

Enhancing Communication and Collaboration Among Multidisciplinary Healthcare Teams in Saudi Arabia: A Focus on Nurses and Technicians in Diverse Clinical Settings

Suaad Saadi Alrshedy¹, Abeer Saadi Alrashidi¹, Nadaya Sadi Banay Al Rashedi², Maha Zaal Shilwah Aldhafeeri³, Seham Zaal Shilwah Aldhafeeri⁴, Mona Yahya Alhabes⁵, Abdrhman Ali Abdullallah⁶, Shoaab Bader Al Shamre⁷

1. Nursing, Hail General Hospital, Hail
2. Nursing, Maternity and Children Hospital, Hail
3. Nursing technician, Alfisaliah PHC, Hafar Albatin
4. Nursing technician, prince sultan PHC, Hafar Albatin
5. Nurse, Almarsalat PHC, Riyadh
6. Healthy Assistant, Al Malqa Health Center, Riyadh
7. Nursing technician, Al Faisaliah Health Center, Hafar Albatin

ABSTRACT

Healthcare systems around the world are facing increasing challenges, particularly due to the increasing prevalence and incidence of infectious and chronic diseases. In Saudi Arabia, these challenges are exacerbated by the increasing population and the threat of pandemics such as COVID-19. To address these issues, a multidisciplinary healthcare model is essential. This approach brings together professionals from different fields, including physicians, nurses, technicians, pharmacists, and physiotherapists, to provide coordinated, patient-centered care. While this model offers many benefits, such as improved patient outcomes, enhanced communication, and improved care coordination, it also faces several challenges, including time pressures, communication barriers, and different priorities among team members. This review explores the benefits and challenges of multidisciplinary teamwork in clinical settings, with a focus on the role of nurses and technicians in enhancing healthcare delivery in Saudi Arabia.

KEYWORDS: Multidisciplinary teams, healthcare collaboration, communication in healthcare, nursing practice, Saudi Arabia.

1. Introduction

Healthcare systems worldwide are facing challenges from the spread of infectious diseases and chronic diseases [1]. In Saudi Arabia, the demand for healthcare services is increasing with the massive increase in population, increased risk of chronic diseases such as diabetes, and the risk of pandemics such as COVID-19 [2]. Therefore, a multidisciplinary healthcare model must be developed to ensure the provision of healthcare services and address any health risks that society is exposed

to. A multidisciplinary approach, a care model consisting of several healthcare professionals who come together to provide their expertise in healthcare services to patients in coordinated and real-time ways [3,4]. A multidisciplinary healthcare model consists of a variety of disciplines, such as physicians, nurses, technicians, pharmacists, physiotherapists, nutritionists, and others, so that their knowledge and expertise are integrated to fully meet the needs of the patient [5]. Merriel et al. (2016) indicate that multidisciplinary teams improve patient satisfaction, integration of care, administrative procedures, and patient care outcomes [6]. This makes it a means of providing effective and efficient care that integrates the different capabilities of healthcare professionals. It also enhances communication between different health specialties, reduces incidents and errors that almost occur, and reduces barriers between patients and health care providers [7,8].

Despite the many benefits offered by this model, implementing multidisciplinary care faces some challenges. The most prominent of these challenges is the time pressure experienced by medical team members during treatment rounds, as limited time may be an obstacle to covering a large number of patients effectively [9]. In addition, some studies indicate that communication between doctors and nurses may suffer from some obstacles due to structural or cultural differences, which negatively affects the effectiveness of teamwork [9,10]. Despite the challenges, team members also experience many tangible benefits such as feeling appreciated, respected and trusted, helping to share the workload, improving feelings of well-being, and learning from the experience of others [11].

Accordingly, this review aims to explore the benefits and challenges of multidisciplinary teamwork in clinical settings, with a focus on the role of nurses and technicians in improving healthcare in Saudi Arabia.

The Benefits of a Multidisciplinary Approach in Clinical Settings

The multidisciplinary care team approach offers many benefits in the field of medical and clinical care at the level of patients and the services provided to them, and at the level of health professionals.

Literature indicates that clinical practices of multidisciplinary teams contribute effectively to providing clinical services to patients, improving their healthcare outcomes, and reducing the time from diagnosis to treatment, which contributes to providing treatment efficiently [4,12]. In addition to enabling patients to access data and information related to their health condition, which enhances their satisfaction with the quality of healthcare provided to them [13]. In contrast, the multidisciplinary model contributes to improving the quality of care and health outcomes by developing treatment plans agreed upon by all team members [4]. This model also contributes to simplifying treatment paths and reducing duplication in the services provided, which achieves better coordination of care [14]. Moreover, this model provides educational opportunities for health practitioners, which enhances the development of their professional skills. It also enhances the improvement of the psychological well-being of practitioners, as they can deal with patients' cases in a more organized and comfortable manner [3].

