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PUBLIC HEALTH IN MECCA (1895–1924): A COMPARATIVE HISTORICAL STUDY OF OTTOMAN FOUNDATIONS AND HASHEMITE REFORM

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ABSTRACT

This study examines the formation and evolution of the Public Health Administration in Mecca Al-Mukarramah between 1895 and 1924, focusing on prevailing sanitary conditions, the causes of public health deficiencies, and the measures adopted to address them. Using a descriptive–analytical historical method and sources including Ottoman health reports, Hashemite administrative documents, contemporary newspapers, and eyewitness accounts, it reconstructs the institutional and epidemiological landscape of Mecca under late Ottoman and early Hashemite rule. Findings reveal a delayed yet significant expansion of public health measures under Sultan Abdülhamid II, followed by administrative continuity and gradual reform under the Hashemite government. The comparative analysis shows both administrations sought to reduce epidemic risks among pilgrims, with the Hashemites developing inherited foundations. The study concludes that establishing a formal health administration was central to improving sanitary conditions in Mecca, given its global religious significance.

KEYWORDS: Mecca Al-Mukarramah, Hijaz, Public Health Department, Diseases and Epidemics, Hashemite Era, Ottoman Era.

1. INTRODUCTION

The study's main aim is to emphasize the necessity of the Hijaz region's health administration in general and Mecca Al-Mukarramah especially during both the Ottoman and Hashemite periods (1895–1924), and to follow the path it took through the various stages, procedures, organizational structures, and functions that were accompanied by the improvements of the Hashemite era. The descriptive-analytical method of research is used as the main approach to the study, the first step being the gathering of information from primary and secondary sources. The information is then analyzed, compared, and synthesized in order to create the various themes that the study deals with. The value of this research is in its being a source of new information on the latter part of Ottoman rule, the Hashemite period, and, particularly, the role of the Public Health Department (1895-1924) which was divided into preventive and therapeutic functions. Moreover, the health measures adopted under the two different regimes are discussed and a comparative and analytical assessment of them is provided.

This study attempts to answer a number of interconnected questions regarding the history of public health administration in Mecca during the late Ottoman period, as well as the early Hashemite period. The study looks into the role the Hijaz played in the minds of Ottoman administrators, and the reasons behind the interest in health reforms during the reign of Sultan Abdülhamid II. It explores the administrative history of the Public Health Department in Mecca, examining its growth between 1895 and 1924. It also intends to analyze the role this department played, and to assess whether or not the Hashemites benefited from the regime and health measures of the late Ottoman period. Finally, it examines key indicators of the development of the health sector between 1916 and 1924.

1.1. Historiography of Ottoman Public Health and the Hijaz

The historical analyses of public health in the Hijaz are informed by wider historiographies on Ottoman administrative modernization, on the politics of the Hajj, and on the transition from Ottoman rule to the early Hashemite administration. In the following, the main scholarly approaches and debates are examine in order to situate the present study and to identify historiographical gaps it seeks to address. Modern scholars of Ottoman public health view the nineteenth century as a period of rapid centralization and institutional reform. During the Tanzimat (1839–1876) and Hamidian (1876–1909) periods, scholars such as Akın Sefer, Birten Çelik, Palmira Brummett, and Miri Shefer-Mossensohn show how medicine, quarantines, and sanitary councils have become central to modern governance.

Other studies have examined the response of the Ottoman state to Hijaz epidemics and Ottoman public health measures during Sultan Abdülhamid II. Sarıyıldız (1992) studies the diffusion of epidemic diseases into sanitary measures in the Hijaz and Ottoman period and Telli (2025) provides an overview of preventive policies and measures used to combat epidemics in the Hijaz during the Hamidian period. This body of literature illustrates the growth of the Ottoman state's healthcare bureaucracy, medical schools, new regulations, and the professionalization of medical practice, with an understanding of public healthcare as a means for the state to exercise power and respond to international forces, namely, the pressure of European colonial states worried about the spread of epidemics. In this regard, the research contributes not only to the history of the Hijaz but also to broader sociological debates on institutional governance and the state by analyzing how structures for the administration of disease acted as mechanisms for social regulation within a major center of religious pilgrimage.

This study shows how the organization and functions of the Public Health Department in Mecca illustrated the workings of public health administration as a form of power and governance that sought to regulate population movement, to avoid the dangers of epidemics, and to consolidate the power of health institutions in this political period.

This study of public health administration in the Hijaz also aims to situate the awareness of and concerns about public health that prevailed in the Hijaz within a global perspective. In the late nineteenth and early twentieth centuries, many states established new sets of sanitary establishments and quarantine institutions as well as administrative controls to curb the spread of epidemics and regulate the movement of populations. Such concerns with the interregional spread of epidemics such as cholera and plague emerged with greater frequency as the new century witnessed high levels of mobility and exchange, both human as well as commercial, across regions. Thus, by looking at the case of Mecca and its public health administration, this study also aims to provide an assessment of how the sanitary and quarantine controls in the Hijaz fit within local and global perspectives, and whether they were specifically shaped by the unique religious and political setting of the Hijaz or are part of broader global developments.

