

C 3.5. COMMUNICATION – FULL ARTICLE

Yellow Fever and Sanitary Policies in the Nineteenth-Century Portuguese Empire: Lisbon and Luanda, 1856–1860

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ABSTRACT: Yellow fever became a recurrent threat to public health across the Atlantic during the nineteenth century, long before its aetiology and transmission were scientifically clarified through the work of Carlos Finlay and Walter Reed. Within the Portuguese imperial context, two outbreaks were particularly significant: Lisbon (1856–1858), which gave rise to the *Relatório da Epidemia de Febre Amarela em Lisboa no anno de 1857*, later praised by Ricardo Jorge as a model of hygienist mobilisation; and Luanda (1860), which led to the publication of the *Relatórios sobre a epidemia de febre amarela em Loanda no anno de 1860*, underscoring the strategic importance of disease control in colonial settings and its articulation with metropolitan health authorities. This study centres on these official reports, read alongside previously underused documentation from the Maritime Health archives preserved at the Museum of Health in Lisbon (reports, correspondence, records from the Casa de Saúde de Belém and the Lisbon Lazaretto, and sanitary inspections of vessels).

In Lisbon, a predominantly contagionist paradigm underpinned isolation, hospital expansion, sanitary statistics, autopsies, cartographic mapping and intensified maritime surveillance, in dialogue with European hygienism and the International Sanitary Conferences. In Luanda, physicians favoured an anti-contagionist, miasmatic reading, attributing the outbreak to local environmental conditions and poor acclimatisation among newly arrived Europeans; containment prioritised municipal hygiene and policing—cleansing miasma-producing sites (notably refuse-laden beaches) and managing insalubrious areas rather than systematic isolation of people. By comparing these paradigms and their institutional settings, the article highlights the centrality of ports, quarantine and isolation measures in nineteenth-century epidemic management, and situates Portugal's response within the broader circuits of international sanitary governance.

KEYWORDS: Yellow fever; Lisbon; Luanda; Nineteenth century; Quarantine and contagion

INTRODUCTION

In the history of tropical medicine, yellow fever is often characterised as an “Atlantic” disease, whose trajectory since the seventeenth century has been intertwined with colonial ports, the slave trade, imperi-

al wars and major epidemics in cities such as Havana, Philadelphia, Rio de Janeiro and New Orleans. The outbreak of 1793 in Philadelphia, then the federal capital of the United States, illustrates the social and economic



impact of these crises: high mortality, the flight of inhabitants and authorities, the collapse of trade and intense medical controversy regarding the origin of the disease [1].

Between the eighteenth and nineteenth centuries, yellow fever emerged as a European public health problem closely associated with Atlantic commerce and with the routes linking Europe to the Caribbean and South America. In this context, William Ludlow Coleman sought to explain its historical genesis through the slave trade, arguing that the unsanitary conditions of ship holds and certain anchorages had created the conditions for the persistence of a specific “germ”. His interpretation, rooted in an environmentalist and anti-contagionist perspective, privileged quarantine and port sanitation as instruments of control, while relegating the hypothesis of mosquito transmission to a secondary position [2].

For South America, Jaime Larry Benchimol has emphasised, in the Brazilian case, the centrality of yellow fever as a decisive setting for the reception and practical translation of Pasteurian theories [3]. The disease thus became a key arena for the incorporation of new concepts of microbes, infection and prevention, contributing to the consolidation of a programme of intervention grounded in microbiology and to the reorganisation of urban sanitary policies.

Before the formulation of the vector hypothesis by Carlos Finlay (1881) and its confirmation by the commission led by Walter Reed (1900), the history of yellow fever was largely characterised by a long pre-etiological phase marked by oscillation between miasmatic, contagionist and environmental explanations. In this context, lazarettos, quarantines and maritime regulations multiplied and were debated at the International Sanitary Conferences from 1851 onwards, which sought to reconcile sanitary protection with trade. Portugal participated in these debates [4], often aligning with the Mediterranean powers and progressively adapting the vocabulary of international hygienism to its port and imperial realities.

It is within this framework that the outbreaks in Lisbon (1856–1857) and Luanda (1860) must be situated. Far from peripheral episodes, these events allow us to observe how the Portuguese Empire sought to manage an epidemic threat in a context of scientific uncertainty, articulating maritime sanitary practices, commercial interests and the transnational circulation of knowledge and sanitary regulations.

