

Comprehensive Review of Nursing Collaboration, Skill Development, And Its Role in Multidisciplinary Teams

Kholod Yaqut Al Taymani¹, Suhaila Salmah Albalawi², Amal Zaidane Alwabsi³, Ahlam Zedan Albalawi⁴, Hanadi Hamdan Albalawi⁵, Alanoud Faraj Hmoud Albalawi⁶, Salwa Salem Falih Al-Balawi⁷, Faten Faleh Albalawi⁸, Adel Hamoud Sirhan Albalwi⁹, Tahany Olyan Mohamed Al balawi¹⁰

Abstract

Nursing collaboration is crucial in the multidisciplinary health care team practice and promotes the improvement in health practice skills, hence improving the outcome of the care of the patients. This review aims to establish a critical understanding and appreciation of the nurses in a team-based healthcare model within different practice environments concerning the various skills involved and the difficulties encountered. The paper synthesizes recent research evidence and best practice cases with figures and tables to offer practical implications for practicing healthcare professionals and policymakers.

Keywords: *Nursing collaboration, skill development, multidisciplinary teams, patient outcomes, healthcare policy.*

Introduction

Given the variability of the healthcare sector, coordinated and intensive collaboration of various specialists is essential to meet client requirements. Nurses, who constitute one of the largest professional groups in the global healthcare systems, are major stakeholders in these MDTs. They go beyond the passive or implicit involvement in patient care, as they assume direct involvement in the decision-making processes of care, planning and even communication (Mohammad et al., 2024a; Mohammad et al., 2023a; Mohammad et al, 2024b).

This review identifies the literature on the nature and practice of nursing collaboration and skill development concerning MDT. It explores how nurses can be promoted to be productive members of inter-professional working teams, the challenges of implementing teamwork, and the effects of integrated working. Also, this work highlights the importance of nurses' professional education and training as the healthcare sector changes to require more professionals.

LITERATURE REVIEW

Nursing Collaboration in Multidisciplinary Teams

Interprofessional relationships among the involved practitioners are the foundation of the coordinated care process. The functioning of the healthcare industry in the contemporary world demands collaboration, where many workers cross over many disciplines to offer a unified effort to deliver patient care. Nurses have extensive and direct patient-family interaction. Thus, they are the main connector between medical

¹ Ministry of Health, Saudi Arabia, Kaltaymani@moh.gov.sa

² Ministry of Health, Saudi Arabia, ssalbalwei@moh.gov.sa

³ Ministry of Health, Saudi Arabia, Azalwabsi@moh.gov.sa

⁴ Ministry of Health, Saudi Arabia. halwabse@moh.gov.sa

⁵ Ministry of Health, Saudi Arabia, hanadiha@moh.gov.sa

⁶ Ministry of Health, Saudi Arabia, Alfaalbalawi@moh.gov.sa

⁷ Ministry of Health, Saudi Arabia, Salwa.yf.2018@gmail.com

⁸ Ministry of Health, Saudi Arabia, Fatenfa@moh.gov.sa

⁹ Ministry of Health, Saudi Arabia, adhalbalawi@moh.gov.sa

¹⁰ Ministry of Health, Saudi Arabia, ta556395@gmail.com

and non-medical staff. This gives them a better understanding of patients' demands and requirements, enabling them to tailor their service delivery to suit all patients.

As the data obtained proves, the importance of the collaboration between stakeholders in question has been featured in various studies. For instance, some research shows that strong team cohesiveness helps minimize medical mistakes, contributing to patient security (Smith et al., 2021; Mohammad et al., 2023b; Al-Hawary et al., 2020; Al-Husban et al., 2023). Also, organizations encourage each other that patient-centered environments lead to quicker discharges than those with traditional lengthy hospital stays, meaning that it costs less to patients and hospitals. Specifically, the integration also improves patient satisfaction since planning improves communication and ensures the continuity of care.

Key Elements of Nursing Collaboration

Several important components have been identified to facilitate effective nursing collaborations that will foster proper interviews and outcomes.

