



Training Needs for Multidisciplinary Health Teams: Dental Nursing, Pharmacy, and Secretarial Staff

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Abstract

Background: Modern healthcare intrinsically depends on MDTs in order to manage complex patient needs, improve safety, and enhance outcomes. While much has been rightly aimed at clinical professionals, the crucial contributions of support staff, including dental nursing, pharmacy, and secretarial staff, remain underappreciated, and their educational needs are also not commonly addressed systematically. These form the operational backbone of patient care; however, training often occurs in silos without a standardized interprofessional approach that fosters true collaboration.

Objective: This review aims to synthesize current evidence to identify core training needs for dental nurses, pharmacy staff, and health care secretaries within MDTs.

Methods: A narrative review of the literature for the period 2013 to 2024 was conducted using major academic databases such as PubMed, Scopus, CINAHL, and ERIC. Studies included in this work focused on training interventions, competency frameworks, and perceived training needs for these three support roles.

Results: The review showed that current paradigms of training have serious deficiencies. Key findings included: 1) A universal need for enhanced communication and health literacy training across all three roles; 2) Critical needs for role-specific clinical-legal training (e.g., dental nurses in infection control, pharmacy staff in medication reconciliation, secretaries in data governance); and 3) a profound deficiency in interprofessional education (IPE) that brings these roles together with clinicians to practice teamwork. Successful training models were characterized by simulation, standardized protocols, and leadership endorsement.

Conclusion: Health care institutions must invest in integrated strategies that combine robust profession-specific upskilling with mandatory, structured IPE to optimize MDT performance. In this respect, defining competencies and a voice for dental nursing, pharmacy, and secretarial staff within the team becomes more than an educational aspiration; it becomes a strategic imperative for building resilient, patient-centered health care systems.

Keywords: multidisciplinary team training, interprofessional education, dental nursing, pharmacy staff, healthcare secretaries.

1. Introduction

The landscape of modern healthcare is, without doubt, collaborative. Gone are the days when the solo practitioner was expected to work alone, and in their place is the model of the multidisciplinary team, comprising professionals with different competencies working together toward the

commission of comprehensive, patient-centered care. Evidence of the effectiveness of MDTs in improving patient outcomes, enhancing safety, and promoting efficiency spans the literature, from primary care through to complex hospital management (Pelone et al., 2017). While the core clinical members-physicians, surgeons, and specialists-tend to occupy

center stage, the functional integrity and success of these teams depend enormously on a cadre of support staff. Of these, dental nurses, pharmacy staff, and secretarial personnel represent an important triumvirate that constitutes the operational backbone, facilitating, coordinating, and sustaining the clinical services (Cleary et al., 2019).

Despite their crucial roles, the specific and systematic training needs of these teams within the framework of the MDT are often forgotten, fragmented, or left to on-the-job training without a standard framework. Dental nurses play a critical role in ensuring efficient and safe dental practice; pharmacy staff, including technicians and assistants, represent the final check in the medication use process; and healthcare secretaries manage the complex flow of information that connects patients, providers, and the healthcare system. Traditionally, the education and training for these roles have been developed in professional silos, emphasizing technical tasks without adequate attention to the interprofessional competencies necessary for effective teamwork, such as communication, mutual trust, and a clear understanding of scopes of practice (Girard, 2021; Baker et al., 2011). This can lead to breakdowns in communication, errors in procedures, and suboptimal experiences for patients, thus undermining the full potential of the MDT.

This narrative review, therefore, aims to synthesize existing evidence from 2013 to 2024 in order to outline the key training needs for dental nursing, pharmacy, and secretarial staff and, importantly, their integration into MDTs. It will explore the profession-specific clinical and administrative competencies, but also the cross-cutting interprofessional competencies that underpin effective collaboration. By analyzing the existing literature, identifying consistent themes and gaps, and proposing a synthesized framework, this review aims to make the case for a more intentional, integrated, and valued approach to the training of the foundational support workforce in healthcare. It is not simply an academic exercise but an imperative in building resilient, adaptive, and high-functioning healthcare teams that are equipped to deal with the complex challenges of the 21st century.

The Imperative of Multidisciplinary Teamwork in Modern Healthcare

The care of modern patients is complex: an aging population, often with many comorbid conditions; rapid changes in technology; and an increased emphasis on metrics for both safety and the quality of care. There is a pressing need for collaboration. Seminal reports from the Institute of Medicine, *To Err is Human* and *Crossing the Quality Chasm*, completely changed the paradigm by pointing out that most medical errors are not due to individual incompetence but rather to system issues, usually grounded in poor communication and insufficient teamwork (Lt, 2000; Committee on Quality of Health

Care in America, 2001). The MDT model is a direct response to this understanding, proposing that a synergistic mix of skills and perspectives leads to more accurate diagnoses, more effective treatment plans, and fewer adverse events.

