



DOI: <https://doi.org/10.38035/dijemss.v6i4>
<https://creativecommons.org/licenses/by/4.0/>

The Influence of Effective Communication and Competency on Inpatient Knowledge of Clinical Pathway at RSUD Koja with the Monitoring System as an Intervening Variable

Alexander Romulo Hutabarat¹, Yanuar Ramadhan², Wahyuni Dian Purwati³

¹Esa Unggul University, Jakarta, Indonesia, hutabarat.alex81@gmail.com

²Esa Unggul University, Jakarta, Indonesia, yanuar.ramadhan@esaunggul.ac.id

³Esa Unggul University, Jakarta, Indonesia, wahyuni.dian@esaunggul.ac.id

Corresponding Author: hutabarat.alex81@gmail.com¹

Abstract: Knowledge of clinical pathways is a key factor in ensuring standardized and efficient healthcare services. This study aims to analyze the influence of effective communication and competence on knowledge of clinical pathways through a monitoring system as an intervening variable at Koja Regional Hospital. This research employs a quantitative method with a causality approach. The sample consists of 276 respondents, including inpatient doctors and nurses at Koja Regional Hospital. Data analysis was conducted using Structural Equation Modeling (SEM) with AMOS software. The results indicate that effective communication and competence have a positive and significant impact on knowledge of clinical pathways, both directly and through the monitoring system. Furthermore, the monitoring system plays a crucial role in enhancing knowledge of clinical pathways by providing accurate and real-time information on healthcare procedures. The implications of this study highlight the importance of improving communication skills and healthcare worker competence, as well as optimizing the monitoring system to ensure better understanding and implementation of clinical pathways in hospitals.

Keyword: Effective Communication, Competence, Monitoring System, Quality Control, Knowledge Of Clinical Pathway.

INTRODUCTION

Health is a fundamental aspect of human life that determines societal well-being and productivity. To improve global health standards, the United Nations (UN) established the World Health Organization (WHO) as the responsible entity for addressing various health issues worldwide. WHO plays a crucial role in limiting the spread of infectious diseases, providing medical assistance to countries in need, improving maternal and child welfare, and promoting health research (Bloomberg Global Health Index, 2023). However, achieving equitable health standards across the world remains a challenge, particularly in low-income countries where access to quality healthcare services is limited. WHO reports that life expectancy in low-income countries is 18.1 years lower than in high-income countries. The main factors contributing to this disparity include poor healthcare services, limited access to

medical facilities, and unfavorable environmental conditions such as inadequate clean water, poor sanitation, and unhealthy lifestyles (Bloomberg Global Health Index, 2023).

To improve healthcare quality, WHO not only conducts health research but also provides accreditation for healthcare facilities through international accreditation bodies. One such body is the Joint Commission International (JCI), which certifies hospitals that meet international healthcare service standards (Joint Commission International, 2023). In Indonesia, out of a total of 3,087 hospitals, only 36 meet international standards, consisting of 25 hospitals accredited by JCI and 11 hospitals accredited by the Ministry of Health's Accreditation Agency (KARS, 2022).

RSUD Koja, as a long-established public hospital, is committed to improving healthcare services for the community. However, data indicates that its quality performance over the past three years has not met the targets set by the hospital's Standard Operating Procedures (SOP), with an average compliance score of only 86.09%. One key indicator in improving healthcare service efficiency is knowledge about clinical pathways, which aims to standardize healthcare services for greater efficiency and effectiveness. An audit of RSUD Koja's clinical pathways revealed varying levels of compliance across different healthcare aspects. Some indicators showed high compliance, such as adherence to nutrition protocols for diabetes mellitus patients at 87% and team consultation and communication for hypertension cases at 100%. However, several indicators recorded extremely low compliance, including discharge planning for diabetes mellitus patients (0%), team consultation and communication for breast cancer cases (0%), and medical management for tuberculosis (0%). These inconsistencies in clinical pathway implementation highlight the need for improvements in healthcare personnel's knowledge about clinical pathways at RSUD Koja.

One crucial factor in enhancing hospital personnel's knowledge of clinical pathways is effective communication. Clear communication between medical personnel and patients fosters trust and enables doctors to gather accurate clinical information for diagnosis and treatment. Effective communication also helps reduce the risk of adverse events and improves overall healthcare service quality (Nurachman & Fitrianingrum, 2022). According to a patient satisfaction survey at RSUD Koja, 45% of patients reported that medical staff communication was unclear, leading to difficulties in understanding medical procedures.

