



# History of Vaccination in Ottoman Empire: Vaccination Officers and Vaccination Centers

Osmanlı'da Aşının Tarihi: Aşı Memurları ve Aşı Evleri

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## Abstract

The focus of this study entails an exploration of the historical development, production, and implementation of vaccines within the Ottoman Empire, with a particular emphasis on vaccination officers and vaccination centers. Moreover, the broader framework for discussion will encompass the establishment of public health practices, vaccination policies, and the evolution of the vaccination administrative system within the Ottoman Empire. During the 19<sup>th</sup> century, the Ottoman Empire sought to officially document, regulate, and oversee the responsibilities of vaccination officers. One of the most pivotal decisions made in this regard was to swiftly train vaccination officers due to the excessive workload faced by physicians who underwent a lengthy education process and the inadequacy of their numbers. Consequently, while the government maintained control over vaccine administration, vaccination officers, as public officials, obtained a legal foundation for asserting their rights and, based on this, established a direct relationship with the state. The objective of administering the smallpox vaccine throughout the empire led to a push for an increase in the number of vaccination officers, alongside advocating for the establishment of institutions involved in vaccine production and the opening of vaccination centers (known as "telkihâne"). Both physicians and political authorities were in agreement regarding the necessity of opening vaccination centers due to concerns about vaccines being compromised while being transported to distant and warmer regions. However, for the authorities, addressing both the temporary and permanent

expenses associated with this endeavor had consistently been a significant challenge. Moreover, the allocation of limited funds to healthcare expenditures raised debates among various institutions about whether prioritizing vaccination officers and vaccination centers should take precedence. Another significant aspect of the issue was the complaints from the public regarding vaccination officers and the vaccination process. These grievances signified the acceptance of the vaccine's protective qualities while also expressing the expectation for officers to dutifully fulfill their responsibilities. Therefore, these complaints can be evaluated within the context of the public's perception and attitude toward vaccination.

**Keywords:** Vaccine officers, telkihane, vaccine centers, public health

## Introduction

In the Ottoman Empire, the advent of modern practices aimed at public health, protection of health, preventing diseases, and averting epidemics began in the 19<sup>th</sup> century. Public health was primarily the responsibility of the state, and during this period, much like in other states, the population was considered an indicator of economic and military strength within the Ottoman Empire. Amidst territorial losses, wars, and epidemics leading to significant losses, preventing population decline became a paramount concern for Ottoman leaders.<sup>1</sup>

<sup>1</sup> The understanding and practices related to public health that began to gain prevalence in 19<sup>th</sup>-century Europe also had an impact on the Ottoman Empire. On the public health policy and institutionalization emphasizing quarantine, hygiene, and cleanliness to increase the population as a source of military personnel and taxation following the Tanzimat reforms of 1839, see (1,2).

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Particularly, they swiftly recognized that infectious diseases, posing threats to the general population and resulting in high mortality rates, incurred a much greater cost than preventive measures alone. Indeed, faced with the success of the vaccine developed against smallpox, which had caused the deaths of millions of people throughout history, the Ottoman administration showed considerable eagerness in adopting this new medical practice.

Until Edward Jenner (1749-1823) discovered vaccination (using the cowpox virus as a vaccine), variolation was the method practiced in various cultures. This involved the technique of applying matter taken from the sores of individuals who had experienced mild smallpox to a scratch on the skin. Europe learned about the practice of variolation (inoculation against smallpox) in the Ottoman Empire from the letters of Lady Mary W. Montagu (1689-1762). Lady Montagu, who married Edward Wortley Montagu (1678-1761), appointed as the British ambassador to the Ottoman Empire in 1717, had lost her brother to smallpox. Although she herself had survived the disease a few years later in 1715, scars remained on her face. During her stay in Edirne for a period of time, Lady Montagu, on April 1, 1717, wrote a letter to her friend Sarah Chiswell in England, describing how inoculation was performed there. When Lady Montagu returned to England in 1721, she made significant efforts to promote the spread of the inoculation practice she had witnessed in the Ottoman Empire. In that same year, during a severe smallpox outbreak in England, she had her daughter inoculated (3,4).

The pivotal moment in the medicalization of the battle against smallpox and the advent of vaccination was marked by Edward Jenner in 1796 when he demonstrated the possibility of vaccination by inoculating a person with matter from the pustules of cowpox. Subsequently, he proved that the individual was thereafter unlikely to contract smallpox. With this new method, vaccination was performed for the first time from animal to human, rather than from human to human. However, gaining acceptance for Jenner's method was not easy. Although he submitted his findings to the Royal Society in 1797, his article was rejected. Subsequently, he solidified his discovery in the literature by penning the work titled "An Inquiry into The Causes

and Effect of The Variolae Vaccinae, A Disease Discovered in Some of The Western Counties of England, Particularly Gloucestershire, and Known by The Name of The Cow-Pox" (1798) (5).

Shortly after Jenner published his book, in the early 19<sup>th</sup> century, it can be said that the new method was also known in İstanbul, and the success of vaccination was being observed. In this context, in the book "Smallpox Vaccine and Its History in Turkey," which forms the basis of research on the smallpox vaccine, it was noted that three years after Jenner's publication in 1801, for the first time, Hekimbaşı Mustafa Behçet Efendi (d. 1834) and later Şânîzâde Atâullah Efendi (d. 1826) mentioned this vaccine in *Mi'yârü'l-etibbâ'* in 1812 (6).<sup>2</sup> In 1840, a decree from the Sultan was issued to provide free vaccination against smallpox at the Mekteb-i Tibbiye-i Adliye. Two individuals were appointed to administer the vaccine, and during the academic term of 1841-1842, a total of 1705 children were vaccinated against smallpox by the medical students of the school (6,8). Furthermore, in the spring of 1845, when faced with a smallpox outbreak in the Bolu region, a request for a physician "knowledgeable in the science of vaccination" led to the appointment of Mustafa Efendi, recognized as proficient in this field, suggesting that the efforts initiated in İstanbul were extended to the provinces as well (9). The first vaccination officer at the Mekteb-i Tibbiye-i Adliye was İstefanaki (İstefan from Edirne/Doctor İstefanaki), who served as an instructor at the Medical and Surgical School in 1840 (6).<sup>3</sup>

As it is known, with the establishment of the *Tibhâne-i Âmire* in 1827, medical education in the madrasas and hospitals ceased, and a transition was made towards a Western-style medical curriculum. The name of the school, upon its relocation to Galatasaray, became *Mekteb-i Tibbiyye-i Adliyye-i Şâhâne* following the visit of Sultan Mahmud II in 1839, in reference to the sultan's official pseudonym.<sup>4</sup> This place was established to train physicians for the army. Its graduates were assigned to military hospitals and army units. Not long after, authorities, acknowledging the insufficient number of physicians for public health services, particularly in the provinces, decided to establish the *Mekteb-i Tibbiye-i Mülkiye* in 1867 to train civilian doctors.<sup>5</sup>

<sup>2</sup> Şânîzâde, who first authored "Mi'yârü'l-etibbâ'", due to the delay in its publication, penned "Mir'âtü'l-ebdân" to facilitate better comprehension of the book. *Mir'âtü'l-ebdân* was subsequently published in İstanbul in 1820. For the new vaccine in "Mir'âtü'l-ebdân", see (6,7).

<sup>3</sup> Rıza Tahsin, a resident of Edirne, noted that he studied medicine in Italy and subsequently, due to his qualifications, was appointed as an instructor at the Medical School in İstanbul (10). İstefanaki Karateodori (1789-1867) not only excelled as a physician but also served as a professor of İlm-i Hayvanat-ı Tibbiye (Medical Zoology - Microbiology) at the Mekteb-i Tibbiye for an extended period (11).

<sup>4</sup> Mekteb-i Tibbiye, referred to in the documents as "Tibhâne-i Âmire" and "Dârü'ttbb-i Âmire" was established in İstanbul in 1827 with the aim of providing modern medical education (10,12).

<sup>5</sup> Osman Nuri Ergin provides in his work titled "İstanbul Medical Schools, Institutes, and Societies" a document, known as a "tezkire," that encompasses the reasons for the establishment of the school, the need for physicians, the educational approach, and the deployment of graduates (13). For more information on Mekteb-i Tibbiye-i Mülkiye, see (14). The administration of the Mekteb-i Tibbiye-i Mülkiye was initially under the jurisdiction of the Mekteb-i Tibbiye-i Askeriye-i Şâhâne Ministry, later successively affiliated with the Ministries of Finance, Interior, and Education. However, in terms of scientific matters, it was always under the supervision of the Mekteb-i Tibbiye-i Askeriye. The teachers generally taught at both schools (14).

The deployment of graduates from the Mekteb-i Tibbiye to the provinces was highly significant for public health in the 19<sup>th</sup> century. The duties and authorities of these doctors, referred to as “Country Physicians” (later known as Government Physicians), were defined by the 1871 İdâre-i Umûmiyye-i Tibbiye Nizamnâmesi (Regulation of the General Administration of Medical Affairs).<sup>6</sup> The first and second articles of the Regulation stipulated the appointment of country physicians in locations determined through consultations between the Municipality in İstanbul and the Governors in the provinces, as per the Ministry of Civil Medical Affairs. Among the duties of country physicians were the biweekly physical examination of patients within their jurisdiction, administering free vaccinations to those who requested them on examination days, promptly reporting to relevant authorities in case of infectious diseases, and taking necessary precautions (15). According to the Regulations of the Provincial Administration of Health in 1913, pertaining to government physicians, each province would have one government physician, and their responsibilities notably included the regular administration of vaccinations in accordance with the Vaccination Regulation (*Aşı Nizamnâmesi* - Articles 1 and 11) (16).

