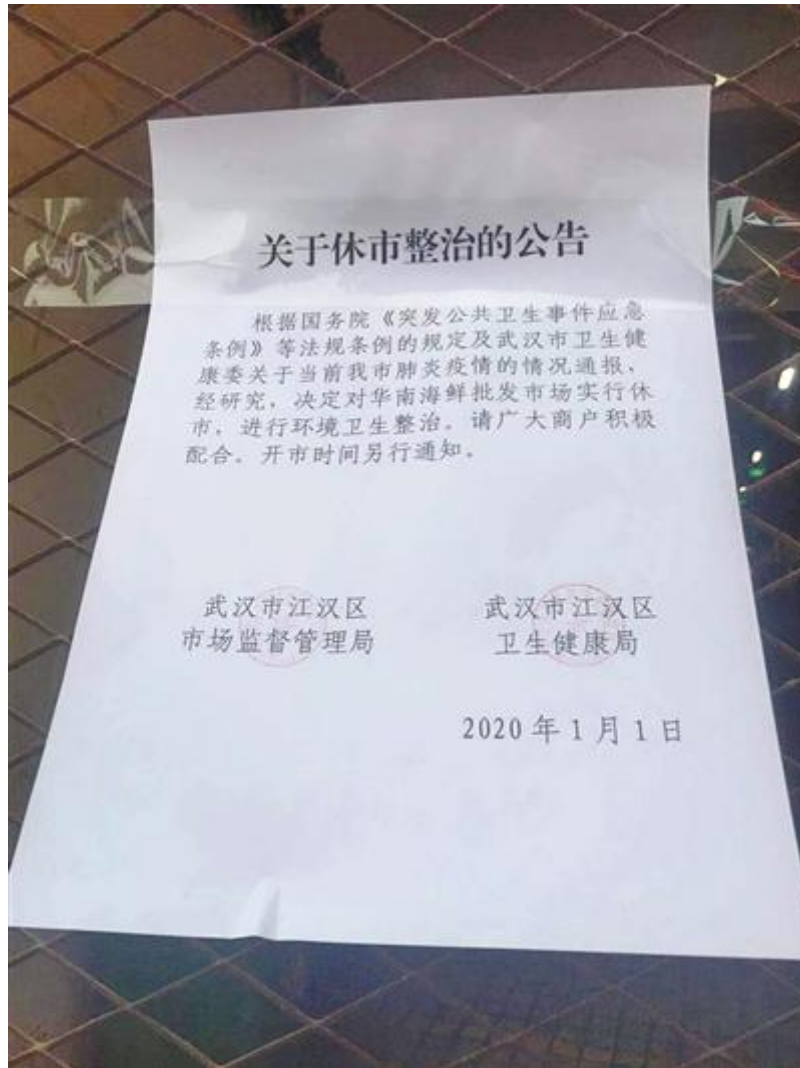


Beijing News – Boundless good news

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Wuhan Huanan Seafood Market operating normally in the afternoon of December 31, 2019.



Wuhan Huanan Seafood Market closed for rectification on January 1, 2020.



December 31, 2019, Wuhan Central Hospital Houhu Campus, where patients with pneumonia of unknown cause were admitted.

The market was closed for rectification yesterday; Experts initially identified it as a viral pneumonia; There has been a well-established monitoring system for the pneumonia of unknown cause.

On December 30, 2019, Wuhan Municipal Health Commission issued an Urgent Circular of the Municipal Health Commission on Reporting the Treatment of the Pneumonia of Unknown Cause, which indicated that patients with pneumonia of unknown cause patients appeared successively at Wuhan Huanan Seafood Market.

According to the follow-up briefing of Wuhan Municipal Health Commission, 27 cases have been identified, of which 7 are in serious condition, while the rest cases are stable and controllable, and 2 cases with improved condition are expected to be discharged soon. Many pneumonia cases are related to Huanan Seafood Market. At present, all patients are being treated in isolation.

The Beijing News reporter visited Wuhan Huanan Seafood Market and found that the Market was closed for rectification on January 1. The market had been operating normally previously, and the pneumonia incident did not cause panic among store owners.

This incident also brought the concept of "pneumonia of unknown cause" to the public. According to Beijing News reporter's research, cases of pneumonia of unknown cause occur in China every now and then, with different causes. At present, there has been a well-established monitoring system for pneumonia of unknown cause, which serves to identify infectious cases in time, issue early warning and take preventive measures as soon as possible.

