



FACTORS SUPPORTING INTERPROFESSIONAL COLLABORATION IN HOSPITALS: A SCOPING REVIEW

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ABSTRACT

Background: Interprofessional Collaboration (IPC) in hospitals plays a crucial role in enhancing the quality of healthcare services, team effectiveness, and patient safety. IPC facilitates better coordination among healthcare professionals from various disciplines, thereby improving team efficiency and reducing the risk of medical errors. Despite its numerous identified benefits, the implementation of IPC still encounters challenges, including rigid hierarchies, ineffective communication, resource limitations, and resistance to change. Therefore, this study aims to identify and analyze the supporting factors of IPC in hospitals as well as the challenges faced in its implementation. **Methods:** This study employed a scoping review methodology with a systematic literature search in the ProQuest, PubMed, and BMC databases. Articles published between 2015 and 2024 were screened based on predefined inclusion and exclusion criteria. Out of the 1,711 articles initially identified, 54 were selected for full-text evaluation. Following a quality assessment using the Joanna Briggs Institute (JBI) framework, 10 articles were ultimately analyzed. The studies included in this review explored various aspects of IPC in hospital settings, including communication effectiveness, leadership support, technological utilization, and interprofessional education in enhancing healthcare team collaboration. **Results:** The findings indicate that effective IPC relies on several key factors, such as supportive leadership, open and structured communication, the use of information technology such as electronic medical records, and integrated interprofessional training. The implementation of policies that support IPC also contributes to improved interprofessional coordination. However, several challenges persist, including hierarchical organizational structures, limitations in technological infrastructure, and the lack of continuous education programs aimed at fostering interprofessional collaboration. Furthermore, there is a research gap regarding long-term evaluations of IPC's impact on patient care quality and overall healthcare system efficiency. **Conclusions:** Interprofessional collaboration in hospitals has been proven to enhance service quality and team effectiveness in delivering patient care. However, the successful implementation of IPC requires stronger policy support, improved interprofessional communication skills, the utilization of digital technology, and more structured interprofessional education. To ensure the sustainable benefits of IPC, further research is needed on its long-term impact and adaptive strategies that can be implemented in various healthcare settings.

Keywords: Primary Nursing Care Model; Nursing Outcomes; Nurse Competence; Patient Satisfaction; Scoping Review



Introduction

Interprofessional Collaboration (IPC) in healthcare has become a crucial approach to improving patient care quality through coordinated cooperation among healthcare professionals from different disciplines (Sulistyaningsih et al., 2022). IPC aims to optimize patient care by reducing communication gaps, enhancing team efficiency, and preventing medical errors that may arise due to fragmented healthcare services (Martin et al., 2023). As the complexity of hospital-based healthcare services continues to increase, factors that support the success of IPC have become a primary concern for healthcare practitioners and researchers. Therefore, this study aims to identify and map the supporting factors that can strengthen interprofessional collaboration in hospitals.

The global healthcare system faces significant challenges in ensuring the effectiveness of interprofessional collaboration in hospitals, particularly within the increasingly complex context of multidisciplinary care (Ruttmann et al., 2024). Many hospitals have implemented strategies to foster IPC, such as developing a collaborative culture, establishing organizational policies that support interprofessional cooperation, and utilizing digital technology to facilitate more effective communication (Lauesen et al., 2023). However, the effectiveness of these strategies varies depending on structural, psychosocial, and organizational policy factors (Krug et al., 2022). Several studies have shown that supportive leadership, interprofessional trust, and open communication are key factors in the

success of IPC (Edström et al., 2020). Meanwhile, barriers such as rigid hierarchies, differences in professional cultures, and a lack of policy support often hinder teamwork in hospital settings (Qi et al., 2020).

A preliminary literature review indicates that although numerous studies have explored the factors influencing IPC, the methodological approaches used remain diverse and lack standardization (Tsakitzidis et al., 2021). Some studies emphasize organizational aspects, such as leadership and hospital policies (Kwak et al., 2021), while others focus on psychosocial aspects, such as trust and interprofessional communication (Sekanina et al., 2024). Furthermore, most research has concentrated on challenges and barriers to IPC, whereas supporting factors that can enhance collaboration have not been comprehensively discussed (Kurniasih et al., 2022).

Interprofessional collaboration in healthcare is defined as a form of cooperation among medical professionals and other healthcare practitioners to achieve better patient care outcomes through clear communication, coordination, and shared responsibilities (McLaney et al., 2022). Within hospital settings, IPC aims not only to improve service efficiency but also to reduce adverse medical events, enhance patient satisfaction, and strengthen collective responsibility among healthcare professionals (Jordan et al., 2022). The supporting factors of IPC encompass various aspects, such as organizational infrastructure that fosters collaboration, information technology that facilitates



communication, and interprofessional training programs that help healthcare professionals understand their respective roles and responsibilities within a team (El-Awaisi et al., 2021). However, a more systematic mapping is required to understand how these factors contribute to the success of IPC in hospital environments.

The inclusion criteria for this study cover research that examines supporting factors of IPC in hospitals, published within the last five years. The analyzed literature includes both quantitative and qualitative studies published in accredited academic journals (Smeets et al., 2024). The process of searching and selecting literature is conducted through various academic databases, such as Scopus, PubMed, Web of Science, and the Cochrane Library, to ensure comprehensive and in-depth research coverage (Nouwen et al., 2023).

