affects the speed of action, the length of time it works, the intensity of action, the pharmacological response, the bioavailability of the drug, and the correct dose to be given to the patient. The results of no dosage forms are also consistent with research.

Patient's name is a component that can be used to reconfirm the patient's personal data before taking medication. Errors or unclear names of patients at the Sukorame Community Health Center were 4.16%. According to previous research conducted by Susanti, if there is an error in the patient's identity such as name, age, weight, web address or gender, it can have fatal consequences because it affects treatment services as a result of confusing drug prescriptions. In accordance with Minister of Health Regulation Number 73 of 2016 which states that prescriptions need to be written completely and clearly.

The incidence of no prescription writing date in this study was 2.08%. The date the prescription is written is very important because it can maintain the patient's safety when taking the medicine so that the pharmacist can determine whether the prescription can still be served or it is advisable to return to the doctor because it is very likely that the symptoms experienced by the patient are different from the date the prescription was written.

CONCLUSIONS AND RECOMMENDATIONS

The results of research on 96 prescriptions for pediatric patients at the Sukorame Community Health Center Pharmacy Installation stated that medication errors in the prescribing phase were 93%. Several factors influenced the occurrence of medication errors at the Sukorame Community Health Center Pharmacy Installation, such as incomplete prescriptions, less conducive environmental conditions or interruptions. and interference when compounding medication. Several measures to prevent medication errors include screening prescriptions, providing guidance to doctors regarding SOPs for writing prescriptions, storing medications neatly, writing clear labels and double checking before handing over medications as well as providing information communication and education to patients to optimize medical therapy

FURTHER STUDY

It is necessary to conduct medication error research in other phases, namely the transcribing phase, dispensing phase and administration phase

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