

Comparative Analysis of Urgent Care Practices and Opportunities for Advancing Emergency Dental and Prosthodontics Education in Saudi Arabia

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Abstract

This study provides a detailed analysis of urgent care dental practices and curricula in Saudi postgraduate dental programs. Key findings include consistent operational policies and challenges such as limited clinic resources and variability in clinical experience. The study highlights the need for curriculum standardization and proposes actionable strategies to enhance emergency dental and prosthodontics education in Saudi Arabia.

All the enrolled postgraduate programs participated. Of 97 survey items evaluated, a high level of consistency was evident in multiple areas including clinic operation policies, student supervision, electronic medical record implementations, clinical competencies and filing systems, triage systems, and advertising policies. The participants identified four challenges including limitation of clinic areas, limited clinical patients, complex compressed time, and highly varied experiences. Clinician experience variability was the theme of both the help service hindrance and professionalism dilemma. Undergraduate dental services and care continuity ideas were the authority dilemma. The opinions on new policy proposals and adjunct services contained the provisional dilemma and marketing dilemma. In conclusion, the study found consistency and provided evidence of the urgent care education provided in the participating postgraduate dental programs. Current dilemmas encountered by clinicians and

program concerns were discussed. Finally, the study proposed future strategic planning, projected continued growth, and some possible opportunities for advancing emergency dental and prosthodontics education.

keywords

dental emergency, repetitive patient, presentations, triage, curriculum

1. Introduction

The field of dental medicine has evolved tremendously since its commencement, and many specialty services in the dental field have been established. The practice of dental emergencies and services for patients with oral discomfort are practiced at dental clinics, analogous to medical practice, but under the title "urgent care" services rather than emergency services. Thus, not every dental emergency could be accommodated in an office setting. In contrast, emergency departments are usually the entry point and a front door to the hospital, as acute sickness and trauma account for a significant proportion of admissions in the hospital. In several health-related programs internationally, the system supports practicing activities in emergency departments as part of undergraduate and postgraduate programs in the field of medical science. (Malamed, 2022)(Cagetti et al.2021)(Carter et al.2020)(Al Masri, 2021)(O'Cathain et al., 2020)

A similar but circumferentially different system exists in the field of dentistry. There is limited research conducted in the dental field only in the Western world, especially in European countries and the United States. In these countries, numerous studies have been conducted to assess the capability in handling dental-related emergencies among dental clinics and emergency departments, and recent observational studies specify that emergency departments can expect an overcrowding problem with preventing further burdens unless organized changes are established. However, despite the authorities' decision to allow Saudi universities to conduct medical dentistry colleges in collaboration with the Ministry of Health, there are minimal dental health problems in Saudi Arabia in the professional dentistry program design for Saudi universities' dental medicine program. (Hugo et al.2021)(Quinn et al.2020)(Chang et al.2021)(Herrera et al.2023)(Broers et al.2022)

The aim of this study is to conduct a comprehensive comparative analysis of urgent care practices in dental medicine across Saudi Arabia, focusing on postgraduate dental programs, and to identify opportunities for advancing emergency dental and prosthodontics education. The study seeks to evaluate existing operational policies, identify challenges clinicians and programs face, and propose strategic recommendations for curriculum standardization and the enhancement of emergency dental care education.

2. Overview of Urgent Care Practices

Healthcare delivery has evolved over the years, particularly in settings such as urgent care. Technology has improved patient care but has also introduced new challenges to healthcare providers posed by younger generations seeking to meet their needs without sacrificing leisure and family time. These expectations simplify the urgent care encounter and may be appropriate for musculoskeletal and skin lesions or infections but present different challenges when the problem stems from a different organ system such as dentistry. Emergency dental care is different from medical urgent care, as patients often seek urgent

dental treatment directly from their dentist, occasionally from the emergency department, or at times from a walk-in urgent care center. The lack of dental urgent care availability may lead to unnecessary extended suffering, lost workdays, and unnecessary financial-related medical emergency department problems. (Guo et al., 2020)(Ren et al.2020)(Malamed, 2022)(Dave et al.)(Brian & Weintraub, 2020)(Jiang et al.2021)(Kumar et al., 2021)