Apart from effective communication, the competence of medical personnel is also a key factor in increasing knowledge about clinical pathways. Competence includes the ability of healthcare professionals to perform their duties with the necessary skills, knowledge, and work ethic in accordance with professional standards (Spencer & Spencer, 2008). Data shows that only 80.77% of doctors and 12.50% of nurses at RSUD Koja have complete competency certifications, including Basic Life Support (BLS), Patient Safety, Effective Communication, Infection Prevention and Control (IPC), and other essential training. This indicates that a significant number of medical personnel do not yet meet the required competency standards for delivering healthcare services. As a healthcare institution responsible for patient safety, RSUD Koja must increase the number of competent medical personnel to ensure optimal service delivery.

In addition to effective communication and medical personnel competency, monitoring systems also play a crucial role in increasing knowledge about clinical pathways. Monitoring is a continuous process of collecting and analyzing data to ensure that implemented policies and programs align with established plans (Kusek & Rist, 2004). In the healthcare sector, monitoring systems function as oversight mechanisms for medical service practices and hospital budget management. Financial records from RSUD Koja over the past three years reveal a significant gap between the billed costs and the actual payments received from patients. This discrepancy suggests that RSUD Koja's monitoring system is not yet functioning optimally, potentially leading to inefficiencies in hospital resource management.

Based on the identified issues, this study aims to analyze the impact of effective communication and medical personnel competency on inpatient knowledge about clinical pathways at RSUD Kojja, with the monitoring system as an intervening variable. This research is expected to provide appropriate recommendations for improving healthcare service quality at RSUD Kojja and establishing a more effective and efficient healthcare system.

METHOD

This study employs a quantitative approach using a survey method, in which research is conducted by selecting a sample from a population and using a questionnaire as the data collection instrument (Sugiyono, 2016). The variables in this study include two independent variables: effective communication and competence. The dependent variable is knowledge about clinical pathways, while the intervening variable is the monitoring system. The population of this study consists of all doctors and nurses in the inpatient department of RSUD Kojja, totaling 889 individuals. The research sample comprises 276 respondents, determined using the Slovin formula with a 5% error tolerance level. The probability sampling technique with a simple random sampling method was used for sample selection. Meanwhile, data collection techniques in this study involved questionnaires, previous research journals, company sources, and literature studies (Riyanto & Prasetyo, 2021). After data collection, the author conducted data analysis using Structural Equation Modeling (SEM) with AMOS to test the research hypotheses (Prasetyo et al., 2021).

RESULTS AND DISCUSSION

Results

Based on the characteristics of the 276 respondents, consisting of nurses and doctors in the inpatient department of RSUD Kojja, the majority were female (77.5%) and aged between 31-40 years (56.9%). Most respondents had a bachelor's degree (63.4%) and had been working at RSUD Kojja for 6-10 years (45.5%). In terms of employment status, the majority were contract employees (64.5%). Most medical personnel worked in the General Inpatient Unit (42.0%) and handled 11-15 patients per day (37.0%). Regarding certification, the majority of respondents had Nursing Competency Certification (33.0%) and Wound Care Training (28.3%), but the number of medical personnel with specialized medical certification remained low (5.4%). These characteristics indicate that RSUD Kojja's medical workforce is predominantly female, within a productive age range, and has sufficient work experience. However, there is a need to increase certification ownership to enhance professional competence.

The analysis results indicate that effective communication and competence at RSUD Kojja fall into the "Moderate" category, suggesting that both aspects are considered fairly good by employees but still have weaknesses, particularly in terms of respectful communication and technical skills in performing duties. Meanwhile, the monitoring system and knowledge of clinical pathways fall into the "High" category, indicating that both aspects are functioning well, although some areas still need improvement, such as the simplicity and accuracy of the monitoring system and compliance with clinical pathways in PPA services.

Using the three-box method, indicators with high index values are classified as "Good" and meet respondents' expectations. Indicators with moderate index values fall into the "Adequate" category, requiring further attention for improvement. Meanwhile, indicators with low index values are categorized as "Poor" and should be prioritized for improvement. In this regard, effective communication and competence need to be enhanced to align with the already well-functioning monitoring system and knowledge of clinical pathways, thereby driving overall service quality improvement at RSUD Kojja.

