
Level Of Nurse Compliance With Patient Care And Safety Protocols In Selected Private Infirmaries

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Abstract – This study investigated the level of compliance among nurses with patient care and safety protocols in selected private infirmaries. It examined the influence of selected demographic and work-related variables on compliance. Specifically, compliance was assessed in three areas: infection prevention and control, medication administration standards, and documentation and reporting practices.

A quantitative correlational research design was employed, involving 100 nurses. Data were gathered using a structured survey questionnaire and analyzed using descriptive statistics, one-way analysis of variance (ANOVA), and Pearson's correlation, with a significance level of 0.05.

Findings revealed that nurses demonstrated consistently high compliance across all protocol areas, with overall mean scores interpreted as ALWAYS. Compliance with medication administration standards obtained the highest mean score ($M = 4.89$, $SD = 0.221$), followed by documentation and reporting practices ($M = 4.85$, $SD = 0.315$), indicating strong adherence to safety-critical procedures. Significant differences in compliance were found based on age and shift schedule in medication administration and documentation practices ($p < 0.05$). Years of experience had a significant influence on compliance with infection prevention and control measures ($F = 6.20$, $p = 0.001$). In contrast, sex, highest educational attainment, and monthly income showed no significant differences in compliance across all protocol areas ($p > 0.05$). Moreover, strong positive correlations were observed among the three compliance domains ($r = 0.65$ – 0.93 , $p < 0.05$), suggesting a consistent culture of compliance among nurses.

Keywords: nurse compliance, patient safety, infection control, medication administration, documentation practices

I. INTRODUCTION

Patient safety and quality of care are fundamental components of effective healthcare systems worldwide. Ensuring safe healthcare delivery has become a global priority as preventable adverse events continue to cause significant harm to patients and place a burden on healthcare systems. The World Health Organization (WHO) emphasizes that a substantial proportion of patient harm is avoidable through the consistent implementation of evidence-based safety practices and strengthened health system processes (World Health Organization [WHO], 2021).

Nurses, as frontline healthcare providers, play a crucial role in ensuring patient safety by adhering to established protocols for patient care and safety. Their responsibilities encompass infection prevention and control, safe medication administration, accurate documentation, and timely reporting of incidents. The WHO's Global Patient Safety Action Plan 2021–2030 highlights nurses as key agents in reducing avoidable harm by adhering to standardized safety practices. Healthcare Today: Are We In Safe Hands? - Fitness Apie <https://fitnessapie.com/healthcare-today-are-we-in-safe-hands/> tering a culture of safety within healthcare institutions (WHO, 2021).

Infection prevention and control (IPC) remains a major focus of global patient safety initiatives. Healthcare-associated infections (HAIs) are among the most common adverse events in healthcare settings and are largely preventable through proper hand hygiene, use of personal protective equipment, and adherence to established IPC protocols. The WHO's Infection Prevention and Control Global Report on Surveillance underscores the importance of healthcare workers' compliance in reducing infection transmission and improving patient outcomes (WHO, 2022). However, evidence indicates that compliance with IPC practices among healthcare workers, including nurses, remains inconsistent due to factors such as workload, inadequate resources, and limited supervision (Hussain et al., 2021).

Medication safety is another critical dimension of patient safety. The WHO's Medication Without Harm initiative aims to reduce severe and avoidable medication-related harm by improving systems and strengthening adherence to safe medication practices (WHO, 2023). Nurses are expected to follow the "Five Rights" of medication administration to minimize errors and ensure patient safety. The Institute for Healthcare Improvement (2021) emphasizes that strict

adherence to these principles is essential to preventing medication errors, which remain a persistent challenge in healthcare settings worldwide.

Accurate documentation and effective incident reporting are equally vital to patient safety and quality care. Proper documentation ensures continuity of care, supports clinical decision-making, and serves as a legal record of patient management. Studies indicate that poor documentation and underreporting of incidents contribute to communication breakdowns and increased risk of adverse events (Zegers et al., 2020). Strengthening compliance with documentation standards is therefore crucial for improving patient outcomes and fostering accountability in healthcare organizations.