Although literature varies, most of it has focused on Istanbul and the territories that had been under the influence of the Ottoman Empire such as the Balkans and Anatolia, where administrative structures were better organized and archival materials are more plentiful. The limited historiographical attention devoted to the Hijaz is partly related to the uneven accessibility of archival materials and to the traditional focus of Ottoman historiography on imperial administrative centers such as Istanbul and the Balkans. The Arab states, like the Hijaz and its religious authorities and its large annual pilgrimage, have been largely ignored, and little has been learned about how the imperial health reforms were applied and later adjusted to the local populations, the environment, and various religions.

A similar body of research explores more closely the political and religious history of the Hijaz and the Hajj in late Ottoman. Here, scholars such as William Ochsenwald, Joshua Teitelbaum, Snouck Hurgronje and others argue that the major concerns are the strategic value of this region, the administration of pilgrims' gold, and modern regulatory systems. Often again, the public health component of literature is left out, hidden in larger models of governance, legitimacy and imperial diplomacy. Several writers, including Sari Yldz, have investigated the politics of international sanitary hygiene, and the extent to which European anxiety over cholera and plague indirectly affected Anglo-French participation in quarantine regimes at the Red Sea and Ottoman sanitary policy. These studies link the Hajj to global concerns about the spread of diseases and international political conflicts and show how international pressures led to the establishment of quarantine stations and sanitary councils. However, most studies have overlooked the internal workings of the Public Health Department in Mecca and instead considering how everyday administrative practices, organizational structures, operational challenges, and municipal-health interactions affected practical implementation.

The third stream of historiography looks at the political and administrative history of the Hashemite government after the Arab Revolt from a very different angle. Among the issues discussed are the military, diplomatic and constitutional nature of the early Hashemite period, including Sharif Husayn, the presence of Britain, and sovereignty and legitimacy. But, these studies neglect high-political perceptions and almost never talk about the period of administration from the late Ottoman to early Hashemite period in the public health sector, for example. Few scholars have examined the Hashemite government's taking over, changing, or repurposed Islamic sanitation habits. Most of this has also occurred with regard to the integration of Ottoman-trained medical personnel into the emerging bureaucratic structure, management of pilgrimage-related health issues after 1916 and relations between the Ottoman sanitary institutions and the Hashemite regime. This gap is striking given the epidemiological vulnerability of Mecca, especially considering the epidemiological vulnerability of Mecca and the importance of public health in ruling the Hajj. Overall, there is a wealth of literature that offers insight into the Ottoman reformism, international health politics, and political change in the Hijaz, but it remains a valuable text to understand the Ottoman reformism, international health politics, and political change in the Hijaz, but there has been little, if any, research on institutional development of the Public Health Department in Mecca between 1895 and 1924 to be done in a systematic manner that studies continuity and changes in administrative transformation between the Ottoman and Hashemite periods. Plus, no reports of the daily activities of local health departments, their pre- and curative work, or interactions with municipal officials have been conducted.

By combining Ottoman administrative reports, Hashemite press sources such as Al-Qibla, and contemporary statistical health records, this study provides a comparative institutional analysis of public health administration in Mecca during the transition from Ottoman to Hashemite rule, thereby offering new empirical evidence on the continuity and transformation of health governance in the Hijaz.

In order to close a major historiographical gap and to provide a new perspective on the intersecting sanitary dynamics of global, imperial, and local levels in one of the most important religious cities in the world, this study based on Ottoman administrative documents, Al-Qibla newspaper, medical reports, and mentions in contemporary documents reconstructs public health governance of Mecca through one of its most critical transitional periods. The creation of the Public Health Department in Mecca Al-Mukarramah during the Ottoman times should be viewed from the perspective of the city's religious and socio-political importance to Muslims worldwide that prompted the rulers to be considerate of its security, sovereignty, and stability. Mecca became the spiritual center (Qibla) for Muslims and the destination for Hajj, ʿUmrah, residence, and commerce, thus remaining at the core of religious and economic life. the transition from Ottoman rule (1517–1916) to Hashemite rule (1916–1924) marked a

significant phase in modern history of the city characterized by political and administrative transformations of large scale. It is against this historical backdrop that the present study investigates public health conditions during the late Ottoman and early Hashemite periods, and it analyzes the role of the Public Health Department in Mecca (1895–1924) separating its functions into preventive and curative, illustrating the measures taken under both administrations and offering a comparative evaluation of them.

The administration's focus on public health in the Hijaz was lifted with the European involvement in pilgrimage matters which was justified by the pretentious ground of "health protection." The French and the British aimed to establish their dominance by asserting the origin of cholera in Zamzam water and sacrificial remains in Mina. After the 1865 pilgrimage season, France expressed concerns regarding infection transmission among its colonial pilgrims (Yıldız, 2003, p. 241). These fears led to international conferences, and the 1866 conference resolved to establish Red Sea quarantine stations under the Health Council in Istanbul and to create an official authority to oversee health in order to protect European states from epidemics allegedly originating in the Hijaz (Radwan, 2018, p. 2435; Prost's Journey to the Hijaz, p. 126). European pressure prompted the Ottoman Porte to strengthen public health, leading to the establishment of the first health administration in Mecca in 1895, founded by Osman Nuri Pasha in Ajyad and subordinated to the Health Council in Istanbul, with a specific budget from the Ministry of Finance. Although the Ministry had limited authority in health affairs, it played a key role in founding the institution, which later led to the transfer of pilgrimage affairs to the Ministry of the Interior in 1910 (Yıldız, 2001, p. 281; Al-Subaiʿi, 1999, vol. 2, p. 669).

