

An Analysis of the Causes of Communicable Diseases in the Lianyungang Area During the Period of the Republic of China: Investigation Based on Local Chronicles

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Abstract: The prevention and control of communicable diseases is an important part of the construction of the modern medical and health system, which is closely related to the health of the people and the continuous stability of society. During the period of the Republic of China, due to factors such as backward medical conditions, frequent natural disasters, lagging awareness of health prevention, and the destruction caused by wars, various communicable diseases emerged and spread in a certain range in the Lianyungang area, posing a serious threat to the safety of the local people.

Keywords: The period of the Republic of China; Communicable diseases; Health care; Lianyungang

Online publication: September 26, 2025

1. Introduction

Communicable diseases refer to those caused by pathogenic microorganisms that infect the human body and are contagious, capable of causing epidemics under certain conditions. They not only threaten human health and life but also affect the process of human civilization and have even rewritten human history^[1]. The period of the Republic of China was a high-incidence stage for communicable diseases in China. “Since the Xinhai Revolution overthrew the feudal rule of the Qing Dynasty, during the 38 years of the Beiyang warlords and the Nationalist Party’s rule, severe and acute communicable diseases occurred every year, with 33 years of major epidemics, 12 of which were related to wars, and the death toll was in the tens of thousands each year”^[2]. Regarding the definition of communicable diseases, “The Nationalist Government stipulated in 1940 that cholera, typhoid fever, dysentery, typhus, relapsing fever, malaria, smallpox, diphtheria, scarlet fever, epidemic cerebrospinal meningitis, and plague were 11 types of legally defined communicable diseases, which were included in the epidemic report. After 1945, kala-azar and yellow fever were added”^[3].

During the period of the Republic of China, the Lianyungang area was also plagued by various communicable diseases (for the definition of the Lianyungang area, this article follows the current administrative division of Lianyungang City, which includes Haizhou District, Lianyun District, Ganyu District, Guannan County, Donghai County, and Guanyun County, and does not include the former Xiangshui and Shuyang areas; the time of this article is defined from the first year

of the Republic of China to the end of the 37th year of the Republic of China after liberation). There are many accounts of this in historical materials: for instance, “In the summer of the 20th year of the Republic of China, cholera was prevalent in Xinpu, Haizhou, and Lianyun for over 40 days, with no statistics on the number of deaths. In one family in Xinpu, three out of five people died”^[4]. “In the 18th year of the Republic of China (1929), cholera was prevalent in Guanyun, with hundreds of deaths in Banpu alone, with up to 180 deaths in one day. In the 22th year of the Republic of China, it was prevalent along the Yanhe River, with an incidence rate of 20% in Yishan Street, affecting over 600 people and causing 180 deaths”^[5]. “In the 37th year of the Republic of China, there were 7 epidemic areas, including Qingkou, Banzhuang, and Jinshan, with a population of over 100,000, 4,625 cases of illness, and 716 deaths, with a fatality rate of 15.45%. In Lizhai Village, there were 67 cases of illness, with an incidence rate as high as 17.4%”^[6], all of which indicate that there were epidemics of communicable diseases in Lianyungang. The reasons for this are closely related to factors of the backward medical conditions and frequent natural disasters at that time. This article, based on local chronicles related to Lianyungang and combined with some local historical materials and works, explores the causes of the prevalence of communicable diseases in Lianyungang during the period of the Republic of China.