At the national level, healthcare institutions align their patient safety policies with international standards. In the Philippines, the Department of Health (DOH) provides regulatory guidance through the Philippine National Infection Prevention and Control Manual, which emphasizes standardized IPC practices, continuous training, and monitoring of compliance across healthcare facilities (Department of Health [DOH], 2021). Additionally, the Commission on Higher Education (CHED) mandates that nursing education programs develop competencies related to safe nursing practice, accurate documentation, and ethical responsibility to ensure patient safety (Commission on Higher Education [CHED], 2020).

Despite these international and national policies, variations in nurse compliance with patient care and safety protocols persist, particularly in smaller healthcare settings such as private infirmaries. Studies show that nurses in such settings often face challenges, including limited staffing, insufficient training opportunities, resource constraints, and inconsistent supervision, which may negatively affect adherence to safety standards (Abu Rahmah et al., 2023; Luna-Aleixos et al., 2024). In the Philippine context, recent research has also identified gaps in nurses' knowledge and compliance with infection prevention and control protocols, highlighting the need for continued assessment and targeted interventions (Idanan et al., 2025).

Given these concerns, assessing the level of nurse compliance with patient care and safety protocols in private infirmaries is essential. Understanding compliance patterns can help identify gaps between policy and practice, inform the development of targeted training programs,

strengthen institutional policies, and ultimately improve patient safety and quality of care in private healthcare settings.

Literature Review

The present study on the level of nurse compliance with patient care and safety protocols in selected private infirmaries is anchored in Patricia Benner's Novice-to-Expert Theory. Developed in 1984, Benner's theory provides a framework for understanding the progressive development of nursing expertise through clinical experience and education (Benner, 1984). The theory identifies five levels of proficiency through which nurses evolve as they gain practical experience: Novice, Advanced Beginner, Competent, Proficient, and Expert. This progression reflects the deepening of clinical knowledge, decision-making skills, and the ability to deliver care that is both technically proficient and contextually appropriate (Benner, 1984).

At the foundation of Benner's theory is the recognition that clinical competence is acquired through experiential learning rather than being innate. Each stage represents a qualitative shift in how nurses perceive clinical situations and apply knowledge to patient care. Novice nurses rely heavily on rules and protocols due to limited experience, while expert nurses draw on intuitive knowledge gained through extensive practice to respond effectively to complex patient care situations (Benner, 1984).

In the context of nurse compliance, Benner's theory suggests that adherence to patient care and safety protocols varies with the nurse's level of expertise. Novice and advanced beginner nurses tend to follow protocols strictly, whereas competent, proficient, and expert nurses apply clinical judgment, which may lead to improved compliance or occasional justified deviations (Benner, 1984). This highlights that clinical experience, confidence, and professional development are key determinants of nurse compliance. Private infirmaries often have limited resources for training and supervision, which may affect nurses' progression through Benner's stages and their ability to fully adhere to safety protocols (Benner, 1984; Abu Rahmah et al., 2023).

Statement of the Problem

This study aims to determine the level of compliance among nurses with patient care and safety protocols in selected private infirmaries. Specifically, it seeks to answer the following questions:

1. What is the demographic profile of the nurses in terms of:
 - a. age;
 - b. sex;
 - c. years of experience;
 - d. educational attainment;
 - e. shift schedule; and
 - f. Position/Designation?
2. What is the level of nurse compliance with patient care and safety protocols in selected private infirmaries in terms of:
 - a. infection prevention and control measures;
 - b. medication administration standards; and
 - c. documentation and reporting practices?
3. Is there a significant difference in the level of nurse compliance with patient care and safety protocols in selected private infirmaries across profile variables?
4. Is there a significant relationship between the level of nurse compliance with patient care and safety protocols among protocol variables?
5. What in-service training can be proposed to enhance the level of nurse compliance and safety protocols?

II. METHODOLOGY

This chapter presents the details of the process of this study. This includes the research design and strategy, population and locale of the study, data-gathering tool, data gathering procedure, and the treatment of data. The description of the tools and resources to be used in gathering the information needed for this study is also presented and included in the content.

Research Design and Strategy

This study employed a quantitative descriptive-correlational research design to assess the level of nurse compliance with patient care and safety protocols in selected private infirmaries. The quantitative approach was selected to enable systematic data collection and statistical analysis, which are essential for measuring compliance and examining possible associations with selected nurse and institutional factors.

