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Surviving the influenza

The use of traditional medicines to combat the Spanish flu in colonial Indonesia, 1918-1919

RAVANDO

ABSTRACT

The Spanish flu pandemic of 1918-1919 was widely regarded as the deadliest in modern history, claiming more lives than World War I. Colonial Indonesia was not spared. Several scholars have estimated that around 1.5 to 4.37 million people in the colony perished, making the death rate one of the highest in Asia.

In the midst of the chaos and confusion caused by the pandemic, many people in colonial Indonesia turned to traditional medicines, particularly the poorer members of society who were inexperienced in Western medicine. Herbal treatment was considered a viable option for those who frequently faced discrimination when visiting Dutch clinics or hospitals.

This essay demonstrates how more than a century ago, various ethnic groups in colonial Indonesia relied on nature to develop their own “vaccine” and medication in the fight against the Spanish flu. In the context of the pandemic, *Sin Po* and other newspapers played an essential role in spreading information about herbal medicines as an alternative, more affordable remedy than modern Western medicine. These newspapers provided the inspiration to investigate traditional Indonesian therapies more thoroughly.

An examination of this subject reveals that there is nothing new under the sun. The colonial government never had a grand design to combat or stop the spread of a pandemic. It made almost no efforts at prevention and the outcome of this lack of preparedness was clear. Unfortunately, even more than a hundred years later, when COVID-19 struck Indonesia, nothing had really changed.

KEYWORDS

Spanish flu; traditional medicines; pandemic; newspapers.

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INTRODUCTION

Pandemics are not a recent phenomenon. Long before the COVID-19 pandemic, the world had continuously been infected with different viruses and bacteria. Human mobility has evolved over the previous two centuries to include easier land and rapid air travel. The advent of steam engines in the early twentieth century, followed by the adoption of diesel engines, considerably facilitated people travel around the world. Increased mobility has not been without cost, as it has corresponded to an increase in cross-border disease transmission (John Tang 2020).

The Spanish flu pandemic of 1918-1919 was widely regarded as the deadliest in modern history, claiming more lives than World War I. Around 500 million people, or one-third of the world's population at that time, were thought to have been infected with this virus, killing 50 to 100 million of them within just a few months.¹ Colonial Indonesia was not spared. Several scholars have estimated that around 1.5 to 4.37 million people in the colony perished, making the death rate one of the highest in Asia.² Several regions in Indonesia like Madura, Banten, and Kediri even lost more than 20 percent of their population, primarily because of this influenza pandemic (Widjojo Nitisastro 1970) (see Table 1).

In the midst of the chaos and confusion caused by the pandemic, many individuals turned to traditional medicines, particularly the poorer members of society who were inexperienced in Western medicine (Liesbeth Hesselink 2011). Herbal treatment was considered a viable option for those who frequently faced discrimination when visiting Dutch clinics or hospitals.

¹ Dr Edwin Oakes Jordan's research in 1927 estimated that the global mortality toll of the Spanish flu at 21.5 million. Wesley Spink (1979), a prominent American infectious disease physician, estimated that 21.7 million people died as a result of the pandemic. K. David Patterson and Gerald F. Pyle (1991: 4-21) calculated that the mortality rates would range between 24.7 to 39.3 million people, averaging 13.6 to 21.7 deaths per 1,000 people. Moreover, Niall Johnson and Juergen Mueller (2002: 105-115) have provided a much higher figure; they estimate a minimum casualty toll could reach 50 million people, with the possibility that the figure could exceed 100 million, given the absence of statistics or records of the pandemic in many countries.

² For decades, the number "1.5 million" was continually reproduced, probably until 2013 after Siddhart Chandra (2013) wrote an article entitled "Mortality from the Influenza Pandemic of 1918-19 in Indonesia". In the article, Siddhart recalculated the Spanish Flu death rate in the Indies by incorporating information from various colonial sources such as *Volkstelling* (Census), *Mededeelingen van Burgerlijken Geneeskundigen Dienst* (MBGD, Reports of Civil Medical Service), *Koloniaal Verslag* (Colonial Report), and annual population reports. From his findings, Siddharth Chandra has estimated a much higher mortality rate in the Indies, ranging from 4.26 to 4.37 million people and this still does not include the mortality rates in the region outside Java and Madura (Chandra 2013: 190-191).

| Residencies | Population loss (%) | Provinces |
|-------------|---------------------|--------------|
| Madura | -23.71 | East Java |
| Banten | -21.13 | West Java |
| Kediri | -20.62 | East Java |
| Surabaya | -17.54 | East Java |
| Cirebon | -16.62 | West Java |
| Rembang | -14.90 | Central Java |
| Pasuruan | -14.32 | East Java |
| Kedu | -13.27 | Central Java |
| Semarang | -13.18 | Central Java |
| Pekalongan | -10.31 | Central Java |
| Banyumas | -9.75 | Central Java |
| Madiun | -7.31 | East Java |
| Batavia | -6.49 | West Java |
| Priangan | -2.49 | West Java |
| Besuki | -1.10 | East Java |

Table 1. Estimated population loss in the Java, 1918-1919. (Widjojo Nitisastro 1970: 6; Chandra 2013: 190).

This essay will demonstrate how various ethnic groups in colonial Indonesia relied on nature to develop their own “vaccine” and medication in the fight against the Spanish flu. An examination of this subject reveals that there is nothing new under the sun. More than a century ago, our ancestors already possessed various founts of local wisdom which enabled them to self-medicate against any disease or outbreak of an epidemic, including the Spanish flu. By utilizing various newspapers such as *Sin Po*, *Tjhoen Tjhioe*, *Djawa Tengah*, *Sinar Hindia*, and *Oetoesan Hindia*, this paper attempts to explain to what extent these herbal medications were effective in saving lives during the Spanish flu pandemic.

THE INITIAL APPEARANCE OF THE SPANISH FLU

In the autumn of 1918, World War I in Europe was drawing to a close and peace seemed imminent. The Americans had entered the war, bringing the Allies one step closer to victory over the Germans. Suddenly, in late February and early March 1918, a pandemic of influenza struck Haskell County and Camp Funston (Kansas), bringing far greater devastation than the Russian influenza (1889-1892) (John M. Barry 2004b: 98). Over 1,100 soldiers were treated for influenza in just three weeks. Various troops reportedly died as a result of complications caused by pneumonia. Within a short period of time, this virus expanded rapidly to New Jersey, South Carolina, Colorado, and several other states in the United States (Barry 2004a: 3-4).

American expeditionary soldiers were suspected of bringing the virus into Europe via Brest, France, which served as the primary landing location for

American soldiers during World War I. From France, this influenza virus spread to practically every country in Europe and by 1918 was encroaching on the rest of the world. After analysing the virus transmission pattern, Frank Macfarlane Burnet, a notable Australian virologist, emphasized that it was critical to trace the mobilization of American and European troops during World War I in order to determine the origin of the virus (Frank M. Burnet and Ellen Clark 1942).

A compelling reason this pandemic was ultimately dubbed the Spanish flu, despite its origins in Kansas, cannot be dissociated from World War I itself. Spain's neutrality during his conflict resulted in much more lenient control of the press than in the countries which actively fought the war. It was believed that news of the Spanish flu would only expose their own vulnerabilities of these countries and censorship was imposed. As a result of the tight control, many people remained unaware of the threat which quickly swept through those countries. Furthermore, Spain's considerable coverage of the outbreak was also because their king, Alphonso XIII, and several of the ministers were claimed to have been infected by the virus. By May 1918, the same virus had infected around 40 percent of Spain's population. Nevertheless, the Spanish press referred to the pandemic as the "French flu".³ Three distinct waves of the disease occurred during the pandemic, beginning in March 1918 and concluding in the summer of 1919. In most countries in America and Europe, the outbreak peaked during the second wave, in the autumn of 1918 (Figure 1). This extremely lethal second wave was responsible for the vast majority of deaths worldwide. During the winter and early spring of 1919, a third wave of disease followed, adding to the pandemic's casualty rate (Patterson and Pyle 1991: 4-21).

