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ANALYSIS CALCULATING OF HOSPITAL LABOR REQUIREMENTS USING THE WORKLOAD ANALYSIS METHOD IN HOSPITAL DIGITALIZATION ERA

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ABSTRACT

In the era of changes in hospitals from implementing manual systems to more modern hospitals with digital systems, this has had many impacts, including reducing the need for labor in several departments. Or another option is to move human resources to other jobs that still require human workers in the work in that unit. Hospitals must wisely shift their human resources work so as not to drastically reduce human resources. Results: Total time Norm = 34 Minutes,Working hours available = 133.920 minutes / year, and Calculating Standard Work Load (Working hours available / Total time Norm) = 868.248. Meeting Supporting Task Factors = 29,57%, Training Supporting Task Factors = 5,38%, Total Supporting Task Factors = 29,57% + 5,38% = 34,95%, Supporting Task Standards = 1,54. Total Energy Requirements 3.40, Supporting Task Standard 1.54, Human resource requirements 5.24 (Rounding 5). Conclusions: Based on the results of research at the hospital, in the file scan section, there were 2 officers. The results of calculating human resource needs at the Hospital in the file scan section using the Health Workload Analysis (ABK Kes) method resulted in a total of 5 staff, whereas currently only 2 staff are available so an additional 3 people are needed.

Keywords: hospital labor requirements; workload analysis method

INTRODUCTION

Indonesia's development is still in the process of transformation conventional health services towards digitalization. The change to a digital system will certainly affect many things, including human resources who provide health services. There is a shift in duties for several human resources who previously carried out services manually, now switching to carrying out tasks to support digital systems. So it is necessary to carry out an analysis regarding human resource needs in hospitals so that services can continue to run more effectively and efficiently without sacrificing employees by laying off employees. Researchers conducted a study at a type C hospital that had started a digital system. There has been a shift in duties from manual service, now several officers have been transferred to carrying out file scanning activities.

METHOD

The type of research used in this research is descriptive qualitative. collecting data on variables to be measured and data analysis. The design of this research is cross sectional. The subjects in this research were 2 file scanning officers, while the object of this research was the workload of file scanning officers. This research directly observes the activities of file scanning officers in carrying out their duties during the transition to a digital system. Next, process the data from the interview results and enter the results of calculating the observation time into the formula for calculating labor requirements using the ABK Kes method.

RESULTS AND DISCUSSION

Set Available Work Times

Table 1.
Available Work Times

Code	Component	Amount	Unit
A	Work day	(52 week x 6 Day) = 312	Day/Year
B	Annual leave	12	Day/Year
C	National holiday	16	Day/Year
D	education and training	5	Day/Year
E	Roll call	-	Day/Year
F	Working Time(within 1 week)	8,5 hour × 5 day = 42,5 6 hour × 1 day = 6 42,5 + 6 = 48,5	Hour/Week
G	Effective Working Hours (JKE)	48,5	Hour/Week
H	Working Time (in 1 day)	8,5	Hour/Day
I	Available Working Time (days)	312-(12+16+5) =279	Day/Year
J	Available Working Time (hours)	312-(12+16+5)×8 =2232	Hour/Year
Working Hours Available Rounded (in hours)		2232	Hour/Year
Working Hours Available Rounded (in minutes)		133920	Minutes/Year

Calculating Workload Standards

Table 2.
Calculation of Standard Work Load

Task Type	Task Discription	Time Norms (Minutes/file)	Working Hours Available (Minutes/Year)	Standard Work Load $\frac{\text{Working Hours Available}}{Time\ Norm}$
Main Task	Inpatient manual file Collection	15	133920	$\frac{133920}{15} = 8928$
	Inpatient manual file Assembling	4		$\frac{133920}{4} = 33480$
	Review the Completeness of the Dyna Form Hard Copy Form	1		$\frac{133920}{1} = 133920$
	Review EMRs beyond Hard Copy Standard Forms	1		$\frac{133920}{1} = 133920$
	Inpatient Statistics Input	1		$\frac{133920}{1} = 133920$
	Inpatient manual file Scan	2		$\frac{133920}{2} = 66960$
	Flowsheet ICU, NICU, PICU	6		$\frac{133920}{6} = 22320$
	Naming Inpatient BRM	1		$\frac{133920}{1} = 133920$
	Upload Inpatient BRM	2		$\frac{133920}{2} = 66960$
	Hard copy storage in the bank	1		$\frac{133920}{1} = 133920$