As of now, the expert group dispatched by the National Health Commission has arrived in Wuhan and is carrying out relevant testing and verification. Authorities remind the public that if pneumonia symptoms appear, especially if fever persists, they should go to medical institutions in time.

Wuhan Huanan Seafood Market has been closed for rectification, and the traffic of customers has decreased recently.

Huanan Seafood Market is located in Wuhan's Jiangnan district and is only 1.3 km away from Hankou Railway Station. According to commercial registration data, the market was established in 2005, which business scope includes market property management and parking lot operation, wholesale and retail of aquatic products and primary agricultural products. A taxi driver in Wuhan told Beijing News reporters that the seafood market was established earlier than the newly built Hankou Railway Station. Prior to that, the neighborhood was desolate and remote, it was only after the opening of Hankou Railway Station did it gradually became prosperous.

In the afternoon of December 31, 2019, Beijing News reporters found that Wuhan Huanan Seafood Market is divided into an east Area and a west Area. The east area

consists of 12 commercial lanes, with about 8 stores each, mainly selling various meat products like beef, pork and poultry; the west area consists of 15 lanes, mainly engaged in aquatic products, seafood and condiments.

Around 4:00 p.m., most stores were still open as usual except for a few stores closed earlier, and many storekeepers solicited customers at their entrance.

However, in the morning of January 1st, Beijing News reporters saw at Wuhan Huanan Seafood Market that the Announcement on Market Closing and Rectification jointly issued by Bureau of Market Supervision of Wuhan's Jiangnan District and Jiangnan District Health Bureau was posted at the gate. The announcement stated that "According to the provisions of the State Council's *Contingency Regulation on Public Health Emergencies* and other laws and regulations, and the Wuhan Municipal Health Commission's briefing on the current pneumonia epidemic situation in our city, upon deliberation, it is decided to suspend operation of Wuhan Huanan Seafood Wholesale Market for environmental sanitation remediation. All business owners are requested to actively cooperate. The reopening time will be announced at a later stage." The announcement is dated January 1st.

Many store owners of the market gathered at the entrance of Huanan Seafood Market. While business owners could still enter and exit the market, they are not allowed to operate. A business owner said that she only learnt the market's closure from the announcement.

"It was posted at five o'clock in the morning." In the morning of January 1, a management staff on duty told Beijing News reporters that the store owners did not know beforehand. "Many store owners procured stocks in advance."

Before the market was closed for rectification, business owners had already felt the changes - disinfection has been strengthened lately at the market. On December 31, 2019, Jiang Ming (not his real name), owner of an aquatic product store in the west area of the Market, told Beijing News reporters that he saw someone spraying disinfectant when he came out to receive delivery at about 10 o'clock in the evening.

A 6-second online video shows that in the dim light of night, three disinfection workers wearing white disinfection suits and masks were dragging a small green tanker with a water gun and spraying water on the shutter doors of some stores in Wuhan Huanan Seafood Market. After watching the video, Jiang Ming said that this was exactly what he saw in the evening of December 30th.

Feng Bei (not her real name), a merchant from the 15th lane, west area, said that when she retrieved the surveillance video of the store, she found that people in white coat were disinfecting the surrounding from 2 to 3:30 AM on December 31. She said that disinfection is also usually done by the market administration several times a week, but mostly after the stores are closed, from 6 to 7 in the evening.

Many store owners in the west area told Beijing News reporters that in the morning of December 31, there were still disinfecting personnel coming to disinfect, but they did not spray disinfectant from store to store.

Affected by pneumonia of unknown cause incident", the customer traffic of Huanan Seafood Market has decreased to certain extent in recent days.

On the day before the New Year's Day holiday, when business was supposed to be booming, merchants felt that the market's customer volume dropped significantly. "Business is somehow affected." Jiang Ming's store is located at the entrance of the market, which is a prime location, but "the number of local residents who come to shop has obviously decreased." According to his estimation, the turnover on that day decreased by 20% to 30% compared with usual.

In a condiment store on the 8th lane in the market's west area, the owner Wang Qin (not her real name) complained to Beijing News reporters that one of her procurement customers asked her to take some videos showing the market in normal business, otherwise, "they may not be able to go there for procurement recently."

Store staff in the Seafood Market are lack of protection awareness.

Although the pneumonia of unknown cause incident has been viral on the Internet, many business owners in Wuhan Huanan Seafood Market had no idea of the situation before. Quite a few store owners in the West Area told Beijing News reporters that they only came to know that many people in the market were infected with pneumonia after the news became viral online.

