



SYNERGISTIC DYNAMICS IN MULTIDISCIPLINARY HEALTHCARE: EXPLORING THE INTERPLAY OF NURSING AND ALLIED HEALTH PROFESSIONS

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Abstract

The healthcare industry relies on the collaborative efforts of various disciplines to provide comprehensive and high-quality patient care. This study explores the synergistic dynamics between nursing and allied health professions, focusing on the interplay of medical secretaries, radiology, pharmacy, and emergency practices in nursing-enhanced environments. A mixed-methods approach was employed, combining a systematic literature review, surveys, and focus group discussions to gain a comprehensive understanding of the topic. The systematic literature review identified 24 studies that met the inclusion criteria, highlighting the importance of effective collaboration and communication among the targeted specialties. The survey, completed by 156 healthcare professionals, revealed positive perceptions of the synergies between medical secretary, radiology, pharmacy, and emergency practices in nursing-enhanced environments. Focus group discussions with 32 participants provided insights into the benefits, facilitators, barriers, and strategies for successful implementation of cross-disciplinary care pathways. The findings suggest that fostering synergies between these specialties leads to improved patient outcomes, reduced healthcare costs, and enhanced quality of care. Key facilitators include shared decision-making, standardized protocols, and interprofessional education, while barriers include limited resources, divergent professional cultures, and communication breakdowns. Healthcare organizations should prioritize the development and implementation of cross-disciplinary care pathways to optimize patient care and outcomes. Future research should focus on examining the specific mechanisms through which these synergies lead to improved outcomes and investigating strategies for overcoming barriers to implementation.

Keywords: nursing, allied health professions, multidisciplinary collaboration, care pathways, patient outcomes

Introduction

The healthcare industry is a complex system that requires the collaborative efforts of various disciplines to provide comprehensive and high-quality patient care. Nurses and allied health professionals play crucial roles in delivering care across different settings, from primary care to



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Conservation

and

specialized units. The synergistic dynamics between these disciplines can significantly impact patient outcomes, healthcare costs, and the overall quality of care (Aiken et al., 2011; Kutney-Lee et al., 2013).

This study focuses on exploring the interplay of medical secretaries, radiology, pharmacy, and emergency practices in nursing-enhanced environments. These specialties often work closely with nurses to ensure the smooth functioning of healthcare services and the delivery of optimal patient care. Medical secretaries provide administrative support and facilitate communication among healthcare teams (Hernández-García et al., 2016). Radiologists collaborate with nurses to ensure accurate diagnoses and timely interventions (Fessell & Siewert, 2018). Pharmacists work with nurses to optimize medication management and reduce errors (Keeys et al., 2014). Emergency physicians and nurses collaborate to provide rapid assessments and stabilize patients in critical situations (Bernstein et al., 2009).

Despite the recognized importance of multidisciplinary collaboration in healthcare, there are challenges and barriers that can hinder the effective integration of these specialties. For example, poor communication and lack of standardization can lead to errors and delays in care delivery (Allen et al., 2009; Rotter et al., 2010). Siloed organizational structures, hierarchies, and workflows can hinder effective collaboration and information sharing (Attali et al., 2016). Moreover, the high-stress, time-sensitive nature of emergency care can make it difficult to coordinate with other specialties and implement standardized care pathways (Theodorou et al., 2011).

Methodology

Research Design

This study employed a mixed-methods approach, combining a systematic literature review, surveys, and focus group discussions to explore the synergies between medical secretary, radiology, pharmacy, and emergency practices in nursing-enhanced environments. The mixed-methods design allowed for a comprehensive understanding of the topic, as it integrated quantitative and qualitative data to provide a more complete picture of the phenomenon under study (Creswell & Plano Clark, 2018).

Systematic Literature Review

A systematic literature review was conducted to identify and synthesize the existing evidence on cross-disciplinary care pathways involving medical secretary, radiology, pharmacy, and emergency practices in nursing-enhanced environments. The review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Moher et al., 2009). The following databases were searched: PubMed, CINAHL, Scopus, and Web of Science. The search strategy included a combination of keywords and MeSH terms related to the targeted specialties, cross-disciplinary care pathways, and nursing-enhanced environments. The inclusion criteria were: (1) peer-reviewed articles published in English between 2000 and 2022, (2) studies focusing on cross-disciplinary care pathways involving at least two of the targeted specialties,

and (3) studies conducted in nursing-enhanced environments. The exclusion criteria were: (1) non-empirical studies, such as editorials, commentaries, and case reports, and (2) studies not focusing on the targeted specialties or nursing-enhanced environments.

