

Workload Analysis of Registration Staff Using the ABK-Kes Method

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A B S T R A C T

The increasing number of patient visits at UPTD Puskesmas Wajo can increase the workload of registration officers. The imbalance between the number of officers and the volume of services can cause patient queues and waiting times to increase. This study aims to analyze the workload of registration officers using the Health Workload Analysis (ABK-Kes) method at Puskesmas Wajo. The study used a quantitative descriptive survey method with a cross-sectional approach. Data were collected through observation, interviews, and documentation. The sample consisted of 1 registration officer and 20 patients, namely 10 new patients and 10 returning patients, to determine the service time standard. The study was conducted from April to May 2026 at UPTD Puskesmas Wajo, Baubau City. The results showed that the available working time of the registration officer was 71,820 minutes per year. The service time standard for new patients was 5.4 minutes/patient, returning patients 3.5 minutes/patient, BPJS verification 1.2 minutes/patient, patient data entry 3.5 minutes/patient, and patient services and education 5 minutes/patient. The ABK-Kes calculation showed that 4 registration officers were needed, while 3 officers were available. In conclusion, there is a shortage of 1 registration officer, so additional staff are needed to improve the effectiveness and efficiency of services.

INTRODUCTION

The Community Health Center (Puskesmas) is a primary healthcare facility that plays a strategic role in delivering public health and individual health services in a comprehensive, integrated, and continuous manner. Puskesmas serve as the frontline of the national healthcare system, as they engage directly with the community to meet basic healthcare needs, bearing the responsibility of providing comprehensive promotive, preventive, curative, and rehabilitative services. Consequently, Puskesmas are required to deliver high-quality, effective, and efficient healthcare services to improve the health status of the community (Kemenkes RI, 2024).

The successful delivery of services at Community Health Centers (Puskesmas) is heavily influenced by the availability and management of health human resources, including registration staff—who are part of the medical records unit and serve as the entry point for healthcare services. The registration process is the initial stage that determines the smooth flow of subsequent patient care necessitating that medical record management be conducted in an orderly, accurate, and continuous manner to support high-quality healthcare. Registration staff are responsible for recording patient identities, managing visit data, and ensuring the availability of medical record information required by other healthcare professionals; consequently, their performance significantly impacts service effectiveness and patient satisfaction (Kemenkes RI, 2022).

As the number of patient visits to Community Health Centers rises, registration staff are required to carry out various service tasks within limited timeframes. If staffing levels are disproportionate to the workload, excessive workloads arise, leading to patient queue backlogs and increased waiting times, while potentially compromising the quality of registration services. Imbalanced workloads can also lead to staff fatigue, ultimately affecting the accuracy and speed of service delivery.

The issue of registration staff workload is a valid and reliable subject for scientific study, as it can be identified and measured based on the volume of activities, available working time, and service time standards. One method used to objectively analyze the workload of health human resources (SDMK) is the Health Workload Analysis (ABK-Kes) (Fazriyansah et al., 2024), as stipulated in the Minister of Health Regulation Number 13 of 2025 concerning Guidelines for Planning Health Human Resource Needs. This method calculates staffing requirements based on actual workload, thereby producing more rational and accurate health human resource planning (Kemenkes RI, 2025).

A study (Rahayu et al., 2024) analyzing the workload of registration staff using the ABK-Kes method at the Polanharjo Community Health Center (Puskesmas) in Klaten Regency found an available working time of 75,000 minutes per year, an average service time norm of 2.56 minutes per patient, a workload standard of 1,241,863, an FTP of 6.08%, and an STP of 1.06; this resulted in a calculated requirement of three registration staff members, compared to the existing staff of only one. Observations and interviews conducted at the Wajo Community Health Center on May 5, 2026, revealed that while the registration unit has three staff members, a surge in patient visits during specific service hours (08:00–10:00) leads to a heavier service workload. This situation highlights the need to analyze registration staff workload using the ABK-Kes method as a basis for health human resource planning to ensure effective and efficient service delivery. However, not all Community Health Centers conduct workload analyses systematically or based on standardized methods this gap serves as the basis for the researcher to undertake a study titled "Workload Analysis of Registration Staff Using the ABK-Kes Method at Wajo Community Health Center".

