

Health Knowledge, Misinformation and Plague Control in Lagos, 1924-1931

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Abstract

This paper examines the nexus between health knowledge and disease control, particularly emphasising misinformation during the plague outbreak in colonial Lagos. The extant literature on plague in colonial Lagos examined the historical effects of the outbreaks on trade, food security, sanitation, urban planning, and racial relations. However, there is a dearth of historical studies on the impact of health knowledge on plague control in Lagos from 1924 to 1931. Moreover, the existing studies focused solely on the bubonic manifestation of the plague without providing deep insights into the septicemic and pneumonic variances of the scourge. Against this backdrop, this paper captures the historical significance of the health knowledge systems in the plague outbreak in colonial Lagos. Based on the historical analysis of archival records, newspaper reports, expert interview surveys, and the literature, this study reveals that negotiating power between indigenous and Eurocentric health knowledge systems impacts plague control due to misinformation in colonial Lagos.

Keywords: Disinformation, Health Intervention, Health Knowledge, Misinformation, Plague.

Introduction

Health knowledge is a social product. This study provides a historical explanation of plague epidemiology with reflections on the misinformation about Colonial health services in Lagos. The study focuses on the social structures sustaining disease outbreaks and control in colonial Lagos. Lagos



was a vital centre of commerce and administration during the colonial period in Nigeria. Before the arrival of European colonial powers, Lagos was a thriving city-state with a complex political and economic system. Lagos served as a market between the indigenous peoples and Europeans in colonial Nigeria. Lagos' history traces the island's establishment and its hinterland environment to Yoruba, Mahin and the Edo peoples.¹This intercultural encounter creates the foundation of Lagos' social structure and health practices over time.

This paper examines the impact of health knowledge on plague control in Lagos from 1924-1931. Lagos witnessed an unprecedented outbreak of the plague in 1924. This outbreak was a part of the Third Plague Pandemic that started in China and spread worldwide from the late nineteenth century to the first half of the twentieth century. The extant literature on the plague examined the historical effects of the outbreaks on trade, food security, sanitation, urban planning, and racial relations.² However, there is a dearth of historical studies on the place of health knowledge and misinformation about health services as essential social determinants of plague control in colonial Lagos. This aspect of the historiography of plague reveals historical lessons for medical practice in the contemporary epoch. It has been noted that the historical analysis of the social determinants of health in Africa could compliment the biomedical understanding of disease control.³ In this context, there is a shortage of historical studies on the health impact of misinformation during the plague outbreak in colonial Lagos. Moreover, the existing studies focused solely on the bubonic manifestation of the plague without providing insights into the septicemic and pneumonic variances of the scourge. Against this backdrop, this paper examines the nexus between health knowledge and disease control, particularly emphasising misinformation in the plague outbreak.

The term “misinformation” means misleading information that is not supported by the consensus among experts about a certain phenomenon. The information that is considered false or true changes as new evidence is uncovered. The deliberate or organized dissemination of false information is disinformation. This is often an agenda that is aimed at the acquisition of power, prestige, or money. Public health is a field that has numerous losers and winners. Because of this loser-winner situation, information politics thrives in health interventions and policy formulation.⁴

¹ Olukayode A. Faleye, “Plague and Trade in Lagos, 1924-1931”, *International Journal of Maritime History*, 30 (2), 2018, pp. 287-301.

² O.A. Faleye, and T.M. Akande. “Beyond “White Medicine”: Bubonic plague and Health Interventions in Colonial Lagos”. *Gesnerus: Swiss Journal of the History of Medicine and Sciences*, 76 (1), 2019, pp. 90-110; F.O. Ajiola, “Public Health and Political Governance: The Colonial State and Disease Control in Lagos, 1924–1935”. *Africa Review*, 2024: <https://doi.org/10.1163/09744061-bja10122>.

³ J.L.A. Webb. “Historical Epidemiology and Infectious Disease Processes in Africa”. *Journal of African History*, 54 (1), 2013, pp. 3-10.

⁴ B. Swire-Thompson, and D. Lazer. “Public Health and Online Misinformation: Challenges and Recommendations”. *Annu. Rev. Public Health*, 41, 2020, pp. 433–451.