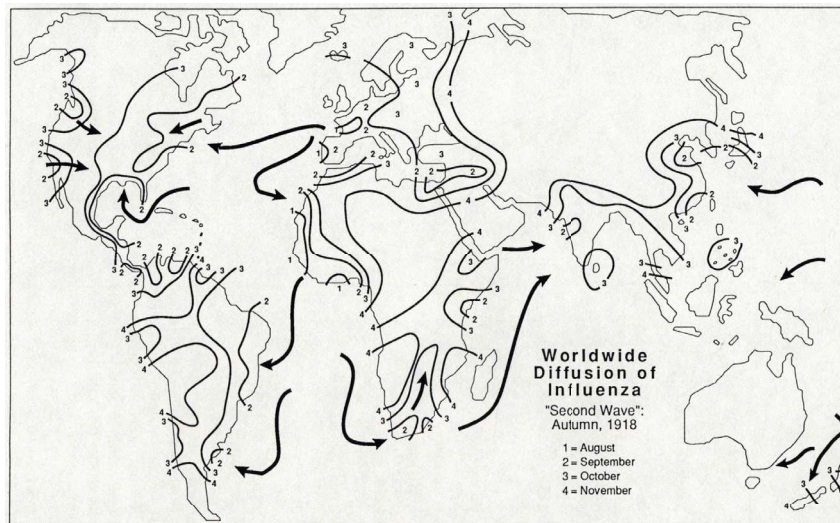


Figure 1. Worldwide diffusion of the Spanish influenza (second wave), which lasted from October 1918 to January 1919. (Source: Patterson and Pyle 1991: 12).

³ "Mysterious malady", *Australasian* (1-6-1918); "Mysterious disease in Spain; Seven hundred deaths", *Hamilton Spectator* (6-6-1918); See also Gina Kolata (1999: 5).

At the time of its initial appearance in colonial Indonesia, Spanish flu, although it had been reported extensively by many newspapers in other countries, was not considered a severe disease by the colonial government. When it first emerged, the colonial government considered the disease to be nothing more than an ordinary flu and a harmless illness (*ongevaarlijke ziekte*). The Civil Medical Service (Burgerlijken Geneeskundigen Dienst, BGD) seemed to await the arrival of the disease passively, even though advances in communication available at the time meant it surely knew that the pandemic had already killed millions in Europe and the United States. One doctor in Batavia, ironically, even said that the Spanish flu was far milder than regular flu, a statement which was widely published in colonial newspapers. The aim was simple: to safeguard security and law and order in the colony. With the First World War still raging, many countries, including the Netherlands, were desperate to hide their weaknesses (Ravando 2020: xiii-xiv).

Both the colonial government and the BGD consistently declared that priority should be given to cholera and malaria prevention, as both diseases had already killed many people in the Netherlands East Indies. Initially, the BGD even regarded the influenza as another version of cholera and, at the BGD's instigation, a massive cholera vaccination programme was conducted throughout the Netherlands East Indies, which, of course, had little effect on curbing the outbreak. Thousands more people were impacted and the death toll continued to rise (Ravando 2020: 138-139). Between October and December 1918, when the second wave of Spanish flu struck colonial Indonesia, the BGD eventually realized how lethal the pandemic really was. By now, the colonial government's response to the pandemic was too late. Millions of people had already fallen victim to this virus.

As said, the Spanish flu hit colonial Indonesia in two waves. The first wave spread between June and early September 1918 when the virus was still mild and caused low morbidity and mortality rates. Pangkatan, a port in North Sumatra, was the epicentre of the infection before it spread to Java and Borneo. In just a few weeks, the Spanish flu had struck Tanjung Pandan (Belitung) and Weltevreden (Batavia). In June 1918 alone, the virus was calculated to have contaminated 5 percent of the total population of Surabaya. Meanwhile, the eastern part of the Indies was largely free of the pandemic, even though several newspapers reported cases in Makassar (Ravando 2020: 134-136).

The second wave, estimated to have taken place from the end of October to December 1918, was more massive and devastating. In some areas in the East Indies, the pandemic continued until February 1919. During this second wave, the influenza virus swiftly infected people across various regions in colonial Indonesia, from Sumatra to Celebes, Maluku, the Lesser Sunda Islands, and even Papua. Because of the rapidity of the transmission process, the Civil Medical Service reported that "*er was haast geen plaats in Nederlandsch Oost-Indië, welke toen niet door influenza was besmet.*" (There was almost no area in the Netherlands East Indies which was not infected by influenza.) (MBGD 1920 X: 145) (Figure 2). All hospitals and clinics were overloaded. Many patients were turned away

because of a lack of available beds. Doctors were perplexed about what to do as they had never encountered anything like it. They strove to treat the illness with the medicines they had on hand, like quinine, salypirin, and aspirin.⁴

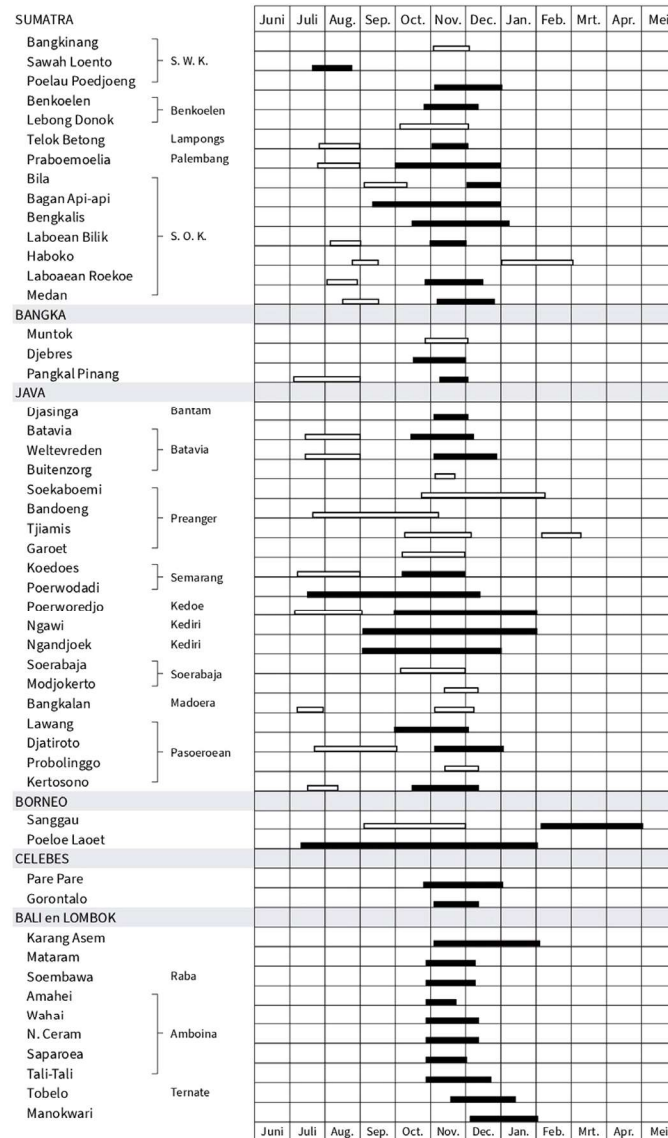


Figure 2. The graph provided by the Burgerlijken Geneeskundigen Dienst (Civil Medical Service) illustrating the prevalence and duration of the Spanish flu in colonial Indonesia. The white line indicates a minor infection, whereas black indicates a serious infection. (Source: "Rapport over de Influenza-Epidemie in Nederlandsch-Indië 1918", MBGD 1920 X: Bijlage B).