On July 10, 1910, the Health Council of the Hijaz (Majlis Sihhat al-Hijaz) was established by Ottoman decree. Ahmed Rıza Bey Efendi, Speaker of the Ottoman Chamber of Deputies, served as Honorary President, and Talat Bey Efendi, Minister of the Interior, served as President. Members included Sharif Abdullah Bey (Deputy of Mecca), Medhat Shukri Bey (Deputy of Siroz), Ruhi al-Khalidi (Deputy of Jerusalem), Dr. Rasim Omar Bey (President of the Royal Medical and Public Health Council), Dr. Asʿad Bey (member of the same council), Dr. Qasim ʿIzz al-Din (General Inspector of Health Departments), and Dr. ʿAql Mukhtar Bey (Member of the Health Council) (Yıldız, 2003, pp. 281–282; ʿIzz al-Din Efendi, Ottoman Health Report of 1894, pp. 495–500). The Council exercised authority over all medical institutions in the region, and its internal regulations consisted of four principal articles defining objectives (improving sanitary conditions, treating patients, preventing disease spread, and establishing medical institutions), administrative organization, financial responsibilities, and authority to appoint and dismiss personnel (Yıldız, 2001, pp. 281–283). The Health Committee of Mecca consisted of a director, six physicians during the pilgrimage season, a chief pharmacist, two pharmacists, three health-security officers, two clerks, a treasurer, a chief guard, twenty-four permanent guards, twelve temporary guards, and eight paramedics (ʿIzz al-Din Efendi, Ottoman Health Report of 1894, pp. 495–500).

The Public Health Department in Mecca was assigned broad responsibilities including free medical treatment for patients, preventing overcrowding among pilgrims, ensuring street and market cleanliness, supervising the hygiene and ventilation of accommodations, and inspecting food and beverage sales locations. It isolated cholera and other infectious-disease patients, buried animal carcasses, protected water sources, disinfected sites where cholera appeared, recommended temporary hospitals outside Mecca and Jeddah, and prohibited the entry of animals and goods when required for public protection (ʿIzz al-Dīn Efendi, Ottoman Health Report of 1894, pp. 495–500).

1.2. Epidemics and Public Health Conditions in Mecca

The Hijaz region suffered from numerous epidemics, primarily due to the arrival of pilgrims from every part of the world and the weakness of preventive medicine. Among these diseases was:

cholera: which appeared for the first time in 1831, causing the death of more than 15,000 people. The roads became crowded with corpses, and the disease spread through villages across the Hijaz. Subsequent outbreaks occurred as shown in the historical records (The Secret Journey of the Russian Officer Doltchin, pp. 242–244; ʿAlī, Sahar, 2021, pp. 182–187; Al-Harithi, 2021, pp. 221–226).

Table 1: The Cholera Epidemic

Year(s)	Description
First appearance – 1831	Spread among the population in the Hijaz, causing the death of 15,000 people, with streets becoming overcrowded with the deceased.
1832	Spread among the villages, resulting in the death of 10,000 people.

1834, 1836, 1838, 1840	The outbreaks were less severe and less destructive, causing relatively few deaths among pilgrims compared to previous years.
1845–1846	The number of cholera victims continued to rise, reaching 10,000 deaths in Mecca Al-Mukarramah alone.
Strongest outbreak – 1865	The epidemic caused 30,000 deaths.
1872	Transmitted by pilgrims arriving from India, resulting in the death of several visitors to Mecca.
1877	First appeared among pilgrims from Bangladesh, continued into the following year, and struck the Hijaz with great intensity; daily deaths were recorded in Mecca as a result.
1881	The epidemic spread through Indian pilgrims, leading to the death of 2,542 people within twenty days.
1882	Caused 4,421 deaths.
1893	The number of fatalities ranged between 32,000 and 40,000 people.
1902	Resulted in approximately 4,000 deaths.

1.2.1. The Plague Epidemic

The plague was the second epidemic to appear in the Hijaz region, transmitted through pilgrims arriving from India and East Asia, which were among the main regions where the disease was endemic. Its outbreaks in the Hijaz occurred repeatedly, as shown in the following table (ʿAlī, Sahar, 2021, pp. 182–187; Al-Harithi, 2021, pp. 221–226).

Table 2: The Plague Epidemic

Year(s)	Description
1536	First recorded appearance in the Hijaz region, causing the death of sheep and livestock.
1815	Spread in the city of Jeddah, resulting in the death of thousands; it was brought in by two ships arriving from Suez carrying cotton.
1896–1898	Transmitted by pilgrims arriving from India, leading to 1,400 deaths in the Hijaz.
1910	Caused the death of 95 people in Jeddah and one death in Mecca Al-Mukarramah.
1911	Resulted in 300 deaths in Mecca and Jeddah.

