Analysis of Human Resource Needs in Inpatient Medical Record Officers Using WISN and ABK-Kes Methods in "X" Hospital

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Abstract. Every hospital must have qualified human resources both in the field of medical and health personnel. Hospitals have a responsibility to fulfill health service criteria. One of the minimum services that must exist in hospitals is medical records. Several hospitals in Indonesia, there are problems related to the needs of Human Resources (HR) in the medical records, including problems regarding the completeness of filling out medical records and high workloads. Therefore, it is necessary to calculate the staffing needs of the medical records and health information unit using the Workload Indicator Staffing Needs (WISN) method and Health Workload Analysis (ABK-Kes) in the inpatient unit at Hospital "X". This research uses a qualitative descriptive method. Data collection using observation methods and interviews with medical record officers in the inpatient unit to determine their main tasks and jobs. The results of the analysis of human resource needs in the inpatient unit at Hospital "X" using the WISN and ABK-Kes methods both obtained the results of 6 officers. Hospital "X" currently has 3 officers, so it is necessary to change 3 officers.
Keywords: WISN and ABK-Kes, Medical records, Hospitalization, Human resources

I. BACKGROUND

Hospitals must have qualified human resources both in the medical and health personnel. Human resources in hospitals are adjusted to the type of hospital and the type of services provided to the community [1]. One of the indicators of effective and efficient hospital success is the availability of adequate, high-quality, and professional human resources in accordance with the functions and duties of each personnel [2].

A hospital is a health care that organizes comprehensive individual health services through promotive, preventive, curative, rehabilitative, and / or palliative health services by providing inpatient, outpatient, and emergency services [1]. Every hospital has a responsibility for the quality of service, including increasing human resources who have competence and sufficient numbers to fulfill the criteria for health services in hospitals. One of the minimum services that must exist in hospitals is medical records [3]. Medical records are documents containing data on patient identity, examination, treatment, actions, and other services that have been provided to patients [4].

Hospital "X" is a referral hospital from several regions. "X" hospital has 37 outpatient clinics with the number of visits in 2020 is 93232 patients with an average of old patient visits per day is 890.14 patients and an average of new patient visits per day is 42.18 patients. While in 2023 there were 21473 patient visit data, one of the largest visit achievements in October was 1998 patients. Based on survey data from the medical records unit of the inpatient section in three hospitals in East Java Province, there are several similar problems, one of which is related to the need for human resources (HR) and the completeness of filling out medical record files. The problem that occurs is the lack of officers and the large workload that exists in the unit. Medical record officers also often double several jobs without calculating the workload, so they feel a high workload [5]. Therefore, it is necessary to analyze the suitability of workload in service units in hospitals, one method that is often used is the Workload Indicator Staff Need (WISN) and Analisis Beban Kerja Kesehatan (ABK-Kes) method.

The existing workload can be used to analyze the ideal human resource needs based on the job. WISN and ABK-Kes are the two most commonly used methods for calculating health worker needs. Between the two methods, there is a difference, The WISN method uses an allowance factor, while ABK-Kes uses a support factor [6]. According to Ministry Regulation PANRB No 26 of 2011, effective working hours are 1200 hours per year or equivalent to 7200 minutes per year for workers who carry out 5 days or 6 working days per week [7]. This method is often used in health care facilities such as hospitals, health centers, and health department.

Based on the results of observations that have been made and interviews with the responsible person of the medical records in "X" hospital, it is known that there are 3 officers in the inpatient medical records. The results of interviews that have been conducted to the person in charge of the medical record of "X" hospital is known that the officer concurrently holds several jobs. This causes the workload not to match the number of officers. Based on the problem, the authors are interested to observed with the title, "Analysis of Human Resource Needs in the Inpatient Medical Records Unit Using the WISN and ABK-Kes Methods in "X" Hospital.

II. METHOD

This research is a qualitative descriptive study. The subjects in this study were medical record officers who were in the inpatient section at "X" hospital. The object in this study are workload. Data collection was carried out by interview and observation methods. Interviews were used to explore what workloads were carried out by medical record officers in the inpatient section. Observations were made to record the time required by employees based on the workload components studied. The workload analysis methods used Workload Indicator Staff Need (WISN) and Analisis Beban Kerja Kesehatan (ABK-Kes) method.