Based on validity and reliability tests, all exogenous latent variables in this study met the required criteria, with loading factor values above 0.50, indicating that each indicator strongly

contributes to its variable. Additionally, the Construct Reliability (CR) and Variance Extracted (VE) values for each variable were above the minimum threshold ($CR > 0.7$ and $VE > 0.50$), indicating that the instrument used has good internal consistency and accurately measures the variables. Therefore, the variables of effective communication, competence, monitoring system, and knowledge of clinical pathways are considered valid and reliable in assessing the studied phenomenon, ensuring that the subsequent analysis results are credible and can be used for decision-making.

Table 1. Validity and Reliability Test Results

| Measurement Model | | Standard Loading | Standard Loading ² | Measurement Errors (1-Std Loading ²) | Reliability | |
|-------------------------------|----------------|------------------|-------------------------------|--|----------------|----------------|
| Latent Variable | Indicator Code | | | | CR $\geq 0,70$ | VE $\geq 0,50$ |
| Effective Communication | X11 | 0.762 | 0.581 | 0.419 | 0.946 | 0.812 |
| | X12 | 0.939 | 0.882 | 0.118 | | |
| | X13 | 0.948 | 0.899 | 0.101 | | |
| | X14 | 0.954 | 0.910 | 0.090 | | |
| | X15 | 0.889 | 0.790 | 0.210 | | |
| Competence | X21 | 0.946 | 0.895 | 0.105 | 0.974 | 0.892 |
| | X22 | 0.936 | 0.876 | 0.124 | | |
| | X23 | 0.960 | 0.922 | 0.078 | | |
| | X24 | 0.971 | 0.943 | 0.057 | | |
| | X25 | 0.908 | 0.824 | 0.176 | | |
| Monitoring System | Z1 | 0.948 | 0.899 | 0.101 | 0.942 | 0.888 |
| | Z2 | 0.925 | 0.856 | 0.144 | | |
| | Z3 | 0.944 | 0.891 | 0.109 | | |
| | Z4 | 0.952 | 0.906 | 0.094 | | |
| Knowledge of Clinical Pathway | KM1 | 0.820 | 0.672 | 0.328 | 0.762 | 0.697 |
| | KM2 | 0.849 | 0.721 | 0.279 | | |

Based on the Goodness of Fit Test analysis results for the structural model of this study, all model fit indicators meet the required criteria. A probability value greater than 0.05, RMSEA below 0.08, and GFI, CMIN/DF, TLI, CFI, NFI, and IFI values exceeding the recommended minimum thresholds indicate that the model used in this study has a good fit with the data. Thus, the structural model is considered valid and suitable for further analysis in explaining the relationships among the studied variables.

