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Research Article

Professionalizing Care at Petronella Hospital: Javanese Agency, Colonial Medicine, and Healthcare Work in Yogyakarta (1900–1940)

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Abstract

This article traces the professionalization of indigenous medical staff at Petronella Hospital, Yogyakarta, between 1900 and 1940. Addressing the historical gap regarding non-elite health workers, this study examines how marginalized Javanese individuals negotiated colonial disciplines to achieve social mobility. Using a historical method framed by subaltern theory based on colonial archives, this research reveals that Petronella served as an engine of mobility. The institution transformed unskilled domestic workers into professionals (*zuster* and *mantri*). Through the decentralized "Yogyakarta System," Petronella produced state-recognized nurses and conducted a radical gender experiment by training male midwives to address high rural maternal mortality. Ultimately, this professionalization demonstrates how subaltern indigenous agency adopted medical modernity without forfeiting cultural roots.

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INTRODUCTION

The indigenous population's skepticism of Western medicine in the Dutch East Indies during the late 19th century is often simplistically attributed to cultural fanaticism or intellectual backwardness. However, an investigative report in the daily newspaper *De Locomotief* on January 21, 1898, exposed a deeper structural root cause: social alienation. The newspaper highlighted the phenomenon of empty military hospitals and government institutions not because the Javanese rejected healing, but because they rejected institutional racism ("De Kliniek van Den Zendeling-Arts Scheurer Te Jogjakarta," 1898). In government wards, indigenous patients were treated as second-class citizens, isolated behind walls or iron bars by staff who were alien in both language and custom. Crucially, these early state facilities completely disregarded Javanese social hierarchy. The elite class (*priyayi*) and local leaders received no spatial privileges; a district head or overseer (*mandor*) would be forced to share the same grim wards with common laborers, prisoners, or even prostitutes. To avoid this severe social degradation, the elites refused admission (E. Q. Hesselink, 2015, pp. 291–292). Through this article, a profound sociological aspiration is discernible: the Javanese population yearned for healers capable of integrating with their culture, a humanistic qualification absents from the state health bureaucracy of that era.

The colonial economic reality further widened this segregation gap. With an average annual income of less than 100 guilders (a potentially biased figure based on colonial economic categorizations that generalized the Inlander as a mere labor commodity), an ordinary Javanese family could not afford private doctors, and accessing free services at government hospitals required trading dignity for discriminatory treatment ("De Kliniek van Den Zendeling-Arts Scheurer Te Jogjakarta," 1898). Consequently, the structural and racial barriers of colonialism obstructed the Javanese from adopting medical modernity. Driven by this systemic alienation, the indigenous majority, spanning both urban commoners and rural communities, were forced into a pragmatic retreat. They reverted to their old socio-cultural references, returning to traditional healers (*dukun*). Mission reports noted that "prayer water and a little spit" from a village dukun were trusted more than a doctor's medicine, primarily because they were administered in a language the patients understood. Consequently, voluntary visits

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to European clinics were virtually non-existent. When the indigenous population did cross the threshold of colonial medical facilities, these interactions occurred strictly out of unavoidable necessity, often driven by external coercion or severe emergencies, such as when plantation laborers suffered industrial accidents or when victims of violence were brought in by the police ("Dr. Scheurer," 1900).

It was amid this crisis of trust that Petronella Hospital was established in Yogyakarta, not merely as a medical facility but as an antithesis to colonial arrogance. This project was unique because it emerged from the collaboration of two often marginalized forces: women's solidarity and local politics. The hospital's establishment was not subsidized by the colonial government but relied instead on mobilizing private philanthropic efforts. The name "Petronella" was adopted from Petronella Te Winkel, the late wife of Pastor N. Adriani, who provided a substantial grant of 10,000 guilders in her memory ("Hospital Te Djogja," 1899; "Nieuwe Indische Specialiteit," 1911) Alongside this individual donation, the role of the Vereeniging Dr. Scheurer's Hospitaal (Dr. Scheurer's Hospital Association), also composed of women, cannot be overstated. While professional men contributed minimally (less than 5,000 guilders) and the Church Synod opted not to contribute at all, this women's association became the primary engine of fundraising; between 1896 and 1935, it raised nearly 200,000 gold guilders ("De Vereeniging Dr. Scheurers Hospitaal.," 1935, p. 209). By contrast, the land in Gondokusuman was acquired through political negotiation with Sultan Hamengkubuwono VII, who stipulated binding conditions: the hospital must provide 100 beds and pay 1,400 guilders in compensation to affected residents ("Generale Synode van De Geref. Kerken in Nederland," 1899).

Under the leadership of Dr. J.G. Scheurer, the hospital became a social laboratory. Scheurer dismantled feudal barriers by addressing commoner patients in High Javanese (*Krama Inggil*). An anecdote in *De Locomotief* (November 22, 1900) recorded the sociological impact of this approach: a gardener treated by Scheurer refused to return to menial labor after his recovery. He felt his status had been elevated because Scheurer had addressed him in *Krama Inggil*, rendering his former job beneath his newfound dignity ("Dr. Scheurer," 1900).

