

# The Research and Strategy Analysis of Public Health Emergency in Civil Aviation

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**Abstract:** Facing the sudden outbreak of COVID-19, China's civil aviation industry has suffered an unprecedented blow. As an important part of the transportation industry, it's an urgent problem for major airlines and airports to do a good job in safety protection and ensure the smooth and stable operation of flights. Domestic airlines and airports had some friction with passengers in the process of operation due to the need of epidemic prevention and control, which brought unprecedented pressure to the development of civil aviation. The friction with passengers once again sounded the alarm for the development of civil aviation. Airlines and airports are seeking a solution of taking the right measures in the event of public health events. It's effective to build an impregnable wall of epidemic prevention and protection. We need to work together from legal norms, operational procedures, scientific and technological innovation, channel publicity and other aspects.

**Keywords:** Public Health Emergency; Civil Aviation; Law

## 1. Introduction

The COVID-19 has impeded the recovery of civil aviation since it occurred in 2020. In order to deeply understand and study the relevant public health events, we carried out a variety of forms and channels of domestic research, focusing on existing problems, legal regulation, rules and practices at home and abroad, as well as suggestions on innovation of legal system. In the second half of 2020, a special domestic survey was organized and followed up in the later period. During the survey, the project team carried out a practical investigation on the current domestic public health emergencies from airlines, airports, law enforcement agencies and so on to ensure the comprehensiveness of the survey. The team had conversations with related leaderships of aviation security department, large international airport public security department and air Police detachment in south China. They took the practical problems that needed to be solved at first in public health emergencies as the starting point, and investigated, studied individual case and carried out comparative study with related civil aviation industry frontline personnel to get the latest relevant information and find the problems.

## 2. The Main Problems

### 2.1 The Main Manifestations and Characteristics of Civil Aviation Public Health Emergencies

The main manifestations of civil aviation public health emergencies are the passengers from affected areas failure to wear masks, take relevant epidemic prevention measures in terminals and cabins, and failure to listen to the dissuasion of staff, resulting in the risk of virus transmission. Passengers from affected areas refuse to cooperate in measuring temperature or taking relevant quarantine measures; they do not listen to the dissuasion of the staff after boarding the plane, and change seats without cause, which affects the related work of the crew. The majority of passengers support and cooperate with the civil aviation epidemic prevention and control work, but very few passengers refuse to cooperate. According to the survey results, similar incidents are mostly manifested as individual demands, that is, illegal rights protection actions carried out by single passengers.

### 2.2 Legal Regulation and Practice of Civil Aviation Public Health Emergencies

If a person spreads the coronavirus in a public place on purpose without wearing a mask, he or she will be punished for "endangering public security by dangerous means" in terms of the Criminal Law of

the People's Republic of China. However, in practice, almost all of them are neither confirmed patients nor suspected patients. Subjectively, there is no suspicion of intentional transmission, objectively, there is no confirmed risk for public safety, and no criminal offence is involved when they go to public places without masks. As to whether it involves administrative violations, it is necessary to know whether it is a mandatory order for public authorities to remind the public to wear masks when they go out. As far as the prevention notices and instructions issued by most local governments are concerned, masks are issued as protection guidelines rather than mandatory requirements. At the national level, there is only the Guidelines on the Use of Pneumonia Masks for the Prevention of Novel Coronavirus Infection issued by the National Health Commission in January 2020, which is also a non-mandatory guidance document. It is mostly a moral obligation for uninfected travelers to wear masks when going out with a mandatory order. It is only the rational choice of individuals and moral responsibility to others in a special period.

Neither the Law of the People's Republic of China on the Prevention and Treatment of Infectious Diseases, the Law of the People's Republic of China on Response to Emergencies, nor the Regulations on Emergency Response to Public Health Emergencies impose any additional obligation on the public during an epidemic except for compulsory quarantine, isolation and treatment. They also did not acquiesce in the fact that the prevention and control headquarters of local governments can take more extreme and stronger prevention and control measures beyond the legal authorization. Under the existing regulations, the emergency response staff have no more effective basis and measures for handling emergencies.

Most of the civil aviation front-line staff surveyed believe that there is no clear and detailed legal basis for the handling of public health events at present due to the suddenness of the epidemic, which makes it impossible for staff to accurately characterize the event in a public health emergency. It is unclear whether the parties violate the law or whether it constitutes illegal interference, resulting in unclear follow-up measures. When it comes to the handling of time in the cabin, some aviation security officers are not clear about the source of their rights, which is easy to cause improper exercise of power. In some cases, it is believed that the security officer's excessive law enforcement has infringed upon the rights and interests of passengers.