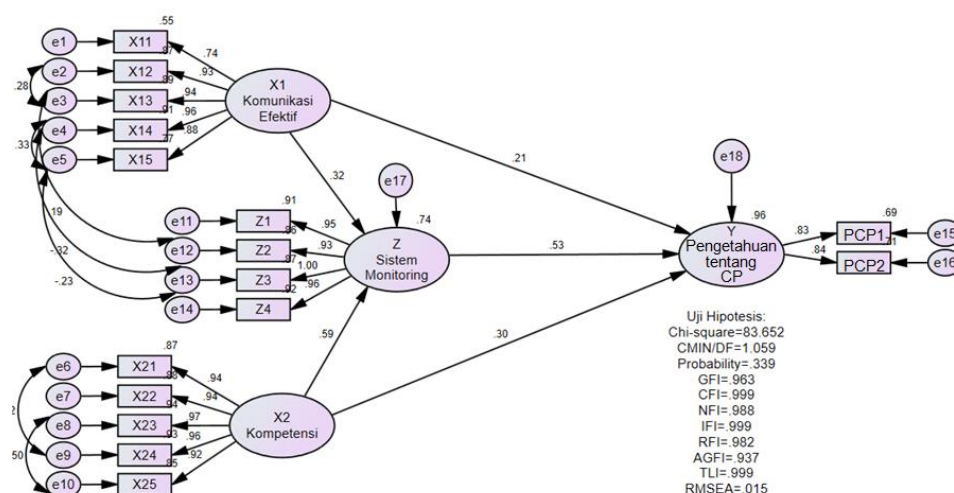

Figure 1. Research Model Diagram

Table 2. Hypothesis Results

| Hypothesis | Hypothesis Statement | SEM Results | | Description |
|------------|---|-------------|---------|-------------|
| | | Coefficient | P-value | |
| H1 | There is a significant effect of effective communication on knowledge of clinical pathways. | 0.212 | < 0,05 | Supported |
| H2 | There is a significant effect of effective communication on the monitoring system. | 0.363 | < 0,05 | Supported |
| H3 | There is a significant effect of competence on knowledge of clinical pathways. | 0.289 | < 0,05 | Supported |
| H4 | There is a significant effect of competence on the monitoring system. | 0.630 | < 0,05 | Supported |
| H5 | There is a significant effect of the monitoring system on knowledge of clinical pathways. | 0.470 | < 0,05 | Supported |
| H6 | There is a significant effect of effective communication on knowledge of clinical pathways through the monitoring system. | 0.171 | < 0,05 | Supported |
| H7 | There is a significant effect of competence on knowledge of clinical pathways through the monitoring system. | 0.296 | < 0,05 | Supported |

Based on the hypothesis testing results, the structural equations in this study are as follows:

$$Z = 0.363 X_1 + 0.630 X_2 + e;$$

$$Y = 0.212 X_1 + 0.289 X_2 + 0.470 Z + e;$$

Where:

1. There is a positive and significant effect of effective communication on knowledge of clinical pathways, as indicated by an estimate value of 0.212, which signifies a positive relationship and significant effect with a P-value of $0.000 < \alpha = 0.05$.
2. There is a positive and significant effect of effective communication on the monitoring system, as indicated by an estimate value of 0.363, signifying a positive relationship and significant effect with a P-value of $0.000 < \alpha = 0.05$.
3. There is a positive and significant effect of competence on knowledge of clinical pathways, as indicated by an estimate value of 0.289, signifying a positive relationship and significant effect with a P-value of $0.000 < \alpha = 0.05$.
4. There is a positive and significant effect of competence on the monitoring system, as indicated by an estimate value of 0.630, signifying a positive relationship and significant effect with a P-value of $0.000 < \alpha = 0.05$.
5. There is a positive and significant effect of the monitoring system on knowledge of clinical pathways, as indicated by an estimate value of 0.470, signifying a positive relationship and significant effect with a P-value of $0.000 < \alpha = 0.05$.
6. There is a positive and significant effect of effective communication on knowledge of clinical pathways through the monitoring system, as indicated by an estimate value of 0.171 and a P-value $< \alpha = 0.05$. Based on the comparison of direct and indirect effects, it can be concluded that the direct effect of effective communication on knowledge of clinical pathways is greater than its indirect effect.

7. There is a positive and significant effect of competence on knowledge of clinical pathways through the monitoring system, as indicated by an estimate value of 0.296 and a P-value $< \alpha = 0.05$. Based on the comparison of direct and indirect effects, it can be concluded that the direct effect of competence on knowledge of clinical pathways is greater than its indirect effect.

Discussion

The findings of this study confirm that effective communication has a positive and significant impact on knowledge of clinical pathways in the inpatient care unit at RSUD Kojja, where improved communication enhances the understanding and adherence to clinical pathways. Clear and timely communication facilitates the accurate delivery of information, improves coordination among healthcare professionals, and ensures that clinical pathways are implemented correctly (Haftel & Hicks, 2011; Pham et al., 2006). In critical care settings, effective communication also influences patient understanding and decision-making regarding prognosis, playing a crucial role in appropriate medical decisions (Chiarchiaro et al., 2015). Additionally, effective communication within interdisciplinary teams supports better coordination and the proper implementation of clinical pathways (Hammick et al., 2007). RSUD Kojja should consider integrating patient-reported outcome measures (PROMs) to strengthen interactions between healthcare providers and patients, ensuring structured and quality-oriented communication that enhances adherence to clinical pathways (Schick-Makaroff et al., 2022). By implementing consistent, transparent, and respectful communication, RSUD Kojja can ensure that clinical pathways align with established standards, ultimately improving patient care and service efficiency.