Based on the foregoing, this study aims to analyze the workload of registration staff at the Wajo Community Health Center (Puskesmas Wajo) using the ABK-Kes method. Specifically, the study aims to: (1) identify the health facility and the types of health human resources (SDMK) in the registration unit at Puskesmas Wajo; (2) determine the available working time (WKT) for registration staff at Puskesmas Wajo; (3) establish workload components and service time standards for registration staff; (4) calculate the workload standard for registration staff at Puskesmas Wajo; (5) calculate the standard for supporting activities performed by registration staff at Puskesmas Wajo; and (6) calculate the staffing requirements for registration staff at Puskesmas Wajo based on the ABK-Kes method (Cahyaningrum et al., 2020).

The workload of registration staff warrants attention because the registration unit is a section that interacts directly with patients from the moment they begin receiving care. A smooth process in this unit supports subsequent stages of service delivery, whereas a workload that is mismatched with the available workforce can lead to suboptimal performance. Therefore, workload assessment must take into account all activities performed by the staff, including both core and supporting tasks. Such measurement provides an overview of the actual workload situation and assists in determining staffing requirements that align with service activities at the health facility (Oktaviani et al., 2020).

METHOD

This study is a descriptive quantitative study employing an observational (cross-sectional) approach and the Health Workforce Workload Analysis (ABK-Kes) method. It was conducted at the Wajo Community Health Center (Puskesmas) in Baubau City, Southeast Sulawesi, during April and May 2026. The study population consisted of a single registration officer. A purposive sampling method was used to select the officer currently on duty, with time-norm observations performed on 20 patients—comprising 10 new and 10 returning patients (Jailani & Jeka, 2023). Data were collected through direct observation, interviews, and document review. The instruments used included a stopwatch, interview guidelines, and ABK-Kes calculation forms. The analysis was carried out in six stages: defining the health facility and the type of health workforce; determining Available Working Time (WKT); establishing workload components and time norms; calculating the Standard Workload (SBK); calculating the Supporting Task Factor (FTP) and Supporting Task Standard (STP); and calculating health workforce requirements based on annual activity achievements.

RESULTS AND DISCUSSION

This study analyzes the workload of registration staff at the Wajo Community Health Center (UPTD Puskesmas Wajo) using the Health Workload Analysis (ABK-Kes) method. The analysis involved determining the health service facility and the type of health human resources (SDMK), calculating Available Working Time (WKT), identifying workload components and time norms, establishing Workload Standards (SBK), determining Supporting Task Factors (FTP) and Supporting Task Standards (STP), and assessing staffing requirements. The unit analyzed was the Registration Unit, specifically focusing on medical record registration staff. The study found that three registration staff members were assigned to this unit. Defining the unit and the type of staff served as the basis for ensuring that the calculation of staffing needs aligned with the actual tasks and activities performed within the registration unit.

Based on the Available Working Time (WKT) calculation, there are 260 working days in a year. After deducting 12 days of leave, 17 national holidays, and 3 days of absence, the total available

working days amounted to 228. With an effective working time of 5.25 hours per day, the WKT for registration staff was calculated at 1,197 hours—or 71,820 minutes—per year. This WKT value serves as the basis for calculating the staff's capacity to complete activities over the course of a year. These results differ from the study by Rahayu et al. (2024) @@@@at the Polanharjo Community Health Center, which determined a WKT of 1,250 hours (75,000 minutes) per year. Such differences can be attributed to variations in the number of effective working days, leave, holidays, and absences at each specific health service facility. The WKT calculation demonstrates that the time available to staff forms the foundation for determining the service capacity that can be achieved within a year. Accurate calculation of available working time is essential, as it underpins the establishment of workload standards for each service activity. By determining WKT based on the actual conditions at the Wajo Community Health Center, staffing requirements can be calculated in alignment with the effective working time truly available to the staff.

