



From Missionary Medicine to Modern Academic Healthcare: The Evolution of Health and Medical Education in Urmia, Iran

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Abstract

Context: The historical evolution of health and medical education in Iran has been shaped by interactions among indigenous traditions, missionary initiatives, and modern state reforms. Urmia, in West Azerbaijan Province, occupies a distinctive place in this history as one of the country's earliest centers of Western-style medical education.

Evidence Acquisition: This study aimed to examine the historical development of health and medical education in Urmia and to analyze its transformation from missionary-led initiatives into a modern academic healthcare institution. A qualitative historical research design incorporating a narrative historical review was employed. Data were collected from literature indexed in PubMed, Scopus, and Web of Science and were supplemented by archival and historical sources. The data were analyzed using thematic and chronological synthesis to evaluate institutional continuity and educational transformation.

Results: The findings indicate that Joseph P. Cochran's establishment of Westminster Hospital and Medical College in 1878 - 1879 marked the introduction of structured Western medical education in Iran. Despite the institution's decline following Cochran's death in 1905, its educational legacy persisted in the region. The establishment of Urmia University of Medical Sciences (UMSU) in 1985 subsequently institutionalized modern health and medical education within Iran's national healthcare system.

Conclusions: Urmia's health and medical heritage illustrates a process of educational adaptation, localization, and institutional continuity. Urmia University of Medical Sciences has a rich health and medical heritage spanning more than a century and serves as a cross-cultural bridge between missionary medicine and modern Iranian healthcare. These findings underscore the historical continuity of health and medical education and healthcare in Urmia and provide insights into the evolution of medical education systems in non-Western contexts.

Keywords: Medical Education, Health Education, History Of Medicine, Urmia University Of Medical Sciences, Missionary Medicine

1. Context

The modernization of health and medical education in Iran emerged through complex interactions among traditional health and medical practices, missionary medicine, and state-led reforms (1-4). Although the development of modern medicine in Tehran and other major cities has received considerable scholarly attention, regional centers such as Urmia remain comparatively understudied (1, 3, 5).

Urmia occupies a distinctive place in the history of Iranian health and medicine due to the establishment of Westminster Hospital and Medical College in the late nineteenth century by Joseph P. Cochran (1855 - 1905). Frequently described as one of the first modern medical schools in Iran, this institution introduced structured curricula, clinical education, and Western biomedical practices in the region (6).

Urmia University of Medical Sciences has a rich heritage in health and medical education spanning more than a century. Unlike many modern institutions that emerged

solely through twentieth-century governmental reforms, the origins of health and medical education in Urmia can be traced to nineteenth-century missionary initiatives. Consequently, Urmia represents a bridge between missionary medicine and modern Iranian healthcare. This historical continuity in health and medical education and healthcare in Urmia provides a unique opportunity to examine how educational traditions evolve, adapt, and become institutionalized over time.

Beyond its regional importance, the historical trajectory of health and medical education in Urmia contributes to broader discussions of educational transfer, the localization of medical knowledge, and institutional continuity in non-Western contexts (6). Therefore, the present study aims to analyze the evolution of medical education in Urmia from the missionary period to the development of a contemporary academic healthcare system.

2. Evidence Acquisition

This study employed a qualitative historical research design incorporating a narrative historical review. Historiographic analysis was combined with thematic synthesis to examine the evolution of medical education in Urmia.

A comprehensive literature search was conducted in PubMed, Scopus, Web of Science, and Google Scholar. Search terms included combinations of the following keywords:

“Urmia medical education”, “Joseph Plumb Cochran”, “Westminster Medical College”, “history of medicine in Urmia”, “history of healthcare in Urmia”, “missionary medicine”, and “medical heritage”. The reference lists of eligible studies were manually screened to identify additional relevant publications.

The inclusion criteria comprised peer-reviewed articles indexed in PubMed or Scopus; historical studies related to healthcare and medical education in Urmia; publications discussing Urmia or Urmia University of Medical Sciences; and English-language historical analyses. The exclusion criteria comprised non-scholarly reports, duplicate records, and sources without verifiable references.