YELLOW FEVER IN LISBON (1856–1858)

In 1694, J. Ferreira da Rosa, in the *Tratado Único da Constituição de Pernambuco*, described yellow fever in the Brazilian colonial context, associating it with climatic conditions, the environment and the urban dynamics of the city of Recife [5]. This text constitutes one of the earliest systematic attempts at a medical interpretation of the disease within the Portuguese Atlantic world and reflects an explanatory framework dominated by miasmatic theories, which linked the origin of illnesses to environmental and atmospheric factors.

Throughout the eighteenth century, yellow fever came to be included among the so-called “exotic pestilences” that threatened Europe, alongside diseases such as cholera morbus and bubonic plague. In Portugal, references exist to outbreaks recorded in Peniche (1718), Ericeira (1721) and Lisbon (1723) [6]. It was in this context that Simão Félix da Cunha published, in 1726, the *Discurso e observações apollineas sobre as doenças que houve na cidade de Lisboa occidental e oriental o anno de 1723*, seeking to interpret the Lisbon health crisis in the light of contemporary medical knowledge. [7]. His account describes a clinical picture that nineteenth-century authors would later revisit as a reference for understanding subsequent episodes of yellow fever – or outbreaks then interpreted as such – that affected the country in the nineteenth century. The circulation of this work throughout the nineteenth century shows that, for contemporaries, the episode of 1723 functioned as an interpretative precedent through which new epidemic crises could be understood.

Within this interpretative framework, the disease was frequently associated with maritime circulation and contagion linked to ports, which reinforced the importance of sanitary surveillance structures established in such infrastructures, particularly relevant for port cities. In 1849 Brazil once again became the scene of a major yellow fever epidemic, now within a context of increasing commercial interconnection across the Atlantic world. A few years later outbreaks were recorded in the city of Porto (1850, 1851, 1856 and 1860) and, in a particularly devastating form, in Lisbon between 1856 and 1858, with the epidemic reaching its peak in 1857.

The first case of yellow fever in Lisbon was reportedly identified in Belém, in the courtyard of the royal stables, near the customs area. From this initial focus, the disease spread first through the low-lying central

areas of the city and subsequently to neighbouring districts closely connected with maritime activity and port life. In 1857 the epidemic assumed particularly alarming proportions: the lower districts of Lisbon and the parishes close to the River Tagus were the most severely affected, with very high levels of incidence and mortality. According to official records, 5,652 deaths were registered, corresponding to approximately one death for every 35.4 inhabitants of the capital and one death for every 3.18 individuals affected by the disease [8].

Faced with the scale of the disaster, the government and the health authorities mobilised to organise a coordinated response. In September 1857 the Extraordinary Council of Public Health was created specifically to manage the crisis, with the task of responding to the immediate sanitary demands and, once the epidemic had ended, proposing measures capable of preventing new outbreaks or at least mitigating their effects. The Council brought together a group of physicians with scientific and administrative responsibilities and was also entrusted with producing a detailed report to be presented to the King – the *Relatório sobre a Epidemia*

de Febre Amarela em Lisboa no anno de 1857 – compiling clinical observations, statistical mortality data and analyses of the city's urban and social sanitary conditions [8].

This report therefore represents not only a systematic record of the epidemiology of yellow fever in Lisbon but also a fundamental document for studying the origins and development of the epidemic and the measures adopted to contain it. The systematisation of clinical, statistical and observational data contributed to consolidating new ways of observing and interpreting epidemic diseases and reinforced, within the Portuguese medical community, the gradual affirmation of a contagionist paradigm aligned with the scientific transformations associated with microbiology and the theories of Louis Pasteur.

The cartography of the epidemic (see Figure 1) also illustrates the organisational plan of the sanitary response. The “*Plano de Lisboa com o diagrama da epidemia de febre amarela que esta cidade sofreu no anno de 1857*” simultaneously identifies the distribution of cases and the location of the institutions mobilised to treat and isolate patients within the city.



Fig. 1 – Plan of Lisbon with the diagram of the yellow fever epidemic of 1857, indicating the concentration of cases in the riverside areas of the city and the location of the civil and military hospitals that received patients. Source: *Relatório sobre a Epidemia de Febre Amarela em Lisboa no anno de 1857*, Extraordinary Council of Public Health, Lisbon, 1859.

The map shows a strong concentration of cases along the city's riverside front, particularly in the so-called *cidade baixa*, where densely populated parishes were directly linked to port, commercial and customs activities. This area corresponds to the zones where the greatest number of cases and deaths were recorded, reinforcing the contemporary perception that the epidemic was associated with maritime circulation and with the sanitary conditions of port environments.