Based on observations and interviews, the registration staff's workload comprises five primary activities and two supporting activities. The primary activities include registering new patients, registering returning patients, verifying BPJS coverage status, entering patient data, and providing patient services and education. The supporting activities consist of meetings and free health check-ups. Time standards were established through stopwatch measurements and interviews with the registration staff..

Tabel 1. Workload Components and Time Standards for Registration Staff

Task Type	Activity	Time Norms
Core task	New patient registration	5,4 minutes/patient
Core task	Returning patient registration	3,5 minutes/patient
Core task	Verification of BPJS active status	1,2 minutes/patient
Core task	Patient data entry	3,5 minutes/patient
Core task	Patient services and education	5 minutes/patient
Supporting tasks	Meeting	3 hours/month
Supporting tasks	Free health check-up	4 hours/month

Source: Primary data, 2026

The longest standard time applies to new patient registration (5.4 minutes per patient), while the shortest applies to verifying BPJS coverage status (1.2 minutes per patient). This variation indicates that each activity involves distinct processes and time requirements. These standard times serve as the basis for determining the Workload Standard (SBK). Meetings and free health checks are excluded from the SBK calculation as they are classified as supporting activities; instead, they are accounted for via FTP and STP. These differing standard times demonstrate that each service activity has a different completion rate. Activities requiring more time result in lower completion capacity within available working hours, whereas activities with shorter completion times allow for greater activity capacity. Therefore, accurately calculating the standard time for each activity is essential, as it serves as a key factor in determining staff work capacity and workforce requirements at the Wajo Community Health Center (Puskesmas) Registration Unit.

The Workload Standard (SBK) calculation results indicate a staff member's capacity to complete each core activity over the course of a year, based on Available Working Time (WKT) and standard times. The SBK calculation results for the Wajo Community Health Center Registration Unit are presented below:

Tabel 2. Workload Standards for Registration Staff

Activity	Time Norms	WKT (minutes/years)	SBK
New patient registration	5,4 minutes/patient	71.820	13.300
Returning patient registration	3,5 minutes/patient	71.820	20.520
Verification of BPJS active status	1,2 minutes/patient	71.820	59.850
Patient data entry	3,5 minutes/patient	71.820	20.520
Patient services and education	5 minutes/patient	71.820	14.364

Source: Primary data, 2026

Calculation results indicate a Standard Workload (SBK) of 13,300 activities per year for new patient registration, 20,520 for returning patient registration, 59,850 for BPJS membership verification, 20,520 for patient data entry, and 14,364 for patient services and education. BPJS membership verification has the highest SBK because it has the shortest time norm, whereas new patient registration has the lowest SBK because it requires the longest time. This demonstrates that the more time required to complete an activity, the lower the activity capacity that can be achieved within the same Available Working Time (WKT) (Syaiyku & Fannya, 2024).

The patient data entry activity has a time norm of 3.5 minutes per patient, while patient services and education require 5 minutes per patient. The relatively high time norm for patient services and education indicates that this activity requires more interaction time between the staff member and the patient. These differences in time norms subsequently affect the staff's ability to complete activities within the available working time. Therefore, measuring time norms for each activity is essential so that the calculated workload is not based solely on patient volume but also accounts for the time required to complete each specific task. These differences highlight that each activity possesses distinct work characteristics, thereby requiring varying completion times. Consequently, the capacity for activities that staff can complete within the available working time differs across service types. Thus, establishing time norms for each activity is a crucial step in determining workload standards and defining the service capacity of registration staff.

These results differ from the study by (Rahayu et al., 2024) at the Polanharjo Community Health Center due to differences in activity components and time standards. Variations in activity characteristics, service workflows, and completion times result in differing work capacities. Therefore, the Standard Time Burden (SBK) needs to be calculated based on the specific service conditions of the facility under study.

