

Health Services at Bangkattan Hospital, 1908-1942

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Abstract

This study discusses the plantation hospital owned by Deli Maatschappij, focusing on the Dutch colonial period in East Sumatra. This study aims to explain the history of the hospital's establishment and its impact on plantation workers. The research method used is historical research, which consists of several steps, namely heuristics, criticism, interpretation, and historiography. Bangkattan Hospital is located in Binjai, which was previously part of the Langkat district. Bangkattan Hospital is affiliated with 12 plantations in the surrounding area. Bangkattan Hospital provided modern health services and adequate facilities for the care and treatment of laborers and the local community, which yielded satisfactory results for those who received treatment. This changed the local community's perception of European medicine for the better.

Keywords: *Bangkattan, Deli Maatschappij, Health Services, Hospital, Epidemic*

Introduction

During the Dutch colonial period, health services in the form of hospitals were established in large plantation companies, such as those in East Sumatra, to address the health issues of plantation workers. The obligation of companies to provide health services was regulated in the *Koeli Ordonantie* (Coolie Ordinance) of 1880 No. 133 in article 2 number 8. This obligation was later reaffirmed in *Staatsblad van Nederlandsch-Indië* (State Gazette of the Dutch East Indies) No. 138 of 1889 and *Staatsblad van Nederlandsch-Indië* No. 421 of 1915, which stated that companies must provide medical care, health care, and medical expenses for coolies and their families at the expense of the plantation. This obligation to provide health services was also based on reports documenting the high mortality rate among laborers during the early development of plantations.¹

Some colonial literature mentions that the first infectious disease outbreak in Deli was cholera. In 1891, a cholera outbreak occurred in this region, resulting in 136 deaths per 1,000 laborers. Another outbreak that spread in Deli was influenza, which caused a high mortality rate. This outbreak is estimated to have occurred around 1918-1919, which also hit the rest of the world.² Leprosy is endemic in East Sumatra. It is said that the disease was brought by laborers from

¹ *Staatsblad van Nederlandsch-Indië* No. 138 of 1889 and *Staatsblad van Nederlandsch-Indië* No. 421 of 1915.

² Kiki Maulana Affandi, Budi Agustono, Junaidi, and Muhammad Rasyidin. "From Curative policy to preventive efforts: The role of physicians and corporate management in health maintenance for plantation workers at the Senembah plantation company, 1871-1940", *Medicina Historica*, 8(3), 2024: e2024030.

China, because at that time, southern China was known as a hotbed of leprosy. In East Sumatra, leprosy is prevalent in Serdang, Deli, and Langkat. Most cases of leprosy are found among Chinese laborers and some Javanese laborers.³

In 1882–1883, the mortality rate among laborers was very high. This was recorded in the Deli Maatschappij's 10-year report. The high mortality rate was caused by dysentery and beriberi, which were rampant in the Deli region. This epidemic also resulted in 105 deaths per 1,000 people in 1896. Hookworm disease also spread in plantation areas and affected laborers. This disease was prevalent among Javanese immigrants. Many Javanese immigrants suffered from severe anemia. Hookworm disease mainly affected laborers living in barracks with poor hygiene conditions.⁴

Based on the report by Dr. W.A. Kuenen and J.A. Knebel in the association for the benefit of health science in the Dutch East Indies, the East Sumatra subdivision recorded an average mortality rate of plantation laborers at Deli Maatschappij in 1910 of 14.6% out of a total of 22,129 laborers. The mortality rate of laborers on the Deli Maatschappij plantations began to be recorded in the years after 1908; no records of plantation laborer deaths were found for the late 19th century.⁵

High mortality rates due to tropical diseases led to an increase in demand for healthcare services. One way to meet this demand was through the construction of hospitals. The first hospital in East Sumatra was built by Deli Maatschappij in 1871 and was led by a European doctor. The Deli Maatschappij also built a central hospital in Medan. However, this hospital was built for Europeans. In addition, the Deli Maatschappij also built a hospital in Langkat for plantation workers. The hospital in Langkat was the Bangkattan Hospital, which was built by the Deli Maatschappij with the intention of providing health services for workers owned by the Deli Maatschappij as well as for Europeans in the Langkat area. Bangkattan Hospital is located in Binjai, which is part of the Langkat district. At that time, Bangkattan Hospital served around 12 plantations in Langkat.

The construction of hospitals in several areas was carried out to provide health care facilities for coolies. In 1908-1909, the mortality rate among coolies showed a positive change. The decline in mortality was quite significant. At the Tandjong Morawa Hospital owned by Senembah Maatschappij, there were 10.5 deaths per 1,000 coolies. At the Deli Maatschappij Hospital, the mortality rate was

³ Ririn Darini, "Experience of East Sumatra: Eradication of Disease Outbreaks, 1880 1940s", *Jurnal Mozaik Humaniora*, 23(1), 2023, p. 22.

⁴ P. Arens, N.L. Swart, A.A.L. Rutgers, *Handboek voor de rubbercultuur in Nederlandsch-Indië*, Amsterdam: J.H. de Bussy, 1921, p. 692.

⁵ Marieke van Klaveren, "Death among Coolies: Mortality of Chinese and Javanese Labourers on Sumatra in the Early Years of Recruitment, 1882–1909", *Itinerario*, 21(1), 1997, pp. 114-117.

around 16.6 per 1,000 laborers. At the Sei Sikambing Central Hospital owned by Tabak Maatschappij, the mortality rate was around 18.4 per 1,000. Meanwhile, at the Patoemboekan Hospital, the mortality rate was around 13.5 per 1,000.⁶ This decline is inseparable from the increased attention to health care for laborers, which can be seen from the improvement in medical facilities.

