

Analysis of Nurse Position on the Workload with WISN (Workload Indicators of Staffing Need) Method in Patient Hospital Royal Prima Medan

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Abstract— Problems that often occur in organizations are the lack of number and types of personnel needed, lack of competence (knowledge, skills, attitudes and values) of nursing staff and limited funds from hospitals so that they cannot add and maintain the human resources (HR) they need. This study aims to determine the need for health workers by calculating the ideal number of health workers (nurses and pharmacists) based on the workload at the Royal Prima General Hospital Medan. This research is qualitative research using observation techniques, interview guidelines and document review. This study uses research informants where the informants used are the head of the nursing room and the nurse in the inpatient room. Data analysis is systematically searching and compiling data obtained from the results of field observations (work sampling), in-depth interviews and document review. The products received: 1) The full use of time for nurses during remarks is known that the use of time for direct nursing activities of nurses in the inpatient room is 36.3%, indirect nursing activities is 40.6%, and personal activities are personal 23.1 %. This shows that the activities that nurses mainly carry out are indirect nursing activities. This is because indirect nursing activities must be carried out and completed by nursing procedures, 2) The number of personnel needed based on the workload using the WISN method in the inpatient room of the Royal Prima General Hospital Medan is 12 people.

Keywords— WISN, Workload, Nurse, Hospital.

I. INTRODUCTION

Health workers have an essential role in improving the maximum quality of health services to the community so that people can increase awareness, willingness, and ability to live healthy so that the highest degree of health will be realized as one of the elements of the general welfare as referred to in the Preamble to the Constitution. The Republic of Indonesia in 1945. (Siti Nurrahmah, Journal of FKM Univ. Halu Oleo, 2016:1).

The development of a country can be seen from its Human Development Index (HDI), which is measured through 3 (three) indicators, namely health, education, and purchasing power. However, from these indicators, health indicators are the most critical aspect. This is because health is an asset that significantly determines the survival of human life; only with a healthy body can humans attend education and improve their standard of living so that it has an impact on increasing purchasing power. (Pebriana Marlinda, NIARA Journal, 2, January 2017: 44).

One of the concrete steps taken by the government to realize health development is the issuance of Government Regulation Number 32 of 1996 concerning Health Workers that the procurement and placement of health workers are carried out to meet the needs of health workers equally for the community. The national planning for health workers is prepared by taking into account the types of services needed, health facilities, and the appropriate types and quantities. As a follow-up to Government Regulation no. 32 of 1996 concerning Health Workers, several Decrees of the Minister of Health (Kepmenkes) were issued, namely Kepmenkes No. 850/Menkes/SK/XII/2000 the Year 2000 concerning Health

Personnel Planning Policy to improve the ability of planners of government, community, and all professions at all levels. Furthermore, Kepmenkes No. 81/Menkes/SK/I/2004 of 2004 regulates Guidelines for the Preparation of Health Resource Planning at the provincial, district/city, and hospital levels. The Kepmenkes also provides a list of methods for planning health workers to choose according to their needs (Pebriana Marlinda, NIARA Journal, 2, January 2017: 44).

Human resource planning is collecting and using the information to support resource investment decisions in various human resource activities. Health HR planning (HRMK) is carried out by adjusting health development needs, both locally, nationally, and globally. The calculation of HRK needs can be guided by three methods: workload analysis, minimum workforce standards, and population ratio (Permenkes No.33, 2015).

This research focuses on type B hospitals because the hospital that is the object of study, namely the Royal Prima Medan General Hospital, is a type B hospital. This type B general hospital has the facilities and capabilities of medical services, consisting of 4 basic specialists, four medical support specialists, eight other specialists, and two basic subspecialists.

For this type B particular hospital, at least it has specialist and subspecialist medical services and facilities according to limited specialities.

Furthermore, the effort to prepare health sector planning in facilities and infrastructure with health personnel is an indicative planning document that contains information and data on health development programs that will be carried out directly by the Provincial Government of North Sumatra especially Medan City. Thus, the study results are expected to

serve as a master planning document for the development of the health sector in the fields of infrastructure and facilities and resources for health workers in North Sumatra Province. Based on this, the scope of the study is to describe the achievement or supply of health workers, calculate the need for health workers by number, type and qualifications and formulate the need for health personnel planning policies in North Sumatra Province. (Heru Santoso, Journal of FKM USU, 2, March, 2015:37)

The ratio method has not been able to reflect the real needs of health workers based on workload. Planning the need for health workers by analyzing the workload according to the Regulation of the Minister of Health (Permenkes) Number 75 of 2014 concerning Community Health Centers (Puskesmas) is considered more appropriate. One method that can be used to calculate the workload and estimate the number of HRK needs is the Workload Indicators of Staffing Need (WISN) method. This method is accurately used to calculate HRK needs based on the actual workload carried out by each HRK category in each work unit in health care facilities.

