

Enhancing Safe Practices in Medication Administration for Telephone Orders: An Evaluation of Compliance with Read-back and Confirmation Policies

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ABSTRACT

This quantitative descriptive–correlational study examined nurses’ compliance with the Read-Back and Confirmation Policy during telephone medication orders in oil and gas healthcare clinics in Abu Dhabi. Using audit data, surveys, and error tracking over six months, the study assessed compliance levels, influencing organizational and individual factors, and patient safety outcomes. Findings revealed 100% compliance across 732 audited orders and zero medication errors, while qualitative data highlighted workload pressure, communication challenges, fear of blame, and leadership support as key factors affecting the sustainability of compliance.

Keywords: - Medication errors; telephone orders; read-back; confirmation; patient safety; nursing practice.

INTRODUCTION

Patient safety is still an issue regarding medication-related harm, and telephone (verbal) orders for medications have been identified as a high-risk communication channel. While closed-loop verification has been recommended as a best practice (write-down, read-back, and receive confirmation from the prescriber), it is not being applied consistently across the board.

Statement of the Problem

This study explored how nurses’ use of the read-back and confirmation policy supports safe medication administration during telephone orders in industrial healthcare settings, and examined the factors that influence compliance. It looked at how well the policy reduces miscommunication, considering error rates, staff awareness, training, communication clarity, and patient safety outcomes. It also examined key influences on compliance, such as nurses’ knowledge and competence, leadership and institutional support, policy accessibility, workload, time pressures, and feedback systems. In addition, the study focused on real-world challenges nurses face—like fear of blame, hierarchical dynamics, communication barriers, and heavy workloads—and how these affect policy implementation. Overall, it aimed to understand how compliance links to medication safety and to identify practical strategies to further improve adherence.

Scope and Delimitations

The study included registered nurses in oil and gas medical centers and site clinics in Abu Dhabi from October 2025 to March 2026, focusing solely on telephone medication orders to isolate the read-back and confirmation process and reduce variability. Compliance was evaluated through direct observation and audit trail documentation, thereby enabling triangulation of real-time and recorded data, strengthening internal validity, and minimizing reliance on a single data source.

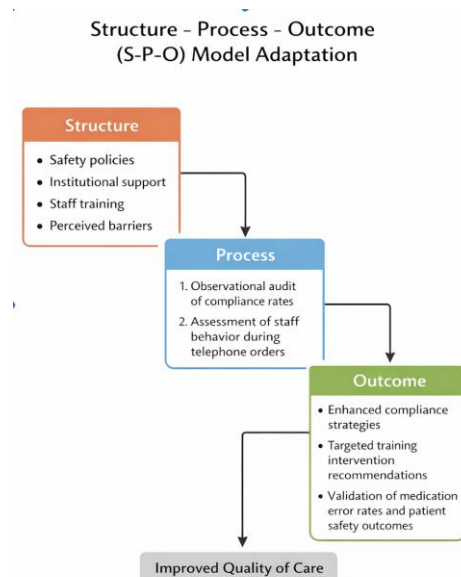
Review of Related Literatures

Despite advances in Electronic Health Records, telephone medication orders remain high-risk, especially in fast-paced settings, and continue to contribute to medication errors (Jenkins & Stone, 2022; Aljohani et al., 2023). Although overall error rates have declined, verbal and telephone orders remain overrepresented among serious adverse events, highlighting the need for sustained compliance monitoring (Chen et al., 2024). Effective read-back implementation depends on targeted training, clear communication, and organizational support; simulation-based training improves adherence, whereas workload, time pressure, and communication barriers undermine compliance (Williams & Patel, 2024; Smith et al., 2022). Evidence further shows that strong leadership, a just culture, and constructive audit feedback systems improve adherence and are associated with better patient safety outcomes, thereby reinforcing the importance of strict read-back practices (Johnson, 2025; Lee & Williams, 2024).

Theoretical Framework

This study is anchored in Pender's Health Promotion Model (HPM) and Roy's Adaptation Model (RAM) to explain nurses' compliance with the Read Back and Confirmation Policy during telephone medication orders and its association with safe medication administration. Together, these frameworks provide complementary perspectives on how individual cognitive-perceptual factors and adaptive responses to environmental demands influence professional nursing behavior in high-risk clinical settings.

Conceptual Framework



METHODOLOGY

A descriptive–correlational mixed-methods design with an integrated qualitative thematic component to comprehensively examine nurses’ compliance with the Read-Back and Confirmation Policy during telephone medication orders in industrial healthcare settings.

Research Design

This study utilized a non-experimental descriptive–correlational mixed-methods design to examine nurses’ compliance with the Read Back and Confirmation Policy during telephone medication orders and its association with medication safety outcomes, allowing observation of naturally occurring practices without manipulation. Integrated quantitative and qualitative analyses yielded measurable relationships and contextual insights into compliance and communication processes, supporting ethical clinical research standards and offering a comprehensive understanding of the factors influencing patient safety.