Research Methods

This research is historical research. Therefore, it uses historical methods. Historical methods can also be defined as methods of historical research and writing that use systematic approaches, procedures, or techniques in accordance with the rules of historical science.⁷ In writing history, the chronological aspect is very important; in history, events are arranged in chronological order. According to Kuntowijoyo, historical research has five stages, namely: (1) topic selection, (2) source collection (heuristics), (3) verification (historical criticism, source validity), (4) interpretation: analysis and synthesis, and (5) writing (historiography).⁸

Results and Discussion

Opening of the Deli Maatschappij Plantation

Deli Maatschappij was the first joint-stock company in the Dutch East Indies and the first and largest tobacco company in East Sumatra.⁹ The Deli Maatschappij was founded on November 1, 1869, by J. Nienhuys, G.C. Clemen, and P.W. Janssen. Nienhuys, a tobacco merchant, met Abdullah Bil Sagih in Surabaya, who was promoting pepper and tobacco from Deli to attract European merchants to invest in Deli. Nienhuys listened to Abdullah Bil Sagih's words and was intrigued, so he decided to go to Deli. However, he did not find the tobacco he was looking for. Instead, the Sultan of Deli, Mahmud Perkasa Alam, agreed to give him 2,000 hectares of land to grow tobacco.¹⁰

Nienhuys began experimenting with tobacco cultivation using land owned by the Sultan of Deli. In his first attempt, Nienhuys only produced 50 bales of tobacco. However, the harvest was still unable to meet market demand. Next, Nienhuys tried another method by opening an experimental plantation on 75 hectares of rented land in Tanjung Sepassai, near Titi Papan. Using this method, Nienhuys produced 25 bales of tobacco at a price of 0.48 guilders per half kilogram. However, this method required a lot of labor. There was resistance from the local population to being employed, so Nienhuys had to pay several Javanese Hajis and

⁶ Ririn Darini, *op.cit.*, p. 24.

⁷ A. Daliman, *Metode Penelitian Sejarah*, Yogyakarta: Ombak, 2015, p. 27.

⁸ Kuntowijoyo, *Pengantar Ilmu Sejarah*, Yogyakarta: Tiara Wacana, 2020, p. 69.

⁹ J.F.L. de Balbian Verster, *Deli Maatschappij: Gedenkschrift bij gelegenheid van het vijftigjarig bestaan*, Amsterdam: Roeloffzen-Hübner & Van Santen dan gebrs. Binger, 1919, p. 5.

¹⁰ Ririn Darini, *op.cit.*, p. 24.

their followers from Penang to cultivate and supervise the planting work. In 1865, Nienhuys brought in Chinese coolies from Penang and directly from mainland China. At the end of the 1865 harvest season, Nienhuys was able to produce 189 bales of good quality tobacco, valued at 2.51 guilders per half kilogram. In 1867, Nienhuys obtained a 99-year land concession from the Dutch East Indies government, located between the Deli and Percut rivers, stretching from the village of Mabar to Deli Tua. In 1868, the plantation's production costs amounted to 30,000 guilders and generated 67,000 guilders. The following year, Nienhuys' plantation made a profit of 36,400 guilders and 87,200 guilders.¹¹

Deli Maatschappij continued to grow rapidly and opened several plantations. In 1873, Deli Mij. opened the Annidale, Kesawan, and Petersburg plantations. In 1876, they opened the Budra plantation. All of these plantations were established on land based on the Mabar-Deli Tua land contract. In 1873, Deli Mij owned 7 plantations. By 1884, Deli Mij. was operating 12 plantations: Mariendal, Medan, Petersburg, Tanjung Jati, Bandar Kalipah, Deli Tua, Kuala Begumit, Bekala, Belawan, Lubu Dalam, Bulu Cina, and Kota Lambaru.¹²

In the 1880s, Deli Maatschappij began expanding its plantation area to Langkat and Serdang. In this region, Deli Maatschappij had a land concession covering 120,000 hectares.¹³ The plantations owned by Deli Maatschappij in the Langkat region vary in size, such as: Kotta Lama has an area of 7,751 bau, Loeboe Dalam 6,963 bau, Kwala Bingei 6,425 bau, Kwala Begoemit 6,310 bau, Poengei 2,735 bau, Tandjong Djatti 4,626, Kwala Mentjirim 2,757 bau, Namoe Trassi 2,010 bau, Wiget (Lambiki) 3,495 bau, Namoe Toembis 18,310 bau, Lingga 5,767 bau, Sakoeda 5,356 bau, Serapit 8,508 bau, Soekaranda 2,280 bau, Bekioen 3,000 bau, Sei. Bekoelap I 260 bau, Namoe Djawi 490 bau, Tandjong Bringin 8,790 bau, Tandjong Slammat 3,262 bau, Tandjong Poetoes 3,337 bau, Batang Serangan 59,330 bau.¹⁴

A. The Life of Plantation Laborers at the Deli Maatschappij

In the early days of plantation farming, labor was much harder to come by than land for plantations. Therefore, plantation owners sought labor outside the Deli region. At the beginning of plantation development, the first laborers to be employed were Chinese. The first group of Chinese laborers to arrive numbered

¹¹ Edi Sumarno, "Pelestarian dan Perlindungan Tembakau Deli Sebuah Perspektif Historis", *Jurnal Pertanian Tropik Edisi Khusus Semnas Tembakau*. 3(3), 2016, p. 190.