### ***2.3 An Analysis of the Practice Related to Public Health Emergencies in Civil Aviation***

During the epidemic, a passenger missed the boarding time due to his own reasons, had a dispute with the airport staff, and took off his mask because of his emotions, which caused a public health safety risk. The police persuaded him, but he refused to cooperate. So the police brought him to the police station, and the passenger's refusal to wear a mask was dealt with as "disturbing the order of public places" in the *Public Security Administration Punishment Law* of the People's Republic of China, and the result of the treatment was a fine of 200 yuan. Subsequent passengers refused to accept the punishment and filed a lawsuit with the local people's court on the grounds of improper punishment by the public security organ.

Although the local prevention and control headquarters has announced that the public is required to wear masks in public places during the epidemic prevention and control period, this is a mandatory order that must be followed. If the public does not abide by this order, first of all, the prevention and control personnel will persuade; If the public do not listen to the dissuasion, they will be regarded as "refusal to implement the decisions and orders issued by the people's government in accordance with the law in an emergency", but the prevention and control department or the CDC only has a lower level. The normative document, which originally belonged to administrative guidance, has been elevated to a mandatory order, supplemented by administrative punishment as a deterrent. This enforcement basis will also affect the legitimacy of the punishment itself as a means of execution.

In dealing with the actual problems of civil aviation public health emergencies, the public security also believes that there are few policies that can really be implemented in the handling of similar incidents. At present, issues related to epidemic prevention and control can only be handled by referring to previous laws and regulations, and there is not much basis in health-related laws, and there are no relevant penalties. Only the "*Public Security Administration Punishment Law* of the People's Republic of China" (hereinafter referred to as "*Public Security Administration Punishment Law*"), and the *Public Security Administration Punishment Law* also has limitations in handling public health emergencies, and there are problems in the connection between civil aviation-related laws and regulations and the *Public Security Administration Punishment Law*. The behaviors regulated in the "*In-flight Safety and Security Regulations for Public Air Passenger Transport*" and the "*Public Security Administration Punishment Law*" cannot be fully connected, and they also cannot fully apply to civil aviation public health

emergencies and lack of operability, which is not helpful for the airport public security law enforcement department to ensure the law enforcement standards.

In a real case, a passenger did not take the original seat after boarding, but sat in the second to last row of the cabin (the last three rows on the plane belong to the isolation area during the epidemic prevention period), the flight attendant reminded him, and the passenger refused to change. When the plane was about to enter the taxiway, the flight attendant notified the aviation safety officer to deal with it. The passenger excused the back pain and could not stand up. After the safety officer reminded the passenger in a stern tone, the passenger reluctantly sat back to his seat and said he would complain it. During the handling process, the captain asked the security officer whether it was necessary to hand over the passenger to the local airport public security after understanding the situation. During the entire disposal process, passengers believed that his legitimate interests were violated, and the crew members lacked of clear guidelines and could only rely on their own work experience to deal with the problem.

In the case of passengers who refuse to cooperate with the epidemic prevention inspection and knowingly commit acts in other cabins, the flight attendants can only take methods such as filling out the registration form, measuring the temperature, or adjusting the passengers who refuse to cooperate to the last row of the cabin. And the ground staff will take the person out of the plane only under the serious situation. Aviation safety personnel have no clear laws and regulations to follow in exercising their powers, and there is no more effective disposal basis and disposal measures.

### **3. Suggestions on the Analysis of Public Health Emergencies in Civil Aviation**

#### ***3.1 Establish a Process Operation Mode to Reduce Potential Risks***

The COVID-19 is mainly transmitted through human-to-human contact and close-range air droplets. Objectively speaking, air transportation should be regarded as a safer long-distance travel way during the epidemic. The air conditioning systems of most commercial passenger aircraft are equipped with high-efficiency particulate air filtration. The modern cabin ventilation system guarantees a thorough change of air every three minutes, which helps the flow of fresh air. Under the condition of stable operation of the entire air circulation system, passengers wear masks as required, and disinfect sensitive parts such as hands in a timely manner, so the risk of infection is extremely small.