The gardener's story serves as a powerful metaphor for this article's central argument. For a long time, colonial health historiography has been heavily "doctor-centric," predominantly fixated on the heroism, administrative triumphs, and civilizing missions of European medical figures. Recent scholarship has begun to correct this imbalance by integrating indigenous agency into the historical narrative, although often still focusing on the native elite. Hans Pols (Pols, 2024) and Djoko Marihandono (Marihandono, 2021), for instance, have highlighted the pivotal roles of young Javanese men educated at the School for Training of Native Doctors (STOVIA). These scholars demonstrate how STOVIA graduates not only became the frontline medical personnel during crises like the 1918 Spanish Flu pandemic but also formed a new professional class that occupied an ambiguous, often radicalized, social position between European administrators and the indigenous population. Similarly, Liesbeth Hesselink (E. Q. Hesselink, 2015) has pioneered the broader study of native doctors and midwives navigating the complex colonial medical market.

However, while the historiography of STOVIA graduates successfully captures the mobility of the educated native elite (*dokters djawa*), the experiences of lower-tier, subaltern healthcare workers remain significantly underexplored. This study aims to fill this historiographical gap by shifting the focus to these non-elite indigenous health workers. Specifically, this research poses the central question: how did marginalized Javanese individuals—particularly uneducated domestic workers (*baboe*)—negotiate colonial medical disciplines to achieve professional recognition and social mobility at Petronella Hospital? It argues that Petronella Hospital served as an engine of social mobility for the Javanese underclass. Through nursing and midwifery education, the institution transformed ordinary Javanese individuals, particularly women from uneducated domestic backgrounds (*baboe*), into recognized medical professionals. Within Petronella's walls, the white uniform was not merely personal protective equipment but a symbol of social ascension negotiated between Western medical discipline and Javanese tradition.

METHOD

To address the transformation of indigenous healthcare workers from marginalized domestic roles into recognized medical professionals, this study employs a critical historical method framed within the social history of medicine. Drawing upon Ranajit Guha's (1982, pp. 1–8) foundational critique of elitist historiography, this research deliberately moves beyond conventional narratives that centralize the agency of European doctors or educated indigenous elites. Instead, it adopts a Subaltern Studies framework to construct a "history from below," an approach essential for illuminating the specific lived experiences of lower-class Javanese women and men who constituted the rank-and-file of the healthcare workforce.

The research relies on a comprehensive collection of primary colonial archives dating from the late 1890s to 1940, capturing the period from the hospital's embryonic phase to the twilight of Dutch colonial rule. The first data set consists of contemporary Dutch East Indies press records—including *De Locomotief*, *Amsterdamsche Kerkbode*, *De Heraut*, *Het Zendingblad*, *Algemeen Handelsblad voor Nederlandsch-Indië*, and *Nieuwe Utrechtsche Courant*. These periodicals provided crucial real-time observations of hospital operations, public reception, and socio-medical experiments. The second data set comprises institutional and missionary archives, most notably annual reports (*Jaarverslag*), official correspondence, and jubilee commemorative books such as Dr. J. Offringa's *Na Vijf en Twintig Jaren* (1925) and Dr. K.P. Groot's *Het Zendingsziekenhuis Petronella* (1937). Furthermore, visual and spatial data, including architectural layouts and historical photographs of the hospital wards, were utilized to analyze the implementation of colonial discipline and segregation.

Given that these primary sources were predominantly authored by European medical personnel and colonial administrators, this study explicitly acknowledges a major archival limitation: the authentic voices of the indigenous healthcare workers are heavily mediated, making it inherently challenging to reconstruct their unvarnished personal perspectives and subjective experiences. As Gayatri Chakravorty Spivak (1988) emphasized in her seminal work on the extensively mediated nature of subaltern voices within imperial records, the extraction of authentic indigenous narratives from European texts requires rigorous methodological intervention. To navigate this dominant colonial gaze, the data processing technique relied heavily on source criticism through "reading against the grain." Rather than accepting the colonial texts' inherent paternalistic and Eurocentric assumptions regarding the civilizing mission, the analysis isolates the subtext to reconstruct the lived realities and active participation of the indigenous staff. For instance, reports describing the training difficulties of illiterate Javanese girls were re-interpreted as evidence of the monumental cultural negotiations the indigenous workers navigated. Through qualitative synthesis, these fragmented archival traces were contextualized within the broader political economy of the Ethical Policy and Javanese social stratification, yielding a critical narrative on professional mobility, gender experimentation (such as the *vroedmeester* policy), and indigenous agency in the face of medical modernity.

RESULT AND DISCUSSION

The Genesis of Nursing Training at Petronella Hospital

The arduous process of professionalizing nursing in the Dutch East Indies—sometimes romanticized in early mission reports as "making gold from straw"—reflects the severe sociological challenges faced by the medical mission in Yogyakarta. When Dr. J.G. Scheurer began his service, the nursing profession as known in the modern world did not exist within Javanese society's social structure. The available recruits were primarily drawn from the lowest stratum of society, consisting of *baboes* (nannies/maids), domestic servants, and village youths without formal educational qualifications. Transforming this untrained labor force into professional medical personnel was a long journey that began well before the permanent hospital building was erected. The initial phase of this transformation began in an unexpected location: a rented house in Bintaran. The daily *De Locomotief* edition of September 30, 1898, provides a detailed visual record of this early phase. In the yard of the rented house, Dr. Scheurer

established an emergency clinic that was far from luxurious. As shown in Figure 1, the structure was a rectangular hut measuring 15 x 5 meters and 8 meters high, constructed of bamboo poles and woven walls (*gedek*). The narrow space was divided by a bamboo partition; the front served as a crowded waiting room, while the back functioned as the doctor's practice room ("Een Missionnair-Arts," 1898).