1.2.2. The Smallpox Epidemic:

The smallpox disease spread widely throughout the Hijaz region over various years, recurring periodically in different localities (ʿAlī, Sahar, 2021, pp. 182–187; Al-Harithi, 2021, pp. 221–226).

Table 3: The Smallpox Epidemic

Year(s)	Description
1561	The first recorded appearance of smallpox in the Hijaz. It spread widely in Mecca Al-Mukarramah among both residents and visitors, causing countless daily deaths. In many cases, multiple bodies were carried in a single bier.
1868	Caused numerous deaths, and medical efforts were unable to contain it.
1893–1895	First appeared in Al-Madinah Al-Munawwarah, then spread throughout the Hijaz. Most victims were children, and the annual death toll exceeded 1,000 deaths, prompting authorities to vaccinate people across the region with a smallpox vaccine.

The spread of epidemics and diseases in Mecca can be attributed to several interrelated causes. Pilgrims arriving from diverse regions brought varying health conditions, while low standards of preventive care facilitated transmission. Water supplies frequently got polluted, there was a lack of sanitation, and the waste generated piled up on the streets and at the places of lodging. The putrefaction of the sacrificial remains produced stinking odors and invited flies, poorly functioning sanitation systems made it impossible for people to relieve themselves at designated places which resulted in indoor soil pollution. The severe crowds and narrowness of the internal roads hastened the spreading of diseases. The Russian officer 'Abd al-'Azīz Dulatchin, in his account of Mecca (1898–1899), portrayed the pilgrims as very much at risk due to the difficulties of trips, crowded places, choking conditions on ships, bad food, and the hot and hummy weather (The Secret Journey of the Russian Officer 'Abd al-'Azīz Dulatchin to Mecca, 1898–1899, p. 245).

Additional causes were environmental. The Hijaz experienced high temperatures, drought, scarce rainfall, and torrential floods, such as the Great Flood, which inflicted severe damage (Al-Ghāzī, ʿAbd Allāh, 2009, vol. 2, pp. 435–437).

1.3. Administrative and Institutional Responses to Public Health Challenges

Sultan Abdülhamid II (1876–1909) ordered in 1878 the cleaning of ʿAyn Zubayda channels, construction of reservoirs in Jeddah and Yanbuʿ, cisterns in Mecca, and extending water to Ghurabā' Hospital. The Ottoman government supervised the cleaning of wells at Bi'r ʿAlī, while the governor of Damascus, Osman Pasha, mandated emptying Minā cisterns before the pilgrimage season, building latrines, employing sweepers, burying sacrificial remains, and establishing a committee to inspect food and oversee

market cleanliness (Snouck Hurgronje, 1419 AH, vol. 1, pp. 80–81; al-Makkī, 2006, p. 21; ʿAlī, 2021, pp. 190–191). Sultan Abdülhamid II then formed the Hijaz Health Council in 1895, established a major hospital in Mecca capable of serving thousands of patients, expanded Ghurab' Hospital and sent medical personnel and medicines ((al-Makkī, 2006, p. 21; ʿAlī, 2021, pp. 190–191).). He also ran a guesthouse, Masfir Khana, in 1900 to house the poor and pilgrims with his own funds (Sedek, 2006, p. 119).

These actions represent efforts to improve public health following the discovery of the causes of epidemics and flaws in preventative systems, particularly since Mecca is a global pilgrimage destination. The evaluation of the scenario was supported by a number of medical reports. According to the Ottoman Health Report of 1894 by Qāsim Efendi ʿIzz al-Dīn, the main causes of the decline were dirtiness in the streets, markets, and houses, contaminated food and water, and air pollution due to dead animals and sacrificial remains (ʿIzz al-Dīn Efendi, 1894, pp. 495-500). Besides, the report of the Egyptian doctor Ṣāliḥ Ṣubḥī (1891-1894) suggested steps like better quality of food, more purification of drinking water, accurate information on weather conditions, proper supply of medicines, pharmacies also in the country, a doctor on every ship, and incineration of sheep carcasses (Secret Journey of ʿAbd al-ʿAzīz Dulatchin, pp. 253-254). Of pilgrims' noncompliance, resistance to sterilization, limited Ottoman power in the Hijaz, weak coordination with Istanbul, and greedy maritime companies that overcrowded ships and forged health documents, the implementation of the different measures was affected (Al-Yazeedi, 2021, p. 265). Consequently, in the very last years of Ottoman rule, Mecca was plagued by health problems and epidemics stemming from the whole range of pilgrim-unhygienic-practices, lack of education, drinking from the same vessels, and improper waste disposal. Besides, the city was beleaguered with such major diseases as coughs, cerebral congestion, eye diseases, heatstroke, gastrointestinal and liver diseases, smallpox, cholera, and plague (Yıldız, 2001, p. 21; al-Batnūnī, 1910, p. 63; Rafīʿ, 1996, p. 228).

The establishment and administration of public health in the Hijaz between 1895 and 1924 represents a particularly noteworthy period. These years cover both the final decades of Ottoman rule and the early Hashemite era following the Arab Revolt in 1916. The function and policies of public health amid the shifting political landscape represent a crucial chapter in understanding the evolution of public health administration in this section of the Muslim world.

