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Hospital policy and nurses' knowledge on healthcare-associated infection prevention: A case study from General Hospital of Aisyiyah St. Khadijah Pinrang

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ABSTRACT

Healthcare-associated infections (HAIs) remain a critical public health concern worldwide, contributing to increased morbidity, mortality, and healthcare costs. However, studies focusing on the interplay between hospital policy and nursing staff knowledge in rural healthcare settings remain limited. This study aims to analyze the relationship between hospital policies and nurses' knowledge in preventing HAIs at General Hospital of Aisyiyah St. Khadijah Pinrang. A quantitative approach was employed involving 36 respondents selected through total sampling. Data were gathered using observations, questionnaires, and documentation, and analyzed using the chi-square test via SPSS. The findings revealed a statistically significant relationship ($p = 0.000$, $p < 0.05$) between hospital policy and the level of nurses' knowledge regarding HAI prevention. These results highlight the critical role of supportive institutional policies and informed nursing staff in mitigating infection risks during healthcare delivery. The study underscores the need for integrated institutional strategies and continuous professional education to enhance patient safety, particularly in rural hospital settings where resource limitations pose added challenges.

ABSTRAK

Infeksi terkait layanan kesehatan (HAIs) masih menjadi masalah kesehatan masyarakat yang penting di seluruh dunia, yang berkontribusi terhadap peningkatan morbiditas, mortalitas, dan biaya perawatan kesehatan. Namun, penelitian yang berfokus pada interaksi antara kebijakan rumah sakit dan pengetahuan staf perawat di lingkungan perawatan kesehatan pedesaan masih terbatas. Penelitian ini bertujuan untuk menganalisis hubungan antara kebijakan rumah sakit dan pengetahuan perawat dalam mencegah HAIs di RSU Aisyiyah St Khadijah Pinrang. Pendekatan kuantitatif dilakukan dengan melibatkan 36 responden yang dipilih melalui total sampling. Data dikumpulkan dengan menggunakan observasi, kuesioner, dan dokumentasi, dan dianalisis dengan menggunakan uji chi-square melalui SPSS. Hasil penelitian menunjukkan adanya hubungan yang signifikan secara statistik ($p = 0,000$, $p <0,05$) antara kebijakan rumah sakit dan tingkat pengetahuan perawat mengenai pencegahan HAI. Hasil ini menyoroti peran penting dari kebijakan institusi yang mendukung dan staf keperawatan yang terinformasi dalam mengurangi risiko infeksi selama pemberian layanan kesehatan. Penelitian ini menggarisbawahi perlunya strategi institusional yang terintegrasi dan pendidikan profesional yang berkelanjutan untuk meningkatkan keselamatan pasien, terutama di rumah sakit pedesaan di mana keterbatasan sumber daya menjadi tantangan tersendiri.

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INTRODUCTION

Healthcare-associated infections (HAIs) are a persistent global public health issue, significantly contributing to increased patient morbidity, mortality, and healthcare costs. According to the World Health Organization (WHO), approximately one in ten hospitalized patients globally acquires at least one HAI during their hospital stay (WHO, 2020). In developed countries, nosocomial infections still cause substantial harm despite advanced medical infrastructure, with an estimated 4.5 million cases annually in Europe and 1.7 million in the United States, resulting in nearly 99,000 deaths (Rusman & Sumirat, 2020). In contrast, developing countries face greater challenges, with higher prevalence rates due to limited resources, inadequate infrastructure, and suboptimal infection control practices. The prevalence of HAIs in developing countries ranges between 5.7% and 19.1%, with a combined average of 10.1% (Millah et al., 2022).

In Indonesia, the prevalence of HAIs is concerning, with national data indicating rates as high as 15.74% (Dhamanti, 2022), considerably higher than those reported in developed nations. The high incidence of HAIs in Indonesian hospitals has been attributed to inadequate infection control policies, insufficient healthcare worker training, and inconsistent implementation of safety protocols. The Indonesian Ministry of Health has mandated healthcare facilities to implement comprehensive Infection Prevention and Control (IPC) programs, including the adoption of Standard Precautions and routine monitoring. Effective management of HAIs relies heavily on institutional policies and healthcare personnel's knowledge of standard precautions (Rosjidi et al., 2023). These programs aim not only to protect patients but also healthcare workers, volunteers, and visitors from potential infection risks (Auwalani & Sundoro, 2021).