The study results indicate that effective communication has a positive and significant influence on the monitoring system in the inpatient care unit at RSUD Kojja, where improved communication enhances the effectiveness of the monitoring system. Good communication ensures that essential information is received and understood by healthcare professionals, patients, and administrative staff, thereby supporting optimal patient supervision. Wang et al. (2023) emphasize that effective communication, including through online communities, enhances patient trust in healthcare services, while Farrell & Christopher (2013) highlight that high-quality communication among healthcare professionals improves the effectiveness of healthcare programs. Standardized hospital communication reduces errors in information delivery and ensures better coordination. Furthermore, integrating technology into communication systems enables real-time data collection and analysis, allowing healthcare professionals to respond to patient needs more efficiently. A participatory approach involving patients and families in the monitoring process can also strengthen system effectiveness. Therefore, RSUD Kojja must ensure open, clear, and unbiased communication, allowing the monitoring system to function optimally in accordance with established clinical pathways.

The study findings show that the competency of healthcare professionals has a positive and significant impact on knowledge of clinical pathways in the inpatient care unit at RSUD Kojja, where increased competency enhances understanding and compliance with clinical pathways, while low competency may hinder proper implementation. Competency, which includes technical skills, procedural understanding, and work efficiency, plays a critical role in ensuring that clinical pathways are properly followed. Research by Hajering (2020) and Roem et al. (2020) confirms that professional competency contributes to better adherence to medical guidelines, while Bartosiewicz et al. (2021) highlight the importance of continuous training in maintaining compliance with clinical standards. Additionally, Himmawan et al. (2019) show that competency in quality audits significantly determines the success of internal control systems in healthcare facilities. The effective implementation of clinical pathways also relies on healthcare professionals' skills in diagnosis, treatment, and the appropriate use of medical technology according to established protocols. Therefore, RSUD Kojja must prioritize

improving healthcare professionals' competencies through continuous training programs to ensure optimal adherence to clinical pathways, ultimately benefiting patient safety and service quality.

The findings of this study indicate that the competency of healthcare professionals has a positive and significant impact on the effectiveness of the monitoring system in the inpatient care unit at RSUD Koja, where improved competency contributes to optimizing patient monitoring, while low competency can weaken the monitoring function and reduce service quality. The technical competency of healthcare professionals, including their understanding of monitoring technology, data interpretation, and information-based decision-making, is a key factor in the success of the monitoring system (Karsikas et al., 2022). Studies by Areia et al. (2021) and Leenen et al. (2020) confirm that the use of modern monitoring devices, such as wearable devices and continuous vital sign monitoring, largely depends on the skills of healthcare professionals in operating and interpreting the generated data. Additionally, Pavithra et al. (2024) found that remote monitoring supported by competent healthcare professionals can reduce mortality rates and accelerate patient recovery, while Dixon-Woods et al. (2013) emphasize the importance of a continuous improvement culture in hospital monitoring systems. Chang & Manojlovich (2023) also highlight that the role of healthcare professionals in ensuring patient safety is closely related to their competency in managing monitoring systems to prevent care negligence. Therefore, improving training and technical skill development for healthcare professionals is a crucial step for RSUD Koja in ensuring the monitoring system operates effectively, ultimately enhancing patient safety, medical staff efficiency, and overall healthcare service quality.

The findings of this study indicate that the monitoring system has a positive and significant influence on knowledge of clinical pathways in the inpatient care unit at RSUD Koja, where increased monitoring effectiveness contributes to improving compliance with clinical pathways, while a weak monitoring system can reduce the effectiveness of pathway adherence. Previous studies (Jarrett, 2013; Alayoubi et al., 2021; Nuryadi et al., 2022) support this finding, showing that a well-functioning monitoring system helps ensure that clinical pathways are followed properly while improving transparency and accountability in healthcare services. Nuryadi et al. (2022) emphasize that effective administrative control supports compliance through a simple and targeted monitoring mechanism, while Wirtschafter et al. (2011) highlight the importance of monitoring in cost and service quality management. Additionally, research by Yan (2024) and Wagner et al. (2014) shows that effective monitoring can reduce healthcare-associated infections, improve compliance with clinical guidelines, and strengthen performance indicators. Balding & Leggat (2020) also reveal that training in monitoring systems can improve the accuracy of measurement procedures at service points. Beyond technical aspects, monitoring systems also play a role in building a better organizational culture, as noted in studies by Casey et al. (2012) and Marshall et al. (2012), where transparent monitoring increases staff trust in compliance processes and promotes continuous learning (Dixon-Woods et al., 2013). Thus, RSUD Koja must ensure that the monitoring system is implemented effectively, in a simple manner, and aligned with the needs of the clinical pathway to enhance compliance, service efficiency, and overall patient satisfaction.