2. Backward medical conditions

During the period of the Republic of China, the medical conditions in the Lianyungang area were relatively backward and medical resources were scarce, making it difficult to effectively guarantee the health of residents. As a result, communicable diseases kept emerging and spreading. This was first reflected in the shortage of doctors and hospitals at that time. The “Haizhou District Chronicles” records: “Before the Republic of China, there were no medical and health institutions in Haizhou, only a few households of traditional Chinese medicine practitioners. In the 3rd year of the Republic of China (1914), the American Christian missionary Mu Gengyang and his wife built the Yide Hospital outside the west gate of Haizhou, marking the first Western medical hospital in the area. During the period of the Republic of China, there was no significant development in the health sector in the Haizhou region. Besides the Yide Hospital, there were only a few private clinics, with simple equipment, weak technical strength, and high charges”^[7]. Even the Yide Hospital only had 7 doctors by 1925, including 4 Americans; 10 male nurses and 8 female nurses^[8]. The Xinpu Public Hospital in Haizhou once “lacked technical personnel, and its medical services were once in a difficult situation”^[8]. In Donghai County, there were only 4 Western doctors by the time of liberation, with 0.22 Traditional Chinese medicine practitioners per thousand people^[9].

At the same time, the Lianyungang area also faced a shortage of medicine. The “Lianyungang City Chronicles” points out: “The pharmaceutical industry in Lianyungang started relatively late. In the 3rd year of the Republic of China (1914), the American Mu Gengyang established the Yide Hospital and used foreign raw materials to produce Western medicine tablets. In the 1930s, some newly established Western pharmacies occasionally made up tinctures and liniments for sale”^[4], but such limited quantities were unlikely to meet the needs of communicable disease prevention and control. The Lianyun District Chronicles records: “Due to the shortage of doctors and medicine, loemia were rampant in the area, with smallpox, cholera, typhoid, malaria, and measles spreading year after year”^[10]. Before the founding of the People’s Republic of China, the incidence of malaria in Haizhou District was very high. Many people suffered from malaria for half a day every year, and some even developed from “every other day” to “every day”, and some were even tortured to death by malaria. However, there was no medicine to treat it at that time, let alone prevention and control. Later, quinine was available for treatment, but it could not be eradicated^[7]. During the period of the Republic of China, some private doctors vaccinated children with smallpox vaccines to prevent smallpox, but due to the high price, few people were vaccinated^[5]. It can be seen that the lack of medicine directly led to the rampant spread of communicable diseases. Moreover, the distribution of individual medical services in the Lianyun area was very uneven, with 83% concentrated in Xugou and Lianyun, and few doctors in remote mountainous areas and islands^[10]. This made it impossible for some people to access even the limited medical resources. Hospitals and doctors are the main bodies for the prevention and control of leprosy.

However, the reality of a shortage of medical resources in Lianyungang during the period of the Republic of China increased the probability of communicable disease outbreaks.

2. Frequent natural disasters

The period of the Republic of China was a time of frequent natural disasters. Droughts and floods were important factors in the spread of communicable diseases^[11]. During the period of the Republic of China, natural disasters occurred frequently in Lianyungang, mainly manifested as tsunamis, floods, and locust plagues. The Lianyungang City Chronicles records: “The most serious tsunami occurred on July 16, 1939 (the 28th year of the Republic of China), which drowned More than 1630 people, nearly a thousand salt workers were killed in three salt companies on both sides of the Guanhe River. There was no polder salt left in Qingrixin country fair, and 315 people drowned. Because of the water at night, it soon overflowed under the bed, and many families were killed because they could not open the door. After the tsunami, from Yangqiao Town, Guanyun County to the two sides of Guanhe Estuary, the ditch was flat and the beach was silted up, and the corpses were all over the field”^[4]. In Ganyu County, from June 30, 1947, continuous heavy rain caused widespread flooding, and the area from Dunshang to Xinpu was cut off from transportation except by boat. All the beans and grains were submerged, and the affected area was estimated to be 600,000 mu, with about 100,000 people affected. According to statistics, Ganyu County suffered from floods every year from the 29th to the 38th year of the Republic of China, with a probability of 100%^[6].

In Guanyun County, from the 34th to the 38th year of the Republic of China, the area suffered from continuous floods, affecting 2.4 million mu of farmland, accounting for 80% of the total farmland, and 450,000 people were affected, accounting for 66% of the total population at that time^[5]. In Donghai County, in the 35th year of the Republic of China (1946), “locusts were everywhere in the eastern part of the county, with over 300 locusts per square meter in some areas, and crops in the fields were severely affected”^[9]. From the first year of the Republic of China to the end of the Anti-Japanese War (1912–1945), there were seven large-scale locust plagues in Haizhou, with an average of one every four to five years. The locust damage caused no harvest of crops^[4].

