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The Role of Healthcare Professionals in Nursing, Dentistry, Radiology, and Health Administration in Enhancing Patient Experience and Quality of Healthcare Services

Norah Mohammed Alshamrani[1], Mohammed Omar Aqili[2], Azeb Mohammed Azeb Alghamdi[3], Saeed Mohammed Abdullah Al-Ghamdi[4], Kholoud Abdullah Alfahhad[5], Mohammad Abdulaziz Thalab Alharbi[6], Ibrahim Mohammed Ahmed Al-Mutahami[7], Yahya Abdullah Othman Al-Hazmi[8], Mulham Hussni Jameel Bugis[9]

[1]Nursing Tabalah General Hospital Asir.
[2]Nursing Cluster Jazan Health Cluster.
[3]Nursing Al-Baha Health Cluster.
[4]Radiology Al-Baha Health Cluster.
[5]Dental Resident Ministry Of Health.
[6]Patient Experience Specialist Ministry Of Health AlQunfudhah Office.
[7]Health Services Management Ministry Of Health AlQunfudhah Office.
[8]Hospital Administrator Ministry Of Health AlQunfudhah Office.
[9]Hospital Administrator Ministry Of Health AlQunfudhah Office.

1. Introduction

Health systems are increasingly judged not only by what they achieve clinically but by how patients experience the care they receive. For much of the twentieth century, the quality of healthcare was defined largely in technical terms: correct diagnosis, appropriate treatment, and survival. Over the past three decades, however, a broader understanding has emerged. The landmark report of the Institute of Medicine (2001), Crossing the Quality Chasm, established patient-centredness as one of six core dimensions of quality, alongside safety, effectiveness, timeliness, efficiency, and equity. Since then, patient experience has moved from the margins of healthcare management to its centre, and it is now routinely measured, publicly reported, and linked to accreditation, funding, and institutional reputation.

This shift reflects a growing recognition that patient experience and clinical quality are not competing goals but deeply interconnected ones. Systematic evidence shows that positive patient experience is consistently associated with better patient safety, clinical effectiveness, adherence to treatment, and lower utilisation of unnecessary services (Doyle et al., 2013). When patients understand their condition, feel respected, and trust their care team, they are more likely to share critical information, follow treatment plans, and report concerns early. Conversely, poor communication, long waits, and fragmented care undermine both satisfaction and outcomes.

Crucially, patient experience is not the product of any single professional. A patient admitted for surgery may encounter an administrative booking team, a triage nurse, a radiographer and radiologist, a dental team for pre-operative oral clearance, ward nurses across multiple shifts, and discharge coordinators—each of whom contributes to the patient's overall perception of care. The quality of each encounter, and the smoothness of transitions between them, determines whether the patient experiences a coherent, safe, and compassionate journey or a fragmented and anxious one.

> Patient experience is not delivered by one profession at one moment; it is co-produced by many professionals across every touchpoint of the care journey.

In the Kingdom of Saudi Arabia, these questions carry particular urgency. Saudi Vision 2030 and its Health Sector Transformation Program aim to restructure the health system around the principles of value, access, quality, and patient-centredness, supported by a new Model of Care, regional health clusters, expanded digital health services, and strengthened accreditation and professional regulation (Alasiri & Mohammed, 2022). Achieving these ambitions requires a clear understanding of how different professional groups contribute to the patient experience and how their efforts can be aligned.

This paper focuses on four professional groups whose contributions are central yet often discussed in isolation: nursing, dentistry, radiology, and health administration. It has four objectives: (1) to clarify the

conceptual foundations of patient experience and quality of care; (2) to analyse the specific contributions of each profession; (3) to examine how interprofessional synergy amplifies these contributions; and (4) to propose an integrative framework—the PRISM Framework—together with practical recommendations tailored to the Saudi healthcare context.