¹² Ririn Darini, *loc.cit.*

¹³ Ririn Darini, "Deli Maatschappij's Contribution to the Transformation of East Sumatera, 1869 1940s", *Paramita: Historical Studies Journal*, 31(1), 2021, p. 25.

¹⁴ N.V. Deli Maatschappij, *N.V. Deli Maatschappij: Hoe zij ontstond en groeide*. Medan: Deli Courant, 1931, p. 33.

120 people. These laborers were recruited from Penang and Malacca.¹⁵ In the early 20th century, there was a shift in interest from hiring Chinese laborers to Javanese laborers. The recruitment process for Javanese laborers was carried out through agents commonly known as *werek*, who traveled to remote villages in Java.

In the early days of plantation development, women were not considered as laborers. At that time, female labor was not yet needed, because the work in the early days of plantation development was large-scale forest clearing. The majority of female laborers came from Java, with only a few coming from China. In the early 20th century, female laborers were a minority, accounting for nearly 8% according to data from the *Deli Planters Vereeniging*, DPV (Deli Planters Association). It is not known exactly how many female laborers were employed on plantations owned by the *Deli Maatschappij*. Workers recruited by plantation companies received an advance payment, which was an advance on their wages paid to laborers when they were accepted to work on the plantation.¹⁶ This advance payment will actually be taken back by the plantation company by deducting it from the laborers' wages after they have worked. This advance payment is like a debt that must be repaid by the laborers. The employment contract, which was originally only for three years, can be automatically extended if the laborers have not repaid their debts.¹⁷

This type of fraud was actually carried out by labor recruitment agents, who promised high wages and claimed that the Deli region was a land of opportunity. When it came time to pay wages, the laborers received vouchers or special coins that were only valid on the plantations where they worked. The plantation owners did this to force the coolies to shop only within the plantation. In 1880, the colonial government created a regulation called the *Koeli Ordonantie*. This regulation was created to “bind” the coolies so that they would not run away from their responsibilities as plantation workers. The *Koeli Ordonantie* contained penalties for laborers who violated their employment contracts. These penalties were called *Poenale Sanctie* or criminal sanctions, were the plantation owners' justification for punishing laborers who committed violations in order to discipline them.¹⁸

In various colonial literature, it is stated that acts of violence such as beatings or physical punishment carried out by European assistants were

¹⁵ Jan Breman, *Menjinakkan Sang Kuli: Politik Kolonial, Tuan Kebun, dan Kuli di Sumatra Timur Pada Awal Abad ke-20*, Jakarta: Pustaka Utama Grafiti, 1997, p. 24.

¹⁶ Maiza Elvira, Fatima Gay J. Molina, Anne Van der Veer, “Women In The Middle Of The Wild Life In The East Sumatra Plantation 1880-1940”, *Humanisma: Journal of Gender Studies*, 7(1), 2023, p. 95.

¹⁷ Budi Agustono, Kiki Maulana Affandi, and Junaidi, “Benih Mardeka in the political movement in East Sumatra, 1916-1923”, *KEMANUSIAAN The Asian Journal of Humanities*, 28(2), 2021, pp. 135-157.

¹⁸ Junaidi, Lila Pelita Hati, Kiki Maulana Affandi, Nurhabsyah, “Weaving Hope in Tanah Deli: Life and Healthcare of Plantation Workers in the East Sumatra's Plantation Belt, 1870-1940”, *Medicina Historica*, 7(2), 2023, p. 5.

deliberately applied to coolies, because this method was considered more effective in helping coolies understand their work. Articles 8 to 10 of the coolie ordinance listed types of violations of employment contracts, such as: running away, refusing to work, resistance, insults, threats against employers and superiors, rioting, inciting other coolies to run away, fighting, drunkenness, and violations of public order. The penalties imposed were unpaid labor for public works for 12 days, 3 months, or one year, depending on the severity of the offense, and a minimum fine of 25 guilders and a maximum fine of 50 guilders.¹⁹ In addition, during the period of punishment, illness lasting more than one month, and absence without permission are not included in the calculation of working days. Therefore, these days must be made up by working.

This labor ordinance also stipulates the obligations of plantation owners, such as providing accommodation, health care, good treatment, wages in accordance with the contract, clean drinking water and bathing facilities, and plantation owners must issue a permit if a laborer wishes to complain to the local government about poor treatment. Furthermore, the obligations of laborers are also listed in this ordinance, such as: laborers are not allowed to leave the plantation without written permission from the plantation owner or supervisor, laborers must carry out their work regularly, obey the orders given by their employer or superior loyally, and behave in accordance with their contract.

Unfortunately, the implementation of this labor ordinance did not go as intended. There were violations committed by plantation owners. This was because most laborers were unaware of the contents of the employment contracts drawn up by the plantation owners and the Dutch East Indies government.²⁰ So they were easily lured by recruiters who invited them to work on plantations in East Sumatra.

The labor ordinance stipulates that laborers work 10 hours per day. However, in practice, laborers work longer than they should. Before sunrise, laborers leave for the fields to start work. This is because the fields where they work are quite far from the laborers' barracks, so it takes quite a long time to get there. The laborers must arrive at the fields on time and are only allowed to return to the barracks after completing their assigned work.

