

Review: Medication Error in Prescribing and Dispensing Phases on Outpatient

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Review: Medication Error in Prescribing and Dispensing Phases on Outpatient

(Review: Medication error dalam fase peresepan dan dispensing pada Pasien Rawat Jalan)

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ABSTRACT

Background: A medication error is defined as "any preventable event that may cause or lead to inappropriate medication use or patient harm while the medication is in the control of the healthcare professional, patient, or consumer." A medication error might occur at any point during the medication-use process, such as when prescribing the medicines, during dispensing, and when the drug is taken by the patient. **Objectives:** This review focusing on the types of medication errors (MEs) which commonly occurs during prescribing and dispensing phase on the outpatient in Indonesia. **Material and Methods:** Articles related to MEs during prescribing and dispensing phase were collected from DOAJ (Directory of Open Access Journals) and google scholar. The articles were reviewed and analyze to draw conclusions about the common type of MEs mostly occurred on the outpatients. **Results:** There were 10 articles (2003-2020) that have been reviewed, covering the types of MEs, MEs incidents and how to reduce the number of MEs incident. **Conclusions:** Based on the reviewed articles, MEs commonly occurred in the prescribing phase were; incomplete data of patient's on the prescription include address, born date, weight and gender; unclear information on the prescription including, dosage, route of administration, illegible writing; uncomplete data on the doctor's information such as the practise license number wasn't listed, and there were no information on medicine interactions. MEs occurred during dispensing phase that were uncomplete data on the information about how to use, time of using, indication, the amount of the drug given, the side effects, the storage instruction, the strength or the doses of medicine, error in writing etiquette, error in compounding as well as there was no information related what to do if the patient forgot to take the medicines.



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ABSTRACT

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Keywords: Medication errors, Prescribing phases, Dispensing phases, Outpatients.

ABSTRAK

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Latar Belakang: *Medication error* adalah suatu kejadian yang menyebabkan atau mengakibatkan pelayanan kesehatan yang tidak tepat atau merugikan, yang sebenarnya dapat dihindari atau dicegah. Kesalahpahaman yang umum terjadi pada fase peresepan dan dispensing (dokter yang tidak lengkap dalam penulisan resep dan kurangnya ketepatan dan informasi dispensing mengenai pengobatan kepada pasien oleh apoteker). Tujuan: mengidentifikasi kesalahan jenis *Dispensing Phases* dan kesalahan jenis *Prescribing Phases* yang sering terjadi pada pasien rawat jalan berdasarkan studi literatur. Bahan dan Metode: Teknik pengumpulan data menggunakan jurnal yang diperoleh dari *DOAJ (Directory of Open Access Journals)* dan *google scholar*, kemudian dirangkum untuk ditarik kesimpulan. Data yang telah terkumpul selanjutnya diolah dan dianalisis dengan metode menyimpulkan jenis kesalahan pengobatan yang umum terjadi pada pasien rawat jalan. Hasil: Terdapat 10 literatur (2003-2020) yang telah dikaji, terdiri dari tipe *medication error*, *Incident Medication Error* dan cara mengurangi angka kejadian *medication error*. Kesimpulan: Berdasarkan literatur yang diperoleh, kesalahan pengobatan pada fase peresepan yang sering terjadi pada pasien rawat jalan adalah tidak adanya alamat pasien pada resep, tidak ada tanggal lahir pasien atau usia pasien, berat badan pasien, jenis kelamin, tidak ada keterangan dokter tulisan, tidak jelas rute pemberian obat, tidak ada bentuk bentuk sediaan obat resep, tidak tercantum SIP (nomor izin praktek) dokter, inisial dokter, dan interaksi obat. *Medication error* fase dispensing yang terjadi pada pasien rawat jalan adalah tidak adanya informasi tentang cara penggunaan obat, waktu penggunaan, indikasi obat, jumlah obat yang diberikan, efek samping obat, teknik penggunaan obat khusus, cara penyimpanan obat, kekuatan atau dosis obat, kesalahan dalam penulisan etiket kesalahan dalam meracik serta tidak adanya informasi terkait apa yang harus dilakukan jika lupa minum obat.

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Kata kunci: *Medication Error*, *Fase Prescribing*, *Fase Dispensing*, Pasien Rawat Jalan

INTRODUCTION

Pharmacy services are the type of direct services which responsible in upgaring of patient's quality of life and protecting them from unrational use of medicines. Preventing harmful or injury during medication is one the pharmacy services purpose (Timbongol *et al.* , 2016).