The efficacy of MDTs is particularly prominent in the management of chronic diseases, such as diabetes and heart failure, in cancer care, and in geriatric medicine (Wagner, 2000). For example, various studies have illustrated that better-coordinated MDTs in oncology result in more patients receiving guideline-concordant care, with higher completion rates of treatment courses and improved survival rates (Prades et al., 2015). Similarly, in the primary care setting, teams that incorporate clinical pharmacists, nursing staff, and care coordinators show improved management of hypertension and diabetes compared to physician-only models (Chisholm-Burns et al., 2010). The mechanism underlying this success is the pooling of specialized knowledge and distribution of tasks according to competency, enhancing the team's collective capacity to solve complex problems (Bridges et al., 2011).

However, assembling a group of professionals alone does not in itself create an effective team. True collaboration demands a shared mental model, agreed roles and responsibilities, mutual respect, and clear channels of communication. This is where focused training becomes paramount (Foronda et al., 2016). Suter et al. (2009) defined five key principles that are important for successful MDTs. These include: a clear mandate and agreed goals, having formalized routines and procedures, and the development of a culture of collaboration. Support workers play an important role in each of these principles. For a dental nurse to work predictively with the dentist, they need to understand the procedural aims; for a pharmacy technician, understanding the treatment plan means they will correctly dispense medicines; and for a medical secretary, understanding clinic priorities enables effective scheduling. Training must therefore prepare them not only for technical competencies but also cognitive and behavioral ones to perform their work as knowledgeable, proactive, and valued members of the team (Ellis et al., 2020).

Dental Nursing: From Chair-Side Assistance to Comprehensive Patient Management

The dental nursing role has evolved significantly from a passive assistant to an active participant in patient care and practice management. Core responsibilities traditionally include the preparation of the clinical environment, sterilization of instruments, assisting during procedures, and management of patient records (Barr & Low, 2011). For example, the GDC in the UK prescribes stringent standards for dental nurse education, placing much emphasis on competencies related to clinical chair-side support, infection prevention and control, and medical emergencies. However, in the context of the

MDT, the requirements for training go beyond these basics (Council & Britain, 2014).

A very specific area for advanced training is in communication and patient advocacy. Dental nurses are usually the first and last point of contact with the patient, and therefore, have a very important role in the alleviation of dental anxiety, postoperative instruction, and the reinforcement of oral health education (Levett-Jones et al., 2019). Training in motivational interviewing, health literacy-ensuring that patients understand their treatment and care plans, and managing anxious or difficult patients is essential (Albano et al., 2019). Moreover, within the team, they need to be trained in closed-loop communication with the dentist-instructing and reporting observations to avoid mistakes. Simulation-based training using scenarios common in clinical dental practice, for example, managing a patient who becomes unwell or a misunderstanding over a procedure, can be particularly effective in developing these non-technical skills (Flin & O'Connor, 2017).

Another very important domain of training is the wider healthcare system. Dental nurses are increasingly regarded as gatekeepers for oral health, which is inextricably linked to systemic health. Training should thus include basic knowledge of conditions like diabetes and cardiovascular disease, whose manifestations and treatments impact oral health, and vice versa (Brandt et al., 2014). This equips the dental nurse to contribute more meaningfully when reviewing the history of the patient and identifying when a patient needs to be referred back to the physician. As part of an MDT managing patients with head and neck cancer, for example, the importance of pre- and post-treatment oral assessment and prevention ensures that the dental nurse requires specific training in oncology care and collaboration with oncologists and specialist nurses. In conclusion, training for dental nurses must equip them to shift from task-oriented to patient-focused and care-coordinating professionals within the oral health micro-team and across the wider ecosystem (Board on Global Health, Committee on Measuring the Impact of Interprofessional Education on Collaborative Practice, & Patient Outcomes, 2016).

Pharmacy staff: ensuring medication safety and collaborative pharmaceutical care

The pharmacy team-which includes pharmacists, pharmacy technicians, and pharmacy assistants central to the medication management process, one of the high-risk areas in which MDT collaboration is non-negotiable. The core training for pharmacy technicians has, until now, been governed by bodies such as the Pharmacy Technician Certification Board (PTCB) in the US or the GPhC in the UK, focusing on aspects of medication dispensing, inventory management, and pharmacy law. An evolving model of pharmaceutical care that emphasizes patient-centered outcomes demands an

expanded skill set and deeper integration into clinical MDTs (Zhou et al., 2023).