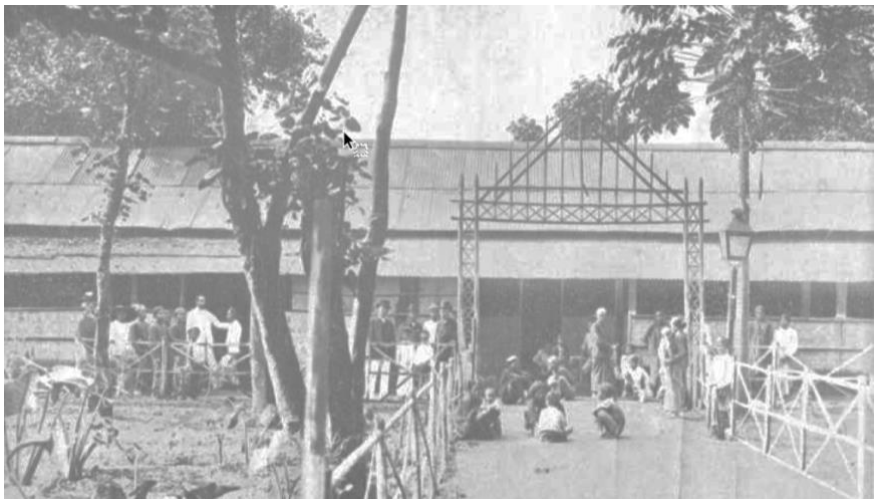


Figure 1. Dr. Scheurer's clinic in Bintaran
Source: Offringa, 1925.

Under this bamboo roof, guided by the pragmatic motto "Work first; better facilities will follow," Scheurer began accepting patients, whose numbers soon exploded to an average of 100 to 150 per day. This makeshift physical space served as a stark reflection of early medical improvisation, in which rudimentary architecture dictated a more fluid, less segregated interaction between European and indigenous bodies. This massive volume demanded an efficient workflow, and it was here that the role of indigenous assistants began to take shape. Among his assistants was Joram, a Javanese man who had accompanied him from the Netherlands (Kuyper, 1933, p. 30). *De Locomotief* (September 30, 1898) noted that Scheurer did not work alone; he was assisted by several indigenous staff who sat on small benches facing the patients directly. They were not passive spectators but active participants in the medical care process.

The initial duties undertaken by these indigenous assistants in Bintaran were highly technical and demanded physical fortitude. They were the vanguard who had to touch uncleaned ulcers. *De Locomotief* described their routine: patients first came to the assistants, who were charged with cleaning the affected body parts, spraying creolin emulsion for disinfection, and irrigating open wounds with sublimat solution. For Javanese society, which placed high importance on bodily purity and the avoidance of things considered repulsive, the willingness of these assistants to handle the pus and blood of strangers constituted a mental revolution.

Furthermore, rudimentary yet strict hygiene protocols were introduced. Assistants were taught never to rewash used bandages. They had to remove soiled bandages from patients and dispose of them in a large clay jar containing a disinfectant solution, which was then burned daily ("Een Missionnair-Arts," 1898). This ritual of burning bandages in a clay jar might seem simple, but symbolically, it marked the moment when Western medical rationality began to take hold. The assistants learned that disease was not a curse requiring incantations but rather a biological agent that had to be destroyed by fire and chemicals. In the Bintaran hut, the *baboe* mentality began to erode, giving way to the seeds of medical discipline.

In March 1900, the Vereeniging Dr. Scheurer's Hospital—politically sanctioned by the Sultan—finally materialized. The shift from the Bintaran bamboo hut to the permanent Gondokusuman complex marked a fundamental transformation in scale and medical standards. An *Amsterdamsche Kerkbode* report (January 13, 1901) highlighted Dr. Scheurer's managerial efficiency: the modern complex was completed for ƒ38,398.87, well below the ƒ43,000 budget. This surplus funded ƒ8,962.19

in furnishings, ensuring the interior matched the modern exterior ("Godsdienstoefeningen In De Week van 13 Tot 19 Januari 1901," 1901).

Gondokusuman stood as the antithesis of Bintaran; while the latter symbolized improvisation, the former embodied colonial order (*rust en orde*). A 150-meter iron-reinforced wall visually separated the sterile hospital from the supposedly unhygienic *kampung* (village). Inside, lush gardens and fish ponds created a humane healing environment. Ten main buildings included five treatment pavilions featuring bamboo walls for tropical ventilation. White-plastered or oiled floors ensured superior cleanliness compared to typical earthen homes ("Godsdienstoefeningen In De Week van 13 Tot 19 Januari 1901," 1901).

This grandeur created a paradox: Scheurer possessed a sophisticated 100-bed hospital—as stipulated by the Sultan—but lacked competent nursing staff to operate it. Bintaran-trained assistants knew basic disinfection, but modern wards demanded complex observational and administrative skills. Prioritizing patient safety over visitor statistics, Scheurer boldly restricted operations to 50 beds until adequate staff could be trained ("Godsdienstoefeningen In De Week van 13 Tot 19 Januari 1901," 1901).