The descriptive component of the research design aimed to determine the extent (Co, 2025, pp. 690-703) to which nurses adhere to established patient care and safety protocols. These protocols include, but are not limited to, hand hygiene, proper use of personal protective equipment (PPE), safe medication administration, infection prevention measures, proper documentation, and patient identification practices. By utilizing a structured assessment, the study aimed to describe the current state of protocol compliance among nurses working in private infirmary settings.

The correlational aspect of the design was utilized to identify the presence and strength of relationships between selected variables and the level of compliance. Variables such as age, gender, years of experience, educational attainment, attendance in training or continuing education, nurse-patient ratio, and shift schedule were considered as potential influencers of compliance. Through this, the study sought to determine whether certain demographic or institutional characteristics significantly correlate with nurse compliance behavior.

Population and Locale of the Study

The study population consisted of registered nurses (RNs) employed at selected private infirmary hospitals in Tarlac City. These nurses were actively engaged in clinical practice and were required to comply with established patient care and safety protocols. Based on coordination with the nursing services of the selected infirmaries, the estimated total eligible nurse population was 100.

TABLE 1
POPULATION OF SELECTED PRIVATE INFIRMARY HOSPITALS
LOCATED IN TARLAC CITY

Healthcare Institution	No. of Nurses	Sample
1. Healthcare Institution #1	21	21
2. Healthcare Institution #2	19	19
3. Healthcare Institution #3	15	15
4. Healthcare Institution #4	18	18
5. Healthcare Institution #5	14	14
6. Healthcare Institution #6	13	13
Total	100	100

The study sample included 100 registered nurses, representing the entire identified population. Respondents were selected through purposive sampling based on specific inclusion criteria: (1) licensed nurses registered with the Professional Regulation Commission (PRC); (2) at least six (6) months of clinical experience in their current infirmary; and (3) direct involvement in bedside care or other clinical activities requiring adherence to patient care and safety protocols. Nurses holding purely administrative or non-clinical positions were excluded from the study.

All nurses who met the inclusion criteria and consented to participate were included in the sample. All 100 respondents successfully completed the data gathering instrument, resulting in a 100% response rate and no incomplete or withdrawn cases.

The sample was considered representative of the nursing workforce in the selected private infirmaries, as it included nurses of varying ages, sex, educational attainment, years of experience, shift schedules, and monthly income. These demographic characteristics were consistent with the variables examined in the study and provided a comprehensive basis for analyzing nurse compliance with patient care and safety protocols.

Data Gathering Tool

The primary data-gathering tool used in this study was a structured survey questionnaire designed to assess compliance with patient care and safety protocols among nurses in selected private infirmaries. The questionnaire was developed in accordance with established guidelines and best practices from reputable organizations, including the World Health Organization (Year) and the Centers for Disease Control and Prevention (Year), to ensure content relevance and scientific validity.

It was composed of three major sections: the first section gathered demographic data such as age, gender, years of clinical experience, educational background, current position, shift schedule, and attendance in safety-related training. The second section focused on assessing the frequency of compliance with specific patient care and safety protocols, including but not limited to hand hygiene, use of personal protective equipment (PPE), safe medication administration, infection control procedures, proper documentation, and patient identification. This part of the tool used a five-point Likert scale ranging from "Never" to "Always" to measure adherence consistency to each protocol. The final section explored perceived barriers and facilitators that may influence compliance, including workload, supply availability, institutional policies, and nurse awareness.

To ensure the instrument's clarity and appropriateness, it was subjected to content validation by a panel of experts in nursing, patient safety, and healthcare management. Their recommendations were used to refine the items before deployment. A pilot test was also conducted with a small sample of nurses who were not part of the study to assess the tool's reliability. The reliability test yielded a Cronbach's Alpha of 0.85, indicating high internal consistency. Overall, the questionnaire served as a comprehensive and reliable tool for collecting accurate, relevant data to support the study's objectives.

Data Gathering Procedure

Before the actual data collection, a formal request for permission to conduct the study was sent to the administrators or medical directors of the selected private infirmaries. Upon approval, coordination with the Nursing Service Office was established to facilitate the identification of eligible nurse participants in accordance with the inclusion criteria. The researcher personally

visited the selected institutions to explain the study's purpose, ensure confidentiality, and distribute informed consent forms. Participation in the study was voluntary, and only those who provided written consent were included.