The greatest need for training is in medication reconciliation and safety. Pharmacy technicians are increasingly deployed to conduct the best possible medication histories at hospital admission, a role requiring not only meticulous attention to detail but also excellent communication skills to interface with patients, community pharmacies, and prescribers (Xyrichis & Lowton, 2008). Training for this role must extend beyond data collection to include the clinical reasoning required to identify discrepancies, recognize potential adverse drug reactions, and understand drug interactions (Mekonnen et al., 2016). This directly enhances MDT effectiveness by providing clinicians with an accurate medication list, forming the basis for safe prescribing decisions.

Interprofessional collaboration is another critical training frontier. Pharmacy staff must be trained to communicate effectively with physicians and nurses, especially in challenging situations, such as clarifying an ambiguous prescription or questioning a potentially inappropriate dose. This requires assertiveness training and a firm grounding in clinical pharmacology to articulate concerns confidently and accurately. Models like the "SBAR" (Situation, Background, Assessment, Recommendation) communication technique have been successfully incorporated into pharmacy training to standardize these critical interactions (Müller et al., 2018). Furthermore, with the expansion of clinical pharmacy services, technicians are taking on roles in chronic disease management clinics-for example, performing point-of-care testing for anticoagulation or diabetes-and antimicrobial stewardship programs, such as auditing prescribing practices. These advanced roles require specific, accredited training pathways that are recognized and respected by other MDT members. Training must therefore foster a sense of professional identity and accountability, positioning pharmacy staff not as dispensers in a remote location but as accessible medication experts embedded within the care team.

Secretarial and Administrative Staff: the MDT's Central Nervous System

Health secretaries, administrative assistants, and receptionists are often the unsung heroes of healthcare. They are usually the first point of contact, the schedulers of often complex care pathways, custodians of sensitive medical records, and a communication hub for an entire MDT. Despite this, their training is often the most informal and undervalued, typically focusing on basic computer software and telephone etiquette. To function effectively within a high-performing MDT, their training needs are far more sophisticated.

The most crucial area of training, however, involves health information management and data governance. This will involve the processing of

referral letters, clinical correspondence, and test results by secretarial staff. Training must therefore include a sound knowledge of medical terminology, anatomy, and common pathologies to ensure that data is accurately entered, filed, and prioritized example, identifying an urgent result that requires immediate clinician attention. With the global implementation of EHRs, training should extend to include advanced EHR navigation, logical flow of clinical documentation, and ensuring data integrity and confidentiality in compliance with regulations like HIPAA or GDPR (Kruse et al., 2018).

Communication and customer service training in this cohort presents a unique challenge and is of utmost importance. They regularly encounter upset patients, angry family members, and hurried clinicians. Training should, therefore, include advanced communication skills, de-escalation techniques, and empathy training. They also require a clear understanding of the scope of practice of all MDT members so that they may appropriately triage patient queries and direct them to the correct professional, whether it be the nurse, the pharmacist,

or the doctor. A misunderstanding here can lead to significant delays in care. Because their function has them serving as the nexus of communication within the MDT, they must be versed in the use of multiple modes of communication—telephone, email, internal messaging systems—and be trained in the use of standardized tools for the delegation and tracking of tasks within the team (such as shared electronic task lists or huddle boards (O'Leary et al., 2011)). Investing in comprehensive ongoing training among secretarial staff directly enhances team efficiency, reduces clinician burnout due to offloaded administrative burdens, and dramatically improves the patient's first impression and overall experience of the healthcare system (Thistlethwaite, 2012).

Overview of Synthesized Training Requirements and Proposed Framework

After comparing the unique and shared needs of these three professional groups, a series of synthesized training themes emerges, including Core Interprofessional Competencies and Profession-Specific Advanced Skills, described in Table 1 and Figure 1.

Table 1: Synthesized Training Framework for Healthcare Support Staff in MDTs

Competency Domain	Core Interprofessional Competencies (For All Roles)	Profession-Specific Advanced Skills
Communication	- Health Literacy & Plain Language - SBAR Technique - Active Listening & Empathy - Interprofessional Dialogue	- Dental Nurse: Managing dental anxiety, reinforcing oral hygiene instructions. - Pharmacy Staff: Conducting medication reviews, clarifying prescriptions with prescribers. - Secretarial Staff: De-escalation, triaging complex phone inquiries.
Teamwork & Collaboration	- Understanding Scopes of Practice of all MDT roles - Principles of Psychological Safety & Assertiveness - Shared Decision-Making Models - Conflict Resolution	- Dental Nurse: Anticipating clinical needs within the dental team. - Pharmacy Staff: Participating in ward rounds or clinical meetings. - Secretarial Staff: Managing MDT calendars and coordinating team meetings.
Clinical & Technical Knowledge	- Basic Life Support (BLS) - Infection Prevention & Control (IPC) principles - Data Privacy & Confidentiality	- Dental Nurse: Dental materials science, radiography. - Pharmacy Staff: Pharmacology, medication reconciliation protocols. - Secretarial Staff: Advanced EHR management, medical terminology.
Patient Safety & Quality Improvement	- Error Reporting & Just Culture - Root Cause Analysis basics - Patient Identification & Safety Checks	- **Dental Nurse: ** Equipment sterilization audit, clinical waste management. - Pharmacy Staff: Dispensing accuracy checks, antimicrobial stewardship support. - Secretarial Staff: Ensuring referral completeness, managing critical result alerts.