Multidisciplinary Team: Enhancing Communication and Coordination

Providing medical and clinical care services to patients by specialists separately leads to confusion, duplication of efforts, lack of continuity of patient care services, and increased likelihood of medical errors [15]. Therefore, enhancing cooperation and coordination between health service providers, including nurses, nursing technicians, and other health care professionals, contributes to providing comprehensive and integrated medical and clinical services to achieve health care goals for patients and their families [3,16]. In cooperation and coordination, periodic meetings are an essential feature of a multidisciplinary model that contributes to reviewing and discussing the patient's health condition, studying and evaluating treatment options, as well as continuous follow-up to assess progress [17]. In addition to exchanging experiences and skills, which contributes to avoiding unnecessary examinations and the risk of medical errors [4,15]. Coordination between a multidisciplinary team contributes to ensuring the provision of more consistent and effective care. It also enhances patients' sense of security and confidence and contributes to enhancing patients' commitment to treatment plans. A multidisciplinary approach reduces gaps in care, reduces confusion, and ensures that patients receive comprehensive and coordinated treatment in a timely manner [4,18].

Communication between nursing teams and other medical specialties

Effective communication between nursing, nursing technician, and medical specialties relies on different channels:

- Face-to-face communication: Direct interaction allows for immediate clarification and understanding of information [19].
- Electronic health records (EHRs): Digital systems provide real-time access to patient information, facilitating collaboration and information sharing [20]
- Handover reports: Organized handovers ensure continuity of care during shift changes, reducing the risk of information loss [21].
- Multidisciplinary meetings: Regular meetings facilitate multidisciplinary collaboration, promote shared decision-making, and coordinate patient care [18].

Facilitators of Effective Communication

To promote effective communication among a multidisciplinary team, especially between nurses and nursing technicians, strategies include: Team-building exercises that enhance trust and cooperation, thus improving communication dynamics and creating a more effective work environment [22]. As well as training and communication programs that help improve communication skills among medical teams by providing the knowledge and techniques necessary to promote effective interactions among team members [23]. In addition, unified communication tools such as health records improve access to accurate, real-time information across all medical specialties. Fostering a culture of open communication is also vital, as creating an environment where members feel comfortable expressing concerns and sharing information improves overall communication effectiveness [24].

Improving patient outcomes: Lessons

Multidisciplinary Healthcare Teams members are socially competent, share

information, and negotiate decisions. Clinical service delivery requires interdisciplinary teams to have a high level of trust, commitment, and professional skills to communicate well and deliver clinical services. However, conflicts between the organization, healthcare workers, and interdisciplinary teams are inevitable [25]. Therefore, providing opportunities for workforce development that respects and responds to the needs of individuals and allows for flexibility is essential to maintaining team effectiveness [26]. Distributing activities among team members and encouraging individual performance contributes to improving team effectiveness. Patients, stakeholders, and team members often evaluate the outcomes of teamwork in different ways, as effectiveness is both a political and an experiential concept. Determinants of team effectiveness are typically presented in terms of individual, group, and organizational benefits [10]. The organizational benefits of teamwork have been demonstrated to include reduced length of hospital stay and costs, improved patient access, enhanced coordination of care, and reduced unplanned admissions. Team-level benefits include efficient use of services, greater diversity of professional expertise, and improved communication [27]. Measuring team effectiveness is critical for organizations focused on team performance. One major reason for this is that team effectiveness can lead to further benefits such as increased productivity, improved employee attitudes, quality, and workplace efficiency. Additionally, stakeholders seek a return on investment from the costs associated with supporting a team structure in an organization. Effective problem solving is critical for both individual contributors and teams [28].

Challenges of the multidisciplinary approach:

Despite the potential benefits of multidisciplinary teams, collaborating and working with people from diverse backgrounds can be challenging. Several challenges can hinder working within a multidisciplinary team. The most prominent of these challenges are [29]:

1. Communication and coordination problems: Due to the differences in beliefs and vision of team members, and the difficulty of communicating medical terminology to patients, which can lead to a breakdown in communication between the multidisciplinary team and patients.
2. Time pressure: Team members may have busy schedules and competing demands, making it difficult to coordinate meetings and work effectively together.
3. Differing priorities: Each team member may have different goals and priorities regarding the patient's condition, leading to conflicts and difficulties in reaching consensus on treatment plans.
4. Limited resources: Establishing and maintaining a multidisciplinary rehabilitation team requires significant resources.
5. Training and development: Team members may need ongoing training and support to learn how to work effectively within a multidisciplinary team and develop the skills and knowledge necessary to provide high-quality care.

Impacts on nursing practice and nursing technicians:

- Enhancing collaboration: Strategies such as regular multidisciplinary

meetings and joint training programs promote mutual understanding and teamwork across teams.