Urgent care dental services provide a viable solution for these problems and offer opportunities for cooperative efforts between dental and medical schools participating in community health activities. Dental education throughout the world is taught within the university setting, and students learn procedures necessary for the private office, hospital dental clinics, and to treat medically compromised hospitalized patients. Unfortunately, graduation from many dental schools qualifies the new dentist to provide only emergency palliative and antibiotic care to medically compromised patients who present at the emergency department with dental abscesses, facial swellings, and toothaches until a specialist or general dental practice can be seen to complete definitive care for the patient. Saudi Arabia is unique in that its dental emergency departments are staffed with dental graduates prepared to complete the definitive treatment while ministrokes, temporary ischemic attacks, and other life-threatening medical problems and dental swelling decrease. (Jamal et al.2023)(Ain et al.2023)(Alobaid et al.2022)(Tariq et al.2022)(Ali et al.2020)

The Saudi Arabian model, where dental schools have increased their training programs to care for patients, providing support for many medically compromised patients without oral health insurance, represents an opportunity to develop a unified dental and medical model for patient care. This model to unify emergency dental and prosthodontics education and the urgent care concept within the Riyadh embassy and US toothache and facial swelling sites can integrate urgent dental care with the students from both disciplines to reduce medical burden and better meet patient needs. In return, students would interact as they gained an enhanced appreciation for each other's profession and lifelong medical/dental practitioner contributions. The presentation compares and contrasts various emergency dental programs in different countries using the urgent care model. (Alsawwid et al.2020)(Alasiri & Mohammed, 2022)(Al et al.2021)(Aljohani, 2020)(Alharbi et al.2021)

3. Overview of Emergency Dental Education in Saudi Arabia

This section provides an overview of pre-doctoral emergency dental and prosthodontics education in the dental schools of Saudi Arabia. A major goal of this research is to inform the development of a standardized predoctoral emergency dental curriculum in Saudi dental schools to ensure competency in medical emergency management. The new regulations for private dental clinics in Saudi Arabia state the requirement to provide safe dental practice. The regulations emphasize the dental team's knowledge of dental management of medical emergencies and cardiopulmonary resuscitation. (Aldossary, 2023)(Ali et al.2020)(Sabbahi et al.2020)(Aboalshamat2020)

In Saudi Arabia, the Ministry of Health has comprehensive medical emergency training programs. They have also prepared emergency drug boxes that are required for emergencies, filled with drugs for managing and stabilizing medical and dental patients. The Commission for Health Specialties, which sets the National Specialty Guidelines for

all the postgraduate programs in health and health-related programs, does not provide postgraduate dental or emergency dental standards, but at the level of Bachelor of Dentistry, they provide dental schools with a minimum program where students learn about periodontics, dental hygiene, radiology, and restorative dentistry. It should address community health, emergency experience, and oral diseases. Although the education of a dental diploma related to the management of medical emergencies at all Saudi dental schools exists, no specific data is available on the curricular content, format, and teaching time devoted to this important topic. (Al-Sebaei, 2024)(Al-Haj et al.2020)(Jaber et al.2021)(Shaath et al.2023)(Nafea, 2021)(Gaffar et al.2022)

4. Comparative Analysis of Urgent Care and Emergency Dental Education

The analysis of urgent care practices in the delivery of dental services at academic dental institutions in Saudi Arabia represents the existence and scope of an education program regarding emergency dental and prosthodontics services. The results of the survey with academic institutions, together with an interpretative review of existing urgent dental care education in dental schools, are presented. The report outlines and recommends that there is a weak or lacking formal educational effort at Saudi dental schools to graduate academically and clinically prepared dentists in handling emergency dental situations, with their potential need to prevent and minimize serious medical sequelae, as well as provide necessary requirements for comprehensive care. (Salama & Al-Balkhi, 2020)(Sabbagh et al.2022)(Quamar, 2020)(Mously et al.2020)