The staffing shortage began to ease on November 19, 1900, a date worthy of note as a turning point in the history of professional nursing in Yogyakarta. On that day, the ship Prinses Sophie docked at Batavia, bringing two eagerly awaited figures: Miss J.H. Kuyper and Miss J.C. Rutgers. The arrival of these two nurse sisters was not merely the addition of European staff but the beginning of the institutionalization of a structured nursing education system. The *Amsterdamsche Kerkbode* report of December 23, 1900, provided crucial architectural details for understanding the radical educational method they implemented. The hospital foundation did not place these two head nurses in a comfortable, exclusive official residence in the European elite quarter. Instead, they were housed in a special pavilion strategically located to the left of the doctor's house. This pavilion's design was unique and pedagogically significant, featuring front and inner verandas, with bedrooms under the same roof as those of the indigenous nurses ("Vierde Jaarverslag Der Vereeniging 'Dr. Scheurer's Hospitaal' (Petronella Hospitaal) van 1 September 1899 Tot 31 Augustus 1900," 1900). This "living-in" spatial arrangement dissolved rigid racial hierarchies between the Dutch *zuster* and Javanese student. Living together 24 hours a day, the European nurses taught modern etiquette, hygiene, and discipline through continuous lived example. The pavilion functioned as a character incubator, transforming untrained Javanese recruits into disciplined healthcare workers through close, familial supervision.

The task of Kuyper and Rutgers was compounded by the demographic realities of education in the Dutch East Indies. As noted by Liesbeth Hesselink, most Javanese women had no access to formal schooling in the early 20th century. Statistical data from 1912 indicated that only about 14,000 girls attended school across Java and Madura, a minuscule proportion of the population (L. Hesselink, 2018, p. 167).



Figure 2. Nurses at Petronella Hospital
Source: Groot, 1937.

Consequently, most of the women the head nurses had to train were illiterate village girls. This created tangible technical obstacles in the wards. N.A. de Gaay Fortman, in *De Geschiedenis der Medische Zending*, noted a specific gender disparity. Unlike male nurse candidates, who generally possessed basic literacy, female nurses struggled with fundamental medical tasks such as reading and recording body temperature from a thermometer. For them, the numbers and scales on the glass rod were confusing foreign codes. This condition compelled the Kuyper-Rutgers pavilion to function in dual roles: not only as a medical training dormitory but also as a primary school for literacy. The European instructors had to start from absolute zero, teaching letters and numbers before anatomy or physiology (Fortman, 1908, p. 392). In this context, acquiring basic literacy was not merely a prerequisite for medical training; it constituted the very first, radical step in their professionalization, marking a definitive break from their former domestic roles. The patience of Kuyper and Rutgers in guiding hands accustomed to holding hoes or kitchen tools to wield pens and thermometers was the epicenter of this profound professional transformation.

Nursing education became a central pillar of the mission hospital's work. The association's board believed that without well-educated, experienced, and trustworthy indigenous staff, hospital operations would be paralyzed. Although initially simple, the hospital's growth increased the number of applicants. The recruitment process included rigorous background checks to assess candidates' character and temperament ("Geslaagde Leerlingen van Het Petronella Hospitaal," 1935, p. 208).

The Institutionalization of Education: From Leadership Crisis to Decentralized Medical Empire (1903–1940)

The transition from the charismatic, pioneering phase to the bureaucratic, institutional phase at Petronella Hospital was not smooth; it was precipitated by severe shocks that tested the institution's resilience. The immense physical and mental burden began to take its toll on the pioneer. In 1901, Dr. Scheurer was forced to take leave due to severe exhaustion. Although he returned on March 13, 1903, with renewed spirit—managing 32,709 patients and 1,285 home visits in 1905 alone—his energy was depleted. In 1906, due to declining health, Dr. Scheurer was forced to return permanently to the Netherlands ("X. Petronella Jubelt!," 1925).

This leadership crisis was exacerbated in 1903 by internal developments: the second doctor, Dr. Esser, fell seriously ill, and the head nurse, J.H. Kuyper, resigned. In practice, the hospital lost its founding figures within a short period. However, amid this crisis, the indigenous education system, which had been pioneered earlier, demonstrated its vitality. The absence of strict supervision by European staff compelled indigenous nurses to assume greater operational responsibilities. The *Tijdschrift voor Armenzorg* report (1904) noted that daily services continued at high intensity without a significant decline in medical standards. This moment served as a historical catalyst, transforming Petronella from a person-based organization into a system-based one driven by cadre formation (De Chauferie, 1904, p. 273).

The leadership baton then passed to Dr. H.S. Pruijs, a former government health official with a strong bureaucratic vision. Facing demographic challenges in which a 100-120-bed hospital had to serve millions of Javanese, Dr. Pruijs realized that the centralized model was no longer adequate. He devised a structural innovation called the "Auxiliary Hospital" (*Hulpziekenhuis*). The concept was simple yet revolutionary: building a network of small healthcare facilities surrounding the main hospital in rural areas. Some construction was funded by plantation companies, and others by the colonial government ("Ds. C. Zwaan Te Djokjakarta," 1908, p. 147).

Each auxiliary hospital was designed to strict yet efficient standards, comprising one male ward, one female ward, a wound care room, and a pharmacy. The key to this system was connectivity; each unit was equipped with a telephone to contact the central hospital for emergencies exceeding its capabilities. Initially, the colonial government viewed this system skeptically, doubting the ability of indigenous staff to manage it without direct doctor supervision. However, skepticism faded as the system proved effective. Eventually, nine auxiliary hospitals stood encircling Yogyakarta like a medical

defensive perimeter. Four of them—in Toengkak, Wates, Wonosari, and Sanden—were built by the local government, while the rest were established by plantation companies. Yet medical management remained under Petronella's control ("X. Petronella Jubelt!," 1925). This rapid expansion fundamentally relied on the proven clinical competence and administrative independence of the indigenous staff, demonstrating that the system's success hinged on local capability rather than constant European oversight.