The cartography also indicates the organisation of the infrastructures mobilised to assist patients. Several civil and military hospitals were used, and provisional hospitals and medical posts were created specifically to deal with the outbreak, many of them installed in former convents or adapted public buildings. The distribution of these facilities reveals an attempt to combine medical assistance with the containment of the disease, placing treatment structures relatively close to the most affected areas while dispersing them throughout the urban fabric.

Among the most important institutions was the Hospital do Desterro, which became the principal treatment centre during the outbreak, receiving more than 2,500 patients and playing a central role in the clinical observation and investigation of the disease [9]. It was complemented by provisional civil hospitals created to respond to the sanitary emergency, such as the Hospital of Santa Anna and the Hospital of Santa Clara [8].

The assistance network also included military structures adapted for medical care, notably the Hospital dos Mariannos and the Hospital da Boa Hora, organised in adapted convent buildings that functioned as emergency wards. Other institutions also participated in the system of surveillance and isolation, such as the Casa Pia, used for preventive observation, and the Hospital da Estrela, later linked to the quarantine system and to the Lazaretto hospital [8].

The yellow fever epidemic in Lisbon also placed pressure on the health authorities and reinforced the need to consolidate isolation institutions such as lazarettos and quarantine hospitals, understood as essential infrastructures for preventing the spread of epidemics associated with maritime circulation. The Lisbon Lazaretto, located in Porto Brandão on the southern bank of the Tagus, together with the health structures in Belém, played a crucial role in the quarantine of ships and in the medical assistance provided to their passengers, despite the “deplorable” conditions

in which they were found at the time of the outbreak.

It was the epidemic itself that prompted the reinforcement of quarantine regimes applied to passengers arriving from “foul ports”, particularly from 1869 onwards, when the new lazaretto hospital facilities in Porto Brandão came into operation, allowing the reception of quarantined individuals who required isolation outside the city.

Documentation preserved in the Maritime Health Archive makes possible to reconstruct some of the medical and therapeutic practices associated with the treatment of quarantined patients at the Lazaretto hospital after the 1856–1858 outbreak had subsided. At the Lazaretto hospital, quarantined patients were treated with Port wine used as a tonic and stimulant and appearing in the records as one of the substances that was well tolerated. The most frequently recommended measures were “general hygienic precautions, cleanliness and the ventilation of dwellings; avoiding fatigue and emotional disturbances, exposure to the sun, indigestion and colds” [10]. During the first stage of the illness, diaphoretics (to induce perspiration),

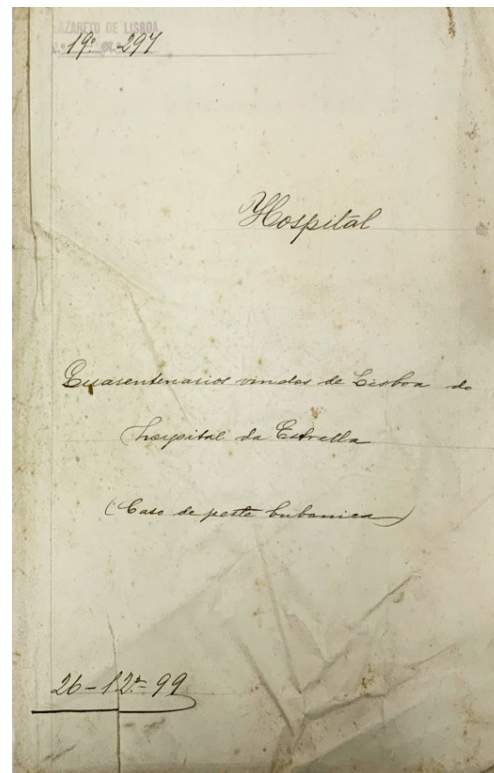


Fig. 2 – The Lisbon Lazaretto received quarantined patients transferred from the Hospital da Estrela, 26 December 1899.[10]



lemonades and acidulated drinks were used. In the second and third stages, quinine sulphate was administered in high doses, especially against intermittent fevers – though with controversial results in yellow fever – together with syrup of orange peel, opium syrup and orange-blossom syrup; camphor, used as a stimulant and antispasmodic; and purgatives such as salts and castor oil to relieve constipation. Vesicatories, cold baths, opiates and iron preparations were also used to address specific symptoms such as delirium, vomiting and haemorrhages [11]

All these elements indicate that in Portugal, and particularly in Lisbon, the programme of maritime sanitary surveillance remained active throughout the nineteenth century and extended into the early decades of the twentieth century, as demonstrated by the records preserved in the maritime health archives. This programme included quarantine regulations applied to passengers and goods, the monitoring of port installations and the maintenance of observation and isolation structures such as the lazaretto hospital.