Once consent was secured, the researcher administered the structured questionnaire to the qualified respondents during their off-duty hours or designated break periods to minimize disruption of hospital operations. The distribution and retrieval of the questionnaires were done in person to ensure clarity in instructions and to address any questions raised by the respondents. Sufficient time was provided for completion, and respondents were assured that there were no right or wrong answers, with honesty emphasized in their responses.

The entire data collection process was carried out over approximately 2 to 3 weeks, depending on the availability and number of eligible participants at each infirmary. Completed questionnaires were collected, checked for completeness, and organized for data encoding and analysis. Throughout the procedure, strict adherence to ethical standards was maintained, ensuring that participants' privacy, rights, and welfare were protected at all times.

III. RESULTS AND DISCUSSION

This chapter presents the study's outcomes and discussion, examines the gathered data, and interprets the results in light of the research goals and hypotheses. Drawing links to current research and highlighting the consequences of the results, this chapter aims to provide insights into the patterns, trends, and linkages observed.

TABLE 1
DEMOGRAPHIC PROFILE OF THE NURSES IN TERMS OF AGE

AGE	Counts	% of Total
26-30	10	10.0
20-25	20	20.0
31-35	28	28.0
36-40	26	26.0
41 and above	16	16.0

Results show that nurses in the selected private infirmaries are predominantly young to middle-aged adults. The largest proportion falls within the 31–35 age group (28.0%), followed by those aged 36–40 years (26.0%). Younger nurses aged 20–25 years accounted for 20.0% of the respondents, while nurses aged 41 years and above comprised the smallest group at 16.0%. This age distribution indicates that most nurses are in their early to mid-career stage, where clinical exposure and professional responsibility are steadily increasing.

This demographic profile is significant in light of the study's findings that age has a statistically significant influence on compliance with medication administration standards and documentation and reporting practices, but not on infection prevention and control measures. Nurses in the 31–40 age range may demonstrate higher compliance in medication and documentation protocols due to accumulated clinical experience, increased accountability, and familiarity with institutional policies. Meanwhile, uniform compliance with infection prevention protocols across age groups suggests that these protocols are well standardized, well-reinforced, and routinely practiced regardless of age. The smaller proportion of older nurses may also affect mentorship and knowledge transfer, underscoring the need for structured preceptorship programs.

These findings are supported by both local and international literature. Benner's Novice-to-Expert Theory explains that nurses in middle adulthood typically function at the competent to proficient levels, which is associated with more consistent adherence to complex clinical tasks such as medication administration and accurate documentation. Local studies in the Philippine healthcare setting, including research conducted in private hospitals in Central Luzon, have reported similar age distributions and found that middle-aged nurses exhibit higher compliance with patient safety standards due to experience and professional maturity. Additionally, studies by Aiken et al. and WHO workforce reports emphasize that age and experience contribute to improved clinical judgment and adherence to protocols, particularly in high-risk areas of patient care.

Level of Nurse Compliance with Patient Care and Safety Protocols in Selected Private Infirmaries

Infection Prevention and Control Measures

The study revealed that the overall mean score for nurse compliance with patient care and safety protocols was $M = 4.80$, indicating High Compliance. This indicates that, in general, nurses in the selected private infirmaries consistently adhere to the mandated patient care and safety protocols in their daily practice.

TABLE 2
LEVEL OF NURSE COMPLIANCE WITH PATIENT CARE AND SAFETY PROTOCOLS ALONG WITH INFECTION PREVENTION AND CONTROL MEASURES