ME's is any incidents that happened during medication which could endangering patient's life, resulting in unappropriate health services basically could be prevented during any points of medication process. (Oktarlina and wafiyatunisa, 2017).The institute of medicine (IOM) reports showed that MEs affecting 44,000-98,000 people died from medication error. From this report it was realized that the unexpected incident from medicine use were not only related with the pharmacological effects of the drug, but involving all processes such as, the administration of the prescription for example the doses, the patient identity, delivering how to use the medicines correctly to the patients so that the unexpected events such as wrong patients (exchangeable medicines) could avoided, unappropriate medicine's use led to uneffective therapy, as well improper storage led to deterioration or use of expired products. Based on IOM data, there were about (1.5-15%) medication errors occurs in the prescribing process, in the dispensing phase by the pharmacy (2.1%-11%), giving drug to patients (5%-19%) and when patient use the drug.

MEs mostly occurs in the prescribing and dispensing processes. In this case, pharmacist role is essential in monitoring, detecting and preventing the MEs to improve the quality of patient's life (Patel *et al.*, 2018). Study on MEs at the Mayjend Ryacudu Kota Bumi Hospital on the outpatients showed that ME's occured as much as 65% (Oktarlina and wafiyatunisa, 2017). In line with another study by (Maalengan T, *et al*, 2019) the occurance of MEs during prescribing phase associated with incomplete patient data such as age as much as 80.12%, incorrect dosage form as much as 38.85%, incorrect dose (27.71%), incomplete information on the wiring of precription drugs (6.32%), illegible writing by healthcare professional (3.01%), wrong name (1.20%), incorrect amount of (0.30%), and incomplete information on how to use the medicines (0.30%). MEs occurance in the dispensing phase mostly affecting by wrong administration as much as 8.31%, discrepancy between the number of drugs in the prescription and the number of drugs given 1.81 %, and uncomplete and writing wrong prescription as much as 0.30 (Maalengan T, *et al*, 2019) . The risk factors of prescribing error are the enviromental workplace factors such as disruption and interruption from the patients' family, uncooperative patients, knowledge of the healthcare professional, illegible writing, and and burden overwork (Wafiyatunisa, 2017).

Therefore, in order to improve the pharmacy services, it is important to review the MEs occurance especially in the prescribing and dispensing phase to identify the frequent MEs on the outpatients' medications. By identifying the frequent MEs, pharmacist could prevent the occurance of MEs.

MATERIAL AND METHODS

Materials

Articles related to MEs in Indonesia collected from DOAJ and google scholars.

Methods

Search strategy; the articles were collected from DOAJ (Directory of Open Access Journals) and google scholar, then summarized for drawn conclusion. The key words in this review are Medication Errors, Prescribing Phases, Dispensing Phases, Outpatients. Inclusion criterias in this review are research articles within the last 10 years, reserach articles which discussing the prescription and dispensing phases on the outpatients. While the exclusion criterias were review articles about MEs, research articles discussing the transcribing phase of medication errors and research articles on inpatients.

RESULTS AND DISCUSSION

In this research, the result can be seen at table below

Table 1. Medication errors in research on journals reference

Title	Location (Country)	Type / shape medication errors	Sample size	Research Design
Study of Medication Errors in Services Recipe Non Access Geriatric Patients In Installation Outpatient Pharmacy ULIN Hospital Banjarmasin	RSUD ULIN Banjarmasin. 2010	a. There is no name of doctor b. There is no name of drug c. There is no rule of use d. There is no name of patient e. There is no age of patient f. There is no patient's weight g. There is no amount of drug h. Etiquette no clear i. Without information j. There is no information method usage drug	50 patient prescription sheets	The sampling method was cluster random sampling, and data collection was done prospectively (observation & interview). Data were analyzed descriptively, using prescription service data and supporting data in the form of interviews with patients
Completeness Study Recipe Potential Outpatient Pediatrics bring up Medication Error at Private hospital in Kabupaten Gianyar	Private hospital in Kabupaten Gianyar, 2012	a. How to use b. Name and age patient c. The amount of the medicines d. The doses was not clear e. Combination drug f. Interaction drug	The total of prescriptions that used to be sample was 96 prescriptions	This study was run by using descriptive evaluative method by observing the prescription of some children in hospital at Gianyar regency during February to April 2009. The sample was conducted by accidental sampling