The findings of this study indicate that effective communication influences knowledge of clinical pathways in the inpatient care unit at RSUD Koja through the monitoring system, with a greater direct impact compared to its indirect effect, making its role moderate but still crucial in achieving optimal pathway adherence. Effective communication ensures that information is conveyed clearly and promptly, supporting compliance with clinical pathways (Yamanaka et al., 2021). Additionally, the integration of communication technology into the monitoring system enhances the reliability of clinical pathway adherence, as demonstrated by Iwai et al. (2023), who emphasize the importance of network-based communication in improving monitoring performance. Li et al. (2023) also highlight that real-time communication ensures

the integrity and quality of monitoring data, enabling clinical pathway adherence to be executed in a simple yet effective manner. A structured communication approach helps healthcare professionals identify and resolve issues more efficiently, aligning with findings by Chen et al. (2018), which show that communication plays a vital role in compliance with quality control systems such as Six Sigma.

The findings of this study indicate that the competency of healthcare professionals has a positive and significant impact on knowledge of clinical pathways in the inpatient care unit at RSUD Koja through the monitoring system, with a greater direct effect than its indirect impact. High competency enables healthcare professionals to manage the monitoring system in a simple yet targeted manner, ensuring consistent clinical pathway implementation and improving adherence effectiveness at RSUD Koja. Therefore, investing in training and developing both technical and non-technical competencies of healthcare professionals is a strategic step in enhancing healthcare service quality.

CONCLUSION

This study concludes that effective communication and the competency of healthcare professionals have a positive impact on knowledge of clinical pathways in the inpatient care unit at RSUD Koja, both directly and through the monitoring system as a mediating variable. Effective communication enables the clear and accurate delivery of information, thereby enhancing the effectiveness of the monitoring system and improving healthcare professionals' understanding and adherence to clinical pathways. High competency among healthcare professionals also contributes to ensuring that the monitoring system operates optimally, supporting the consistent implementation of clinical pathways. Additionally, the monitoring system plays a crucial role in supervising the application of clinical pathways, ultimately leading to better compliance with medical protocols and improved patient safety. Therefore, the combination of effective communication, adequate competency, and a strong monitoring system serves as a key factor in strengthening knowledge of clinical pathways in hospitals.

As a follow-up, RSUD Koja needs to enhance effective communication training for healthcare professionals to ensure better coordination in the implementation of clinical pathways. Additionally, healthcare competency development programs should be strengthened with continuous training, both in technical and managerial skills, to improve adherence to clinical pathways. Regular evaluation and refinement of the monitoring system are also necessary to ensure that healthcare professionals effectively implement clinical pathways, utilizing the latest technology to monitor performance and compliance with established medical guidelines. A collaborative approach across various hospital departments should also be reinforced so that the implementation of clinical pathways does not only focus on individual aspects but also encompasses the overall healthcare service process. With these measures, RSUD Koja can achieve continuous improvements in the application of clinical pathways, ultimately enhancing the quality and consistency of healthcare services.

REFERENCE

- Alayoubi, M. M., Arekat, Z. M., Al-Shobaki, M. J., & Abu-Naser, S. S. (2021). The effect of administrative control on improving the quality of health services: an empirical study on al-awda hospita. *QAS*, 22(184). <https://doi.org/10.47750/qas/22.184.28>
- Areia, C., Biggs, C., Santos, M., Thurley, N., Gerry, S., Tarassenko, L., ... & Volla, S. (2021). The impact of wearable continuous vital sign monitoring on deterioration detection and clinical outcomes in hospitalised patients: a systematic review and meta-analysis. *Critical Care*, 25(1). <https://doi.org/10.1186/s13054-021-03766-4>
- Balding, C. and Leggat, S. (2020). Making high quality care an organisational strategy: results of a longitudinal mixed methods study in Australian hospitals. *Health Services Management Research*, 34(3), 148-157. <https://doi.org/10.1177/0951484820943601>