As evident from legal regulations, physicians were essentially made responsible for administering vaccinations. However, considering the extensive scope of operational fields and the scarcity in their numbers, the political authority of the time made a significant decision in the vaccination policy during the second half of the 19<sup>th</sup> century by opting to train personnel to administer vaccinations. This decision involved admitting students to the Mekteb-i Tibbiye to teach them about vaccination, marking one of the pivotal decisions in the vaccination policy. On December 18, 1846, it was announced in the official gazette *Takvîm-i Vekâyi* that two children from each district would be designated to receive theoretical and practical training in vaccination, with the purpose of being assigned for vaccination duties. The sought-after conditions were for individuals to be talented, intelligent, educated, having completed the recitation of the Qur’an several times, and aged between 13 and 18 years old. Upon completion of their education, these individuals were expected to return

to their homeland and serve their fellow citizens (17). What makes the decision important in terms of vaccine policy is the desire to deliver the vaccine to a broader population. Indeed, instead of a lengthy medical education, a rapid training program could be implemented to establish a cadre of officials/vaccinators capable of administering vaccines in a shorter period of time. Therefore, this can be considered a turning point at the inception of the profession of vaccination officers. The implementation of this can be traced through existing documents. For instance, one of these documents is related to the return of one child out of four sent from Isparta and Burdur in 1847 to learn the “vaccination procedure” at the Mekteb-i Tibbiye due to their lack of aptitude for education at the institution (18). In the same year, two individuals, Hüseyin and Hafız Mustafa aged 13 and 15, meeting the necessary qualifications from Antalya, along with Mevlud and Mehmed from Alaiye, were sent to İstanbul to learn the administration of vaccinations (19,20).<sup>7</sup> The official authorization for individuals holding a license (*ruhsatnâme*) from Tibbiye-i Mülkiye<sup>8</sup> to administer vaccinations alongside doctors and surgeons was established through the 1885 Regulation (Article 2 and 5) and the Regulation specific to vaccinators issued on the same date (Article 1) (23).

Another significant decision taken to train the necessary personnel was the establishment of a vaccination institute in İstanbul called *Telkîhhâne-i Şâhâne*<sup>9</sup> in 1892, as a result of the efforts of Hüseyin Remzi Bey. Additionally, a school was opened in 1898 within this institute to train vaccinators. The statement regarding the matter specified that although it was fundamentally necessary for municipal physicians to administer the smallpox vaccine, the number of physicians graduating from Mekteb-i Tibbiye-i Mülkiye-i Şâhâne could not adequately meet the demand throughout the entire empire and, therefore, in accordance with the vaccination regulations, vaccination officers were appointed. However, due to their limited knowledge, 15-20 students with basic-level training would be selected annually from among those who had undergone basic training. They would receive training for three to four months, and those who demonstrated competency would be granted a

<sup>6</sup> Refers to a set of provisions outlining the rules that an institution or organization must adhere to.

<sup>7</sup> Out of the 16 children sent from Saruhan and Karesi in 1847, three of them were not literate and furthermore had no desire for education; hence, they were sent back (21).

<sup>8</sup> It would be appropriate to provide a brief overview of institutions related to the protection of public health mentioned in the text: In 1869, the Society of Civil Medicine (*Cemiyet-i Tibbiye-i Mülkiye*) was established. Its task was to appoint healthcare personnel such as physicians, pharmacists, and midwives to municipalities. This Society took on the name *Meclis-i Maârif-i Tibbiye* in 1906 and became affiliated with the Ministry of Military Schools (*Umûm Mekâtib-i Askeriye Nezâreti*). II. After the declaration of the Constitutional Monarchy (1908), it adopted the names *Meclis-i Umûr-ı Tibbiye-i Mülkiye ve Sihhiye-i Umûmiye*. Subsequently, it was abolished, and on March 1, 1913, the General Directorate of Public Health (*Sihhiye-i Müdüriyet-i Umûmiyesi*) was established under the Ministry of the Interior (22).

<sup>9</sup> For more information on the establishment of *Telkîhhâne-i Şâhâne*, its statistics and directors, and the Damascus *telkîhhâne*, see (8). For the establishment process, see (24).

certificate of proficiency. When vaccination officers were requested from the provinces, these certified officers with the aforementioned certificates of proficiency would be dispatched (25-27). In the publication of *Telkîhânê-i Şâhâne* for the year 1318 (1902/1903), details regarding the "Vaccination School Program" dated 1898 were included, providing further insight into the process. According to this, the students to be admitted to the Vaccination School would undergo examinations to demonstrate their competence. Those who passed would undergo health examinations, and the successful candidates would attend practical courses on animals and humans twice a week. They would also attend theoretical classes one day a week. The training lasted four months. Theoretical classes would cover information such as the history of vaccines, different types of vaccines, Jenner's method, smallpox disease and its history, microbes, sterilization of equipment, antiseptics, and the process of vaccine administration. The conditions for admission to the school included not having any infectious diseases, being at least 20 years old, having a good reputation, and having received basic education. Candidates possessing these qualifications were examined in Turkish (Ottoman language and grammar) and arithmetic (basic arithmetic operations) (28).<sup>10</sup> In 1317 (1901/1902), 15 individuals completed their education and received certificates, while in 1318 (1902/1903), the number increased to 25. Additionally, records indicate that from the establishment of the school until the early years of the 20<sup>th</sup> century, a total of 319 individuals graduated, providing crucial information for our understanding (28). The desire to train qualified auxiliary health personnel resurfaced with the opening of the School for Junior Health Officers (*Küçük Sıhhiye Memurları Mektebi*) in 1912. The school, which was closed in 1920, had a two-year education program. Graduates of the school were appointed as junior health officers with preference, serving in medical services alongside doctors in İstanbul and other provinces, replacing the previously appointed vaccination officers (13).<sup>11</sup>

Additionally, it should be noted that the inadequacy of the number of vaccination officers had always been a subject of complaint among doctors and state officials who acknowledged their reasoning. Because, according to them, the primary reason for the high mortality rates from smallpox disease was the inadequacy in the implementation of vaccination practices. The document dated January 1894,

reporting cases of smallpox disease in the vicinity of Nişantaşı, highlights the success achieved in Europe by timely vaccination of children, which effectively prevented and almost eradicated smallpox disease. Subsequently, emphasis was placed on the full attention and care to the assignment of officials, both in İstanbul and in the provinces, as needed (30). Once again, the document dated November 1894 serves as another example through which we can observe the significance attributed to the smallpox vaccine by the authorities. Accordingly, the smallpox vaccine, which served as a remedy for the smallpox disease that had inflicted significant harm upon the human race, was considered a blessing bestowed upon humanity by God. As a result, the mortality rate had significantly decreased, particularly in most parts of Europe, nearly reaching negligible levels, especially in Germany. Additionally, the inclusion of the information stating the death of 25 individuals within a week in İstanbul further emphasized the concern regarding the situation (31). In March 1914, when smallpox was observed even in individuals over the age of 20 in Sivas, the inadequacy of vaccination officers and the inability to enforce mandatory vaccination regained prominence as the fundamental reasons behind the outbreak (32). In June 1914, reports indicating the continued severe outbreak of smallpox throughout the empire prompted the Health Directorate to once again emphasize the lack of vaccination officers in every district, and even in many provinces, highlighting negligence in implementation (33,34). It appears that during the most severe periods of the smallpox outbreak, the determination to increase the number of vaccination officers and prevent negligence did not achieve the desired outcome.

Indeed, as the Director of the Vaccination Department, Kemal Muhtar<sup>12</sup> in his article titled "Why Does Smallpox Disease Persist?" questioned why success in eradicating the smallpox disease through vaccination, as achieved in many civilized countries, was not attained in the Ottoman Empire. To him, the answer lied in the lack of understanding regarding the value of life and how crucial each individual was for every family, and their country. In this context, he attempted to illustrate the failure to reach the desired level of vaccine administration with numbers, stating that within the twenty-two years until 1913-1914, a total of 7.260.784 vaccinations were administered from *Telkîhânê*, with an additional one million from the *telkîhhanes* in Europe, Baghdad, and Damascus, reaching a total of eight million. According to his

<sup>10</sup> The statistics in question were obtained from the Sadreddin Konevi-Turgutoglu Library, and we are grateful for their assistance.

<sup>11</sup> For the Mekteb which was closed in 1920, see (29).

<sup>12</sup> When the director of *Telkîhane*, Hüseyin Remzi Bey (1839-1896), passed away, he was succeeded by Hasan Zühtü Nazif Bey. In 1897, upon his death while serving in Thessaly, Rifat Hüsameddin took his place. In 1913, Kemal Muhtar Bey became the director and remained in office until 1920. In June 1920, Rifat Hüsameddin Bey resumed the position of director (8).



calculations, at best, roughly one in every twenty people of the population remained unvaccinated (35).<sup>13</sup> The necessary action was for all doctors and vaccination officers to perceive the administration of vaccines not merely as an official duty but as a national and patriotic issue. In concluding his article with the statement, "The person who facilitates someone getting vaccinated should take pride as if they have recruited a soldier for the nation," the notable point in his article was the part where he advocated the responsibility of government authorities in protecting public health. It is noteworthy to mention the inclusion of the article in the "Sıhhiye Mecmuası", published by the Ministry of Health's Directorate of Internal Medicine, aimed at enhancing the professional knowledge of personnel working in healthcare services.<sup>14</sup>

### Certification-Regulation

In the 19<sup>th</sup> century, the Ottoman Empire attempted to certify and regulate the position of vaccination officers within its administration. The certificates/diplomas provided to those trained in schools and academies for vaccination distinguished them from elderly women or barbers who previously administered vaccinations to the public, elevating them to the status of "public officials."<sup>15</sup> Thus, while situated at the lowest rung, these vaccinators had their positions and authorities established and regulated within the medical hierarchy, enabling oversight and control. In the mid-19<sup>th</sup> century, warnings were issued by local authorities, indicating that even doctors without knowledge of this new medical practice, and vaccination certificates, were not permitted to intervene in vaccination procedures (37-39). For example, when it was reported in a document dated 1858 that certain individuals in the provinces, who were not knowledgeable about medicine and vaccination, indiscriminately administered vaccines to children, it was requested for the preservation and improvement of public health that henceforth those without permission from the Mekteb-i Tıbbiye-i Şahane should not intervene in vaccination. They would administer the vaccine in places where there is quarantine, country and

military physicians. This is such an important matter that, at the end of the document, it is reiterated once again that those without permission should absolutely not interfere with the vaccination process, considering the importance of public health (40).