During harvest season, it is not uncommon for both male and female laborers to work much longer hours at night. The female laborers continue to hang the harvested tobacco leaves in the drying barn. Meanwhile, Javanese and Indian laborers prepare the land for new plantings by clearing forests, hoeing and leveling the soil, making ridges for planting, digging drainage ditches, building barns for

¹⁹ Jan Breman, *op.cit.*, p. 43.

²⁰ Ervin Herdiansyah, "Kehidupan Kuli Kontrak Jawa di Perkebunan Tembakau Sumatera Timur Tahun 1929-1942", *Avatara, E-Journal Pendidikan Sejarah*, 5(3), 2017, p. 944.

drying tobacco, and barracks for laborers. Chinese laborers continue to work in the fields, burning dry leaf litter, hoeing, and cleaning warehouses.

For Chinese laborers, their wages were calculated based on the tobacco harvest. After planting, tending, and harvesting the tobacco, these Chinese laborers were paid on a piecework basis. The laborers were paid 10 francs for every 1,000 tobacco plants they worked on.²¹ Meanwhile, Javanese and Indian laborers were paid based on the length of time they worked on the plantation. Tamil Indian laborers received the same amount as Javanese laborers, earning 20 cents per day, which amounted to 6 to 7 dollars per month.²² Female coolies received even lower wages than male coolies. Female coolies received 2.30 guilders per month, equivalent to 0.50 shillings per day, or 7.50 cents.²³ Female coolies receive very low wages, barely enough to cover their daily needs. Consequently, they are forced to prostitute themselves to make ends meet.

A life of exploitation and extremely limited access made the coolies highly dependent on the plantations. With wages so low that they barely even covered their living expenses, they resorted to theft, fraud, and even the cruel act of selling their wives and children. This restricted lifestyle meant the coolies had no freedom of movement outside the plantations. Therefore, entertainment was restricted to the plantations, which usually took place after payday.²⁴ The coolies were presented with Wayang or Chinese theater performances, which were considered major celebrations at the time. These festivities also included gambling, prostitution, and the free sale of opium. The conditions in which the coolies lived contrasted sharply with those of the plantation owners, especially the gleaming administrative bungalows. The coolies' huts had dirt floors, plank walls, and roofs made of nipah palm leaves. These huts suffered from numerous sanitation and hygiene issues. This poor living environment contributed to the rapid spread of disease among the coolies.

B. Disease Outbreaks

The poor living conditions and working environment of laborers certainly caused the spread of disease and high mortality rates in the mid to late 19th century. The first epidemic to spread was cholera, which occurred in the 1800s. In 1884, cholera spread, particularly in the Langkat region.²⁵ In 1881, beriberi emerged in the plantations of the Deli Maatschappij. By 1884, this disease had also spread to

²¹ Junaidi, Lila Pelita Hati, Kiki Maulana Affandi, Nurhabsyah, *loc.cit.*

²² Apriani Harahap, "Orang India di Perkebunan Tembakau Deli: Narasi Foto, 1872 1900", *Jasmerah: Journal of Education And Historical Studies*, 1(2), 2019, pp. 68-69.

²³ Jan Breman, *op.cit.*, p. 115.

²⁴ Budi Agustono, Kiki Maulana Affandi, Junaidi, "Benih Mardeka and plantation workers in East Sumatra, 1916–1923", *Kasetsart Journal of Social Sciences*, 45(1), 2024, p. 229.

²⁵ Jan Breman, *op.cit.*, pp. 125-126.

other regions, particularly Langkat. At the Deli Tobacco Central Hospital located in Medan, the mortality rate among laborers was 7.4 percent. Meanwhile, at the hospital in Langkat, the mortality rate among laborers was 14.4 percent.²⁶ Information on laborer mortality rates is not available in its entirety; some data is only available for the mid-20th century, not for the early years of the plantations.

Epidemics affecting plantation laborers were indeed a complex health problem in East Sumatra. The initial opening of plantations that used labor-intensive systems was the cause of health problems among plantation workers. The harsh working conditions and the adaptation of Chinese workers to the environment and climate led to deaths among the workforce. Sanitation and hygiene were major problems faced by Chinese workers since the opening of the plantations. In addition, Chinese workers were accustomed to consuming opium, which further deteriorated their health. The Chinese workers lived in barracks in the middle of the plantations, which also contributed to the spread of infectious diseases.²⁷

Cremer noted in his report that smallpox began to spread among the population in early 1893 in Deli. In 1918, an influenza epidemic spread globally. Nearly half of the deaths in 1918 on the plantations of East Sumatra were caused by this disease.²⁸ The next disease to attack the plantations of East Sumatra was malaria. Malaria is a disease that causes fever accompanied by chills and malaise. In addition to malaria, there were other diseases caused by the tropical climate of East Sumatra, which had not previously been found in East Sumatra, such as dysentery, hookworm (ankylostomiasis), tuberculosis, fever, meningitis, syphilis, and leprosy.

C. Bangkattan Hospital, 1908-1942

A hospital that is built must meet general building and hygiene requirements, such as being flood-free and not located in an area known to be a hotbed for malaria or other infectious diseases. Hospitals should be located in the center of the region, and it is also recommended that they be close to a river. The land area available for hospital construction should be large enough so that multi-story buildings are not necessary. The construction of a hospital must also take into account several things, such as: the main building must be located in the center of the hospital and not too far from the wards because many patients have to go there every day.²⁹ This main building must also be close to the laboratory to facilitate

²⁶ Marieke Van Klaveren, *loc. cit.*

²⁷ Budi Agustono, Junaidi, and Kiki Maulana Affandi. "Pathology laboratory: An institution of tropical diseases in Medan, East Sumatra, 1906-1942", *Cogent Arts & Humanities*, 8, 2021, 1905261.