2. Conceptual foundations

2.1 Defining Patient Experience

Patient experience is frequently confused with patient satisfaction, yet the two concepts are distinct. Satisfaction reflects whether a patient's expectations were met and is therefore highly subjective, shaped by prior experiences and personal expectations. Patient experience, by contrast, captures what actually happened during care: whether the patient was given clear information, whether pain was controlled, whether staff introduced themselves, whether the patient was involved in decisions, and whether transitions were coordinated. Wolf et al. (2014) define patient experience as the sum of all interactions, shaped by an organisation's culture, that influence patient perceptions across the continuum of care.

This definition carries three important implications. First, experience is cumulative: it is built across multiple interactions rather than a single encounter. Second, it is culturally shaped: organisational values, leadership behaviours, and norms of teamwork determine how interactions unfold. Third, it spans the continuum of care, including pre-arrival access, clinical encounters, diagnostics, discharge, and follow-up. Surveys that measure specific, reportable events rather than general satisfaction are therefore considered more valid indicators of quality (Anhang Price et al., 2014).

2.2 Defining Quality of Healthcare Services

The Institute of Medicine (2001) defines quality as the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge. Its six domains remain the most widely used reference point internationally. The World Health Organization, OECD, and World Bank (2018) have reinforced this view, arguing that universal health coverage is meaningless without quality, and the Lancet Global Health Commission on High Quality Health Systems further emphasised that quality includes the confidence and trust that people place in their health system (Kruk et al., 2018). Table 1 illustrates how each quality domain translates into the lived experience of patients.

Table 1. The Six Domains of Healthcare Quality and Their Expression in Patient Experience

Quality Domain	Core Meaning	How Patients Experience It
Safe	Avoiding harm from care intended to help	Correct identification, safe medication, fall prevention, protection from infection and unnecessary radiation
Effective	Evidence-based care for those who benefit	Accurate diagnosis, appropriate treatment, visible improvement in health
Patient-centred	Respect for patient preferences, needs, and values	Being listened to, involved in decisions, and treated with dignity and privacy
Timely	Reducing waits and harmful delays	Short waiting times for appointments, imaging, results, and procedures
Efficient	Avoiding waste of resources and effort	No repeated tests, no redundant paperwork, smooth processes
Equitable	Care that does not vary by personal characteristics	Equal respect and access regardless of nationality, gender, income, or location

Source: Adapted from Institute of Medicine (2001) and World Health Organization et al. (2018).

2.3 The Link Between Experience and Quality

A persistent misconception holds that patient experience is a "soft" measure that competes with technical quality. The evidence does not support this view. In a systematic review of 55 studies, Doyle et al. (2013)

found consistent positive associations between patient experience, patient safety, and clinical effectiveness across a wide range of settings and outcomes. Good experience reflects functioning systems: clear communication reduces errors, coordinated transitions prevent readmissions, and engaged patients detect problems earlier. Patient experience is therefore best understood as both an outcome in its own right and a sensitive signal of underlying system quality.

3. Theoretical Frameworks

3.1 Donabedian's Structure–Process–Outcome Model

Donabedian (1988) proposed that quality can be evaluated through three linked components: structure (the settings, resources, staffing, equipment, and organisational arrangements in which care occurs), process (what is actually done in giving and receiving care), and outcome (the effects of care on health status and patient experience). The model is especially useful for this paper because the four professional groups operate at different levels: health administrators largely shape structure; nurses, dentists, and radiology professionals execute processes; and all contribute jointly to outcomes. Improvement in patient experience requires alignment across all three levels.

3.2 The SERVQUAL Service-Quality Model

Originating in services marketing, SERVQUAL identifies five dimensions through which customers judge service quality: tangibles (physical facilities, equipment, appearance), reliability (dependable and accurate performance), responsiveness (willingness to help and prompt service), assurance (knowledge, courtesy, and ability to inspire trust), and empathy (individualised attention) (Parasuraman et al., 1988). Although healthcare differs from commercial services, SERVQUAL has been widely adapted in hospitals and clinics because patients often judge technical quality indirectly through these observable dimensions—for example, inferring competence from a radiographer's clear explanation or a nurse's prompt response to a call bell.