Another document from the same year reiterated the ban on individuals without medical knowledge or vaccination expertise in the countryside, including a record indicating that unqualified persons were found vaccinating children with "inappropriate substances", which refers to vaccinations administered in a manner contrary to the accepted scientific approach by uncertified vaccinators (41).<sup>16</sup> The prohibition issued by the Ministry of Interior to the governorates on August 25, 1858, regarding individuals without certificates involved in medicine and vaccination, had found compliance in the provinces. Indeed, it was reported that in September 1858, Egyptian Mehmed, Hacı Mehmed, Konstantaki, Yorgaki, and Hekimoğlu, who did not comply with the prohibition, were instructed not to repeat their actions, and their shops were closed due to the lack of necessary permits (43).

In 1895, Mekteb-i Tıbbiye-i Şâhâne reported to the Ministry of Interior that barbers and some elderly women in Burdur were administering vaccinations. Their request for the relevant provincial authority to be instructed indicates not only the determination of the administration regarding this matter but also underscores the power of tradition (44). We have other examples of the failure to prevent unauthorized vaccination despite prohibitions. On August 11<sup>th</sup>, 1912, it was reported, based on the statement of the vaccination officer stationed in Akka, that a vaccine had been administered by a person lacking a municipal medical diploma. The request to restrain this individual and penalize those who obstructed the vaccination officer from performing their duties was forwarded to the Ministry of the Interior by Meclis-i Tıbbiye-i Mülkiye on September 11<sup>th</sup>. On September 17, in the letter sent by the Ministry to the Beirut Governorship, it was ordered to take necessary action (45).<sup>17</sup> In 1883, an investigation was initiated

<sup>13</sup> When Kemal Muhtar assumed the role of Telkikhane Director, he was asked how much vaccine he could produce. He replied, "If you provide me with enough cattle, I can produce around five million doses per year." He managed to produce around three and a half million doses, and as recognition for his efforts, he was awarded an order of distinction (6).

<sup>14</sup> "Sıhhiye Mecmuası" was launched in 1913 to enhance the professional knowledge of personnel involved in health services. It adopted the name "Sağlık Dergisi" in 1945 and continued as the official publication of the Ministry of Health and Social Assistance of the Republic of Turkey until 1996 (36).

<sup>15</sup> Lady Montagu mentions the vaccinations performed by elderly women in the Ottoman Empire in one of her letters [see (6)]. Rifat Osman also provided information about women in Edirne who were enthusiasts of smallpox and vaccination, referred to as "smallpox women," "vaccinating women," "lady vaccinators," and similar names, who administered smallpox vaccines [Provided in Ünver (6)], based on his 1931 letter titled "Smallpox Vaccination and its Administration in Edirne in History" and the text he presented at an international congress).

<sup>16</sup> For another document dated August 1858 reporting vaccinations with inappropriate substances in the provinces and explicitly prohibiting their use, see (42).

<sup>17</sup> Meclis-i Tıbbiye-i Mülkiye communicated in its report dated July 3, 1912, in Beirut, that absolutely no permission should be granted for the barbers to administer vaccinations, emphasizing that this was a punishable offense. Subsequently, the Ministry of Interior Affairs notified the Beirut Governorate in its letter dated July 8, explaining this situation (46).

when Chief Physician Cemal Bey reported that a person had been administering vaccines in Skopje-Montenegro for some time, possessing a license but performing vaccinations without obtaining permission from the municipality. As previously, 1.500 children had been vaccinated by doctors and surgeons appointed by the state, and there had been a temporary break in the process (47). In both examples, what stands out is the state's control over vaccination procedures through the officials authorized in the medicalization process.

In 1902, Harisandioğlu Simyon, who had been practicing smallpox vaccination for twenty-two years, requested to be appointed as a vaccination officer by presenting a complaint about Kadri Efendi being appointed in his place, and highlighting his family's difficult situation. As expected, his application for the appointment as a vaccination officer, along with the request for a diploma, was rejected. Because the statement emphasized the necessity for acquiring theoretical and academic knowledge from Mekteb-i Tibbiye-i Şâhâne. Indeed, from Simyon's perspective, it was unjust for someone else to take his place solely due to the absence of a diploma, especially considering his extensive experience in administering vaccinations over a prolonged period. Hence, in the face of such a response, it's not challenging to infer that he found it hard to accept that his wealth of experience was disregarded merely due to the absence of a singular document (48). Ahmed Hamdi, who had migrated from Cairo to Kosovo and had been administering smallpox vaccines for seventeen years, expressed his discomfort in his petition regarding the hindrance to his livelihood due to the appointment of an official to the region of Iştib, where he administered vaccines in 1903, leading one to assume that he shared similar sentiments. For this reason, Ahmed Hamdi, indicating that he was in an extremely difficult situation, appended to his petition his ability to read and write, alongside knowing the Albanian and Bulgarian languages, stating that he had been administering vaccines with the permission of the province for a long time. He requested permission to serve as an assistant vaccination officer in the province or its affiliated districts (49).

On the other hand, the authority of a certified vaccination officer was limited strictly to vaccination, and their entry into the domain of a physician was unequivocally prohibited. However, those who were also engaged in treatment might have believed that they had such a right based on their position within the medical hierarchy. For instance, in 1899,

Agop Bağcıyan, who had been practicing medicine for twenty-six years with the certifications he held and who had traveled to İnegöl for his medical practice three months prior, questions being detained on the road in Karamürsel despite having a travel permit, and being sent to the capital. Following the investigation conducted, as no inappropriate situation was encountered, his application to travel to İnegöl, despite his desire, was unreasonably rejected. After expressing his situation and dissatisfaction, he submitted a petition to the authorities regarding his desire to work in the provinces with his diploma. However, an examination of his official record, revealed not a medical degree but only a vaccination certificate obtained through an examination at Mekteb-i Tibbiye-i Şâhâne. Ultimately, despite being a vaccinator, he was referred from the İzmid Governorate to the Capital due to his use of medications reserved for doctors, and subsequently, he was arrested and his documents were submitted to the courthouse (50). Another example reflected in the documents from 1902-1903 is quite intriguing. Accordingly, when there was a need for a vaccination officer due to an outbreak in Dersim, the Mamuret-ul Aziz Governorate requested the assignment of Ahmed Efendi, who had been practicing medicine and vaccination in Malatya for eight years. However, upon examination by the central authority, it was revealed that Ahmet Efendi actually held a certificate as a junior health officer (51). As seen in the examples provided, the regulations concerning documentation and areas of authority not only protected vaccination officers but also imposed restrictions. The state regulated officials and the functioning of the vaccination process through the newly established vaccination bureaucracy.

### **Vaccine Oversight and Bureaucracy**

After the regulations were formulated and documented, the inspection process commenced. Medical personnel and law enforcement officers took on this responsibility. We can observe the bureaucratic process regarding the specific matters outlined in Articles 15-19 of the 1894 Vaccine Regulation. Additionally, detailed information about data collection and inspection can be found in a document from the same year. Accordingly, officials would conduct a check on individuals one week after vaccination, and if the vaccine did not take effect initially, it would be administered again.<sup>18</sup> If the vaccine was effective, a certificate ('şehadetnâme') proving the administration of the vaccine, along with personal identification details, would be filled out. This document

<sup>18</sup> In the 6<sup>th</sup> section of the 1885 Regulation: "...to those in whom the vaccine takes and the 'nedbe' or mark is seen..." indicates a reference to the visibility of a scar, implying the presence of a successful vaccination (23).

would be sealed by an official, either a religious official or the local headman ('muhtar') (53).<sup>19,20</sup>

The stubs of vaccination certificates given to vaccinated children would be taken from the officials by the local council, and in return, a certified document ('mazbata') would be provided for authentication purposes. The stubs and certified authentication documents would be sent to the Ministry of Medicine by vaccination officers and municipal physicians. The collected records would be referred to the Vaccination Inspectorate by the Ministry of Health, and at the end of the year, the inspector would enter them into the statistical ledger. The names of those who were vaccinated, those who missed vaccination due to negligence, illness, or ineffective vaccination, as well as those who passed through towns or villages without being vaccinated, would be recorded annually in a register by the local administrative council and forwarded to the Ministry of Health (55).

Since the 19<sup>th</sup> century, numbers have governed the understanding of public health. Collecting statistical data enables the identification of medical issues and facilitates the planning of actions. "Moreover, records converted into numerical data enable effective oversight. For instance, Doctor Hüseyin Efendi, tasked with vaccination duties in Trabzon, had his work deemed insufficient when he sent a register containing the names of 77 vaccinated children in Batumi in November 1867 to the central authorities. The low number of vaccinations was acknowledged, leading to the need for an explanation in the local council document sent to the province. It mentioned that due to harsh weather conditions, families in the region hesitated to get their children vaccinated and postponed it until spring. The statement highlighted that only migrant children were vaccinated with the encouragement of the local administration and the efforts of the officer. Nevertheless, in the letter sent from the capital to the Trabzon Governorate, it was emphasized that the number was very low, indicating Hüseyin Efendi's lack of effort. It requested that he take his job more seriously in the spring and vaccinate all the children in his region (56). Indeed, between September 1867 and May 1868, Hüseyin Efendi vaccinated a total of 803 children, comprising 650 Muslims, 43 Greeks, and 110

Armenians in Trabzon. Records of these vaccinations were submitted by the Governorate on May 12 to be forwarded to the Mekteb-i Tibbiye-i Şâhâne Ministry (57).

Local administrative units were also tasked with ensuring the delivery of numerical data, thus including them in the oversight process. For instance, in 1902, the Konya Governorate informed the Ministry of Interior that the vaccination officer assigned due to the occurrence of smallpox in Saidili District had vaccinated 883 individuals. Among the 74 people who contracted the disease, only four deaths were reported (58).<sup>21</sup> The request for more organized vaccination records became evident in 1913 when the General Directorate of Health issued an announcement to provincial health directors and municipal physicians regarding the use of printed documents for maintaining vaccination records. As it appears, the failure to typically record vaccination statistics on printed documents by health directors, municipal physicians, and vaccination officers was causing issues during year-end calculations. Therefore, it was announced to the relevant parties that the necessary documents were to be requested from the Telkîhhâne, and regular statistics had to be prepared every three months and sent upon request from the Telkîhhâne Directorate (60).