The scoping review approach was chosen because this method allows for an in-depth exploration of the various factors that support IPC in hospitals, particularly in the context of research with diverse methodologies (Nishiguchi et al., 2021). Through this approach, the study will identify key findings, analyze different available perspectives, and highlight research gaps related to supporting factors of IPC in healthcare services (Zenani et al., 2023). Additionally, the findings of this study are expected to serve as a foundation for future research in developing more effective interventions to enhance interprofessional collaboration in hospitals.

The primary objective of this study is to assess the extent to which scientific evidence supports or challenges the supporting factors of interprofessional

collaboration in hospitals. Thus, this study will provide a comprehensive understanding of the key elements that drive IPC success and offer recommendations for healthcare professionals, policymakers, and researchers to enhance interprofessional collaboration standards in hospitals (Tsakitzidis et al., 2021). The research question addressed in this study is: What are the factors that support the success of interprofessional collaboration in hospitals based on scientific evidence from the available academic literature?

Methods

This study employs a scoping review approach based on the latest methodological guidelines from the Joanna Briggs Institute (JBI) (Peters et al., 2020) and the PRISMA-ScR framework (Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews) (Tricco & al., 2018). This approach ensures that the literature review process is conducted systematically, transparently, and credibly to generate a comprehensive mapping of the factors supporting interprofessional collaboration in hospitals.

The first step in this study is to define the research objectives and questions using the Population, Concept, Context (PCC) framework, which is designed to clarify the focus and scope of the review (Peters et al., 2020). Subsequently, a research protocol is developed, including inclusion and exclusion criteria, literature search strategies, and data extraction methods to ensure transparency and replicability. It is also recommended that this protocol be registered on platforms such as the Open Science Framework (OSF) or JBI Evidence Synthesis (Peters & al., 2020; Tricco & al., 2018).



The next phase involves conducting a comprehensive literature search across various academic databases and gray literature sources. In this process, a librarian expert is engaged to develop an optimal search strategy and systematically document each stage (Tricco & al., 2016). Article selection is carried out through multiple stages, starting with screening based on titles and abstracts, followed by a full-text evaluation using the PRISMA-ScR flow diagram to ensure transparency and accountability in the study selection process (Tricco et al., 2018). Relevant data are then extracted and analyzed descriptively to map key findings, research trends, and gaps in the existing literature (Peters et al., 2020).

Inclusion Criteria

The article search method applies the Population, Concept, Context (PCC) framework as follows:

Table 1. PCC Framework

Component Description	
Population	Healthcare professionals working in hospitals, including doctors, nurses, pharmacists, therapists, and other professionals involved in multidisciplinary healthcare services.
Concept	Factors supporting interprofessional collaboration in the hospital setting, including organizational aspects, communication, technology, interprofessional education, and leadership.
Context	The hospital environment within various healthcare systems, both at the national and international levels.



Types of Sources Used

This scoping review will encompass various sources of evidence to provide a comprehensive overview of the supporting factors for interprofessional collaboration (IPC) in hospitals. A wide range of research designs will be included to ensure extensive coverage of this topic.

Experimental and quasi-experimental studies will be incorporated into this review, including randomized controlled trials (RCTs), non-randomized trials, pre-and post-studies, as well as interrupted time-series studies. These studies will offer insights into the effectiveness of various interventions that support interprofessional collaboration in hospital settings.

Additionally, analytical observational studies will be included, such as prospective and retrospective cohort studies, case-control studies, and analytical cross-sectional studies. These studies can help identify the relationships between structural, organizational, and psychosocial factors and the success of interprofessional collaboration.

This review will also take into account descriptive observational studies, such as case series and individual case reports, to provide additional context regarding the implementation of IPC-supporting factors in various hospital settings.



Furthermore, qualitative research employing phenomenology, grounded theory, ethnography, qualitative descriptive approaches, action research, and feminist research will be included to capture diverse perspectives and experiences of healthcare professionals in practicing interprofessional collaboration in hospitals. These qualitative studies are crucial for understanding the psychosocial and cultural factors that influence the effectiveness of IPC.

By incorporating various research designs and sources of evidence, this review aims to comprehensively map the available evidence, identify research gaps, and provide in-depth insights into the supporting factors for interprofessional collaboration in hospitals across different healthcare systems.

Eligibility Criteria

The eligibility criteria in this literature review have been strictly established to ensure the relevance and quality of the analyzed articles. This study will include only articles that directly report research findings on the facilitating factors of interprofessional collaboration (IPC) in hospitals, encompassing structural aspects, communication, leadership, technology, and interprofessional education. The selected articles must employ quantitative, qualitative, or mixed-methods research designs to provide a broader perspective on the effectiveness of IPC-supporting factors in hospital settings.

Furthermore, the studies included in this review must explicitly involve healthcare professionals working in hospitals, including physicians, nurses,

pharmacists, therapists, and other health professionals contributing to interprofessional collaborative practice. To ensure the accuracy and readability of the data, only full-text articles will be considered, enabling a more in-depth and evidence-based analysis.

To maintain the relevance of findings to recent developments in this field, a publication time frame is applied, where only articles published between 2020 and 2025 will be included in this review. Additionally, the language of the included articles must be either English or Indonesian to ensure a comprehensive understanding of the analyzed research content.