²⁸ Winda Octavia, Lister Eva Simangunsong, "Sejarah Kesehatan Kuli Kontrak di Perkebunan Deli Maatschappij (1872-1942)", *Puteri Hijau Jurnal Pendidikan Sejarah*, 5(2), 2020.

²⁹ W. Kouwenaar, *Ziekenhuisbouw ter oostkust van Sumatra*, n.p.: n.pub. 1929, pp. 9-10.

doctors in conducting research and to facilitate the supervision of patients by European nurses. Then, there must be enough trees around the hospital to provide good seating for patients during the day. Finally, the entire area must be well enclosed by fences or walls, both to prevent patients from leaving and to prevent unwanted visitors (especially food vendors and the like) from entering.

Figure 1. Bangkattan Hospital in Binjai



Source: E. Enthoven. *N.V. Deli-Maatschappij, 1869-1929: Gedenkschrift bij gelegenheid van het zestigjarig bestaan aansluitende bij het gedenkboek van 1 November 1919*. De Bussy, 1929.

Bangkattan Hospital was designed in a pavilion style that is very suitable for tropical regions such as East Sumatra. Bangkattan Hospital is equipped with several facilities, such as: a main building, a reception building, a laboratory, an operating room, a morgue, a kitchen with a dining room, a food storage area, a water tower, toilets, a septic tank, a patient pavilion, a drainage pond, a doctor's house, a steam house, a special room for Europeans, and other supporting facilities. Based on the Deli Maatschappij 1869-1929 report, it is recorded that Bangkattan Hospital and Loeboe Dalam Hospital were replaced by Bangkattan Central Hospital, which opened in August 1921.³⁰ Loeboe Dalam Hospital continued to be used as a quarantine facility for new workers arriving to work for companies in Langkat.

The cost of constructing Bangkattan Hospital is unknown. However, the construction of patient pavilions is estimated to have cost between 750 and 1,200 guilders per bed.³¹ According to other sources, the construction of pavilions cost between 400 and 600 guilders per bed, or between 100,000 and 200,000 guilders. A large hospital can usually accommodate 600-800 people.³² Hospitals that have reached their maximum capacity for accommodating patients will require operating costs of around 1 to 1.25 guilders per day. The cost of treatment per laborer is usually 12 to 16 guilders per year.³³

³⁰ J.F.L. de Balbian Verster, *loc.cit.*

³¹ W. Kouwenaar, *loc.cit.*

³² P. Arens, N.L. Swart, A.A.L. Rutgers, *op.cit.*, p. 770.

³³ W. Kouwenaar, *loc.cit.*

The Bangkattan Hospital building is divided based on its respective functions, namely:

- a) **Main Building:** The main building is used for various integrated central services. Inside this building, doctors have study rooms, consultation rooms, and examination rooms. Offices for doctors' assistants are also located in this building. In addition, this building also houses a laboratory, a darkroom, and a treatment room. These rooms were designed to facilitate access for doctors when conducting examinations. A pharmacy and administrative offices must also be available in this building.

Figure 2. Bangkattan Hospital Laboratory



Source: W. Kouwenaar, *Ziekenhuisbouw ter oostkust van Sumatra*. n.p.: n.pub. 1929.

The pharmacy and administrative office are areas that must be directly supervised by the doctor's assistant. Rooms for examining Europeans are also available in this building. The rooms for examining Europeans are located in front of the main building.³⁴ This is done to separate the examination rooms for Europeans from those for non-Europeans. These rooms are supervised by doctors on duty at the hospital.

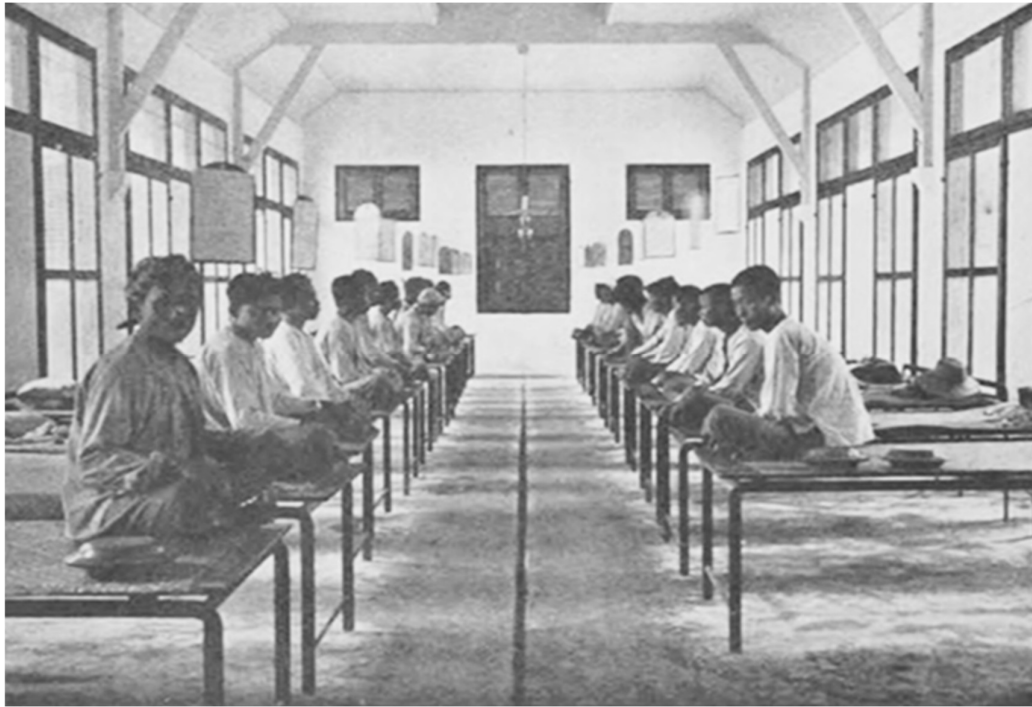
- b) **Reception Building:** The reception building is one of the most important buildings in a hospital. This building functions as a “gateway” or barrier between the hospital and the outside world.³⁵