In 1906, vaccination officials were instructed not to store the vaccine vials obtained through many sacrifices in warm places, to request them as needed, and to vaccinate at least three children with one vial. Furthermore, as part of various measures aimed at ensuring thorough oversight, there was a directive to maintain a record book detailing the quantity of vaccine vials acquired and utilized, to be submitted every three months. Additionally, in areas lacking physicians, the request included the preparation of statistical reports every three months, which were to be certified by district governors to guarantee proper oversight (61).

The recording and collation of data spanning from the capital to the provinces revealed disruptions in the process. Consequently, vaccination officers felt it necessary to inform the central authority about issues for which they would be directly held responsible, such as low vaccination numbers

<sup>19</sup> The term "muhtar" refers to an appointed or elected administrator responsible for managing the affairs of a neighborhood or village. It was first implemented in Istanbul in 1829 and later in the provinces in 1833. Among their duties was the dissemination of official government announcements to the public, which, within the context of our topic, included notifications regarding mandatory smallpox vaccinations, public announcements about vaccination officers' arrival times in districts or villages, as well as the responsibility to report newborns. In 1871, with the establishment of district directorates (nahiye müdürlüğü) that had control authority over the council of elders (ihtiyar meclisleri) and muhtars, communication between the state and the people of villages and districts began to take place through the district directorate, which replaced the administrative role, see (52).

<sup>20</sup> In the 12<sup>th</sup> section of the 1904 Vaccine Regulation, it was stated that if the vaccines administered to children were effective, a certificate ('şehadetnâme') would be filled out, and sealed by an official, along with the seal of an imam and the local headman ('muhtar') (54). See Annex-1 for the draft vaccination certificate. <sup>21</sup> For information on how many people the vaccination officer vaccinated, see also: (59).

<sup>21</sup> For information on how many people the vaccination officer vaccinated, see also: (59).

or vaccine spoilage. In 1917, perhaps due to the issues raised by vaccination officials, the Ministry of Health requested support from the Ministry of the Interior, urging for gendarme assistance to accompany each vaccination officer whenever possible. This request stemmed from the necessity of compulsory vaccination in some areas due to public mistrust in vaccines. Furthermore, the governors of Sivas, Ankara, Niğde, Kayseri, and Canik requested the public to be informed that individuals were obliged to present a vaccination certificate for every official procedure (62).

The political authority of the Ottoman Empire preferred a vaccination policy where vaccines were compulsory and provided free of charge. Once the legal groundwork was established, during the monitoring and supervision phase, local civil authorities were authorized to ensure the compulsory administration of vaccination by collaborating with vaccination officers, providing them with any necessary assistance, and arranging for law enforcement to accompany them if needed. In July 1895, the need for a warning from the center was highlighted due to the lack of facilitation by the district governorship towards Şefik Bey and Bekir Bey, who were supposed to administer smallpox vaccines under the Mekâtib-i Askeriye-i Şâhâne Ministry in Şile District. Additionally, the request for assistance to the appointed itinerant vaccinators is one of the examples regarding this matter (63). In February 1904, the district vaccination officer, İsmail Hakkı Bey, reported to the Ankara Governorship addressing that the villagers of Yabanabad were causing difficulties in the administration of smallpox vaccines to children. He stated that due to the lack of assistance from the local administration, the majority of children were left unvaccinated. Upon notice, the governorship was ordered to assist vaccination officers (64). Once again, in August 1907, due to a telegraph from the Vaccination Officer İsmail Hakkı in Haymana District stating that no gendarmerie was provided to him and that there was a risk of the vaccine vials becoming spoiled due to expiration, the Ministry of Interior requested the Ankara Governorship to promptly resolve the issue and take necessary action (65).

İsmail Hakkı's concern was not unfounded. Because the spoilage or wastage of vaccines was among the primary concerns followed by the central administration in the Ottoman Empire. Warnings and documents emphasizing the proper storage of vaccine vials to prevent wastage were frequently encountered. For instance, in 1903, the Ministry of Military Schools (Mekâtib-i Askeriye-i Şâhâne Nezâreti) was extremely disturbed by the spoilage of vaccine vials sent to the provinces due to being placed "here and there," especially being kept near stoves during the winter season. Furthermore, neglecting the delivery notes and delivering

vials and documents past the expiry date meant leaving a considerable number of children unvaccinated. Therefore, the vaccine, upon arrival, should have been promptly delivered to the municipal doctor or vaccination officers without delay, used within a maximum of 15 days, and not requested in excess of the necessary amount (66). Telkîhhâne Director Kemal Muhtar, in his article titled "Why Vaccination Against Smallpox May Fail," while discussing the spoilage of vaccines, provides information about the production of vaccines in the Telkîhhâne and asserts that the vaccines produced by the institution are "definitely potent and effective." The vaccines, once they leave the Telkîhhâne, tended to spoil if not stored at the appropriate temperature. For this reason, the vaccine had to be kept in the freezer or in cold places or cellars. However, in some cases, the vaccines were exposed to the sun, kept near stoves, or carried in pockets for days. Another point that Kemal Muhtar emphasized regarding the spoilage of vaccines was that doctors and vaccinators should have only requested the amount they needed. In fact, it was sufficient for them to report just once without the need for repeated written reports or telegraphs. All that was necessary was to submit a short request, indicating the demand for one hundred or five hundred vials to be sent weekly. This way, regular shipments would have started with entries recorded in the weekly ledger. When there was no longer a need, notifying would be sufficient (67).

In a document dated 1905, clear dissatisfaction was expressed regarding the vaccines sent to the provinces free of charge from the Telkîhhâne, stating that despite being obtained with "considerable expense and effort," these vaccines did not yield significant effects. The officials attributed the lack of effectiveness of the vaccine to excessive requests and careless usage. Considering the damage caused to the treasury due to the expenses incurred to save people from smallpox, they decided to hold accountable those responsible for this situation (68). We can observe the implementation of the decision taken in the capital by the request from the Mecidiye District Governor for the accountable party to cover the incurred damage. In a letter sent from the Ankara Governorship to the Ministry of Interior Affairs in 1907, it was stated that the refusal of the district governor to perform his duties, hindering the vaccination officer who was supposed to administer smallpox vaccines to the children of Mecidiye District, resulted in the spoilage of 70 doses of vaccine. Therefore, a request was made for compensation for the incurred damage. Mekâtib-i Askeriye-i Şâhâne Nezâreti conveyed an order to the Ministry of Interior Affairs, which was then forwarded to the governorship, indicating that the district governor would pay a total of 280 kuruş, calculated at 4 kuruş each, for the spoiled 70 doses of vaccine. However,



when the Ankara Governorship reported on February 12<sup>th</sup> that the district governor's assignment had changed, and his new duty station was in Trabzon, the subsequent transfer of the payment request to the Trabzon Governorship on February 27<sup>th</sup> is quite significant in demonstrating the central government's stance on this matter (69). Additionally, considering that the salaries of district governors were around 1125 kuruş in 1907, the penalty of 280 kuruş given to the Mecidiye District Governor is a considerably significant amount.<sup>22</sup>

### Social and Professional Achievements

As a medical and professional occupational group, vaccination officers had a legal basis and could establish a direct relationship with the state and seek rights based on this. The standout issue in their quest for rights was the irregular payment of their salaries. The petitions presented by vaccination officers regarding their unpaid salaries and allowances were forwarded by the Ministry of Military Medical Schools Affairs/Office of Civil Medical Affairs and Public Health Administration to the Ministry of the Interior. Orders were then issued to the governorship of the respective region where they were stationed. For instance, the complaint regarding the non-payment of salary despite Vaccination Officer Mustafa Fevzi Efendi fulfilling his duties properly in Yozgad, having his salary reduced by 100 kuruş, and even his allowance not being paid, can be cited as one of these instances. The request from the Mekteb-i Tibbiye-i Şâhâne to the Ministry of the Interior for the regulation they sought stipulated the necessity of full and proper payment of salaries according to the relevant clause. Following this, the Ministry of the Interior sent a warning to the Ankara Governorship (72).<sup>23</sup> Upon learning about the decision made by the Kırşehir council administration and municipality to deduct 100 kuruş from his salary, Vaccination Officer Ali Efendi, who had been receiving a salary of 400 kuruş until then, was unwilling to accept such a deduction. Therefore, he deemed it appropriate to pursue his rights by submitting a petition (77).

The statements found in the petition dated October 31, 1894, particularly those of Osman Nuri, are significant as they directly reflect the experiences of a vaccination officer. When Osman Nuri was appointed, his salary was set at 400 kuruş with an hourly rate of 5 kuruş. However, he complained of not receiving any payment for seven months, although both

his salary and allowances were supposed to be paid from the Diyarbakır Municipality fund. Therefore, he remained in a desperate state in the corners of the inn and was burdened with a significant debt. According to his explanation, although he reported his situation to the Ministry of Health on August 17, 1893, through a petition, he did not receive any response. Therefore, he was compelled to directly submit a petition to Sâdâret. Moreover, although the climate in Diyarbakır allowed for the administration of the smallpox vaccine for only three to five months, he managed to vaccinate around 1.500 children within this short period. This achievement was even announced in the provincial newspaper, indicating that everyone knew how well he performed his duties. "Now that his distress has become unbearable, his salary should be given as sultan's benevolence for the sake of Allah." Indeed, it is understood from the correspondence in December 1894 that action was taken following the consideration of the petition. The information submitted to the Mekâtib-i Askeriye-i Şâhâne revealed that the payments for salary and allowances were delegated by the municipality to certain districts and townships. As a result, an inquiry into the matter was conducted due to the request of the vaccination officer Osman Nuri, who was facing a challenging situation. In the end, it was announced in the governorate's notification dated February 5, 1894, that the municipality had been duly notified regarding the regular payment of the vaccination officer's salary (78,79). It is worth noting that delays in payments sometimes extend up to a year. An example of this can be seen in the complaint lodged in 1901 by the vaccination officer Lazari Refailidis of Osmancık and İskilip districts, who had not received his salary for thirteen months, indicating a very challenging situation (80). In 1906, another vaccination officer who hadn't received his salary and allowances for seventeen months lamented in his petition that he was extremely distressed and living in destitution. He even expressed his inability to step out of the door due to debts (81).