The hospital is a service company, where the product produced is intangible and comes from the service provider, which in this case is an officer or HR. HR is an essential element in both the production and delivery of services. HR is a part of differentiation where service companies create added value and gain a competitive advantage. Other resources of tools and infrastructure are possible to be imitated and owned by other hospitals, but this is not the case with the quality and competence of human resources, which are very complex. (Falih Suaedi, ISSN Journal, 1, June 2017: 81).

Talking about HR issues, of course, is related to competence. Competence is generally defined as a combination of knowledge, skills and attitudes of an employee to carry out his work. Some experts state that knowledge and skills are complex competencies while attitudes and behaviour are soft competencies, which can support hard skills aspects. (Falih Suaedi, ISSN Journal, 1, June 2017: 82).

The ratio of general practitioners in Indonesia is 16.8 per 100,000 population, with a range of 9.6–42.4 per 100,000 population. Based on the 2014 target for the need for health workers, the ratio of general practitioners is 40 per 100,000 population. The data also reflects the shortage of general paramedical practitioners in Indonesia. (Desy Setiani, JIMKESMAS Journal, 4, October 2016:3)

According to Permenkes Number 56/MENKES/PER/III/2014, Class B hospitals have a ratio of 1:1 nursing staff and beds. If the balance of nursing staff to beds does not reach 1:1, there is a shortage of nursing staff at the hospital.

In 2004 the Ministry of Health of the Republic of Indonesia, through the Decree of the Minister of Health Number: 81/Menkes/SK/2004, issued Guidelines for the Preparation of Health Human Resources Planning at the Provincial, Regency/City and Hospital levels. In this guideline, the most exciting and appropriate for use in hospitals is calculating the need for nurses in hospitals using the Workload Indicator Staffing Need (WISN) method.

Meanwhile, Amini's research (2014) shows that nursing calculations using the WISN method in the Inpatient Unit of the Bangkatan Binjai Hospital obtained nurses as many as 60 nurses outside of nurses who have duties as head of the room. The number of nurses at the time this research was carried out was 50 nurses. This means that there is a shortage of nurses that the need for nurses in the Bangkatan hospital inpatient unit lacks ten nurses using the Workload Indicator Staff Need (WISN) method.

The current research was conducted in the Inpatient Room of the Royal Prima General Hospital, Medan. The study was achieved by observing and interviewing several employees at the Royal Prima General Hospital Medan. This is done to obtain more valid data regarding the need for nurses in the Inpatient Room of the Royal Prima General Hospital, Medan.

II. LITERATURE REVIEW

2.1 HR Planning

HR planning is a systematic process to predict future employee needs (demand) and supply (supply), both in number and type, so that the HR department can plan recruitment, selection, training and other activities properly. (Yohana N, 2016: 94).

HR planning according to Hellriegel & Slocum (1992) includes inventory skills, job analysis, replacement charts and expert forecasts. The explanation of the HR planning is as follows:

- 1) Skill inventory is detailed data on each employee, education, training, experience, length of work, current job position, salary, other demographic features such as gender, race and material status.
- 2) Job analysis/job analysis is a description of the duties and responsibilities of a particular job and personal characteristics (knowledge and skills) required to occupy a position and achieve optimal performance. A job description is a detailed description of certain duties and responsibilities. Job specification is a list of personal characteristics, abilities and experiences needed by an employee to perform certain jobs, tasks and responsibilities.
- 3) Replacement chart is a diagram that describes all positions in the organization, who is in office now and who has the potential to replace him, the data is confidential and is a simple forecast of the need for HR management and the availability of human resources in the hospital.
- 4) Expert forest is a forecast made by experts, usually based on several assumptions and possibilities.