Analysis Of Medication Error Prescribing Phase Of Prescription Pediatric Outpatient In The Pharmacy Installation At Sambas Hospital 2014.	Sambas Hospital, 2014		<ul style="list-style-type: none"> a. Doctor's name b. SIP doctor c. Practice address doctor d. The Date of the prescription e. R/ sign f. Drug name and composition g. Rule usage h. No Initials of the doctor i. Patient name j. Patient address k. Age patient l. There is no patient's weight m. There is no gender of the patient n. How to use the medicine is not clear o. Using uncommon abbreviations 	the sample size used as many as 105 prescriptions	This ⁴ study was a cross sectional design study. Data collection was carried out retrospectively by collection of prescription sheets for outpatient pediatric patients in Sambas Hospital Pharmacy from January to December 2014
Administrative , Pharmaceutical and Clinical Studies Recipe Outpatients at Rumkital Dr. Mintohardjo on the January 2015	Rumkital Dr. Mintohardjo, 2015	Dr.	<ul style="list-style-type: none"> a. Patient name b. Address c. Date born d. illegible writing on the name of the drug e. How to use the drug was not clear f. Initials doctor g. The Accuracy of dose preparation h. Dosage form i. Administration route 	Samples size is 400 prescriptions	a descriptive research and data collection was done retrospectively. The random sampling method was occupied
Evaluation Medication Error In Prescription Patients with Type II Diabetes Mellitus Judging from the Prescribing Phase, Transcribing and Dispensing in the Outpatient Installation of One House North Jakarta	North Jakarta of Hospital, 2017		<ul style="list-style-type: none"> a. There is no initials doctor b. There is no a doctor's SIP c. There is no dosage form d. There is no information on the patient's gender e. Wrong dosage concentration f. Wrong/ no etiquette 	Samples size is 344 prescriptions	This research was an observational study with a cross sectional design on existing prescription data

14	Medication Error Prescribing Phase Polyclinic Outpatient Mayjend Ryacudu Kotabumi	In RSD Maj. Gen. Hm Ryacudu Kotabumi, 2017	In	a. There is no name doctor b. There is no a doctor 's SIP c. Date writing recipe d. R/ sign e. Drug name not clear f. Rule usage g. Concentration / dose preparation h. Dosage form i. The streghth of the dose j. There is no unit dose k. There is no rule use l. There is no adminstration route m. Subscriptio n. There is no information on the name of patient o. There is no information on the age of patient p. There is information on patient's gender	The number of samples studied were 354 prescriptions	This was a cross-sectional descriptive study
8	Observational Study Medication Error Outpatient Pharmacy RSUP Hasan Sadikin Bandung	Of RSUP Dr. Hasan Sadikin Bandung, 2017	In	a. Age b. Type sex c. Body Weight _ d. Body Height e. Dosage form f. The strength of the dose g. How to use the drug h. Number phone of the patient i. Giving information on the name of the drug j. Usage time (drug's timetable) k. Drug Indication	The number of sample was 1100 prescriptions	This study was a cross-sectional observational study to obtain the percentage incidence of medication errors whose results are obtained from outpatient prescription data.
	Treatment Medication Errors For BPJS Participants In Depo Pharmacy Out Patient On Of The Hospital Bandung	Hospital of Bandung, 2018		a. Age of patient b. Body weight c. Body Height d. Dosage form e. Strength / dose preparation f. Rules / ways of use g. Dose h. Duplication i. Interaction j. No recipe number / queue k. Patient name l. Age m. Patient address	The sample size were 226 prescriptions	The research was carried out by observation, data collection was concurrently on prescriptions outpatient

			<ul style="list-style-type: none"> n. Number phone patient o. Drug name p. Indication drug q. Dose r. Not information on how to use the drug s. Dosage form t. Usage time u. Amount drug v. Special technique to use the medication w. No information on how to store the medicines x. Drug's timetable not clear y. No information on what to do if the patient forget to take the medicine z. No information on side effect and how to overcome it 		
Assessment Recipe Outpatient At North Sumatra University Hospital	North Sumatra University Hospital, 2018	<ul style="list-style-type: none"> a. Patient name b. Body weight and height c. Drug name d. Dosage form e. Amount of the drug f. How to use the medicine 	The sample size were 343 prescriptions	The design of study was non-experimental research with prospective descriptive research design.	
Identification Medication Error Prescription Internal Poly Patient In Installation Pharmacy Hospital Bhayangkara Tk. III Manado	Manado Bhayangkara Hospital, 2019	<ul style="list-style-type: none"> a. There is no information on the birth date b. There is no information on dosage form c. There is no information onn concentration / dose d. Illegible writing e. The name of the patinet unclear f. There is no total amount of the drug g. There is no rule use h. Uninstructed medication was prescribed i. The amount of the drugs was not enough j. Wrong etiquette 	Sample size were 332 prescriptions	This research was a descriptive analysis research with prospective data collection.	⁶

Based on the analysis from each research the most frequent cases of MEs could be seen in Table 2.