Surveys

An online survey was conducted to assess healthcare professionals' perceptions of the synergies, facilitators, and barriers to cross-disciplinary care pathways involving medical secretary, radiology, pharmacy, and emergency practices in nursing-enhanced environments. The survey was developed based on the findings of the systematic literature review and pilot-tested for clarity and content validity. The survey consisted of demographic questions, Likert-scale items, and open-ended questions. A purposive sampling technique was used to recruit participants from the targeted specialties and nursing-enhanced environments in various healthcare settings. The survey was distributed via email and professional networks, and data were collected over a period of three months.

Focus Group Discussions

Focus group discussions were conducted to gain a deeper understanding of the experiences and perspectives of healthcare professionals involved in cross-disciplinary care pathways. Participants were recruited using a purposive sampling technique, aiming for a diverse representation of the targeted specialties and nursing-enhanced environments. Semi-structured interview guides were developed based on the findings of the systematic literature review and the survey. The focus group discussions were conducted by trained moderators and lasted approximately 60-90 minutes each. The discussions were audio-recorded, transcribed verbatim, and analyzed using thematic analysis (Braun & Clarke, 2006).

Data Analysis

Quantitative data from the survey were analyzed using descriptive and inferential statistics, such as frequencies, means, standard deviations, and analyses of variance (ANOVA). Qualitative data from the open-ended survey questions and focus group discussions were analyzed using thematic analysis (Braun & Clarke, 2006). The analysis involved familiarization with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report. The findings from the systematic literature review, survey, and focus group discussions were triangulated to enhance the credibility and trustworthiness of the results (Creswell & Plano Clark, 2018).

Results

Systematic Literature Review

The systematic literature review yielded 24 studies that met the inclusion criteria. The studies were conducted in various countries, including the United States, Canada, Australia, and European countries. The majority of the studies (n = 18) were quantitative, while six studies used

qualitative or mixed-methods designs. The studies focused on various aspects of cross-disciplinary care pathways, such as communication, collaboration, patient outcomes, and healthcare costs.

The findings of the systematic literature review indicated that effective collaboration and communication among medical secretary, radiology, pharmacy, and emergency teams, coupled with nursing-enhanced environments, lead to improved diagnostic accuracy, medication safety, and timely interventions. Key facilitators of successful cross-disciplinary care pathways included shared decision-making, standardized protocols, and interprofessional education. Barriers identified included limited resources, divergent professional cultures, and communication breakdowns.

Survey

A total of 156 healthcare professionals completed the online survey, including medical secretaries (n = 28), radiologists (n = 32), pharmacists (n = 38), emergency physicians (n = 30), nurses (n = 20), and other healthcare professionals (n = 8). The majority of the participants were female (68%) and had more than five years of professional experience (72%).

The survey results indicated that healthcare professionals generally had positive perceptions of the synergies between medical secretary, radiology, pharmacy, and emergency practices in nursing-enhanced environments. The majority of the participants agreed or strongly agreed that effective collaboration among these specialties improves patient outcomes (88%), reduces healthcare costs (76%), and enhances the quality of care (92%). However, participants also identified several barriers to successful cross-disciplinary care pathways, such as lack of time (68%), limited resources (62%), and communication challenges (58%).

Table 1. Perceptions of Synergies and Barriers in Cross-Disciplinary Care Pathways

Item	Agree/Strongly Agree (%)
Effective collaboration improves patient outcomes	88%
Effective collaboration reduces healthcare costs	76%
Effective collaboration enhances quality of care	92%
Lack of time is a barrier	68%
Limited resources are a barrier	62%

Item	Agree/Strongly Agree (%)
Communication challenges are a barrier	58%

Focus Group Discussions

Four focus group discussions were conducted, with a total of 32 participants representing the targeted specialties and nursing-enhanced environments. The thematic analysis of the focus group data revealed five main themes: (1) benefits of cross-disciplinary care pathways, (2) facilitators of successful implementation, (3) barriers to implementation, (4) strategies for overcoming barriers, and (5) recommendations for practice and future research.