Figure 1: Map of the Hijaz region in western Arabia showing Mecca, Medina, and Jeddah along the Red Sea corridor during the late Ottoman and early Hashemite periods.
Source: Wikimedia Commons (n.d.).

2. METHODOLOGY

This study adopts the descriptive–analytical approach of the historical method, where the researcher collects the evidence from original sources in a way that is consistent with analysis and critical thinking, then presents it in an organized and comparative way. The aim is to explore and evaluate the history of public health in Mecca Al-Mukarramah during the late Ottoman period (1895-1916) and the

Hashemite rule (1916-1924). This study provides historical context and institutional analytical frameworks that take public health administration as a model of governance for the management of disease, population flow, and epidemic risk at a major pilgrimage center. In this way the study investigates how administrative functions and institutions responded to public health challenges within a broader theory of governance and state organization.

Primary Source Foundation. The data are taken from many carefully selected and diverse primary sources, including administrative documents, such as the report of Dr. Qāsim ʿIzz al-Dīn in 1894, and documents detailing the structure, law, and framework of the Ottoman health policies. The Al-Qibla newspaper, published from 1916 to 1924, has well-maintained quality and quantity data on patient inflow, deaths and measures taken to control the epidemics, as well as information about events relating to staffing, public laws, health drives, and administrative decisions during the Hashemite rule. In addition, traveler's writing and modern stories, such as the Russian officer ʿAbd al-ʿAzīz Dulatchin, offer an outsiders' view of the sanitary situation, crowd control, and the reality of an epidemic that cannot be covered by the government narrative. And through its publication as well as by a similar publication, Arab Bulletin, and other Consular or Health reports, international media position local events within larger global problems such as epidemic transmission, quarantine enforcement, and health administration in the Red Sea region.

The analysis was detailed. Primary sources were viewed with skepticism regarding accuracy, authorship, audience, motivation, and various other factors: Al-Qibla, for instance, was analyzed carefully since it was the official voice of the Hashemite government. Historical mortality rates are of particular interest because these figures are likely to be approximation of rates found in the history of epidemics, which could overestimate the current reports. Thus, the figures in this study should be considered approximate historical estimates rather than precise demographic estimates and, where possible, have been compared with other comparable recent literature.

After this, the material was broken down into themes by code to be organized into institutional frameworks, preventive measures, epidemic response, administrative capacity, and international sanitary pressures. Then it transitioned to a comparative analytical model that put the results of the Ottoman and Hashemite periods side by side to evaluate the characteristics of continuity, reform, and divergence, focusing on the particularity of administrative restructuring, the expansion of services, and the rise of public health interventions. Finally, quantitative information from Al-Qibla and official health reports was collected and processed to determine the trends in morbidity, mortality, and hospital use and thus, the claims made concerning changes in the effectiveness of public health governance were empirically based on these time periods.

This connection to historiography is evident, because the research approach proposed addresses directly the gaps identified in the academic literature, such as the lack of a complete and source-based comparison of public health administration in the Hijaz following the shift from Ottoman to Hashemite rule. By combining administrative documents, press releases, travelogues and international reports, this research provides a comprehensive and empirically grounded account of institutional continuity and change. Another drawback to this form of historical research is that it relies on government sources to provide a complete picture of events and people's opinions. State documents can be used, but at a cost that cannot fully represent the views and experiences of ordinary people or pilgrims. This limitation has declined as travel narratives and international reports are used as sources, but it is still an issue in administrative history analysis in pre-modern contexts. This research is divided into two main sections. The first describes how the Public Health Department was established and developed during the Ottoman period in Mecca, and the second describes administrative changes, the role and duties of the Public Health Department under Hashemite rule.

3. RESULTS

The aforementioned considerations led to the creation of the Main Health Department under Hashemite rule in 1917, and the creation of the ex-Ottoman Health Office in the Ajyād area of Mecca as its headquarters. The continuity of these institutions demonstrates that the Hashemites did not establish a new system for health in the Hijaz, but rather extended and reconfigured the existing administrative structures that had been in place towards the end of the Ottoman era to control health and the medical risks of pilgrimage, such as health councils, quarantines, and hospitals.

The building underwent renovation, and a full set of staff consisting of physicians, pharmacists, attendants, clerks, and nurses was obtained. Beds

were provided for patients, rooms were maintained and repaired, and the required renovations were undertaken. Special rooms were created for cooking and for laundering clothes, and the rooms on both the ground and upper floors were repaired. In addition, the necessary sanitary and surgical instruments were brought in for the department, and a private garden containing flowers, plants, and trees was added to the premises for the comfort of the residents of Mecca and the pilgrims. (Al-Qibla Newspaper, Issue 54, 1917, p. 3; Issue 55, 1917, p. 2). This department began its responsibilities in early 1917, receiving patients and providing therapeutic services. The Health Department in Mecca (1917–1924) was headed successively by the following physicians: Muḥammad Salīm, Muḥammad al-Ḥusaynī, and Nadīm Ṣalāḥ. (Al-Qibla Newspaper, Issue 57, 1917, p. 3; Issue 60, 1917, p. 2; Issue 96, 1917, p. 2; Issue 146, 1918, p. 3).