- **Establishing clear communication protocols:** Clear guidelines for documentation, handoffs, and communication across teams will help reduce errors and promote smooth transitions of care.
- **Communication training programs:** Such as simulation exercises, interactive training, and feedback sessions that enable teams to deal with communication challenges more effectively.
- **Cultural competence:** Providing cultural competence training and language support can improve communication and promote inclusivity within health teams.
- **Promoting a culture of open communication:** Encouraging open communication channels and regular feedback mechanisms can help build trust and transparency within health teams.

Current Landscape in Saudi Arabia

The Kingdom of Saudi Arabia is witnessing tremendous developments and reforms in the health sector in line with Vision 2030, and many hospitals and clinics have adopted the multidisciplinary team model in providing healthcare and clinical services [30]. However, there is still randomness in implementing multidisciplinary care [31]. The Saudi Ministry of Health has also launched several initiatives that support multidisciplinary medical models and has employed technology and artificial intelligence tools that contribute to activating telemedicine, which is a means of enabling multidisciplinary teamwork for better collaboration between care providers. With the help of telemedicine systems, even the most distant healthcare providers can. This in turn will enhance the maintenance of high-quality patient care in a timely manner, and further develop equitable healthcare for those living far from specialized facilities [32].

2. Conclusion:

Multidisciplinary teams play a pivotal role in the healthcare sector, improving patient outcomes, enhancing care coordination, and providing more comprehensive services. In Saudi Arabia, this model is increasingly being adopted as part of broader healthcare reforms in line with Vision 2030. However, implementing multidisciplinary care faces several challenges, including communication issues, time constraints, and resource limitations. Effective strategies, such as regular interdisciplinary meetings, clear communication protocols, and cultural competence training, are critical to overcoming these barriers. As Saudi Arabia continues to modernize its healthcare system, fostering effective multidisciplinary collaboration will be key to improving patient care and achieving healthcare sector goals.

References

Baker, Rachel E., et al. "Infectious disease in an era of global change." *Nature Reviews*

- Microbiology 20.4 (2022): 193-205.
- Al-Raddadi, Rajaa, et al. "Burden of COVID-19 infection and lockdown measures on individuals with chronic diseases in Saudi Arabia: A national population-based study." *Journal of Infection and Public Health* 15.12 (2022): 1531-1539.
- Bendowska A, Baum E. The Significance of Cooperation in Interdisciplinary Health Care Teams as Perceived by Polish Medical Students. *Int J Environ Res Public Health*. 2023 Jan 5;20(2):954. doi: 10.3390/ijerph20020954. PMID: 36673710; PMCID: PMC9859360.
- Taberna M, Gil Moncayo F, Jané-Salas E, Antonio M, Arribas L, Vilajosana E, Peralvez Torres E, Mesía R. The Multidisciplinary Team (MDT) Approach and Quality of Care. *Front Oncol*. 2020 Mar 20;10:85. doi: 10.3389/fonc.2020.00085. PMID: 32266126; PMCID: PMC7100151.
- Guerra S, Lambe K, Manolova G, Sadler E, Sheehan KJ. Multidisciplinary team healthcare professionals' perceptions of current and optimal acute rehabilitation, a hip fracture example A UK qualitative interview study informed by the Theoretical Domains Framework. *PLoS One*. 2022 Nov 18;17(11):e0277986. doi: 10.1371/journal.pone.0277986. PMID: 36399456; PMCID: PMC9674178.
- Merriel, Abi, et al. "Emergency training for in-hospital-based healthcare providers: effects on clinical practice and patient outcomes." *Cochrane Database of Systematic Reviews* 2016.5 (2016): CD012177.
- Epstein, Nancy E. "Multidisciplinary in-hospital teams improve patient outcomes: A review." *Surgical neurology international* 5.Suppl 7 (2014): S295.
- Haleem A, Javaid M, Singh RP, Suman R. Telemedicine for healthcare: Capabilities, features, barriers, and applications. *Sens Int*. 2021;2:100117. doi: 10.1016/j.sintl.2021.100117. Epub 2021 Jul 24. PMID: 34806053; PMCID: PMC8590973.
- Zajac, Stephanie, et al. "Overcoming challenges to teamwork in healthcare: a team effectiveness framework and evidence-based guidance." *Frontiers in Communication* 6 (2021): 606445.
- Rosen MA, DiazGranados D, Dietz AS, Benishek LE, Thompson D, Pronovost PJ, Weaver SJ. Teamwork in healthcare: Key discoveries enabling safer, high-quality care. *Am Psychol*. 2018 May-Jun;73(4):433-450. doi: 10.1037/amp0000298. PMID: 29792459; PMCID: PMC6361117.
- Speicher, Leigh L., and Dawn Francis. "Improving employee experience: reducing burnout, decreasing turnover and building well-being." *Clinical Gastroenterology and Hepatology* 21.1 (2023): 11.
- Altman, Robert K., et al. "Multidisciplinary care of patients receiving cardiac resynchronization therapy is associated with improved clinical outcomes." *European heart journal* 33.17 (2012): 2181-2188.
- Epstein, Nancy E. "Multidisciplinary in-hospital teams improve patient outcomes: A review." *Surgical neurology international* 5.Suppl 7 (2014): S295.
- Albarqi, M.N. Assessing the Impact of Multidisciplinary Collaboration on Quality of Life in Older Patients Receiving Primary Care: Cross Sectional Study. *Healthcare* 2024, 12, 1258. <https://doi.org/10.3390/healthcare12131258>
- Spath, Patrice L., ed. *Error reduction in health care: a systems approach to improving patient safety*. John Wiley & Sons, 2011.
- Sheehan, Jacinta, et al. "Methods and effectiveness of communication between hospital allied health and primary care practitioners: a systematic narrative review." *Journal of multidisciplinary healthcare* (2021): 493-511.
- Schurman, Jennifer Verrill, and Craig A. Friesen. "Collaborative, multidisciplinary treatment." *Pediatric Psychogastroenterology*. Routledge, 2023. 87-100.
- Baek, H., Han, K., Cho, H. et al. Nursing teamwork is essential in promoting patient-centered care: a cross-sectional study. *BMC Nurs* 22, 433 (2023). <https://doi.org/10.1186/s12912-023-01592-3>
- Tang, Chun M., and Adrian Bradshaw. "Instant messaging or face-to-face? How choice of