1. Interprofessional Communication

One main factor that facilitates successful teamwork regarding patient care objectives is accurate and unambiguous information exchange. Ideas can be transmitted incorrectly, resulting in oversights, repetitions, or even omissions likely to compromise patient safety. Standardization tools such as the SBAR (Situation, Background, Assessment, Recommendation) have been particularly dock in supporting communication processes. Through structured communication, SBAR increases the refinement of information exchange during handover and emergency or *interprofessional meetings*.

2. Mutual Respect

The second necessary element is that there are no conflicts or disrespect within teams to prevent free access to implementing ideas. Speaking up concerns, observations and opinions occur when the nurses are valued in their workplace. On the other hand, a lack of respect for such environments results in poor communication and failure to intervene early during an illness. This ensures that people work together with different inputs, enriching decision-making while increasing respect and improving morale.

3. Defined Roles

It is always helpful for specialists to have clearly defined roles and responsibilities for their employment. Lack of clarity of role means that work duplication, competition or conflict affects patient care. By so doing, teams eliminate possible rivalry and confusion between duties and ensure that every professional is assigned tasks corresponding to his/her specialism besides working jointly towards capturing generalized care goals. Similarly, sufficient role definition for nurses can focus on realizing patient's rights, case management and direct nursing care without infringing on the other niches.

Skill Development for Effective Collaboration

To work as members of a multidisciplinary team, nurses must have a set of skills not only connected with clinical practice. Ongoing educational requirements for nurses are necessary to prepare them for interaction and pursue their team purpose.

Core Skills for Effective Collaboration

1. Clinical Skills

Clinical competencies are the primary building block and essential in nursing practice. Knowledge of technical skills like putting IVs and administering medication allows a nurse to effectively address clients' needs regarding caregiving as their core responsibilities. Furthermore, clinical experience allows them to

fully engage in team discussions concerning their patients. For instance, a nurse with early signs of sepsis can contribute much during case conference discussions and lead to early action.

2. Communication Skills

Communication is one of a team's most important aspects, particularly in working towards achieving a common goal. Any intervention planning and patient education requires nurses to give and receive such information in various contexts, such as during handover, consultation with families, or multidisciplinary team meetings. Other skills include active listening, which is the ability to be attentive to the message the other person is conveying and probably processing the message before getting a response, and conflict management, which arises when individuals have different opinions. They have to find the best way of solving the problem. Further, cultural competence is critical in communication since it permits perceptions and interactions caused by satisfying the organization's cultural requirements and promoting effective interaction with patients in their community.

3. Leadership and Decision-making

Nurses take charge of care teams in care settings and may be involved in making key decisions most of the time. For example, during code blue, the nurse may be in charge of managing the process, and she has to delegate tasks to other medical professionals and give her attention to the patient's condition. Some of the task's content of leadership competencies comprises delegative, priority setting and decision-making to ensure the nursing teams achieve common goals and objectives. Outside the hospital/clinical environment, leadership skills enable nurse leaders to fight for a change in policies or resource allocation that would benefit the working group and patients.

4. Technological Proficiency

Technology and computer systems use has grown fast in the health sector. So, competency in matters technological is becoming a very important factor that any nurse should possess. New participators are encouraged by increased information sharing and coordination through Electronic Health Records, Telemedicine Platforms and other Digital Tools. For instance, the ability to update patient records at a go eliminates cases where a caregiver is given a patient's record only to find that another carer had intervened in the same way earlier on. Also, technological competency facilitates the use of data analytics to ascertain trends, record patient progress, and produce evidence-based care plans.

Application of Core Skills in Practice

Integrating these skills into daily practice enhances the effectiveness of nursing collaboration within multidisciplinary teams. Table 1 outlines the core skills required for collaboration, their definitions, and examples of how they are applied in practice.

Table 1: Core Skills for Nursing Collaboration

Skill	Definition	Example in Practice
Clinical Skills	Proficiency in patient care procedures	Inserting IV lines, administering medications
Communication Skills	Ability to convey and interpret information	Conducting patient handovers
Leadership Skills	Guiding team actions toward shared goals	Leading a code blue situation
Technological Proficiency	Effective use of healthcare technologies	Updating patient records in EHR systems

The examples illustrate how these skills translate into practical actions that improve team dynamics and patient outcomes. For instance, a nurse leading a patient handover using the SBAR framework ensures clarity and demonstrates communication and leadership skills.