³⁴ *Ibid.*, p. 13.

³⁵ *Ibid.*, p. 19.

- c) Patient Care Wards: The first room is intended for patients with milder illnesses. This room only requires a large space that can accommodate 50 or more beds. The second room is used to treat patients with severe illnesses.

Figure 3. Patient Ward Room at Bangkattan Hospital



Source: W. Kouwenaar, *Ziekenhuisbouw ter oostkust van Sumatra*. n.p.: n.pub. 1929.

- d) Bathrooms: Patients in general wards have their own bathrooms. Some of these bathrooms use bathtubs filled with water for bathing, while others use a slow flow of water (shower). Meanwhile, in critical care wards, the same bathing facilities are also available in the pavilion where they are treated. However, for emergencies, there are portable bathtubs that can be moved.
- e) Kitchen and Dining Room: Generally, stoves in hospitals still use firewood as fuel. Some of these stoves have wooden barrels with holes in the bottom that are used to cook rice. The dining room is located right next to the kitchen. Most patients eat in the dining room, except for those who are on a diet, paralyzed, or not allowed to come into contact with other people. Those who do not eat in the dining room will eat in the treatment room.
- f) Steam House: This steam house was built to disinfect patients' belongings when they first entered the hospital and to sterilize hospital items that had been used by patients when they were discharged from the hospital.

- g) Mortuary: The mortuary is equipped with an adjacent autopsy room. In addition, large hospitals usually also have a small room for pathologists and a storage room for coffins.
- h) European Hospital: This section of the hospital is reserved for Europeans living in the vicinity of the hospital. The treatment rooms are equipped with folding beds, a front room or balcony for relaxation, and a small bathroom with a toilet. In this room, the ventilation is designed with glass installed in front of the balcony, glass that can be opened installed on the bedroom windows, and mosquito nets installed.
- i) Doctor's House: The doctor's house was designed in accordance with post-18th century architectural styles. This building was photographed around 1930. The doctor's house was built close to the hospital to save the doctor time in getting to the hospital and immediately performing his duties as a doctor.³⁶
- j) Water Supply: A hospital with a capacity of 500 patients typically requires 80 to 100 cubic meters of water, or the equivalent of 80. Most hospitals use a well system as a source of water for hospital operations. However, well water sources such as these are not hygienic for drinking water. To make it more sterile for drinking water needs, well water needs to be filtered first. According to Dr. J. Smit, there are two ways to filter water.³⁷ First, the Jewell filter and the lime filter. However, for bathing and rinsing needs, well water only needs to be treated with alum or lime as a filter to make the water hygienic for use. Water for kitchen use usually needs to be filtered first. This is done to disinfect the water that will be used. The water distribution system usually uses large drainage pipes.
- k) Waste Disposal and Toilet Systems: Toilets available in pavilions for patients with minor illnesses have squat toilets made of porcelain or enamel. Pavilions for patients with severe illnesses usually provide a pot placed under the bed and emptied in the morning after the doctor's visit. Fecal waste from toilets that is drained into septic tanks requires 25 to 50 liters of water per person per day.³⁸ Feces that enters the septic tank will turn into liquid through a decomposition process. The liquid is then drained into a pond through a long drain pipe to ensure proper decomposition. A pond measuring 15 x 44 meters with a depth of 2 meters is used to collect waste from the septic tank.³⁹ In addition, the pond is also used to collect hospital laundry waste and other hospital waste.

³⁶ Fuji Sartika and Lukitaningsih, "Potret Kehidupan Masyarakat Binjai Tahun 1930-1933", *Historis: Jurnal Kajian, Penelitian & Pengembangan Pendidikan Sejarah*, 7(1), 2021, p. 14.

³⁷ W. Kouwenaar, *op.cit.*, p. 30.

³⁸ E.P. Sniijders, *Koeliehuisvesting en geneeskundige dienst op rubberondernemingen*, Amsterdam: De Bussy, 1921, p. 24.

³⁹ W. Kouwenaar, *op.cit.*, p. 40.

Deli Maatschappij had an organizational structure for managing medical service personnel.⁴⁰ In this organizational structure, medical services were headed by medical officers. Then, at the next level was a hospital director and a second doctor. The next level was nurses and hospital assistants. The lowest level was nursing assistants, who were non-European employees. Based on the 1869-1929 annual report of Deli Maatschappij, the company had five plantation doctors, namely Dr. G. W. Pott Hofstede, T. de Waard, Dr. M. Straub, Dr. L. J. Del Baere, and J. Potter van Loon. Furthermore, Deli Maatschappij also had five hospital assistants, one pharmacist, and four nurses, all of whom were European employees of the Deli Maatschappij.⁴¹ The Deli *Maatschappij* annual report for 1869-1929 noted that there were six European employees working at Bangkattan Hospital, consisting of two doctors, two nurses, and two hospital assistants. In addition, there were 70 non-European employees working at Bangkattan Hospital.