The yellow fever epidemic in Lisbon exposed the sanitary fragility of an Atlantic capital heavily dependent on maritime traffic. Through the Extraordinary Council of Public Health created to manage the crisis, the State structured a robust sanitary programme that was set out in the Council's report; this document became a landmark of hygienist management of the epidemic and would later be recognised by Ricardo Jorge – a central figure in Portuguese public health at the beginning of the twentieth century – as an example of organised sanitary mobilisation in the face of epidemic crises.

YELLOW FEVER IN LUANDA

Luanda was also struck by an outbreak of yellow fever in 1860, shortly after it had been brought under control in Lisbon.

The first identified victim was a newly arrived ensign who landed in Luanda on 2 July 1860 aboard the war steamer *Estephania*, which carried a contingent of 400 soldiers from Lisbon. The officer fell ill four weeks after his arrival, and the disease was initially classified as a rapidly evolving “bilious remittent cerebral fever”. In September, with the arrival of the corvette *Bartolomeu Dias*, the steamer *D. Antonia*, and the Portuguese packet *Paquete de Loanda* from Brazil, the number of patients gradually increased. Among the resident

population, cases were rare. The epidemic affected 292 individuals and caused 89 deaths, of which 38 were autopsied. Most of the recorded cases (220 out of 292) were military personnel [12]. These figures alarmed the central government in Lisbon at a time when the memory of the Lisbon epidemic remained vivid and suspicions existed regarding the correct identification of the disease in Luanda. The origin of the epidemic also became the subject of considerable debate between the theory of importation and the hypothesis of spontaneous development.

Faustino José Cabral, who held the post of chief physician of the Health Service in Angola, was “obliged by official order, issued in a circular from the physico of this province (Angola), dated 26 February (1861), to give an opinion on the diagnosis of the severe fevers that existed as an epidemic in this city of Loanda during the last quarter of the previous year” [12]. Consequently, a report was sent for publication in Lisbon in 1861 which contained, in addition to the report of the physico-mor of the Province of Angola, a series of other reports prepared by several physicians who had followed the development of the disease in Luanda, Moçâmedes and Benguela. This document, published under the title *Relatórios sobre a epidemia de febre amarela em Luanda no anno de 1860*, in addition to the contributions of Faustino Cabral, also brought together the contributions of Antonio José dos Santos (brigade surgeon), José Maria de Bulhões Maldonado (first-class surgeon), Miguel Augusto da Veiga (surgeon-major of the army), Francisco José dos Santos Chaves Junior (first-class surgeon of the Royal Navy, on service in Luanda), Matheus Alexandre Gueullete (second-class surgeon), and João Cabral Pereira Lapa e Faro (second-class surgeon of the health service of the Province of Angola), as well as João Januário Vianna de Rezende (physician of the Military Hospital of Benguela), Thomás de Aquino Pinheiro (surgeon of the steamer *D. Maria Anna*), and Francisco Maria de Méra (physician of the steamer *D. Antonia*) [12].

Although most of the physicians who contributed to the study of the epidemic in Luanda agreed on the diagnosis of yellow fever, important disagreements arose, particularly concerning the nature of the disease. Some even stated: “if this is yellow fever, then we have had it here many times before” [12]. In fact, Faustino Cabral eventually admitted that the disease might have appeared several times previously without being



recognised by most physicians in the province, and that this may also have occurred with the earliest cases that preceded the first one identified in the report; nevertheless, he stated that “we calmly await what happens around us without fearing the future, because we have the conscience of having fulfilled a duty” [12]. However, detailed information on the symptomatology of the disease had already been described by the physician Pinto de Azeredo in 1799, *Ensaio sobre algumas enfermidades d’Angola dedicados ao Serenissimo Senhor D. João Prinipe do Brazil* [13]. The population also raised objections to the diagnosis of yellow fever. The inhabitants appear to have lived in a state of great alarm, oscillating between paralysing fear of the fatal symptoms and resistance to accepting the seriousness of the situation because of the social and commercial implications associated with the name “yellow fever”. Fear of public reaction was such that some physicians accused colleagues of deliberately avoiding the publication of certain facts in order not to “frighten the population” without an immediate practical benefit.