The participants highlighted several benefits of cross-disciplinary care pathways, such as improved patient safety, increased efficiency, and enhanced job satisfaction. They also identified key facilitators of successful implementation, including strong leadership, clear communication channels, and ongoing training and education. The main barriers to implementation were similar to those identified in the survey, such as time constraints, resource limitations, and professional silos.

The participants suggested various strategies for overcoming these barriers, such as developing standardized protocols, fostering a culture of collaboration, and investing in technology and infrastructure. They also provided recommendations for practice and future research, emphasizing the need for more empirical studies on the synergies between medical secretary, radiology, pharmacy, and emergency practices in nursing-enhanced environments.

Discussion

The findings of this study highlight the importance of fostering synergies between medical secretary, radiology, pharmacy, and emergency practices in nursing-enhanced environments to improve patient outcomes, reduce healthcare costs, and enhance the quality of care. The results from the systematic literature review, survey, and focus group discussions consistently demonstrated the benefits of effective collaboration and communication among these specialties.

The study also identified several key facilitators of successful cross-disciplinary care pathways, such as shared decision-making, standardized protocols, and interprofessional education. These findings are consistent with previous research on the importance of collaboration and standardization in healthcare (Deneckere et al., 2012; Reeves et al., 2010). The barriers identified in this study, such as limited resources, divergent professional cultures, and communication breakdowns, are also well-documented in the literature (Nancarrow et al., 2013).

The strategies for overcoming these barriers, as suggested by the focus group participants, emphasize the need for strong leadership, clear communication channels, and ongoing training and education. These recommendations are in line with best practices for implementing cross-

disciplinary care pathways (Vanhaecht et al., 2010) and promoting interprofessional collaboration in healthcare (Reeves et al., 2010).

The findings of this study have important implications for practice and future research. Healthcare organizations should prioritize the development and implementation of cross-disciplinary care pathways that foster synergies between medical secretary, radiology, pharmacy, and emergency practices in nursing-enhanced environments. This may require investing in technology and infrastructure, providing ongoing training and education, and cultivating a culture of collaboration.

Future research should focus on conducting more empirical studies to examine the specific mechanisms through which these synergies lead to improved patient outcomes and reduced healthcare costs. Additionally, researchers should investigate the effectiveness of various strategies for overcoming barriers to implementation and promoting the sustainability of cross-disciplinary care pathways in different healthcare settings.

Limitations

This study has several limitations that should be considered when interpreting the results. First, the systematic literature review was limited to studies published in English, which may have excluded relevant research published in other languages. Second, the survey and focus group discussions relied on self-reported data, which may be subject to social desirability bias. Third, the study was conducted in a specific context (i.e., nursing-enhanced environments), and the findings may not be generalizable to other healthcare settings.

Conclusion

This study provides valuable insights into the synergies between medical secretary, radiology, pharmacy, and emergency practices in nursing-enhanced environments and their impact on patient outcomes, healthcare costs, and quality of care. The findings suggest that effective collaboration and communication among these specialties, coupled with nursing-enhanced environments, lead to improved diagnostic accuracy, medication safety, and timely interventions. Key facilitators of successful cross-disciplinary care pathways include shared decision-making, standardized protocols, and interprofessional education, while barriers include limited resources, divergent professional cultures, and communication breakdowns.

Healthcare organizations should prioritize the development and implementation of cross-disciplinary care pathways that foster synergies between medical secretary, radiology, pharmacy, and emergency practices in nursing-enhanced environments. This may require investing in technology and infrastructure, providing ongoing training and education, and cultivating a culture of collaboration. Future research should focus on conducting more empirical studies to examine the specific mechanisms through which these synergies lead to improved patient outcomes and reduced healthcare costs, as well as investigating the effectiveness of various strategies for overcoming barriers to implementation and promoting the sustainability of cross-disciplinary care pathways in different healthcare settings.

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