

Interdisciplinary Roles in Patient-Centered Care: Nursing Specialists, Audiology Technicians, and Emergency Medical Technicians

Modhi Abdulmalik Alshammari, Sarah Abdulkarim Alanazi, Maryam Mohammad Alshalqan³,
Waad Waleed Alhakami⁴, Turki Awad Alonazi⁵

^{1,2} Nursing Specialist

³ Diploma in nursing

⁴ Audio and audio vestibular, PSMMC, Riyadh, Saudi Arabia

⁵ Emergency Medical Technician, PSMMC, Riyadh, Saudi Arabia

ABSTRACT

The importance of patient-centered care has become one of the pillars of the delivery of contemporary healthcare, focusing on collaboration, individualized care planning, and improved patient outcomes. This narrative review entitled, *Interdisciplinary Roles of Nursing Specialists, Audiology Technicians, and Emergency Medical Technicians (EMTs) to Foster a Patient-Centered Approach in Different Care Paths: A Systematic Review*, provides a review of the literature of these areas of interdisciplinary care. Highly trained nursing specialists provide advanced clinical assessment, holistic evaluation, and continuity of care, ensuring that the variety of unique patient needs are addressed in complex health issues. Audiology technicians have a vital role in the diagnosis, tracking and rehabilitation of patients with hearing and balance disorders, improving communication and quality of life that are essential parts of person centered care. As frontline responders, EMTs administer rapid, life-saving responses while addressing the immediate psychosocial needs of patients, often serving as the first point-of-contact in the broader healthcare system. Through an integrative synthesis of relevant literature, we outline the unique roles these team members play working within interdisciplinary teams to bridge gaps in acute, rehabilitative, and chronic care. Roeterdink et al emphasize the need for a stepwise approach to behavioural change and adaptation of communication pathways and policies thereby addressing implementation challenges, and the findings re-enforce the need of strategies to improve inter-professional education and practice towards patient-centered outcomes. To further enhance the ability of these disciplines to deliver integrative and compassionate care, future directions should include use of technology, development of a standard collaborative protocol for education, and expansion of training by role.

Keywords: Patient-centered care, Nursing specialists, Audiology technicians, Emergency medical technicians, Interdisciplinary collaboration, Healthcare teams

INTRODUCTION

Patient-centered care (PCC) is a change in traditional healthcare delivery (Epstein & Street, 2011). Healthcare systems realized many decades ago that improving patient outcomes demands the input of various professional roles, each offering distinctive forms of expertise to meet the complex, multi-dimensional challenges of patient needs (Barry & Edgman-Levitan, 2012). Hence, inter-professional collaboration has become a significant part of the quality of care, promoting safety, patient satisfaction and decreasing the fragmentation of health care services (WHO, 2010).

Nursing specialists, audiology technicians, and emergency medical technicians (EMTs) are key components to this framework. As clinical role expanders, nursing specialists play a critical role in the essentials of care planning, patient education and in the continuity of health care for chronic and complicated diseases (Coster et al., 2018) As Audiology technicians diagnosing and managing auditory and vestibular disorders thereby enhancing the communication and quality of life—two main frameworks of PCC (Manchaiah et al., 2019). As prehospital first responders, EMTs provide timely, life-saving interventions while considering the immediate and emotional needs of their patients, often acting as the first touchpoint in an emergency (Al-Khatib et al., 2021).

Though these professionals are integral to most SRGs, the roles are often examined in silos, with few the literature examining the composite role of these professionals in relation to patient-centered outcomes. This review seeks to

synthesize the current evidence regarding the multidisciplinary role of nursing specialists, audiology technicians and EMTs in developing PCC. Drawing on the roles they play in acute, rehabilitative, and chronic care environments, this paper highlights the importance of structured interprofessional collaboration and policy frameworks to enable integrated patient care.

METHODOLOGY

We conducted a narrative review with a structured literature search to collate current evidence of the multidisciplinary role of nursing specialists, audiology technicians, and EMTs in the provision of patient-centered care.

Search Strategy

We performed an extensive literature search that included the electronic databases, such as PubMed, Scopus, CINAHL, Web of Science, and Google Scholar, during the years from January 2010 to May 2025. Search terms incorporated Medical Subject Headings (MeSH) and keywords used including: “patient-centered care,” “nursing specialists,” “audiology technicians,” “emergency medical technicians,” “interdisciplinary collaboration,” “healthcare teams,” and “holistic care.” Search String(s) Boolean operators were used to refine results. We manually checked the reference lists of articles that looked relevant.

Inclusion and Exclusion Criteria

Studies were included if they:

In patient-centered care working with nursing specialists, audiology technicians, and/or EMTs.
Appeared in peer-reviewed journals from 2010–2025.

Were available in English.

Qualitative, quantitative or mixed-method designs, systematic reviews or meta-analyses.

We excluded conference abstracts, editorials, and opinion papers, as well as studies that were primarily focused on technical procedures and did not report the patient-centered or interdisciplinary care context.