The Need for Continuous Professional Development

Because change is an ongoing process within the healthcare industry, learning is not a finite but progressive process. Some of the reasons why nurses require constant training include the following. There is a continuous improvement in medical technologies, patients' demography is also evolving, and coming up with new diseases and complications are common. In services and training, difficult work triggered by insurance, demands, and identification offers nurses professional enhancement to strengthen previous experiences and learn new ones.

However, the need for innovation in assessments and curricula is important, and most crucial is interprofessional education (IPE). This way, through operating and learning alongside other members of the multi-professional healthcare team, the nurses perceive and value the work of their colleagues. It also helps build a structure for effective coordinated solving of multi-faceted care challenges skillfully and constructively.

Therefore, nursing collaboration for patients in an MDT is critical for providing coherent and efficient care. The highlighted competencies reflect the value of knowledge-based competencies including clinical knowledge, communication, leadership and technologies about team contributions and patient care. It is, therefore, important for nurses to engage and continue their learning, as well as learn with healthcare workers from other professions, to be in a position to address the challenges of the current evolving health system.

This collective evaluation demonstrates that skill development should be a popular investment action to improve cooperation and healthcare performance.

METHODS

This extensive systematic review utilizes qualitative and quantitative data from articles published in academic databases, case studies and institutional literature reviews. The following steps were undertaken:

- **Literature Search:** The following database was searched: PubMed, CINAHL, and Scopus databases involving keywords like 'nursing collaboration', 'multidisciplinary teams', and 'skill development'.
- **Inclusion Criteria:** There is a lot of focus on the roles played by nurses who are part of an MDT; papers published between 2015 and 2023 were used.
- **Data Analysis:** Consequently, the content was analyzed by themes to determine trends, challenges, and outcomes of nursing collaboration and skill enhancement.

|Due to Its relative newness to the rail industry, it has been more flexible in Its approach to the market, as seen through acquiring extra distribution depots and gaining statutory company status.

RESULTS AND FINDINGS

Enhanced Patient Outcomes

Interprofessional work in the MDT model can significantly affect the outcome of intervention provision, which many studies have supported. Interprofessional relationships among the workers in health facilities promote teamwork, decrease the chances of slip-ups, and guarantee that all the conventions of individualized and consequential treatment are applied. For example, a systematic review published in 2022 by Jones et al. demonstrated that hospitals that included inter-professional collaboration in their strategic plan cut the readmission rate by 20% more than hospitals that offered little collaboration. It has highlighted

a drastic reduction in the number of complications resulting from cooperation to reduce the development of new care plans instead of better treatment.

It makes teamwork since all members with different knowledge contribute to the treatment of the patient to improve their well-being. With patients often at the center of families' dealings with healthcare, such a role typically falls to nurses. These aspects directly enable the physicians, therapists or other related professionals to enhance communication to reduce care coordination pitfalls. The advantages for patients include decreased time lost to diagnosis and time wasted when receiving general intercessions that do not meet their needs. Furthermore, research indicates that PCCMs produce better patient satisfaction scores since people trust multiple doctors working in coordination.