Suaad Saadi Alrshedy, Abeer Saadi Alrashidi, Nadaya Sadi Banay Al Rashedi, Maha Zaal Shilwah Aldhafeeri, Seham Zaal Shilwah Aldhafeeri, Mona Yahya Alhabes, Abdrhman Ali Abdallah, Shoaab Bader Al Shamre

- communication medium affects team collaboration environments." *E-learning and digital media* 17.2 (2020): 111-130.
- Tapuria, Archana, et al. "Impact of patient access to their electronic health record: systematic review." *Informatics for Health and Social Care* 46.2 (2021): 194-206.
- Guevara-Lozano, Maryory, and Ligia Patricia Arroyo-Marles. "The handover a central concept in nursing care." *Enfermería glob* 37 (2015): 419-434.
- Miller, Christopher J., et al. "A systematic review of team-building interventions in non-acute healthcare settings." *BMC Health Services Research* 18 (2018): 1-21.
- Buljac-Samardzic, Martina, Kirti D. Doekhie, and Jeroen DH van Wijngaarden. "Interventions to improve team effectiveness within health care: a systematic review of the past decade." *Human resources for health* 18 (2020): 1-42.
- Aceto, Giuseppe, Valerio Persico, and Antonio Pescapé. "The role of Information and Communication Technologies in healthcare: taxonomies, perspectives, and challenges." *Journal of Network and Computer Applications* 107 (2018): 125-154.
- Brogan, Paula, Felicity Hasson, and Sonja McIlfratrick. "Shared decision-making at the end of life: A focus group study exploring the perceptions and experiences of multi-disciplinary healthcare professionals working in the home setting." *Palliative medicine* 32.1 (2018): 123-132.
- Marcee Everly, D. N. P. "Multigenerational challenges: Team-building for positive clinical workforce outcomes." *Online Journal of Issues in Nursing* 21.2 (2016): 1C.
- Gluyas, Heather. "Effective communication and teamwork promotes patient safety." *Nursing Standard* (2014+) 29.49 (2015): 50.
- Kash, Bitu A., et al. "Measuring team effectiveness in the health care setting: an inventory of survey tools." *Health services insights* 11 (2018): 1178632918796230.
- Nguyen, Mimi, and Celine Mougnot. "A systematic review of empirical studies on multidisciplinary design collaboration: Findings, methods, and challenges." *Design Studies* 81 (2022): 101120.
- Muafa, Amnah Mohamed, and Saed Hamed Al-Obadi. "The Impact of Artificial Intelligence Applications on the Digital Transformation of Healthcare Delivery in Riyadh, Saudi Arabia (Opportunities and Challenges in Alignment with Vision 2030)." *Academic Journal of Research and Scientific Publishing* Vol 5.59 (2024).
- Alghamdi, Saleh, et al. "Effects of a team Quality Improvement method in a national clinical audit programme of four clinical specialties in Ministry of Health hospitals in Saudi Arabia." *International Journal for Quality in Health Care* 36.1 (2024): mzad107.
- Amjad, A.; Kordel, P.; Fernandes, G. A Review on Innovation in Healthcare Sector (Telehealth) through Artificial Intelligence. *Sustainability* 2023, 15, 6655. <https://doi.org/10.3390/su15086655>