Despite existing policies and training mandates, the incidence of HAIs in Indonesian hospitals remains alarmingly high, particularly in rural and resource-limited settings. This reflects gaps in the implementation of hospital infection control programs and the insufficient integration of healthcare workers' knowledge into routine clinical practice. To address this issue, strengthening hospital policy frameworks and enhancing nurses' knowledge through continuous education and effective supervision are critical strategies for reducing HAI prevalence (Aziz et al., 2022; Supratiningsih et al., 2024).

A growing body of literature underscores the importance of robust hospital management and policy implementation in preventing HAIs. For instance, effective hospital leadership that enforces standard operating procedures and promotes a culture of patient safety has been associated with higher compliance among healthcare workers (Supratiningsih et al., 2024). The implementation of targeted infection control policies, such as routine hand hygiene practices (e.g., the five moments of handwashing), sterilization monitoring, and environmental cleanliness, has been shown to significantly reduce infection transmission in healthcare settings. Additionally, sustained education and competency-based training for healthcare workers are vital in ensuring adherence to infection control protocols (Rosjidi et al., 2023).

Moreover, literature suggests that nurses play a pivotal role in preventing HAIs through the application of clinical knowledge and infection prevention practices. Studies show a positive correlation between the level of nurses' knowledge on standard precautions and their compliance with infection control measures. Ensuring that nurses are well-informed about HAI prevention strategies not only improves patient outcomes but also enhances institutional capacity in infection control (Auwalani & Sundoro, 2021; Millah et al., 2021). This highlights the importance of aligning hospital policies with continuous professional development programs tailored to the needs of frontline healthcare workers.

Although numerous studies have documented the prevalence of HAIs and proposed strategies for prevention, limited research has specifically examined the interplay between hospital policies and nurses' knowledge in rural Indonesian hospitals. The high prevalence of HAIs in such settings, coupled with limited institutional resources and training opportunities, calls for a nuanced understanding of how policy and knowledge synergize to influence infection control outcomes. Previous investigations often address these variables separately, leaving a critical gap in assessing their

combined impact on HAI prevention (Millah et al., 2022; Dhamanti, 2022).

This study addresses this gap by analyzing the relationship between hospital policy and nurses' knowledge in preventing HAIs at General Hospital (RSU) of Aisyiyah St. Khadijah Pinrang. By integrating these two variables, the research offers a comprehensive perspective on how institutional frameworks and human resources collectively shape infection control practices. The findings aim to provide actionable insights for hospital administrators and policymakers in formulating more effective strategies to combat HAIs, particularly in rural healthcare contexts where systemic limitations prevail

METHODS

This study employed a quantitative method with a cross-sectional approach to evaluate the relationship between nurses' knowledge and hospital policy in the prevention of healthcare-associated infections (HAIs). The study was conducted at RSU Aisyiyah St. Khadijah Pinrang, Pinrang Regency, during the period of January to February 2025. Both primary and secondary data were utilized.

The study population comprised all nurses employed at the hospital. Respondents were selected through a total sampling technique, involving the entire population that met the inclusion criteria. The independent variables consisted of hospital policy and nurses' knowledge, each measured using ten questionnaire items. The dependent variable, namely HAI prevention practices, was assessed using a Likert scale comprising ten statements.

Data collection was carried out through field observations and structured interview questionnaires. Questionnaires were distributed in stages to respondents who met the inclusion criteria. Prior to data collection, the researchers obtained official permission through an approval letter issued by the Investment and One-Stop Integrated Services Office (DPMPTSP) of Pinrang Regency, which was then submitted to the Director of RSU Aisyiyah St. Khadijah or the appointed representative from the human resources department.

To ensure instrument validity, a validity test was conducted. The results showed that all questionnaire items had correlation coefficient (r) values greater than the critical value (r-table) at a 5% significance level, indicating that all items were valid. Reliability testing using Cronbach's Alpha yielded a coefficient of 0.965, demonstrating excellent internal consistency and high reliability of the measurement tool.

