Fighting COVID-19: China's Experience in Aviation Security

Since its outbreak, COVID-19 has had a significant impact on the aviation security of China. The Bureau of Aviation Security (BAS) of Civil Aviation Administration of China (CAAC) responded quickly, developed and issued a series of policies, measures and work plans, guiding the aviation security regulatory authorities, airport police, inflight security personels and air transport enterprises in their fight against the disease for months. BAS actively supported the epidemic prevention and control without compromising any aviation security measures and standards, and thus making great contributions to and achievements in curbing the spread of the disease and maintaining the air transport safety during the unusual period. The main initiatives (see the appendix for part of detailed measures) are as follows:

1. Strengthening organization and leadership, establishing a working mechanism to identify responsibilities.
At the early stage of the outbreak of the epidemic, BAS issued *Civil Aviation Security Program on Responses to Pneumonia Outbreak Caused by Novo-Corona Virus* and established a leading group for the pandemic prevention and control, which was composed of 5 working groups including the administrative support group, the public security prevention and control group, the information group, the internal control group and in-flight security group. Each working group was assigned clear duties and required to work with other groups collaboratively. With the development of the COVID-19, BAS further required all transport enterprises to identify and define primary responsibility of the executives, the responsibilities of departments and the division of labor among the posts; to establish an effective horizontal communications with local governments, the health, the customs, the immigration departments in time in accordance with the requirements of joint prevention and control mechanism so as to form a top-down and effective interconnected work system

2. Carrying out quality control activities in an innovative and flexible way to ensure continuous security compliance.
BAS innovated supervision methods such as remote supervision and online supervision to keep the frequency and intensity of supervision unchanged and to ensure the implementation of the relevant rules and regulations. The industry adopted various ways and means in a flexible manner to strengthen the internal quality control. BAS also adjusted extension of the qualification validation and certification of security personnel and certain security equipments in time, and developed the online training platform to ensure the training available.

3. Caring and for the personnel fighting on the front-line and intensifying all-round protection and support.

BAS attached great importance to the personal protection of front-line staff such as security screening personnel, in-flight security personnel, airport police, and supervision personnel of CAAC, issued a manual on personal protection and established a system of a psychological counseling and medical treatment mechanism; BAS established a scientific system for law enforcement and duty performance to ensure the rational use of manpower; and continued to ensure material supply and stable support.

4. Dealing with new threat in time without compromise aviation security screening standards.

BAS required clearly that all airport screening agencies should adhere to the screening standards and strictly implement all kinds of security rules and standards. In response to the new risk arising from the COVID-19, BAS immediately developed and issued the *Technical Instructions on Disease Prevention, Control and Protection for Civil Aviation Security Screening Personnel* (First Edition) to guide the security screening work.

5. Reinforcing airport security management and emergency responses to ensure safe and orderly operation.

In order to deal with the gathering of passengers and their emotional agitation caused by the quarantine and isolation, BAS made special plans to ensure the safe and orderly operation of the quarantine site. Meanwhile, BAS strengthened landside security patrol to properly prevent and resolve the possible mass incidents related to the COVID-19. BAS directed the airport police to crack down and handle crimes related to the epidemic promptly. At the same time, the legal education and alerting publicity were intensified to form a deterrent for potential criminals.

6. Addressing new-type in-flight disturbances properly to ensure inflight security and orderly operation.

BAS developed and issued the *Classifications and Handling of Common Civil Aviation Criminal Acts during the COVID-19 Prevention and Control*, guiding the in-flight security personnel to deal with the on-board incidents related to the epidemic prevention and control such as spreading the false information on the pandemic in the cabin, disturbing the order of the cabin by suspected passengers with COVID-19 symptoms, etc. in accordance with the laws and the regulations, properly and effectively in an reasonable and appropriate way, thereby ensuring cabin safety and order.

7. Making good use of information, and scientifically deploy in-flight security personel(domestic only).

BAS strengthened the information collection and analyzing, concerning the

COVID-19, and continuously improved the security service dispatch plan and scientifically deployed the service and reasonably arrange the rest time so as to ensure the sufficient staffing for the in-flight security.

8. Focusing on the key security operations and continuing to strengthen the civil aviation counter-terrorist work.

In order to prevent the security loopholes caused by the lax preventive measures in the unusual period, and also emerging new threats, BAS continued to implement various security measures; focused on the key security operations to prevent and address security risks; and refined the emergency plan, tested the protocols and improved the commanding and dispatching practices.

9. Enhancing security publicity and promoting aviation security culture.

BAS coordinated national civil aviation entities and launch security publicity activities during the outbreak of COVID-19 and played its role in this regard. Focusing on the primary responsibility shouldered by the entities who engaged in the epidemic containment and the responsibility of joint prevention and control mechanism, BAS made full use of various media means and forms of expression to effectively promote the national civil aviation security personnel as an whole, their practical actions strenuous efforts in fighting the COVID-19, their measures and consequent results as well as their touching stories, and to galvanize strong positive energy by making concerted effort to overcome the daunting difficulties. Leveraging on media platforms such as radio and television, all transport enterprises gave full play to the role of social media such as Wechat and Weibo to enhance policy publicity, respond to the concerns of the public and guide public opinion on aviation security, so as to garner maximum support and recognition of the society and passengers for aviation security.