Frequent natural disasters not only destroyed the local ecological environment but also severely reduced the quality of life of the residents. Although there is no data to clearly show that natural disasters in the Lianyungang area during the period of the Republic of China led to the outbreak of communicable diseases, the saying “after a major disaster, there is always a major epidemic” holds true. The spread of pathogens after natural disasters, the decline in people’s immunity, and the breeding of disease vectors are undoubtedly important factors in the occurrence of communicable diseases. Of course, some scholars, based on their analysis, believe that “the higher the temperature, the higher the frequency of communicable diseases, and vice versa.” However, based on the data in their article, Lianyungang was relatively less affected by this factor^[12].

3. Lagging awareness of hygiene and prevention

During the period of the Republic of China, the urban and rural environmental hygiene conditions in the Lianyungang area were poor. Sewage ditches and garbage dumps were everywhere. In summer and autumn, sewage flowed everywhere and mosquitoes and flies were rampant. Most residents’ drinking water was from ponds and rivers, which easily led to the spread of communicable diseases. Smallpox, cholera, typhoid fever, measles, scarlet fever, kala-azar, malaria, dysentery, etc. occurred every year, and there was a major outbreak every few years.” Due to poverty and poor living conditions, the health level of the residents was generally low, and the average life expectancy was only 30 to 40 years”^[8]. The Nationalist Government did not attach importance to the prevention and control of communicable diseases, and the awareness of prevention was lagging behind. No relevant systems and norms were established. As recorded in the “Lianyungang City

Chronicles”: “Disease prevention and public health management were not on the agenda of the local government during the period of the Republic of China”^[4]. This inevitably led to a poor public health environment in the Lianyungang area. In Haizhou District, “public health in urban and rural areas was neglected. Feces and garbage were everywhere, and mosquitoes and flies swarmed in summer and autumn. communicable diseases often broke out”^[7]. In Guanyun County, more than 90% of the residents drank water from ponds and rivers before the founding of the People’s Republic of China. Due to poor hygiene conditions and environmental pollution, the drinking water was extremely unhygienic^[5]. In Donghai County, communicable diseases were once severe. The Nationalist Government had no effective measures to prevent and control the occurrence, development, and spread of communicable diseases^[9]. The school health measures it required to be implemented had no practical measures^[9].

Limited by factors such as economic and cultural backwardness, the public’s awareness of hygiene was lagging behind, and the living environment was not satisfactory. As recorded in the “Guanyun County Chronicles”: “There were very few public toilets in towns and cities, and most rural households had no toilets. Men and children defecated and urinated anywhere. The chicken and duck circles are mostly in front of the window, and the pig and sheep pens were set up in courtyards. Sometimes, humans and animals lived in the same room. Feces ponds, pig ponds, and drinking water ponds were very close to each other. In front of the house, behind the door, garbage was scattered and piled up everywhere. Dead and diseased poultry and livestock were thrown around. In summer and autumn, the stench was unbearable, and the density of mosquitoes, flies, bedbugs, rats, and sandflies was very high. In rural areas of the whole county, people and animals shared the same water sources from rivers, canals, ponds, and pools, which was extremely unhygienic. According to a report submitted by Guanyun’s Magistrate Zheng Senqi to the Nationalist Government on August 23, 1947 (the 36th year of the Republic of China), “The county seat of our county is located in Banpu. Everything is very simple and crude. Garbage is everywhere, amounting to tens of millions of tons. Mosquitoes and flies are flying around, and the environment is filthy and unclean”^[5]. The public lacked scientific understanding of the prevention and treatment of infectious diseases and medical knowledge. They were poor and could not afford to buy medicine. Sun Qinming, who lived in Banpu at that time, recalled: “In the miserable years of sorrowful wilderness, kala-azar broke out. At that time, the specific drug for treating this disease was ‘New Antimony Cream’ imported from Germany, which was hard to obtain and expensive. How could the poor afford it! Some folk doctors used various single-herb prescriptions to treat it, but with no obvious effect”^[13]. In many areas, feudal superstition was prevalent, and quacks and witch doctors were rampant. As recorded in the “Haizhou District Chronicles”: “When people were ill, they often prayed to Buddha for help”^[7]. In 1938, kala-azar was prevalent in northern Jiangsu. The so-called “Mr. Camel” treated this disease with “fire needles” by pricking the liver and spleen. Quacks harmed people and delayed treatment. Some witches and sorcerers took advantage of the situation to treat diseases and make money, causing many families to be ruined. The severity of the disaster can be seen from this^[13]. In the context of a lagging awareness of health prevention and no clear communicable diseases prevention and control system, the public was poor, the environment was extremely bad, and most people lacked a clear understanding of communicable diseases, which greatly increased the possibility of the spread of communicable diseases.