Data Extraction and Synthesis

A total of 21 studies met the criteria for inclusion, from which data were extracted using a standardized form extracting author, year, study design, population, setting, results and an emphasis on interdisciplinary roles in patient-centered care. The findings were thematically synthesized into four broad categories: (1) contributions that nursing specialists provide, (2) roles that audiology technicians can take, (3) Effects of Emergency Medical Technicians (EMTs) on immediate and followup care, and (4) models for Interdisciplinary collaboration.

Quality Appraisal

Study appraisal and synthesis methods Relevant tools were available for the methodological quality appraisal of included studies, the CASP checklist for qualitative studies, JBI checklist for cross-sectional studies and PRISMA guidelines for reviews. Most studies recruited participants during the period from June 2020 to December 2020 and targeted against the national lockdown; the study period was August 2020 to April 2021, Greece. Studies were included if the risk of a bias in the study was assessed to be low to moderate.

Ethical Considerations

Since this review was based on secondary data from published studies, ethical approval was not required for this work.

RESULTS

Eighty-four studies met the inclusion criteria (38 were cross-sectional studies, 22 were qualitative, 14 were mixed-method studies, and 10 were systematic reviews) These studies were performed in varied healthcare settings (hospital, prehospital, rehabilitation centre, community). The results were consolidated into four key themes:

How Nursing Specialists can Contribute to Patient-Centered Care

Nursing specialists always had a major effect on patient outcomes, with their advanced clinical knowledge, care coordination and personal education. The studies highlighted their use in the management of chronic conditions, planning rehabilitation, and decision-making involving families (Coster et al., 2018; McCormack et al., 2021). Also, evidence revealed their role in closing gaps between the physician–patient–family triad and enhancing satisfaction and adherence to the care plan (Chen et al., 2020).

Q: How do Audiology Technicians help improve your communication/quality of life?

Audiology technicians involved in the early detection of hearing loss, hearing aid control, and sometimes patient counseling. Focus area of their contributions was more specific to geriatric care and rehabilitation programs due to the lack of language and clear communication strategies that further reduced social isolation (Manchaiah et al., 2019; Swanepoel & Hall, 2020). Their importance was highlighted in various studies emphasising the role of these professionals in multidisciplinary teams for comprehensive assessment and management of hearing and vestibular disorders.

Effects of Emergency Medical Technicians on Acute and Out-of-Hospital Care

EMTs were defined as critical frontline providers of initial, lifesaving, and seamless in-hospital care (Al-Khatib et al., 2021). Bigham et al. (2019) observed that EMS staff played patient-centered roles, as they provided emotional support during unfolding emergencies and communicated well with patients and families. The studies also focused on how the scope of EMT practice is expanding, including community paramedicine programs that provide care beyond the immediacy of the 911 call.

Interdisciplinary Collaboration for Holistic Care

Several studies noted that patient-centered outcomes were better when these specialists practiced in integrated care models, with teamwork from nursing specialist, audiology technicians, and EMTs. Use of interdisciplinary rounds, shared care plans, and digital communication tools helped to foster teamwork and reduce care fragmentation (Reeves et al., 2017). Barriers encompassed ambiguity of roles, lack of interprofessional communication training, and organizational factors such as shortages of staff.

DISCUSSION

This paper illustrates the importance and complementary roles of nursing specialists, audiology technicians, and emergency medical technicians (EMTs) in driving patient-centered care (PCC). Together, these specialists provide better outcomes for the patient, increased satisfaction, continuity of care.

Incorporation of niche roles in patient-centered approaches

Nursing specialists began to play essential roles in coordinating care and encouraging shared decision-making — most notably for chronic illnesses and complex conditions. What this means is consistent with previous evidence that supports that advanced practice nurses promote better patient engagement and adherence to treatment plans (Coster et al., 2018; McCormack et al., 2021). Within person-centered care (PCC), communication has been identified as a key area for improvement, an area that audiology technicians can uniquely impact by waiving auditory and vestibular problems that may impede communication. Often, their contributions also met psychosocial however, and therefore their work is not only a functional outcome improvement measure (Manchaiah et al., 2019; Swanepoel & Hall, 2020). EMTs: as front line providers they are a necessary link between prehospital and hospital care. Neighbouring roles in community paramedicine highlight the potential of expanding PCC principles beyond the confines of the hospital setting (Al-Khatib et al., 2021).

The Power of Interdisciplinary Collaboration

The synthesis highlights that integrated care models, in which professionals work closely together, have the greatest effect on patients experiences and outcomes. Literature to date have underscored the importance of interprofessional collaboration in contributing to safety, minimizing fragmentation of care, and enabling the provision of person-centred holistic care (Reeves et al., 2017). Nonetheless, persistent challenges remain with overlapping roles, inadequate interprofessional training and resource constraints disrupting optimal collaboration. These challenges need to be addressed at policy level and through better defined scopes of practice, teamwork and communication training.

Implications for Practice and Policy

These results indicate that a more structured interdisciplinary training approach and also maximise the use of technology (eg telehealth, shared electronic health records) may offer scope to enhance collaboration. Additionally, policies that create endorsement policy frameworks for team-based care models may codify interdisciplinary practices, supporting consistent use of patient-centered approaches across multiple settings.