3.3 Interprofessional Collaboration: IPEC and TeamSTEPPS

The Interprofessional Education Collaborative (2016) defines four core competency domains for collaborative practice: values and ethics, roles and responsibilities, interprofessional communication, and teams and teamwork. These domains provide a shared language for understanding how professionals from different disciplines can work together towards common patient goals. TeamSTEPPS, developed by the Agency for Healthcare Research and Quality and the US Department of Defense, operationalises teamwork through trainable skills—leadership, situation monitoring, mutual support, and communication—using tools such as SBAR handovers, briefs, huddles, and debriefs (King et al., 2008). Research on teamwork consistently identifies shared mental models, closed-loop communication, and mutual trust as critical coordinating mechanisms (Salas et al., 2005).

3.4 The Quadruple Aim and Safety Science

The Triple Aim of improving patient experience, improving population health, and reducing per-capita cost (Berwick et al., 2008) was later expanded into the Quadruple Aim by adding the wellbeing of the healthcare workforce (Bodenheimer & Sinsky, 2014). This addition recognises that exhausted, overburdened staff cannot reliably deliver compassionate, safe care. Complementing this, Reason's (2000) Swiss cheese model explains adverse events as the alignment of weaknesses across multiple layers of defence—a perspective that underscores why no single profession can guarantee safety alone.

4. The Saudi Healthcare Context

The Saudi health system is undergoing one of the most ambitious transformations in its history. Under Vision 2030, the Health Sector Transformation Program seeks to improve access to services, raise quality and efficiency, strengthen prevention, and shift the system towards a value-based model. Key structural reforms include the reorganisation of public services into regional health clusters, the introduction of a population-based Model of Care organised around patient journeys, the corporatisation of provider organisations, and an expanded role for the private sector (Alasiri & Mohammed, 2022).

Several national bodies directly shape the quality and experience of care. The Saudi Central Board for Accreditation of Healthcare Institutions (CBAHI) sets and audits national standards covering patient rights, patient and family education, infection control, medication management, and leadership. The Saudi

Commission for Health Specialties (SCFHS) regulates professional classification, licensing, and continuing professional development, ensuring the competence of nurses, dentists, radiology professionals, and health administrators. The Saudi Patient Safety Center promotes a national safety culture, while digital platforms such as Nphies, the Seha Virtual Hospital, and national health applications are reshaping access, appointment booking, and information exchange.

At the same time, the system faces workforce challenges. Saudi Arabia has historically relied heavily on expatriate health professionals, particularly in nursing, which creates both opportunities for diverse expertise and challenges related to language, cultural concordance, and staff turnover (Al-Hanawi et al., 2019). National workforce development and localisation initiatives aim to expand the Saudi health workforce while maintaining quality. Understanding the role of each profession in patient experience is therefore not merely an academic exercise; it is central to workforce planning, education, and performance management across the transforming system.

5. The Role Of Nursing Professionals

5.1 Nursing as the Relational Core of Patient Experience

Nurses are the professional group with the most continuous and intimate contact with patients. In inpatient settings, nurses are present around the clock, and their behaviour strongly shapes patients' perceptions of the entire institution. Qualitative research shows that patients' experiences of quality are closely linked to nurses' communication, attentiveness, professional competence, and the extent to which nurses are able to provide individualised care within a supportive work environment (Kieft et al., 2014). The nurse is often the professional who explains what a physician said, prepares the patient for a scan, notices anxiety, and advocates for the patient when something seems wrong.

Key domains of patient experience that are primarily nurse-sensitive include communication and information, pain and symptom management, responsiveness to requests, respect for privacy and dignity, emotional support for patients and families, and education for self-care at discharge. In many patient experience surveys, items relating to nursing communication are among the strongest predictors of overall hospital ratings.