Conversely, specific exclusion criteria are also applied in this study. Articles categorized as literature reviews, systematic reviews, or other scoping reviews will be excluded to avoid duplication in the analysis and ensure that only primary research studies are utilized in mapping scientific evidence. Furthermore, duplicate publications across multiple journals will be identified and removed to maintain the integrity and uniqueness of this literature review.

With this approach, this scoping review is designed to systematically and transparently collect, organize, and analyze the available scientific evidence, thereby providing a clear overview of the facilitating factors of interprofessional collaboration in hospitals.

Databases

The databases utilized in this study include ProQuest, PubMed, and BMC (BioMed Central). The selection of these databases was made to ensure that the



literature review encompasses articles from accredited academic journals and relevant scientific publications in the field of healthcare and interprofessional collaboration. The researchers accessed all databases in January 2025 to collect articles that met the inclusion and exclusion criteria. The following are the links to the databases used: ProQuest: <https://www.proquest.com>, PubMed: <https://pubmed.ncbi.nlm.nih.gov>, BMC (BioMed Central): <https://www.biomedcentral.com>. The utilization of these databases aims to ensure a comprehensive literature scope and to establish that this study is grounded in valid and up-to-date scientific evidence regarding the supporting factors of interprofessional collaboration in hospital settings.

Search Strategy

In conducting the literature search, a combination of keywords with Boolean operators was employed to obtain more specific results and facilitate the selection of articles relevant to this research topic. The keywords used in this search were: ("Interprofessional Collaboration" OR "Interprofessional Teamwork") AND ("Hospital" OR "Acute Care Setting") AND ("Facilitators" OR "Supporting Factors" OR "Enablers") AND ("Effective Communication" OR "Leadership Support" OR "Mutual Trust" OR "Workload Management" OR "Interprofessional Education" OR "Training").

By applying these keywords across three major academic databases—ProQuest, PubMed, and BMC (BioMed Central)—the researcher successfully

identified a number of articles that met the initial search criteria. The search process included articles from various sources relevant to the supporting factors of interprofessional collaboration in hospitals.

Overall, the initial search yielded 1.711 articles that matched the predetermined keywords, with the following distribution: ProQuest: 1.174 articles, PubMed: 63 articles, BMC (BioMed Central): 486 articles.

Additionally, gray literature was considered in this search to capture evidence that may not have been published in academic journals but still provides valuable insights into the supporting factors of interprofessional collaboration in hospital settings.

Article Screening

The article screening process in this study followed the PRISMA-ScR flow diagram, which includes the stages of identification, screening, eligibility assessment, and inclusion. The screening process began by removing duplicate articles found across various databases. Subsequently, articles were screened based on titles and abstracts, retaining only those that explicitly addressed the impact of permanent pacemaker implantation on the quality of life of elderly individuals for further evaluation.

Articles categorized as literature reviews, systematic reviews, or other scoping reviews were excluded at this stage to prevent duplication. Additionally, articles with identical titles and authors or those classified under the same category within one or more databases were also eliminated. After completing this stage,



full-text articles that passed the initial selection were further evaluated to ensure alignment with the pre-established inclusion and exclusion criteria.

Data Extraction

The article screening process in this study follows the PRISMA-ScR flow diagram, which includes the stages of identification, screening, eligibility assessment, and inclusion. This process is conducted to ensure that only articles relevant to the supporting factors of interprofessional collaboration in hospitals are further analyzed.

The first stage of screening involves removing duplicate articles found across various databases, namely ProQuest, PubMed, and BMC (BioMed Central). Articles with the same title and author or those belonging to similar categories in more than one database are excluded to avoid redundancy in the analysis.

Next, screening is conducted based on titles and abstracts, where only articles that explicitly discuss supporting factors of interprofessional collaboration in hospitals are retained for further evaluation. Articles focusing solely on barriers or challenges without discussing supporting factors are excluded at this stage.

Articles categorized as literature reviews, systematic reviews, or other scoping reviews are also removed at this stage to prevent duplication in the analysis. Additionally, articles that are not available in full text or are written in languages other than English or Indonesian are excluded.

After completing the initial screening phase, full-text articles that pass the preliminary selection are further

evaluated to ensure their alignment with the predetermined inclusion and exclusion criteria. Articles meeting these criteria are then included in the final analysis to gain deeper insights into the supporting factors of interprofessional collaboration in hospitals.

Results

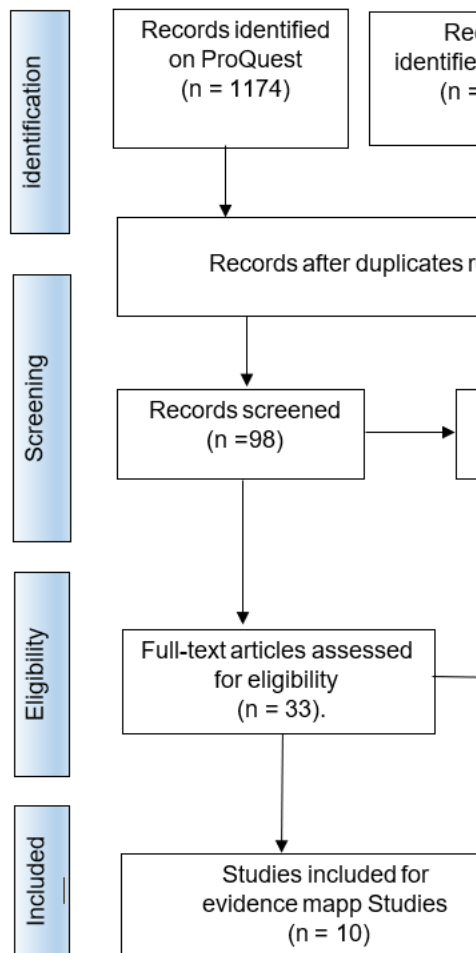
The researcher utilized three primary databases for the literature search: ProQuest, PubMed, and BMC (BioMed Central), along with several other relevant sources. During the identification phase, a total of 1.711 articles were retrieved from all databases. These articles were then screened based on predefined inclusion criteria, which included articles published between 2014 and 2025, available in full-text format, and written in either English or Indonesian. Following the initial screening phase, the number of eligible articles was reduced to 1.202.