Table 1
Characteristics of respondents

Characteristic	n	%
Gender		
Male	11	30.6
Female	25	69.4
Age		
< 35 Years	27	75
≥ 35 Years	9	25
Last Education		
Diploma in Nursing (D3)	24	66.7
Bachelor of Nursing (S1)	5	13.9
Nurse Profession Program	7	19.4
Length of Work		
< 5 Years	16	44.4
≥ 5 Years	20	55.6

Each questionnaire was reviewed for completeness before data analysis. SPSS software was used for data analysis. Univariate analysis was performed to describe respondent characteristics, while bivariate analysis using the Chi-square test was employed to examine the relationship between the

independent and dependent variables. Statistical significance was set at $p < 0.05$. A p-value less than 0.05 was considered indicative of a statistically significant association between the examined variables

Table 2
Relationship between hospital policy, knowledhe, and prevention of HAI's.

Variable	Prevention of HAIs				Total	P Value
	Adequate		Effective			
	n	%	n	%		
Hospital Policy						
Adequate	16	80	4	20	20	0.000
Good	0	0	16	100	16	
Nurse Knowledge						
Adequate	15	88.2	2	11.8	17	0.000
Good	3	15.8	16	84.2	19	

RESULTS AND DISCUSSION

This research was conducted at RSU Aisyiyah St. Khadijah Pinrang which is located at Jaya Village, Watang Sawitto District, Pinrang Regency. The hospital is one of the main referral facilities in the region, with a strategic role in promotive, preventive, curative, and rehabilitative services, including in efforts to overcome nosocomial infections (HAIs). The hospital's working environment reflects the social and cultural diversity of the medical personnel on duty. Data collection was conducted using a questionnaire designed to obtain quantitative information regarding the characteristics of respondents and their perceptions of policies and knowledge of HAIs prevention.

Table 1 shows the characteristics of respondents that the majority were female (69.4%). Most of the respondents were under 35 years old (75%) and the majority had the last education D3 Nursing (66.7%). A total of 55.6% of respondents had worked for more than five years, indicating the dominance of respondents with considerable work experience.

Table 2 shows that respondents who rated the hospital policy as "fair" the majority only achieved "fair" HAIs prevention category as well (80%), and only 20% were in the "effective" category. In contrast, all respondents who rated the hospital policy as "good" showed effective preventive measures (100%). The p value of 0.000 indicated a highly statistically significant relationship between the quality of hospital policies and the effectiveness of HAIs prevention.

Based on the research findings of Aisyiyah St. Khadijah Pinrang Hospital. Most nurses with only a "fair" level of knowledge (88.2%) were also only able to take precautions in the same category. Only 11.8% of them managed to reach the "effective" category. Meanwhile, the majority of nurses with "good" knowledge level (84.2%) managed to prevent HAIs effectively. The p value of 0.000 indicates a highly significant relationship between nurses' knowledge level and the effectiveness of HAIs prevention measures.

The results of research conducted at Aisyiyah St. Khadijah Pinrang Hospital showed a significant correlation between hospital policy and the effectiveness of nosocomial infection prevention measures (HAIs). Of the 20 respondents who rated the hospital policy as "adequate", 80% reported that HAIs prevention measures were also adequate, while only 20% stated that their measures were effective. On the other hand, all respondents who rated the hospital policy as "good" were able to implement infection prevention effectively.

This finding indicates that the quality of internal hospital policies plays an important role in determining the successful implementation of infection prevention strategies. A well-designed policy is not just an administrative document, but must be able to be translated into concrete actions that are oriented towards patient safety. Effective policy implementation requires support from various parties, including hospital management who must actively provide supervision, financing, and routine training to medical personnel.

This study is in line with several previous studies that emphasize that a strong, consistent, and systematic hospital management structure can improve compliance with infection prevention procedures. Several aspects such as repetitive training, five-moment handwashing culture, as well as strict supervision of the sterilization process, have been proven to strengthen the effectiveness of HAIs prevention.

