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From Prescription To Practice: A Grounded Theory Of Nurses' Decision-Making In Medical Order Implementation

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Abstract
The implementation of medical orders by clinical nurses represents a complex, multifaceted process that goes far beyond simple task execution. This study explores the decision-making processes that nurses engage in when implementing medical orders, drawing primarily on recent grounded theory research by Asadi et al. (2024). Through synthesizing findings from multiple studies, this article illuminates the contextual factors, challenges, and strategies that shape nurses' decision-making as they translate medical orders into patient care. The analysis reveals that nurses' implementation of medical orders occurs within a dynamic healthcare environment characterized by communication challenges, workflow interruptions, and institutional pressures. The paper concludes by proposing a theoretical framework for understanding nurses' decision-making in medical order implementation and offering recommendations for improving this critical aspect of healthcare delivery.

Introduction

The implementation of medical orders constitutes a fundamental aspect of nursing practice and a critical element in patient care. Far from being a mechanical process of simple execution, it involves complex decision-making that draws on nurses' clinical knowledge, ethical judgment, critical thinking, and situational awareness. The journey from prescription to practice—from the physician's written order to the nurse's implementation of that order in patient care—represents a critical interface in healthcare delivery.

Recent research has brought increased attention to this process, highlighting both its complexity and its significance for patient outcomes. Asadi et al. (2024) conducted a groundbreaking grounded theory study that explored the implementation of medical orders by clinical nurses, revealing the multifaceted nature of this process and the various factors that influence it. Their findings, along with other recent research in this

area, provide valuable insights into the challenges nurses face and the strategies they employ when implementing medical orders.

This study draws on these findings to develop a comprehensive understanding of nurses' decision-making in medical order implementation. By synthesizing recent research and theoretical perspectives, it aims to illuminate the cognitive, interpersonal, and systemic factors that shape this process and to identify strategies for enhancing the safety and effectiveness of medical order implementation.

Theoretical Background

The implementation of medical orders by nurses occurs within a complex sociotechnical system characterized by multiple actors, technologies, and organizational factors. Several theoretical frameworks provide useful lenses for understanding this process.

Decision-making in nursing practice has been conceptualized in various ways, including analytical models that emphasize rational cognitive processes and intuitive models that highlight the role of pattern recognition and tacit knowledge. In the context of medical order implementation, both approaches are relevant, as nurses must often balance procedural requirements with situational judgments based on patient conditions and contextual factors.

Patient safety theory provides another important perspective, emphasizing the systemic nature of healthcare errors and the importance of organizational factors in shaping individual behavior. From this perspective, nurses' decisions in implementing medical orders are influenced not only by their individual knowledge and skills but also by team dynamics, organizational policies, and cultural norms related to safety and accountability.

Communication theory is also relevant, as the implementation of medical orders involves crucial exchanges of information between physicians and nurses. The quality of these communications can significantly impact the accuracy and appropriateness of order implementation.

Methodology

This article is based primarily on a synthesis of findings from recent research on nurses' implementation of medical orders, with a particular focus on the grounded theory study conducted by Asadi et al. (2024). This study employed a qualitative methodology based on the principles of Corbin and Strauss (2015), including semi-structured interviews with nurses and physicians, as well as field observations of nursing practice.

The findings from this study are supplemented by insights from other recent research on related topics, including medication administration errors (Schroers et al., 2020), nurse-physician communication (Park et al., 2018; Tan et al., 2017), and nurses' perceptions of patient safety (Mihdawi et al., 2020).

Through this synthesis, the article aims to develop a comprehensive understanding of the decision-making processes that nurses engage in when implementing medical orders and the various factors that influence these processes.

Findings

The Core Process of Medical Order Implementation

Asadi et al. (2024) identified a complex process through which nurses implement medical orders, characterized by multiple stages and influenced by various contextual factors. This process begins with the

nurse receiving and interpreting the medical order, continues through preparation and planning for implementation, and culminates in the actual execution of the order and subsequent documentation.

At each stage, nurses engage in decision-making that goes beyond simple procedural compliance. They assess the appropriateness of the order for the specific patient, consider potential contraindications or safety concerns, plan the timing and approach for implementation, and adapt their actions based on patient responses and contextual factors.

This decision-making process draws on multiple sources of knowledge, including formal nursing education, clinical experience, knowledge of the specific patient, and understanding of institutional policies and procedures. It also involves balancing competing considerations, such as the need to follow physicians' orders, the imperative to ensure patient safety, and the practical constraints of the nursing workflow.

Contextual Factors Influencing Decision-Making

Several key contextual factors influence nurses' decision-making in medical order implementation:

Communication Challenges

The quality of communication between nurses and physicians significantly impacts the implementation of medical orders. Asadi et al. (2024) found that poor communication, including unclear orders, lack of accessibility for clarification, and hierarchical barriers to questioning orders, created challenges for nurses in accurately implementing medical orders.