5.2 Nurse Staffing, Work Environment, and Outcomes

An extensive body of research links nurse staffing and education to patient outcomes. Aiken et al. (2002) found that each additional patient added to a hospital nurse's workload was associated with a 7% increase in the likelihood of patient death within 30 days of admission, together with higher nurse burnout and job dissatisfaction. A subsequent study across nine European countries found that each increase of one patient per nurse was associated with a 7% increase in mortality, while every 10% increase in bachelor-educated nurses was associated with a 7% decrease (Aiken et al., 2014). These findings demonstrate that nursing capacity and preparation are structural determinants of both safety and experience—and therefore a direct concern of health administration.

5.3 Nursing Contributions to Safety and Quality

Nurses serve as the final and most frequent line of defence in many safety processes. Their contributions include:

- **Medication safety:** verifying the "rights" of medication administration, double-checking high-alert medications, and detecting prescribing errors before they reach the patient.
- **Early recognition of deterioration:** using early warning scores and escalating concerns through rapid response systems.
- **Prevention of hospital-acquired harm:** implementing bundles for falls, pressure injuries, catheter-associated infections, and venous thromboembolism.
- **Infection prevention:** modelling and monitoring hand hygiene, isolation precautions, and aseptic technique.
- **Care coordination and discharge:** conducting structured handovers, medication reconciliation, and teach-back education to prevent avoidable readmissions.

5.4 Nursing in the Saudi Context

In Saudi Arabia, nursing faces a distinctive combination of opportunity and challenge. The workforce includes a large proportion of internationally educated nurses, alongside a growing number of Saudi nurses

graduating from expanding national programmes (Al-Hanawi et al., 2019). Language and cultural concordance matter greatly for patient experience: Arabic-speaking patients may struggle to express pain, fears, or preferences to nurses who do not share their language, and cultural expectations regarding gender, family involvement, and religious practice require sensitive, culturally competent care. Investments in Arabic-language skills, cultural orientation, and nursing leadership development—together with national Saudization goals—are therefore important levers for improving patient experience.

6. The Role Of Dental Professionals

6.1 Dental Anxiety and Patient-Centred Communication

Dentistry occupies a unique position in patient experience because dental fear and anxiety are highly prevalent and can lead patients to delay or avoid care until problems become severe. Armfield and Heaton (2013) describe a range of evidence-based approaches for managing dental anxiety, including establishing trust, giving patients a sense of control (for example, agreed stop signals), explaining procedures in advance, using "tell-show-do" techniques with children, providing effective pain control, and, where necessary, pharmacological approaches such as sedation. Each of these is a direct intervention in patient experience: a calm, communicative dental team can transform an anticipated ordeal into a tolerable, even reassuring, encounter.

6.2 Prevention and Oral–Systemic Health

Oral diseases are among the most common non-communicable conditions worldwide, affecting an estimated 3.5 billion people, yet they have historically been marginalised in health policy (Peres et al., 2019). The FDI World Dental Federation defines oral health as multifaceted, encompassing the ability to speak, smile, smell, taste, touch, chew, swallow, and convey emotions without pain or discomfort (Glick et al., 2016). This broad definition positions oral health as integral to quality of life and wellbeing. Dental professionals contribute to health quality through preventive counselling, fluoride and sealant programmes, early detection of oral cancers, and recognition of oral signs of systemic conditions such as diabetes. Close links between periodontal disease and diabetes control, and the importance of oral assessment before cardiac surgery, chemotherapy, or radiotherapy, make dentistry a genuine partner in interprofessional care.

6.3 Safety and Infection Control in Dental Settings

Dental procedures involve sharp instruments, aerosol-generating procedures, and frequent exposure to blood and saliva, making rigorous infection prevention essential. Dental teams contribute to safety through validated sterilisation and instrument tracking, appropriate personal protective equipment, water-line management, and adherence to national infection control standards. Dental radiography must also follow justification and optimisation principles to minimise radiation exposure. Visible cleanliness and professional conduct serve as "tangible" cues that reassure patients about the safety of care, directly reinforcing trust.