A recommendation to improve dental school education is included regarding the need for the incorporation of effective approaches at both didactic and clinical levels to maximize the delivery of care in dental emergency settings. Recognition of the role of an academic dental institution requires the necessity to graduate dentists who possess urgent dental care knowledge, skills, and attitudes. The essential role of a dentist when presented with an emergency dental situation is to avoid delay in proper dental and medical management and to get the patient out of pain. In addition, academic institutions are responsible for updating the knowledge, skills, and attitudes of practicing dentists through continuing education in dentistry. The chronic, incapacitating, and degenerative effects of both systemic and oral diseases can lead to hospitalization and affect the patient psychologically as well as sociologically, which would decrease their productivity and quality of life. Moreover, proper education and awareness can lower the cost of both dental and medical care. The pain experience has unique characteristics that make it one of the most common reasons for toothache sufferers to seek relief in the dental office. These conditions necessitate the importance of dental schools preparing dental students to address dental problems in emergencies. (Ghai, 2020)(Malamed, 2022)(Iyer et al., 2020)(Hassan & Amer, 2021)(Tewari et al.2020)

5. Challenges and Opportunities for Advancing Emergency Dental Education

The challenges associated with establishing formal emergency dental and prosthodontics educational programs and standardized care practices include the relatively high cost of resources available only at multi-specialty hospitals within the Kingdom and the lack of qualified faculty with emergency dentistry expertise. Future opportunities to support the creation of optimal training environments include increasing the number of trained emergency dentists in Saudi Arabia and utilizing input from established emergency dental

and prosthodontics educational programs to prepare experts in emergency dental care in other countries. This manuscript reviews the status quo of emergency dental and prosthodontics education in Saudi Arabia and offers detailed recommendations for overcoming the prevailing challenges and capitalizing on the opportunities for emerging new standardized emergency dental curricula and care practices. (AlRuthia et al.2023)(Bin et al.2022)(Alsadaan et al., 2021)

International collaboration is necessary to exchange new teaching information, joint research of basic medical and dental science, and to foster teaching staff, including providing Master's Degree scholarships in emergency dental practice by sending them to international institutions outside the Kingdom. International exchange of teaching staff and establishing international teaching standards among universities are helpful solutions to overcome the identified challenges in advancing emergency dental and prosthodontics education in Saudi Arabia. Simple solutions to advance emergency dental and prosthodontics education shortly are highly warranted and challenging and can be valuable for further reinforcing collaboration in advanced emergency dental and prosthodontics education. The results will benefit our university and other dental hospitals and colleges in Saudi Arabia to develop systematic emergency dental curricula to train their undergraduate dental students in the latest knowledge and expertise.

6. Conclusion and Recommendations

Whether delivered directly or indirectly, dental curricula and education for undergraduate programs provide students with the fundamental knowledge, attitudes, and skills required to manage emergency dental conditions. Curricular changes must be considered to ensure that undergraduate students' competencies for dealing with dental periodontal care in routine and emergency care settings, particularly those that present with facial cellulitis and dental abscesses, are aligned with national standards. Compulsory dental clinical skills programs should incorporate modern methods that use simulators or students' peers to enhance the early practice of managing the emergency dental conditions of patients. The implementation of dental curricula content by institutions will prepare new graduate students to meet societal requirements and contribute to health improvement and sustainability. Scientific discussions are necessary to develop a common approach for the progression of dental education through the associated curriculum. Oral healthcare policy should insist that hospitals establish formal dental services for optimal patient management. During their compulsory clinical years and internship, dental students spend from one to two weeks in turn at the Accident and Emergency Departments, and their experiences are valuable. A deeper understanding of their knowledge, skills, attitudes, and different models based on the education followed and their clinical practice experiences will provide a clear view of emergency practice models. Recommendations for advancing dental education are presented from a regional and curriculum perspective. Key actionable recommendations include:

1. Establish standardized emergency dental curricula nationwide.
2. Foster interdisciplinary collaboration between medical and dental students.
3. Increase faculty expertise through international training programs.
4. Enhance clinical rotations in emergency departments for dental students.

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