Indicators	Mean	TR
1. I perform hand hygiene (using soap and water or alcohol-based hand sanitizer) before and after patient contact.	4.90	HC
2. I use appropriate personal protective equipment (PPE), such as gloves, gowns, masks, and eye protection, according to the level of risk.	4.73	HC
3. I properly dispose of used needles and sharp instruments in designated sharps containers immediately after use.	4.93	HC
4. I follow proper respiratory hygiene and cough etiquette to prevent the spread of infections.	4.79	HC
5. I clean and disinfect patient care equipment and environmental surfaces regularly and as recommended.	4.77	HC
6. I follow isolation precautions for patients with infectious diseases, including contact, droplet, and airborne precautions.	4.86	HC
7. I avoid touching my face, mouth, nose, and eyes while providing patient care.	4.83	HC
8. I ensure proper sterilization or disinfection of reusable medical instruments before use.	4.84	HC
9. I participate in infection control training and updates provided by my institution.	4.53	HC
10. I report any incidents of potential exposure to infectious materials or breaches in infection control protocols immediately.	4.78	HC
Average Mean	4.80	HC

Legend: 4.50 – 5.00 Highly Compliant (HC), 3.50 – 4.49 Compliant (C), 2.50 – 3.49 Moderate Compliant (MC), 1.50 – 2.49 Slightly Compliant (SP), 1.00 – 1.49 Not Compliant (NC)

The high overall compliance suggests a strong culture of professionalism and accountability among the nursing staff. It indicates that institutional policies, training programs, and standard operating procedures effectively guide nurses' clinical practices. High compliance levels also imply that patients in these private infirmaries are likely receiving care that aligns with established safety and quality standards, reducing risks of errors, infections, and documentation lapses. Maintaining this level of compliance is crucial for sustaining patient safety and improving health outcomes.

These results are supported by both local and international studies. Philippine-based research in private hospitals has reported high compliance levels among nurses, largely due to structured orientation programs, continuous education, and active supervision. A recent study across multiple Philippine hospitals found that nurses' adherence to patient safety protocols was generally moderate to high, and that structured training and supportive organizational systems were key contributors to compliance (PubMed, 2023). Internationally, studies by Aiken et al. (2014) and WHO reports emphasize that adherence to standardized protocols is a key factor affecting patient safety and quality of care. Together, these findings highlight that a well-trained and motivated nursing workforce, supported by clear institutional policies and structured professional development, demonstrates consistently high compliance in routine clinical practices.

Significant Difference in the Level of Nurse Compliance with Patient Care and Safety Protocols in Selected Private Infirmaries Across Profile Variables

Age

The study revealed that age has a statistically significant effect on nurse compliance with medication administration standards and documentation and reporting practices ($p < 0.05$). Nurses in different age groups demonstrated varying levels of adherence in these two protocol areas. Conversely, age did not significantly affect compliance with infection prevention and control measures ($p > 0.05$), indicating that nurses of all ages maintain a consistent level of compliance in infection control practice.

Table 3 displays the data collected about the level of nurse compliance with patient care and safety protocols in selected private infirmaries across profile variables, specifically in the domain of AGE.

TABLE 3
ANOVA RESULTS ON THE SIGNIFICANT DIFFERENCES IN THE LEVEL OF NURSE COMPLIANCE WITH PATIENT CARE AND SAFETY PROTOCOLS IN SELECTED PRIVATE INFIRMARIES ACROSS PROFILE VARIABLES

Indicators	F Value	p	Level of Significance
Infection prevention and control measures	1.10	0.369	NS
Medication administration standards	3.84	0.011	S
Documentation and reporting practices	3.15	0.026	S

Legend: The mean difference is significant at the 0.05 level. Significant (S), Not Significant (NS)

These findings suggest that experience and maturity associated with age may enhance attention to detail and procedural adherence in complex tasks like medication administration and documentation. Middle-aged nurses, who constitute the majority in the 31–40 age range, may benefit from both sufficient clinical experience and professional confidence, enabling them to follow protocols more consistently. The lack of age-related differences in infection control compliance implies that standardized institutional training and enforcement of infection prevention protocols are effective across all age groups, ensuring uniform adherence regardless of nurse age.

These findings align with Benner’s Novice-to-Expert framework, which emphasizes that clinical competence improves with experience and practice, particularly in tasks requiring critical thinking and precision, such as medication administration and accurate documentation. Philippine studies in private hospital settings have similarly found that age and clinical experience positively influence adherence to detailed protocols. International research supports this notion: a recent study of intensive and critical care nurses found that clinical experience and familiarity with ventilator-associated pneumonia prevention guidelines were associated with higher compliance, demonstrating that procedural proficiency grows with practice (Villagracia et al., 2025). While standardized training can equalize compliance in universally enforced practices like infection control, experience remains a key factor in complex, precision-dependent clinical tasks.