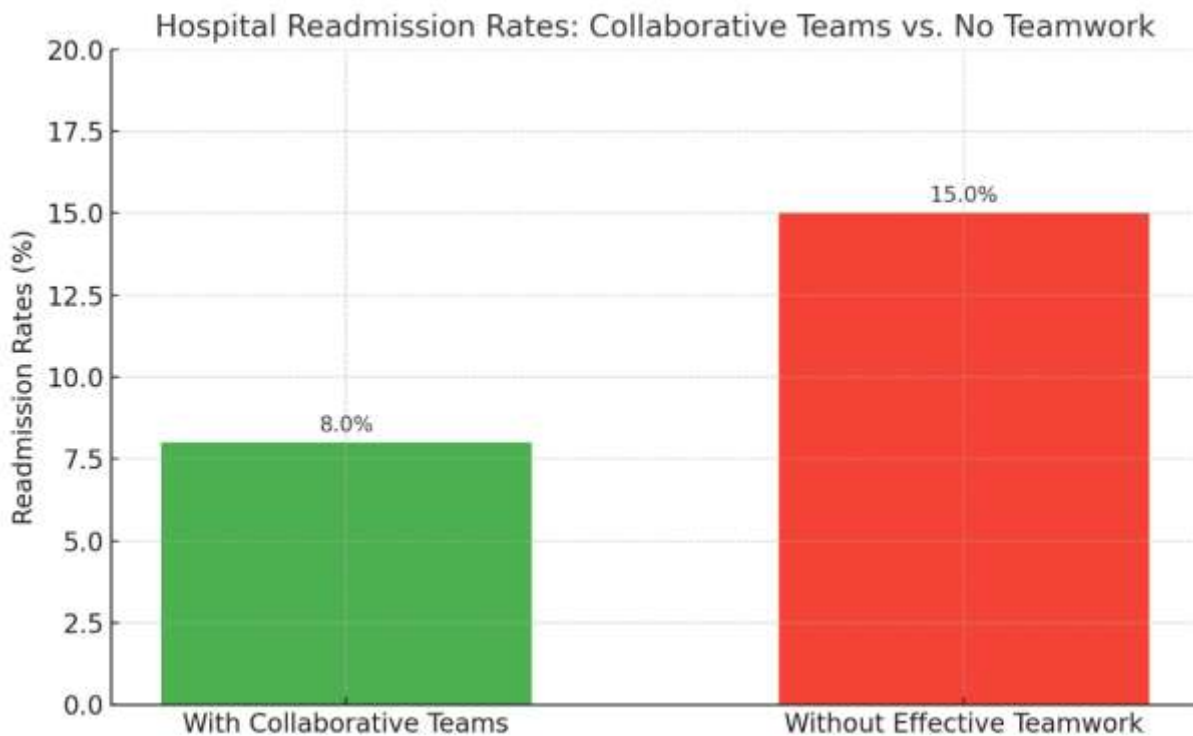


Figure 1: Impact of Collaboration on Patient Readmissions

(Cawley-Chambers, 2024)

(A graph illustrating lower readmission rates in hospitals with collaborative teams compared to those without effective teamwork.)

Skill Gaps and Training Needs

However, existing research has established the advantages of MDT, as noted earlier; the reality of the nursing profession on skill differences is a challenge to the efficiency of the MDT. Some of these areas of development that should be embraced include leadership, effective communication and information technology skills. These gaps are often the result of differences between the educational programs for physicians, inadequate opportunities for continuous education, and the relatively short time needed to develop some medical technologies.

Questionnaire results indicate these shortcomings always; leadership skills are among the most reported. While many new nurses come to the workforce with excellent clinical knowledge, confidence to lead a team, delegate patient care assignments, or participate in planning is often limited. It may cause apprehensions of being unable to put a word for or against a patient or express one's opinion during a team huddle.

Unlike professional identity, which maintains that the cornerstone of nursing, patient communication skills must be constantly developed. Skills such as active listening, conflict solving and cultural understanding are growing more valuable in different healthcare settings. Including this, the communication breakdown continues to impede efficient teamwork, implying that it leads to mistakes occasionally. Other targeted interventions include cognitive-perceptual exercises for assessment and communication, including role plays or communication-training simulations, to increase one's ability to address the relational aspects of interactions among different groups.

Technical competency is a second key knowledge gap, especially as healthcare organizations move forward in applying increasingly sophisticated technologies. EHRs, telemedicine applications, and data intelligence have become the hallmarks of the current and progressive care processes. However, many nurses lack confidence while using these technologies, leading to information flow limitations and inefficient care coordination.

Table 2: Pre- and Post-Training Competency Levels

Competency Area	Pre-Training Score (%)	Post-Training Score (%)
Leadership	55%	85%
Communication	65%	90%
Technological Proficiency	50%	80%

Training programs that address these areas have shown quantifiable enhancement of the nurses' self-efficacy and proficiency. For instance, enhancing leadership skills to nurses has improved how they could control a team and advocate. The technology training has helped decrease the errors that the inexperienced users of EHR often cause. It is, hence, important to continue developing the existing skill gaps and enable nurses to afford the best they offer in MDTs.