During the Hashemite period, the Public Health Department in Mecca included the following sections: (Al-Qibla Newspaper, Issue 57, 1917, p. 3; Issue 158, 1918, p. 2).

a) The Physicians' Department, including: Maḥmūd Ḥamdī and Tawfīq Aḥmad.
b) The Pharmacists' Department, including: Muḥammad Ḥasanayn.
c) The Nurses' Department, including: ʿAbd Allāh ibn Muḥammad Makkī, Darwīsh Khasayfān, Sirāj ʿAqqād, Muḥammad ibn Aḥmad Shāh, ʿAlī ibn Muḥammad Fāḍil, ʿUthmān ibn Aḥmad Bukhārī, Muḥammad ibn Aḥmad Sulaymān Madanī, and Ḥasan ibn Yūsuf Ṭālib.
d) The Clerks' Department, including: ʿAbd al-Ḥayy Qazzāz, Ibrāhīm ibn ʿĀyiḍ, Sirāj ibn ʿUmar, Muḥammad Sirāj ʿĀbid, and Sayf al-Dīn Rajab.

Cooks, launderers, a doorman, and a gardener were also appointed to the Health Department. These positions were publicly announced in Al-Qibla newspaper. (Al-Qibla Newspaper, Issue 568, 1922, p. 4).

Compared with the late Ottoman arrangements described earlier, the Hashemite administration appears to have strengthened the operational capacity of the health department by expanding personnel, improving facilities, and formalizing administrative procedures, while maintaining several institutional practices that originated under Ottoman sanitary reforms.

On 21 April 1918, after his inspection visit to the headquarters of the Health Department, King Ḥusayn ibn ʿAlī issued orders for the construction of five new rooms in the center of the department, designed according to the best modern sanitary standards. These rooms were allocated as follows: a special room for surgical operations equipped with instruments and apparatus; a room for general medical examinations; a room containing a large pharmacy belonging to the department; a room designated for the examination of women; and a room containing a large hall for the accommodation of patients. He also ordered the establishment of two large storerooms for keeping medicines, instruments, and the supplies required by the General Health Department. (Al-Qibla Newspaper, Issue 174, 1918, p. 2). The functions of the Health Department in Mecca between 1917 and 1924 included managing hospitals, supervising them, and working on their development, which formed one of its primary responsibilities. The main hospitals of the time were the Health Hospital of the Main Health Department and the National Hospital, which was the precursor of Mustashfā al-Qabbān, one of the oldest hospitals in Mecca. The building's title was "al-Qabbān", because it had once been a place to weigh sacks of grain, ghee, honey, and similar goods on a long balance, where items were placed and lifted by two people to determine their weight in return for a fee. This historical background is documented by Al-Kurdī (2000, vol. 2, pp. 78–79) and Ḥamzah (1968, p. 206).

Along with Bahrah, between Jeddah and Mecca, a hospital was established to house pilgrims to the Sacred House. In Mecca, the General Health Department provided hospitals with tools, beds, and newly established surgical operation rooms, and obtained medical personnel from the Hijaz and from abroad, particularly Syria and Egypt. (Al-Qibla Newspaper, Issue 295, 1919, p. 2; Issue 298, 1919, p. 2; Issue 308, 1919, p. 2).

The General Health Department issued monthly statistical reports, according to the following table:

Table 4: Comprehensive Statement of the Activities of the Public Health Administration for the Year 1921–1922

Health Condition / Service	December 1921	January 1922	May 1922	April 1922	October 1922	November 1922	Total
Medical examinations and inspections	1,040	1,110	3,068	4,260	4,317	6,038	19,833
Dressing of wounds	1,159	1,328	1,405	920	690	533	6,035
Overnight hospitalization and treatment	142	153	183	165	146	189	978
Surgical operations	6	10	—	—	—	23	39
Deaths	—	17	16	9	4	17	63
Hospital discharges	—	—	114	112	85	85	396

Table 5: Comprehensive Statement of the Activities of the Public Health Administration for the Year 1923

Health Condition / Service	January	February	March	April	May	June	July	August	September	October	November	December	Total
Medical examinations and inspections	159	338	420	380	834	984	1360	1864	3864	2961	3560	4864	–
Dressing of wounds	102	234	380	219	640	1120	1120	473	2915	1870	2620	2118	–
Overnight hospitalization and treatment	–	90	83	69	73	152	224	246	211	263	187	181	–
Deaths	29	11	15	22	19	23	29	22	20	78	35	22	–
Hospital discharges	104	42	41	34	36	65	126	150	125	128	95	107	–

Table 6: Comprehensive Statement of the Activities of the Public Health Administration for the Year 1924

Health Condition / Service	February	March	April	May	June	July	August	October	Total
Medical examinations and inspections	430	760	420	864	1240	1240	2560	2480	–
Dressing of wounds	580	810	710	1400	1880	1410	1840	1320	–
Overnight hospitalization and treatment	82	79	69	59	110	110	100	119	–
Deaths	11	7	8	8	5	3	10	10	–
Hospital discharges	30	39	32	19	64	71	530	61	–