III. RESULTS AND DISCUSSION

A. Human Resources Needs Analysis in the Medical Records Unit of the Inpatient Using the WISN Method at "X" Hospital

Good medical record management requires a competent workforce in the field of medical records in terms of quality and quantity. The quality of the workforce includes knowledge, skills and education level. While the quantity is the number of workers available must be in accordance with the workload [6]. The following data from observations and interviews with medical record officers in the inpatient section of the "X" hospital are used to calculate human resource needs using WISN calculations.

1. Determine available working time

In "X" hospital, working days in the inpatient section are 5 days per week and working time is 8 hours per day. It is concluded that the results of the available working time calculation in the inpatient section are 1456 hours/ year or 87360 minutes/ year with 5 working days/ week. Available working time is obtained from the calculation of the number of working days minus the number of days of leave, training, public holidays, average work absence, then multiplied by working hours in one year.

2. Determine workload standards

In "X" hospital, there are 8 main activities in the inpatient section, from checking medical record documents (MRD), input MRD into hospital management information system, quantitative analysing on MRD, performing document alignment, diagnosis coding of MRD inpatient, searching and inputting of death MRD's, sorting and aligning death MRD, and retaining medical record documents that has been stored for more than 5 years. So that, total workload standard is 6933.3 minutes/ year was obtained.

3. Determine standard allowances time

In "X" hospital, the activities of standard allowances time in inpatient section can obtained from break during working hours (60 minutes/ day) and other activities (60 minutes/ day). So, the results of standard allowances time per activities is 0.142 minutes and the total is 0.284 minutes.

4. Calculate human resource needs

The volume of activity in the medical record unit is calculated based on the average number of medical record documents, which is 24960 documents per day. Human resource needs are obtained from the calculation of activity volume (24960 per day) divided by workload standards (4696.7 minutes). Furthermore, it is added with a standard allowances time

(0.284 minutes). The result obtained is 6 officers. The human resource of the medical records in "X" hospital (in inpatient section) are 3 officers. So, the inpatient officer requires an additional 3 person.

B. Human Resources Needs Analysis in the Medical Records Unit of the Inpatient Using the ABK-Kes Method at "X" Hospital

1. Determine available working time

Calculating available working time based on the State Civil Service Regulation No 10 of 2021 concerning general guidelines for the preparation of civil servant needs and Ministry Regulation PANRB No 26 of 2011 stated that effective working hours can be obtained 1200 hours/ year or 72000 minutes/ year with 5 working days/ year [7,8].

2. Determine workload components and time norms

Workload components in "X" hospital consist of 8 activity components. There are checking medical record documents (MRD), input MRD into hospital management information system, quantitative analysing on MRD, performing document alignment, diagnosis coding of MRD inpatient, searching and inputting of death MRD's, sorting and aligning death MRD, and retaining medical record documents that has been stored for more than 5 years. The total of time norms from workload components is 18.6 minutes.

3. Calculate workload standards

Calculation of workload standards in each activity component is obtained from the results of available working time divided by time norms. Each activity component gets its standard workload time according to the time of activity carried out by the officer.

4. Calculate the standard of supporting activities

Supporting activity for medical record officers in inpatient section is registering in outpatient section. The calculation of outpatient registration is 180 minutes every day. The result obtained of standard of supporting activities is 2.85.

5. Calculatte human resource needs

The calculation of human resource requirements using ABK-Kes method initially calculates the need for officers in each task component. Then add up the whole and get the standard officer needs. The results of the calculation with ABK-Kes method found that it requires 5.5 officers or can up to 6 officers. So, the inpatient officer requires an additional 3 person.

The working hours are determined in 2 systems, 7 working hours/ day or 40 working hours/ week for 6 working days/ week or 8 working hours/ day or 40 working hours/ week for 5 working hours/ day. It can be seen that both of these work systems have a working time limit of 40 hours in 1 week. If the working time exceeds the agreement, it can be considered as overtime work [7].