These findings are consistent with other research on nurse-physician communication. Tan et al. (2017) identified various barriers to effective communication, including hierarchical relationships, differing communication styles, and lack of structured communication protocols. Park et al. (2018) similarly highlighted physicians' experiences of communication with nurses, noting challenges related to differing perspectives and priorities.

Jemal et al. (2021) found that the quality of nurse-physician communication was associated with patient safety outcomes, with poor communication contributing to medical errors. Similarly, Topcu et al. (2017) identified communication failures as a significant factor in both physician and nurse medical errors.

Workload and Time Pressure

High workloads and time pressures significantly impact nurses' ability to implement medical orders safely and effectively. Asadi et al. (2024) found that nurses often faced competing demands and insufficient time to carefully review and implement orders, leading to rushed decisions and potential errors.

Odberg et al. (2018) identified frequent interruptions during medication administration in nursing homes, which disrupted nurses' concentration and increased the risk of errors. Similarly, Härkänen et al. (2018) found that high workloads and frequent interruptions were perceived by nurses as major challenges in the medication administration process.

Organizational and Environmental Factors

The organizational environment, including policies, procedures, and cultural norms, also shapes nurses' decision-making in implementing medical orders. Asadi et al. (2024) found that institutional expectations, resource constraints, and workplace culture all influenced how nurses approached order implementation.

Mihdawi et al. (2020) identified several aspects of the nursing work environment that influence patient safety, including staffing levels, professional relationships, and organizational support for safety practices.

Al-Jumaili and Doucette (2017) similarly highlighted the impact of organizational factors on medication safety in nursing homes, emphasizing the importance of systems thinking in addressing safety issues.

Nurses' Decision-Making Strategies

In response to these contextual challenges, nurses employ various strategies when implementing medical orders:

Information Seeking and Verification

When faced with unclear or potentially inappropriate orders, nurses engage in information-seeking and verification strategies. Asadi et al. (2024) found that nurses often sought clarification from physicians, consulted with colleagues, or referred to additional resources such as drug references to ensure the accuracy and appropriateness of orders.

Schwappach et al. (2016) described nurses' approaches to medication double-checking, highlighting the importance of independent verification as a safety strategy. Karttunen et al. (2020) found that nurses in long-term care settings employed various strategies to adhere to safe medication preparation and administration guidelines, including verification of orders and consultation with colleagues.

Prioritization and Time Management

To manage high workloads and competing demands, nurses employ prioritization and time management strategies. Asadi et al. (2024) found that nurses carefully sequenced their activities, balancing urgent patient needs with routine care tasks and documentation requirements.

Lindsay and Lytle (2022) described efforts to redesign workflow to optimize nursing documentation in electronic health records, highlighting the importance of efficient processes for managing nursing tasks. Pirinen et al. (2015) similarly described nurses' experiences with the medication administration process, noting the challenges of managing multiple tasks and the strategies nurses developed to maintain accuracy and efficiency.

Adaptation and Workarounds

When faced with system constraints or procedural barriers, nurses sometimes develop adaptations or workarounds to ensure patient care needs are met. Asadi et al. (2024) found that nurses occasionally modified standard procedures or deviated from formal protocols when they believed doing so was necessary for patient welfare, though such adaptations could also introduce risks.

Alomari et al. (2018) described pediatric nurses' perceptions of medication safety and error, noting the tension between adherence to protocols and the need to adapt to specific patient circumstances. Ghezeljeh et al. (2021) explored factors affecting nursing error communication in intensive care units, highlighting the complex decision-making involved in reporting and addressing errors.

The Consequences of Decision-Making in Medical Order Implementation

The decisions nurses make in implementing medical orders have significant consequences for patient outcomes, professional relationships, and organizational functioning:

Patient Safety Implications

The accuracy and appropriateness of medical order implementation directly impacts patient safety. Asadi et al. (2024) found that various factors, including communication breakdowns, time pressures, and systemic constraints, could contribute to implementation errors with potential harm to patients.

Schroers et al. (2020) conducted a qualitative systematic review of nurses' perceived causes of medication administration errors, identifying multiple contributing factors including interruptions, high workloads, and communication issues. Amaniyan et al. (2020) similarly examined patient safety incidents in emergency departments, highlighting the complex interplay of factors that contribute to errors.

Professional Relationships and Team Dynamics

The process of implementing medical orders both influences and is influenced by professional relationships, particularly between nurses and physicians. Asadi et al. (2024) found that the quality of these relationships affected nurses' comfort in seeking clarification or questioning potentially problematic orders.

Kato et al. (2022) explored bedside nurses' perceptions of effective nurse-physician communication, highlighting the importance of mutual respect and collaborative problem-solving. Daheshi et al. (2023) examined nurses' perceptions of communication quality with physicians in emergency departments, noting the impact of communication patterns on team functioning and patient care.