Furthermore, the level of knowledge of nurses also showed a significant relationship with the success of infection prevention. As many as 88.2% of nurses who had knowledge in the "sufficient" category were only able to implement preventive measures that were also in that category. This indicates that despite having a basic understanding, it is not enough to ensure optimal action. This could be due to lack of advanced training, lack of clinical experience, or limited understanding of preventive procedures in depth.

The level of knowledge has a strong relationship with a person's efforts to prevent infection. Knowledge itself is the result of a cognitive process that occurs after an individual senses an object or phenomenon. This process involves the five senses, where most information is obtained through the senses of sight and hearing. Apart from sensory experiences, knowledge can also be developed through formal education, personal and other people's experiences, as well as through interaction with the media and social environment. This cognitive domain is the main foundation in the formation of behavior, because in general, individual actions are influenced by the level of knowledge they have (Sunaryo, 2020).

In contrast, respondents with knowledge levels classified as "good" performed much more effectively in preventive practices. Most of them (84.2%) were able to implement preventive measures appropriately, reflecting a more comprehensive understanding of health protocols, such as the use of personal protective equipment (PPE), hygiene techniques, and other preventive procedures. Statistical analysis using the chi-square test showed a p value of 0.000 ($p < 0.05$), indicating that nurses' knowledge level has a significant influence on the effectiveness of HAIs prevention. In other words, an increase in knowledge is directly proportional to an increase in the quality of preventive measures taken.

This finding is consistent with the study of Saad et al. (2024), which states that nurses' knowledge has a direct impact on their ability to prevent nosocomial infections. The higher the level of knowledge, the better the quality of preventive actions that can be taken, which in turn can reduce the incidence of HAIs in the hospital environment.

This study concluded that there is a significant relationship between hospital policy and nurses' knowledge with the effectiveness of nosocomial infection (HAIs) prevention at RSU Aisyiyah St. Khadijah Pinrang. Both variables demonstrably contribute to shaping more effective infection prevention practices. Nurses with a sound understanding of HAIs, supported by well-structured and applicable institutional policies, demonstrated a higher capacity to implement effective preventive measures. The findings affirmed that hospital policies significantly influence HAI prevention, as evidenced by a p-value of 0.000 ($p < 0.05$), suggesting that strong institutional support enhances adherence to standard infection control procedures by nursing staff. Similarly, the study found a significant relationship between nurses' knowledge and HAI prevention ($p = 0.000$), emphasizing the critical role of educational background in fostering the competence of healthcare workers in infection control.

These findings underscore the necessity of reinforcing internal hospital policies and investing in the continuous development of human resources, particularly nursing staff, to effectively reduce the incidence of HAIs in healthcare settings. The study contributes to the growing body of evidence that institutional policy and personnel capacity are interdependent in achieving optimal infection control outcomes. Limitations of this study include the restricted sample size and its focus on a single institution, which may affect generalizability. Future research should consider multi-center studies with larger populations to enhance the robustness of findings and explore other contributing factors such as organizational culture, workload, and availability of infection control resources.

CONCLUSION

This study concluded that there is a significant relationship between hospital policy and nurses' knowledge with the effectiveness of nosocomial infection (HAIs) prevention at RSU Aisyiyah St. Khadijah Pinrang. Both variables demonstrably contribute to shaping more effective infection prevention practices. Nurses with a sound understanding of HAIs, supported by well-structured and applicable institutional policies, demonstrated a higher capacity to implement effective preventive measures. The findings affirmed that hospital policies significantly influence HAI prevention, as evidenced by a p-value of 0.000 ($p < 0.05$), suggesting that strong institutional support enhances adherence to standard infection control procedures by nursing staff. Similarly, the study found a significant relationship between nurses' knowledge and HAI prevention ($p = 0.000$), emphasizing the critical role of educational background in fostering the competence of healthcare workers in infection control.