The quality of this "forced" independent cadre system received surprising external validation from a political camp usually opposed to religious missions. *De Heraut* (May 17, 1903) published an in-depth review of a visit by Henri van Kol, a member of the Dutch Parliament (Tweede Kamer) from the Social Democratic Workers' Party (SDAP). Van Kol, a sharp critic of colonialism and Christianization, publicly praised Petronella after inspecting it in August 1902 ("Een Bezoek Aan Het Zendingshospitaal," 1903). In his book *Uit onze Koloniën*, he highlighted the hospital's modern management and its Christian atmosphere that did not coerce patients. Specifically, Van Kol praised the indigenous nurses, whom he judged to be carefully selected and trained—a secular acknowledgment confirming that the competence standards of Javanese nurses at Petronella had transcended mission ideological barriers and were recognized as equal to colonial professional standards (Van Kol, 1903, pp. 786–787).

Over time, educational methods at Petronella evolved from mere practical apprenticeship to a culturally structured curriculum. The jubilee document *Na Vijf en Twintig Jaren* by Dr. J. Offringa notes that the key to successfully producing indigenous medical staff lies not in the raw imposition of Western medical science but in intelligent curriculum adaptation. Two central figures emerged as architects of this new pedagogy: Sister A.C. Enserinck and a Javanese educator named R. Sasrasoegondo. This cross-cultural collaboration represents one of the most crucial findings of this study, as it exemplifies the active co-production of colonial medical knowledge. Complex medical materials were not taught in Dutch, which was alien to village tongues, but were reconstructed in Javanese and "adapted to local ways of thinking" (Offringa, 1925, p. 9). Sasrasoegondo played a vital role not merely as a passive translator, but as a cultural broker. By bridging Western bacteriological logic with Javanese epistemological reasoning, he ensured that abstract concepts such as sterility and anatomy were deeply understood by students from rural backgrounds, proving that indigenous agency was central to the successful transfer of medical modernity.

In strengthening this curriculum, Dr. H.S. Pruijs's role was also decisive. He realized that training could not be solely practical; it required a strong theoretical foundation. Thus, building upon the linguistic and cultural groundwork laid by Enserinck and Sasrasoegondo, Dr. Pruijs wrote a simple Javanese handbook that became the mandatory guide for training courses. The colonial government recognized the handbook's quality and covered its publication costs so it could serve as a health education standard in other parts of the Dutch East Indies ("X. Petronella Jubelt!," 1925). Pruijs's intellectual contribution showed that Petronella was not only producing a workforce but also producing standardized, culturally integrated medical knowledge that transcended the hospital's boundaries.

The turning point toward a more rigid and hierarchical institutionalization occurred with the arrival of Nurse Loggen in 1907. In her retrospective speech published in *De Standaard* (September 24, 1936), Loggen emphasized the shift in educational focus from the mere transfer of technical skills to character education. The primary instrument for molding this disciplined character was the closed dormitory system ("Het Petronella-Ziekenhuis Te Djocja," 1936).

The push to formalize the dormitory system became evident in 1908, when *Het Zendingblad* reported severe overcrowding in the nurses' pavilion. Designed for 2 European nurses and 10-12 Javanese nurses, it accommodated 3 European nurses (including Rutgers) and 1 European midwife (Roepman), as well as about 20 Javanese nurses. This situation prompted management to raise *f*4,000 to build a new dormitory. The design of this new building reflected a vision of segregation that was becoming organized yet remained under a single supervisory authority. It featured four separate bedrooms for European staff, two large wards for 10 Javanese nurses each, and a shared rear veranda

serving as a study hall. Behind this physical construction lay Dr. Pruijs's philosophy: the mission's ultimate goal was not to create dependency but to empower the Javanese people so that, eventually, "they themselves would care for the sick"—a vision that positioned indigenous nurse education as a long-term investment (Dijkstra, 1908, p. 205).