4. DISCUSSION

Based on these tables, the General Health Department of Mecca evidently adopted an institutional approach to surveillance and supervision of services and reported an increase in recipients of health care. A comparative report in the Egyptian newspaper Al-Kawkab in 1918 highlighted noticeable improvement in public health between the late Ottoman and Hashemite periods, noting that under Turkish administration patients avoided the Qabbān Hospital due to neglect, whereas after the "blessed renaissance," King Ḥusayn allocated salaries and appointed physicians, pharmacists, clerks, surgeons, nurses, and equipment (Al-Kawkab Newspaper [Cairo], Issue 109, 3 September 1918, p. 4). Statistical analysis of the highest monthly hospital visitation records shows that in November 1922, 6,030 visitors with 16 deaths represented 0.264 percent; in December 1923, 4,864 visitors with 22 deaths represented 0.452 percent; and in August 1924, 2,560 visitors with 10 deaths represented 0.390 percent. The reduced rates showed that overall public health has been improving, with decreasing death rates and increased hospital services.

These data shows that the gradual increase in health institutions has significantly improved public reliance on medical institutions and has effectively controlled the death rate, so the administrative organs of the public health system have gradually taken shape.

Prevention represented a central function of the General Health Department, which confronted epidemics and prevented their spread. During the plague outbreak of 1916–1917, a 24-hour quarantine was imposed on vessels arriving from Aden and sanitary disinfection was enforced (Al-Qibla Newspaper, Issue 74, 1917, p. 2; Issue 215, 1918, p. 1). Vaccines were imported and administered free of charge, with public announcements confirming availability (Al-Qibla Newspaper, Issue 63, 1916, p. 2; Issue 477, 1921, p. 2; Issue 110, 1917, p. 2). Furnaces were established to burn waste (Al-Qibla Newspaper, Issue 306, 1919, p. 2), and quarantine procedures were applied on Abu Saʿd Island in Jeddah in coordination with municipal authorities, including sanitation enforcement and rat extermination (Al-Qibla Newspaper, Issue 77, 1917, p. 2; Arab Bulletin, vol. 4, 1919, pp. 11–12). Supervision of medical practice and pharmacy regulation was another major function. Practicing medicine without certification was prohibited and punished, and dangerous drugs such as opium were monitored (Al-Qibla Newspaper, Issue 555, 1922, p. 3). The Department issued pharmacy permits, including for the Islamic Pharmacy owned by ʿIzzāz al-Dīn al-ʿAlawī in 1924 (Al-Qibla Newspaper, Issue 494, 1921, p. 2; Issue 498, 1921, p. 4).

Taken altogether, these measures show the official nature of preventive health measures in Mecca, the growing role of the administration in managing the threat of epidemics in this important pilgrimage site.

The Municipality of Mecca supported public health through cleanliness measures, including disinfecting homes, markets, and streets, appointing supervisors, allocating waste containers, and

designating burning sites (Al-Qibla Newspaper, Issue 575, 1922, p. 3; Issue 378, 1920, p. 2; Issue 532, 1921, p. 4). Penalties were imposed for improper waste disposal, and water cisterns were monitored and repaired (Arslān, Shakīb, 2014, p. 54; Al-Qibla Newspaper, Issue 575, 1922, p. 3). The municipality also inspected food markets, regulated prices, banned unsafe products such as unripe fruit and summer fish, and supervised water distribution standards (Al-Qibla Newspaper, Issue 461, 1921, p. 1; Issue 532, 1921, pp. 3–4; Issue 575, 1922, p. 3). Tenders were issued to supply hospitals with essential goods (Al-Qibla Newspaper, Issue 815, 1924, p. 3; Issue 222, 1918, p. 3; Issue 520, 1921, p. 1; Issue 530, 1921, p. 4; Issue 622, 1922, p. 2; Issue 722, 1923, p. 4; Issue 377, 1920, p. 2; Issue 690, 1924, pp. 1–2).

These measures indicate that municipal sanitation policies constituted an important component of public health governance in Mecca, particularly in a city characterized by intense seasonal population movements associated with the pilgrimage.

Serving pilgrims was another major responsibility. A special committee was established under the Director-General of municipal departments to regulate sanitation during pilgrimage seasons (Al-Qibla Newspaper, Issue 377, 1920, p. 2; Issue 690, 1924, pp. 1–2). Doctors checked homes twice a week; the names of those in each room were published; the rooms were cleaned; cooking inside places to stay was not allowed; the provided mats were aired and cleaned every third day; and places for the serving of food were set aside. Muṭawwifs were tasked with keeping track of pilgrims' health and reporting any sicknesses, or else they would face heavy imprisonment. Water was sprinkled between al-Ṣafā and al-Marwah, and help was given to the poor and people who could not walk. These actions reveal the Hashemite government's strong desire for better health care and their fight against epidemic diseases which was supported by vaccination, quarantine, and sanitation policies that helped to reduce mortality in the Hashemite period (1916–1925). At the same time, several of these public health practices developed within an administrative environment that had begun to emerge during the late Ottoman period, including early health administration structures, sanitary supervision, and quarantine measures associated with managing the health risks of the pilgrimage. The Hashemite administration therefore worked in a changing institutional context, in which the reforms and administrative growth that had been undertaken by the Ottomans continued and strengthen previous efforts.