In this study, therefore, we develop hypotheses testing procedures by selecting an appropriate chaining method of moments estimator for our ML-competitive approach to estimation.

Barriers to Collaboration

Nevertheless, some stable factors do not allow collaboration to flourish fully within the healthcare sphere. These barriers could be structural and hence related to the organizational setting, financial, or cultural, which hinder the appropriate working of MDTs.

1. Hierarchical Structures

Standard bureaucracy erases nursing accountability as the key decision-making structure in healthcare. Hospitals or wards assigned to physicians are often perceived as top gear, while list nurses are in second gear. This dynamic can prevent free and open discussions and limit nurses' chances to offer crucial information or request changes to the patient's care plan. For example, a nurse may see changes in a patient's behavior and hesitate to report the changes to the doctor or nurse practitioner if she/he does not feel that her opinion will be valued. To reduce and eliminate (eradicate) these hierarchies involved in the nursing profession, one has to adopt shared leadership models to enhance the team nurse's independence.

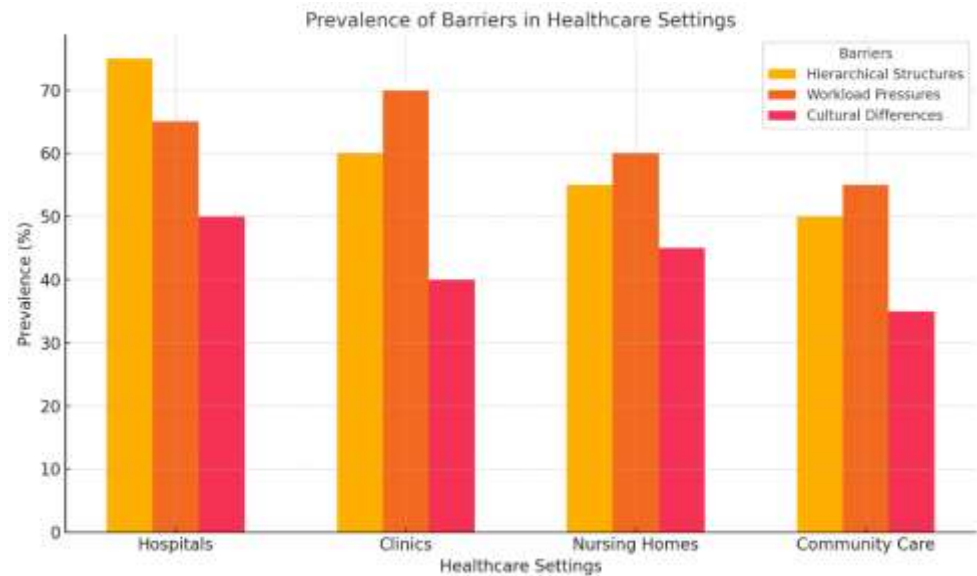
2. Workload Pressures

Due to enormous patient volumes, patient-nurse ratios and workload are high and do not allow nurses to effectively participate in collaborative processes. When the nurses are bogged down with individual tasks, they cannot attend interdisciplinary meetings, bearably communicate with other colleagues, or engage in team-based care planning. This workload burden not only hinders collaboration among teams but also increases the chances of burnout, besides lowering the performance of the team/organization. Staffing shortages and applying efficient technologies can reduce such pressures, freeing nurses to work more collaboratively.

3. Cultural Differences

This article suggests that professionals from different disciplines and cultures that form an MDT possess different priorities, ways of communication, and orientations to care. On the positive side, diversity grants team members a variety of perspectives, but on the other side, teams face problems due to misunderstanding each other's opinions. For example, a physician who learned a directive style may conflict with a nurse championing patient engagement and decision-making. These gaps can be addressed through training on cultural competence and boosting teamwork so that people will accept and respect each other.

Figure 2: Barriers to Effective Collaboration



(A bar chart showing the prevalence of barriers such as hierarchical structures, workload pressures, and cultural differences across various healthcare settings.)