Figure 1. Core Interprofessional Training Competencies Required Across Dental Nursing, Pharmacy, and Secretarial Staff

The most significant gap identified in all the literature reviewed is a lack of formal IPE. IPE is defined as when two or more professions learn about, from, and with each other to enable effective collaboration (Girard, 2021). While this is very

common for doctors and nurses, support staff are seldom included. IPE sessions for dental, pharmacy, and secretarial staff might include joint simulation scenarios—for example, the management of a complex medication history patient who presents for a dental extraction, which requires coordination between the dental nurse (to understand medical history), pharmacy technician (to review drug interactions with anesthesia), and secretary (to schedule appropriately with relevant pre-op assessments) (Greedy, 2022).

The various effective training methods identified in the literature are summarized in Table 2 and Figure 2. A blended learning approach seems most effective, with e-learning providing foundational knowledge and hands-on, simulation-based workshops for practical and behavioral skills. Notably, the success of any training program relies on organizational culture. Leadership needs to actively endorse the value of these roles through protected time and funding for training and by modeling a "psychologically safe" environment where all team members, regardless of rank, feel empowered to speak up with questions or concerns (Edmondson, 2018).

Table 2: Effective Training Modalities for MDT Support Staff

Training Modality	Description	Best For
Simulation-Based Training	Realistic, simulated clinical scenarios using mannequins or standardized patients.	Practicing communication, teamwork, and clinical skills in a safe environment.
E-Learning Modules	Online, self-paced modules on topics like medical terminology, data governance, or infection control.	Delivering standardized foundational knowledge efficiently.
Structured On-the-Job Training	Mentorship programs with checklists and competency assessments.	Integrating new staff and ensuring proficiency in role-specific tasks.
Interprofessional Workshops	Facilitated sessions bringing together different professional groups for joint learning.	Building mutual understanding, breaking down stereotypes, and practicing collaboration.
Quality Improvement Projects	Involving staff in real-world projects to improve a process or outcome in their department.	Fostering ownership, problem-solving skills, and understanding of systems thinking.

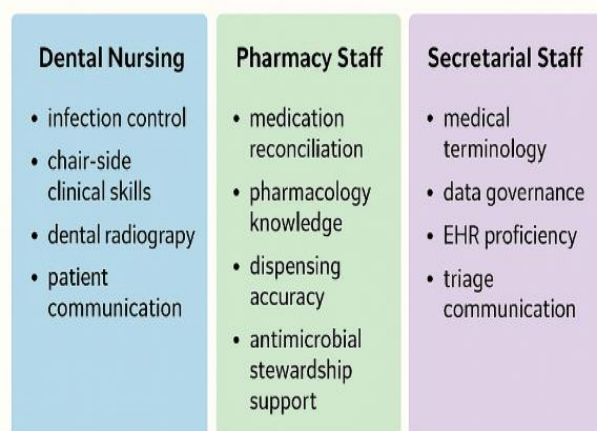


Figure 2. Profession-Specific Advanced Training Needs for Dental Nurses, Pharmacy Staff, and Healthcare Secretaries

Conclusion and Future Directions

This review has identified the key and differing training needs for dental nursing, pharmacy, and secretarial staff and has placed their development as central to the success of a multidisciplinary healthcare team. Evidence from the literature clearly supports that present training paradigms are often inadequate, narrowly focused on technical skills, and lacking in the interprofessional competencies that form the bedrock of safety and effectiveness. The framework now proposed, with core competencies common to all but supplemented by a series of competencies reflecting professional expertise, offers a direction for healthcare educators and managers. Going forward, several steps are necessary.

First, professional regulating bodies and healthcare institutions must work together to formally incorporate IPE into the continuing professional

development requirements of these support roles. Second, research must move beyond describing training needs to examining the impact of specific IPE interventions on objective outcomes such as medication error rates, patient satisfaction scores, and measures of team psychological safety. And finally, there is a need for a cultural change in healthcare to really acknowledge and value the contributions of such professionals. Spending on comprehensive, respectful, and integrated training for dental nurses, pharmacy staff, and secretaries is not a cost but a strategic investment. It is an investment in the resilience of our healthcare workforce, the safety of our patients, and the ultimate efficacy of the multidisciplinary model upon which modern medicine depends.

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