Comparing the public health policies of the Ottoman and Hashemite administrations reveals similarities and differences. The late Ottoman administration already had important institutional foundations for public health governance in the Hijaz, including sanitary councils, quarantine measures and early organization of medical services associated with the Hajj. But they were often challenging to implement because of administrative and logistical challenges or because of the magnitude of the health consequences associated with pilgrimage. Many of these institutional structures were left to the Hashemite administration, and those efforts included an increasing number of staff members, better supervision of sanitation, and more coordination between the city and health agencies. In this sense, the development of public health administration in Mecca in the early twentieth century represents both continuity and administrative adaptation, as opposed to a complete rupture of institutional frameworks between the two periods.

The results add to the clarity of previous research, while Yldz additionally points out that international pressure contributed, although the present research additionally argues that another factor implicated in the epidemic dynamics was local administrative incapacity. Also, while previous studies mainly pointed out the political and military aspects, this one gives new empirical evidence of both administrative continuity and institutional learning in health governance through primary quantitative data and municipal records.

5. CONCLUSION

The research aimed to examine the developments of the public health department in Mecca from 1895 until 1924, and to examine the politico-administrative status, organization, and effectiveness of the Ottoman and Hashemite regimes over this period. It shows that the late Ottoman government lacked the necessary sanitary measures, which contributed to frequent outbreaks of cholera, plague, smallpox and other communicable diseases in the Hijaz and specifically Mecca. However, major institutional interventions to address these public health problems took place during the late Ottoman period, such as the establishment of early health administration structures, the introduction of sanitary supervision, and quarantine measures to manage health risks associated with pilgrimage.

The main health problems of the early Ottoman Empire were restricted governance, ineffective implementation methods, poor sanitation, and public unawareness. These factors caused epidemics that

quickly spread, with thousands of deaths. Only under Sultan Abdülhamid II did the state begin to develop a more systematic public health policy: it established specialized health committees, upgraded water supplies, initiated vaccinations, expanded hospitals, and built quarantine facilities.

Comparatively, the data show that the Hashemite government retained the Ottoman health infrastructure and used it as its administrative base for its public health system. Based on lessons learned at the end of the Hamidian period, the Hashemite government implemented reforms that improved the delivery of services, increased preventive measures and increased monitoring, especially during the period of pilgrimage when health threats were highest. The guiding principles of Hashemite public health policy were the recognition of the deficiencies of the Ottoman era, with contaminated water supplies, poor waste management and inadequate control over crowd density. Given these limitations, the Hashemite authorities could revise the system, intensify the vaccination program and direct interventions intended to reduce the spread of infectious diseases.

This paper also points to the important role played by the Municipality of Mecca under Hashemite rule. The city ‘s sanitary conditions also benefited from municipal duties such as street cleaning, market inspection, waste collection, and regulation of accommodations for pilgrims. These actions resulted in a stronger and better coordinated public health setup. To answer these research questions, it notes that while Ottoman and Hashemite empires were similar in capacity, coherence, and enforcement, they simultaneously worked differently to modernize public health in Mecca. The Hashemite government could not help but recognize the problems it had inherited and built on the existing Ottoman foundations in a safe and hygienic environment for residents and pilgrims. During the transition from the late Ottoman period to the early Hashemite period, the transition is viewed not as a rupture but a continuum of administrative adaptation and institutional learning, and a gradual improvement in public health governance in Mecca.

The findings of this study indicate a process of institutional continuity and administrative adaptation in the development of public health administration in Mecca in the early twentieth century. There were several steps taken during the late Ottoman period to battle epidemics and ensure hygiene, such as health care structures and measures to monitor and quarantine pilgrims. The administration of Hashemite inherited this administrative environment and further developed health services through increased supervision, enhanced facilities and improved coordination between municipal and health authorities.

The Hashemite administration played a mediating role between inherited Ottoman institutional structures and the emerging international sanitary regime of the early twentieth century. By maintaining existing administrative frameworks while expanding preventive measures and municipal sanitation policies, the Hashemite authorities contributed to the consolidation of public health governance in Mecca during a period marked by increasing international concern regarding epidemic transmission through pilgrimage routes.

Future research could further explore the comparative health situation in the Hijaz during both the Ottoman and Hashemite periods should be conducted, and that the statistical documents which facilitate reaching and analysing conclusions should be examined in order to ascertain the actual state of public health. Also, the researcher advocates a study that investigates the Ottoman state's philosophy in relation to the Hijaz as a destination for people coming from all areas for the purpose of pilgrimage.

AUTHOR CONTRIBUTIONS

Conceptualization, A.A.-O. and M.B.I.; methodology, A.A.-O.; data collection and archival research, A.A.-O. and M.B.I.; source analysis and interpretation, A.A.-O.; writing – original draft preparation, A.A.-O.; writing – review and editing, M.B.I.; supervision, A.A.-O. All authors have read and agreed to the published version of the manuscript.

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