Research Steps

The study followed a structured descriptive–correlational mixed-methods process, beginning with the identification of risks in telephone medication orders and grounding the framework in Pender’s Health Promotion Model and Roy’s Adaptation Model. Conducted in selected industrial clinics with registered nurses, data were collected over six months using audit, questionnaire, and error tracking tools, analyzed through descriptive statistics and thematic analysis, and interpreted within the theoretical framework while adhering to ethical standards to inform conclusions and recommendations.

Data Collection and Sample Selection

The study used purposive, criterion-based sampling of registered nurses directly involved in telephone medication orders in city, onshore, and offshore industrial clinics during the study period. Data were collected over six months through audit checklists, a staff awareness & barrier questionnaire, and error tracking forms, capturing real practice, nurses’ experiences, and safety outcomes while ensuring confidentiality and minimal disruption.

Data Analysis Methods

Data analysis combined quantitative and qualitative methods aligned with the descriptive–correlational design. Demographic, compliance, and safety data were summarized using descriptive statistics, while planned correlational analyses were limited due to zero variance. Qualitative responses were thematically analyzed to identify barriers and facilitators, and integration of both data sets provided a comprehensive view of compliance and contextual factors influencing safe medication administration.

Research Hypotheses and Validation

The study tested the null hypothesis that no significant association exists between nurses’ compliance with the read-back and confirmation policy and medication safety outcomes during telephone orders, versus an alternative proposing a significant relationship, focusing on naturally occurring variables without causal inference. Validation through audits, error reviews, and survey data was limited by the lack of variance, but consistent descriptive findings and qualitative themes regarding barriers and facilitators supported the conclusion that strict compliance enhances medication safety.

Study Limitations and Ethical Considerations

The descriptive–correlational mixed-methods design limited the study’s ability to establish causality because it relied on naturally occurring data. A ceiling effect with 100% compliance and zero medication errors precluded inferential analysis, necessitating descriptive interpretation of the results. Conducting the study in industrial healthcare settings may also limit generalizability, and survey data may be affected by response bias despite anonymity. Ethical standards were strictly upheld through ethical approval, informed consent, voluntary participation, and the use of de-identified data to maintain confidentiality.

RESULTS AND DISCUSSION

A review of 732 telephone medication orders found perfect compliance, with no errors or near misses, highlighting how powerful the read-back and confirmation process can be in keeping patients safe—though it’s hard to prove cause and effect when outcomes are already at 100%. Nurses showed strong knowledge, confidence, and communication skills, supported by leadership, clear policies, and a non-punitive culture that encourages learning. Still, everyday challenges like heavy workloads, time pressure, background noise, prescriber impatience, and hierarchical dynamics sometimes made it harder to follow the process consistently or speak up for clarification. Even with these obstacles, compliance remained high, suggesting that continued training, a supportive, blame-free environment, structured communication tools, and improved staffing and workflow can help sustain and further strengthen safe practice and ongoing quality improvement.

SUMMARY

This study examined how well nurses adhered to the Read Back and Confirmation Policy when handling telephone medication orders across industrial healthcare settings. Over six months, involving about 200 nurses from city, onshore, and offshore clinics, the findings showed perfect compliance across 732 orders, with no errors or near misses. While this highlights how effective standardized communication can be in keeping patients safe, nurses also shared real-world challenges like heavy workloads, time pressure, communication difficulties, and hesitation to speak up due to hierarchy or fear of blame. Overall, the results suggest that maintaining this high level of safety relies not just on the policy itself, but also on strong leadership support, ongoing training, and a supportive, non-punitive work culture.

CONCLUSIONS

This study examined how nurses adhere to the Read Back and Confirmation Policy for telephone medication orders in industrial healthcare settings. Among around 200 nurses, six months of data showed perfect compliance across 732 orders with no errors, highlighting how effective standardized communication can be. Still, nurses faced everyday challenges like heavy workloads, time pressure, communication difficulties, and hesitation to speak up. Overall, while the policy proves effective, maintaining this high level of safety depends on strong leadership, continuous training, and a supportive, blame-free work environment.

RECOMMENDATIONS

Based on the findings, the study recommends **continuing simulation-based training** focused on real-world telephone order scenarios to strengthen skills and confidence.

Healthcare leaders should **promote a just, non-punitive safety culture** that encourages assertive communication and reduces fear of blame. **Workflow and staffing adjustments** are needed to manage workload and time pressures, while **structured communication tools and regular audit-feedback systems** should be maintained to support ongoing compliance. Future studies are recommended to use **longitudinal and multisite designs** to evaluate the sustainability of compliance and its impact on patient safety across settings.

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AI DECLARATION STATEMENT

Tools like Grammarly, ChatGPT, and Microsoft Copilot were used to refine the writing, especially grammar and structure. However, all data collection, analysis, and interpretation were carried out by the authors themselves, and full credit for the academic work belongs entirely to them.

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