6.4 The Dental Team and Interprofessional Links

The dental team includes dentists, dental specialists, dental hygienists, dental assistants, and dental technicians. Each member contributes to experience—from the receptionist who manages appointment timing to the hygienist who delivers preventive education. Within hospitals and health clusters, dental professionals collaborate with physicians, nurses, pharmacists, and radiology professionals, particularly for medically complex patients, those on anticoagulant or bisphosphonate therapy, pregnant women, and patients with special healthcare needs. Integrating dental records and referrals into electronic health systems strengthens continuity and reduces duplication.

7. The Role Of Radiology Professionals

7.1 Diagnostic Accuracy as a Foundation of Quality

Radiology is central to modern diagnosis: imaging informs decisions in emergency care, oncology, surgery, cardiology, and chronic disease management. The radiology team—including radiologists, radiographers (radiologic technologists), sonographers, nuclear medicine technologists, medical physicists, and radiology nurses—therefore has a profound influence on effectiveness and safety. Diagnostic discrepancies are an inherent risk of image interpretation; Brady (2017) notes that retrospective error rates in day-to-day

radiological practice are commonly cited at around 3–5%, arising from perceptual and cognitive factors, workload, fatigue, and incomplete clinical information. Itri et al. (2018) emphasise that reducing diagnostic error requires system-level strategies such as structured reporting, peer learning, double reading for selected examinations, adequate staffing, and better communication of clinical context by referring clinicians.

7.2 Radiation, Contrast, and MRI Safety

Radiology professionals carry specific responsibility for protecting patients from hazards associated with imaging. This includes applying the principles of justification (ensuring each examination is clinically warranted) and optimisation (keeping doses as low as reasonably achievable), screening for pregnancy, managing contrast media reactions and kidney risk, and enforcing strict magnetic resonance safety protocols to prevent injuries from ferromagnetic objects or implants. Radiographers, as the professionals who position patients and operate equipment, are central to both image quality and dose management.

7.3 The Patient Experience of Medical Imaging

For many patients, an imaging examination is an anxious experience: it may involve unfamiliar machines, noise, confined spaces, physical discomfort, and uncertainty about what the scan may reveal. A systematic review of qualitative evidence found that patients undergoing high-technology imaging value clear information before and during the procedure, the reassuring presence and communication of staff, and timely access to results, while claustrophobia and waiting for results are major sources of distress (Munn & Jordan, 2011). Radiographers often have only a few minutes with each patient, yet those minutes—an introduction, an explanation of what the patient will hear and feel, a check on comfort, and clear instructions—can substantially shape the patient's perception of the entire service.

> In the imaging suite, a few minutes of clear, compassionate explanation can be as important to the patient as the technical quality of the image itself.

7.4 Timeliness and Communication of Results

Timely imaging and reporting are major determinants of patient flow, emergency department length of stay, and treatment delays. Radiology departments contribute to timeliness through efficient scheduling, protocol standardisation, report turnaround time targets, and robust systems for communicating critical and unexpected findings directly to responsible clinicians. Teleradiology and picture archiving and communication systems (PACS) enable rapid access to images and reports across facilities—an important capability within Saudi health clusters, where patients may move between primary, secondary, and tertiary facilities.

8. The Role Of Health Administration Professionals

8.1 Strategic Leadership and Culture

While clinical professionals deliver care directly, health administrators design the environment in which that care happens. Leadership shapes organisational culture, and culture shapes behaviour at the bedside. Evidence reviewed by West et al. (2015) shows that compassionate, inclusive, and collective leadership is associated with higher staff engagement, better patient experience, and improved quality outcomes. The Institute for Healthcare Improvement similarly identifies person-centredness, front-line engagement, relentless focus on vision and strategy, transparency, and boundarylessness as characteristics of high-impact healthcare leadership (Swensen et al., 2013). Administrators who make patient experience a board-level priority, visibly round on units, and act on feedback send powerful signals throughout the organisation.