A further screening process was conducted by reviewing the titles and abstracts to ensure their relevance to the research topic. Studies with a research design categorized as literature reviews, systematic reviews, or other scoping reviews were excluded to avoid duplication of findings. Additionally, articles that appeared in multiple databases with identical titles and authors were also removed. After this stage, 33 articles remained and proceeded to the full-text evaluation phase.

Furthermore, studies that did not present primary research findings or lacked sufficient data for mapping in this scoping review were also eliminated. After completing the final selection process, 10

articles were chosen as part of the final literature review for further analysis.

Picture 1. PRISMA Flowchart



Critical Appraisal Results

The initial assessment was conducted independently. Discussions were held to reconcile differences in evaluations before arriving at the necessary final justification. In this study, the Joanna Briggs Institute (JBI) Critical Appraisal Tools (2020 version) were used to evaluate qualitative studies (n=6), the JBI Checklist for cross-sectional studies (n=1), and the JBI Checklist for case

series (n=1). Additionally, the Mixed Methods Appraisal Tool (MMAT) (2018 version) was employed to assess one mixed-method study (n=2).

Articles Included in the Literature Review

The results of the initial analysis, further review, and identification ultimately included 10 articles. The following table provides detailed information about each article:



Table 3. Accumulated Critical Assessment of Articles

ID	Title	Criteria													Mark
		1	2	3	4	5	6	7	8	9	10	11	12	13	
JBI Qualitative Research															
IPC 3	Barriers and Enablers to Effective Interprofessional Teamwork in the Operating Room: A Qualitative Study Using the Theoretical Domains Framework	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				100%
IPC 5	The use of SBAR as a structured communication tool in the pediatric non-acute care setting: bridge or barrier for interprofessional collaboration?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				100%
IPC 6	Exploring Interprofessional Teamwork at a Tertiary Public Hospital in South Africa	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				100%
IPC 7	Interprofessional Collaboration in Complex Patient Care Transition: A Qualitative Multi-Perspective Analysis	✓	✓	✓	✓	✓	-	✓	✓	✓	✓				90%
IPC 11	Healthcare Professionals’ Perceptions of Interprofessional Teamwork in the Emergency Department: A Critical Incident Study	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				100%
IPC 13	Understanding Intra- and Interprofessional Team and Teamwork Processes by Exploring Facility-Based Neonatal Care in Kenyan Hospitals	✓	✓	✓	✓	✓	-	✓	✓	✓	✓				90%
JBI Checklist for Analytical Cross-Sectional Studies															
IPC 9	Care complexity, perceptions of complexity and preferences for interprofessional collaboration: an analysis of relationships and social networks in paediatrics	✓	✓	✓	✓	-	✓	✓	✓	✓	✓				88%
JBI Checklist for Case Series															



ID	Title	Criteria													Mark
		1	2	3	4	5	6	7	8	9	10	11	12	13	
IPC 8	Institutionalizing an interprofessional simulation education program: an organizational case study using a model of strategic change	✓	✓	✓	-	✓	✓	✓	✓	✓	✓	✓	✓	-	80%
Checklist for Mixed Methods Research															
IPC 2	Improving Critical Care Teamwork: Simulation-Based Interprofessional Training for Enhanced Communication and Safety	Temuan menunjukkan bahwa 17 (100%) dari 17 kriteria terpenuhi, mengonfirmasi integrasi yang kuat dari metode kualitatif dan kuantitatif, termasuk validasi sistematis kinerja tim melalui penilaian terstruktur dan umpan balik kualitatif.													100%
IPC 10	Evaluation of interprofessional teamwork modules implementation in an emergency department – A mixed-methods case study of implementation fidelity	Studi mencapai 16 (94%) dari 17 kriteria, menunjukkan ketelitian metodologi yang tinggi. Pendekatan mixed-methods memberikan evaluasi komprehensif terhadap implementasi interprofessional teamwork, tetapi terdapat sedikit inkonsistensi dalam pengumpulan data kualitatif.													94%

Table 4. Analysis of Literature Results

ID Number	Author and Journal Identity	Journal Title	Objective	Population and Sample	Method	Summary of Results
IPC 1	Author: Joyline Jepkosgei et al. Journal Identity: <i>BMC Health Services Research</i> , Vol. 22, 2022 (Jepkosgei et al., 2022).	Understanding Intra- and Interprofessional Team and Teamwork Processes by Exploring Facility-Based Neonatal Care in Kenyan Hospitals	To explore intra- and interprofessional teamwork in neonatal care units in Kenyan hospitals.	Healthcare professionals from three hospitals in Kenya, including nurses, nursing students, doctors, and trainees.	Exploratory qualitative study using ethnographic methods, in-depth interviews, and non-participant observations.	Teamwork in neonatal care units is influenced by organizational structures, institutional culture, and professional role dynamics. Recommendations: Strengthening leadership, fostering open communication, and reducing hierarchical barriers in the workplace are necessary to improve team coordination.