The disease thus progressed in an insidious and gradual manner, evolving through the three stages described during the Lisbon epidemic: the first, marked by chills and high fever; the second by an apparent and deceptive improvement; and the third by haemorrhages (such as black vomit) and extreme prostration, which normally led to death. During the first stage of the illness, general bloodletting was attempted, but without effective results. Leeches (local bloodletting) were also applied to the hepatic region when pain was present, but the practice was abandoned because it caused haemorrhages that were difficult to stop. Emollient drinks and sudorifics were administered, notably Dower’s powders and ammonium acetate. For constipation, mild laxatives were prescribed, such as magnesium citrate lemonade, calcined magnesia and castor oil. Opium was the principal sedative used in cases of great severity. Headache and the initial bilious vomiting were treated with sinapisms (mustard poultices) and the application of sedative water compresses to the epigastric region. In the second stage of the disease, a simple saline mixture was used. If vomiting reappeared, physicians resorted to Rivière’s anti-emetic drink, opium administered by enema, and vesicatories (application of irritant substances to produce blisters on the skin) applied to the epigastric region. Quinine sulphate was administered in several cases, but physicians observed

that this medicine was not useful in treating this specific disease, unlike in other fevers common in the region. To combat the feared black vomit and other haemorrhages, monesia, tannin and rhatany were used, but generally without success. Iron preparations, especially iron citrate, proved more useful in reducing haemorrhages. To relieve persistent hiccups, physicians used asafoetida, musk (administered by enema) and ether internally. When patients presented extreme weakness after heavy blood loss, they were revived with Port wine mixed with broth, administered by the spoonful. In cases of loss of consciousness, vesicatories were applied to the nape of the neck or the head, together with stimulating enemas and dry friction. During convalescence, dyspepsia and gastric obstruction were treated with subnitrate of bismuth and pills of aloes and calomel [12].

Faustino José Cabral categorically defended the diagnosis of yellow fever, drawing on the knowledge he had acquired when observing the disease in Brazil while serving aboard the corvette D. João I. Of the 200 passengers on board, four sailors and one passenger contracted the disease in the port of Bahia; three died very rapidly, while the others experienced a prolonged convalescence. Cabral also passed through Rio de Janeiro and Lisbon in 1857, when the disease was spreading there. His diagnosis was based on the clinical observation of symptoms such as black vomit, jaundice and suppression of urine, drawing on the previous experience he had acquired with the disease in Brazil. He argued that the epidemic developed spontaneously in Luanda, rejecting the theory of importation and person-to-person contagion, and maintaining that the disease had a miasmatic origin while simultaneously rejecting the contagionist theory defended in Lisbon. Nevertheless, ships leaving the port of Luanda for other ports of the province were advised to observe quarantine measures “as far as possible in harmony with commercial interests”. Examples included the war steamer D. Maria Anna, bound for Benguela, which recorded a case of yellow fever on board, and the steamer D. Antonnia, bound for Moçâmedes, which carried a clean bill of health. [12].

Antonio José dos Santos confirmed without hesitation the diagnosis of yellow fever after verifying the characteristic symptoms presented by the patients described by Faustino Cabral, recognising the disease in its early stages.

José Maria de Bulhões Maldonado admitted that he had not followed the beginning of the epidemic be-



cause he was serving in the Congo, but upon returning in December 1860 he analysed cases in the hospital and in his private practice. He argued that it was yellow fever by comparison with earlier outbreaks (1848 and 1851), noting that although some referred to them as “typhoid” or “pernicious” fevers, the symptoms of this epidemic corresponded to those of yellow fever [12].

Miguel Augusto da Veiga also identified the disease as yellow fever in the first cases observed in August in a cavalry ensign. Having previously observed the same set of symptoms in other regions and after consultation with colleagues, he became convinced that Luanda was facing an epidemic of “true yellow fever”. [12].

Francisco José dos Santos Chaves Júnior likewise supported the diagnosis of yellow fever, drawing on his experience as a student in Lisbon during the epidemic of 1857. He highlighted the insidious progression of the disease, the abundant haemorrhages, the black vomit and the presence of albumin in the urine as key diagnostic features. In his view, the disease showed a tendency to become endemic in Luanda [12].

Matheus Alexandre Gueullete represented the most dissenting and sceptical voice in the report. He classified the cases as typhoid fever or errors in the clinical bulletins and argued that gastric lesions and the yellow colouring of the skin, as well as stomach lesions such as the blackened and disintegrated mucous membrane, were not exclusive to yellow fever but could occur in several pernicious fevers. For him, the disease was one of the varieties of a “miasmatic poisoning” underlying various diseases such as plague and cholera. He confessed that he had signed the diagnostic papers identifying yellow fever merely out of “excessive confidence” in the opinion of colleagues who had seen the disease in Portugal, even though he himself had never treated it before. Indeed, he openly admitted that he had never seen nor treated yellow fever before that time. For this reason, he stated that he had signed the diagnostic certificates for yellow fever merely out of trust in colleagues who claimed to have treated the disease in Portugal and other countries. He also noted that during his twenty years of medical practice in Angola, earlier physicians had always classified similar cases as typhus or typhoid fevers, and that the outbreak of 1860 had simply become more severe due to atmospheric conditions and the arrival of numerous Europeans who were not acclimatised. In short, Gueullete represented