Table 2. Medication errors in prescribing phase on outpatients.

Reference	Subject Study	Case
(Cahaya <i>et al.</i> , 2010)	Geriatric patients prescriptions in the Pharmacy services for outpatients	50 sheets of geriatric patients prescription were analyzed for MEs occurrence. MEs during the prescribing phase include, incomplete information on the doctor's name (2%), no information about the name of the drug 12%, No information on how to use the medicines (20%), there was no patient's name 2%, There was no information on the age of patient 28% and There is information on the patient's weight 98%.
(Piliarta <i>et al.</i> , 2012)	Outpatient's prescription sheets	The most common MEs occurred in the prescribing phase was incomplete information on how to use the medicines by 76.92%, incomplete information on the patient's name and age 15.3%, total requested drug 7.69%, unclear dose information 3.57%, combination drugs 54.34% and interactions drug by 45.65%.
(Muiz, N., 2015).	Outpatient's prescription sheets	MEs that occurred in the prescribing phase such as ; incomplete information on the name of the doctors, the number of practice legal certificate and illegible writing was 0 %, date writing prescription 53.33%, R/ sign, name and the composition of drugs, how to use the drugs was 0%, no initials doctor 51.43%, no name of patient 0%, no patient; address 84.76%, age patient 0%, no information on the patient's weight was 100%, no there is type sex patient 99.05%, unclear doses was 15.24% and the uncommon abbreviations usage by 15.24%.
(Bilqis, S.U., 2015)	Outpatient's prescription sheets	MEs in the prescribing error phase; no information on the patient's address by 88%, date birth 8.3%, clarity of the name of the drug was 4.8%, hoe to use the drug 3.8%, doctor's initial 0%, Dose preparation 32.8%, dosage form 73% and incomplete description on the administration route was 68%.
(Pernama, 2017)	Outpatient's prescription sheets specifically to type II diabetes mellitus	MEs in patients with diabetes mellitus during the prescribing phase were no doctor's initials by 87%, no information on the doctor's legal practise certificate 84%, no dosage form 4.3%, no gender 4%.
(Oktarlina and Wafiyatunisa, 2017)	Outpatient's prescription sheets	MEs during the prescribing phase was no existence name the doctor listed on the prescription as big as 13%, There was no a doctor's SIP 38.7%, no date of prescription 35.3%, sign r/ 0% , illegible writing 0%, rule usage 1.1% , concentration / dose preparation 53.1%, dosage form 26%, dose giving 0%, There was no unit dose 56.2%, There was no rule of use 100%, There was no administration route 24.6%, subscriptio 0% There is no name patient 0%, There is no age patient 73.3% and no existence type sex listed patient prescribed as big as 81.9%
(Hestiarini <i>et al.</i> , 2017)	Outpatient's prescription sheets specifically outpatient with BPJS assurance	Medication errors that occur in the prescribing phase : The was no information on the age of patient on the prescription as big as 12.27%, gender 37.18%, body weight 4.80% body height 24.14%, dosage form 21.68%, strength preparation 13.4% and no existence rule use as big as 1.73% .
(Kusumahati <i>et al.</i> , 2018)	Outpatient's prescription sheets	400 recipes were analyzed each month for 2 months to identify the occurrence of in the prescribing phase, namely: no existence age patient on prescription by 12.5%, body weight 90.25%, patient's height 100%, dosage form 21.68%, strength / dose 13.41%, rules / how -to use 1.76%, dose 0.13%, duplication 0.88% and interactions by 9.78%.

(Audina, 2018)	Outpatient's prescription sheets	MEs incident in the prescribing error phase no existence name patient by 0.3%, body weight 96.6 %, height 100%, date recipe 2.9%, name drug 10.9%, shape preparation 73.7% and no existence rule method recipe use by 16.6%.
(Maalengan T, <i>et al</i> , 2019)	Outpatient's prescription sheets	A total of 332 prescription were analyzed for MEs in the prescribing phase; no born date of 80.12%, no dosage form 38.85%, no concentration / dose 27.71%, uncomplete writing on the prescription drugs 6.32, illegible writing 3.01%, wrong/ no clear name patient 1.02%, no total drug 0.30%, and no existence rule use on etiquette by 0.30%.