ID Number	Author and Journal Identity	Journal Title	Objective	Population and Sample	Method	Summary of Results
IPC 2	Author: Tzu-Ching Sung & Hsiang-Chin Hsu. Journal Identity: Journal of Multidisciplinary Healthcare, 2025 (Sung & Hsu, 2025).	Improving Critical Care Teamwork: Simulation-Based Interprofessional Training for Enhanced Communication and Safety	To evaluate the impact of simulation-based interprofessional education on teamwork and communication in critical care.	237 healthcare professionals in emergency and intensive care units.	Prospective mixed-methods study using simulation scenarios and teamwork assessments.	Factors influencing interprofessional teamwork in emergency units highlight the importance of clear communication, professional experience, and a supportive work environment.
IPC 3	Author: Cole Etherington et al. Journal Identity: PLOS ONE, Vol. 16(4), 2021 (Etherington et al., 2021).	Barriers and Enablers to Effective Interprofessional Teamwork in the Operating Room: A Qualitative Study Using the Theoretical Domains Framework	To identify factors that facilitate or hinder interprofessional teamwork in the operating room.	66 healthcare professionals from various disciplines in the operating room.	Qualitative study with semi-structured interviews and Theoretical Domains Framework.	A multi-level approach is necessary to improve teamwork, including communication training, social hierarchy management, and optimization of resources and teamwork culture.
IPC 4	Author: Jenny Milton et al. Journal Identity: <i>Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine</i> , Vol. 30, 2022 (Milton et al., 2022).	Healthcare Professionals' Perceptions of Interprofessional Teamwork in the Emergency Department: A Critical Incident Study	To describe healthcare professionals' perceptions of critical incidents related to the facilitators and barriers of interprofessional teamwork in the emergency department.	28 healthcare professionals, including physicians, nurses, nurse assistants, and administrators.	Qualitative study using the Critical Incident Technique and semi-structured interviews.	The study reveals that interprofessional teamwork in the emergency department is significantly influenced by communication, professional experience, and managerial support. To enhance teamwork effectiveness, hospitals need to strengthen team reflection, communication



ID Number	Author and Journal Identity	Journal Title	Objective	Population and Sample	Method	Summary of Results
						training, and more supportive management strategies.
IPC 5	Author: Ester Coolen et al. Journal Identity: Journal of Interprofessional Care, Vol. 34(3), 2020 (Coolen et al., 2020).	The Use of SBAR as a Structured Communication Tool in the Pediatric Non-Acute Care Setting: Bridge or Barrier for Interprofessional Collaboration?	To explore the impact of SBAR in pediatric non-acute care settings and its effect on interprofessional collaboration.	Pediatric residents and nurses in a children's hospital in the Netherlands.	Qualitative study with focus group discussions and thematic analysis.	The effectiveness of SBAR is influenced by departmental culture, professional identity, and situational dependency. Effective use requires better adaptation to interprofessional needs.
IPC 6	Author: Firdouza Waggie & Nicole Erin Arends. Journal Identity: Journal of Interprofessional Care, Vol. 34(4), 2020 (Waggie & Arends, 2020).	Exploring Interprofessional Teamwork at a Tertiary Public Hospital in South Africa	To investigate barriers and facilitators of interprofessional teamwork in a public hospital in South Africa.	14 healthcare professionals from various disciplines in a tertiary hospital.	Qualitative study with focus group discussions and thematic analysis.	Barriers include hierarchy, poor communication, resource shortages, and role confusion. Facilitators include trust, communication tools, and team-building efforts.
IPC 7	Author: Franziska Geese & Kai-Uwe Schmitt. Journal Identity: Healthcare, Vol. 11, 2023 (Geese & Schmitt, 2023).	Interprofessional Collaboration in Complex Patient Care Transition: A Qualitative Multi-Perspective Analysis	To explore Swiss healthcare professionals' experiences in complex patient care transitions and potential interprofessional collaboration.	Healthcare professionals from various disciplines in Switzerland.	Qualitative study with interviews and focus group discussions.	Barriers to care transition include fragmented healthcare structures and role ambiguity. Interprofessional collaboration is recognized as a key solution but faces systemic obstacles.
IPC 8	Author: Jan B. Schmutz. Journal Identity: Journal of	Institutionalizing an Interprofessional Simulation	To analyze the implementation of an interprofessional	Staff and educators in a non-academic	Case study with interviews, participatory	Successful implementation requires leadership support, structured