8.2 Process Design, Access, and Patient Flow

Many of the most common patient complaints—long waiting times, difficulty booking appointments, confusing navigation, repeated registration, and delays in discharge—are administrative and systemic in origin rather than clinical. Health administrators address these through capacity planning, appointment and referral systems, bed management, Lean and process-improvement methods, wayfinding, and service redesign. When administrative processes work well, clinical professionals can devote more time to patients; when they fail, even the most skilled clinicians struggle to deliver a positive experience.

8.3 Measuring and Managing Patient Experience

Health administration is responsible for building the measurement infrastructure that turns patient experience from an aspiration into a managed outcome. This includes validated patient experience surveys, patient relations and complaints management, real-time feedback tools, performance dashboards, and linking experience indicators with clinical quality and safety data. Accreditation standards set by CBAHI require institutions to protect patient and family rights, manage complaints, and use data for improvement, placing these functions firmly within administrative responsibility.

8.4 Workforce Management and Wellbeing

Consistent with the Quadruple Aim, administrators influence patient experience indirectly by shaping the work lives of clinicians. Appropriate staffing, fair scheduling, access to professional development, recognition, and protection from burnout are all administrative levers. Research on nurse staffing (Aiken et al., 2002, 2014) demonstrates that decisions made in administrative offices have measurable effects on patient survival and experience at the bedside.

8.5 Digital Enablement and Resource Stewardship

Health administrators lead the adoption of electronic health records, e-appointment systems, telehealth, and national data platforms such as Nphies, which together reduce duplication, improve information continuity, and enhance access. Administrators also steward financial resources, balancing investment in staff, equipment, and facilities against efficiency expectations under value-based models. Effective stewardship ensures that quality and experience initiatives are sustainable rather than dependent on short-term projects.

9. interprofessional synergy across the patient journey

The contributions of each profession are amplified—or undermined—by the quality of collaboration between them. Consider a patient with diabetes scheduled for cardiac surgery. The administrative team books pre-operative assessments; the radiology team performs imaging and communicates findings; the dental team assesses and treats oral infection sources that could compromise surgery; and nurses coordinate preparation, education, and post-operative recovery. If any link fails—an unbooked dental assessment, a delayed imaging report, or a poorly communicated handover—the patient experiences delay, repetition, and anxiety, and surgical risk may increase. When the professions share information, use structured communication, and align around the patient's goals, the same journey feels seamless and safe.

Table 2 summarises the principal contributions of each profession across the six domains of quality, illustrating their complementarity**.**

Table 2. Contributions of the Four Professional Groups Across the Domains of Quality

Domain	Nursing	Dentistry	Radiology	Health Administration
Safe	Medication checks, fall and infection prevention, early warning	Sterilisation, infection control, safe sedation	Radiation, contrast, and MRI safety	Safety culture, incident reporting systems, policies
Effective	Evidence-based nursing protocols and bundles	Preventive and restorative evidence-based care	Accurate, protocol-driven imaging and reporting	Clinical governance, audit, guideline adoption
Patient-centred	Communication, dignity, emotional support	Anxiety management, shared treatment planning	Explanation, comfort, privacy during imaging	Patient rights, feedback and complaints systems

Domain	Nursing	Dentistry	Radiology	Health Administration
Timely	Prompt response and discharge readiness	Accessible appointments, urgent care pathways	Report turnaround, critical result alerts	Scheduling, capacity, patient flow
Efficient	Care coordination, reduced duplication	Integrated dental–medical referrals	Avoiding unnecessary or repeated scans	Lean processes, resource stewardship
Equitable	Culturally competent care	Outreach and special-needs dentistry	Equal access to diagnostic services	Equitable distribution across clusters and regions

Source: Author synthesis based on the literature reviewed in this paper.