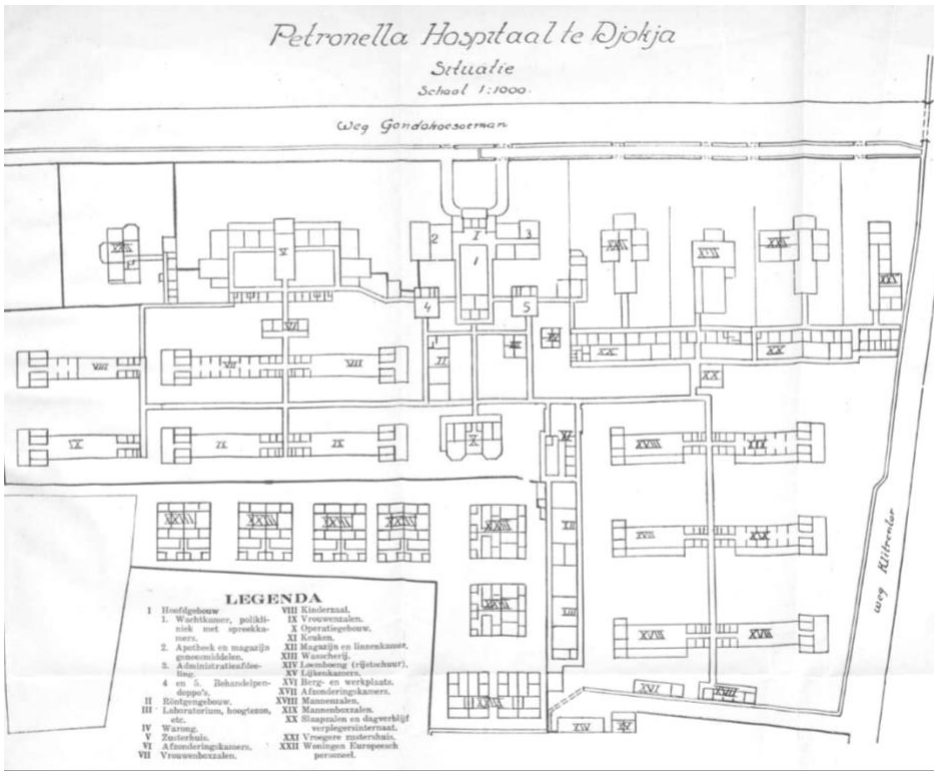


Figure 3. Floor plan of Petronella Hospital
Source: Offringa, 1925.

The physical development of this dormitory was later codified in the hospital floor plan published in 1925. The floor plan shows that the dormitory was intricately designed to facilitate continuous supervision. There was a strict spatial separation between male and female dormitories, arranged in a layout that allowed European staff to maintain visual oversight of the Javanese recruits. Rather than a formal panopticon, this architecture of surveillance was a pragmatic tool to enforce colonial discipline. Within these dormitory walls, the colonial trinity of *Rust*, *Orde*, *en Reinheid* (Tranquility, Order, and Cleanliness) was strictly instilled, shaping the students' daily habits to ensure they remained perpetually sterile and obedient to medical protocols.

This institutionalization gave rise to a new social stratification within the indigenous health workforce. The educational curriculum was divided into two class tracks, reflecting colonial segregation. The first track, or Class B, was designed for Village School graduates who received Javanese/Malay instruction and were trained as practical executive staff. The second track, or Class A, was the elite track for Dutch school graduates, such as those from the Hollandsch-Inlandsche School (HIS) or Meer Uitgebreid Lager Onderwijs (MULO), with Dutch instruction, who received in-depth theoretical instruction (Groot, 1937, p. 22). After acceptance, they underwent three years of education. Several hours weekly were dedicated to instruction, culminating in a government examination after three years. Passing this exam granted a diploma valid throughout the Dutch East Indies ("Geslaagde Leerlingen van Het Petronella Hospitaal," 1935, p. 208). This dualism created a distinct internal hierarchy; collectively, the "Petronella Diploma" became a highly valuable ticket to social mobility for Javanese youth.

The resilience of this established system was severely tested when the Dutch East Indies was hit by the global economic crisis (the Great Depression). Director Dr. K.P. Groot's report in *Het*

Zendingblad (April 1935) described a bleak situation in which the sugar industry, the hospital's main donor, suffered mass bankruptcies. The crisis forced management to drastically cut employee salaries ("Jaarverslag van Het Petronella-Hospitaal Te Djokjakarta over Het Jaar 1934," 1935). Contributions from the colonial government and the Sultanate also dwindled significantly. To survive, strategic steps were taken, such as converting auxiliary hospitals into polyclinics (outpatient clinics), as some buildings stood on land owned by bankrupt plantations. Mobile polyclinic services were halted, and nurses accepted pay cuts ("Zeven En Dertigste Jaarverslag van de Vereeniging Dr. Scheurers Hospitaal 1 Juli 1932—30 Juni 1933," 1933, p. 226).

Despite the storm, Petronella survived. As the economy recovered, the hospital rebounded, showing rapid progress. Petronella's position as a center of excellence on the colonial medical map was solidified on August 16-17, 1938, when it hosted the Conference of Missionary Doctors of the Dutch East Indies. Attended by 35 doctors from Java, Sumatra, and Papua, as well as senior figures such as Dr. Pruijs and Dr. Offringa, the forum served as a critical evaluation of mission services. Dr. J.P. de Jong (Malang) highlighted a sociological shift among patients: as more educated patients sought treatment at mission hospitals in large cities, there was a need to raise nursing education standards by recruiting MULO graduates (Junior High equivalent). In the same forum, modern medical-ethical issues such as birth control were discussed ("Conferentie Van Zendingsartsen," 1938). This momentum confirmed that Petronella had transformed from a mere health facility into a center of modern and progressive medical discourse.

The most tangible implementation of the "Yogyakarta System" (*Het Djocja-Stelsel*)—the press term for Dr. Pruijs's decentralization strategy—was evident in the expansion into difficult geographic regions such as Gunung Kidul. *De Locomotief* (October 5, 1938) reported the opening of two new polyclinics in Legundi and Baran, complementing the network established in Wonosari (1912) and Semin (1935), serving a population of roughly 420,000. Improved road access allowed permanent structures; in Baran, a stone building with a waiting room, pharmacy, and temporary inpatient room was erected. To lead this region, Dr. Picauly (a STOVIA graduate) was stationed in Wonosari after intensive training at Petronella. Under his leadership, the Wonosari Auxiliary Hospital was upgraded with an operating theater, so surgical patients need not be referred to Yogyakarta. Even more progressively, a male midwife was stationed in Semin—a gender experiment characteristic of Petronella's pragmatism ("Twee Nieuwe Poliklinieken in Wonosari," 1938).