Extracted data included institutional milestones, educational structures, historical events, sociocultural contexts, and healthcare impacts. Data were analyzed through chronological reconstruction and thematic coding.

The main analytical themes included 1) missionary foundations of medical education, 2) localization of health

and medical knowledge, 3) institutional continuity and transformation, and 4) integration into the national healthcare system. To enhance methodological rigor, multiple independent sources were compared through triangulation, with preference given to peer-reviewed and indexed publications.

This study used exclusively published and publicly available historical sources. The study was approved by the Medical Research and Ethics Committee of the Urmia University of Medical Sciences with registration number IR.UMSU.HIMAM.REC.1405.005.

Available at:
<https://ethics.research.ac.ir/EthicsProposalView.php?id=864759>

3. Results

The establishment of Westminster Medical College in 1878 - 1879 represented a major turning point in Iranian medical education. The institution integrated structured curricula, clinical hospital training, anatomy instruction, and modern biomedical approaches (6).

Joseph P. Cochran (Figure 1) played a central role in organizing medical training and hospital-based clinical education in Urmia. The educational model introduced by Westminster Medical College differed substantially from traditional apprenticeship-based medical systems (6).

Although the medical school trained a relatively limited number of physicians, its influence extended throughout northwestern Iran. Graduates contributed to the dissemination of modern health and medical knowledge and to hospital-based medical practice.

The institution also promoted public health awareness, clinical medicine, surgical training, and structured medical instruction. This early educational system laid the foundation for the subsequent acceptance and institutionalization of modern medicine in the region (6).

Following the death of Joseph Plumb Cochran in 1905, Westminster Hospital was renamed Cochran Memorial Hospital in recognition of his major contributions to medical education and healthcare services in Urmia. The hospital continued to function as an important center for modern medical care and professional training (Figure 2). In 1915 - 1916, Cochran Memorial Hospital initiated organized academic nursing education, representing one of the earliest structured nursing training programs in northwestern Iran. This development demonstrated that, despite challenges in physician education, the institution's educational mission continued through nursing preparation and hospital-based learning (6).

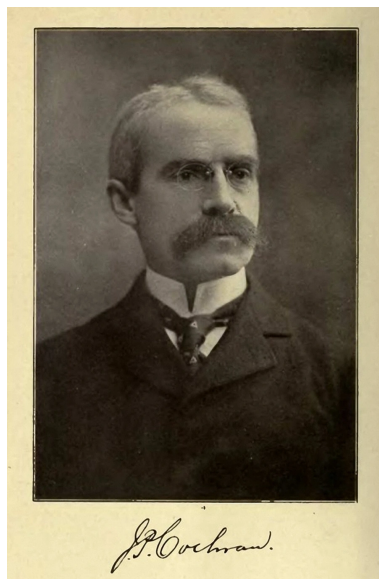


Figure 1. Joseph P. Cochran (1855 - 1905)



Figure 2. Cochran Memorial Hospital

The period between the early twentieth century and the establishment of modern medical education in Urmia represents a critical transitional phase in the history of healthcare development in the region. Although the closure of Westminster Medical College in 1915 marked the end of formal physician training in Urmia for several

decades, it did not signify the disappearance of modern medical practices introduced through missionary medicine. Instead, many institutional, educational, and professional traditions established during the missionary period continued to influence healthcare development in the region (6).

The outbreak of the First World War (1914 - 1918) profoundly affected missionary healthcare activities throughout the region. Owing to wartime instability, missionary operations were interrupted, and many missionary personnel, including physicians and educators, left Urmia and relocated to Tabriz. Consequently, hospital and educational activities were substantially reduced during this period. Nevertheless, the institutional identity and healthcare infrastructure established by the missionary system remained influential (6).

During the early 1930s, Cochran Memorial Hospital resumed its activities, particularly in nursing education and healthcare service delivery (Figure 3). The revival of nursing training represented an important step in maintaining continuity in modern healthcare education in Urmia after years of disruption. The hospital continued to serve as a center in which Western medical knowledge, clinical practice, and healthcare organization were integrated into the local healthcare environment (6).