the perspective of long-standing resident physicians in Angola who regarded the epidemic of 1860 as a more severe manifestation of local endemic fevers and resisted the classification of yellow fever because of its potential social and psychological consequences for the population. His disagreement reflected a view rooted in the traditional clinical practice of Angola, which favoured the diagnosis of endemic fevers rather than the acceptance of a new nosological entity that, in his opinion, merely served to terrify the population [12].

Thomás de Aquino Pinheiro also concluded that the disease was yellow fever, basing his view on the information produced by colleagues in Lisbon in 1857. He described it as a “true epidemic”, of occasional origin, caused by the concentration of Europeans in unhygienic and climatically adverse conditions. Pinheiro’s report emphasised that the large influx of Europeans aggravated the situation, since they were “lodged in buildings without the indispensable hygienic conditions”, facilitating the action of the morbid element on their non-acclimatised organisms [12].

Francisco Maria de Méra likewise agreed that the disease was yellow fever, noting the strong similarity between the cases in Luanda and the epidemic he had witnessed in Lisbon. He argued that the illness developed spontaneously due to local and individual causes. João Cabral Pereira Lapa e Faro and Vianna de Rezende, physicians in Moçâmedes and Benguela respectively, confirmed that the patients presented symptoms of yellow fever such as black vomit and haemorrhages, reinforcing the diagnosis made in the capital. Although the disease appeared after the arrival of several ships in Luanda, Faustino José Cabral maintained that it had not been imported but had instead developed spontaneously in the city [12].

According to Cabral’s reports, the reaction of the population of Luanda to the epidemic of 1860 was marked by feelings of terror, moral despondency and intense controversy. Some physicians, such as Matheus Gueullete, even argued that this panic was “more fatal to humankind” than the disease itself. Among those who fell ill, a profound “moral discouragement” was observed. The most severe symptoms, especially black vomit, terrified patients to such an extent that they abandoned themselves to “neglect and indifference”, losing all hope of recovery. The impact on families was also notable. The case of the family of Captain Soares is described as an example of emotional impact: after



the death of a close servant, the family was overcome by a “moral impression of terror and grief”, which the author suggests may have contributed to the remaining members also succumbing to the disease.

The unhealthy conditions of Luanda appear to have been crucial for the development and spread of the epidemic of yellow fever in 1860, providing the fertile ground for what was believed to be the spontaneous development of the disease. The city lies within the tropics and is built along the seashore, which, combined with “thermo-electro-hygrometric” influences (heat and humidity), was believed to favour the formation of miasmas. The “lower town” was considered the most dangerous area because of its extremely poor hygienic conditions. Insalubrity there was aggravated by proximity to the sea and the direct influence of the coastline. Beaches accumulated waste that was believed to produce miasmas. It was thought that in unhealthy places such as Luanda a “deleterious principle” or “miasmatic poison” formed in the atmosphere. This agent was believed to attack first the nervous system of individuals, particularly those in “specific conditions”, such as newly arrived Europeans.

Although Cabral argued that isolation was unnecessary because he considered yellow fever to be a “primitive infection” of the environment (miasmatic) rather than contagion between individuals, other physicians were more cautious and attempted to separate patients arriving in Luanda or travelling to other ports in Angola. The principal measures adopted by the authorities included observation quarantines, control of bills of health, disembarkation and isolation of patients, inspection of irregularities, and monitoring of secondary ports.

Upon the arrival of a vessel, the quarantine regulations in force in the country were followed. The local medical officer (physician or port doctor) was responsible for boarding the ship, examining the sick and classifying the disease. Health authorities in the ports decided whether patients should be disembarked for treatment in local hospitals. When disembarkation was authorised, doctors or surgeons determined that the patients should be treated in “a place separate from other patients” in order to mitigate the risk of contagion. Port health services recorded the entry of patients and issued death certificates, detailing the observed symptoms (such as haematemesis and melena) for statistical and clinical monitoring of the epidemic.

Ships departing from Luanda for other ports of Angola (such as Benguela or Ambriz) underwent an “observation quarantine”. Control through bills of health was based on the classification of vessels through clean or foul bills of health. However, Cabral pointed to failures in this system, noting that the brig Paquete de Loanda, arriving from Rio de Janeiro (an endemic port), carried a “clean bill of health” and reported no illness during its long voyage, which he considered suspicious.