⁴ Aspirin use was not without risk as there were several instances of people being poisoned by it. In the majority of cases, this was because certain doctors prescribed their patients high-dose aspirin, ranging from 8 to 31 grams (see Karen M. Starko 2009: 1405-1410; G.W. Scott 1919: 306).

Although the “Spanish fever” was frequently referred to as “*penjakit baroe*” (new disease) by various media outlets in colonial Indonesia, historical records revealed that epidemics and pandemics characterized by febrile symptoms had occurred in colonial Indonesia for centuries. Such an outbreak occurred between 1846 and 1847 in the Pekalongan and Banyumas Residencies (Central Java). The residents afflicted by the disease displayed symptoms consistent with a high fever. The disease paralysed the production processes in both Residencies between 1849 and 1850, resulting in a catastrophic famine in Central Java. The colonial authorities and physicians recognized that the virus which caused the fever had the potential to develop into a deadly disease. Later, it was discovered that the outbreak of acute fever had been dubbed “typhoid” (M.C. Ricklefs 2008: 269).

In 1875, the Rembang area was also struck by a fever similar to that which had previously ravaged Pekalongan and Banyumas. Some experts believed that this fever had begun on the coast and travelled swiftly into the interior. An examination conducted by several colonial physicians revealed that the majority of the victims suffered from a wide range of symptoms, including shortness of breath, shivering, stuffed nose, and coughing. However, the most common symptom was a severe fever lasting between three to seven days (Ravando 2020: 299-300). This fever continued to mutate, resulting in a variety of symptoms not seen in the previous milder infections. These included nausea and vomiting, loss of appetite and diarrhoea. Similar symptoms were discovered in a variety of areas around Java around 1890. Most of the victims were soldiers billeted in barracks. Physicians adopted the term “influenza” to refer to the fever (Cornelis Winkler 1891: 21).

A far more devastating attack occurred between 1889-1892 when the Russian influenza decimated people’s lives globally. This pandemic is often cited as the first modern flu pandemic. The disease probably emerged somewhere in the Russian Empire in 1889 and quickly spread around the world in successive waves. It took only four months to hit every part of the globe, with the United States seeing its peak in January 1890. More than a million people (of the 1.5 billion on earth) were killed worldwide in that first wave. This pandemic is now largely forgotten, overshadowed by the far more devastating Spanish flu of 1918.⁵

Sin Po, the largest Chinese *Peranakan* newspaper in the colony, was one of the very first newspapers to report on the Spanish flu in colonial Indonesia. The first article appeared in *Sin Po* on 17 July 1918. In this edition *Sin Po* reported that sixty police officers had been infected and 100 Chinese coolies had died

⁵ In February 1957, a new influenza A (H2N2) virus emerged in East Asia, triggering a pandemic called the Asian flu. The estimated number of deaths was 1.1 million worldwide and 116,000 in the United States. And in 1968, another influenza pandemic occurred which was caused by the influenza A (H3N2) virus. The pandemic was popularly called the Hong Kong flu, although some experts argued that the first case was noted in the United States in September 1968. The estimated number of deaths was 1 million worldwide, with most excess deaths being in people 65 years and older. In the last 20 years, we have had six significant threats, namely: SARS in 2003, MERS in 2013, Ebola in 2014, Avian influenza, Swine flu, and lastly COVID-19.

in North Sumatra as a result of a “*penjakit aneh*” (a strange disease). Doctors were unable to do anything to treat this disease other than giving quinine or aspirin to reduce the fever and relieve pain.⁶ The use of the term “*penjakit aneh*” illustrates the confusion felt by both *Sin Po* and the general population about the disease as the editor had never before encountered the symptoms described as accompanying this disease. One *Sin Po* subscriber in Ciledug, West Java, sent a letter to *Sin Po* explaining the symptoms he had experienced from this “*penjakit baroe*” (new disease). The initial symptom was a high fever which could reach 41 degrees Celsius. Then the whole body suddenly went limp, so much so that the sufferer could no longer lift his/her head. After three to four days, the disease slowly began to subside. Generally, on the eighth day the patients gradually recovered, although they might still feel weak.⁷

The Spanish Flu outbreak resulted in an abnormally high death rate and bewilderment. The BGD was perplexed by the atypical clinical signs, which were usually followed by pneumonia. Western medicine seemed to be unsuccessful in dealing with it, forcing people to seek alternative therapies. To add insult to injury, on numerous occasions the Dutch colonial administration publicly denounced and blamed its own population, claiming that their rejection of modern medical treatments combined with an insanitary lifestyle was the primary cause of colonial Indonesia’s high mortality rates (Ravando 2020: xxii).

Those accusations were countered by Dr Abdul Rivai, a prominent Indonesian nationalist and member of the *Volksraad* (People’s Council). He strongly criticized and derided the colonial government as well as the *Burgerlijken Geneeskundigen Dienst* (BGD, Civil Medical Service) for their slow responses in attempts to manage and contain the pandemic. It was unacceptable, Dr Rivai argued, that at least 900,000 people had died in the Netherlands East Indies in the four months from August to November 1918.⁸ Dr Rivai also used Pasuruan, East Java, as an example, comparing the fatality rate in the first two weeks of November 1918 to the same period in 1917 (Figure 3). These numbers demonstrated how the death rate in various areas of Pasuruan had climbed significantly over the last two weeks and over the preceding year. Therefore, in one *Volksraad* meeting Dr Rivai stated:

⁶ Quinine was already prescribed to treat malaria, possibly from as early as the 1600s. The substance contains an essential anti-malarial remedy as well as being useful in treating other infectious diseases. Quinine was first discussed in *Geneeskundig Tijdschrift voor Nederlandsch-Indië* (GTNI, The Medical Journal of the Dutch East Indies) in 1891 (Vol. 31) as a cure for malaria. To date, quinine continues to play a vital part in the management of malaria (see J.H. Schmidt 1891: 584-586).

⁷ “Tanda-tandanja”, *Sin Po* (22-7-1918).

⁸ Dr Rivai also pointed to Pasuruan, East Java where, from 1-14 November 1918, some 5,187 people had died, compared to just 496 in the same period the year before. He also took the opportunity to say that many poor patients were not able to access medicines from government pharmacies either because of a lack of supplies or the price. Dr Rivai suggested the colonial government look to the governments of Ceylon (Sri Lanka) and the Straits Settlements (Penang, Malaka, and Singapore) which had successfully contained the Spanish flu in their regions. See *De Preanger Bode* (22-11-1918). As quoted in *Handelingen van den Volksraad: Tweede Gewone Zitting* (1918: 306).