Table 1. Historical Milestones in the Development of Health and Medical Education in Urmia University of Medical Sciences, Urmia, Iran

Period	Major Event	Educational Significance
1878 - 1879	Westminster Hospital and Medical College founded	Introduction of modern health and medical education
1905	Death of Joseph P. Cochran and renaming of Westminster Hospital to Cochran Memorial Hospital	Beginning of institutional transition and preservation of medical legacy
1915 - 1916	Initiation of academic nursing education at Cochran Memorial Hospital	Early organized nursing education in the region
1914 - 1918	First World War and interruption of missionary activities	Suspension of medical and educational activities
Early 1930s	Reactivation of Cochran Memorial Hospital nursing education	Continuation of modern healthcare and nursing training
1934 - 1935	Termination of missionary activities and renaming of Cochran Memorial Hospital to Urmia Government Hospital	Transition from missionary healthcare to state-administered medical services
1915 - 1977	Transitional period	Preservation of modern medical practice and institutional continuity
Early 1970s	West Azerbaijan Project implemented around Urmia endorsed by WHO	Foundation for Iran's nationwide primary healthcare network
1977	Faculty of Medicine established	Reintroduction of formal medical education
1985	Urmia University of Medical Sciences established	Institutionalization within national healthcare system
2000s-present	Expansion of research and education	Regional academic healthcare leadership

**Figure 3.** First nursing class graduation, 1931, Cochran Memorial Hospital

In 1935, following the termination of missionary activities in Iran, Cochran Memorial Hospital was transferred to government administration and renamed Urmia Government Hospital (Figure 4). This transition represented a major historical turning point: healthcare services that had originated within a missionary framework became incorporated into the national healthcare system. Rather than reflecting institutional collapse, this transformation illustrates the localization and adaptation of imported medical models within Iranian governmental structures (6).

**Figure 4.** Urmia Government Hospital

The mid-twentieth century was characterized by the gradual expansion and modernization of medical education in Iran. Although Urmia did not have a medical school during this period, the clinical traditions, healthcare infrastructure, and professional culture established through earlier institutions contributed to the

preservation of modern medical practice in the region. National developments in Iranian medical education, particularly the expansion of university-based medical training and increasing alignment with international models, created the foundation for the subsequent revival of medical education in Urmia.

By the 1970s, healthcare development in Urmia became increasingly connected to national health system reforms. In the early 1970s, Iran initiated several pilot projects aimed at improving rural primary healthcare delivery that were endorsed by the World Health Organization (WHO). One of the most influential initiatives was the West Azerbaijan Project, whose pilot implementation was conducted around Urmia (Figure 5). The experiences gained from this project contributed to the development of Iran's nationwide primary healthcare network and demonstrated the continuing role of the region in shaping national healthcare strategies.

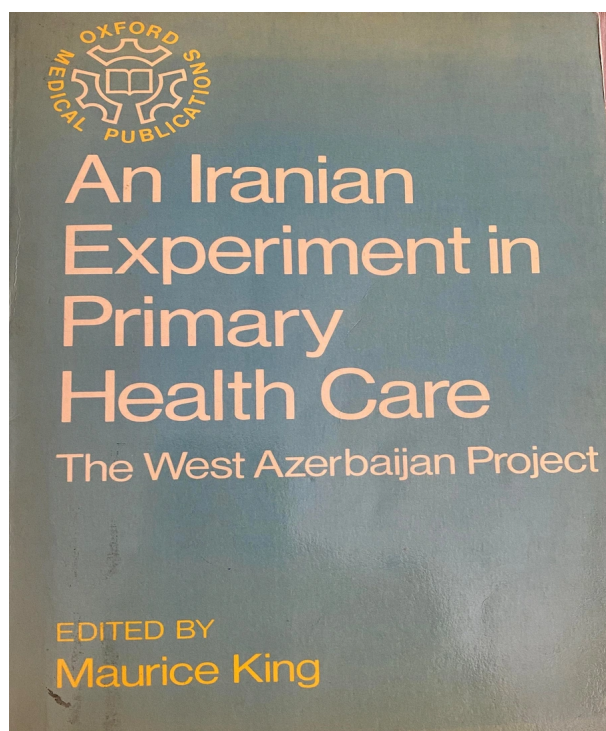


Figure 5. An Iranian experiment in primary health care, West Azerbaijan Project

Therefore, this transitional period should not be viewed as a gap between missionary medicine and modern academic healthcare. Instead, it represents a phase of adaptation, preservation, and transformation in which