By late 1939, amid the shadow of the looming World War in Europe, Petronella's network saw a significant leap in technological independence and skill diversification. Under the guidance of lung specialist Dr. Veen and Engineer Vander Werff, the colonial tuberculosis eradication organization, Stichting Centrale Vereeniging tot bestrijding der Tuberculose (SCVT), set new standards in preventive medicine by graduating three *mantris* (one female, two male) as certified home visit officers. They were trained not to wait for patients in hospitals but to proactively visit homes, teaching hygienic lifestyles to break the chain of Tuberculosis transmission.

At the same time, the Pakem Sanatorium underwent radical modernization. In cooperation with Lindeteves-Stokvis, a hydroelectric power plant was built on the Kali Kuning River. Machinery transported by the ship Indrapoera in August 1939 provided an independent 18 kVA power supply, illuminating wards and neighboring villages while powering modern X-ray equipment imported from Europe. This energy independence enabled plans to expand the sanatorium's capacity to 160 beds by 1940 and to construct a meeting hall for film screenings and worship—a holistic approach that addressed patients' medical, psychological, and spiritual needs simultaneously ("Het Sanatorium Pakem," 1939).

Midwives (*Vroedvrouw*) and Village Doctors: The Pinnacle of Autonomy and Network Expansion

The history of training indigenous midwives in the Dutch East Indies is essentially one of colonial government failure and hesitation. As noted in health history archives, the discourse on training indigenous women to replace traditional birth attendants (*dukun bayi*) dates to the early 19th century. However, efforts to establish government midwifery schools in Batavia often encountered obstacles: budget cuts in 1839, stigma associated with midwives, and difficulty recruiting literate female students. Consequently, until the late 19th century, most births in Java remained in the hands of *dukun bayi*, with very high maternal and infant mortality rates due to unhygienic practices. Although comprehensive civil registration was lacking, historical demographers indicate that the Crude Death Rate (CDR) in 19th-century Java hovered between 20 to 35 per 1,000 inhabitants (De Zwart et al., 2022, p. 229). Furthermore, infant mortality remained exceptionally high; estimates suggest that even by 1920, the infant mortality rate in rural Indonesia was still around 250 deaths per 1,000 live births (Van Der Eng, 2024, p. 197). Against this backdrop, maternal mortality deeply devastated rural demographics, a situation often exacerbated by traditional childbirth practices that European doctors frequently criticized in the most lurid terms (Boomgaard, 1993, p. 88; E. Q. Hesselink, 2015, pp. 119–120).

Amid this stagnation, Petronella Hospital introduced a different educational model. Under the guidance of Mrs. A.E. Ensink and the sisters, indigenous midwife education was promoted ("X. Petronella Jubelt!," 1925). The greatest transformation occurred under Dr. Pruijs's decentralized "Yogyakarta System." This system grouped various small health facilities scattered across the Yogyakarta Sultanate, maternity clinics, polyclinics for the poor, auxiliary hospitals for chronic patients, into a cohesive network. Almost all these facilities were managed by trained, experienced, and dedicated nurses ("Bezoek Petronella Hospitaal," 1937).

In this system, the role of Petronella graduates, both midwives (*vroedvrouw*) and nurse *mantris*, experienced a significant elevation in status. When stationed in the network of 22 auxiliary hospitals, they held the highest medical authority. This autonomy was not merely a delegation of tasks but a recognition of competence. Evidence of this professional maturity was their ability to manage specialist facilities, such as the TB Sanatorium in Kaliurang, where indigenous nurses independently managed complex infectious disease care ("Kabar Warni-Warni," 1935).

Recognition of this competence was solidified through the standardization of the state examination. *Algemeen Handelsblad voor Nederlandsch-Indië* (June 28, 1935) reported a notable achievement: nine out of ten Petronella midwifery students passed the government midwife exam. The exam, held in Semarang and Yogyakarta, was strictly supervised by a high committee led by Health Service Inspector Dr. H.C. Gomperts. The graduation of Sripit, Saminah, Girah, Sadimi, Alinah, Srianah, Sarti, Paikem, and Martinah was not merely an academic statistic but historical evidence that Javanese women could meet strict colonial medical standards ("Petronella-Hospitaal," 1935). Their success was celebrated by the public as a fundamental step toward providing proper maternity services in villages.

Beyond rural expansion, Petronella strengthened specialized urban services. In 1926, a special maternity clinic opened in Lempuyangan. This facility became a center of modern midwifery, eventually led by Sister J. Prins. Under her leadership, the clinic grew rapidly, serving patients from diverse racial backgrounds, including Javanese, Chinese, and Europeans ("Uitbreiding Van Het Petronella-Hospitaal," 1937).

The modernity of the Lempuyangan clinic was evident not only in its medical equipment but also in the symbols of mobility and indigenous agency that accompanied it. In 1936, a new building was constructed, designed by the indigenous architectural bureau Sindoetomo. This U-shaped building provided sophisticated facilities, such as a "milk kitchen," which offered inexpensive baby food subscriptions. It was here that preventive health practices were systematically implemented: free baby weighing, nutritional consultations, and a dormitory for 12 Javanese midwives. Sister Prins herself

became an icon of modernity, widely known for driving the clinic's small Fiat to provide home-delivery services ("Uitbreiding Van Het Petronella-Hospitaal," 1937).

Efforts to raise professional standards continued until the final moments of Dutch rule. In early 1940, hospital management brought in an expert with extraordinary qualifications, E. Postema. As reported by the *Nieuwe Utrechtsche Courant*, Postema held certifications as a pediatric nurse, midwife, and a specialized TB home-visit officer ("De Christen in Oorlogstijd," 1940). Her presence signaled that Petronella was adhering to the highest medical standards in specialist referrals.