Addressing Barriers to Collaboration

These barriers can only be effectively addressed by involving system-level changes, human resource development initiatives, and cultural transformation in healthcare organizations. Organizations can reduce hierarchy in organizations by supporting decision-making that calls for its members to participate equally. Also, workload pressure can be reduced by demonstrating a commitment to staff numbers, implementing Technology to manage administrative burdens, and highlighting effective workflow designs.

Discussion

The study emphasizes the need for systematic changes to enhance the collaboration of the nurses within the MDTs. It's difficult to anticipate and overcome problems like hierarchical organizational structure, inadequate professional skills, and conflict between working and private life because they are difficult to address. However, overcoming them requires changing organizational culture and investing in professional development and resources (Al-Azzam et al., 2023; Al-Shormana et al., 2022; Al-E'wesat et al., 2024). When these calls are properly disregarded, the culture of the healthcare organizations is modified in ways that define empowered nurses, effective teams, and better patient-care consequences.

Breaking Barriers and Encouraging Everyone to Lead

Standard pyramidal models of workforce organization in healthcare organizations restrain the roles of nurses to cooperative mechanisms. Demolishing these hierarchies through the shared leadership Bent might effectively reduce inequality within multidisciplinary teams, where nurses can participate in the planning and decision making. Integral decision-making, also labelled as shared among others, presupposes

delegation of power within a team, all members who exercise their right in proportion to specialized knowledge, having no regard as to formal status.

For example, establishing collaborative governance councils in which nurses will be included in policy-making and clinical decision-making will enable them to work on 'patient care strategies. Such models do more than improve the team functionality, but also increase nurses' morale and satisfaction in their job. Furthermore, it was found that the implementation of shared leadership enhances verbal interaction among team members because the distorted hierarchy common in most healthcare organizations hampers participation for non-physician employees.

Interprofessional Education Promotion

IPE, therefore, is one of the key concepts for collaborative health practice. Since IPE implements shared learning with different personnel including physicians, pharmacists, and therapists, patient care teams develop an appreciation of the others' roles, duties, and perceptions. This way of learning enhances trust between the students, increases communication and allows the teams to get a feel of how working in a real team would be.

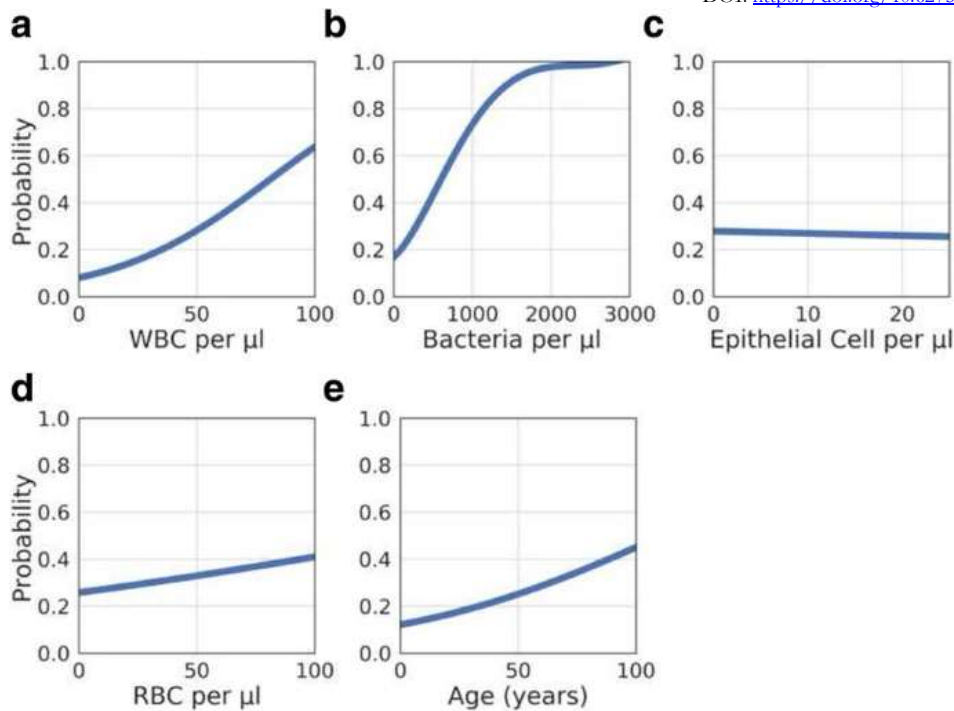
IPE should take priority for being included in the undergraduate and continuing education programs within various institutions. Simulation-based training enables teams to practice how they will address certain instances in real life without actually encountering those situations. Some of these can be designed specifically to mirror pressure-related activities e.g. code responses or district/no district Case Meetings wherein a nurse will feel well prepared to handle a task if simulated.