There were numerous complaints regarding the irregular payment of salaries to vaccination officers, alongside available data indicating that their allowances were also not being disbursed. However, among these cases, the vaccination officer Kasım Hilmi from Bolu holds a particularly distinctive place. Indeed, Kasım Hilmi Bey had not received his

<sup>22</sup> We can access the purchasing power information of 280 kuruş in the given period from Istanbul Grain Exchange data. Accordingly, one sack of flour was 117 kuruş, 1 kantar of sugar was 91 kuruş, and 100 okkas of hazelnuts were 141 kuruş (70,71).

<sup>23</sup> The subject of the document dated 1903 is the action taken in accordance with the notification stating the priority of the salaries of health officers, as Vaccination Officer İhsan Efendi, assigned to the Ertuğrul district, did not receive his salary (73). In 1901, upon request, a vaccination officer was appointed to the Ayaş and Zir districts, where he served for thirty-four months without receiving his salary and allowance. Moreover, he was unjustly terminated from his position. Consequently, citing his dire circumstances due to these reasons, the vaccination officer reported his quest for rights to the authorities through a petition (74). For other examples, see (75,76).

allowances for eleven years. In a letter forwarded to the Bolu Governorate in 1912, the non-payment issue despite several notifications was deemed notably conspicuous. An urgent advisory was given to promptly settle the payments and cease any further appeals on this matter (82). In the same year, a significant correspondence ensued regarding the demand of the vaccination officer Mehmed Efendi, who was terminated from his position in Karaburun-Urla-Çeşme due to insufficient municipal revenue. He sought the payment of not only his accumulated salary but also his allowances (83).

While the efforts of vaccination officers to claim their rights found some response in the capital, they often led to significant problems with local authorities. Indeed, one such case is that of Yuvakim Ağâh, who complained of severe insults by the Sındırgı District Governor when he demanded his accumulated salary for the period of his service in Bandırma and Sındırgı districts in 1893 (84). In a matter referred to the Council of State, in January 1893, an investigation was deemed necessary regarding the complaint of a vaccination officer who alleged that the district governor insulted and assaulted him in front of the administrative council and subsequently had him imprisoned. The statement of the district governor regarding the investigation conducted in June 1893, along with the record of his imprisonment and the minutes of the administrative council, were sent to the central authorities (85). In 1901, when the vaccination officer Ali Efendi requested his six months' salary and one and a half years' worth of allowances, he reported being not only insulted but also physically assaulted by the Mihaliçık District Governor. As a result, the Mekâtib-i Askeriye-i Şâhâne Ministry requested an investigation into the matter on behalf of the officer from the Ministry of Interior, and subsequently, the Ankara Governorate was tasked with taking necessary actions (86).

The vaccination officers had requested that the additional payment decision granted to healthcare personnel working in distant and challenging conditions be applied to them as well. Indeed, in 1910, Osman Nuri, who was serving in the Zor Sanjak, believed that he had the right to make a request as a vaccination officer based on the regulations applicable to health officers in the country, similar to the provisions specified for them in the regulations (87). Osman Nuri was not the only example. In 1911, İsmail Hakkı, serving as the vaccination officer in Hums Sanjak with a salary of 400 kuruş, requested an increase in his salary to 600 kuruş. He sought this increase in accordance with a decision granting health officers serving in provinces like Trablusgarp, Hicaz, Bağdat, Basra, Musul, Yemen, and Bingazi an additional payment equal to half their salary (88).

Another notable aspect highlighted in the petitions submitted by vaccination officers based on the legal grounds

of their profession was their requests for reassignment. Especially following their duties in districts, we encounter requests for transfer to a province. In 1894, Necib of Palanka, who had been administering smallpox vaccinations in a district of Kosovo for fourteen months and mentioned labor shortages, must have considered that a transfer to another province for the position of a vaccination officer would be appropriate. Therefore, he submitted a petition regarding this matter (89). Although not as urgent as Necib, the vaccination officer who had been vaccinating children in the Doğanhisar District of Dedeağaç Sanjak for seventeen years must have deemed that he had served in the district for an extended period and, therefore, requested a transfer to another province for the position of a vaccination officer (90).

In pursuit of rights, objections of vaccination officers to irregular task assignments can also be observed in their petitions. In 1904, when Bekir Sıtkı Efendi, appointed to the position of vaccination officer in Ereğli District with a salary and allowance, was additionally assigned to the vaccination officer position in Düzce District during a smallpox outbreak, although he might initially have deemed such an assignment acceptable, the disease was later brought under control. Bekir Sıtkı refused to accept the vaccination officer duties for Düzce District and Akçayşehir Nahiyeler, with 256 villages and a population of 90.000, located 24 hours away from the central district, solely on an allowance basis without any allocation, despite the circular specifying the appointment of a vaccination officer and the payment of their salaries by municipalities to each district. We can see in the document sent from the capital to the Kastamonu Governorship that Bekir Sıtkı's objection was considered justified. It emphasized that a vaccination officer could not be assigned to such a distant and densely populated place without any payment, deviating from their actual place of duty. Therefore, it was suggested that either a vaccination officer be appointed to Düzce, or the said officer be allocated a half-salary to cover expenses. However, when the Kastamonu Governorship forwarded the issue to the Bolu District and subsequently to Düzce Municipality, it became apparent from the existing correspondence that an extra payment of 200 kuruş from municipal funds could not be provided. Hence, the insistence on continuing the assignment solely with an allowance "as has always been the case" persisted (91).

We believe it would be beneficial to emphasize the reluctance of municipalities to pay the salaries and allowances of vaccination officers to better understand this significant issue that had led to institutional conflicts. Such a perspective also allows us to track the conflicts between institutions regarding which aspects would be prioritized in the limited health expenditures that continue to be on the agenda today.

Let us immediately point out that the reluctance to employ vaccination officers was due to limited/lack of income and was not only limited to the rural areas. Even in the capital, the Municipality was also making efforts to rid itself of this allocation that it deemed dispensable in terms of income and spending priorities. In 1907, upon receiving news of fatalities due to smallpox in İstanbul within the First, Third, Fifth, and Sixth municipal departments, three vaccination officers were dispatched to the Ninth Municipal Department. However, the disease could not be prevented. Vaccination officers were appointed to municipal departments as the duties of the doctors in the health committee were too intense to be fulfilled. The Municipality was asked about the number of vaccination officers needed and how much allocation it could afford. The Municipality stated that there was a requirement for ten vaccination officers. However, due to budget constraints, they mentioned their inability to allocate 500 kuruş per month for each appointee, totaling 5000 kuruş. Therefore, they inquired whether this expense could have been covered by adding it to the budget of the Ministry of Interior's Health Committee allocation. During the correspondence between the Ministry of Interior and the Finance Commission, the Finance Commission proposed that the salaries of vaccination officers should be covered within the Municipality's budget and paid from there. However, despite the response, the Municipality insisted that its current financial situation could not afford such an expenditure. Eventually, due to the paramount importance of preserving public health, the Ministry of Interior conveyed to the Presidency that, considering the necessity to preserve public health, there was no alternative but to pay the aforementioned 5000 kuruş in addition to the health committee's allocation. The response highlighted the presence of several doctors within the Municipality and the existence of a health committee, suggesting that vaccination could be administered through them. Considering the current situation where the treasury could not bear new expenses, the solution proposed was to assign the doctors and health committee officials in place to carry out vaccinations, thus resolving the issue (92).<sup>24</sup>

It seems that due to doctors being fundamental in the healthcare field, municipalities considered it an option to assign the duties of vaccination officers, viewed as dispensable if necessary, to doctors. However, those advocating for such an option were opposed by the Mekteb-i Tibbiye-i Şâhâne, which defended the rights of vaccination officers and simultaneously supported doctors who already had heavy workloads. Back in

1893, in İstanbul, when the Municipality claimed that doctors in municipal offices were administering the vaccines, they argued that there was no necessity for the vaccinators whose salaries were being paid in trust at the Mekteb-i Tibbiye-i Şâhâne. They further proposed the discontinuation of the allocation reserved for these vaccinators. In response, they sought the opinion of the Mekâtib-i Askeriye-i Şâhâne. Upon this, the institution in question reported that annually 21.600 vials were produced, consisting of 9.600 vials with 24.000 units -two units per vial- resulting in an expenditure of 24.000 kuruş. Each vial cost 1 kuruş 4.5 para. These were sent to the provinces when necessary, and they were provided free of charge to doctors and vaccinators who requested them in the military and the capital. Additionally, it was mentioned that those who applied to the Mekteb were vaccinated by officers whose salaries were wanted to be cut. Ultimately, it was deemed inappropriate to cut the salaries of the vaccination officers (94).

In order to avoid salary payments, some municipalities in the provinces terminated the duties of vaccination officers based on the provision in the Vaccination Regulation, which stated that "vaccination operations in the provinces may be performed by country physicians, and in places where no physician is available, by those appointed." The reason cited by municipalities for terminating the duties of vaccination officers in the districts of Tire, Ödemiş, and Bayezid was based on this provision. The central government's stance on the issue was that while the doctors could administer vaccines centrally, they would not be able to vaccinate the villages while traveling. Therefore, the central government's direction was to restore the duties of vaccination officers. The municipal doctor visiting each village in every district would take months to administer vaccines separately, thus resulting in a prolonged absence from the center for an extended period. Municipalities sought legitimacy based on the articles of the Regulations, and similarly, Article 18 of the Regulations was utilized to prove the illegality of the practice. Indeed, according to the relevant article, a vaccination officer had to be appointed in each sanjak. However, given that one district (sanjak) had twelve and the other had thirteen districts -such as İzmir and Manisa- having only one vaccination officer for each would not suffice. Therefore, the termination of the vaccination officers' duties by the district municipalities, prioritizing their own interests and acting contrary to the provisions of the regulations, was unacceptable. Therefore, in order to prevent other municipalities from emulating the

<sup>24</sup> For another document addressed to the Ministry of Interior, stating that since there were many doctors working in the Municipality's staff and as well as a health committee, the vaccination work should be handled by them because the treasury could not bear a new burden, see (93).

same practice, measures should have been taken promptly to curb the attempts (95).