People with accurate health knowledge reduce their vulnerabilities during disease outbreaks.⁵ In this vein, health knowledge impacts health behaviours in a population.⁶ Inadequate health knowledge leads to misinformation. Misinformation can come from various sources, such as rumours, fiction, traditional beliefs, and propaganda. Misinformation can be used to describe information presented as accurate, but it does not accurately reflect the truth. Misinformation is defined as the dissemination of false information with no intention to harm, while disinformation is the dissemination of misleading information with the intent to harm.⁷

Health knowledge is a product of culture. Against this background, cultural disparities in medical practice in multicultural societies such as colonial Lagos have been seen to facilitate information multiplicities that often lead to misinformation during a significant health emergency such as the Third Plague pandemic. Indeed, during a public health emergency, authorities are tasked with informing the people living in the affected area about disease manifestations and possible threats. The authorities are also obliged to engage the people in protective behaviour and address concerns. This type of communication can help create a feeling of support and cooperation. However, official information on public health emergencies often undermines deep-rooted cultural values and beliefs with implications for the effectiveness of health interventions.

The discourse on the relationship between misinformation, disease control and the cultural context of health knowledge is manifest during the Third Plague Pandemic. The plague outbreak in colonial Lagos is a phase of the Third Plague Pandemic. The Third Pandemic (1855-1959) accounted for 12 million deaths, stimulating much resistance to sanitary and biomedical approaches adopted in Africa and elsewhere. The pandemic spread to Africa in the late nineteenth century.⁸ The plague reached Dakar Senegal in 1914 and Lagos, Nigeria, in 1924.⁹ These outbreaks witnessed local responses based on diverse health knowledge and created a misinformation crisis that has not been vigorously investigated in the literature. Thus, this paper examines the impact of misinformation on health interventions with a focus on the plague outbreak in colonial Lagos. The study asks: What was the nature of health knowledge before the plague outbreak in colonial Lagos? How do health knowledge and

⁵ G.A. Ilivieda, *Impact of Health Knowledge on Plague Control in Lagos: 1924-1931*. Ph.D. Thesis, Department of History and International Studies, Edo State University, Uzairue, 2023.

⁶ R. Uribe, M. Godinho, K. Machado, N. Oliveira, N. Espejo, de Sousa, N. Barbalho, & P. Pedroso. "Health knowledge, health behaviors and attitudes during pandemic emergencies: A systematic review". *PLoS One*, 16 (9), 2021: e0256731. doi: 10.1371/journal.pone.0256731.

⁷ S. Lewandowsky, U. Ecker, C.M. Seifert, N. Schwarz, and J. Cook. "Misinformation and its correction: Continued influence and successful debiasing". *Psychological Science in the Public Interest*, 13, 2012, pp. 106-131.

⁸ M. Echenberg, "Plague in Africa: Third Pandemic". In J.P. Byrne (Ed.), *Encyclopedia of Pestilence, Pandemics and Plagues*, Greenwood Press, 2008.

⁹ O.A. Faley. "Environmental change, sanitation and bubonic plague in Lagos, 1924-31". *International Review of Environmental History*, 3 (2), 2017, pp. 89-103.

misinformation impact plague control in Lagos? What is the impact of misinformation on plague control in colonial Lagos?

Third Plague Pandemic in West Africa: Mapping the Ghana-Nigeria Connection

Literarily framing public health in the colonial context divides West African societies along the colonizer-colonized space cleavage. In the light of this dichotomy, it has been noted that the abdication of British authorities' responsibility in providing medical and sanitary services in Sierra Leone during the Third Plague Pandemic up to the 1920s.¹⁰ The approach of the Colonial Office is adjudged to be embedded in notions of pseudo-scientific racism. However, the manifestation of pseudo-science amidst the scarcity of medical personnel and financial difficulties sheds light on the role of the dearth of medical knowledge as brought into being by the infancy of health sciences and associated limited colonial resources in West Africa. While the racial politics of health within colonies cannot be ruled out in British West Africa, the infancy of medical practice seems to have bred misinformation rather than disinformation and undermined public policy on health during the plague outbreaks (Third Pandemic).

The Third Pandemic spread to British West Africa in the early twentieth century. Earlier cases had been recorded in Ashanti, Sekondi and Kumasi on the Gold Coast. These were plague cases before the first official outbreak in Lagos. Assessing plague patterns in the Gold Coast is vital to understanding the outbreak in Lagos, Nigeria. The colonial records showed that until the major epidemic of 1924, earlier episodes of the disease had occurred and endured sporadically at the Gold Coast.¹¹ The first outbreak of plague in the Gold Coast was recorded in 1908. The public health response to the disease spread was built on the health infrastructure deployed to curb the epidemic Yellow Fever of 1910. The outbreak of yellow fever in 1910 was a significant public health crisis that led to the establishment of the public health service at the Gold Coast.¹²