institutional knowledge, healthcare practices, and educational traditions were transferred from missionary organizations to governmental and academic systems. This historical continuity ultimately contributed to the establishment of modern medical education structures in Urmia and the subsequent development of Urmia University of Medical Sciences.

The establishment of a medical faculty in Urmia in 1977 marked the reintroduction of formal medical education into the region. Subsequently, the formation of Urmia University of Medical Sciences in 1985 institutionalized these developments within Iran's national healthcare and higher education systems.

Over subsequent decades, Urmia University of Medical Sciences expanded considerably through developments consistent with broader reforms in Iranian medical education systems (Table 1), including the development of new academic faculties, expansion of teaching hospitals, establishment of research centers, and increased scientific productivity.

The historical development of health and medical education in Urmia demonstrates a continuous process of adaptation and institutional transformation.

3.1. Discussion

The modernization of medical education in Iran represents a gradual transition from traditional apprenticeship-based approaches to structured university education, curriculum development, and closer integration between healthcare delivery and academic training. Following the expansion of medical schools and the establishment of new educational structures, Iranian medical education has undergone continuous reforms aimed at improving curriculum design, clinical training, and alignment between educational outcomes and healthcare system needs. Tavakol et al. emphasized major challenges and priorities in Iranian medical education, including curriculum innovation, improved integration of basic sciences with clinical learning, and greater emphasis on learner-centered approaches (1).

The historical development of medical education in Iran reflects interactions among indigenous medical traditions, missionary initiatives, and modern state reforms. Within this broader context, the evolution of medical education in Urmia illustrates how regional institutions contributed to the transformation of health professions education in response to changing social, technological, and healthcare demands. Although the early foundations of medical education in Urmia were influenced by missionary medicine, bedside clinical training, and institutional development, contemporary medical education has expanded toward a greater

emphasis on professionalism, innovation, and learner-centered approaches (4, 6, 7).

This study highlights the historical importance of Urmia in the development of modern medical education in Iran. The findings suggest that the history of medical modernization cannot be understood solely through centralized narratives focused on Tehran (8-10). Regional institutions played an important role in shaping healthcare education through cross-cultural exchange, adaptation of international educational models, and sustained institutional development (11).

A major finding of this study is the continuity between early missionary-led medical education and contemporary academic healthcare structures in Urmia. Westminster Hospital and Medical College and the later establishment of Urmia University of Medical Sciences should not be viewed as separate historical episodes, but rather as interconnected stages in the evolution of regional healthcare and education (7). Urmia therefore represents a bridge between missionary medicine and modern Iranian healthcare, demonstrating how externally introduced educational models were gradually localized, institutionalized, and integrated into national healthcare systems (4, 7).

The transition from Westminster Medical College to Urmia University of Medical Sciences reflects broader processes of institutional transformation within Iranian healthcare policy. Despite interruptions in educational activities, including disruptions related to the First World War and changes in missionary operations, medical knowledge, clinical traditions, and healthcare services remained influential in the region and contributed to later institutional development.

The contribution of Urmia and West Azerbaijan to Iran's primary healthcare system further demonstrates the region's broader historical significance. The West Azerbaijan Project of the 1970s served as an important pilot initiative for rural primary healthcare delivery and later influenced the nationwide implementation of Iran's primary healthcare network. This experience illustrates that Urmia's contribution extended beyond medical education and included innovation in healthcare organization and service delivery.

From a contemporary health professions education perspective, the historical experience of Urmia provides insights into several ongoing challenges, including the sustainability of educational reforms, regionalization of medical education, institutional resilience, and localization of international educational models. The history of Urmia contributes to the growing literature on medical heritage by demonstrating how educational systems in non-Western contexts adapt, transform, and

develop through interactions between local needs and global influences (12, 13).