However, despite urban progress, rural challenges remained severe. Dr. K.P. Groot, Director of Petronella in the late 1930s, faced grim statistics. In an article in *De Locomotief* (July 7, 1938), Groot presented stark data: approximately 16 of every 1,000 birthing mothers died, totaling 29,000 maternal deaths annually. In rural areas, trained midwife coverage was only 1-2%. Petronella realized that relying solely on female midwives was a structurally flawed strategy ("Nieuwe Perspectieven Door de Opleiding van Vroedméésters in Plaats van Vroedvrouwen.," 1938).

This failure, identified by Dr. Groot, was not due to intellectual ability but to the sociological cycle of Javanese women's lives. Midwifery education was lengthy, yet their professional service period was very short, averaging only 3 to 4 years before being interrupted by marriage. Additionally, there were physical and cultural barriers at remote posts; female midwives were difficult to mobilize for long nighttime journeys without escorts and were reluctant to live in isolated villages.

To break this deadlock, in 1934, Petronella conducted a radical social experiment by training male nurses to serve as male midwives, or *vroedmeesters*. This policy was based on pure pragmatism. Dr. Groot viewed male staff as physically stronger than female staff, less prone to fatigue, capable of traveling long distances alone without violating moral norms, and, most importantly, as offering a service period of 25 years or more, uninterrupted by marriage. They could be ordered to ride horses through forests in storms, something impossible to ask of a Javanese girl at that time ("Nieuwe Perspectieven Door de Opleiding van Vroedméésters in Plaats van Vroedvrouwen.," 1938).

However, a critical reading of this policy reveals a deep-seated patriarchal bias embedded within colonial rationality. The assertion of "male efficiency" masked the colonial health system's structural failure to provide safe and accommodating work environments for female professionals. Rather than improving rural infrastructure or creating support systems for married female midwives, the colonial administration opted to exploit the male body as a more enduring and flexible labor commodity. Thus, while the *vroedmeester* experiment radically disrupted Javanese cultural taboos regarding childbirth, it paradoxically reinforced the patriarchal logic of colonial capitalism, which valued medical workers primarily based on their uninterrupted utilitarian output.

Naturally, this radical policy raised a major question: would conservative village women accept delivery assistance from men? Dr. Groot argued that "custom is not rigid" but adaptive to survival needs. In the eyes of villagers, the line between doctor and nurse was often blurred. A male *mantri* in an auxiliary hospital was often regarded and addressed as "doctor." The masculine authority associated with the *mantri* figure provided psychological security for village patients.

The peak of this experiment occurred on June 30 and July 1, 1938, when seven first-class Petronella nurse *mantris* passed the government midwifery exam. This was a historic event: for the first time in the Dutch East Indies, men passed the state midwifery exam ("Nieuwe Perspectieven Door de Opleiding van Vroedméésters in Plaats van Vroedvrouwen.," 1938). The graduation of these seven *vroedmeesters* was not only Petronella's academic victory but also marked the birth of a unique hybrid healthcare model in Java, a system that assumed women's domestic roles in the name of bureaucratic efficiency and lifesaving. Petronella proved that to lower maternal mortality, medical modernity had to dare to crash through traditional gender boundaries.

CONCLUSION

Answering the central research question, the professionalization of indigenous healthcare workers at Petronella Hospital fundamentally challenges the binary narrative of colonial medicine as merely a top-down tool of imperial subjugation. Instead, this study argues that medical modernity in the Dutch East Indies was co-produced through a complex process of cultural negotiation and indigenous agency. By transforming from marginalized domestic servants into state-recognized medical professionals, Javanese women and men utilized colonial institutions as engines for social mobility and professional empowerment. Viewed through the theoretical lens of subaltern agency, Petronella was not just a space where Javanese bodies were treated; it was an arena where Javanese identities were redefined through the uniform of the modern *zuster* and *mantri.*

This study carries significant implications for the historiography of colonial medicine and gender studies in Southeast Asia. It shifts the analytical lens from the oft-celebrated European missionary doctors to the subaltern indigenous healthcare workers, revealing how local actors actively shaped the delivery and reception of modern healthcare on the ground. Furthermore, the radical experiment of training male midwives (*vroedmeesters*) implies that under the pressure of demographic and health crises, both rigid colonial policies and traditional gender taboos were remarkably adaptable. This case invites future researchers to re-examine other colonial institutions not merely as sites of hegemonic oppression, but as spaces of strategic socio-cultural adaptation. Furthermore, the historical dynamics of Petronella Hospital remain relevant to contemporary global health challenges, particularly in demonstrating that medical interventions must be culturally embedded and rely on localized empowerment to succeed.

However, this research is not without its limitations. Due to the heavy reliance on colonial archives, missionary reports, and Dutch-language newspapers, the voices of the Javanese healthcare workers are largely mediated through the perspectives of European administrators. The scarcity of ego-documents—such as personal diaries, letters, or direct memoirs written by the indigenous nurses themselves—makes it challenging to fully capture their unmediated personal sentiments, internal conflicts, or localized resistance. Additionally, this study focuses specifically on the institutional context of Petronella Hospital in Yogyakarta, meaning its findings on inclusive cultural negotiation and social mobility may not fully represent the structural dynamics in more remote government hospitals or non-missionary institutions across the wider archipelago. For future research, it is strongly recommended to conduct comparative studies of indigenous nursing education in other colonial contexts, such as British Malaya or French Indochina, to further broaden the theoretical discourse on subaltern medical agency.

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