The authorities in Lisbon specified strict penalties for breaches of quarantine regulations. The report mentions that an official explanation was requested from the medical officer of Ambriz for granting “free pratique” (permission for communication and disembarkation) to the steamer D. Antonia, despite the fact that the vessel had presented a foul bill of health.

Cabral used the effectiveness of these measures – or the absence of negative consequences when they failed – to reinforce his thesis that the disease was not contagious, emphasising that even in cases where patients disembarked the epidemic did not spread to the local populations. He concluded that it was indeed an epidemic rather than isolated occurrences of disease, reaffirming the amarilic nature of the outbreak, its non-contagious character, and the decisive role of environmental factors in its emergence.

The miasmatic theory, which dominated medical thought at the time, was fundamental to the understanding of the nature of the epidemic of 1860 in Luanda and directly influenced the therapeutic and preventive approaches adopted by physicians, as detailed in the report of Faustino José Cabral. He classified yellow fever as the result of a “miasmatic, zymotic, pestilential or putrid infection or poisoning” [12]. This view was based on the belief that a “deleterious principle” or “septic principle” formed in the atmosphere due to local conditions of insalubrity. Consequently, treatment was influenced by the belief that the body reacted against a toxic atmospheric agent, resulting in a therapy that attempted, with limited success, to mitigate symptoms and strengthen the vital response of patients.

Believing that the disease represented a reaction of the body to an external miasmatic agent, physicians passed through the first stage of the illness without recognising it. For this reason, initial treatment was largely expectant and supportive. As quinine sulphate – effective against the intermittent fevers of the region – proved useless in this epidemic, physicians concluded



that it represented a different form of “miasmatic poisoning” that did not respond to usual methods, forcing them to adopt a purely symptomatic treatment.

Since the “morbid element” was believed to attack first the nervous system and produce general collapse, treatment focused on stimulating the nervous system to resist the miasma. Stimulants were used to support the patient’s strength during profound prostration, and vesicatories were applied in an attempt to “divert” the action of the poison from the internal organs to the surface of the body. Treatment was therefore strongly influenced by the belief that yellow fever resulted from a corrupted atmosphere attacking the individual, leading physicians to pursue therapies aimed at mitigating symptoms and reinforcing the vital resistance of the patient against an external toxic agent.

The miasmatic interpretation also led to the proposal that the disease was a “primitive infection” contracted directly from the local atmosphere and not from other patients, as seemed to be confirmed in hospitals. Patients were treated in common wards because physicians believed that the risk lay in the air of Luanda – particularly in the unhealthy lower town – rather than in direct contact with the sick. The preventive and “curative” focus for the city therefore lay in improving the activity of the municipal police, especially through cleaning the beaches in order to eliminate the causes that produced miasmas.

Believing that the disease was a “primitive infection” contracted directly from unhealthy air rather than through contagion between individuals, and therefore not prioritising the isolation of patients, Faustino Cabral openly acknowledged that he diverged from the opinion held in Lisbon. He used the experience of Luanda to reinforce his conviction that yellow fever was neither contagious nor imported, but rather the result of local miasmatic conditions and the lack of acclimatisation of Europeans.

The comparison between the anti-contagionist stance adopted in Angola and the contagionist position of the Extraordinary Council of Public Health of the Kingdom rests on a divergence in the interpretation of the observed facts, and not merely on a distinction between military and civil spheres. While in Lisbon the official policy favoured isolation based on the assumption of contagion, in Luanda the “promiscuity” of treatment served, in Cabral’s view, as scientific proof that the disease was not transmissible from person to per-

son and that restrictive measures on the circulation of people and goods were therefore unnecessary.

Cabral acknowledged that he had read the “conscientious report” of the Lisbon Council of Health on the epidemic of 1857 and confirmed that it had “strongly shaken his spirit”. Nevertheless, his previous observations in Brazil and his direct experience in Luanda “subjugated his spirit” in favour of the non-contagionist position, leading him to consider the facts advanced by contagionists as “very rare and extraordinary” and outside any plausible explanation. He gave greater weight to accounts of ships arriving at European ports with sick passengers without the disease spreading, as well as to “emigrations caused by terror”, in which crowds of sick people fled cities without spreading the fever to neighbouring populations. However, in Benguela – a smaller civil and hospital sphere – the local physician João Januário Vianna de Rezende acted in a manner closer to contagionist assumptions.