Moreover, mentorship programs help break barriers related to interprofessional relationships. Nurses are assigned senior mentors from other fields as this opens up space in which knowledge can be shared as well as gain tangible skills in their daily practice. Such programs, over time, foster a culture change within and among the teams that becomes the institutional culture.

Addressing Workload Challenges

The most acute restrictions are the excess of patients treated by each nurse and increased work pressure on all individuals performing in healthcare. These pressures do not allow the nurses much time for team-related work, such as team conferences or planning with other multidisciplinary team members. Reducing workload burdens is always a good thing; hence, it calls for the right investments in staffing, Technology and the right techniques of work (Alzyoud et al., 2024; Mohammad et al., 2022; Rahamneh et al., 2023).

Some institutions can start with staffing issues and guarantee the assignment of a sufficient number of nurses so that they can have time to provide quality patient care and engage in MDTs. Studies show that increasing staffing levels could be associated with increased patient satisfaction, decreased nurse turnover rates, better staff morale, and optimum working relationships.



(Burton et al., 2019)

Technology can also help to release workload pressures. For example, implementing automation tools to work on administrative chores like charting and reconciliation of medication eliminates distractions to allow real nursing participation and collaboration in a team. Likewise, telehealth can facilitate nurse team meetings through a virtual conference that can occur simultaneously with patients' treatment to maintain continuity between the inpatient and outpatient environments.

Targeted Training Programs

The analysis proved that the process of the CPD should continue to contribute to the acquisition of necessary skills for collaboration between nurses. Training should be both content and soft skill related, in leadership, communication experience and technological know-how.

Institutions can optimize advanced training technologies, including VR as learning tools. One is that, through VR simulations, nurses can rehearse teamwork in the operation environment, including in times of emergency or when implementing care plans. (Zhang et al., 2021; Al-Nawafah et al., 2022; Alolayyan et al., 2018; Eldahamsheh, 2021) These experiences sharpen the acquisition of specific skills and increase confidence regarding the actual team environment.

In MDTs, leadership and decision-making training workshops appear crucial for the nurses. For example, delegation, conflict solution, and research-informed decision-making courses prepare nurses to assume more central roles in cooperative patient care. Likewise, cultural competence training prepares nurses for challenging interactions with the different ways of thinking and practicing that may prevail within interprofessional groups.

Organizing Communication and Collaboration Using Technology

And finally, as more healthcare processes are shifting to digital, Technology is an essential enabler of collaboration. All those tools, such as EHRs, telemedicine, or data analytics, help nurses exchange information and organize care properly.

It is also important that institutions should continue to train nurses on these technologies to enable them to practice the art of collaboration. For instance, teaching can include seminars on the best approaches to introducing order to EHR since the nurses can record and search for patient details effectively in MDTs. Further, as a practice, telemedicine involves teams that are allowed to consult in real time, irrespective of location.

Building a Collaborative Culture

In conclusion, the improvement of the nursing collaboration processes is associated inevitably with a modification of the organizational culture of the healthcare organizations. Organizational leaders should thus demonstrate best collaboration practices by attending to others and being inclusive. Thus, acknowledging and rewarding the efforts applied to the teamwork also strengthens its importance to the authors of the work and makes team members focus on constructing good teamwork.

Organizational interaction should be supported by extra activities related to team building teambuilding sessions, like having a retreat or working on a problem-solving workshop that can enhance the team members' interpersonal relations. When carried on for several years, these efforts foster organizational culture improvement that can sustain the increased team performance and quality of patient care.