Selwyn-Clarke report of 1925 traced the epidemiology of plague in the Gold Coast in 1924 to an initial outbreak in Ashanti. The index case was a worker at a food store who received contaminated goods from plague-infested Sekondi in March 1924. By June 1924, the outbreaks in Ashanti and Sekondi spread to Kumasi due to socioeconomic networks. The Kumasi plague outbreak exploded between June and September 1924, with a record of 140 cases. This explosion was due to inadequate knowledge of the plague aetiology as the disease was new to the local health system. The outbreak accounted for 90 cases of bubonic plague, 26 cases of pneumonia, and 24 cases of septicemia, all accounting for

¹⁰ C. Festus. "Sanitation, disease and public health in Sierra Leone, West Africa, 1895–1922: Case failure of British colonial health policy." *The Journal of Imperial and Commonwealth History*, 43 (2), 2015, pp. 238-266.

¹¹ British Online Archives (BOA) "Ghana and Togo under colonial rule". Government Reports, 1843-1957. *Municipal Annual Reports*, 1923.

¹² BOA. "Guggisburg Report on the Gold Coast, 1920-1926", 1927.

121 deaths.¹³ Subsequently, the colonial government deployed sanitary measures and movement restrictions to curb the outbreak.

It has been observed that the plague outbreak in Kumasi between March 1924 and March 1925 led to 145 fatalities and impacted the socioeconomic and political structure of the colonial town.¹⁴ This led to the remaking of a colonial order in Kumasi through public health intervention. As observed in the Guggisburg report, the 1920s witnessed town improvement as a general public health measure in the Gold Coast (now Ghana).

Government intervention mainly focused on roads and housing construction, water drainage and sanitation involving slum clearance and housing schemes for the displaced. The slow pace of the re-housing schemes in Kumasi and Accra had led to congestion in other places, with public health implications. The colonial officials noted that in town planning, emphasis was placed on seaports, "the sanitary condition of which is all- important owing to their being the bottle-necks of our trade".¹⁵ Consequently, the colonial authorities focused on Accra, Cape Coast, Winneba, and Sekondi and the railway linking Kumasi. This reality of colonial public health intervention and infrastructure in the Gold Coast (now Ghana) reveals an administrative approach to healthcare based on economic preferences. Through this economic functional area within the British West African Empire, the plague spread to the port city of Lagos in Nigeria.

Misinformation and the Sources of Plague in Colonial Lagos

The plague outbreak in colonial Lagos was a phase in the global spread of *Yersinia Pestis* in the Third Pandemic. This translated into the spread of an initial outbreak in China to the port cities in Africa due to improved navigational technology and global trade in the late nineteenth and early twentieth centuries. The pandemic in West Africa spread from Ivory Coast in 1899 to Ghana in 1908, Senegal in 1914, and Lagos in 1924.¹⁶ In a way, the plague of Lagos was a product of globalization and its associated economic connections in the British Empire.

The contradictory plague statistics documented by the government and the press brought to light the gravity of misinformation in disease control in colonial Lagos. The official records of the outbreak accounted for a total number of 414 cases and 349 deaths in 1924, 104 cases and 88 deaths in 1925, 497 cases and 476 deaths in 1926, 155 cases and 151 deaths in 1927, 519 cases and 509 deaths in 1928, 188 cases and 176 deaths in 1929, 65 cases and 65 deaths in 1930, 5 cases and 5 deaths in 1931. In other colonial records, 343 plague

¹³ Percy, Selwyn-Clarke. "Report on the Outbreak of Plague in Kumasi, Ashanti." (1925), pp. 1-61.

¹⁴ B. Talton. "Kill Rats and Stop Plague": Race, Space, and Public Health in Postconquest Kumasi". *Ghana Studies*, 22, 2019, pp.95-113.

¹⁵ BOA, "Guggisburg Report on the Gold Coast, 1920-1926", p. 121.

¹⁶ See W.J. Simpson, Report on Plague in the Gold Coast in 1908. J & A. Churchill, 1909; Faleye, "Environmental Change".

fatalities were reported for 1924 and 6 deaths in 1931.¹⁷ The variances in plague statistics in other colonial official records such as Sir Edward Thornton's Report on Plague in Nigeria reveal the infopolitics dimension of epidemic control in colonial Lagos. The newspaper reports show contradictory plague statistics differing from the administrative records. For instance, the *Lagos Daily News* reported 47 deaths in 1928, 60 in 1927 and 62 in 1926.¹⁸ This could be a deliberate attempt to under-report the outbreak's severity to the populace, perhaps to stall panicking in colonial Lagos and its environs. The under-reportage of the plague outbreak reflects a lack of synergy between the colonial medical establishment and the populace, especially in the area of information gathering and sharing. These figures are controversial as more people must have died from the outbreak considering the limited reach of the colonial medical services. Moreover, the contradictions between the figures published in the colonial press and the statistics of the official annual departmental reports as well as special reports on the plague reflect the level of misinformation and disinformation in the light of the scourge.