ID Number	Author and Journal Identity	Journal Title	Objective	Population and Sample	Method	Summary of Results
	Interprofessional Care, Vol. 36(3), 2022(Geese & Schmitt, 2023).	Education Program: An Organizational Case Study Using a Model of Strategic Change	simulation education program using Kotter's model of strategic change.	community hospital.	observations, and archival data analysis.	training, and integration into hospital policies. Major barriers include resource limitations and organizational inertia.
IPC 9	Author: Lisa-Maria van Klaveren et al. Journal Identity: BMC Medical Education, Vol. 24, 2024 (L.-M. van Klaveren et al., 2024).	Care Complexity, Perceptions of Complexity, and Preferences for Interprofessional Collaboration: An Analysis of Relationships and Social Networks in Pediatrics	To investigate the relationship between care complexity, professionals' perceptions of complexity, and preferences for interprofessional collaboration in pediatric care.	123 healthcare professionals in a tertiary academic children's hospital.	Online questionnaire with conjoint analysis and social network analysis.	Interprofessional collaboration tends to be stronger in more complex care settings, with shifting team roles based on situational demands.
IPC 10	Author: Jenny Liu et al. Journal Identity: BMC Health Services Research, Vol. 21, 2021(Liu et al., 2021).	Evaluation of Interprofessional Teamwork Modules Implementation in an Emergency Department – A Mixed-Methods Case Study of Implementation Fidelity	To evaluate the implementation of interprofessional teamwork modules from staff perspectives and examine how implementation fidelity can be sustained.	Staff in the emergency department, including nurses, doctors, and managers.	Mixed-methods case study using structured observations, semi-structured interviews, and questionnaires over five years.	The study found that the initial implementation of interprofessional teamwork modules in the emergency department improved collaboration and efficiency, but without strong maintenance strategies, adherence to core teamwork behaviors declined over three years. Continuous training, leadership support, and data-driven monitoring are needed to sustain positive impacts.



The results of the literature analysis are as follows:

Interprofessional collaboration in hospital settings plays a crucial role in improving patient safety, healthcare service efficiency, and job satisfaction among healthcare professionals. The key supporting factors for such collaboration include effective leadership, clear communication, a supportive organizational culture, adequate training, and sufficient resource availability. Based on a literature analysis of ten reviewed studies, the following are the primary factors contributing to the enhancement of interprofessional collaboration in hospitals.

Leadership and Organizational Support. Inclusive leadership and strong organizational support are essential in fostering a collaborative work environment. Jepkosgei et al. (2022) [IPC 1] emphasized that organizational structure and leadership style significantly influence the effectiveness of neonatal team performance in Kenyan hospitals. Supportive leadership can reduce hierarchical barriers and enhance interprofessional communication (Jepkosgei et al., 2022).

Furthermore, Schmutz (2022) [IPC 8] identified that the successful implementation of interprofessional simulation programs heavily depends on leadership support in providing necessary facilities, setting policies, and ensuring the

sustainability of training programs (Schmutz, 2022). Similarly, Milton et al. (2022) [IPC 4] highlighted that leadership that encourages team reflection and implements structured management strategies can improve interprofessional effectiveness in emergency departments (Milton et al., 2022).

Additionally, Waggie & Arends (2020) [IPC 6] demonstrated that transparent and collaborative leadership helps in resolving interprofessional conflicts and fostering trust within healthcare teams (Waggie & Arends, 2020).

Effective Communication and Clear Communication Structures. Effective communication is the foundation of interprofessional collaboration. Sung & Hsu (2025) [IPC 2] found that simulation-based education in critical care units enhances team communication skills and reduces clinical errors (Sung & Hsu, 2025).

Meanwhile, Coolen et al. (2020) [IPC 5] underscored the importance of standardized communication tools such as SBAR (*Situation, Background, Assessment, Recommendation*) in pediatric units (Coolen et al., 2020). SBAR facilitates structured information exchange and minimizes interprofessional misunderstandings (Sung & Hsu, 2025).

In the operating room setting, Etherington et al. (2021) [IPC 3] identified that communication barriers often arise due



to hierarchical differences within medical teams. Thus, communication training that emphasizes professional equality can significantly improve teamwork efficiency in surgical environments (Etherington et al., 2021).

Organizational Culture and Team Dynamics. A supportive organizational culture is a critical factor in interprofessional team effectiveness within hospitals. Geese & Schmitt (2023) [IPC 7] emphasized that interprofessional collaboration in patient care transitions heavily depends on workplace culture and inter-unit coordination (Geese & Schmitt, 2023). Fragmentation within the healthcare system can pose a significant barrier to successful collaboration.

A study by van Klaveren et al. (2024) [IPC 9] found that in pediatric care, the complexity of a patient's condition increases the likelihood of healthcare professionals working collaboratively (L. van Klaveren et al., 2024). Therefore, a flexible workplace culture that allows for role adjustments based on clinical situations is vital in supporting interprofessional cooperation.

Training and Strengthening Collaborative Competencies. Interprofessional education and training play a fundamental role in fostering synergy among healthcare professionals. Liu et al. (2021) [IPC 10] demonstrated that implementing interprofessional collaboration training modules in emergency departments enhances team efficiency and reduces medical errors (Liu et al., 2021). However, the positive impact of such training may diminish over time if

not accompanied by maintenance strategies and continuous professional development.

Additionally, Schmutz (2022) [IPC 8] emphasized that simulation-based training integrated with hospital policies enhances healthcare professionals' adaptability to interprofessional collaboration challenges (Schmutz, 2022). The success of such training programs also depends on managerial support in providing facilities and allocating time for healthcare staff to participate in training sessions.

Environmental Factors and Resource Availability. A supportive work environment and adequate resource availability are crucial factors in ensuring the success of interprofessional collaboration. Waggie & Arends (2020) [IPC 6] found that resource constraints, such as a shortage of healthcare personnel and high workloads, are major barriers to effective interprofessional teamwork (Waggie & Arends, 2020). However, strategies that build trust and employ effective communication tools can help mitigate these challenges.