Three interprofessional mechanisms are especially important. First, structured communication tools such as SBAR and standardised handovers reduce information loss at transitions (King et al., 2008). Second, shared mental models—a common understanding of the patient's plan and goals—allow team members to anticipate needs and provide mutual support (Salas et al., 2005). Third, clarity of roles and responsibilities, a core IPEC domain, prevents both gaps and duplication. These mechanisms depend on organisational structures that only health administration can provide: shared information systems, multidisciplinary meetings, and interprofessional training time.

10. The Prism Framework

Drawing together the evidence reviewed, this paper proposes the PRISM Framework as an integrative model for aligning nursing, dentistry, radiology, and health administration around patient experience and quality. The metaphor of a prism is deliberate: just as a prism takes a single beam of light and reveals its component colours, the framework recognises that a single patient experience is composed of distinct professional contributions—and that these contributions must be aligned to produce a coherent whole. The framework integrates Donabedian's structure–process–outcome logic, the IOM quality domains, SERVQUAL dimensions, and IPEC competencies into five interlocking pillars (Table 3).

Table 3. The PRISM Framework: Pillars, Descriptions, Lead Contributors, and Indicators

Pillar	Description	Lead Contributors	Example Indicators
P — Patient-centred relationships	Respectful, empathetic, culturally competent communication that involves patients and families in decisions	Nursing, dentistry, radiology (front-line)	Patient experience survey scores on communication, respect, and involvement
R — Reliable clinical processes	Standardised, evidence-based protocols that deliver accurate and consistent care every time	All clinical professions	Protocol adherence, diagnostic discrepancy rates, report turnaround times
I — Integrated interprofessional teamwork	Shared goals, structured handovers, role clarity, and coordinated care across the journey	All four professions jointly	Handover compliance, referral completion, readmission rates
S — Safety and quality systems	Proactive risk management, infection prevention, radiation safety, and a just reporting culture	Clinical professions with quality departments	Adverse event rates, hand hygiene compliance, safety culture survey results

Pillar	Description	Lead Contributors	Example Indicators
M — Managerial enablement	Leadership, staffing, digital tools, and measurement systems that make excellent care possible	Health administration	Staffing ratios, staff engagement and burnout, waiting times, accreditation outcomes

The PRISM pillars are interdependent. Patient-centred relationships (P) cannot be sustained without reliable processes (R) that free clinicians from constant firefighting; integration (I) requires the shared systems and time created by managerial enablement (M); and safety systems (S) depend on the trust and openness that characterise strong relationships and teamwork. In Donabedian's terms, Managerial enablement corresponds largely to structure; Reliable processes and Integrated teamwork to process; and Patient-centred relationships and Safety systems to both process and outcome.
For implementation, institutions may use PRISM as a diagnostic and planning tool. Leadership teams can assess current performance on each pillar, identify the weakest link in the patient journey, assign interprofessional ownership, and track progress using a balanced set of experience, clinical, and workforce indicators. Because CBAHI standards and Health Sector Transformation Program objectives already emphasise many of these elements, PRISM can be aligned with existing accreditation and performance frameworks rather than adding a parallel bureaucratic layer.

11. Challenges And Barriers

Despite strong policy commitment, several barriers constrain the ability of healthcare professionals to maximise patient experience and quality. Table 4 summarises the principal challenges alongside potential mitigation strategies.