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2.2. Workload Analysis

Workload analysis is to identify both the number of employees and the qualifications of employees needed to achieve organizational goals. Meanwhile, in KepMenKes No. 81 of 2004, it is explained that the definition of workload analysis is an effort to calculate the workload on a work unit by adding up all workloads and then dividing by individual work capacity per unit time. (Sinaga, 2016: 24)

The workload can be seen from the activities carried out by staff at work, both direct and indirect activities, and other activities such as personal activities and unproductive activities. The available human resources are related to the workload. There are three ways to calculate workload, including:

1) Work Sampling

Work sampling is a technique to measure the magnitude of each activity pattern from the total time of activities that have been carried out from a workgroup (work unit). The observed activities can be grouped as follows:

- Direct activities are activities carried out directly related to patients/customers; here are listed all activities that this personnel may carry out.
- Indirect activities are activities carried out indirectly to customers/consumers.
- Personal activities are activities for personal interests such as eating, drinking, and going to the toilet.
- Non-productive activities are activities carried out by this personnel that are not beneficial to customers/consumers, their work units, and their organization.

2) Time Motion Study

This technique can be used to evaluate the level of quality of certified skills training or education. Observations were carried out continuously until the work was completed, then repeated the next day. Observers or researchers must be careful in following the activities carried out by employees. This technique is a technique that is difficult, heavy, and expensive, so it is rarely done. In research on work measurement, bias can occur because a person feels that he is being observed while working, so he does a better job. Bias in research can be minimized by increasing the length of observation time. Usually this happens at the beginning of the study, after a few days the work rhythm returns to normal.

2.2. Analysis of the Workload of Implementing Nurses in the Inpatient Room

This study describes the activities and time used by the implementing nurse during observations with a work sampling form. The activities carried out are divided into four types: direct nursing activities, indirect nursing activities, personal activities, and non-productive activities.

Table 1 illustrates that the average number of nurses in 2019 was 266 people and in 2020 there were 143 people. The average number of patients in inpatient rooms in 2019 was 18,752 people and in 2020 there were 18,970 people.

TABLE 1. Distribution of Number of Nurses and Number of Patients in Inpatient Room Building A Gedung

Category	2019	2020
Nurses	266	143
Patient	18.752	18.970

1. Total Time of Direct Nursing Activities

The amount of time nursing activities were carried out for two days starting from September 16, 2020 to September 17, 2020 in the inpatient room and getting the results of the amount of time for implementing nurse activities. The amount of time can describe the workload of implementing nurses in the inpatient room for two working days for 24 hours.

To calculate the number of nurses needed in the inpatient room based on the WISN method, it takes 5 (five) steps, namely:

1. Set Available Working Time

Available working time is a unit of time used by nurses to carry out their main activities for a year. Determining available working time aims to obtain available working time for each category of HR who work in hospitals for one year. The data needed to determine the available working time is as follows.

$$\text{Available Working Time} = \{A - (B + C + D + E)\} \times F$$

a. Working days

The number of working days in a year according to the applicable provisions in the hospital or Regional Regulations and generally in 1 week five working days. However, because the nursing service lasts for 24 hours, the working day is seven days. The implementing nurse in the inpatient room uses a shift system so that the provisions that apply to the implementing nurse are 6-2, i.e. six working days and then two days off. Based on the results of in-depth interviews with the informants of this study regarding the working days in the inpatient room are:

Informant 1: The hospital arranges shifts for morning, afternoon, evening and holidays. So in a month, there are between six to eight days off for changes.

Informant 2: ... there are 24 days, six days a week"

From the data obtained, the number of effective working days can be calculated. In a year, there are 365 days; if the calculation is done manually with a nurse entry system which is six working days then two days off, it is found that in one month there are seven days off so that in one year there are 84 days off. Thus, the number of working days of nurses in the inpatient room at RSU Royal Prima Medan results from a reduction of 365 with 84 days, which is 281 days.

b. Annual leave

Annual leave valid for 12 days a year. Based on the results of in-depth interviews with informants of this study regarding yearly leave in the inpatient room

Informant 1: "leave allowance for 12 days in a year".

Informant 2: "Yes, there are 12 days of leave every year."

c. National holiday

The number of holidays and joint leave in one year. Because the shift system applies, holidays still work.

d. Absence from Work

According to data on average absence from work (over one year) due to illness, absent with or without

notification/permission. Based on the attendance list during 2018, the average number of nurse absences from inpatient work in a year is 22 working days.

e. Working time

A number of working hours per day. Because the nurse is a shift system, the calculation of working hours is based on the average working hours per shift (morning, afternoon, evening) for a year. The average working time of the implementing nurse in the inpatient room is $(7 + 7 + 10) 8$ hours/day.