Calculating Supporting Task Standards and Supporting Task Factors

Table 3.
Supporting Task Standards and Supporting Task Factors

Task Type	Job description	Time Norm
Supporting Duties	Meeting	55 hour/mounth
	Training	60 hour/6 mounth

Meeting Supporting Task Factors

$$\text{Meeting Supporting Task Factors} = \frac{\text{Activity Time}}{\text{Working Hours Available}} \times 100\%$$

$$Meeting\ Supporting\ Task\ Factors = \frac{55 \times 60 \times 12}{133920} \times 100\% = \mathbf{29,57}\%$$

Training Supporting Task Factors

$$Training\ Supporting\ Task\ Factors = \frac{\text{Activity Time}}{\text{Working Hours Available}} \times 100\%$$

$$Training\ Supporting\ Task\ Factors = \frac{60 \times 60 \times 2}{133920} \times 100\% = \mathbf{5,38}\%$$

Total Supporting Task Factors = 29,57% + 5,38%

= **34,95%**

$$\text{Supporting Task Standards} = \frac{1}{1-\frac{\text{Supporting Task Factors}}{100}}$$

$$= \frac{1}{1-\frac{34,95}{100}}$$

$$= \mathbf{1,54}$$

Calculating the Need for Health Human Resources

Table 4.
Calculations of Health Human Resources

Task Type	Activity	Achievements (1 Year)	Workload standards	Health Human Resources needs $\frac{Achievement\ 1\ year}{SBK}$
Main Task	Inpatient BRM Collection	13429	8928	$\frac{13429}{8928} = 1,50$
	Inpatient BRM Assembling		33480	$\frac{13429}{33480} = 0,40$
	Review the Completeness of the Dyna Form Hard Copy Form		133920	$\frac{13429}{133920} = 0,10$
	Review EMRs beyond Hard Copy Standard Forms		133920	$\frac{13429}{133920} = 0,10$
	Inpatient Statistics Input		133920	$\frac{13429}{133920} = 0,10$
	Inpatient manual fileScan		66960	$\frac{13429}{66960} = 0,20$
	Flowsheet ICU, NICU, PICU		22320	$\frac{13429}{22320} = 0,60$
	Naming Inpatient manual file		133920	$\frac{13429}{133920} = 0,10$

Task Type	Activity	Achievements (1 Year)	Workload standards	Health Human Resources needs $\frac{Achievement\ \ 1\ year}{SBK}$
	Upload Inpatient manual file		66960	$\frac{13429}{66960} = 0{,}20$
	Hard Copy Storage in the bank		133920	$\frac{13429}{133920} = 0{,}10$
			Jumlah Kebutuhan Tenaga	3,40
			Supporting Task Standards	1,54
			Health Human Resources Need	5,24
			Rounding	5

The staffing pattern in hospitals is one part of the direction of developing health human resources in hospitals by adapting to changes towards digital. This manpower pattern consists of manpower requirements based on the manpower standards of the Indonesian Ministry of Health, Hospital Accreditation Standards, and Job Analysis Program Follow-up Guidelines by the Minister of Information which are compiled with hospital capabilities. If the standardization of personnel requirements is carried out appropriately, then this workforce pattern can be structured well so that the implementation of service activities can achieve the predetermined targets. In determining the need for personnel, file scanning must be in accordance with certain standards through a systematic process and clear reasons regarding the amount and type of personnel needed. Based on calculations by ABK Kes, 5 officers are needed, whereas currently there are 2 officers, an additional 3 officers are needed so it is hoped that the service will be faster and more efficient.

CONCLUSION

Based on the results of research at the hospital, in the file scan section, there were 2 officers. The results of calculating human resource needs at the Hospital in the file scan section using the Health Workload Analysis (ABK Kes) method resulted in a total of 5 staff, whereas currently only 2 staff are available so an additional 3 people are needed.

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