In the context of patient care transitions, Geese & Schmitt (2023) [IPC 7] identified that the lack of an integrated health information system is a significant obstacle to coordination among medical teams (Geese & Schmitt, 2023). Therefore, investment in health information technology that facilitates interdepartmental communication can enhance teamwork efficiency and reduce errors resulting from poor coordination.

Conclusion and Implications for Clinical Practice

Based on the analysis of ten studies, several key factors support



interprofessional collaboration in hospital settings:

1. **Leadership and Organizational Support.** Inclusive leadership that fosters collaboration can reduce hierarchical barriers and improve medical team coordination.
2. **Effective Communication.** The use of structured communication tools such as SBAR, along with simulation-based training, can enhance healthcare professionals' interactions.
3. **Organizational Culture.** A well aligned workplace culture and clearly defined roles within teams support stronger interprofessional collaboration.

4. **Simulation-Based Training.** Ongoing interprofessional education is essential for building collaborative competencies.

5. **Resource Availability.** Providing sufficient workforce support and implementing integrated health information systems can help overcome collaboration barriers.

The implication of these findings is that hospitals must develop strategic policies to strengthen interprofessional collaboration. Recommended actions include continuous training programs, creating a supportive work environment, and integrating more effective communication systems.

Table 5. Key issues emerging.

Key Issue	Specific Aspect	Source	Quotation
Leadership and Organizational Support	Inclusive leadership enhances interprofessional team coordination	Jepkosgei et al. (2022) [IPC 1]; Schmutz (2022) [IPC 8]	"A supportive organizational structure and leadership can reduce hierarchical barriers and strengthen coordination among healthcare teams." (Jepkosgei et al., 2022)
	Managerial support in collaborative training programs improves team effectiveness	Milton et al. (2022) [IPC 4]; Waggie & Arends (2020) [IPC 6]	"Hospital management support in team reflection and collaborative management strategies can enhance interprofessional collaboration effectiveness." (Milton et al., 2022)
Effective Communication and Clear Communication Structures	The use of structured communication tools (SBAR) facilitates team coordination	Coolen et al. (2020) [IPC 5]; Etherington et al. (2021) [IPC 3]	"The effectiveness of SBAR depends on departmental culture, professional identity, and clinical situations." (Coolen et al., 2020)
	Simulation-based communication training	Sung & Hsu (2025) [IPC 2]	"Simulation-based education in critical care units



Key Issue	Specific Aspect	Source	Quotation
	reduces clinical errors in critical care units		enhances team communication skills and minimizes medical errors.” (Sung & Hsu, 2025)
Organizational Culture and Team Dynamics	A supportive organizational culture increases team engagement in interprofessional collaboration	Geese & Schmitt (2023) [IPC 7]; van Klaveren et al. (2024) [IPC 9]	“Interprofessional collaboration tends to be stronger in workplace environments with an organizational culture that encourages cross-disciplinary cooperation.” (Geese & Schmitt, 2023)
	Team roles are dynamic and depend on patient case complexity	van Klaveren et al. (2024) [IPC 9]	“Interprofessional collaboration is more prominent in complex patient care cases, with roles adapting according to situational demands.” (van Klaveren et al., 2024)
Training and Strengthening Collaborative Competencies	Interprofessional training programs improve team efficiency	Liu et al. (2021) [IPC 10]; Schmutz (2022) [IPC 8]	“Simulation training based on strategic change models can help healthcare professionals develop adaptive skills for interprofessional challenges.” (Schmutz, 2022)
	Training sustainability is essential for maintaining collaboration effectiveness	Liu et al. (2021) [IPC 10]	“Without maintenance strategies, the positive impact of collaborative training in emergency units diminishes over time.” (Liu et al., 2021)
Environmental Factors and Resource Availability	Workforce shortages and high workloads are major challenges in collaboration	Waggie & Arends (2020) [IPC 6]	“Barriers to interprofessional collaboration include staff shortages, high workloads, and differing professional expectations.” (Waggie & Arends, 2020)



Key Issue	Specific Aspect	Source	Quotation
	Lack of integrated information systems hinders hospital unit coordination	Geese & Schmitt (2023) [IPC 7]	“A primary barrier in patient care transitions is the lack of integration between hospital information systems, which delays communication and coordination.” (Geese & Schmitt, 2023)
Implementation Challenges	Lack of periodic evaluation in collaboration programs leads to long-term effectiveness decline	Liu et al. (2021) [IPC 10]	“Without continuous monitoring and reinforcement strategies, the effectiveness of interprofessional collaboration modules tends to decline over the years.” (Liu et al., 2021)
Research Gaps	Limited long-term research on interprofessional collaboration effectiveness across various clinical conditions	van Klaveren et al. (2024) [IPC 9]	“Most studies only evaluate the short-term impact of interprofessional collaboration, while its long-term effects on patient care quality remain underexplored.” (van Klaveren et al., 2024)
	Limited research on interprofessional collaboration effectiveness in vulnerable populations such as patients with cognitive impairments or disabilities	Geese & Schmitt (2023) [IPC 7]	“Further research is needed to develop more inclusive interprofessional collaboration models for patients with cognitive impairments or disabilities.” (Geese & Schmitt, 2023)

Discussion

The Role of Leadership and Organizational Support in Interprofessional Collaboration.

