

Analysis of administrative-pharmaceutical completeness on patient prescriptions at Puskesmas X, Sorong City

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ABSTRACT

Prescription completeness is an important indicator in pharmaceutical services because it is related to therapeutic accuracy and patient safety. Incomplete prescriptions may increase the risk of medication errors during drug preparation and administration. This study aimed to determine the level of administrative and pharmaceutical completeness of patient prescriptions at Puskesmas X, Sorong City. This research used a descriptive observational method with a retrospective approach involving 1,572 patient prescriptions selected using a total sampling technique. The assessment was conducted based on the standards of the Indonesian Ministry of Health Regulation Number 73 of 2016 and Number 58 of 2014. The results showed that all prescriptions (100%) were categorized as incomplete. In the administrative aspect, patient name and prescription date reached 100% completeness, while patient height, doctor's practice license number, and doctor's phone number showed 0% completeness. Doctor's initials/signature were found in 60.8% of prescriptions. In the pharmaceutical aspect, drug name, stability, and compatibility reached 100% completeness, while dosage form and drug strength reached 70.6% and 69.3%, respectively. The study concluded that pharmaceutical completeness was better than administrative completeness; however, prescription writing at Puskesmas X, Sorong City still, did not meet pharmaceutical service standards.

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INTRODUCTION

A prescription is a written request from a doctor to a pharmacist to prepare and deliver medication to a patient, both in conventional and electronic form. In healthcare practice, prescriptions not only serve as a means of therapeutic communication between doctors and pharmacists, but also as legal documents that have legal and patient safety implications (Ulandari et al., 2024; Yuniatri et al., 2025). Each prescription must be written in a complete, clear manner and in accordance with applicable standards in order to ensure the accuracy of therapy and minimize the risk of medication error (Anggraini et al., 2022; Hardia, 2023).

Prescription completeness is one of the important indicators of the quality of pharmaceutical services. In general, the completeness of prescriptions is divided into two main aspects, namely administrative and pharmaceutical. The administrative aspect includes the patient's identity, such as name, age, gender, address, and clinical parameters, such as weight, and the identity of the doctor, such as the doctor's name, Practice License (SIP) number, practice address, signature or initial, and the date of prescription writing. The pharmaceutical aspect includes drug-related information such as the name of the drug, the form of the preparation, the strength or dosage of the drug, the amount of the drug, the rules of use, the stability, and the compatibility of the drug (Permenkes RI, 2016). These two aspects complement each other in ensuring the safety, effectiveness, and legality of drug use in patients (Aripin et al., 2024; Lloyd et al., 2021; Ph, 2019; WHO, 2016).

Incompleteness in prescribing can cause various problems in health services. Incomplete information has the potential to cause errors in the interpretation of prescriptions by pharmacists, errors in the preparation of drugs, and errors in administering doses to patients. This condition can increase the risk of medication error, which has an impact on patient safety and can even cause serious side effects. Incomplete prescriptions can also weaken the function of prescriptions as legal documents that are the basis for the accountability of medical personnel and pharmaceutical personnel (Hardia, 2023; Paulus & Hardia, 2025; WHO, 2019).

Previous research has shown that prescription incompleteness is still a common problem in healthcare facilities. Research conducted by Suharwinda et al. (2023) shows that administrative, pharmaceutical, and clinical incompleteness is still found in drug prescriptions at Puskesmas X, Sungai Penuh City (Suharwinda et al., 2016). A similar thing was also reported by Elista (2025), who stated that no prescription meets 100% completeness, with a dominant lack of patient and doctor identity (Elista, 2025). Hardia's (2023) research in Sorong City shows that administrative components such as weight, patient address, and doctor's SIP are the most often not included in prescriptions (Hardia, 2023).

This phenomenon indicates a gap between the established standards and field practice. Although regulations related to prescription writing have been regulated in Permenkes No. 73 of 2016 and Permenkes No. 58 of 2014, their implementation is still not optimal. Some factors suspected to affect this condition include the high workload of medical personnel, limited service time, a lack of support systems such as electronic medical records, and low supervision of prescription-writing compliance. In crowded service situations, medical personnel tend to prioritize therapeutic aspects rather than administrative completeness, which is considered less urgent.