Documentation and Accountability

The implementation of medical orders is closely tied to documentation practices and accountability structures. Asadi et al. (2024) found that nurses' decisions about how to document order implementation reflected both professional standards and practical constraints.

Tajabadi et al. (2020) conducted a qualitative content analysis of unsafe nursing documentation, identifying factors that contribute to documentation problems and their potential impact on patient care. Jones and Treiber (2018) discussed nurses' rights of medication administration, emphasizing the balance between authority, accountability, and responsibility in nursing practice.

Discussion

A Theoretical Framework for Understanding Nurses' Decision-Making

Based on the findings from Asadi et al. (2024) and other relevant research, a theoretical framework for understanding nurses' decision-making in medical order implementation can be proposed. This framework conceptualizes the implementation process as involving three interrelated dimensions:

1. **Cognitive Dimension**: The mental processes through which nurses interpret orders, assess their appropriateness, plan implementation, and evaluate outcomes. This dimension draws on clinical knowledge, critical thinking skills, and experience-based intuition.
2. **Relational Dimension**: The interpersonal dynamics that shape the implementation process, including communication with physicians, collaboration with nursing colleagues, and interactions with patients and families. This dimension involves navigating professional boundaries, hierarchies, and team dynamics.
3. **Systemic Dimension**: The organizational and environmental factors that constrain or enable effective implementation, including policies, resources, technologies, and cultural norms. This dimension reflects the broader context in which nursing practice occurs.

These dimensions interact continuously throughout the implementation process, with each influencing the others. For example, cognitive assessments of an order's appropriateness may prompt relational actions such as seeking clarification from a physician, while systemic constraints such as high workloads may limit the cognitive resources available for careful order review.

Implications for Practice

The findings summarized in this article have several important implications for nursing practice, healthcare organizations, and educational institutions:

Enhancing Nurse-Physician Communication

Given the critical role of communication in medical order implementation, efforts to enhance nurse-physician communication are essential. These might include structured communication protocols, regular interdisciplinary rounds, and organizational cultures that encourage open dialogue and questioning of orders when concerns arise.

Wieke Noviyanti et al. (2021) found that communication satisfaction among nurses was associated with patient safety culture, highlighting the importance of effective communication systems. Jemal et al. (2021) similarly emphasized the need for improved nurse-physician communication structures to enhance patient safety.

Supporting Nurses' Decision-Making

Healthcare organizations should provide supports for nurses' decision-making in implementing medical orders, including readily accessible clinical resources, clear policies and procedures, and adequate time for thoughtful review and implementation of orders.

Luokkamäki et al. (2021) conducted a systematic review of nurses' medication administration skills, highlighting the importance of ongoing education and organizational support for safe practice. Mortensen et al. (2022) identified various instruments for measuring patient safety competencies in nursing, which could be used to assess and enhance nurses' decision-making skills.

Addressing Systemic Barriers

Many of the challenges nurses face in implementing medical orders reflect systemic issues such as high workloads, frequent interruptions, and resource constraints. Addressing these systemic barriers requires organizational commitment to creating environments that support safe and effective nursing practice.

Zaree et al. (2018) examined the impact of psychosocial factors on medication errors among nurses, highlighting the importance of balancing effort and reward in the workplace. Reis et al. (2018) reviewed research on patient safety culture, emphasizing the role of organizational factors in shaping individual behavior and decision-making.

Promoting a Culture of Safety and Accountability

Healthcare organizations should foster cultures that balance accountability with learning, encouraging nurses to report concerns about medical orders and to learn from errors when they occur.

Afaya et al. (2021) conducted an integrative review of barriers to reporting medication administration errors among nurses, highlighting the importance of supportive organizational cultures. Munn et al. (2023) examined error reporting by nurses, finding that team dynamics significantly influenced reporting behaviors.

McLennan et al. (2016) explored nurses' perspectives on disclosing errors to patients, noting the ethical complexities involved and the need for organizational support for transparency. Brabcová et al. (2023) similarly investigated reasons for medication administration errors and barriers to reporting them, emphasizing the importance of non-punitive approaches to error management.

Conclusion

The implementation of medical orders by clinical nurses represents a complex process that involves sophisticated decision-making across cognitive, relational, and systemic dimensions. As revealed by Asadi

et al. (2024) and other recent research, nurses navigate various challenges in this process, including communication difficulties, workload pressures, and organizational constraints.

Understanding the factors that influence nurses' decision-making in implementing medical orders is essential for enhancing patient safety and improving healthcare quality. By addressing communication barriers, supporting nurses' decision-making, tackling systemic issues, and fostering cultures of safety and accountability, healthcare organizations can help ensure that the journey from prescription to practice is as safe and effective as possible.

Future research should continue to explore the complexities of medical order implementation, examining how nurses navigate the challenges they face and identifying effective strategies for supporting their decision-making. As healthcare systems evolve and new technologies emerge, understanding and enhancing this critical aspect of nursing practice will remain an important priority.

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