Leadership and organizational support are key factors in the success of interprofessional collaboration in hospitals. Inclusive leadership enhances team

coordination and reduces hierarchical barriers in the workplace (Jepkosgei et al., 2022; Schmutz, 2022). Effective leadership not only ensures a fair distribution of tasks but also facilitates open communication among different healthcare professions.



Several studies indicate that strong organizational support, including the provision of facilities, supportive policies, and a collaborative work environment, significantly contributes to the success of interprofessional teams (Milton et al., 2022; Waggie & Arends, 2020). Hospitals that implement team reflection strategies and participatory leadership-based supervision demonstrate higher team effectiveness compared to organizations with rigid hierarchical leadership structures (Schmutz, 2022).

However, challenges remain, particularly in healthcare systems with limited resources. A lack of managerial support and unintegrated policies often hinder efforts to improve collaboration effectiveness (Reeves et al., 2018). Therefore, more strategic leadership interventions are needed, such as interprofessional leadership development programs and the alignment of hospital policies with collaborative practices.

Effective Communication as the Foundation of Interprofessional Collaboration. Communication is a fundamental element in interprofessional teamwork. Without clear and effective communication, coordination in clinical decision-making can be hindered, potentially impacting patient safety (Coolen et al., 2020). The use of structured communication tools such as SBAR (Situation, Background, Assessment, Recommendation) has been proven to improve the efficiency of information exchange among healthcare professionals in hospital settings (Etherington et al., 2021).

Simulation-based communication training has also shown positive outcomes in reducing medical errors in critical care units (Sung & Hsu, 2025). These simulations allow healthcare professionals to practice in realistic scenarios, enhancing their communication skills and fostering trust among team members (Leonard et al., 2017).

Nonetheless, challenges in implementing communication strategies persist. Hierarchical differences within medical teams often create communication barriers that can affect collaboration effectiveness (O'Daniel & Rosenstein, 2008). Therefore, communication strategies emphasizing professional equality, such as case-based communication skills training and the use of digital technology for team communication, are essential.

Organizational Culture and Team Dynamics in Interprofessional Collaboration. An organizational culture that supports interprofessional teamwork is a crucial factor in ensuring optimal collaboration. Organizations with an inclusive work culture tend to be more successful in integrating healthcare professionals from different disciplines into an effective team (Geese & Schmitt, 2023).

Team dynamics in hospitals often depend on the complexity of patient cases. Research shows that the more complex a patient's condition, the higher the level of cooperation among healthcare professionals (L. van Klaveren et al., 2024). This indicates that hospital organizations need to cultivate a flexible work culture that



supports the adaptation of healthcare roles based on clinical needs.

However, many healthcare organizations still lack a conducive work culture for cross-disciplinary collaboration. Fragmentation within the healthcare system, differences in professional perceptions, and the absence of incentive mechanisms for teamwork remain major challenges in establishing a sustainable collaborative culture (D'Amour et al., 2005).

Training and Strengthening Collaborative Competencies.

Interprofessional education has been recognized as an effective strategy in enhancing healthcare professionals' collaboration competencies (Liu et al., 2021). Simulation-based training programs and team-based learning have been shown to improve teamwork skills, communication, and team-based decision-making in hospital environments (Schmutz, 2022).

However, the effects of such training are often temporary if not accompanied by long-term maintenance strategies (Reeves et al., 2016). Studies suggest that periodic and practice-based training programs are more effective in sustaining learning outcomes compared to one-time training sessions without follow-up (Frenk et al., 2010). Therefore, hospital policies should adopt a model of continuous training integrated into professional education programs.

Environmental Factors and Resource Availability in Interprofessional Collaboration. A supportive work environment and resource

availability are key factors in ensuring successful interprofessional teamwork. Hospitals with adequate healthcare staffing and integrated information systems tend to be more successful in fostering teamwork (Waggie & Arends, 2020).

However, in many healthcare systems, the primary challenge is resource constraints, both in terms of workforce and infrastructure (Geese & Schmitt, 2023). Additionally, unintegrated health information systems often hinder coordination between various hospital units (Cresswell et al., 2013).

Investment in information technology that facilitates communication among medical teams has been identified as a solution to improve teamwork efficiency (Etherington et al., 2021). The implementation of electronic health records that allow real-time access to patient information can support faster and more accurate decision-making.

Implementation Challenges and Research Gaps in Interprofessional Collaboration. Despite substantial evidence supporting the effectiveness of interprofessional collaboration, challenges remain in its implementation. One of the main issues is the lack of regular evaluations of collaboration programs, leading to diminished effectiveness over time (Liu et al., 2021).

Additionally, research gaps persist in understanding the long-term impact of interprofessional collaboration in various clinical conditions (L. van Klaveren et al., 2024). Most studies focus only on short-term effects, while long-term impacts on



patient care quality remain underexplored (Geese & Schmitt, 2023).

Furthermore, there is limited research exploring the effectiveness of interprofessional collaboration among vulnerable populations, such as patients with cognitive impairments or disabilities. Future research should aim to develop more inclusive collaboration models tailored to patient needs.

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Conclusion

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Leadership and organizational support are key factors in the success of interprofessional collaboration in hospitals. Inclusive leadership enhances team coordination and reduces hierarchical barriers in the workplace (Jepkosgei et al., 2022; Schmutz, 2022). Effective leadership not only ensures a fair distribution of tasks but also facilitates open communication among different healthcare professions.

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