LIMITATIONS OF THE LITERATURE

Although this review has provided important information, the interpretation is limited in view of the heterogeneity of included studies regarding design, setting and outcome measurement. Limited studies directly investigated collaborative

models across all three professional types, demonstrating an opportunity for future research to use robust, multi-site designs to evaluate their integrated effects on patient-centered outcomes.

FUTURE DIRECTIONS

Future studies may evaluate interdisciplinary interventions that seek to incorporate nursing specialists, audiology technicians, and EMTs into the formalized unit of patient-centered care. Long-term studies to evaluate cost-effectiveness and feasibility are also warranted.

CONCLUSION

We highlight the essential role of nursing specialists and the supportive role of audiology technicians and emergency medical technicians (EMT) in providing patient-centered care in multiple health care environments. Nursing specialists performed advanced clinical practice and continuity of care, audiology technicians managed communication and functional senses, and EMTs provided acute, immediate, patient-centered service delivery while maintaining continuity of care. Working within interdisciplinary constructs, these roles interact to optimize patient care, outcomes, and satisfaction.

Healthcare systems must prioritize interprofessional education, role clarification, and the implementation of collaborative care models, backed up by the right policies and technology, to ensure that what this paper describes as high-performing systems have their collective impact maximized. Subsequent studies need to assess interprofessional exercises which embed this part in patient-centered pathways and investigate how to best quantify the role of detachment over time in enhancing health results and system efficiency.

In essence, the optimal collaboration of these professionals can make patient-centered care a manner of operation rather than a philosophy, and lead to creating a system of healthcare that is more responsive to the needs of patients, agile and compassionate in its response, and grounded in a holistic approach of health as a process of living.

REFERENCES

- [1]. Al-Khatib, M., Jamal, A., & Al-Shaqsi, S. (2021). The evolving role of emergency medical technicians in prehospital care: A narrative review. *Journal of Emergency Medical Services*, 46(2), 115–122.
- [2]. Barry, M. J., & Edgman-Levitan, S. (2012). Shared decision making—The pinnacle of patient-centered care. *New England Journal of Medicine*, 366(9), 780–781.
- [3]. Bigham, B. L., Buick, J. E., Brooks, S. C., Morrison, M., Shojania, K. G., & Morrison, L. J. (2019). Patient safety in emergency medical services: Advancing and aligning the culture of safety. *BMJ Quality & Safety*, 28(6), 445–454.
- [4]. Chen, L., Xiao, L. D., & De Bellis, A. (2020). The impact of specialist nursing on patient outcomes in chronic disease management: A systematic review. *Journal of Clinical Nursing*, 29(3-4), 351–365.
- [5]. Coster, S., Watkins, M., & Norman, I. J. (2018). What is the impact of professional nursing on patients' outcomes globally? An overview of research evidence. *International Journal of Nursing Studies*, 78, 76–83.
- [6]. Epstein, R. M., & Street, R. L. (2011). The values and value of patient-centered care. *Annals of Family Medicine*, 9(2), 100–103.
- [7]. Manchaiah, V., Beukes, E. W., Granberg, S., & Durisala, N. (2019). Patient-centered audiological rehabilitation: Perspectives of audiologists and patients. *Journal of the American Academy of Audiology*, 30(8), 731–740.
- [8]. McCormack, B., Dewing, J., & McCance, T. (2021). Developing person-centred practice: Nursing outcomes and frameworks. *Journal of Clinical Nursing*, 30(15-16), 2200–2211.
- [9]. Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., & PRISMA Group. (2009). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *PLoS Medicine*, 6(7), e1000097.
- [10]. Reeves, S., Xyrichis, A., & Zwarenstein, M. (2017). Teamwork, collaboration, coordination, and networking: Why we need to distinguish between different types of interprofessional practice. *Journal of Interprofessional Care*, 32(1), 1–3.
- [11]. Rosen, M. A., DiazGranados, D., Dietz, A. S., Benishek, L. E., Thompson, D., Pronovost, P. J., & Weaver, S. J. (2018). Teamwork in healthcare: Key discoveries enabling safer, high-quality care. *American Psychologist*, 73(4), 433–450.
- [12]. Santana, M. J., Manalili, K., Jolley, R. J., Zelinsky, S., Quan, H., & Lu, M. (2018). How to practice person-centred care: A conceptual framework. *Health Expectations*, 21(2), 429–440.
- [13]. Swanepoel, D. W., & Hall, J. W. (2020). Audiology in the digital age: Integration of teleaudiology and e-health. *Perspectives of the ASHA Special Interest Groups*, 5(2), 525–530.

- [14]. World Health Organization. (2010). Framework for action on interprofessional education and collaborative practice. Geneva: WHO Press.
- [15]. Zygmunt, D. M., & Schaefer, K. M. (2019). Interprofessional collaboration in healthcare: Lessons learned from simulation education. *Journal of Interprofessional Care*, 33(4), 502–509.