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REFERENCES

Auwalani, F. R., & Sundoro, T. (2021). Kepemimpinan, Tata Kelola Dan Sumber Daya Dalam Pencegahan Dan Pengendalian *Healthcare Associated Infections* (Hais) Di Rumah Sakit X Yogyakarta. *TheJournalish: Social and Government*, *2*(2), 15–29. http://thejournalish.com/ojs/index.php/thejournalish/article/view/90

Aziz, F., Lestari, F. B., Indarjulianto, S., & Fitriana, F. (2022). Identifikasi dan Karakterisasi Resistensi Antibiotik Terduga Staphylococcus aureus pada Susu Mastitis Subklinis asal Sapi Perah di Kelompok Ternak Sedyo Mulyo, Pakem, Sleman Yogyakarta. *Jurnal Ilmu Peternakan Dan Veteriner Tropis (Journal of Tropical Animal and Veterinary Science)*, *12*(1). https://doi.org/10.46549/jipvet.v12i1.226

Dhamanti, S. A. R. & I. (2022). *JOURNAL OF HEALTH SCIENCE AND PREVENTION*,Program Pencegahan dan Pengendalian Infeksi di Rumah Sakit. *Kuttab*, *6*(1), 1.

Millah, Z.N (2021). Isolasi Fungi Tanah Muara Desa Pasir Putih Kabupaten Situbondo serta Penapisan Aktivitas Antibakteri terhadap *Staphylococcus aureus (Isolation of Soil Fungi from Pasir Putih Estuary in Situbondo Regency and Screening of Antibacterial Activity against Stap*. *Jurnal Ilmu Kefarmasian Indonesia*, *68121*(2), 150–157.

Nisa, K. (2019). Kebijakan Rumah Sakit dalam Upaya Pencegahan Penyakit Infeksi bagi Pasien dan Tenaga Kesehatan di Lingkungan Rumah Sakit. In *Jurnal Ilmiah Kesehatan* (Vol.1,Issu1,pp.1–12).

Organization, W. H. (2020). *No Title*.

Permenkes. (n.d.). No Title. In *2017*.

Ririn Teguh; dkk. (2023). Pencegahan dan Pengendalian Infeksi Di Fasilitas Kesehatan Tingkat Pertama (FKTP). In *Eurekamediaaksara*. http://www.nber.org/papers/w16019

Rosjidi, A., Setiyawan, & Sulisetiyawati, S. D. (2023). *Pengaruh Pendidikan Kesehatan Dengan Metode Focus Group Disscusion Terhadap Tingkat Pengetahuan Dalam Melakukan Kewaspadaan Standar Mencegah Healthcare Associated Infections (HAIs) di Puskesmas Kartasura Kabupaten Sukoharjo*. *27*, 1–10.

Rusman, A., & Sumirat, I. (2020). *Hubungan Antara Tingkat Pengetahuan Perawat Tentang Kejadian Infeksi Nosokomial dengan Upaya Pencegahan di Lingkungan IGD Rumah Sakit Bahayangkara Brimob*. 942–948.

Saad, R., Zulkarnaen, I., Rivai, A., Dunggio, S., Sartika, D., Makassar, U. C., Tinggi, S., Kesehatan, I., Maluku, P. K., Makassar, S. A., & Mada, U. G. (2024). *Pencegahan Healthcare Associated Infection (HAIs) Pada Pasien Post Operasi Terhadap Knowledge Perawat Di Rumah Sakit*. *4*, 5331–5344.

Sulaiman, Z., Mardatillah, Devy Febrianti, & Said, S. (2021). Pelaksanaan Program Badan Penyelenggara Jaminan Sosial Kesehatan Di Puskesmas Kabupaten Sidrap. *Jurnal Ilmiah Manusia Dan Kesehatan*, *4*(2), 299–308. https://doi.org/10.31850/makes.v4i2.817

Sundoro, T. (2020). Program Pencegahan dan Pengendalian Healthcare Associated Infections (Hais) di Rumah Sakit X. *Jurnal Ilmu Kesehatan Masyarakat Berkala*, 2(2), 25. https://doi.org/10.32585/jikemb.v2i2.986

Supratiningsih, T., Mintasih, S., & Kamilah, S. (2024). Hubungan Pengetahuan Perawat tentang Penerapan Sasaran Keselamatan Pasien dengan Tingkat Kepatuhan dalam Pencegahan Infeksi di Rumah Sakit Prikasih. *Open Access Jakarta Journal of Health Sciences*, *3*(1), 1058–1064. https://doi.org/10.53801/oajjhs.v3i1.221