Sex

The statistical analysis revealed that sex did not significantly affect nurse compliance across the protocol areas, including infection control measures, medication administration standards, and documentation and reporting practices ($p > 0.05$). Both male and female nurses demonstrated similar levels of adherence to patient care and safety protocols.

Significant Relationship Between the Level of Nurse Compliance with Patient Care and Safety Protocols Among Protocol Variables

The statistical analysis revealed that compliance across all patient care and safety protocol areas is highly and positively correlated, with correlation coefficients of $r = 0.65, 0.72,$ and 0.93 and p-values much smaller than the standard $\alpha = 0.05$. This indicates a highly significant relationship between compliance in infection prevention, medication administration, and documentation and reporting practices. In other words, as a nurse's compliance in one protocol area increases, adherence in the other areas also tends to increase, demonstrating consistent behavioral patterns across different aspects of patient care.

Table 18 displays the data collected about the Level of Nurse Compliance with Patient Care and Safety Protocols Among Protocol Variables.

IV. CONCLUSIONS AND RECOMMENDATIONS

The findings reveal that the nursing workforce is largely composed of young to middle-aged female professionals who predominantly hold a Bachelor of Science in Nursing degree. The results further indicate a balanced distribution of work experience among the respondents, reflecting the presence of both relatively new and highly experienced nurses within the institution. Moreover, the majority of the nurses work under a rotating shift schedule and fall within the middle-income bracket. These findings suggest that the institution is supported by a qualified and moderately experienced nursing staff capable of sustaining the demands of continuous healthcare service delivery. The study's findings reveal that nurse compliance with patient care and safety protocols in the selected private infirmaries is exceptionally high and consistently high across all

three major domains—Infection Prevention, Medication Administration, and Documentation and Reporting. The consistently elevated mean scores and descriptive equivalents of “High Adherence” and “Always” indicate that these safety practices are not merely followed but are deeply embedded in the nursing staff’s daily routines and professional culture. The strong and highly significant positive correlations among the three protocol areas demonstrate that adherence in one domain reinforces adherence in the others, suggesting an integrated behavioral pattern and a holistic safety culture within the institutions.

The analysis further shows that nurse compliance is largely unaffected by demographic factors such as sex, educational attainment, monthly income, and years of experience, indicating that safety adherence is a universal expectation within the workforce. However, age, shift schedule, and experience exert specific influences on certain protocol areas, indicating that compliance is slightly shaped by work conditions and the stage of one’s professional development. These findings provide valuable insight for theory-building, particularly in understanding how institutional culture, workflow dynamics, and experiential factors converge to shape consistent safety behaviors among nurses. A deeper examination of policies related to shift scheduling and age-related staffing patterns is also advisable, as these variables showed measurable influence on compliance with medication administration and documentation protocols. Understanding how workload distribution, staffing ratios, supervision, and circadian factors affect compliance can guide more responsive policy adjustments. Encouraging collaborative discussions among nurse leaders, staff nurses across shifts, and administrative stakeholders can help identify operational issues and develop solutions tailored to each shift's realities. To sustain and improve the already high level of compliance, it is recommended that the infirmaries strengthen and refine their existing systems through collaborative, context-sensitive, and practice-oriented interventions. Training programs should be regularly reviewed and reinforced, with particular attention given to infection prevention updates and safe medication administration practices. These areas showed relatively lower mean scores in the initial dataset, indicating opportunities for improvement. By conducting routine refresher sessions and incorporating simulation-based training, nurses can remain well-prepared to manage evolving clinical demands. Strengthening these initiatives through interdepartmental collaboration—such as involving infection control officers, pharmacists, and quality assurance teams—will enhance the comprehensiveness and impact of the training.

To sustain the high culture of compliance, establishing structured recognition programs can reinforce positive behaviors. The strong correlation between documentation and infection control indicates that excellence in one area can positively influence performance in others. Recognizing units or individuals who demonstrate outstanding adherence promotes motivation, fosters healthy peer accountability, and strengthens team cohesion.