At the moment, as we gather, hundreds of children, women and men have died in villages and towns around this country which, in terms of the BGD calculation, is not a large figure, therefore there is no reason to lament.⁹

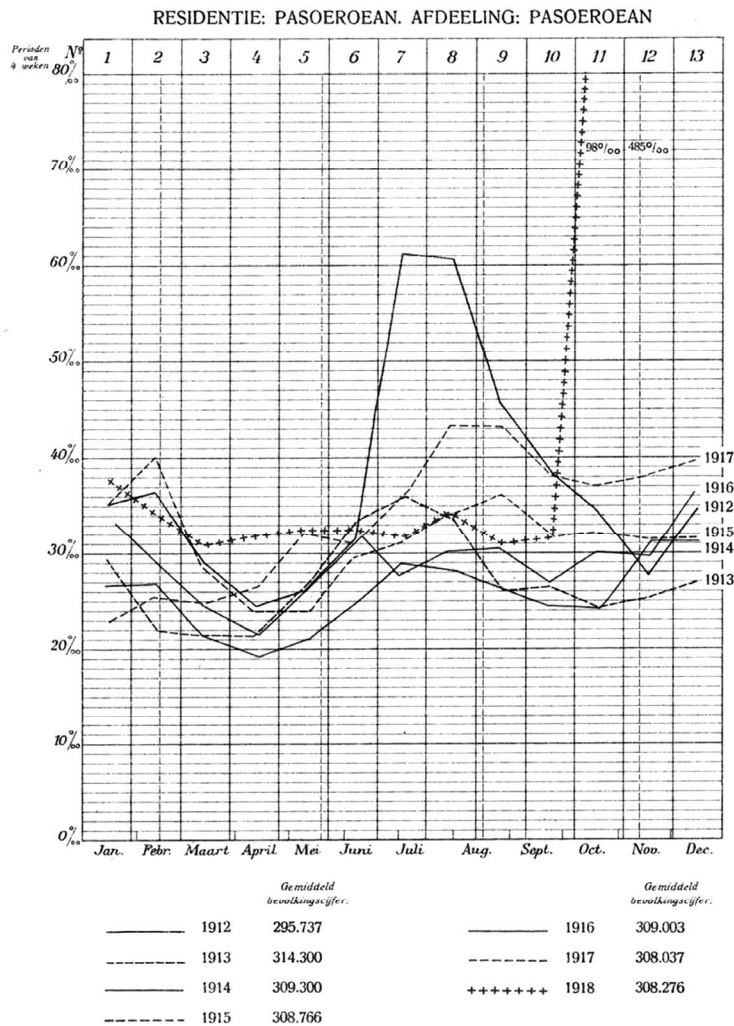


Figure 3. Monthly mortality rates in Pasuruan, East Java. The province recorded an average death rate of 48.5 percent in December 1918, the highest in Java and Madura. The plus line (+) indicates the mortality which had occurred during 1918. (Source: "Sterfte in de Afdeelingen van Java en Madura van 1912 t/m 1918", MBGD 1920 XI: Bijlage B No. 67).

Rubbing salt into the wound, Dr Rivai explicitly stated that the sluggish, ponderous response of the colonial government had forced him to watch many people die like rats every single day (*nog sterft als ratten*). Smarting from the injustice, he was unafraid to challenge the BGD directly before other

⁹ See *Handelingen van den Volksraad* (1918: 305).

Volksraad members. He also criticized several contentious points raised by the BGD regarding the pandemic, which this institution repeatedly described as a harmless, run-of-the-mill influenza. As the BGD never disclosed any precise data on the number of casualties, the circumstances were made even more complicated, particularly for health workers (Ravando 2020: 5).

In response to Dr Rivai's various strong accusations, Dr Thomas de Vogel, the inspector of the BGD, allegedly blamed the Chinese and Bumiputera (indigenous people) who frequently employed different traditional medical treatments to combat the Spanish flu. He claimed that these kinds of treatment would only exacerbate a patient's condition and this is what made diseases such as influenza so deadly. Dr De Vogel even wrote to the Governor-General of the Netherlands East Indies, Johan Paul van Limburg Stirum, to emphasize that these medicinal practises were speculative and not supported by scientific research. By way of explanation, Dr De Vogel argued that the indigenous medical tradition was based on custom and trial and error rather than insight and knowledge and hence required validation in western clinical practice.

Dr Rivai acknowledged that the majority of western medicines were incredibly effective in the treatment of a variety of chronic ailments such as malaria, syphilis, rabies, tetanus, and dysentery. Pertinently, he did not say that those treatments were without flaws and therefore traditional medicine could be utilized to fill the gap. He specifically mentioned various alternative therapies, including *electrische therapie* (electrical therapy), *balneotherapie* (seawater therapy), and *chirurgie serotherapie* (serum therapy). He argued that these therapies had proved to be effective in curing patients from various diseases.¹⁰ Dr Rivai, however, did not elaborate on whether these therapeutic approaches were also useful in the treatment of Spanish flu patients.

Dr De Vogel admitted that the BGD did not have the trained personnel required to control the pandemic. The response was the idea of sending Dutch physicians to colonial Indonesia. Nevertheless, the idea had to be abandoned because at the time the Dutch government was also having a hard time coping with the same issue. In addition, during World War I numerous Dutch doctors had served as medics in different European countries, including Switzerland, Denmark, and Sweden. As a result, the BGD had been forced to rely on Javanese physicians. Perhaps less than realistically, Dr de Vogel recommended everyone in the colony use only European medicines rather than traditional remedies. He also advised those who were ill to seek treatment exclusively from a hospital or a doctor, rather than visiting a *dukun* (shaman) or participating in strange rituals such as *arak-arakan* (processions).¹¹

Generally, efforts to prevent and contain the Spanish flu in colonial Indonesia can be broadly classified into two categories. The first consisted of preventative actions taken by the colonial government, either central or provincial. Quinine, aspirin and Dover's Powder (*doveri-poeder*) were regularly

¹⁰ *Handelingen van den Volksraad* (1918: 305).

¹¹ *Handelingen van den Volksraad* (1918: 606-607).

advertised as first-aid measures in the event of an outbreak.¹² The second focused on preventative measures to be taken by local residents, which were often spontaneous and heavily connected to indigenous wisdom.¹³

Interestingly, each ethnic group in colonial Indonesia, turned to its own systems of belief to deal with the pandemic. The ethnic Chinese, for example, held *toapekong* processions during the first wave.¹⁴ This procession was usually held several times within a space of one or two weeks. They believed it was powerful enough to ward off the disease. During the ritual, they commonly prayed for heavy rain because they were sure the prolonged drought which had hit the Indies since the early 1918 had caused the virus spread more quickly as it was borne on clouds of high-flying dust. They were also confident the heavy rain would wash away the Spanish flu. Ironically, the procession only contributed to spreading the virus. Thousands of people who gathered in the streets to watch the ritual transmitted or became infected with the virus.¹⁵

Sin Po often targeted Chinese and Indonesian elites criticizing their initiatives of holding various anti-influenza rituals beyond the bounds of medical norms. In Surakarta, for instance, *Sin Po* criticized the Surakarta sunanate for issuing instructions to its subjects to perform an anti-influenza ritual as follows:

People were instructed to burn incense (*kemenyan*) and prepare flowers for an offering (*bunga setaman*), as well as to prepare [the flesh of] a young coconut (*degan*) which has been peeled and to mix this with sugar. They were also required to mention the name of Sunan Lepen (Pakubuwono X's ancestor) as the incense was burned. After chanting the spell, they had to drink the coconut water so that their bodies would become immune to and protected from influenza.¹⁶

¹² Dover's Powder is a traditional fever remedy developed in the eighteenth century by an English physician named Thomas Dover. Thomas Dover was born in Warwickshire in 1660 and graduated with a medical degree from Cambridge University in 1683. Although this compound is no longer used in modern medicine, physicians were still recommending it until the 1960s. Opium, the *ipecacuanha* plant and lactose were components in this medication (Joseph H. Boyes 1931: 440-443).

¹³ In the United Kingdom and Australia, for instance, physicians strongly advocated quinine as a first-aid treatment for fever. Students in both countries were required to take two quinine pills each morning at the beginning of each school-day. Furthermore, the government also outlawed meeting in public spaces, closed various locations in which people might gather such as cinemas or theatres, and regularly cleansed public areas. See *West Australian* (5-7-1918).