While the first official case of Plague infection was diagnosed in Lagos on 28 July 1924, other cases had occurred before this date. The locals treated the outbreak as an epidemic of sudden death caused by blood poisoning.¹⁹ However, the European administrators in Lagos, acquainted with the plague in Europe, noted that the new outbreak was transmitted from Kumasi in Ghana. This colonial official account was of the view that the carriers were traders who violated international health regulations by evading quarantine measures at the Ghanaian seaport before disembarking at the Lagos port.²⁰ In Lagos, the epicentre was Oko Awo, a slum community of indigenous Lagosians. The outbreak ravaged the overcrowded slums, which included Idoluwo Street, Ebute Ero, Docemo and Oke Suna. The colonial medical and sanitary report for 1926 noted the plague manifestation in colonial Lagos as 44.5% bubonic, 48.7 % septicemia and 6.8 % pneumonia. It was noted that the condition of the disease was exceedingly difficult to diagnose and a few infected people were admitted to the African Hospital as cases of non-plague lung infections.²¹ The erroneous diagnoses of pneumonic plague as non-plague lung infection reveal the extent of misinformation in the colonial medical services due to the infancy of the existence of medical sciences during the outbreak in Lagos.

Health Knowledge and Bubonic Plague Propaganda

The aetiology of bubonic plague reveals a disease occurrence following the bite of an infected flea. Inflammation is induced by the uncontrolled growth of the

¹⁷ See National Archives Ibadan (NAI). CSO 26/2. 17222. Vol I. "Sir Edward Thornton's Report on Plague in Nigeria, 1926"; O.A. Faleye, *Plague and Society in Colonial Lagos*. Lagos: University of Lagos Press, 2021; Faleye, "Environmental Change".

¹⁸ *The Lagos Daily News*, Plague. 1931, May 9.

¹⁹ Faleye and Akande, "Beyond White Medicine".

²⁰ NAI. CSO 26.13001 Vol.I. "Plague in Lagos". From the Deputy Director of Sanitary Service, Lagos to the Director of the Medical and Sanitary Service, Lagos. Memorandum No. 333/D.M.S/24 of 12 August, 1924.

²¹ NAI. Annual Medical & Sanitary Report, 1926.

pathogen in the human body.²² According to the colonial government, the manifestation of the bubonic form of the disease in colonial Lagos shows mild cases regarded as *pestis minor*. According to official records, the patients had buboes and “diagnosis was made by gland puncture [...] a feature was the large number with lung complications [due to] broncho-pneumonia [characterized by...] a slight cough with a minimal amount of sputum”.²³ These cases show that some patients categorized under the bubonic category manifested symptoms of pneumonic plague. From the foregoing, the diagnosis of the plague disease reveals that many bubonic cases recovered, and most fatalities captured as bubonic were manifestations of other forms of plague. This is an upshot of misinformation engendered by the underdeveloped state of knowledge on health in colonial Lagos.

During the outbreak of bubonic plague in colonial Lagos, the British colonial government utilized available medical knowledge to enforce measures for preventing the spread of the disease. These measures included the creation of quarantine systems and the relocation of infected individuals to isolation camps. However, these actions were met with opposition from the local population, who saw them as unjust and discriminatory.²⁴ Similarly, in the postcolonial era, the implementation of public health measures of movement restrictions without consideration for food security in the face of the COVID-19 pandemic led to local disdain for public health measures in Nigeria and elsewhere in Zimbabwe.²⁵

The government utilized various forms of media, such as posters, pamphlets, and public announcements, to disseminate information about the disease and the control measures being taken. The messages focused on emphasizing the seriousness of the condition and the necessity of following the government's directives to prevent its spread. However, blaming the local population for the presence of rats only served to alienate them (the local population) further and undermine efforts to control the epidemic. The manner of the colonial health intervention also diverted attention away from the more practical measures that could have been taken to address the spread of the disease, such as improving sanitation and hygiene practices through deliberate government investment in infrastructure. The experience of Lagos highlights the importance of accurate and transparent communication during public health emergencies, as misinformation can have severe consequences for both the control of infectious disease outbreaks and community trust in public health measures.