One of the methods employed in rural areas was to hire individuals who were capable of administering vaccines despite lacking formal qualifications, provided they were competent, in exchange for appropriate compensation. In the circular sent to the provinces dated 1901, it was reported that in some provinces, local governments appointed individuals who did not possess a vaccination certificate as vaccination officers with a specified payment; and it was emphasized that individuals without a certificate obtained through education at the Vaccination School (Aşı Mektebi) in the Telkîhâne could not be employed under any circumstances (96). At times, rather than an appointment being made by the central authority, there would be a request from the central authority to assign someone already present in the region willing to accept a lower payment. For instance, in a letter addressed to the Ministry of Health dated 1906, it was mentioned that the municipal revenues of Elbistan District did not allow for the employment of a vaccination officer. However, due to the significance of the area, there was a need for an officer, and in response, the municipality requested the appointment of Elbistan native Mikriyan Ohanes Efendi, a vaccination graduate willing to conduct vaccinations for a year at a low salary of 150 kuruş per month (97).

At the beginning of the 20<sup>th</sup> century, when the central administration, following the viewpoint of the Mekâtib-i Askeriye-i Şâhâne, mandated the compulsory employment of vaccination officers in every district and ordered their salaries to be paid from municipal revenues, it put the district municipalities in a difficult situation regarding how the salaries would be covered in districts with very low income. Certainly, in 1904, the correspondence between the Ioannina Governorship, Mekâtib-i Askeriye-i Şâhâne, and the Ministry of Interior explicitly illustrates this situation. When the province inquired about what to do in districts unable to afford such payments, the response received was the appointment of vaccination officers in districts as per the regulations and ensuring the provision of their salaries by any means necessary. However, acknowledging the hardship, as a last resort, it was suggested to appoint a municipal physician by paying allowances to ensure that no child remained unvaccinated (98).<sup>25</sup> Among the recommendations offered by the central administration in response to applications from the provinces, as seen in the

example of the vaccination officer in the Ma'an district in Syria in 1905, was the suggestion of utilizing municipal revenues from other districts where available. In cases where this was not viable, the proposal advocated for the coverage of expenses from the central provincial municipal revenues (81).

On the other hand, there are also examples of governorates and municipalities hiring vaccination officers by pushing the limits of their current conditions. In a document from the Erzurum Governorate in 1909, it was stated that apart from Erzincan and Bayburt, there were no vaccination officers in any other affiliated units due to insufficient income. However, given the crucial nature of such an issue concerning human life, every kind of sacrifice was necessary. Therefore, by making payments from the Bayezid Sanjak and Pasinler, the appointment of a vaccination officer was ensured. This allowed surrounding districts to benefit. Additionally, for districts without revenue, a request from municipal and administrative councils was forwarded to the Ministry of Interior for payment from the treasury (100). The Aleppo Governorate's administrative council in 1902 requested to meet the salaries of physicians and vaccination officers in the Cısr-i Şugur District by levying taxes on sheep and goats due to the insufficiency of municipal revenues. This request was another effort among local initiatives (101). The Erzurum Governorate, in 1913, had requested permission to collect money from the buying and selling of animals at the fairgrounds and to use it for the payment of salaries to vaccination officers and midwives (102).

Despite the aforementioned issues, it should be added that among the achievements of vaccination officers was the acknowledgment by administrators through medals and commendations for their services. Although presented as an accomplishment of the administration, the publication of the numbers of vaccinated children in the Takvîm-i Vekâyi announced the successes of the vaccination officers, thus establishing prestige for them within their social circles. For instance, in a document dated 1860, Mehmet Tevfik and Osman, who served for a year in the Rumelia secondary division among three groups of surgeons appointed from Mekteb-i Tibbiye-i Şâhâne, vaccinated 11.092 individuals, none of whom contracted smallpox throughout the year. The commendable activity of protecting children from smallpox, which prevented the disease, was published in Takvîm-i Vekâyi and Ceride-i Havâdis newspapers. The services and efforts of those mentioned were appreciated in the public eye (103).<sup>26</sup>

<sup>25</sup> When the Yanya Governorship inquired about how to implement the regulations through a telegram sent to the center on March 30, 1905, the Ministry of Interior, after consulting the viewpoint of Mekâtib-i Askeriye-i Şâhâne, informed on May 6 that in areas where vaccination officers could not be employed, allowances should be provided to surrounding personnel or municipal physicians and vaccinators as an alternative (99).

<sup>26</sup> A record from 1868 pertains to an announcement in Takvîm-i Vekâyi, similar to the information from the Ankara Governorate, regarding the vaccination of 613 children by the vaccination officer Salih Efendi in Yozgat (104).



In 1858, in İzmir, the contributions of a commission consisting of military physician Mustafa Bey, a quarantine physician, and accompanying physicians in the vaccination activity assigned to them were considered noteworthy by the administrators, although it was not mentioned in the newspapers (105). The İzmir Governor's request for commendation regarding Mustafa Bey's efforts and services in İzmir was forwarded to the Serasker's office due to his position as a military physician (106). The document dated 1865 focuses on acknowledging the gratitude of the public towards Salih Efendi, who was appointed among the students of Mekteb-i Fünûn to vaccinate children against the smallpox outbreak that had been occurring in the Konya and Bozok regions. His dedicated efforts successfully prevented the disease, prompting a request for the expression of gratitude to be published in the newspapers (107).

The request for commendation for the vaccination officer was forwarded from the local unit to the Ministry of Interior and then to the Mekteb-i Tıbbiye. In 1865, when the appointed physician Hırastaki Efendi in Cyprus abandoned his official duties during the outbreak and fled, the vaccination officer Salih Efendi continued his duty. Due to his success, a request for commendation made by the Cyprus Assembly was forwarded to the authorities (108). In 1868, Tahsin Efendi, appointed to the vaccination duty in Siroz Sanjak for the protection of children against smallpox, arrived in Nevrekop District on September 28<sup>th</sup> and vaccinated 1.509 children by traveling around the district until November 9<sup>th</sup>. His dedication to his duty was reported to the Siroz Governorate by the council of elders in the region on November 10<sup>th</sup> (109). The vaccination officer dispatched to vaccinate children in Lesbos successfully fulfilled his duty by traveling through the districts and villages, vaccinating 3.501 children. This accomplishment was duly recorded in official records (110). In 1895, due to the services rendered by the vaccination officer Hüseyin Efendi in Kastamonu, a request for promotion as a commendation was sent from Kastamonu Governorate to the Ministry of Interior. When the request was approved by the Mekâtib-i Askeriye-i Şâhâne Ministry, it was submitted to the Ministry of Interior (111). The Ministry of Interior also forwarded the request to Sadâret. In 1902, the request from the Benghazi Sanjak for the

commendation of the vaccination officer Mustafa Nuri Efendi with a promotion was another instance among numerous examples where the governorate forwarded the request to Sadâret (112).

A request originating from the local administration regarding the proposal for the awarding of a medal of honor due to the successful performance of duty by the vaccination officer Hulusi Efendi in 1903 had been submitted to the Mekâtib-i Askeriye-i Şâhâne Ministry, supported by a memorandum obtained from the Ministry of Interior, and forwarded to Sadâret (113).<sup>27</sup> In the same year, commendation with a medal was requested for the Vaccination Officer Tevfik Efendi in Erzincan (117)<sup>28</sup>, while the Vaccination Officer Nikolaki Efendi in Haymana-Kalecik districts was requested to be conferred with the fifth-grade Mecidi Order (120).<sup>29</sup> In 1900, there was a request from the Bingazi Sanjak Council to increase the salary of the Vaccination Officer Mustafa Efendi from 400 kuruş to 600 kuruş due to his commendable service and diligence, as he struggled to make ends meet. This request indicates that recognition could extend beyond medals and ranks (122).

### Vaccination Centers

When discussing the history of vaccination in the Ottoman Empire, it is essential to focus on vaccination locations, particularly the vaccination centers or houses. When the smallpox vaccine was introduced in the Ottoman Empire, one of the vaccination locations in Istanbul was pharmacies. For instance, in 1855, at the pharmacy known as Balıklı Dükkân owned by Antoine Calleja in Bahçekapı, a doctor administered vaccinations from morning till evening daily. In 1889, at the Hormel Pharmacy in Cemberlitaş, vaccinations were administered daily, while at the Ahmed Hulusi Pharmacy in Bakırköy, Vaccinator İsmail Efendi administered smallpox vaccines on Sundays and Thursdays (123). Article 5 of the Vaccination Regulation of 1885 stipulated that vaccinations in Istanbul would be administered free of charge by physicians, surgeons, and vaccinators at the clinics of the Mekteb-i Tıbbiye-i Şâhâne and designated rotation areas. Moreover, as needed, municipal offices would temporarily appoint vaccinators to vaccinate unvaccinated individuals free of

<sup>27</sup> For another example of the awarding of Teke Sanjak Vaccination Officer Şevki Efendi with a medal of honor in 1904, see (114). In the Ottoman Empire, the tradition of awarding and wearing a type of medal with various ranks for distinguished military and civil officials began during the reign of Mahmud II (1808-1839). Due to the establishment of the new military organization, insignia specific to the ranks of Ülä (First), Sâniye (Second), Sâlise (Third), and Rabia (Fourth) were created to denote ranks. The first Western-style decoration was established in 1852 with the Mecidi Order (115). II. The medals during the Abdülhamid period (1885) were the Gold and Silver Medals of Honor (116).

