

Evaluation Of Drug Prescription Base On Hospital Formularium In The Outpatient Installation In A Hospital Tasikmalaya Region

Ai Syifa Ruhaniyyah^{1*}

1. Medika Citra Utama Hospital Tasikmalaya, Indonesia.

Correspondance: Ai Syifa Ruhaniyyah

Email: syifa@cms@gmail.com

Address : Desa Linggasirna Kecamatan Sariwangi Kabupaten Tasikmalaya, Jawa Barat



Pharmacogenius Journal is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/).

ABSTRACT

Hospital Formulary is a document that regulates pharmaceutical services in a Hospital, containing a list of drugs and drug use policies in the Hospital as well as instructions for their use. The Hospital Formulary has a very important role in the use of drugs for patients in the Hospital, in addition to functioning to ensure the quality and accuracy of drug use. The purpose of this study was to evaluate the suitability of prescription writing in the Outpatient Installation based on the hospital formulary in a hospital in the Tasikmalaya area. The method used in this study is a non-experimental type of research that is descriptive in nature with data collected retrospectively. The analysis period was carried out for one year from January to December. The results of the study showed that the percentage of prescription suitability by calculating the prescribed drug items was in the range of 89% -95%. The highest percentage of drug item suitability was achieved in September and November, which was 95%. The average percentage of drug item suitability during January-December was 92%. From the results of this study, it can be concluded that prescriptions in a Hospital in the Tasikmalaya Area show compliance with the Hospital Formulary.

Keywords : Evaluation, drug prescription, hospital formularium.

INTRODUCTION

Hospitals have duties and responsibilities in ensuring the quality of patient services, including pharmaceutical services. The use of drugs and drug prescriptions in hospitals should be in accordance with the guidelines set by the hospital, namely the Hospital Formulary. This is an effort to increase the efficiency of drug utilization which is still not optimal, to ensure the quality of pharmaceutical services. Based on the regulations of the Indonesian Ministry of Health through the Regulation of the Minister of Health of the Republic of Indonesia Number 74 of 2016, the Hospital Formulary is an application of the concept of essential drugs in hospitals which contains a list of drugs and information on their use. Drugs included in the formulary list are the main drugs of choice and also alternative drugs.

The hospital formulary is created as a reference for medical personnel in prescribing effective and efficient drugs, as well as providing clarity in the selection, procurement and management of drugs. The selection of the right drugs through the Hospital formulary system has benefits in improving the quality of drug therapy and reducing the incidence of drug side effects. The function of the Formulary is also to improve the efficiency of procurement, drug management and improve efficiency in inventory management, so that in the end it can reduce the overall cost of health services.

The preparation of the Hospital formulary must be in accordance with the National Formulary which contains a list of medicines approved by the Ministry of Health to be prescribed throughout Indonesia, which shows which products are valid for BPJS. The general purpose of the National Formulary is as a reference for health facilities in ensuring the availability of efficacious, quality, safe, and affordable medicines. Minimum Hospital Service Standards are a benchmark for health services in hospitals. The conformity of prescription writing with the formulary must be fully in accordance with the objective of depicting the efficiency of drug services to patients.

Inconsistency in drug prescriptions can result in a decrease in the quality of hospital services and the cost of drugs used is ineffective. The quality of hospital services is a performance that indicates the level of perfection of health services that can lead to patient satisfaction and the procedures for its implementation are in accordance with standards.

Based on research conducted by J. Aritonang, 2017 on the Hospital Formulary in Ungaran Regency, it is in accordance. As an effort to determine the quality of health services in hospitals, a study was conducted to evaluate the suitability of drug prescriptions based on formularies in the Outpatient Installation at a Hospital in the Tasikmalaya Region.

TOOLS AND MATERIALS

The tools and materials in this study were in the form of a doctor's prescription at the Outpatient Installation at the Tasikmalaya Regional Hospital for the January-December period, a checklist of conformity and a hospital formulary as a reference. The prescription used must meet the specified criteria, namely written by a doctor at a predetermined Tasikmalaya Regional Hospital, the prescription must be complete consisting of: doctor's name, doctor's practice permit, prescription date, drug name, drug quantity, patient's name, patient's address and patient's age.

METHODS

The method used is a non-experimental type of descriptive research with data collected retrospectively. The analysis period was carried out for 1 year from January to December. This study is an observational study, retrospective data collection on prescriptions that have been received at the outpatient pharmacy installation and evaluated against research variables based on polyclinics, generic or non-generic drugs, suitability of diagnosis with sub-class therapy in the drug formulary studied. Data taken from all polyclinics, mental health polyclinics such as ENT polyclinics, eye polyclinics, pediatric polyclinics, neurology polyclinics, obgyn polyclinics, internal medicine polyclinics, general surgery polyclinics, and skin polyclinics. Sampling was done randomly (random sampling).

Data collection techniques were carried out based on the number of prescriptions received by outpatient pharmacies in the January-December period. Samples were taken from a total population of 72,000 prescriptions randomly, namely 1200 prescription samples received by the hospital outpatient pharmacy. Furthermore, the prescriptions were matched with the formulary and a percentage of prescription compliance with the hospital formulary was made.