Puskesmas, as a first-level health service facility, has a strategic role in providing comprehensive health services to the community. The high number of patient visits and limited resources at the Puskesmas can affect the quality of services, including writing prescriptions. Evaluation of the completeness of prescriptions at the Health Center is important as an effort to improve the quality of pharmaceutical services and ensure patient safety. The evaluation of the completeness of prescriptions at the Community Health Center (Puskesmas) as a primary health service facility is very urgent and has a crucial role in ensuring patient safety, therapeutic effectiveness, and the quality of pharmaceutical services. The completeness of the prescription is not only related to the administrative aspect, but also an important part of preventing medication errors that can have an impact on therapy failure and drug side effects. Thus, the evaluation of the completeness of prescriptions in the Puskesmas is not only important but also an urgent need to improve the quality of primary health services and overall patient safety. Overall, incomplete prescriptions can cause: a decrease in the quality of primary health services, low patient satisfaction, increased service costs due to therapy errors, and an increase in the incidence of medication errors that can actually be prevented. Therefore, the evaluation of prescription

completeness is an important part of pharmaceutical service standards at the Health Center to ensure the rational, safe, effective, and quality use of drugs.

Based on this background, this study aims to analyze the level of administrative and pharmaceutical completeness of patient prescriptions at Puskesmas X, Sorong City. The results of this research are expected to be evaluation materials for health workers and management in improving compliance with prescription writing standards, so as to support safer, more effective, and quality health services.

RESEARCH METHOD

This study uses a quantitative method with a type of descriptive observational research and a retrospective approach that aims to assess the level of administrative and pharmaceutical completeness in patient prescriptions at the Puskesmas x Sorong City. The retrospective approach was carried out by examining the prescription documents that had been served by the pharmaceutical installation during the study period.

The population in this study is all patient prescriptions served at the pharmacy installation of Puskesmas X, Sorong City. The sampling technique uses the total sampling method, where all recipes that meet the inclusion criteria are used as research samples. Based on the results of the data search, the number of recipes analyzed was 1,572.

The data studied were original prescriptions from patients that had been processed by pharmaceutical installations. The prescription analyzed must meet the inclusion criteria, namely be legible, include the identity of the patient and doctor, and have drug therapy information. Prescriptions that are illegible, damaged, or physically incomplete were not included in the study. Prescription review was carried out directly from the prescription archive at the pharmacy installation of Puskesmas X, Sorong City. Each prescription is checked based on two categories of completeness, namely administrative and pharmaceutical, in accordance with the standards set in the Regulation of the Minister of Health of the Republic of Indonesia Number 73 of 2016 concerning Pharmaceutical Service Standards in Pharmacies and the Regulation of the Minister of Health of the Republic of Indonesia Number 58 of 2014 concerning Pharmaceutical Service Standards in Hospitals. Overall, the use of Permenkes Number 73 of 2016 and Permenkes Number 58 of 2014 as an instrument for assessing the completeness of prescriptions in Puskesmas can be carried out if they consider the relevance of indicators, characteristics of primary services, and evaluation objectives. However, the main reference should still be to use the special pharmaceutical service standards for the Health Center so that the assessment results are more precise and in accordance with regulations.

The administrative components assessed include the patient's identity, such as the patient's name, age, gender, weight, height, and address, as well as the doctor's identity, which includes the doctor's name, Practice License (SIP) number, practice address, telephone number, doctor's initials or signatures, and the date of prescription writing. The pharmaceutical components studied include drug name, dosage form, drug strength, drug amount, stability, and drug compatibility.

All data collected were then analyzed descriptively by calculating the frequency and percentage of completeness of each component assessed. The results of the analysis are presented in the form of distribution tables and narratives to provide a comprehensive overview of the level of administrative and pharmaceutical completeness of patient prescriptions at Puskesmas X, Sorong City.

RESULTS AND DISCUSSIONS

This study was conducted retrospectively on patient prescription data that had been served at the pharmacy installation of Puskesmas X, Sorong City. Data collection was carried out in the research period with a total of 1,572 prescriptions that met the inclusion criteria. All prescriptions were

analyzed using the total sampling method with an assessment of administrative completeness (12 components) and pharmaceuticals (6 components) according to applicable standards.

Based on the results of the overall analysis of the completeness of the recipe, it was found that there was no recipe that met all the components of the completeness set. This is due to the fact that there are still several components that are never listed in the prescription, such as the patient's height, the doctor's Practice License (SIP) number, and the doctor's phone number. All of the analyzed recipes were categorized as incomplete recipes. The overall distribution of the level of completeness of the prescription can be seen in Table 1.

Table 1. Completeness of patient prescriptions at Puskesmas X, Sorong City

Categories Recipes	n	%
Complete recipe	0	0
Incomplete recipe	1,572	100

Based on Table 1, there is no recipe that meets all the completeness criteria. All of the recipes analyzed fall into the incomplete category because there is still one or more components that are not listed.