Table 3. Medication errors in dispensing phase on outpatients.

Reference	Subject Study	Incident Medication Error
(Cahaya, <i>et al.</i> , 2010)	Outpatient's Geriatric prescription sheets	50 sheets of geriatric patients prescription were analyzed for MEs on the dispensing phase was; no existence information about total drug as big as 4%, etiquette unclear 10%, without information 20% and There is no information regarding to how to use the drug by 42%.
(Pernama, 2017)	Outpatient's prescription sheet on type II diabetes mellitus	Concentration dispensing phase different by 1.45%, illegible writing/ uncomplete label as big as 0.58%.
(Kusumahati <i>et al.</i> , 2018)	Outpatient's prescription sheets	400 recipes were analyzed each month for 2 months to identify the occurrence of in the Dispensing phase; There was no number recipe / queue by 0%, name patient 0%, age 98.75%, address patient 96%, number phone patient 0%, name drug 0%, indication of drug 0%, dose 93.75%, no information on how to use the drug 24%, dosage form 99%, Timing 50%, amount of medicine 99.95%, route of administration 100%, no information on medicines' storage 100%, no information on the timetable for taking the next drug 98%, no information on what to do if the patient's forget to take the drug 100 and no information about side effects of the medicine and how to handle the side effects by 100%.
(Maalengan T, <i>et al</i> , 2019)	Outpatient's prescription sheets	MEs in the Dispensing phase were; wrong administration route 8.13%, inappropriate amount of medicines 1.81% and illegible writing/ uncomplete label by 0.30%.

On these table below summarized common MEs and how to prevent it (Table 4).

Table 4. Common MEs and how to prevent it

Medication errors	Case / incident	How to reduce the number of incidents
Prescribing phase (Pernama, A. M. (2017)).	<ol style="list-style-type: none"> 1. Incomplete patient's address 2. No information about the age of patients 3. No Information about weight of patient 4. No information about about gender of patient 5. illegible writing 6. Incorrect route of administration 7. Incorrect dosage form 8. No information reganrding to the legal practise sertificate number (SIP) 9. Initials doctor 10. Drug interactions 	MEs in prescribing occurred as the consequences of the physicians careless in writing the identity of the patients and the uncomplete information on of the prescription sheets. To handle this, the pharmacist should confirm all the missing information to physician so that the MEs regarding to prescription phase could be avoidable (Pernama, A. M. (2017)).
Dispensing phase (Pertiwi, SM., 2014)	<ol style="list-style-type: none"> 1. Incomplete information on thet instruction use of drug 2. Timing (drugs' timetable), drug indication 3. The amount of the drug 4. Side effects 5. Specific Technical use of special drugs 6. How to store the drug 7. Strength or dose drug 8. Error in writing etiquette /label 9. Error in compounding 10. incomplete information on what to do if the patient forget to take the medicine. 	<p>In this phase, pharmacists play an important role in managing patient prescriptions and conveying all information needed by patients. Therefore, errors in the dispensing phase can be minimized by further optimizing services to patients, to prevent errors in drug taking, the storage of medicinal products such as the LASA drug category is carried out separately. The steps taken to prevent medication errors in the dispensing phase are (Pertiwi, SM., 2014):</p> <ol style="list-style-type: none"> 1. Verify and screen prescriptions by pharmacists 2. Confirm with the doctor about the prescription if something is not clear 3. Write a clear and correct prescription 4. Confirm with pharmacist regarding etiquette 5. Research before taking medicine 6. Review and check prescription drugs

Pharmacy services at the moment have shifted their orientation from drugs to patients referring to pharmaceutical care services. As a consequence of these changes in orientation, pharmacists are required to improve knowledge, skills and behavior to be able to carry out direct interactions with patients. These forms of interaction include providing information, monitoring drug use and knowing the end goal as expected and well documented. Pharmacists must understand and be aware of the possibility of medication errors in the service process. Therefore, pharmacists in carrying out practices must be in accordance with existing standards to avoid the occurrence of this. Pharmacists must be able to communicate with other health workers in establishing therapies to support rational drug use. In an effort so that pharmacists can carry out pharmaceutical services well, The Directorate General of Pharmacy Services and Medical Equipment of the Ministry of Health in collaboration with the Indonesian Bachelor of Pharmacy Association (ISFI) to establish standards of pharmaceutical services in

pharmacies to ensure the quality of pharmaceutical services to the community (Health Ministry of Indonesia, (2004).