¹⁴ *Toapekong* (*Tua Pek Kong*, *Dabogong*) is one of the deities in Indonesian, Malaysian, and Singaporean folk spirituality. *Toapekong*, whose name literally means 'Great Uncle', is regarded as the "God of Prosperity". Many people believed that *toapekong* was the representation of the spirits of Chinese pioneers who offered protection to those who relied on him. Jack Meng-Tat Chia presents the multifaceted cult of *toapekong* in three forms: a representative of sworn brotherhood, a Sino-Malay god, and a Sinicized deity. In Indonesia *toapekong* is sometimes applied generally to images of deities and, in some areas, to temples or festivals. In Kudus, his image was paraded by the Chinese in Kudus to avert disasters like diseases. See Jack Meng-Tat Chia (2017: 439-460); Josh Stenberg (2019: 202).

¹⁵ "Penjakit influenza", *Sin Po* (2-11-1918).

¹⁶ "Tida laen dari influenza", *Sin Po* (9-11-1918).

Sin Po claimed that, rather than offering protection against influenza, some people who performed the ritual had endured stomach-ache instead, because the ritual lasted a long time and the majority of them had not breakfasted earlier.

Sin Po also criticized various *Ping An* (salvation) ceremonies, like laying flowers and placing incense while praying or bowing before deities. Taking a rather brave stance, *Sin Po* bluntly criticized the ritual, even calling the tradition irrational and of no useful benefit. "People who could use their logical powers", one *Sin Po* article asserted, "would be able to understand how useless this was and what a waste of money holding the procession was".¹⁷ Moreover, *Sin Po* also stigmatized the *toapekong* procession and similar rituals which attracted large crowds as nonsense which worsened the situation as these practices would attract large crowds and obviously more people would become infected. *Sin Po's* attitude often caused a backlash, with some calling all the figures behind *Sin Po* "uncultured" for abandoning their ancestral traditions.

Matters became even more complicated because people who were unfamiliar with western medicine were apt to perceive hospitals and doctors with suspicion. People with adverse experiences sometimes spread false stories about these doctors, causing others to lose faith in western medicine as well. A rumour spread alleging that European surgeons sometimes just began cutting away at their patients' bodies without asking the patients' permission. Meanwhile, underprivileged groups in colonial Indonesia were convinced that anyone setting foot in a hospital would almost certainly end up dead (L. Th. Mayer 1918: 5). When the influenza pandemic raged in colonial Indonesia, many locals refused to take western medicines, despite the fact that they were provided free of charge (Colin Brown 1987: 243).

One of the reasons for these slanders was the distrust of western physicians among the non-European community. They would only call doctor or certified midwife when there were complications; unfortunately, in most cases, by that time it was already too late. In addition, women who had lost their babies during the birth itself often blamed the physicians, which in turn led to them refusing to engage doctors or nurses in the future (Hesselink 2015: 146). The situation was aggravated by the fact that the majority of hospitals in colonial Indonesia did not comply to high standards of care, with many being run by unreliable and incompetent staff. Many physicians refused to treat patients who lacked financial means, leaving those who had been subjected to this long-standing pecuniary discrimination with no choice but to rely on *dukun*, uncertified medical workers, or traditional herbs to save their lives (Ang Yan Goan 2009: 58-61). These misconceptions were rife in many areas in colonial Indonesia, particularly during the second wave of the pandemic. Therefore, in these difficult circumstances, newspapers were instrumental in informing their readers about the efficacy of various alternative medicines for treating and preventing influenza.

¹⁷ "Bandjermasin", *Sin Po* (28-12-1918).

TRADITIONAL MEDICINE TO COMBAT SPANISH FLU

For hundreds of years, traditional medicines in Indonesia (*jamu*) have been the primary means for maintaining health as well as preventing and treating human diseases. Plants are clearly an important source of therapeutic medicine and many of these plant-derived drugs are used in traditional medicine (Eric J. Buenz and Brent A. Bauer 2014: 20). Georgius Everhardus Rumphius (1653-1702), an employee of the *Vereenigde Oost-Indische Compagnie* (Dutch East India Company), in his seven volume 7,000-page *Herbarium Amboinense* (Ambonese Herbal), written more than 400 years ago, already described the medicinal uses of 1,200 plants on the island of Ambon, such as the *atun* tree (*Atuna racemosa*) to treat diarrhoea and dysentery (Buenz et al. 2006: 1314). Using Rumphius's work, it is possible to utilize this text as a source to identify new plant-based therapeutics.

Hans Pols has asserted that, during the Dutch East India Company's administration (VOC, 1602-1798), merchants, military pharmacists, and military surgeons who resided near strategic areas of commerce demonstrated a strong interest in and fascination with therapeutic herbs. A few herbal gardens, in which many researchers investigated those plants, were founded in Batavia in the seventeenth century. The board of the VOC, the Heeren XVII (the Seventeen Gentlemen), even sponsored several botanists to conduct investigations into medicinal herbs in the expectation that this would reduce various expenses (Hans Pols 2009: 183).

During the nineteenth and the early-twentieth-century, European doctors and botanists working in colonial Indonesia also displayed an eager interest in Indonesian indigenous herbal medicine. In the 1880s, the Chinese also began to exert a key influence on colonial Indonesia's pharmaceutical business. They marketed not only western medicines, but also herbal remedies developed from their ancestors' prescriptions. Moreover, they imported a variety of medications from various countries, demonstrating the sophistication of their networks (Pols 2009: 202-203). Some European doctors in colonial Indonesia became intrigued by the way Chinese doctors treated diphtheria with *inblaspoeder* (insufflation powder), a powder which had to be inhaled (J.v.d. Wiel 1881: 303-306; P.J. Hijmans van Anrooij 1888: 228-245).

Following the successful cultivation of quinine in the Buitenzorg botanical gardens in the 1860s, a project initiated by German biologist Franz Junghuhn (at one point, the Dutch controlled 90 percent of the world market for quinine), botanists began conducting research into all manner of herbs, plants, roots, and spices in order to determine which could be exploited economically in the future; medicinal uses were undoubtedly of interest to them. This approach to herbal medicine conveyed a sense of ordinariness and familiarity, rather than mysticism or spirituality (Pols 2009: 174).

However, as western medicine advanced after the turn of the twentieth century, the interest of European physicians and botanists in native herbal medicine waned dramatically. They frequently criticized it as it was based on custom rather than knowledge or understanding. They also asserted that the

recommendations from these sources should be validated in clinical practice or empirical study. Therefore, only after being filtered through European medical research procedures could indigenous knowledge gain legitimacy in cosmopolitan circles (Pols 2009: 203).

Nevertheless, at the time of the Spanish flu outbreak, traditional medicines still retained their important role in Indonesian society and remained immensely popular. Newspapers were critical of distributing new knowledge about the Spanish flu which colonial officials were attempting to conceal or manipulate, but they also consistently published information about medicinal plants which could be used as an alternative medicine for treating influenza. The majority of prescriptions called for boiling (fresh) leaves or roots and then straining them – much like tea or an infusion – and they were available at all markets in colonial Indonesia.

The Dutch-language daily newspaper, *De Sumatra Post* (Medan), urged all newspapers in the Netherlands East Indies as a matter of routine to publish articles informing the public how to prevent and contain the Spanish flu.¹⁸ Meanwhile, *Sin Po* (Batavia), *Bataviaasch Nieuwsblad* (Batavia), *Bromartani* (Surakarta), and *Oetoesan Hindia* (Surabaya) regularly published articles about herbal remedies to treat the flu. The spike in the use of herbal remedies was no doubt boosted to the fact that the BGD had no idea how to contain the disease effectively.



Figure 4. Musk mallow (*Abelmoschus moschatus*) as illustrated by Francisco Manuel Blanco in his famous book, *Flora de Filipinas*. (F.M. Blanco 1878: 245).