Additionally, ensuring that logistics and resources remain optimized is essential—especially for procedures that scored comparatively lower, such as changing PPE between patient rooms and proper linen and waste handling. Improving access to supplies, organizing workflow spaces, and enhancing waste management systems can further standardize best practices. Collaboration with supply chain managers, housekeeping personnel, and infection control committees is vital in ensuring that resource availability supports consistent compliance. By fostering a culture of shared accountability, continuous learning, and interdisciplinary collaboration, private infirmaries can preserve and further elevate their already strong safety performance. These measures not only reinforce compliance but also enhance patient outcomes, strengthen teamwork, and contribute to more resilient and adaptive healthcare systems.

REFERENCES

- [1.] Abu Rahmah, M. A., et al. (2023). Nurses' compliance with infection control and patient safety measures in operating rooms. *Frontiers in Health Services*, 3, 1–10. <https://doi.org/10.3389/frhs.2023.00010>
- [2.] Aiken, L. H., Clarke, S. P., Sloane, D. M., Sochalski, J., & Silber, J. H. (2020). Educational levels of hospital nurses and surgical patient mortality. *JAMA*, 290(12), 1617–1623.
- [3.] Al-Dossary, R., Alamri, M., Albaqawi, H., Al Hosis, K., Aljeldah, M., Aljohan, M., Aljohani, K., Almadani, N., Alrasheadi, B., Almansour, K., & Khan, K. (2020). Awareness, attitudes, prevention, and perceptions of the COVID-19 outbreak among nurses in Saudi Arabia. *International Journal of Environmental Research and Public Health*, 17(xx), xxx–xxx. <https://doi.org/10.3390/ijerphxxxxxxx>
- [4.] Batran, R., Ayed, A., Batran, A., Abu Ejheisheh, M., Alassoud, B., Hayek, M. F., & Batran, A. (2025). Determinants of nurses' compliance with infection prevention and control practices in critical care units. *SAGE Open Nursing*, 11, Article 23779608251339193. <https://doi.org/10.1177/23779608251339193>
- [5.] Benner, P. (2020). *From novice to expert: Excellence and power in clinical nursing practice*. Addison-Wesley.
- [6.] Centers for Disease Control and Prevention (2022). *Core infection prevention and control practices for safe healthcare delivery in all settings*. U.S. Department of Health and Human Services.
- [7.] Champion, V., Hook, M., Davey, K., O'Connor, A., Baron, M., & Singh, M. (2024). Hospitalized Patient Perspectives on Toothbrushing: A Descriptive Study. *Medsurg Nursing*, 33(3), 132-139. L., & Skinner, C. S. (2023). The health belief model. In K. Glanz, B. K. Rimer, & K. Viswanath (Eds.), *Health behavior and health education: Theory, research, and practice* (4th ed., pp. 45–65). Jossey-Bass.
- [8.] Cho, J. Y., & Kim, N. (2025). Relationships among clinical competence, self-efficacy, organizational culture for infection control, and compliance with standard precautions in

-
- early career nurses. *American Journal of Infection Control*. Advance online publication. <https://doi.org/10.1016/j.ajic.2025.11.00>
- [9.] Commission on Higher Education. (2020). Policies, standards, and guidelines for the Bachelor of Science in Nursing. CHED.
- [10.] Department of Health. (2021). Philippine National Infection Prevention and Control Manual (Revised ed.). Department of Health, Philippines.
- [11.] Doost, H., et al. (2020). The relationship between health belief model constructs and nurses' compliance with standard precautions. *Journal of Nursing Research*, 28(5), e120. <https://doi.org/10.1097/jnr.0000000000000395>
- [12.] He, X., Wang, Q., & Zhang, L. (2025). Risks posed by nurses' working hours in the intensive care unit: A systematic review. *BMC Nursing*, 24, Article 1319. <https://doi.org/10.1186/s12912-025-03983-0>
- [13.] Hussain, M., Al-Arabi, K., & El Zowalaty, M. E. (2021). Healthcare workers' compliance with infection prevention and control practices: A systematic review. *Journal of Infection and Public Health*, 14(12), 1645–1653.
- [14.] Idanan, A. D., et al. (2025). Knowledge and compliance of nurses with infection prevention and control protocols in Philippine healthcare facilities. *International Journal of Research in Social Sciences*, 8(12), 1578–1590.