Hong Wei (not his real name) is the owner of an aquatic product store on the 6th lane of the west area. He told Beijing News reporters that he only heard in the morning of December 31 that three store owners who often played poker in front of the stores near the 10th lane were hospitalized a few days ago. He sent a WeChat greeting to one of the owners, who replied, "infected with virus".

Bai Xiaomei (not her real name), a merchant in the west area, said that a couple she knew, who were doing business in the seafood market, have been also hospitalized, "for two or three days". According to her inquiry, both were contracted with pneumonia caused by a cold.

Another merchant in the west area's second lane told Beijing News reporters that the store owner selling condiments next door was first hospitalized in Wuhan Central Hospital on December 25th, and then transferred to Wuhan Union Hospital, and the store is now run by their family members.

Guided by the store owner, Beijing News reporters found the four stores whose owners were hospitalized for pneumonia of unknown cause. These stores which were engaged in the business of vegetables, edible fungi, condiments, fish and shrimp, etc., are now

closed. Among the four stores, the vegetable store is adjacent to the edible fungus store, while the other two are in different blocks.

Ping Xu (not her real name), a neighbor merchant of the condiments store, told Beijing News reporters that the affected owner was a man in his 40s or 50s, who usually liked to stay up late to play poker. He caught a cold recently but "didn't care". He didn't go to see a doctor at first, and only went to the hospital after several days when he found his illness worsened, and was finally diagnosed with pneumonia.

"I was surprised when I first heard that he was hospitalized. Is it necessary to be admitted with a minor cold?" Ping Xu said that she was not worried about being infected. "If it's SARS, we would have been infected already! It happened more than one day or two days ago. When Beijing News reporters saw Xu Ping, she was about to close the door and go home and she didn't wear a mask.

In Ping Xu's opinion, store owners in the seafood market are usually very busy with business, and when they feel hot after finishing their work, they will take off their outer garment. It is "normal" to catch a cold due to temperature changes. "They won't go to see a doctor with a minor cold, but it will become serious after a long time."

According to Jiang Ming, the store owners in the seafood market usually have irregular working hours and can't get a good rest. "We generally get up at three or four o'clock in the morning, and close at four or five o'clock in the afternoon. The business hours of a store are decided by the owner. If the stocks are not received, they may be still at home at 7 or 8 in the morning, and they may open at 4 in the morning if the stocks arrive."

At 5:00 pm on December 31, there were few customers in the seafood market, and most store owners were preparing to close and go home. The owner of a condiments store in the West Area is checking the 2019 inventory list. When talking about the "pneumonia incident", she seemed a little careless. "It is a warm winter, keeping personal hygiene is good enough."

According to many business owners interviewed, there were store owners who had caught cold or even pneumonia in the market in the past years, but they did not pay too much attention. "Among hundreds of people at the market, it is normal for a handful of people to get flu."

When Beijing News reporters visited the market, it was found that the sanitary conditions in the market were not ideal, with garbage often stacking, the ground being wet, and the ventilation being poor. In recent days, "market management staff told us to strengthen personal protection, be sure to wear masks and maintain hygiene." Jiang Ming said that he used to wear a mask when the air quality was not good at ordinary times. After receiving the notice, he found a mask in the store and put it on. However, Beijing News reporters found that most store owners in the market did not wear masks.

All cases have been treated in isolation.

On December 31, Beijing News reporters visited Wuhan Central Hospital Houhu Campus, which is about 2 km away from Wuhan Huanan Seafood Market. According to their official website, Houhu Campus is an extension of Wuhan Central Hospital's high-quality medical resources in the northern part of Hankou, filling the gap that there is no large-scale grade AAA hospital in the area.

Li Jing (not her real name), a 60-year-old patient in the emergency ward, told Beijing News reporters that she was admitted to Wuhan Central Hospital's Houhu Campus for treatment due to gallbladder disease on December 27th. Since then, she has seen four merchants from Huanan Seafood Market being admitted to the emergency ward for treatment due to pneumonia.

As Li Jing recalled, when the first pneumonia patient from Wuhan Huanan Seafood Market was hospitalized, the hospital didn't think there was anything unusual, and the patient was put with other patients in the emergency ward together. Shortly afterwards, a middle-aged man accompanied his mother to the hospital. The man runs a poultry store in Wuhan Huanan Seafood Market. His mother developed some symptoms of pneumonia and kept a high fever. The man soon began to have a fever and was hospitalized with his mother.