Information is vital to control infectious diseases. This was the case in the centre of the British Empire. The 1920s witnessed the investment of the British government in disseminating important information on health and wellness in

²² X.Z. Huang, M.P. Nikolich, and L.E. Lindler. “Current Trends in Plague Research: From Genomics to Virulence”. *Clinical Medicine & Research*, 4 (3), 2006, pp. 189-190.

²³ NAI. Annual Report, Nigeria, 1926, pp. 193-194.

²⁴ See Faley, “Environmental Change”; “Plague and Trade”; “Beyond White Medicine”.

²⁵ O.A. Faley, “COVID-19 Pandemic, Geopolitics of Health and Security Entanglement in West Africa”. In Moyo, I. and Ndlovu-Gatsheri, S.J, (Eds). *COVID-19 Pandemic and the Politics of Life*, London: Routledge, 2023; see I. Mugari, M.R. Gahadza, and E.E. Obioha. “Socio-economic and security ramifications of COVID-19 in Zimbabwe”. *Ikenga*, 24 (1), 2023, pp. 1-19.

Britain. The British Broadcasting Corporation was an engine of health education in England. An important programme broadcast in 1930 was "Radio Education on biology and hygiene".²⁶ This was an investment of the British Authorities in information to invigorate British health practices and medical knowledge. Similarly, in the face of the Ebola (EVD) outbreak of 2014-2015, improved communication technologies were deployed in order to energize health knowledge in Lagos. The health services allowed the people to call, toll-free, to report suspected cases, and then, an ambulance was sent to the location and the patient was admitted and quarantined. This active communication network between the people, including medical personnel, helped to control the EVD outbreak.²⁷

However, during the Covid-19 pandemic, more people got infected and died because of misinformation. They did not believe the pandemic was deadly due to its malaria and fever-like symptoms. The fever-like symptoms of COVID-19 made many Lagosians disregard hand washing as a step in guarding against contracting the virus. The scenario led to disbelief in the public health measures with the attendant spread of the virus.²⁸ This implies that misinformation influences the effectiveness of health interventions both in colonial and postcolonial Lagos.

Colonial Medical Knowledge and the Epidemiology of Septicemic and Pneumonic Plagues

Septicemic plague infection occurs following blood infection by infected fleas carrying the *Yersinia Pestis* bacterium. The symptoms of septicemia include abdominal pain, blood clotting under the skin, nose, and mouth, and rectum bleeding, chills, organ collapse, shock and fever, amongst others. Considering its numerous symptoms that mimic other infections, septicemia can quickly spread without adequate laboratory tests. Moreover, it could be asymptomatic, thereby resulting in sudden death. Since the septicemic plague can be spread through skin openings or inhaling infectious droplets, it is often a product of poorly managed bubonic or pneumonic plague. This was the case in colonial Lagos, where some plague victims died of septicemia-related complications.²⁹

Diagnosing septicemic plague requires blood sampling, culture sampling of body fluids, and organ testing (kidney, liver and lungs). The infancy of medical knowledge and technology in colonial Lagos makes the clinical intervention in this case nearly impossible. Hence, the colonial records show that almost all of this category's patients died in Lagos. According to the colonial report, Septicemic Plague is characterized by recovery of *Y. pestis* from a patient's blood in the absence of a bubo. Death, in this case, is caused by multiple organ.³⁰ Due to the complexities surrounding the manifestation of septicemic plague, only a few patients were admitted to the Infectious Diseases Hospital. The clinical records show that the "cases collapsed, death took place in a few days.

²⁶ *British Broadcasting Corporation, BBC, Annual Report, 1930, p.9.*

²⁷ M. Ogedengbe, Personal Communication, September 12, 2023.

²⁸ S. Alabi, Personal Communication, September 15, 2023; A. Ofuase, September 13, 2023.

²⁹ Annual Report of the Infectious Disease Hospital, Lagos, 1926.

³⁰ Huang et al. "Current Trends in Plague Research".

No definite clinical signs were observed, except a very high temperature and signs of severe toxæmia".³¹ These clinical records show that native doctors must have treated many cases, and the infectious diseases hospital became the last resort.

Pneumonic Plague develops as secondary pneumonia after a patient with bubonic or septicemic illness becomes infected by the plague bacilli in his lungs through the bloodstream. Pneumonic Plague occurs by seeding the lungs with the organism following the spread of Bubonic disease. Secondary pneumonic Plague occurs by the spread of fulminate pneumonia followed by organ damage and death.³² In colonial Lagos, cases of Acute Pneumonic plague were reported during the plague outbreak, as the colonial report shows that in "most of these cases, nothing definite can be made out of the lungs". The patients complained of fever, headache, chest pain and cough. The temperature was reported to have ranged from 104F to 105F, with death occurring within two days.³³ As a result of its presentation as ordinary pneumonia, it was impossible to give a diagnosis in a few days.