Table 2. Recipe completeness levels based on administrative aspects

Administrative Components	Complete (n)	Complete (%)	Incomplete (n)	Incomplete (%)
Patient's name	1,572	100	0	0
Patient's age	1,571	99.9	1	0.1
Gender	1,502	95.5	70	4.5
Body Weight	1,490	94.8	82	5.2
Height	0	0	1,572	100
Patient address	1,565	99.6	7	0.4
Doctor's name	1,454	92.5	118	7.5
Doctor's SIP No.	0	0	1,572	100
Doctor's practice address	1,571	99.9	1	0.1
Doctor's phone number	0	0	1,572	100
Doctor's initials	955	60.8	617	39.2
Prescription date	1,572	100	0	0

Based on Table 2, it can be seen that some administrative components, such as the patient's name and the date of the prescription, have been fully listed on the entire prescription. The patient's age, patient address, and doctor's practice address also indicate a high level of completeness. Some components still have a low level of completeness, especially the doctor's initials and the doctor's name. The components of the patient's height, the doctor's SIP number, and the doctor's phone number were also not included in all the prescriptions analyzed.

Table 3. Prescription completeness level based on pharmaceutical aspects

Pharmaceutical Components	Complete (n)	Complete (%)	Incomplete (n)	Incomplete (%)
Drug name	1,572	100	0	0
Form of the preparation	1,110	70.6	462	29.4
The strength of medicinal preparations	1,090	69.3	482	30.7
Number of drugs	1,571	99.9	1	0.1
Stability	1,572	100	0	0
Compatibility	1,572	100	0	0

Table 3 shows that most of the pharmaceutical components have been well met, especially in the drug name, drug quantity, stability, and compatibility, which have a level of completeness of almost or reaching 100%. Incompleteness is still found in the components of the dosage form and the strength of the drug, so drug-related information has not been fully included in the prescription.

The results of the study showed that all the analyzed recipes did not meet the completeness criteria thoroughly, so 100% of the recipes were categorized as incomplete. This shows that the writing of prescriptions at Puskesmas X, Sorong City, is not in accordance with the standards of Permenkes No. 73 of 2016 and Permenkes No. 72 of 2016 (Permenkes RI, 2016).

In the administrative aspect, the most frequently listed components are the patient's name (100%) and the date the prescription was written (100%). Other components, such as the patient's age (99.9%), the patient's address (99.6%), and the doctor's practice address (99.9%), are also very high in completeness. This suggests that the basic identity of the patient is still the most important part of prescription writing. Hardia's (2023) research at the Sorong City "P" Pharmacy shows that doctors' SIP numbers and some patient clinical parameters are still often not included in prescriptions (Hardia, 2023). Another study conducted by Ernifan et al. (2026) at the Pharmacy Kimia Farma A. Yani, Sorong City, also showed the same thing, where the doctor's SIP number was only listed at 11.1% and the doctor's phone number at 4.6%. This result is lower than in this study, because in this study, the component is not even listed at all (0%) (Ernifan et al., 2026). Marselinda and Elvionita (2025) reported that based on the results of screening the completeness of prescriptions on 75 prescription sheets for outpatient pediatric patients at the Air Dingin Health Center, the administrative suitability of pediatric patient prescriptions in the categories of patient name, patient age, patient gender, unit of prescription origin, and date of prescription obtained the highest percentage value, which was 100%. However, the lowest percentage is found in the doctor's paragraph (80%), the patient's weight, and the doctor's name is obtained 85%. Then, for the results of the research on the suitability of pharmaceutical prescriptions for pediatric patients, 100% have been compliant. The results of the study concluded that there was an administrative discrepancy in the completeness of the prescription section, but pharmaceutically it was appropriate (Marsellinda & Elvionita, 2025). Khasana's research (2023) at one of the health centers also found that doctors' initials and SIP numbers are still often not listed, and this is in line with the results of this study (Khasanah, 2023).

In addition, several other administrative components are also still low, such as doctor's initials (60.8%), while the patient's height, doctor's SIP number, and doctor's phone number are not listed at all (0%). This shows that the legality aspect and additional patient data are not yet the main concerns in prescription writing. Research by Elista (2025) at Dadi Keluarga Ciamis Hospital also shows that doctors' SIP numbers are often not listed (more than 80% of prescriptions), and patient data is also incomplete (Elista, 2025).

This incompleteness can increase the risk of medication error. WHO (2019) explains that incomplete prescription information can lead to errors in treatment (WHO, 2019). Some studies report that a lack of prescription information can affect the process of checking and administering medications. In addition, the absence of a doctor's SIP number can also reduce the legal force of the prescription. Some studies report that a lack of prescription information can affect the process of checking and administering medications. In addition, the absence of a doctor's SIP number can also reduce the legal force of the prescription (Kumorowani et al., 2024; Modi et al., 2022; Subagya et al., 2021).