In addition to their primary duties, registration staff also perform supporting activities, such as meetings and free health checks. Meetings take up 3 hours per month (2,160 minutes per year), while free health checks require 4 hours per month (2,880 minutes per year). The total time allocated for supporting activities is 5,040 minutes per year.

Tabel 3. Support Tasks, Support Task Factors, and Support Task Standards

Supporting Activities	Time per Year	FTP
Meeting	2.160 minutes	3,00%
Free health check-up	2.880 minutes	4,01%
Total	5.040 minutes	7,01%

Source: Primary data, 2026

Based on the calculations, an FTP of 7.01% and an STP of 1.07 were obtained. These values indicate that a portion of the staff's working time is spent on activities outside of their primary duties. Therefore, support activities must be taken into account when determining final health workforce requirements. The FTP result in this study is relatively close to that of (Rahayu et al., 2024), who reported an FTP of 6.08% and an STP of 1.06. Such differences may be attributed to variations in the type, frequency, and duration of support activities across different healthcare facilities. Since these support activities consume a portion of the staff's working time, they must be included in the analysis of workforce requirements. The FTP value of 7.01% represents the proportion of working time allocated to support activities over the course of a year. Consequently, this FTP value yields an STP of 1.07, which is used to calculate the final staffing requirements. Thus, the calculation of FTP and STP illustrates that workforce requirements are influenced not only by primary duties but also by support activities performed during working hours.

The calculation of health workforce requirements is performed by comparing the activity achievements over a one-year period with the Standard Workload (SBK) for each activity. The results of the workforce requirement calculation for the Registration Unit of Wajo Community Health Center (Puskesmas) are presented in the following table:

Tabel 4. Calculation of Human Resource Requirements for Registration Staff

Activity	1-Year Achievement	SBK	Need SDM
New patient registration	5.196	13.300	0,39
Returning patient registration	14.830	20.520	0,72
Verification of BPJS active status	20.026	59.850	0,33
Patient data entry	20.026	20.520	0,97
Patient services and education	20.026	14.364	1,39
Required Workforce Size (JKT)	—	—	3,80
STP	—	—	1,07
total requirements SDM	—	—	4,00

Source: Primary data, 2026

Activity achievements over the course of a year comprised 5,196 new patient registrations, 14,830 returning patient registrations, and 20,026 activities involving BPJS verification, patient data entry, and patient services and education. Staffing requirement calculations indicated a need for 0.39 staff members for new patient registration, 0.72 for returning patient registration, 0.33 for BPJS verification, 0.97 for patient data entry, and 1.39 for patient services and education. The total staffing requirement for core duties was calculated at 3.80 staff members. After accounting for a non-productive time allowance (STP) of 1.07, the final requirement was determined to be 4 staff members.

The highest staffing requirement was found in the patient services and education category, requiring 1.39 staff members. This is attributed to a standard time allocation of 5 minutes per patient and an activity volume of 20,026 per year. Conversely, BPJS eligibility verification required only 0.33 staff members because the standard time was merely 1.2 minutes, despite the activity volume being the same. This situation demonstrates that staffing requirements are influenced not only by the volume of activities but also by the time required to complete each activity.

Variations in staffing requirements across different activities demonstrate that the need for health human resources is determined not only by the volume of activities performed but also by the time norms and standard workload benchmarks (SBK) associated with each activity. Patient services and education require the highest staffing level—equivalent to 1.39 personnel—a figure consistent with a time norm of 5 minutes per patient and an SBK of 14,364 activities per year. In contrast, verifying BPJS enrollment status requires 0.33 personnel, based on a time norm of 1.2 minutes and an SBK of 59,850 activities per year.

Wajo Community Health Center (Puskesmas) currently employs three registration staff members, whereas ABK-Kes calculations indicate a requirement for four. Consequently, there is a shortfall of one registration staff member. These findings reveal that the current staffing level does not fully align with workload-based requirements. A similar situation was observed in a study by Giyatno and Rizkika (2020), which analyzed human resource needs in the medical records unit of a community health center. Although the methodologies differed, both studies demonstrate that workload analysis can serve as a basis for determining staffing needs in accordance with service conditions at primary healthcare facilities.