According to colonial officials, the septicemic plague in colonial Lagos was a condition without buboes. Yet, the organism could be recovered from the spleen, heart, blood, etc. One rarely met with a bubonic case that did not show evidence of septicemia. In the actual primary septicemic cases, there was marked congestion and engorgement of all the organs, especially the liver and spleen. The lungs were congested and rather edematous, but in only one case was actual consolidation or infarction noted. The infection could be demonstrated in most of the lung smears.³⁴ The mortality level was almost 100 per cent due to the poor understanding of the disease aetiology as a result of the infancy of medical science at the time.

Considering the manifestation of the index case as pneumonia, one is inclined to submit that the outbreak of the disease had occurred long before the official report. The presentation of pneumonic plague as common pneumonia and the possible treatment thereof reveals the danger of misinformation brought about by contrasting medical and health knowledge perspectives in colonial Lagos. Moreover, detecting the septicemic and pneumonic varieties of the plague was challenging to diagnose. However, the colonial medical establishment investigated every death reported as pneumonia or broncho-pneumonia.³⁵ Here, autopsies were conducted, and a post-mortem examination was made, especially in cases certified as cardiac asthma or acute bronchitis. Some of these respiratory diseases were due to septicemia and pneumonic plagues. Indeed, some deaths from the epidemic might have remained undiscovered due to the infancy of microbiology and medical technology in colonial Lagos. Undoubtedly, misinformation was a product of the state of the knowledge about health at the time rather than a deliberate manipulation of available information.

³¹ NAI. Annual Report, Nigeria, 1926, pp. 193-194.

³² Huang et al. "Current Trends in Plague Research".

³³ NAI. Annual Report, Nigeria, 1926, pp. 193-194.

³⁴ NAI. Annual Medical and Sanitary Report, 1928.

³⁵ NAI., Annual Medical and Sanitary Report, 1927.

Colonial Health Knowledge, Misinformation and Anti-Plague Campaign

Medical knowledge was in its infancy in the early twentieth century. Consequently, colonial territories became landscapes of trials and colonial subjects were transformed into objects of laboratory experimentation in Lagos. It has been noted that 'the British unquestionably made serious efforts to improve public health in its colonies. Medical personnel were deployed to medical facilities where diagnoses and the benefits of biomedicine became instructive in the lives of the natives. However, these "efforts proved ineffective in the late nineteenth and early twentieth centuries". This was "partly because microbiology was in its infancy, limiting knowledge of causation".³⁶ In the same light, "public health conditions in Lagos, concerning water, human waste, and garbage, were[...] miserable for the vast majority living there during the 1850-1900 period[...]even had funds [...] available, the knowledge needed to use them wisely was lacking until well into the 1890s".³⁷

The stifling of the application of medical knowledge in a colonial setting seems to have led to a more significant transformation in people's living standards. This could have been responsible for the drop-in mortality rate rather than medical interventions in the late colonial era. It has been observed that the conflicts concerning the aetiology of diseases impact eradication policy and medical research, which undermined a holistic fight against infectious diseases.³⁸ In essence, the diverse approaches to public health within colonial territories eroded a unified approach to disease control.

However, the progress of medical knowledge elsewhere in the metropole stimulated administrative confidence and a local drive to establish colonial institutions of tropical medicine. Hence, the subsequent improvement in public health, especially in the 1930s, is believed to be driven not only "for economic efficiency but also the demographic demands of emerging nationalist ideology".³⁹ In Lagos, the World War I (1914-1918) and its consequent deployment of medical practitioners into the British Army, as well as the events of the Inter-war period characterised by the influenza epidemic (1918-1919) and the Plague (1924-1931) led to a labour shortage in the colonial medical sector in the 1930s. Hence, these events impeded the establishment of the Yaba Medical College in Lagos with the mandate of incorporation and training of the natives in the colonial medical institution in Nigeria.⁴⁰ The active involvement of indigenous people in colonial medical establishment seems to have been borne out of local resistance to a colonial stranglehold on health management and a remarkable drive towards devolving public health governance from the imperial centre to the periphery. This development (devolution) found

³⁶ I. Klein, "Death in India, 1871-1921." *The Journal of Asian Studies*, 32 (4), 1973, pp. 639-657.