This low completeness is likely to be influenced by high workloads, limited service times, and a lack of supervision. A high workload can affect the completeness of prescriptions, but indirectly can lead to time constraints so that health workers are more focused on treatment than on administration (Imba et al., 2026; Wirajaya, 2019). In the pharmaceutical aspect, the completeness of the prescription is better. Components such as drug name, drug amount, stability, and compatibility are already listed 100%. This shows that health workers are more focused on the treatment aspect than on administrative completeness.

Research by Ernifan et al. (2026) at Pharmacy Kimia Farma A. Yani, Sorong City, showed that the form of the preparation was only listed at 59.9% and the strength of the drug at 38.8% (Ernifan et al., 2026). The results of the research of Widyapratwi et al. (2025) show that the

administrative completeness of e-prescriptions in the patient's name is 100%, age is 100%, gender is 100%, weight is 99.70%, doctor's name is 100%, doctor's SIP is 56%, doctor's paraphrasing is 100%, and the prescription writing date is 100%. Pharmaceutically, in the form of 96.06%, the strength of the preparation 98.48%, the amount of the drug 100%, the rules and methods of use 97.27%, and the incompatibility 100% (Widyapратиwi et al., 2025). Khasanah's research (2023) also shows that the drug name and use rules are more complete than the preparation form and drug strength, which is consistent with the results of this study. However, there are still deficiencies in the form of preparation (70.6%) and in the drug's strength (69.3%). This can be confusing when preparing drugs in pharmacies, especially for drugs that have many forms and dosages (Khasanah, 2023). Research by Elista (2025) also states that incomplete drug information can increase the risk of medication administration errors (Elista, 2025). Some other results explain that inaccuracies in the four clinical phases (prescribing, transcribing, dispensing, and administering) directly harm the patient's clinical condition; in addition, fatal drug misinformation leads to increased treatment costs and decreased efficacy of hospital patient recovery (Atmaja et al., 2024; Nurjanah & Gozali, 2021; Wirajaya, 2019).

Incompleteness of prescription administration information can have various consequences for pharmaceutical services, especially in Public Health Centers (Puskesmas), because pharmaceutical services rely heavily on the clarity and completeness of prescription data to ensure the safety and accuracy of patient therapy. Thus, the administrative components that need the most intervention are patient height data, the doctor's practice license, the doctor's phone number, and the doctor's signature. Pharmaceutically, the completeness data needed for improvement and improvement is the form of the preparations and the strength of the drug preparation. This administrative and pharmaceutical data is needed to support information on drug use that directly affects patient safety and the quality of pharmaceutical services. The incompleteness of a doctor's signature has a direct impact on the legality of the prescription because the signature is an element of authentication and professional accountability in health services. Prescriptions without a signature can be considered administratively invalid, increase legal risks, hinder pharmaceutical services, reduce the quality of medical documentation, and increase the risk of medication errors. Therefore, physician compliance in including signatures or initials on prescriptions is an important part of pharmaceutical service standards and patient safety.

Overall, this study shows that pharmaceutical completeness is better compared to administrative completeness. This shows that prescription writing is more focused on treatment, while administrative and legal aspects are still less considered. These results are also the same as the research of Hardia (2023), Ernifan et al. (2026), and Elista (2025), which shows that the administrative completeness of prescriptions is still an issue in many healthcare facilities (Elista, 2025; Ernifan et al., 2026; Hardia, 2023).

CONCLUSION

The results of the study showed that all patient prescriptions at Puskesmas X, Sorong City (100%) did not meet the completeness criteria as a whole, so they were categorized as incomplete prescriptions. In the administrative aspect, components such as the patient's name (100%), patient's age (99.9%), and prescription date (100%) have a very high level of completeness, but there are still deficiencies in the doctor's paragraph (60.8%) and the patient's height (0%), the doctor's SIP number (0%), and the doctor's phone number (0%). This shows that the administrative aspects, especially those related to legality and patient supporting data, are still not optimal.

In the pharmaceutical aspect, the level of completeness is better than the administrative aspect, especially in the name of the drug (100%), the number of drugs (99.9%), stability (100%), and compatibility (100%). However, there are still incompletions in the form of the preparation (70.6%) and the strength of the drug (69.3%). Overall, this study shows that there is an imbalance between administrative and pharmaceutical completeness, where the pharmaceutical aspect is

more concerned than the administrative aspect, so that prescription writing is still more oriented to the therapeutic aspect than to the legality and administrative aspects.

Policies to ensure compliance with pharmaceutical standards related to prescription completeness should include: strengthening internal regulations, utilizing technology, improving the competence of health workers, continuous quality audits, and optimizing the role of pharmacists. The implementation of this policy will improve the quality of pharmaceutical services at health centers, strengthen patient safety, and support the use of rational, safe, and effective drugs.

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