The aspect in the completeness of the prescription that was not listed the most was the patient's weight. This may be due to the doctor's habit of not including the patient's weight on the prescription, weight is also one of the important aspects that can be used to calculate doses especially for children, on the other hand the age of patient age is also important aspect affecting the accuracy of medication to achieve the desired therapeutic effect (Muiz. N.,2015).

It is important to clearly stated the route of administration of the medicine on the prescription to prevent harmful treatment because of incorrect route of administration. For example for specific ointment it is best to write down the instruction use "apply a small amount on the affected skin area" (Maalengan T, *et al*, 2019).

The physicians' 's name, practice license number (SIP), address, telephone, initials or signed hand as well as the date are important in writing prescription so that when the Pharmacists find MEs while screening the prescription such as incorrect dosage form, stability, incompatibility, method, duration and route of administration, they could immediately confirm the physician. The existence of the SIP of the doctor may affecting the patient trust, as they feel more safe to consult their treatment to the legal physicians (Bilqis, 2015).

Writing the amount, dose and dosage form of the drug should be clear to prevent incorrect dose, strength and dosage form. A drug could be in a different dosage form and vary in dose. Write down the clear dosage unit will lead to the desired therapeutic effect therefore improving the health of the patient (Pemama, 2017).

Another type of prescribing error is the prescribing of several drugs which can result in an interaction between drugs so that the therapeutic goals cannot be obtained optimally. This needs to be confirmed to the physicians, because drug interaction might lead to toxicity or reduces the effectiveness of the drug (Audina, 2018).

The majority of the causes of medication errors in the dispensing phase are the crowded pharmacy situations because there are a lot of patients, so sometimes there is a problem with a lot of information that should be conveyed to the patient, such as: for drugs that are not taken all of them and given a copy of the prescription, it is necessary to be informed that there are remaining drugs that have not been taken. or must be redeemed at another pharmacy, what to do if you forget to take your medicine, and information on side effects that may be caused by the use of certain drugs also need to be informed beforehand so that patients do not panic when the side effects are found, such as the use of rifampicin.

Provision of information related to drug storage is also essential so that the drug remains in good condition to exert the desired therapeutic effect when consumed (Cahaya *et al.*, 2010).

The large number of drug items given to patients sometimes makes patients confused, so that providing information related to the number of drugs for each item, time of use, method of use, and drug indications is very necessary, so that patients will take the drugs properly (Cahaya *et al.*, 2010)

Prevention of medication errors can be done by educating the healthcare professional on the risk factor of MEs, the impact on the therapeutic outcomes, preparing organized treatment system for the outpatients medication, educate pharmacist to upgrade their role in community settings (Ulfah and Mita, 2017). MEs in prescribing occurred as the consequences of the physicians careless in writing the identity of the patients and the uncomplete information on of the prescription sheets. To handle this, the pharmacist should confirm all the missing information to physician so that the MEs regarding to prescription phase could be avoidable. In this phase, pharmacists play an important role in managing patient prescriptions and conveying all information needed by patients. Therefore, errors in the dispensing phase can be minimized by further optimizing services to patients, to prevent errors in drug taking, the storage of medicinal products such as the LASA drug category is carried out separately. The steps taken to prevent medication errors in the dispensing phase are: Verify and screen prescriptions by pharmacists, Confirm with the doctor about the prescription if something is not clear, Write a clear and correct recipe, Confirm with pharmacist regarding etiquette, Research before taking medicine and Review and check prescription drugs.

CONCLUSION

Medication errors in the prescribing phase that often occur in outpatients are the absence of the patient's address on the prescription, the absence of the patient's date of birth or the patient's age, the patient's weight, gender, illegible writing, unclear route of drug administration, incorrect dosage form, incomplete information on the drug preparations on the prescription, the absence of the doctor's SIP, the doctor's initials, and drug interactions. Medication errors in the dispensing phase that occur in outpatients are the absence of information regarding instructions on how to use drugs, time of use, drug indications, number of drugs given, side effects of drugs, techniques for using special drugs, storage methods for drugs, strength or dosage of drugs, errors in writing etiquette, errors in compounding and the absence of information regarding what to do if the patients forget to take their medicine.

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CONFLICT OF INTEREST

No conflict of interest

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