Patient care usually began in the morning around six o'clock. At this time, patients were usually bathed and fed, the pavilion was cleaned and disinfected, temperature and pulse were measured, and medication was given to patients, usually several times throughout the day. Then, care and the provision of hygienic drinking water and good tea must also be carried out. All patients will have their urine and feces examined for malaria parasites and intestinal worms.⁴² For patients in critical condition, examinations will be carried out every day. Meanwhile, for patients in a milder condition, examinations will be carried out at certain times. In addition, hemoglobin levels (Tallquist) are checked to determine whether the patient is anemic.⁴³

Doctors will visit patients at specific times. During doctor visits, all patients are examined in sequence. Therapeutic actions and other additional actions taken must be recorded in the patient list.⁴⁴ This is done to identify patients who need more specific examinations or treatment and can be treated as soon as possible.

Meals are provided three times a day, with breakfast served after patients have been bathed. The second and third meals are served around 11 a.m. and 4:30 p.m. These meals consist of rice, fish, and fresh vegetables in soup and are eaten by patients with mild illnesses together under the supervision of assistants, usually in a separate dining room.⁴⁵ For patients with critical illnesses, meals are usually brought to their pavilions. The selection and preparation of food is an important component of hospital life, and the kitchen must be well supervised. Careful

⁴⁰ N.V. Deli Maatschappij, *op.cit.*, p. 35.

⁴¹ E. Enthoven, *N.V. Deli-Maatschappij, 1869-1929*, Amsterdam: De Bussy, 1929, p. 44.

⁴² Emil van de Velde, *Het hospitaalwezen op Sumatra's Oostkust*, Amsterdam: Van Rossen, 1918, p. 35.

⁴³ W. Kouwenaar, *op.cit.*, pp. 17-18.

⁴⁴ Emil van de Velde, *op.cit.*, p. 35.

⁴⁵ *Ibid.*

attention must be paid to various components, including vitamins, which have special value. In addition, the provision of hygienic drinking water and good tea is also taken into consideration.

Bangkattan Hospital provides modern health services to plantation workers affiliated with the hospital and local residents. There are 12 plantations affiliated with the hospital.⁴⁶ Bangkattan Hospital also functions as a quarantine facility for workers who have just arrived in Langkat before being sent to the plantations where they work.⁴⁷ These newly arrived laborers were examined and treated for several days at the hospital. They were also given medication for intestinal worms and vaccinations. This was done to prevent the spread of infectious diseases in the Langkat region. As a central medical service, Bangkattan Hospital also pays close attention to the proper use and maintenance of toilets. Plantation laborers have been given an understanding of toilets, so that they no longer defecate in random places around them, which can cause disease.⁴⁸

Local residents are generally reluctant to comply with hygiene rules. Many of them are illiterate and lack knowledge and insight. In addition, many of them believe in superstitions and prejudices, which are among the reasons they dislike European doctors and scientists as well as hospitals. Local residents were convinced to follow the plantation workers' requirement to seek treatment when sick. Improvements in hospital services, the provision of more skilled care, and more specialized assistance were among the factors that reduced local residents' fear or reluctance towards hospitals and European medicine, so that most of them requested hospitalization even for minor illnesses.

Conclusion

The construction of the Bangkattan Hospital was motivated by the need for health services for the plantation laborers of the Deli Maatschappij in Langkat. The need for health services was influenced by the high mortality rate among laborers. In addition, a labor ordinance established by the colonial government required plantation owners to provide health services. The colonial government also required plantation owners to improve health services. This was stated in the *Staatsblad van Nederlandsch-Indië* in 1889 and 1915. Bangkattan Hospital, as a plantation hospital owned by Deli Maatschappij, was managed by the administrator of the Deli Maatschappij plantation.

The Deli Maatschappij organized personnel tasked with providing health services in a structured manner. Within this organizational structure, medical services were carried out by medical personnel, namely the hospital director, second

⁴⁶ Willem Kouwenaar, *Verzamelde geschriften 1914-1939*, n.p.: n.pub., 1939, p. 25.

⁴⁷ W. Kouwenaar, *op.cit.*, p. 10.

⁴⁸ *Ibid.*, p. 36.

doctor, hospital assistants, nurses, and non-European nursing assistants or assistants. Bangkattan Hospital was led by two European doctors. These European doctors were assisted by two hospital assistants and two nurses, all of whom were European nationals. In addition, there are about 70 native nurses who will directly treat sick laborers. Patient care usually begins in the morning. Patients are bathed and fed, the pavilion is cleaned and disinfected, temperature and pulse are measured, and then patients are usually given medicine several times throughout the day. All patients will have their urine, feces and blood checked. Patients are fed three times a day, with rice, fish, and vegetable soup. Tea is also provided to patients for drinking water. The Bangkattan Hospital has had an impact in the form of modern health services and adequate facilities for the care and treatment of laborers and the local community. Improvements in health services have led to a decrease in mortality rates.