The evolution of medical education has increasingly extended beyond biomedical knowledge and technical competence to include communication skills, professionalism, empathy, and patient-centered care. Contemporary educational approaches, including technology-enhanced and humanities-based strategies, aim to strengthen these competencies among medical students (14). These principles have historical parallels in the early medical institutions of Urmia, where clinical training was closely connected to community service, patient care, and social responsibility.

Similarly, the continued evolution of foundational disciplines such as anatomy demonstrates how medical education adapts while preserving essential components of clinical competence. Modern approaches to anatomy education have introduced new teaching strategies while maintaining the discipline's central role in medical training (15). In this context, the historical trajectory of medical education in Urmia represents a broader transformation from nineteenth-century Western-style medical training at Westminster Medical College to a comprehensive academic health sciences system integrating education, research, and healthcare delivery.

Healthcare education systems have repeatedly demonstrated resilience in response to social and global disruptions. The COVID-19 pandemic highlighted the need for flexible and innovative educational models to maintain clinical training during periods of uncertainty (16). Similarly, historical disruptions, including the interruption of missionary activities during the First World War, demonstrate that medical education and healthcare institutions can withstand major challenges through adaptation and institutional continuity.

This study relied primarily on published historical and secondary sources. Limited access to unpublished archival documents may have restricted aspects of historical reconstruction. Future investigations incorporating archival materials, missionary correspondence, institutional records, and oral histories may provide further insights into the development and transformation of medical education in Urmia.

Overall, the history of medical education in Urmia demonstrates that regional institutions can make lasting contributions to national healthcare development. The transition from missionary medical initiatives to a modern academic health sciences system illustrates how medical knowledge is transferred, adapted, and sustained across different historical contexts. Urmia's experience provides a valuable example of institutional continuity and

educational transformation within the broader history of modern Iranian healthcare.

4. Conclusions

The historical development of medical education in Urmia reflects a distinctive trajectory of institutional transformation, adaptation, and continuity within the broader evolution of health professions education. Urmia University of Medical Sciences has a rich medical heritage spanning more than a century, beginning with the establishment of Westminster Hospital and Medical College in the late nineteenth century and continuing with the development of a modern academic health system that integrates education, research, and healthcare delivery. The findings of this study demonstrate the historical continuity between early medical education initiatives and contemporary healthcare structures in Urmia, highlighting the city's role as a cross-cultural bridge between missionary medicine and modern Iranian healthcare (4, 6).

Medical education is not a static institutional process but rather an evolving system shaped by historical circumstances, scientific advances, educational innovations, technological developments, and professional values (15). The transformation of medical education in Urmia illustrates how educational institutions can preserve historical legacies while adapting to changing healthcare needs. This trajectory parallels broader global movements in health professions education, emphasizing competency-based training, interprofessional collaboration, and stronger alignment between educational institutions and healthcare systems to improve population health outcomes, as described by Frenk et al. (17).

Beyond its regional importance, Urmia's experience contributes to broader discussions regarding the transfer, localization, and institutionalization of medical knowledge in non-Western contexts. The transition from missionary-based medical training and hospital-centered education to an integrated academic healthcare system demonstrates how external educational models can be adapted to local needs and sustained through institutional development. Urmia's medical heritage therefore provides valuable insights into the dynamic relationship among historical continuity, educational transformation, and healthcare innovation (Figures 6 and 7).

Highlights

- * Westminster Hospital and Medical College in Urmia represented the first modern medical schools in Iran.
- * The study explores the transition from missionary medicine to institutionalized academic healthcare.
- * Urmia University of Medical Sciences has a rich medical heritage that spans more than a century.
- * The findings demonstrate the historical continuity of medical education and healthcare in Urmia.
- * Urmia represents a cross-cultural and bridge between missionary medicine and modern Iranian healthcare.

Figure 6. Highlights



Figure 7. Conceptual continuity framework of health and medical heritage in Urmia

Footnotes

AI Use Disclosure: The authors declare that no generative AI tools were used in the creation of this article.

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