³⁷ S.H. Brown. "Public Health in Lagos, 1850-1900: Perceptions, Pattern, and Perspectives". *The International Journal of African Historical Studies*, 25 (2), 1992, pp. 359.

³⁸ P. Chakrabarti. "Curing cholera: Pathogens, places and poverty in South Asia". *International journal of South Asian studies* 3, 2010, pp. 153-168.

³⁹ M. Gandy. "The Bacteriological City and Its Discontents". *Historical Geography*, 34, 2006, pp. 14-25.

⁴⁰ N.R. Fendall. "A History of the Yaba School of Medicine, Nigeria". *West African Medical Journal*, 16, 1967, pp. 118-124.

expression in the administrative goodwill for the collective scientific and cross-cultural public health approaches to disease control with implications for the abatement of plague in Lagos in the 1930s. The confusion in the world of medical theory in the early twentieth century, despite the advancement of germ theory, is evident in medical practices that sought to curb tropical diseases such as malaria. The summary of vital statistics on deaths in colonial Lagos at the onset of the plague outbreak in 1924 unveils the level of health outcome as determined by the infancy of medical knowledge (see Table 1).

Table 1. Summary of Vital Statistics for 1924

	Lagos Townships (Official Estimates)
Estimated Population (Lagos and Ebute Metta)	105,763
Total Births	3,415
Total Deaths	3,251
Deaths—Causation of—Certified by Medical Practitioners—number	1,846
Deaths—Causation of—Certified by Medical Practitioners—per cent.	56
Deaths—Infants under one year	806
Infantile Mortality per 1,000 births	236
Deaths—Children under five years	1,108
Percentage of deaths of Children under five years to total deaths	34
Total Still-births	158

Source: NAI. Annual Medical and Sanitary Report, Nigeria, 1924.

Table 1 shows that in 1924, Lagos Island and Ebute-Metta, with an estimated population of 105,763, recorded a total of 806 deaths of infants less than one year of age, as well as 158 still births, 236 infantile mortality per 1,000 births, 108 deaths among children under 5 years of age.⁴¹ The death causation certified by the medical practitioners was 56%, revealing the poor reach of the colonial medical services in colonial Lagos. The deaths of infants under one year, accounting for a total of 806 out of the total births of 3415, reveals the inefficiency of the colonial medical establishment as informed by its inadequate health and medical knowledge.

Moreover, the official estimates on disease occurrence among Europeans in the colony in 1925 show 126 cases of dysentery, 104 cases of gonorrhoea, 210 cases of influenza, 30 cases of yellow fever and 1183 cases of malaria in Lagos.⁴² This means that there was no deliberate attempt to undermine the population health of the natives in colonial Lagos. Indeed, the Europeans too were affected by the disease spread in the colony due to environmental, genetic and cultural factors. The underdeveloped nature of medical science at this point led to misinformation in health practices with implications for disease control.

⁴¹ NAI. Annual Medical and Sanitary Report, Nigeria, 1924.

⁴² NAI. Annual Medical and Sanitary Report, Nigeria, 1925.

In Lagos and elsewhere in the world, the evolution of health and medical knowledge impacted disease control in the age of the empire. In 1898, Ronald Ross noted that the *Anopheles* mosquito was responsible for transmitting the malaria parasite into the human blood. However, health knowledge in colonial Lagos instead targeted the natives rather than mosquitoes as the carrier of the malaria agent. In the face of the plague outbreak in 1924, African native areas were institutionalized as a reservoir of the plague bacilli and the African bodies transformed into objects of disinfestation in colonial Lagos. Public health emergency response in colonial Lagos was based on the British practices of disease surveillance and screening of travellers in ports, quarantining, and sanitary measures.⁴³ This British approach to public health was informed by health knowledge on disease transmission through agents and reservoirs. At a time when pharmacology was elementary, controlling the plague bacilli in Lagos depended more on environmental sanitation and quarantining to avoid contagion.

The Local responses to the health intervention bring into view the nature of health knowledge among natives in colonial Lagos. The native's cultural standing on medical knowledge was amplified through viewpoints in the indigenous newspapers published during the outbreaks in Lagos. One such report observed that quarantining as a product of European culture and health knowledge is, to the natives, forceful incarceration.⁴⁴ This is not surprising as the idea of health in the native culture is holistic, involving the ability to ensure food security. Hence, the natives contested the colonial public health policies, which have implications for health intervention.