"When his family came to accompany the patient, they told the doctor that several people at the Huanan Seafood Market had been hospitalized for similar symptoms recently, some in Tongji Hospital and others in the Union Hospital." Li Jing said that at this time, three pneumonia patients related to Wuhan Huanan Seafood Market had been hospitalized in the Houhu Campus, and doctors began to be vigilant. They asked and recorded the occupational information of the three patients and learned that the man's mother often delivered meals to Huanan Seafood Market.

On December 29th, Li Jing saw that the fourth pneumonia patient from Huanan Seafood Market was admitted to the emergency ward. The hospital immediately transferred the beds of the four patients to the southwest corner of the ward and treated them in isolation that afternoon.

"The isolation was done very fast, and as soon as they were moved out, someone came in and disinfected with ultraviolet rays." Li Jing said that she thought that the emergency measures for this incident in Houhu Campus were "well done". Li Jing said that she had no symptoms of respiratory tract infection.

In addition, Li Jing mentioned that the incident rate of flu in Wuhan in 2019 was higher than previous years. "In warm winters, flu tends to be serious, and even masks are hard to buy in pharmacies. The doctor also told us that the temperature was too high, otherwise the flu would not be so serious. "

Public information shows that the average temperature in December 2019 was about 4°C higher than that in the same period of 2018. Ge Haibo, Deputy Chief Physician of Nanjing Hospital of Traditional Chinese Medicine's Department of Respiratory Medicine, said in a previous interview with the media that the high temperature in winter provides favorable living conditions for many germs, and people are more likely to be infected with respiratory diseases, such as upper respiratory tract infection, influenza, pneumonia and asthma. In addition, warm winter will cause evaporation of ground water and dry climate, which will greatly weaken the defense function of human respiratory tract.

In mid-December, local media in Wuhan reported that Wuhan had entered a period of high incidence of influenza, and the number of children in many pediatric hospitals increased sharply. The Beijing News reporter inquired many medical staff about the treatment of patients with respiratory diseases in Houhu Campus, but no one responded.

On the evening of December 31, the son of a condiments store owner in the west area of Huanan Seafood Market told Beijing News reporters that his father had been treated in Houhu Campus after being diagnosed with pneumonia. "(The treatment) went well and everything was fine". The patient, who was supposed to be discharged from hospital, was transferred to Wuhan CDC for treatment. He doesn't know the specific reason.

According to an announcement issued by Wuhan Municipal Health Commission on December 31, all cases are being treated in isolation at present, while the follow-up investigation and medical observation of close contacts are underway, and the hygienic investigation and environmental sanitation handling of Huanan Seafood Market are being carried out.

There has been a well-established monitoring system for pneumonia of unknown cause.

This incident also brought the concept of "pneumonia of unknown cause" to the public.

According to a circular of Wuhan Health Commission, 27 cases of pneumonia of unknown cause have been identified at present, of which 7 are in serious condition, while the rest are stable and controllable, and 2 patients with improved condition are expected to be discharged soon. Up to now, no obvious human-to-human transmission phenomenon has been found in the investigation, and no infection has been found among medical personnel. At present, the detection of pathogens and the investigation of the causes of infection are underway.

In the afternoon of December 31, a staff member of Wuhan Institute of Virology of Chinese Academy of Sciences told Beijing News reporters that some researchers were participating in the investigation of pneumonia of unknown cause, but he said that the institute would not release any information separately, the relevant researching staff

were not in a position to be interviewed, and all should be subject to the news from the Health Commission.

According to publicly available information, pneumonia of unknown cause was included in the disease control and monitoring system in China more than a decade ago. The purpose of monitoring is to find infectious cases in time, issue early warning and take preventive measures as soon as possible.

In 2004, in order to screen possible SARS cases, human avian flu cases as well as other infectious respiratory diseases, the former Ministry of Health requested to carry out nationwide surveillance of pneumonia of unknown cause cases and issued the *National Implementation Program for the Monitoring of Pneumonia of Unknown Cause Case (Trial implementation)*. In 2007, the program was adjusted according to the experience of monitoring till then, and the *National Program for the Monitoring, Screening and Management of Pneumonia of Unknown Cause Cases* was issued.

According to the Program, pneumonia of unknown cause cases refers to those meeting the following four criteria at the same time and which cannot be specifically diagnosed: (1) fever (armpit temperature $\geq 38^{\circ}\text{C}$); (2) Imaging features of pneumonia; (3) reduced or normal total white blood cell count or reduced lymphocyte classification count at the early stage of onset; (4) no significant improvement or progressive worsening of the disease after standard antimicrobial treatment.