The standard and process-based operation mode formulated by airlines based on experiences can greatly reduce the risk of infection between employees and passengers. During pre-flight preparations, airlines should provide the flight crew with sufficient hygiene and epidemic prevention supplies; The supply of non-disposable items such as blankets and pillows should be cancelled, the circulation of newspapers and periodicals should be stopped, and the cabin service procedures should be simplified during special periods; during the flight, the cabin crew should regularly disinfect the cabin toilets thoroughly, and ensure that the toilets are ventilated in order to cut off transmission route; when providing catering services, tableware and food should be adjusted to individual packaging or disposable packaging, and do not actively provide passengers with hot drinks such as coffee and tea; during the entire flight, passengers are reminded to protect themselves, and regularly check the air circulation system operation, to ensure clean air in the cabin.<sup>[1]</sup>

#### ***3.2 Improve Legislation on Public Health Emergencies in Civil Aviation***

Public health emergencies in civil aviation reflect deficiencies in existing laws, regulations, policies, procedures, etc. It is necessary to work together to build a scientific, standardized, comprehensive and effective civil aviation legal system for epidemic prevention and control. The civil aviation transportation industry is a huge system, which requires aviation Companies, airports, national inspection and quarantine, customs and border inspections and other relevant units cooperate in accordance with laws and regulations to deal with epidemic prevention issues, and take this opportunity to complete legislation on civil aviation emergencies and public safety incidents in accordance with national, local and industry emergency legislation needs. The focus of epidemic prevention in civil aviation transportation is to consolidate epidemic prevention experience, check and fill in gaps, and improve the rules and regulations of public health emergencies in civil aviation to ensure institutionalized promotion.<sup>[2]</sup>

Legislation can fully draw on ICAO's existing rules and standards system and past experience to deal with the problems. According to the urgency of the epidemic, the development trend and the degree of harm, hierarchical measures are taken, and plans are formulated to clarify the rights and obligations of

the prevention and control personnel and passengers, and to stipulate the specific behavior boundaries of the two. The legislation should also clarify the cooperation and participation of various units, and establish a mechanism for cooperation, cooperation and joint response between civil aviation and foreign units, and between multiple departments of civil aviation.

### ***3.3 Strengthen Supervision and Launch Contingency Plans***

The civil aviation transportation industry has a heavy task and responsibility for epidemic prevention and control. In response to the severe epidemic prevention and control requirements, it has carried out the construction and supervision of the aviation emergency legislative system oriented to the job requirements and job process, so as to improve the epidemic prevention awareness and emergency response of front-line civil aviation employees, disposal capacity and air transport safety capacity. The prevention and control of public health emergencies is highly operational, and the effective implementation of the emergency legislative system requires the support of emergency plans. The emergency plan includes many links, such as prevention, problem identification and risk judgment, decision-making, implementation, performance evaluation and program optimization, etc. Prevention is the foundation and control is the core. Only by establishing different levels of prevention and control emergency plan systems can the implementation of national policies be guaranteed. [3]

At present, most airlines have established their own emergency plan systems for internal implementation, but the low-level and lack of effective supervision is only the company-level plan system, which has exposed the situation of ineffective implementation in many places. During the epidemic, the state proposed to establish a normalized prevention and control mechanism of detection, rapid disposal, precise control, and effective treatment, and the realization of "timely", "fast" and "accurate" to the greatest extent depends on the effective implementation of the plan, and the effective integration of existing plans at the national level, clarify the implementation requirements, pursue legal responsibilities for units that fail to carry out work as required, and establish a supervision mechanism to ensure the effective implementation of the plan system.

### ***3.4 Innovative Technologies to Accelerate the Process of Informatization and Intelligence in the Civil Aviation Industry***

The use of electronic technologies, such as QR codes, has greatly improved the efficiency of epidemic prevention and control. "Passing with codes" has become the norm for travel. In addition to QR codes, new technologies related to information have also been put into use successively in recent years. The application of big data, 5G, AI technology and biometric identification technology has greatly improved work efficiency. Prevention is the foundation of prevention and control work, such as non-contact body temperature testers, face recognition equipment, and non-contact induction elevators currently used in airports. Measures such as pressing buttons and "passing with codes" have established a solid barrier for passengers to travel safely. The application of new technologies is effective but involves sensitive personal information. Only by further standardizing the application can the long-term development of new technologies be promoted. Based on the sensitivity and timeliness of information involved in the handling of public security emergencies, the legislation of civil aviation public security incidents should incorporate an information reporting system, strengthen the supervision of important and sensitive information, and create information linkage and direct reporting mechanisms under the Internet, to provide support for the research and development of new epidemic prevention technologies and their application in civil aviation transportation.

### ***3.5 Broaden Channels, Publicize in Multiple Ways, and Actively Guide***

With the continuous development and improvement of new media in the new era, airports and airlines should actively respond to changes in passenger groups and strive to expand various publicity channels. In addition to publicity on traditional paper media and news platforms, new media such as TikTok, Weibo, Kuaibuo, and Xigua Video should be used to meet the needs of all audiences. Video propaganda, radio propaganda, text propaganda and other methods should also be set up at multiple locations in the airport, so that passengers can have a sufficient understanding of the epidemic prevention process before boarding, and actively cooperate from a psychological level to promote the smooth development of epidemic prevention work.

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