III. ANALYZED AND RESULT

The nurses' workload in the inpatient room of the Royal Prima General Hospital Medan was obtained by observing for 24 hours in three shifts, namely morning, afternoon and night, using the work sampling technique. The capacity of the number of beds owned by the inpatient installation of RSU Royal Prima Medan in 2020 is 486 beds. With the number of nurses as many as 143 people. Observations of nursing activities were carried out at intervals of five minutes. From the comments that have been made, it is known that the amount of time for direct nursing activities is 36.3%, and the amount of time for indirect nursing activities is 40.6%. In comparison, the total time for personal actions is 23.1%.

Henceforth, indirect productive activities by researchers are included as a component of the nurse's workload because these activities are activities that cannot be avoided and are still related to the needs and interests of patients and nurses. If you add up the time of direct nursing activities, indirect nursing activities and personal activities as a nurse's workload, the proportion of time obtained is 76.9%.

According to Meshkati in Tarwaka (2015), the workload is a difference between the capacity or ability of workers and the demands of the work that must be faced. Considering that human labour is mental and physical, each has a different level of loading. The story of loading that is too high allows excessive energy, and overstress occurs; on the contrary, the intensity of the load that is too low allows boredom and saturation or under stress. Therefore, it is necessary to strive for the optimum level of loading intensity between the two extreme limits and, of course, differs from one individual to another.

The workload is an activity given to implementing nurses in a hospital that has a vital role in determining the need for nurses needed in the smooth completion of a job where the calculation of the workload requires a particular method or technique to suit the hospital's wishes. This specific statement about the amount of time used to carry out certain activities under normal working conditions is often called standard labour work. This workload analysis technique uses ratios or legal staffing guidelines to determine the needs of nurses. Workload analysis identifies both the number of nurses and the type needed to achieve the hospital's goals.

Based on the International Labor Organization (ILO) in Purwanto (2016), it is stated that the workforce is considered productive if it can complete 80% of its workload. Similarly, Ilyas (2004) in Purwanto (2016) says that adequate working time is around 80%. If workers have worked more than 80% of their good time, it is necessary to consider and pay attention

that the unit needs new workers. The proportion of workload time in the inpatient room of the Royal Prima General Hospital Medan exceeds the standard of productive working time according to the ILO. Therefore it is necessary to add a nurse workforce. Based on the results of interviews with several informants, it is known that there is indeed a shortage of nurses in the inpatient room. However, it can still be arranged and needs adjustments with the hospital to provide additional personnel. Several other informants also said that there was a shortage of nurses because it depended on the condition and number of patients; besides that, there were also additional rooms by the head of the room, but the increase did not match it in the number of nurses.

Based on this, it is indeed a dilemma for managing the Royal Prima General Hospital in Medan because the number of patients admitted to the hospital cannot be ascertained. If the number of nurses is added according to the current workload, then there is a possibility that the number of workers will be excessive when the workload one day decreases. Therefore, a policy that is genuinely by the condition of the hospital is needed to become a superior hospital in service to the community.

Based on the results of the study, it was found that the number of workers needed to be based on the workload using the WISN method was 12 people in the inpatient room of RSU Royal Prima Medan. The need for this workforce is based on nurses' work activities, which include measuring temperature, pulse and blood pressure, changing infusion fluids, installing infusions, checking infusions, cleaning beds, and giving medicine.

The nurse's activities illustrate that nurses must be able to carry out their duties to provide the best service to each patient who is cared for without being burdened by a lack of labour. If the number of health workers does not match the existing workload, it is possible that full services cannot be implemented.

The results of the study are in line with Amini's research (2015) entitled "Analysis of Human Resource Needs for Nursing Workers Using the Workload Indicators of Staffing Need (WISN) Method in the Inpatient Unit of Bangkatan Binjai Hospital in 2014" also uses the WISN method in its calculations. This study aimed to analyze the optimal number of nursing human resources in inpatients at Bangkatan Hospital. The results showed that there was a shortage of 10 nurses and an excess of 2 midwives.

IV. CONCLUSION

Based on the results of the study, it can be concluded as follows:

1. The full use of time for nurses during the observation is known that the use of time for direct nursing activities of implementing nurses in inpatient rooms is 36.3%, indirect nursing activities is 40.6%, and personal activities is 23.1%. This shows that the activities that nurses mainly carry out are indirect nursing activities. This is because nursing activities do not directly have to be carried out and completed by nursing procedures.

2. The number of personnel needed based on the workload using the WISN method in the inpatient room of building A Royal Prima General Hospital Medan is 12 people.

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