<sup>28</sup> Regarding the awarding of Benghazi Sanjak vaccination officer Mustafa Nuri Efendi and Alexandroupoli Sanjak vaccination officer Ahmed Hamdi Efendi with medals, following correspondence between Mekâtib-i Askeriye-i Şâhâne, Ministry of Interior and Sadâret upon the request of Edirne Governorate, see (118,119).

<sup>29</sup> Refer to the request for the recognition and award of the fifth-grade Mecidi order based on the service and dedication of Sâim Efendi, one of the vaccination officers in Konya, in the year 1906 (121).

charge up to two or three times a year, providing vaccination certificates. In the provinces, vaccinators would be appointed in places where there were no local physicians available (23). Indeed, according to documents from 1888 and 1889, it is observed that vaccinations were administered to children of applicants by physicians and surgeons at rotation pharmacies in Istanbul and the regions of Galata, Üsküdar, and Eyüp. Additionally, free vaccinations were administered by school vaccinators at the Mekteb-i Tıbbiye (124,125).

Government officials were obligated to be vaccinated, along with children, and officials were sent to institutions where mass vaccination programs could be conducted to administer vaccines. Especially aiming to ensure that no child remains unvaccinated, officials were appointed to schools for this purpose. For instance, in 1904, when smallpox cases were observed in İstanbul and surrounding areas, a decision was made to send vaccination officers to schools. Indeed, vaccination certificates were checked when admitting students. However, considering those whose five-year period had expired or cases of possible negligence, vaccination officers were sent to secondary schools for administering vaccinations (126). In fact, in response to the obligation for not only children but also officials to receive vaccinations, the Ministry of Education in 1895 directed that within three months, vaccinations for officials and servants would be provided free of charge at designated health centers (Telkîhhâne) and rotation pharmacies. Furthermore, upon request, vaccination officers would be dispatched to the requested neighborhoods. These instances can be regarded as examples of the implemented practice (127).<sup>30</sup>

In İstanbul, vaccinations were administered either permanently or temporarily by vaccination officers at an institution. Additionally, there were assignments for vaccination officers to serve itinerantly in required locations. The vaccines produced at Telkîhhâne were sent to the provinces based on demand. However, not long after, the spoiling of vaccines across a vast territory in the empire led to the consideration of establishing vaccination centers (telkîhhâne) even in distant areas from the capital. In a document dated November 1897, it was mentioned that although vaccine vials were being dispatched from the Telkîhhâne in İstanbul to all parts of the empire, numerous child deaths due to smallpox occurred each year because the vials sent to distant provinces often spoiled before reaching their destinations. Therefore, to protect public health, it was deemed appropriate to establish telkîhhâne branches under the supervision of

health inspectors in the provinces.<sup>31</sup> Those aforementioned branches could be established with an amount of around 2000 kuruş, or alternatively, they could be managed with a monthly expense of 1000 kuruş by providing two calves per month for vaccination purposes (129). In September 1898, based on the opinion recommending the establishment of a vaccination center in each province under the supervision of health inspectors, the Mekâtib-i Askeriye-i Şahâne forwarded requests from the provinces of Trabzon, Hüdavendigâr, and the Bingazi District to the Ministry of the Interior. However, the response indicated that since these provinces were close to İstanbul, a sufficient quantity of fresh vaccine vials could be sent when requested. Therefore, it was deemed unnecessary to incur additional expenses by opening vaccination centers in these regions (130).

However, when it was reported that no benefit was obtained from the vaccine supplies sent from İstanbul to distant places in the summer of 1898, and therefore, there was a strong need to open a vaccination center (telkîhhâne) in the provincial capital of Yemen, a positive response was given. It was deemed appropriate for the Chief Physician of the Imperial Army to oversee the establishment of the vaccination center, as there was no health inspector in Yemen at that time (131). In 1900, the San'a Vaccination Center did not have the urgently required supplies. They put in a request for an adequate quantity of vaccine vials. A few months later, it was decided to appoint a health inspector as a physician and designate a competent vaccine maker for the vaccination center to be opened in Yemen (132,133).

Hence, in a document dated June 1899 encompassing Aydın, Manastır, Ioannina, Erzurum, Van, Bitlis, Diyarbakır, Ma'mûratü'l-Aziz, Aleppo, Baghdad, Basra, Yemen, Beirut, and Kastamonu, due to the importance of public health preservation, a request was made to the Mekâtib-i Askeriye-i Şahane Ministry to allocate funds promptly for the establishment of vaccination centers under the supervision of health inspectors in remote provinces for the implementation of a reliable vaccination program. The required amount was to be distributed to municipalities within the provinces, and the necessity of allocation was communicated to the provinces (134). In the autumn of October 1899, it was considered that branches to be opened in distant provinces could be established with an amount of up to 2.000 kuruş. Thus, it was envisaged to open a vaccination center under the supervision of health inspectors in distant provinces such as Erzurum, Diyarbakır, Basra, and Syria (135). In a document from the

<sup>30</sup> In April 1311 (1895), there were five male and two female itinerant vaccinators stationed at Telkîhhâne (6).

<sup>31</sup> Telkîhhanes and vaccine production are discussed in the following study: (128).

Ministry of Interior in 1901, although it was considered appropriate to open vaccination centers in the provinces, it was stated that, at that moment, it was deemed suitable to open them only in Diyarbakır, Erzurum, Manastır, Basra, and Syria (136).

Applications for the opening of vaccination centers in the provinces were frequently encountered. For instance, in a request forwarded by the Aydın Governorate in 1907, it was explained that due to the large population of the province, there was a necessity to open a vaccination center. Hence, there was a requirement for a laboratory, a physician's room, two janitors' rooms, and space for four calves. Besides the construction of the vaccination center, the salaries of physicians and janitors, the necessary equipment for the laboratory, and the funds required for the calves would be covered by the revenues of the central and affiliated municipalities (137). Although the authorities supported the increase in the number of vaccination centers, the incurred expenses hindered their positive decision-making. Indeed, in a letter drafted in December 1907 by the Minister of Interior to be sent to Sadâret, the establishment of vaccination center branches in Damascus, Baghdad, Mosul, Erzincan, Yemen, Tripoli, and Manastır, along with the one-time required amount of 124.000 and the annual 295.200 kuruş for the salaries of officials in these centers, was highlighted as an issue to be addressed. What stands out in this regard is the request for allocation from the Ministry of Interior. However, while the expenses of Telkîhhâne-i Şâhâne in İstanbul were covered by the Ministry, the expenditures incurred in the provinces were not. Therefore, it was proposed to allocate additional funds to the Ministry's budget to address this issue (138).

One of the places that required the establishment of a vaccination center was Basra. A document dated July 23, 1899, outlined the prerequisites for establishing a vaccination center branch in Basra, as requested on April 2, 1898. These requirements included the allocation of a suitable location, a regular supply of two calves weekly for vaccination purposes, as well as the necessity of providing a salary of 1.000 kuruş to the appointed vaccine administrator, along with janitor fees. A telegram sent from Basra expressed the concern about the spread of smallpox in the region on July 17, prompting a request to open a vaccination center branch (139). It seems that the necessary requirements were fulfilled because the telegram dated March 21, 1900, reported the opening of the branch in Basra and the commencement of vaccine administration (140). On April 23, 1900, it was conveyed to the Basra Governorate that Dr. Abdülkerim Ahad Efendi had been appointed to the directorship of the Basra Vaccination Center.

As per the provided information, it was revealed that Dr. Abdülkerim dedicated himself regularly to the Bacteriology Laboratory for about one and a half months to enhance his knowledge in the field of bacteriology. During this period, he learned the theory and practice of vaccination science and was subsequently awarded a certificate of proficiency (141).

In February 1900, a decision was made to open a vaccination center in Syria. A vaccination center comprising a barn and two rooms was intended to be established near the Gurebâ Hospital in Damascus. Since the institution would serve the surrounding area, it was proposed that funds be collected from all municipalities within the province to cover both ongoing and incidental expenses (142).

The officials were concerned when, out of the 270 smallpox vaccine vials sent from Telkîhhâne-i Şâhâne to Hijaz in the spring of 1901, only the vaccinations administered to four children proved effective, while the rest did not yield positive results. The statistical records indicated that over 70 children had lost their lives due to problems with vaccination. Although there were vaccination centers in Medina and Mecca, they were under the administration of the Health Department and lacked the necessary equipment and resources. Furthermore, the individuals dispatched under the title of "mustahzır" (vaccine maker) were some persons appointed from the Quarantine Department who had absolutely no knowledge about preparing vaccines. The fact that there was a demand for vials from Telkîhhâne-i Şâhâne indicated that those centers were left in a neglected state and not utilized. Therefore, the necessity of promptly establishing a vaccination center in these locations was also acknowledged in the capital city (143).

In May 1905, inquiries were made regarding the shortage of demand in certain provinces such as Mosul and Yemen based on requests made to Telkîhhâne-i Şâhâne. In response, the Mosul Governorate in August 1905 expressed the need for a vaccination center in the region. Within this context, while explanations were being presented, emphasis was placed on the ineffectiveness of the vaccines requested from İstanbul due to the long distance or their deterioration during transportation due to severe shaking in the mail, as they were already inadequately packaged to withstand the heat. It was stated that opening a vaccination center branch in Mosul at a minimal cost would eliminate this problem (144).

The effectiveness of vaccination centers in achieving the expected success is debatable. For instance, the vaccination center branch established in San'a, through the efforts of Senior Captain Hamdi Numan and Pharmacist Halid Nureddin Efendi, expanded to the extent of producing 1.500 vaccines

in fifteen days and distributing vaccines to neighboring areas (145) However, besides financial issues, the inability to employ experts trained in institutions like the Vaccination Center or the Bacteriology Laboratory was one of the most significant obstacles faced in the operation of these branches. Indeed, due to the non-functioning of the vaccination center in the highly esteemed region of the Hijaz, which was of great importance to the Ottoman Empire, vaccines had to be sent from the capital in 1910 (146). It is evident from the requested vaccine vials that the vaccination centers in Syria, Baghdad, and Basra were unable to operate effectively in 1906.<sup>32</sup> Regarding this matter, we are of the opinion that the records sufficiently clarify the Basra Vaccination Center's inability to function properly. Despite their efforts to produce vaccines, they were unable to acquire the necessary two calves due to the allocation of the vaccination center's funding by the municipality to the honorary mayor's salary. This resulted in a situation where even the salaries were reduced by half, ultimately rendering the institution non-operational (148).