The workload given to officers can affect work efficiency and productivity. Excessive workload can lead to fatigue and work stress. Workload components are determined based on the type and description of tasks performed in the practice. The average time for each task component, also known as the time norm. This is necessary so that a person in charge of human resources can carry out activities in accordance with the applicable service standards in health services [9].

Based on the research that the author has done, it can be concluded that the working time of medical record officers in the inpatient section at hospital "X" is 8 hours in 1 day or 40 hours in 1 week for 5 working days. The available working time using the WISN method is 1456 hours / year or 87,360 minutes / year, while the available working time using the ABK-Kes method based on PERMEN PA-RB No. 26 of 2011 Effective Working Hours (JKE) is 1200 hours / year or 72000 minutes / year for either 5 or 6 working days.

Based on the WISN and ABK-Kes methods, the number of officers required is 3 officers, meaning that hospital "X" requires additional officers in the unit as much as 3 person so that activities carried out in the inpatient unit are more effective and efficient. The comparison of calculation human resource needs with WISN and ABK-Kes are WISN method is used to calculate human resource needs based on actual workloads, ABK-Kes method considering the ideal standards by regulations.

IV. CONCLUSIONS AND SUGGESTIONS

Based on the results of the analysis carried out regarding the calculation of WISN and ABK-Kes, currently "X" hospital has 3 officers in the medical records unit in inpatient section. In the analysis of the calculation of human resource needs WISN and ABK-Kes, the results of 3 officers were obtained, so that 3 officers was needed. With the addition of the officers, "X" hospital can evaluate the availability of human resources to get a rational number of personnel needs and can also monitor work productive activities in the unit.

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REFERENCES

[1] Republik Indonesia, Law of the Republic of Indonesia Number 17 of 2023 on Health. Jakarta: 2023.

[2] I. T. Adeleke, Q. B. S. Abdul, A. Aliyu, I. A. Ishaq, and R. A. Adio, "Deploying unqualified personnel in health records practice: Role substitution or quackery? Implications for health services delivery in Nigeria," Health Information Management Journal, vol. 48, no. 3, pp. 152–156, 2019.

[3] P. P. Purba, "Patient satisfaction analysis of the online outpatient registration system at Dr. Sardjito Hospital, Yogyakarta," Infokes: Journal of Medical Record and Health Informatics, vol. 12, no. 1, pp. 44–48, 2021. [Online]. Available: https://doi.org/10.47701/infokes.v12i1.1307

[4] Republik Indonesia, Minister of Health Regulation Number 24 of 2022 on Medical Records. Jakarta: 2022.

[5] M. G. Putri and A. A. Mudayana, "Analysis of medical record staffing needs at Grhasia Mental Hospital, Yogyakarta," International Journal of Healthcare Research, vol. 4, no. 1, 2021.

[6] E. Simanjuntak, "Human resource needs analysis in the medical record department using the Workload Indicator Staffing Need (WISN) method at Tere Margareth Hospital, Medan," Education Achievement: Journal of Science and Research, pp. 24–33, 2021.

[7] Republik Indonesia, Ministerial Regulation on Guidelines for Civil Servant Workforce Needs in Local Governments, Number 26 of 2011. Jakarta: 2011.

[8] Republik Indonesia, National Civil Service Agency Regulation Number 10 of 2021 on Procedures for Preparing Civil Apparatus Workforce Needs. Jakarta: 2021.

[9] A. M. Amalin, A. Susanti, N. Amalia, and D. R. Fauzan, "Analysis of human resources needs in the outpatient registration unit using the Analisis Beban Kerja Kesehatan (ABK Kes) method," Healthcare in Low-Resource Settings, 2024. [Online]. Available: https://doi.org/10.4081/hls.2024.11903

[10] A. Fadillah, A. Deharja, and J. Pandiangan, "Analysis of workforce needs for medical record officers based on the WISN theory at Dr. Cipto Mangunkusumo National Referral Hospital," J-REMI: Journal of Medical Records and Health Information, vol. 2, no. 1, pp. 73–83, 2020.