The position adopted in Angola therefore represented a deliberate departure from the scientific authority of Lisbon. If the disease had truly been contagious, as Lisbon maintained, the hospital in Luanda and the households of families (with the exception of that of Captain Soares) would have become major centres of transmission, which according to the report did not occur. For Cabral, the results observed in Luanda gave “incontestable value” to his anti-contagionist thesis, allowing him to regard the conclusions reached in the Kingdom with respect but as conclusions that did not apply to the factual reality he had witnessed in Angola. Moreover, the work of his eighteenth-century predecessor Pinto de Azeredo, rather than simply enabling a definitive diagnosis of yellow fever, also served to suggest that the disease had already existed in Angola before the outbreak of 1860, thus reinforcing Cabral’s argument that the disease could develop spontaneously in the region and was not necessarily an imported infection.

SOME CONCLUDING REMARKS

The comparative analysis of the outbreaks in Lisbon and Luanda demonstrates that yellow fever constituted a moment of interpretative rupture in which competing aetiological models, commercial interests and processes of scientific authority-building intersected between the metropole and Angola.

By revisiting these episodes through official reports and documentation from the maritime health



services, this study also seeks to reposition the Portuguese case within the broader historiography of Atlantic public health, showing how debates concerning contagion, environment and maritime circulation were appropriated and reinterpreted within different institutional contexts of the empire.

In Lisbon, the predominantly contagionist interpretation supported policies of isolation, the expansion of hospital capacity, the organisation of sanitary statistics and the intensification of maritime surveillance, in line with the debates and recommendations emerging from the International Sanitary Conferences and from European hygienism. The existence of a more robust institutional apparatus – large hospitals, a high concentration of cases, the systematic practice of autopsies and the production of extensive reports – allowed the physicians of the Extraordinary Council of Public Health to observe patterns of dissemination on a large scale and to structure a sanitary response that sought to reconcile the protection of public health with the continuity of maritime commerce. In this sense, the yellow fever epidemic contributed to consolidating modern forms of sanitary administration based on the production of statistics, epidemiological cartography and containment policies.

In Luanda, by contrast, Faustino Cabral adopted an anti-contagionist interpretation rooted in miasmatic theory. He argued that the disease resulted from specific environmental conditions – heat, humidity, the insalubrity of the *cidade baixa*, and the lack of acclimatisation of newly arrived Europeans – rather than from importation or interpersonal transmission. The absence of explosive outbreaks in hospitals and family groups was presented as empirical evidence in favour of non-contagiousness, legitimising a strategy less centred on strict isolation and more oriented towards urban hygiene and port management, even though mechanisms of observation quarantine were maintained.

This divergence cannot be explained solely in terms of political opposition between centre and periphery, but rather by distinct institutional and epistemological contexts. The Lisbon report “shook” Angola’s *físico-mor*, Cabral. Even so, it did not alter his conviction, shaped by his earlier observation of the disease in Brazil and by clinical practice in a territory where endemic fevers with partially overlapping manifestations predominated. In this sense, the reference to Pinto de Azeredo’s eighteenth-century descriptions served less

to consolidate an unequivocal diagnosis than to support the hypothesis that the disease had an ancient – and potentially autochthonous – presence in Angola.

Revisited within the *longue durée* of the pre-aetiological debates surrounding yellow fever, these episodes reveal how the Portuguese Empire sought to manage the epidemic within an Atlantic space marked by the intense circulation of people, goods, knowledge and power.

By drawing on official archival sources and maritime health records, this study enriches the historiographical narrative of yellow fever in Portugal, complementing what has already been published, while also helping to integrate the Portuguese case into the international historiography of Atlantic epidemics. It emphasises that the management of sanitary crises in the nineteenth century was inseparable from imperial dynamics, from tensions between science and administration, and from the global transformations of public health policies that preceded the discovery of the disease’s aetiology at the dawn of the twentieth century.

Taken together, the Lisbon and Luanda cases demonstrate that, well before aetiology stabilised, yellow fever had already become a structuring force for public health policies and care practices in periods of epidemic stress: an arena in which sanitary frontiers were drawn and contested, scientific authority was asserted and disputed, and the language and practices of empire were negotiated through the management of risk, circulation and state responsibility.

The recent COVID-19 pandemic, far from relegating such dynamics to the past, brought them sharply back into view: at a moment when scientific knowledge and effective countermeasures were still emerging, epidemic control once again relied heavily on primary containment strategies – restrictions on mobility, border measures, isolation and quarantine – while health systems faced acute pressures in organising care and publics negotiated, often contentiously, the authority of expertise under administrative, political and societal constraints.



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