¹⁸ *De Sumatra Post* (10-5-1919).

The therapeutic procedures employed in colonial Indonesia were fairly similar to those in various countries. People in British Malaya, for instance, had their own methods of combating the Spanish flu, one of which was through the use of traditional medicines. Residents of Kedah, for example, were strongly encouraged to consume a mixture of milk and musk mallow (*Abelmoschus moschatus*) three times a day (Figure 4). Apart from being a food source, this plant has always been regarded as a valuable medicinal herb since ancient times. It turns out that Francisco Manuel Blanco (1779-1845), a prominent Spanish botanist, had already illustrated the benefits of this plant in *Flora de Filipinas* (1878) (Blanco 1878: 245). It aids in the treatment of respiratory, digestive, and urinary tract problems. Additionally, recent studies have also revealed that various elements of the plant are used in Ayurvedic herbal therapy, including as an antispasmodic, antibacterial, and antioxidant, as well as to treat gonorrhoea, hysteria, and nervous debility (Mir Z. Gul 2011: 1-12; Shahid Akbar 2020: 15-19). The addition of milk was also essential to alleviate pulmonary inflammation and mucus production, effectively easing breathing difficulties and fever.

Another less complicated and less expensive option was to combine tea, cinnamon, ginger, coriander, and garlic. Until the patient was recovered, the resulting liquid should be consumed at least twice daily. Numerous newspapers in British Malaya, particularly the *Pinang Gazette*, endorsed this strategy vigorously.¹⁹ In Singapore, there were also claims that durian (*Durio zibethinus*) might be used to prevent the Spanish flu. In the blink of an eye, durian vanished from the market. The local doctors, on the other hand, believed that these assertions were false and had no effect on curing influenza patients (Lee Nurenee 2011: 74).



Figure 5. *Labu air* or calabash (*Lagenaria siceraria*).

Meanwhile in colonial Indonesia, *Sin Po* reported how the residents in various villages in West Java used calabash (*Lagenaria siceraria*) to cure the

¹⁹ *Pinang Gazette* (1-11-1918), as quoted in Kai Khiun Liew (2007: 226).

Spanish flu.²⁰ This plant was cultivated in most Indonesian gardens and was commonly used in a variety of traditional cuisines (Figure 5). To cure influenza, the calabash was shredded and squeezed, before the resulting liquid was mixed with salt. Patients had to drink it three times a day until they got better (Ravando 2020: 305). Various doctors and *sinshe* (Chinese traditional healers) testified to the efficacy of the ingredients, although *Sin Po* journalists remained unsure about the potion. Nonetheless, they believed that, as long as the calabash was ripe, it was still worth trying given the fact that all the ingredients were herbal.²¹ This traditional treatment proved quite effective in treating a variety of mild symptoms, but insufficient to treat severe symptoms. A recent study by Lana Y.M. Juee on calabash indicates that the high phenolic content of calabash might help alleviate the oxidative stress associated with diabetes (Lana Y.M. Juee and Alaadin M. Naqishbandi 2020: 7).

Moreover, *Sin Po*, quoting from the *Djawa Tengah* newspaper, also highlighted how the aloe vera (*ilat bojo*) could also be used to treat fever (Figure 6). Apart from its antioxidant, anticancer, antibacterial, and anti-inflammatory properties, aloe vera also contributed to preventing or curing dehydration and this function was crucial in assisting people who had contracted the Spanish flu in their recovery process. Therefore, aloe vera was washed and cooked with rock sugar until a jelly-like consistency was obtained. This mixture was given to the influenza patient every afternoon. The dose was to be increased in the event of the recurrence of extreme pain. Numerous media reported that a large number of people survived the second wave as a result of adopting this treatment.²²



Figure 6. *Ilat bojo* or *lidah buaya* (*Aloe vera*).

²⁰ This plant is also known as bottle gourd, long melon, New Guinea bean, or *labu air* in Indonesian.

²¹ "Tida laen dari influenza", *Sin Po* (9-11-1918).

²² "Lagi obat influenza", *Sin Po* (2-12-1918).

Meanwhile, *Bromartani* (Solo), the first Javanese-language newspaper in colonial Indonesia, also promoted the use of the *lempuyang* (*Zingiber zerumbet*) rhizome as an anti-influenza medicine (Figure 7).



Figure 7. *Lempuyang* (*Zingiber zerumbet*). (Source: Arifsprings Herbal, Facebook 2016).

The *lempuyang* rhizomes were peeled and crushed before being combined with red chillies. This very spicy mixture would stimulate a lot of sweat. The editor of *Bromartani* claimed that numerous patients experienced the efficacy of the herb's potency.²³ Despite its extensive use as a flavouring and appetizer in Southeast Asia and South Indian cuisines, the rhizomes of *lempuyang* have also been employed in folklore medicine to treat a variety of diseases. Traditionally, this plant was used to treat fever, constipation, and to relieve pain, and it also acted as an anti-inflammatory adjuvant for stomach-aches, sprains, loss of appetite, and so on (S. Elliott and J. Brimacombe 1987: 285-317).

On 9 November 1918, *Tjhoen Tjhioe*, a Surabaya-based Malay language Chinese *Peranakan* newspaper, reprinted the prescription and instructions for treating someone who had contracted Spanish flu. The piece which had originally been published in *Djawa Tengah* newspaper was written by Phoa Tjong Kwan, a notable *sinshe* in Wonogiri, Central Java. In his prescription Phoa wrote that when a patient feels dizzy, apply pressure to his or her head with cold water or ice cubes until it feels cool. This prescription also mentions the efficacy of calabash in treating severe fever. Furthermore, *Tjhoen Tjhioe* also suggested another mixture, which consisted of *temulawak* (*Curcuma zanthorrhiza*), Javanese brown sugar and green coconut water (Figure 8). The *temulawak* was believed to soothe the body and cleanse the blood. For many years, this plant has been used to treat fever, liver disease, stomach-ache as well as to stimulate a good production of gall (Pols 2009: 193).

²³ *Bromartani* (3-11-1918).



Figure 8. *Temulawak (Curcuma zanthorrhiza)*.

To obtain the best results, apart from taking the aforementioned treatment, *Tjhoen Tjhioe* also encouraged every patient to consume a concoction consisting of one glass of Javanese vinegar, mixed with five shallots, [juice of] five limes, and a handful of chopped ginger. All these ingredients were mixed and cooked for a few minutes, before being applied to forehead and body. Meanwhile, to treat a severe cough, the paper also suggested the combination of sweet soy sauce and lime juice which should be consumed three times daily. Additionally, patients could also consume a cup of a clove decoction mixed with rock sugar every day. Another way was to consume the white of a chicken egg (albumen) with a spoonful of honey three times a day.²⁴

On 11 November 1918, *Tjhoen Tjhioe* also issued another prescription for alternative medicine to combat the Spanish flu. The article makes reference to the usefulness of pule tree bark (*Alstonia scholaris*).²⁵ *Alstonia scholaris* (Figure 9) has long been used because of its medicinal properties. Almost every part of the plant is useful in making medicine. Traditionally, the roots and bark are utilized to treat fever, malaria, ulcers, tumours, asthma, dysentery, and a host of other complaints because of its antimicrobial, antiamebic, antidiarrheal, antihypertensive, antimalarial, antioxidant, anti-inflammatory, and other properties. About two spoons of powdered pule tree bark were mixed with a glass of water. This mixture should be taken twice daily until the patient's health improved. This mixture was believed to have the power to detoxify the stomach, hence improving a patient's health immediately. Throughout

²⁴ "Recept obat Djawa boeat penjakit demem panas atawa ini penjakit baroe, jang belon tetep nama dan obatnja", *Tjhoen Tjhioe* (9-11-1918); "Influenza", *Sin Po* (5-12-1918).