Table 4. Key Challenges and Mitigation Strategies

Challenge	Impact on Patient Experience and Quality	Mitigation Strategies
Workforce shortages and turnover	Higher workloads, reduced time with patients, loss of continuity and institutional knowledge	Evidence-based staffing standards, retention incentives, national workforce pipelines
Burnout and staff wellbeing	Reduced empathy, more errors, lower engagement	Wellbeing programmes, fair scheduling, workload monitoring, supportive leadership
Language and cultural barriers	Misunderstanding, reduced trust, incomplete information exchange	Arabic language training, interpreters, cultural competence education
Professional silos	Fragmented care, duplicated tests, unclear accountability	Interprofessional education, joint rounds, shared goals and metrics
Fragmented information systems	Repeated history-taking, delayed results, safety gaps	Interoperable EHRs, integrated dental and imaging records, national platforms
Immature measurement	Limited insight into experience; improvement driven by anecdote	Validated surveys, real-time feedback, dashboards linking experience and outcomes
Cost and productivity pressures	Pressure to shorten encounters and reduce staffing	Value-based metrics that reward quality and experience, not volume alone

Two challenges deserve particular emphasis. First, professional silos remain deeply embedded in education and organisational structures. Dental services are often physically and administratively separated from medical services, and radiology may be perceived as a service department rather than a clinical partner. Second, measurement gaps mean that the contributions of some professions—particularly radiology and dentistry—are rarely captured in institutional patient experience metrics, which tend to focus on inpatient nursing and physician communication. What is not measured is rarely prioritised.

12. Recommendations

12.1 For Policymakers and Regulators

- Integrate patient experience indicators specific to dental and radiology services into national performance frameworks and accreditation standards.
- Establish evidence-based nurse staffing guidance aligned with patient acuity, informed by international research linking staffing to outcomes.
- Strengthen interprofessional competencies within SCFHS continuing professional development requirements.
- Accelerate interoperability between dental, imaging, and medical records across health clusters through national digital platforms.

12.2 For Institutional Leaders and Health Administrators

- Adopt the PRISM Framework, or a comparable integrative model, to assess and improve performance across professions.
- Make patient experience a standing board and executive agenda item, with clear interprofessional ownership.
- Invest in workforce wellbeing and retention as a direct patient experience strategy, consistent with the Quadruple Aim.
- Redesign high-friction processes—appointment booking, imaging scheduling, and discharge—using Lean and patient journey mapping.
- Create protected time for interprofessional huddles, case reviews, and joint training using TeamSTEPPS tools.

12.3 For Clinical Practitioners

- **Nurses:** strengthen teach-back education, structured handovers, and culturally competent communication.
- **Dental professionals:** systematically assess and manage dental anxiety and integrate oral health into interprofessional care plans for medically complex patients.
- **Radiology professionals:** standardise pre-procedure explanations, comfort measures, and critical result communication, and participate in peer-learning programmes.
- **All professionals:** introduce themselves, explain their role, and involve patients and families in decisions at every encounter.

12.4 For Educators and Researchers

Health professions education should expand interprofessional learning so that nursing, dental, radiology, and health administration students learn together, not only alongside one another. Research priorities in the Saudi context include validating patient experience instruments for dental and imaging services, examining the relationship between staffing and experience in Saudi hospitals, and evaluating the impact of interprofessional interventions on both experience and clinical outcomes. Institutions such as KAIMRC and university research centres are well positioned to lead such work.

13. conclusion

Patient experience and quality of care are inseparable, and both are co-produced by multiple professions across the continuum of care. This paper has shown that nursing provides the continuous relational core of patient experience and a critical safety defence; dentistry contributes through anxiety management, prevention, and integration of oral with systemic health; radiology shapes diagnostic accuracy, safety, and one of the most anxiety-laden touchpoints in the patient journey; and health administration builds the structures, processes, culture, and measurement systems that enable all other professionals to excel.

No single profession can deliver an excellent patient experience alone. The greatest gains come from aligning professional contributions around shared goals, structured communication, and supportive systems. The PRISM Framework—Patient-centred relationships, Reliable clinical processes, Integrated interprofessional teamwork, Safety and quality systems, and Managerial enablement—offers a practical way to achieve this alignment. As Saudi Arabia advances its Vision 2030 health transformation, investing in the collaborative capacity of these four professional groups represents one of the most direct and powerful routes to a health system that is not only more effective and efficient, but also more humane, trusted, and genuinely centred on the patient.

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