- Bartosiewicz, A., Burzyńska, J., & Januszewicz, P. (2021). Polish nurses' attitude to e-health solutions and self-assessment of their it competence. *Journal of Clinical Medicine*, 10(20), 4799. <https://doi.org/10.3390/jcm10204799>
- Bloomberg Global Health Index. (2023). *Healthiest Countries 2022*. <https://worldpopulationreview.com/country-rankings/healthiest-countries>
- Casey, M., Prasad, S., Klingner, J., & Moscovice, I. (2012). Are the cms hospital outpatient quality measures relevant for rural hospitals?. *The Journal of Rural Health*, 28(3), 248-259. <https://doi.org/10.1111/j.1748-0361.2012.00406.x>
- Chang, H. and Manojlovich, M. (2023). Clinical nurses' patient safety competency, systems thinking and missed nursing care: a cross-sectional survey. *International Journal of Nursing Practice*, 29(2). <https://doi.org/10.1111/ijn.13130>
- Chiarchiaro, J., Buddadhumaruk, P., Arnold, R., & White, D. (2015). Quality of communication in the icu and surrogate's understanding of prognosis. *Critical Care Medicine*, 43(3), 542-548. <https://doi.org/10.1097/ccm.0000000000000719>
- Dixon-Woods, M., Baker, R., Charles, K., Dawson, J., Jerzembek, G., Martin, G., ... & West, M. (2013). Culture and behaviour in the english national health service: overview of lessons from a large multimethod study. *BMJ Quality & Safety*, 23(2), 106-115. <https://doi.org/10.1136/bmjqs-2013-001947>
- Farrell, M. and Christopher, S. (2013). Frequency of high-quality communication behaviors used by primary care providers of heterozygous infants after newborn screening. *Patient Education and Counseling*, 90(2), 226-232. <https://doi.org/10.1016/j.pec.2012.10.024>
- Haftel, H. and Hicks, P. (2011). Assessing teamwork and communication in the authentic patient care learning environment. *Pediatrics*, 127(4), 601-603. <https://doi.org/10.1542/peds.2010-3767>
- Hajering, M. (2020). Moderating ethics auditors influence of competence, accountability on audit quality. *Jurnal Akuntansi*, 23(3), 468. <https://doi.org/10.24912/ja.v23i3.614>
- Hammick, M., Freeth, D., Koppel, I., Reeves, S., & Barr, H. (2007). A best evidence systematic review of interprofessional education: beme guide no. 9. *Medical Teacher*, 29(8), 735-751. <https://doi.org/10.1080/01421590701682576>
- Iwai, T., Sawabe, A., Shinohara, Y., & Kubo, R. (2023). Demonstration of networked motion control using bandwidth-reserved transmission rate control. *Ieice Communications Express*, 12(9), 464-469. <https://doi.org/10.1587/comex.2023xbl0018>
- Jarrett, J. (2013). The quality movement in hospital care. *Quality & Quantity*, 48(6), 3153-3167. <https://doi.org/10.1007/s11135-013-9947-9>
- Joint Commission International. (2023). *Joint Commission International*. JCI. <https://www.jointcommissioninternational.org/>
- KARS. (2022). *Daftar Rumah Sakit Terakreditasi*. KARS. https://akreditasi.kars.or.id/application/report/report_accredited.php
- Karsikas, E., Meriläinen, M., Tuomikoski, A., Koivunen, K., Jarva, E., Mikkonen, K., ... & Kanste, O. (2022). Health care managers' competence in knowledge management: a scoping review. *Journal of Nursing Management*, 30(5), 1168-1187. <https://doi.org/10.1111/jonm.13626>
- Leenen, J., Leentveld, C., Dijk, J., Westreenen, H., Schoonhoven, L., & Patijn, G. (2020). Current evidence for continuous vital signs monitoring by wearable wireless devices in hospitalized adults: systematic review. *Journal of Medical Internet Research*, 22(6), e18636. <https://doi.org/10.2196/18636>
- Li, Y., Yin, P., Xu, G., Sang, Y., & Tu, G. (2023). Approach to real-time patient case integrity control based on ticdc+kafka.. <https://doi.org/10.21203/rs.3.rs-2721683/v1>
- Kusek, J. & Rist, R., 2011. *A handbook for development practitioners : ten steps to a results-based monitoring and evaluation system*, World Bank Group. United States of America.