²⁵ In English, it is commonly known as blackboard tree or devil's tree. *Alstonia scholaris* is from the family *Apocynaceae* which is native to southern China, tropical Asia, and Australasia. Although it is a poisonous plant, historically it has been used medicinally to treat a variety of diseases and ailments. After all, aspirin is also derived from the bark of the willow tree and it is still widely used.

the course of treatment, the patient was strictly forbidden to consume spicy or acidic foods.²⁶

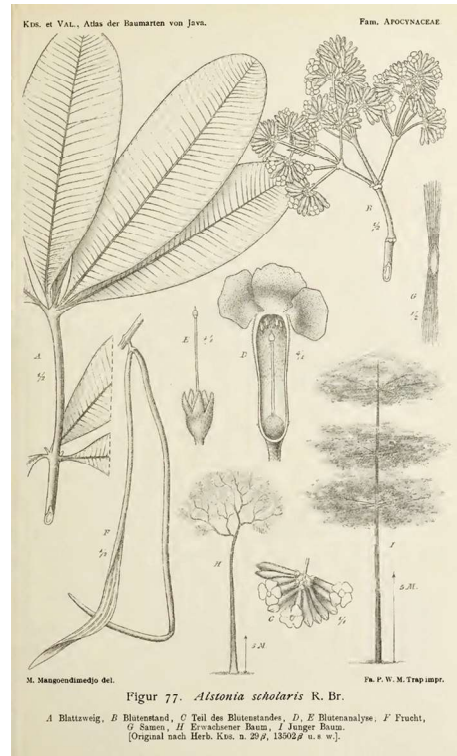


Figure 9. Blackboard tree (*Alstonia scholaris*) which was widely used in colonial Indonesia to treat fever during the Spanish flu pandemic. (Source: S.H. Koorders and Th. Valetton 1913: Figure 77).

The *Bataviaasch Nieuwsblad*, as quoted by *Oetoesan Hindia*, also offered a simple medication which was believed to be effective in preventing and treating the Spanish flu. Those who had contracted the virus were encouraged to boil together a ginger root and brown sugar and drink it three times daily. Following this, the patient should cover his/her body with a blanket or towel until sweat was released through the skin. According to the publication, “this treatment is extremely effective in preventing further coughing and the patient will recover within just a few days”. In addition, besides this mixture, the *Bataviaasch Nieuwsblad* also suggested a patient take aspirin with lime juice. Generally, four hours after consuming it, the patient would no longer be feverish.²⁷

Sinar Hindia, a left-wing Indonesian language publication from Semarang, also featured various herbal remedies which were said to be able to cure influenza patients, namely: (1) grated calabash; (2) a mixture of lime, ginger,

²⁶ “Boeat menjega influenza”, *Tjhoen Tjhoie* (11-11-1918).

²⁷ “Obat boeat influenza (sakit demam)”, *Oetoesan Hindia* (16-11-1918).

onion, and Javanese vinegar; and (3) boiled clove water. Meanwhile, for cough medicine, people could also use these concoctions: (1) white egg combined with pure honey; (2) the mixtures of sweet soy sauce and lime juice; and (3) tamarind leaves boiled with rock sugar. Despite these traditional recommendations, *Sinar Hindia* still advocated the use of aspirin as the best first aid for fever and, once the fever subsided, the patient should also consume *doveri-poeder* every morning and evening until his/her body recovered completely. This *doveri-poeder* was not only effective in treating coughs, but it also protected a patient's body against contracting pneumonia.²⁸

Furthermore, *Sinar Hindia* also encouraged the readers to: (1) always open windows and doors to let natural light and fresh air from outside; (2) regularly sprinkle water on floors and in the yard to minimize high-flying dust; (3) avoid close contact with people who were sick; and (4) do not spit carelessly, as virus and germs could easily infect another person via saliva. In addition, the paper also mentions directions to help contain the spread of Spanish flu, namely: (1) it was strictly forbidden for anyone who had fever to bathe in cold water; (2) drink plenty of fluids; (3) avoid exposure to cold weather, especially when body has begun to sweat; (4) avoid consuming solid food during the recovery process. Moreover, the paper also asserts that one of the best methods to increase sweat production was to consume coffee, tea or hot ginger drink. Meanwhile, in several villages, people also boiled *yuyu* (freshwater crab, *Gecarcinus quadratus*) and drank the liquid (Figure 10). Many of them believed it could aid in their recovery. Additionally, green coconut water which was combined with honey and salt could also be consumed to ease the fever.²⁹



Figure 10. Freshwater crab (*Gecarcinus quadratus*). (Source: [https://commons.wikimedia.org/wiki/File:Gecarcinus_quadratus_\(dead\).jpg](https://commons.wikimedia.org/wiki/File:Gecarcinus_quadratus_(dead).jpg)).

²⁸ "Influenza", *Sinar Hindia* (9-12-1918).

²⁹ "Influenza", *Sinar Hindia* (9-12-1918).

To combat the pandemic, R. Martosoepardjo, a prominent doctor from Medan, also created a mixture consisting of traditional herbs which could be obtained relatively easily in the neighbourhoods in which people lived and worked. The medicine consisted of a handful of *kumis kucing* (*Orthosiphon aristatus*), some *sembung* leaves (*Ngai camphor*), a handful of *pegagan* leaves (*Centella asiatica*), some *meniran* leaves (*Phyllanthus urinaria*), seven betel leaves, 150 grams of rock sugar, *pule* tree bark (*Alstonia scholaris*) and, lastly, Chinese cinnamon (*Cinnamomum cassia*) (see Figures 9, 11-15). All these ingredients were mixed in a pot and simmered for forty-five minutes. The patient had to drink the water every two hours: one tablespoon for an adult and one teaspoon for children. Many people in Medan found this formula really efficacious.³⁰



Figure 11. *Kumis kucing* (*Orthosiphon aristatus*). (Source: <https://www.satuharapan.com/read-detail/read/kumis-kucing-peluruh-batu-ginjal>).



Figure 12. *Sembung* leaves (*Ngai Chamfor Blumea Balsamifera*). (Source: <http://herbsfromdistantlands.blogspot.com/2016/04/blumea-balsamifera-ngai-camphor-plant.html>).

³⁰ "Influenza", *Andalas* (14-11-1918).



Figure 13. Pegagan leaves (*Centella asiatica*). (Source: <https://www.merdeka.com/jatim/6-manfaat-pegagan-atau-centella-asiatica-untuk-wajah-populer-sebagai-bahan-skincare-klm.html>).



Figure 14. Meniran leaves (*Phyllanthus urinaria*). (Source: <https://fredikurniawan.com/klasifikasi-dan-morfologi-tumbuhan-meniran-phyllanthus-urinaria-1/>).



Figure 15. Chinese cinnamon (*Cinnamomum cassia*). (Source: from Koehler's *Medicinal-Plants* 1887, https://en.wikipedia.org/wiki/Cinnamomum_cassia).

A similar method was also used by Yap Goan Thay, a prominent *sinshe* in Makassar, who used traditional medicine to cure and prevent influenza. However, Yap only used two kinds of leaves: *kendal* leaves (*Cordia obliqua*) and *sinom* leaves (*Tamarindus indica*) which were cooked and mixed with sugar (Figures 16 and 17). Both leaves were historically known for their efficacy in antibacterial, hypotensive, respiratory stimulant, diuretic, and anti-inflammatory medicine. When taken on a daily basis, this concoction proved to be effective in the treatment of influenza.³¹



Figure 16. *Kendal* leaves (*Cordia obliqua*). (Source: <https://www.wikidata.org/wiki/Q16752096>).