### **Perception and Attitude Towards a New Medical Experience**

In the 19<sup>th</sup> century, mandatory vaccination became a new medical practice that extended from the capital to the villages across the country, which people from all segments of society had to experience. This brought along new necessities. In the Ottoman Empire, the adoption of mandatory vaccination rendered individual preference or choice irrelevant for the societal benefit. While there were instances of utilizing law enforcement for vaccine administration, it would not be accurate to assert that the public consistently maintained an entirely adversarial stance against vaccination. The subject of the telegram sent to the Trabzon Governorate in 1870 concerns the decision to dispatch a physician, pharmacist, and vaccination officer for the Lazistan population, with their salaries and pharmacy expenses to be covered by the local community (149).

Moreover, individuals were at least able to make choices regarding whom they would prefer to administer the mandated practice, despite its compulsory nature. As an example, in June 1902, it was reported that at the request of the district governorship, the vaccination officer Rafail Lazaris was dismissed from his position in İskilip and Osmançık, and

there was a preference for a Muslim official to take over the role. The reason for this might be that the public directly conveyed their requests to the district governor or the district governor, being aware of the concerns and rumors among the people, believed that such a change would make the new implementation more acceptable. Regardless of whichever takes precedence, ultimately, while the district governorship's request for a Muslim vaccination officer was being relayed to the capital, Rafail, who was removed from his position, had to make a request for an exchange with Keskin, the vaccination officer (150).

The preference for female vaccination officers in the mandatory vaccination of women extended the practice beyond the exclusive domain of men by employing women in this profession. For instance, in March 1904, an official sent from the Third Municipality Department to vaccinate students of the İnâs (Girls') School in the Defterdar Ahmed Çelebi Neighborhood in Yusufpaşa was prevented from doing so on the grounds that a female vaccinator was requested. As a result, in July, Sadberk Hanım, a female vaccinator, was sent from the Mekâtib-i Askeriye-i Şâhâne Ministry to fulfill the request (151). Again, in 1907, a request was made to send a female vaccination officer to Bakırköy Hamidiye Girls' School alongside other girls' schools, as well as to Dârülmualimât, for students who were either unvaccinated or in need of revaccination (152). The record of Vasfiye Hanım conducting vaccinations in girls' schools in May 1908, apart from Sadberk Hanım, implies that the number of female vaccinators increased due to demand (153).<sup>33</sup>

Since the beginning of the 20<sup>th</sup> century, there have been various examples of complaints forwarded to the capital regarding vaccination officers and the functioning of the healthcare system, originating from different regions within the Ottoman Empire. Actually, it would be more appropriate to explain these as a change in perception regarding vaccines rather than an expression of opposition. The prominent complaint was the vaccination officers' requests for money. The subject that necessitated a circular and notification in 1907 was for vaccination officers to administer the vaccine free of charge, as per Article 8 of the regulation, upon receiving a report that some vaccination officers were demanding money from the individuals they vaccinated (154). The necessity for such a circular itself is sufficient to consider it as a result of

<sup>32</sup> Rifat Hüsameddin, serving as the Telkîhâne Director, while embracing the idea of opening new branches, published statistics for the years 1320 and 1321 (1904/1905-1905/1907). He noted that the production output of the Basra Telkîhâne was very low, hence vaccines were sent from the central authority. Additionally, he mentioned that the newly opened branch in Damascus did not provide any statistics the previous year, vaccines were dispatched from the Telkîhâne-i Şâhâne to Beirut and Syria, and that the Damascus branch did not provide a service proportionate to the expenses incurred (147).

<sup>33</sup> In the record dated 1895, the salaries of Sadberk Hanım and Ayşe Sabiha Hanım, who were part of the Telkîhâne staff, were 250 kuruş, while the male vaccinators were receiving 400 kuruş (6).



complaints conveyed from the provinces. Indeed, another document dated 1907 reported that some vaccination officers abused their duties by demanding money from the individuals they vaccinated. However, the vaccine was free. Therefore, alongside notifying the vaccination officers about this matter, announcements had to be made through the published media outlets in Istanbul and communicated to the public in towns and villages by the local religious leaders and village muhtars (155).

The public was informed that the vaccine was provided free of charge, and any officials acting contrary to this information were reported to the central authorities via the local administration. For instance, in a document addressed to the Konya Governorate in April 1908, it is learned that a complaint was made regarding the incompetence of the vaccination officer of Nevşehir District, Sadık Efendi. This was due to his refusal to vaccinate destitute children without taking money, resulting in many children contracting smallpox, some of whom died, while others were left disabled. This was such a distressing situation that the residents of the district had sent a petition containing numerous signatures requesting the appointment of another vaccination officer competent in the field (156).

The cited incompetence of Sadık Efendi was not the only example. Complaints arose regarding Tevfik Efendi, who held the position of vaccination officer in Erzincan, alleging his lack of proficiency and unsuccessful administration of vaccinations. The decision to determine his lack of proficiency was adequately explained by the request for the appointment of a competent individual in his place due to "the deaths of many children from smallpox." The complaint belonged to an "informant". In other words, the individual lodging the complaint felt responsible in this matter and was a resident of the region (157).<sup>34</sup> Presumably, people held the officer responsible for the losses despite vaccinations being administered, attributing the failures to his lack of incompetence. This actually indicates an awareness of the protective nature of the vaccine against the disease. Certainly, the vaccines could have been spoiled, but the officer's negligence was also a factor in the ineffectiveness of the vaccination. Indeed, Kemal Muhtar, as an expert, provided information about issues such as the failure to cool the knife after passing it through the flame, vaccination by placing the vaccine onto a hot blade, contact of the cleansing substance with the vaccine, excessive bleeding, or superficial scratching of the skin (67). Even without possessing such detailed and

technical information about the appropriate procedure, the failure of the vaccine was essentially perceived by the public as the fault of the officer.

The complaint, dated 1905 and titled "İhbarname-i acizânemdir," submitted to the Ministry of Health, begins with information about İsmail Efendi, who, while serving as a vaccination officer in Kırşehir Sanjak, was transferred to the Yabanabad District due to mental health issues. Since his arrival, he had engaged in immoral and inappropriate behavior and failed to fulfill his duties. He never went to the district to vaccinate a child, and he incited and provoked the public against each other, engaged in idle talk at coffeehouses, and misled the people by falsely claiming, "I would make and have made gold and silver from copper using chemistry." Moreover, he accompanied theater actors who came to the district and, for weeks, appeared daily in various costumes and manners, which "violated the dignity of the government." In his court cases, he received three monetary fines and was sentenced to one week in prison. Furthermore, he has colluded with muhtars to falsely portray himself as administering vaccinations to people without actually doing so. Despite the local administration and the public being aware of these behaviors, they refrained from interfering with his livelihood by stating, "He is insane and destitute." However, considering the significance of the district, Yanıkzâde from the population of Yabanabad District deemed it necessary to report, "in the name of the nation," as it could not be accepted for the country's children to be deprived of vaccination (159). In a letter addressed to the Kastamonu Governorate in 1899, another complaint that reached the authorities was about vaccination officer Ziya Efendi. It involved him visiting Bartın once a year to collect his salary and travel allowance without checking if the vaccine administered to the children took effect before immediately issuing vaccination certificates. Additionally, he did not visit villages, took money for various reasons, and was intoxicated day and night. This, like the others, was deemed sufficient to initiate an investigation (160).

This document aimed to examine the vaccination policy of the Ottoman Empire during the period spanning from the 19<sup>th</sup> century to the early decades of the 20<sup>th</sup> century, focusing on diverse dimensions associated with vaccination officers and vaccination centers. In doing so, the discourse and practices regarding vaccination were preferred to be addressed together. The aim was to look at the repeated history of vaccination from the grassroots level, based on chronological and institutional progress. Indeed, it can be said

<sup>34</sup> Regarding the May 1909 request for the transfer of Tokat Vaccination Officer Abdülkadir Efendi to another place due to his failure to perform his duties adequately, see (158).

**Annex 1.** A standard certificate that a vaccination officer is required to fill out contains the following information

Stub number	Vaccination certificate	Total number
	Certificat du vaccine	

Religious sect	Father's profession or occupation	Father's name	Age	Name

Household number	Street	Neighborhood	Known district	District	Department	City

Hereby certify that the individual with the above-mentioned identity and residence has been vaccinated (*number of vaccinations*) times as indicated in this certificate. (*Date*).

---(Location)---Vaccination Officer

Seal (with the name of the Vaccination Officer) (161).

that vaccination officers and vaccination centers are among the overlooked areas of vaccine history that have not received adequate attention. This holds true not only for the history of medicine but unfortunately also for Ottoman historiography. While there are various studies contributing to this field, the lack of multifaceted research directly based on sources, addressing the issue in a systematic manner, has shaped both the subject matter and the writing of our study.

In this context, the fact that the text is based on smallpox vaccination is likely to capture the reader's attention. We can consider the pivotal role of the smallpox vaccine as a fundamental reason for shaping the formation of public health policy and bureaucracy. The emergence of the vaccination officer profession, their deployment across a vast geography extending to districts, and the necessity for the establishment of vaccination centers stemmed from the desire to prevent the losses caused by smallpox outbreaks. Another notable aspect is the approach focused on experiences and relationships. Such a perspective undoubtedly allows us to acquire information not only about the experiences of officials but also about the experiences of the public in the face of these new medical practices. However, alongside this crucial information, it has provided the opportunity to observe the mutual agreement, conflicts, and governance approaches between the state and society regarding vaccination and, on a broader scale, public health.

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