As a result of Beijing News reporter's research of relevant papers, disease control and other relevant agencies across the country have been releasing monitoring results of pneumonia of unknown cause since 2004.

Pneumonia of unknown cause cases from 31 provinces, municipalities and autonomous regions in China were collected in the "Cases of Pneumonia of Unknown Cause in China 2004-2009 " by Xiang Nijuan et al. of China CDC's Office of Disease Control and Emergency Treatment. The research shows that from April 2004 to December 31, 2009, there were 864 pneumonia of unknown cause cases reported through the Disease Monitoring Information Reporting Management System, telephone and fax in China, among which 35 were confirmed cases of human avian influenza while 793 cases were ruled out as pneumonia of unknown cause and diagnosed as other diseases, and the diagnosis for 36 cases has not ruled out to be pneumonia of unknown cause up to now. Studies have shown that most human avian influenza cases were detected by way of pneumonia of unknown cause monitoring.

In recent years, cases of pneumonia of unknown cause have occurred from time to time in China, with different causes.

The Beijing News reporter searched for public news reports and found that 4 cases of pneumonia of unknown cause were found in Shenzhen in 2013, all of them were eventually diagnosed as Influenza A H1N1. In the same year, 4 cases of pneumonia of

unknown cause appeared in Beijing, which were eventually diagnosed as common pneumonia or flu. In 2013, there were severe pneumonia cases of unknown cause in Shanghai, Anhui and Jiangsu provinces, including 3 confirmed cases of H7N9 avian influenza, of which 2 died.

According to the *Evaluation of the Monitoring System for Pneumonia of Unknown Cause* by Wang Yu of the Health Emergency Center of Chinese CDC, as of December 31, 2016, 31 provinces, autonomous regions and municipalities directly under the Central Government have reported in total 1,666 cases of pneumonia of unknown cause through the disease monitoring information reporting management system, of which 8% were cases of human avian influenza, and 76% were diagnosed as other diseases, such as viral pneumonia, bacterial pneumonia, and pneumonia caused by unknown pathogens, and 15% cases were diagnosed as upper respiratory tract infection and chronic obstructive pulmonary disease. Other diseases of unknown cause accounted for 14%, while the rest 2% lacked prognosis information.

According to a paper published in the April 2019 issue of *Occupational and Health* by two physicians from Beijing Fangshan District CDC's Department of Infectious Diseases and Endemic Diseases Control, an epidemic of clustered pneumonia of unknown cause occurred in a primary school in Fangshan District in May 2018, where more than 20 students in a same grade developed symptoms such as fever, cough, sore throat, pneumonia, with chest radiographs reading indicating many pneumonia cases. This led to great importance attached by the attending doctors who, and after group consultation and treatment with relevant departments, eventually determined the incidence as pneumonia caused by mycoplasma infection.

According to the briefing of Wuhan Municipal Health Commission, Wuhan municipality organized experts of clinical medicine, epidemiology and virology from Tongji Hospital, the provincial CDC, Wuhan Institute of Virology of Chinese Academy of Sciences, Wuhan Infectious Disease Hospital and Wuhan CDC for collective consultation. The experts analyzed the condition, treatment prognosis, epidemiological investigation and preliminary lab test, and concluded that the above cases were viral pneumonia.

According to the briefing, viral pneumonia is common in winter and spring, and can be sporadic or outbreak. Its main clinical manifestations are fever, whole-body ache, with a small number of cases having dyspnea and infiltrative lung shadow. Influenza virus is the most common virus causing viral pneumonia. The disease can be prevented and controlled. In term of prevention, indoor air should be ventilated and public venues that are enclosed or with no air circulation and venues with crowds should be avoided, and facial masks should be worn when going out. In term of clinical treatment, the focus is symptomatic treatment, and bed rest is required. People who develop any of the above symptoms, persistent fever in particular, should consult a medical institution in time.

According to CCTV news report, the National Health Commission expert group has arrived in Wuhan in the morning of December 31 and is carrying out relevant testing and verification. People's Daily reported that quite a few Wuhan medical staff claimed that the cause of the disease has not been identified at present, thus cannot be concluded that it is SARS virus as claimed by rumors on the Internet, and it is more likely other severe pneumonia. Even if it is indeed SARS virus, residents need not panic since there is a well-established system of prevention, control and treatment.

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Photos of page A12-A13 by Beijing News reporter Zhang Shengpo.