Figure 17. *Sinom* leaves (*Tamarindus indica*). (Source: https://commons.wikimedia.org/wiki/File:Starr_080608-7474_Tamarindus_indica.jpg).

³¹ "Receptnja djaga penjakit sekarang", *Sinar Makassar* (16-11-1918).

In short, because of the complexity of the disease, people who were overwhelmed by the horrific situation had no choice but to turn to alternative medicine. For impoverished Indonesians, access to Western medicine and health care was limited, necessitating reliance on herbal therapy for health and disease management. They could hardly rely on colonial officials, considering the latter's tardiness in mitigating the outbreak. As a result, alternative remedies gained prominence throughout the period.³²

In the context of the pandemic, *Sin Po* and other newspapers played an essential role in spreading information about herbal medicines as an alternative, more affordable remedy than modern western medicine. These newspapers provided the inspiration to investigate traditional Indonesian therapies more thoroughly. Most of the useful herbs were grown in almost every garden and were commonly used in Indonesian cuisine.

Nevertheless, these traditional medications were not without flaws, since their qualities were typically limited to treating a single symptom; therefore, if the symptoms of the Spanish flu were accompanied by multiple complications, the drug was no longer useful. Until the Spanish flu vanished from colonial Indonesia, there was never a truly effective remedy to ward off the pandemic.

EPILOGUE

On 2 March 2020 President Joko Widodo announced that two of his citizens had tested positive for COVID-19. The statement also put an end to the misconception that Indonesia was a country which was immune from COVID-19. Just a few weeks before the announcement, a series of controversies around the pandemic were raised by Indonesian government sources, such as the denial by the Minister of Health that COVID-19 had entered Indonesia, the approval given 500 Chinese workers to work in Southeast Sulawesi, the state officials who openly revealed the identities of COVID-19 patients to the public, and a series of remarks made by government officials who underestimated the initial appearance of the pandemic (*The Jakarta Post* 2020a, 2020b).

The situation in Indonesia grew even more chaotic when public figures who were supposed to educate people about the danger of COVID-19 began disseminating various false news and rumours instead, causing polarizations and misunderstandings in society. This is not to mention the contentious statements made by government officials whose validity could not be proved, ranging from the introduction of an anti-corona necklace made of eucalyptus leaves, which was believed to be capable of eradicating 42 per cent of the COVID-19 virus in just fifteen minutes, the appearance of various anti-corona medicines which had not been clinically tested and so on (Nafilah Sri Sagita K. 2020; Ahmad Naufal Dzulfaroh 2020).

Because of the turmoil and commotion, many people decided to turn to traditional plant remedies such as *jamu* or *empon-empon*, which are said to be capable of preventing bacterial infection and inflammation, as well as

³² "Influenza", *Andalas* (14-11-1918).

protecting a person's body from free radicals.³³ These herbal medicines have been known to have inhibitory potential which can be used as a prophylactic measure to alleviate COVID-19 symptoms as a consequence of their antiviral, antiseptic, and antibacterial potential. Nevertheless, although this *empon-empon* is believed to boost people's immunity, it is not really effective in treating COVID-19 sufferers with severe symptoms.

The use of these natural elements, however, spun out of control when some people claimed the efficacy of various herbal elements, such as eucalyptus oil and coconut water, to cure COVID-19. Such information travelled at the speed of sound, thanks to short messaging apps like Whatsapp. Many people believed that inhaling some vapour from eucalyptus essential oil (even worse, some people also drinking it) could prevent the SARS-CoV-2 virus from invading their respiratory tract.³⁴ In fact, this information is completely misleading. Eucalyptus and some other herbal plants are indeed highly efficient in combatting the Betacoronavirus, but not the SARS-CoV-2 virus which caused the COVID-19 pandemic. Conversely, consuming large amounts of eucalyptus oil can cause symptoms of poisoning such as increased perspiration, vomiting, diarrhoea, disorientation, respiratory and blood flow irregularities, and so on (Arti Ekawati 2020).

Nevertheless, herbal remedies have always been a part of daily life in Indonesia for countless generations. Natural elements have also been used in the investigation of COVID-19 therapies by a team from the Indonesian Institute of Science (LIPI, now BRIN) and the Association of the Indonesian Doctors for the Development of Traditional and Herbal Medicines. This team is looking at how two types of herbal medicines modulate the immune system. In addition, the Indonesian Medicinal and Aromatic Crops Research Institute (BALITTRO) of the Ministry of Agriculture has also conducted research on a number of spice and medicinal plants which can be used to combat the COVID-19 virus, including red ginger, turmeric, cinnamon, cloves, orange peel, eucalyptus, and virgin coconut oil (Irma Garnesia 2020). We certainly hope that this research can produce results so that it can benefit many people.

Up to the end of December 2020, Indonesia had recorded more than 4.26 million cases with a mortality rate of over 144,000 people. It is probable that the actual figure is much higher considering that there are so many victims, particularly those living in remote areas, for which data have not been recorded. Central Java record the highest number of mortalities (30,282 people) followed by East Java (29,729 people), West Java (14,747 people), DKI Jakarta (13,536 people), and so on (Antara 2021). This figure is very likely to increase along

³³ *Empon-empon* is a concoction of ginger, Javanese ginger, lemongrass, cinnamon, turmeric, pandan leaves, and brown sugar. The ingredients for this mixture are generally cheap and widely available at any market.

³⁴ There were also additional claims that "Susu Beruang" (a brand of milk) could generate COVID antibodies and that drinking coconut water combined with a pinch of salt could treat those infected with the COVID-19 virus. There was also a debate about whether consuming alkaline water could prevent the virus from mutating. See "Keliru, Susu Beruang (Bear Brand) dapat Menyembuhkan Covid-19", *Tempo* (9 July 2021).

with the discovery of an Omicron variant in Jakarta and other cities (Wahyudi Soeriaatmadja 2021).

This essay has demonstrated that, despite the passing of a century, many Indonesians continue to rely on the efficiency of herbal plants to combat any outbreak or pandemic. For instance, in the case of the Spanish flu, we can see how the plants used to battle the pandemic by our forefathers were not all that different from those used nowadays. Many people employed coconut water, ginger, eucalyptus, turmeric, and other medicinal herbs to cure the Spanish flu, which many still regards as able to ward off COVID-19.

From this history of the Spanish flu, we learn that the colonial government never had a grand design to combat or stop the spread of a pandemic. It made almost no efforts at prevention and the outcome of this lack of preparedness was clear. When the Spanish flu attacked colonial Indonesia, the government did not know how to respond. This circumstance can be attributed in part to the damage done by various controversial and misleading statements made by state officials and to the emergence of many false experts who only exacerbated the already challenging situation. Unfortunately, even more than a hundred years later, when COVID-19 struck Indonesia, nothing had really changed.

LIST OF ABBREVIATIONS

| | |
|----------|---|
| BALITTRO | Balai Penelitian Tanaman Rempah dan Obat (The Indonesian Medicinal and Aromatic Crops Research Institute) |
| BGD | Burgerlijken Geneeskundigen Dienst (The Civil Medical Service) |
| GTNI | <i>Geneeskundig Tijdschrift voor Nederlandsch-Indie</i> (The Medical Journal of the Dutch East) |
| MBGD | <i>Mededeelingen van den Burgelijken Geneeskundige Dienst in Nederlandsch-Indië</i> |

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Hamilton Spectator (6-6-1918)
Kompas (2-8-2020)
Oetoesan Hindia (16-11-1918)
Pinang Gazette (1-11-1918)
Sinar Makassar (16-11-1918)
Sinar Hindia (9-12-1918)

Sin Po (22-7-1918)
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The Jakarta Post (17-6-2020)
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