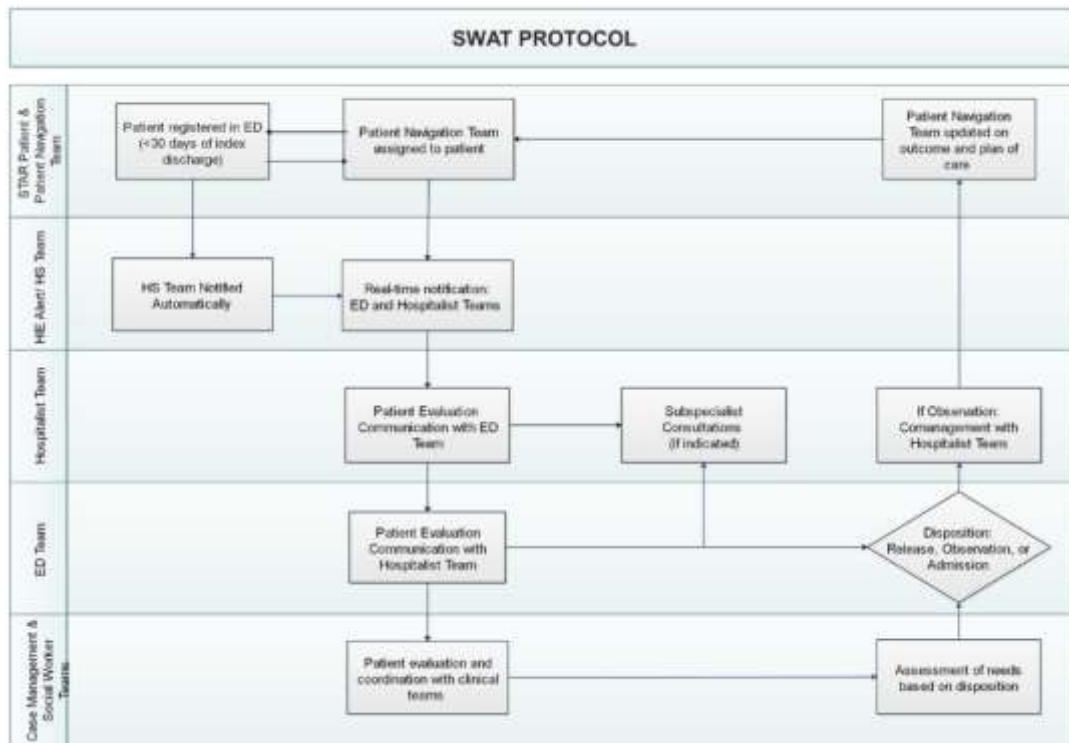


Figure 1. Readmission reduction initiative patient navigation





(Hahn et al., 2024)

CONCLUSION

The organization provides effective collaboration and professional development for nurses who are part of the multidisciplinary teams. However, despite these achievements, practitioners and patients venture capital companies aim to experience a stable, nonetheless controversial relationship due to such challenges and skills gaps. Many institutions should make efforts by improving training, enhancing Technology and adopting policies to allow nurses to deliver their best as team players. Healthcare organizations where MDTs function should seek to democratize hierarchical structures, encourage interprofessional learning,

comprehensively address workforce issues, and provide state-based training to achieve supportive environments where various nurses may coordinate their working efforts efficiently and effectively. A culture of improvement is also maintained in the teamwork agenda through Technology in team collaboration and the enhancement of high team performance to support the best patient-centered care. These systematic alterations advance the team's cohesiveness and improve patient satisfaction; thus, collaboration is a key aspect of modern healthcare.

RECOMMENDATIONS

-  Implement Structured Training Programs: Incorporate leadership, communication learning and technology skills in improving collaboration skills.
-  Adopt Shared Leadership Models: Eliminate high power distance in the team by ensuring all team members have the same chance to contribute with their ideas.
-  Invest in Technology: Ensure patients access better coordination tools and overall care administration.
-  Promote Interprofessional Education: Establish cooperation between the specialists from different branches of health care and organize joint training for developing respect for each other.

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