This staffing shortfall warrants attention because staff members do not perform just a single type of task; rather, they handle multiple core activities simultaneously alongside various supporting tasks. As service volumes fluctuate, staffing requirements may also change, necessitating periodic evaluations of health workforce needs. These findings indicate that workforce planning must account for the full range of activities performed by staff during working hours. Aligning staffing levels with workload is expected to facilitate a more appropriate distribution of service tasks within the Registration Unit. Consequently, the calculation results provide a clearer picture of the workforce availability and requirements at the Wajo Community Health Center (Puskesmas).

The results indicate that current staffing levels do not fully meet the requirements dictated by the measured workload (Widjaja et al., 2024). This situation is particularly critical during peak service hours—specifically between 08:00 and 10:00—as identified through preliminary observations.

The results of this study align with the research conducted by (Rahayu et al., 2024) at the Polanharjo Community Health Center (Puskesmas) in Klaten Regency, which also revealed a gap between the required and actual number of registration staff. Discrepancies in staffing requirements between that study and the current one may stem from differences in activity volume, time norms, available working time (WKT), and support activities at each health center. Consequently, the ABK-Kes (Health Human Resource Workload Analysis) results for the Wajo Community Health Center can serve as a basis for planning health workforce needs tailored to the specific conditions of the Registration Unit.

The workforce requirement calculations also indicate that the workload at the Wajo Community Health Center's Registration Unit requires a comprehensive assessment, as staff members perform various tasks with distinct characteristics and completion times. Activities such as new and returning patient registration, verification of BPJS (social health insurance) status, patient data entry, and patient services and education all contribute to staffing requirements. Furthermore, support activities—such as meetings and free health screenings—consume a portion of the staff's working time outside of their core duties. Therefore, calculating workforce needs using the ABK-Kes method provides a more complete picture, as it accounts for available working time, time norms, workload standards, and support activities when determining the final health workforce requirements.

Overall, the study results indicate that the ABK-Kes method can provide an overview of registration staff requirements based on measurable workload. The calculations yielded a Total Available Working Time (WKT) of 71,820 minutes per year, five core activities with varying Standard Working Time (SBK) values, an Allowance Factor (FTP) of 7.01%, a Non-Productive Time Factor (STP) of 1.07, a Calculated Staff Requirement (JKT) of 3.80, and a final requirement of 4 staff members. The differences in SBK values across activities demonstrate that each task has a distinct completion capacity, determined by time norms and activity volumes. In addition to core tasks, supporting activities—such as meetings and free health checks—were factored in, as they consume a portion of the staff's working time. With a current workforce of three, there is a deficit of one registration staff member. This situation reveals a gap between the available workforce and the staffing requirements derived from the workload analysis. These findings can serve as a basis for Puskesmas Wajo to plan its health workforce and periodically evaluate staffing needs, ensuring that personnel levels align with the service workload at the Registration Unit.

CONCLUSION

The study results indicate that the total available working time (WKT) for registration staff is 71,820 minutes per year. The standard times for the five core activities are 5.4 minutes for new patients, 3.5 minutes for returning patients, 1.2 minutes for BPJS verification, 3.5 minutes for patient data entry, and 5 minutes for patient service and education. The respective Standard Work Loads (SBK) are 13,300; 20,520; 59,850; 20,520; and 14,364. The Non-Productive Time Factor (FTP) is 7.01%, and the Standard Time Factor (STP) is 1.07. The calculated staffing requirement for core duties is 3.80 personnel, resulting in a final requirement of 4 staff members; given that only 3 staff members are currently available, there is a shortage of one registration staff member. It is recommended that Puskesmas Wajo consider these calculation results in its health human resource planning and periodically evaluate staffing needs in line with changes in service volume. A limitation of the study is that time measurements were based on a single staff member and 20 patients; therefore, the results primarily reflect conditions during the study period.

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