The aetiology of the plague in the context of indigenous knowledge in colonial Lagos was regarded as "blood poisoning".⁴⁵ The traditional healers intervened by performing rituals to remove the spirit of plague infirmity.⁴⁶ Some of the locals rejected the biomedical aetiology of the plague and affirmed the outbreak as a smallpox epidemic.⁴⁷ This misinformation appears to have complicated the outbreak. In essence, the local remedy to smallpox epidemic such as ethnomedical inoculation could have been adopted. In the face of the confusion in the realms of knowledge about health in a multicultural urban centre such as Lagos, different groups in the town adopted different approaches to the disease outbreak in line with the British indirect rule system. The traditional approach was related to prayer crusades by Christians and Muslims amidst an epidemic plague.⁴⁸ Moreover, dancing concerts, fiesta and street parades organized by the traditionalists must have ensured the further spread of the epidemic in Lagos.⁴⁹ The different approaches adopted by various medical cultures to curb the public health crisis engendered misinformation and the rapid spread of the plague in colonial Lagos.

⁴³ *The Nigerian Gazette*. "Public Notice under the public Health ordinance Chapter 56". Vol. 11, No. 52 of Saturday, September, 20.

⁴⁴ *Eleti-Ofe*. "Arun L'ota, Arun L'odi", 1924, September 3.

⁴⁵ See Faleye and Akande, "Beyond White Medicine".

⁴⁶ *Eleti-Ofe*. "Ona ti Olukuluku bam o ni ko ma gba", 1924, September 10.

⁴⁷ *Eleti-Ofe*. "The Plague", 1928, December 19.

⁴⁸ See Faleye and Akande, "Beyond White Medicine".

⁴⁹ *Eleti-Ofe*. "Asaje o, Ewe a je, ko-se-ko-se nit i llakose", 1924, August 13.

Plague management in Lagos advanced as vaccination was introduced in 1924. However, this biomedical intervention was marked by confusion in respect of knowledge about medicine. The inoculations failed to curb the outbreak. Contrary to the view of the Colonial Authorities, Dr. Rigollet (a Plague specialist) maintained that the anti-plague vaccination amidst an epidemic in Lagos was responsible for the sustained outbreak of the disease in Lagos.⁵⁰ This confusion concerning contentions in the sphere of medical and health knowledge made the plague of Lagos endure all therapies for seven years. The failure of the plague vaccine triggered the experimentation of African bodies with toxic chemicals in colonial Lagos. The treatment of plague was unsatisfactory and medical doctors in Lagos experimented with dangerous procedures, including the administration of an intravenous injection of a solution of iodine into the veins of plague patients.⁵¹ Considering the foregoing, inadequate health knowledge reinforced misinformation and complicated plague control in colonial Lagos. Moreover, inadequate health knowledge could serve as an essential tool of biopower and necropolitics in the face of emergency public health scenarios. As the history of plague in colonial Lagos reveals, health knowledge and literacy are vital to disease control in a world characterized by diverse medical cultures.

Conclusion

This paper is an advance on the analysis of the history of plague in colonial Lagos, and, therefore, very much beyond the dominant narrative that is centred on the historical effects of the outbreak. The paper evaluates colonial interventions and local responses to the outbreak from a health knowledge prism. The study invigorates our understanding of the plague by dissecting the epidemic's bubonic, septicemic and pneumonic dimensions. The article reveals the place of misinformation in plague control. In line with the British Indirect Rule System, the health knowledge system in colonial Lagos was bifurcated into indigenous and orthodox medical practices. This dualist policy created a fertile ground for misinformation during the plague outbreak in Lagos. The contradictions between the dual medical cultures of disease aetiology and treatment led to mistrust and undermined health interventions.

This paper has shown how the nature of health knowledge and misinformation undermined colonial efforts at combating the plague of Lagos. The infancy of the practice of microbiology and knowledge of medical theory at this point led to erroneous diagnoses of the epidemic, with implications for human lives. This is more obvious in the discourse on the bubonic, septicemic and pneumonic plague taxonomy and the ensuing confusion in the colonial medical establishment in Lagos. Misinformation undermined health interventions in the face of the outbreak. Essentially, as the world battles disinformation and misinformation in the aftermath of the COVID-19 Pandemic, the historical lessons of the plague in colonial Lagos apprised the medical universe of the

⁵⁰ NAI.CSO 26 13001 Vol. III. "Extract from a Private Letter". Fom the British Consul, Dakar, to His Excellency the Governor, 1924, 25 September.

⁵¹ N.A. Sharp, "A note on the treatment of Plague in Nigeria with "Bayer 205". *Transactions of the Royal Society of Tropical Medicine and Hygiene*, 19 (8), 1926, pp. 482-484.

importance of a unified health knowledge system in an age of globalization and an entangled global disease environment.

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