Data Analysis

Prescription writing compliance is the compliance of prescription writing with the Hospital Formulary standard. Data were obtained from the SMC Hospital pharmacy installation from January-December. Compliance with the formulary was measured by calculating the percentage between the number of drug prescriptions in accordance with the formulary and the number of drug prescription samples written by doctors for 1 year in the hospital (Puspitaningtyas, 2014).

$$\text{prescription compliance} = \frac{\text{appropriate amount of recipe}}{\text{total sample}} \times 100\%$$

RESULTS

From the research results, data was obtained from all polyclinics, such as the mental health polyclinic, ENT polyclinic, eye polyclinic, children's polyclinic, neurology polyclinic, obgyn polyclinic, internal medicine polyclinic, general surgery polyclinic, and skin polyclinic as follows:

Table 1. Compliance of prescription with Hospital formulary

No.	Bulan	Total recipe	appropriate number of prescriptions	Inappropriate number of prescriptions	% conformity with the hospital formulary
1.	Januari	100	89	11	89%
2.	Februari	100	91	9	91%
3.	Maret	100	90	10	90%
4.	April	100	91	9	91%
5.	Mei	100	90	10	90%
6.	Juni	100	94	6	94%
7.	Juli	100	91	9	91%
8.	Agustus	100	90	10	90%
9.	September	100	95	5	95%
10.	Oktober	100	93	7	93%
11.	November	100	95	5	95%
12.	Desember	100	94	6	94%
Total		1200	1103	97	Rata -rata 92%

Table 2. Inconsistency of drug prescriptions with the hospital formulary in each polyclinic

No	Polyclinic	Prescription not in accordance with the formulary
1	Internal medicine polyclinic	28
2	Surgery polyclinic	19
3	ENT polyclinic	13
4	Neurology polyclinic	12
5	Obstetrics & Gynecology polyclinic	10
6	Pediatric polyclinic	5
7	Dental polyclinic	4
8	Eye polyclinic	3
	Total	97

DISCUSSION

The total drugs used in calculating the percentage of drugs are obtained from all drug items in the prescription each month. The results obtained for 1 year of the percentage of compliance using the number of drugs prescribed are close to the standard set by the government, which is 100%. The percentage of prescription compliance by calculating the prescribed drug items is in the range of 89%-95%. The percentage of drug item compliance is highest in September and November, which is 95%. The average result of the percentage of drug item compliance during January-December is 92%. On the other hand, there is a prescription or up and down percentage of drug prescription compliance during 1 year, due to the factor of disease patterns, where changing seasons can affect the condition of the community which sometimes requires drugs that are not available in the hospital.

The polyclinics that did not comply with writing the most prescriptions were internal medicine polyclinics with 28 drugs, surgical polyclinics with 19 drugs, ENT polyclinics with 13 drugs, neurology polyclinics with 12 drugs, obstetrics & gynecology polyclinics with 10 drugs, pediatric polyclinics with 5 drugs, dental polyclinics with 4 drugs, and eye polyclinics with 3 drugs.

The results of the study found that internal polyclinics had the most drug prescription inconsistencies. Factors that support prescription inconsistencies include: Because of the large number of patients in internal polyclinics with various types of complaints, The prescribed drugs are not appropriate, namely the therapy used has no good substitute because the patient's condition itself requires various types of drugs outside the formulary, Another factor is caused by the large number of patients in this polyclinic, the prescriber

forgets the generic name of the drug so that when writing the prescription, only the familiar brand of the generic drug is remembered.

CONCLUSION

From the results of the study it was concluded that the suitability of prescriptions based on a formulary in a hospital in the Ciamis area was in the range of 89% -95%. The percentage of drug item compliance was highest in September and November at 95%. The average percentage of drug item compliance during January-December was 92% which means that prescriptions met compliance with the formulary.

ACKNOWLEDGEMENTS

Thank you to all who have helped in carrying out this research, especially to SMC Hospital who have provided support, so that this research can be completed well according to the planned time.

REFERENCES

- PERMENKES RI NO 74, "Peraturan Menteri Kesehatan Republik Indonesia Nomer 74 Tahun 2016," no. 206, 2017.
- M. Djatmiko and R. Sulastini, "Formularium Rumah Sakit Di Rsud Ungaran Kabupaten Semarang Tahun 2008," 2008.
- J. Aritonang, "Analisis Formularium RSUD Cimacan Tahun 2017," vol. 3, pp. 88–99, 2017.
- K. M. Kesehatan *et al.*, *Formularium nasional*. 2016.
- E. Kusumahati, K. Anggadiredja, and L. Lustiani, "Evaluasi Kesesuaian Peresepan Obat Rawat Jalan Terhadap Formularium Obat Pada Salah Satu Provider Asuransi Kesehatan Komersil Di Bandung," vol. 2, pp. 18–24, 2017.
- Z. N. Hanifa, "Evaluasi Kesesuaian Keresepan Obat Pada Pasien Umum Rawat Jalan Dengan Formularium RSUI 'x' Periode Januari-Maret 2016," p. 9, 2017.
- Y. R. Bukifan, "Yane Rosalia Bukifan PO.5303332171407," 2018.
- Notoatmodjo S., 1993, *Metode Penelitian Kesehatan*, PT RikenaCipta, Jakarta.
- Wambrauw J., 2006, Analisis Faktor-faktor yang Mempengaruhi Ketidak patuhan Dokter Dalam Penulisan Resep Sesuai dengan Formularium Rumah Sakit Umum R.A. Kartini Jepara Tahun 2006, Thesis, Program Pasca Sarjana, Universitas Diponegoro, Semarang.
- Kemenkes RI, 2014, Peraturan Menteri Kesehatan Republik Indonesia Nomor 58 tahun

2014 tentang Standar Pelayanan Kefarmasian di Rumah Sakit, Direktorat Bina Farmasi Komunikasi dan Klinik, Depkes RI, Jakarta.

R. T. Pinzon and L. Priskila, "Sistem Pengingat Klinis untuk Perbaikan Kepatuhan Peresepan Berdasarkan Formularium dan Formularium Nasional di RS Bethesda Yogyakarta," *J. Hosp. Accredit.*, 2019.