- Retrieved from <https://coilink.org/20.500.12592/3869x5> on 10 Feb 2025. COI: 20.500.12592/3869x5.
- Male, U. (2019). A review on clinical pharmacist care services on prevention and management of tuberculosis associated burden in health care practice. *Madridge Journal of Internal and Emergency Medicine*, 4(1), 152-157. <https://doi.org/10.18689/mjiem-1000134>
- Marshall, L., Harbin, V., Hooker, J., Oswald, J., & Cummings, L. (2012). Safety net hospital performance on national quality of care process measures. *Journal for Healthcare Quality*, 34(2), 21-31. <https://doi.org/10.1111/j.1945-1474.2011.00186.x>
- Nurachman, M. T. & Fitrianingrum, I. (2022). Effect of Effective Communication on Unexpected Events (KTD). *Jurnal Cerebellum*, 8 (2), 12-15.
- Nuryadi, N., Suhariadi, F., & Pudjirahardjo, W. (2022). Assessment instrument of the alignment between cost and quality or two other aspects. *International Journal of Health Sciences*, 523-535. <https://doi.org/10.53730/ijhs.v6ns9.12445>
- Pavithra, L. S., Khurdi, S., Priyanka, T. G., & Mary, P. (2024). Impact of remote patient monitoring systems on nursing time, healthcare providers, and patient satisfaction in general wards. *Cureus*. <https://doi.org/10.7759/cureus.61646>
- Pham, H., Coughlan, J., & O'Malley, A. (2006). The impact of quality-reporting programs on hospital operations. *Health Affairs*, 25(5), 1412-1422. <https://doi.org/10.1377/hlthaff.25.5.1412>
- Prasetyo, J. H., Prakoso, B. S., Wiharso, G., & Fabrianto, L. (2021). E-commerce: The importance role of customer perceived value in increasing online repurchase intention. *Dinasti International Journal of Digital Business Management*, 2(6), 955-962.
- Riyanto, S., & Prasetyo, J. H. (2021). Factors affecting civil servant performance in indonesia. *International Journal of Entrepreneurship*, 25(5), 1-15.
- Roem, M. K., Su'un, M., & Ahmad, H. (2020). Influences of variable anteseden functional integrity examiner on quality tax inspection. *Point of View Research Accounting and Auditing*, 1(3), 12-24. <https://doi.org/10.47090/povraa.v1i3.24>
- Schick-Makaroff, K., Wozniak, L., Short, H., Klarenbach, S., Buzinski, R., Walsh, M., & Johnson, J. (2022). How the routine use of patient-reported outcome measures for hemodialysis care influences patient-clinician communication. *Clinical Journal of the American Society of Nephrology*, 17(11), 1631-1645. <https://doi.org/10.2215/cjn.05940522>
- Spencer, L. M., & Spencer, S. M. (2008). *Competence at Work Models for Superior Performance*. Wiley India Pvt. Limited.
- Sugiyono. (2016). *Metode Penelitian Kuantitatif, Kualitatif dan R&D*. Bandung: PT Alfabeta.
- Wagner, C., Groene, O., DerSarkissian, M., Thompson, C., Klazinga, N., Arah, O., ... & Suñol, R. (2014). The use of on-site visits to assess compliance and implementation of quality management at hospital level. *International Journal for Quality in Health Care*, 26(suppl 1), 27-35. <https://doi.org/10.1093/intqhc/mzu026>
- Wang, Z., Zhang, X., Han, D., Zhao, Y., Ma, L., & Hao, F. (2023). How the use of an online healthcare community affects the doctor-patient relationship: an empirical study in china. *Frontiers in Public Health*, 11. <https://doi.org/10.3389/fpubh.2023.1145749>
- Wirtschafter, D., Powers, R., Pettit, J., Lee, H., Boscardin, W., Subeh, M., ... & Gould, J. (2011). Nosocomial infection reduction in vlbw infants with a statewide quality-improvement model. *Pediatrics*, 127(3), 419-426. <https://doi.org/10.1542/peds.2010-1449>
- Yamanaka, T., Iwai, T., & Kubo, R. (2021). Quality of performance aware data transmission for energy-efficient networked control. *Ieee Access*, 9, 5769-5778. <https://doi.org/10.1109/access.2020.3048796>

Yan, Y. (2024). Research on the application of evidence-based quality control circle to improve the implementation rate of airway management measures in adult critically ill patients. *Yangtze Medicine*, 08(01), 8-19. <https://doi.org/10.4236/ym.2024.81002>