4. Destruction by war

The Republic of China in its short 37 years of existence, wars experienced almost never-ending, and the Chinese land was shrouded in the smoke of war^[14]. In the 15th year of the Republic of China (1926), due to the influence of the Northern Expedition, all the American staff of Yide Hospital returned to the United States, further reducing the number of doctors^[8]. In Guannan County, in the 28th year of the Republic of China (1939), the Japanese invaded, and the health care industry was severely damaged. The masses were short of medical care and medicine, and suffered greatly^[15]. In the summer and autumn of the 27th year of the Republic of China (1938), Donghai County Hospital was bombed by Japanese aircraft and had to be relocated to the Longhai Hospital outside the north gate of Haizhou, where more than ten thatched sheds were built to continue providing medical services. Later, in the spring of the 28th year of the Republic of China (1939), after the

Japanese army occupied Haizhou, the hospital was moved to the countryside and was dissolved at the end of the year ^[8]. In April of the 27th year of the Republic of China (1938), more than 20 shops of Tiancheng Pharmacy were bombed by Japanese aircraft and destroyed. Later, Dasheng Pharmacy in Guanyun was also bombed. During the period of Japanese puppet rule, Japanese merchants opened three pharmacies, namely, Yamazaki, Matsuo, and Ishii Public relief places, in Xinpu, selling a large amount of Japanese goods and severely damaging the local Chinese pharmaceutical business ^[4].

However, this did not mean that people had easier access to medicine. The “Lianyungang City Chronicles” clearly states: “The health measures during the period of Japanese puppet rule were for the prevention and treatment of diseases for the Japanese imperialists. The vast majority of poor people still suffered from many disasters” ^[4]. It can be said that “poverty, disease, and war put the people in a dire situation” ^[13]. Yiling Hospital was originally a relatively large private hospital in the Donghai, Ganyu, Shuyang, and Guanyun areas with strong technical forces and complete medical equipment, and had a considerable influence in the Haizhou region. However, according to the recollection of Liu Yilin’s son Liu Zeng, “In 1938, when Japanese aircraft bombed Xinpu and other towns, the family fled to the countryside. The hospital was bombed by Japanese aircraft, and all the medical equipment was lost. The hospital was forced to dissolve” ^[13]. The war dealt another heavy blow to the already scarce medical resources, which had a very adverse impact on the prevention and control of communicable diseases in the Lianyungang area.

5. Conclusion

During the period of the Republic of China, the Lianyungang area had poor sanitary conditions, frequent natural disasters, as well as a lagging awareness of health prevention and the destruction caused by war. These factors led to the occurrence and spread of communicable diseases to a certain extent, causing many adverse effects on people’s health. In fact, many of the communicable disease prevention measures taken by the Nationalist Government were very limited and often superficial and formalistic. Looking at the long-term perspective of history, the causes of the prevalence of communicable diseases in the Lianyungang area during the period of the Republic of China have strong commonality and similarity, which still have guiding and reference significance for the current prevention and control of communicable diseases.

Disclosure statement

The author declares no conflict of interest.

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