References

- Affandi, K. M., Agustono, B., Junaidi, & Rasyidin, M. "From Curative policy to preventive efforts: the role of physicians and corporate management in health maintenance for plantation workers at the Senembah plantation company, 1871-1940". *Medicina Historica*, 8(3), 2024, e2024030. <https://doi.org/10.69124/mh.v8i3.16551>
- Agustono, B., Junaidi, & Affandi, K. M. "Pathology laboratory: An institution of tropical diseases in Medan, East Sumatra, 1906-1942". *Cogent Arts & Humanities*, 8, 2021, 1905261. <https://doi.org/10.1080/23311983.2021.1905261>
- Agustono, B., Affandi, K.M., & Junaidi. "Benih Mardeka in the political movement in East Sumatra, 1916-1923". *KEMANUSIAAN The Asian Journal of Humanities*, 28(2), 2021, 135-157. <https://doi.org/10.21315/kajh2021.28.2.6>
- Agustono, B., Affandi, K.M., & Junaidi. "Benih Mardeka and plantation workers in East Sumatra, 1916–1923". *Kasetsart Journal of Social Sciences*, 45(1), 2024. <https://doi.org/10.34044/j.kjss.2024.45.1.23>
- Arens, P., Swart, N.L., Rutgers, A.A.L. *Handboek voor de rubbercultuur in Nederlandsch-Indië*. Amsterdam: J.H. de Bussy, 1921.
- Breman, J. *Menjinakkan Sang Kuli: Politik Kolonial, Tuan Kebun, dan Kuli di Sumatra Timur Pada Awal Abad ke-20*. Jakarta: Pustaka Utama Grafiti, 1997.
- Daliman, A. *Metode Penelitian Sejarah*. Yogyakarta: Ombak, 2015.
- Darini, R. "Deli Maatschappij's Contribution to the Transformation of East Sumatera, 1869 1940s". *Paramita: Historical Studies Journal*, 31(1), 2021.

- Darini, R. "Experience of East Sumatra: Eradication of Disease Outbreaks, 1880-1940s". *Jurnal Mozaik Humaniora*, 23(1), 2023. <https://doi.org/10.20473/mozaik.v23i1.36908>
- De Balbian Verster, J. F. L. *Deli Maatschappij: Gedenkschrift bij gelegenheid van het vijftigjarig bestaan*. Amsterdam: Roeloffzen-Hübner & Van Santen dan gebrs. Binger, 1919.
- Deli Maatschappij, N.V. *N.V. Deli Maatschappij: Hoe zij ontstond en groeide*. Medan: Deli Courant, 1931.
- Elvira, M., Molina, F. G. J., & Van der Veer, A. "Women in the Middle of the Wild Life in the East Sumatra Plantation 1880-1940". *HUMANISMA: Journal of Gender Studies*, 7(1), 2023, 91-100. <https://doi.org/10.30983/humanisme.v7i1.6276>
- Enthoven, E. *N.V. Deli-Maatschappij, 1869-1929: Gedenkschrift bij gelegenheid van het zestigjarig bestaan aansluitende bij het gedenkboek van 1 November 1919*. Amsterdam: De Bussy, 1929.
- Harahap, A. "Orang India di Perkebunan Tembakau Deli: Narasi Foto, 1872-1900". *Jasmerah: Journal of Education And Historical Studies*, 1(2), 2019.
- Herdiansyah, E. "Kehidupan Kuli Kontrak Jawa di Perkebunan Tembakau Sumatera Timur Tahun 1929-1942". *Avatara, E-Journal Pendidikan Sejarah*, 5(3), 2017.
- Junaidi., Hati, L. P., Affandi, K. M., & Nurhabsyah. "Weaving Hope in Tanah Deli: Life and Healthcare of Plantation Workers in the East Sumatra's Plantation Belt, 1870-1940". *Medicina Historica*, 7(2), 2023, e2023030. <https://mattioli1885journals.com/index.php/MedHistor/article/view/14534>
- Kuntowijoyo. *Pengantar Ilmu Sejarah*. Yogyakarta: Tiara Wacana, 2020.
- Kouwenaar, W. *Ziekenhuisbouw ter oostkust van Sumatra*. n.p.: n.pub. 1929.
- Kouwenaar, W. *Verzamelde geschriften 1914-1939*. n.p: n.pub., 1939.
- Octavia, W. & Simangunsong, L. E. "Sejarah Kesehatan Kuli Kontrak di Perkebunan Deli Maatschappij (1872-1942)". *Puteri Hijau Jurnal Pendidikan Sejarah*, 5(2), 2020. <https://doi.org/10.24114/ph.v5i2.20316>
- Sartika, F. & Lukitaningsih. "Potret Kehidupan Masyarakat Binjai Tahun 1930-1933". *Historis: Jurnal Kajian, Penelitian & Pengembangan Pendidikan Sejarah*, 7(1), 2021.
- Snijders, E. P. *Koeliehuisvesting en geneeskundige dienst op rubberondernemingen*. Amsterdam: De Bussy, 1921.
- Staatsblad van Nederlandsch-Indië* Tahun 1889 No. 138.
- Staatsblad van Nederlandsch-Indië* Tahun 1915 No. 421.

Sumarno, E. “Pelestarian Dan Perlindungan Tembakau Deli Sebuah Perspektif Historis”. *Jurnal Pertanian Tropik Edisi Khusus Semnas Tembakau*, 3(3), 2016.

Van de Velde, E. *Het hospitaalwezen op Sumatra's Oostkust*. Amsterdam: Van Rossen, 1918.

Van Klaveren, M. “Death among Coolies: Mortality of Chinese and Javanese Labourers on Sumatra in the Early Years of Recruitment, 1882–1909”. *Itinerario*, 21(1), 1997.