Appendix:

New Measures of Aviation Security regulatory and supervistion

1. Strengthening online training for inspectors. In view of the new problems and new situation in the supervision caused during the outbreak of the epidemic, in order to strengthen the training and communication of the inspectors, the Bureau of Aviation Security (BAS) of the Civil Aviation Administration of China (CAAC) urgently developed an online communication platform for the supervisors within two weeks, encouraging the inspector to upload videos, working papers, sharing experience, analyzing study cases, and leveraging on fragmented time to discuss specific business issues. The BAS strengthened independent learning and regular exchanges of aviation security supervision business during the period of epidemic prevention and control, and improve the level of supervision.

2. Increasing the contents of off-site inspection and encouraging and guiding off-site inspection. The development of the epidemic has limited the number of inspectors going to the operation site for supervision. After full consultation, the BAS of CAAC has increased off-site inspection means for about 15% of the supervision contents. BAS encouraged and guided inspectors in their work of off-site supervision by means of video calls, video conferences, access to video surveillance, and online submission of picture and text information.

3. Strengthening the supervision of air cargo security. As the epidemic has a great impact on the types and composition of air transport, the rapid increase in air cargo, addition of flights, charter flights, and passenger-to-cargo flights, BAS strengthened air cargo security supervision, carried out targeted adjustment and optimization of processes, and tightened cargo security inspection to ensure the safe transport of cargo.

New Threats to Aviation Security Screening and Countermeasures

1. Security screening personnel gloves, goggles and other protective equipment, the security impact on the sense of touch and vision in the process of security screening.
Countermeasures: choosing rubber gloves that can fit close to the hands and spray surfactant inside the eye goggles to minimize the impact on touch and vision.

2. The influence of facial masks on security in the process of passenger document inspection and verification.
Countermeasures: passengers are required to take off their masks for verification, the verification desk is equipped with a high-transmittance isolation screen, and language communication is minimized as much as possible.

3. The security impact of liquid disinfectants carried by passengers such as alcohol.
Countermeasures: passengers are only allowed to carry a very small amount of disinfectant cotton tablets and gel for their own use (because the terminal is regularly sterilized, aircraft are completely sterilized before each flight, and CAAC strictly forbids fire on board the plane and allows a very small amount of liquid disinfectant to be carried, therefore the risk to aviation security is acceptable).

4. The impact of social distancing on current aviation security procedures.
Countermeasures: dedicated personnel are arranged in the passenger waiting area for guidance, and an one-meter interval queue sign is set up on the ground to remind passengers of removing their belongings as far as possible to reduce the proportion of repeated personal examination, aisles are open at intervals and the release speed is taken well under control.

5. It is impossible to effectively observe the influence of passenger's face for behavior recognition.
Countermeasures: carrying out pre-screening by using the information system, the staff focused on abnormal behaviors such as clothes, belongings and movements, and in case of special circumstances, the passengers would be cross-checked by the police.

6. Epidemic prevention problems caused by close inspection by security personnel.
Countermeasures: adding disinfection mats and epidemic prevention reminders before the security check aisles; security personnel are required to wear protective clothing, goggles, masks and headgear; increasing inspection reminders for passengers tips; for every 10-15 passengers, disinfect handheld detectors and the work table with sterilization towels and sprays.

8. The masks and protective clothing worn by passengers are easy places to

conceal forbidden items.

Countermeasures: complex masks or clothing are put into disposable bags for security inspection, and security inspectors strictly implement inspection measures on the premise of tight protection.

9. False alarm caused by disinfectant in ETD.

Countermeasures: protecting ETD and sampling paper before spraying disinfectant, cleaning up the detection area after spraying to reduce the effect of volatilization, and using multiple test sites as back up.

10. Calibration of security equipment.

Countermeasure: due to the special circumstances such as the social distancing of the testing personnel or the fact that calibration equipment are inaccessible, such security equipment will be allowed to apply the exemption of deferred calibration.

New Threats for In-flight Security and Countermeasures

1. The reduction of air service procedures decreases the opportunities for aircrew cabin inspections and communication with passengers, and has an impact on the rapid detection and handling of unlawful acts.
Countermeasures: By analyzing and researching on flight threats strengthen inflight security with targeted measures.

2. After landing of flights from the high-risk epidemic area, the flight may face on-board quarantine and screening for a long time which is easy to cause conflicts between the ground personnel and passengers in the cabin due to passenger anxiety.
Countermeasures: preparing special broadcast scripts for the crew, informing passengers in advance, coordinating with relevant departments and optimizing quarantine and screening procedures to reduce the time needed as much as possible.

3. The impact on in-flight security caused by passengers deliberately fabricating and spreading the epidemic news.
Countermeasures: broadcasting the in-flight security requirements to passengers before take-off, strengthening cooperation with law enforcements, and cracking down on such acts.

4. During the pre-flight preparation meeting, the inadequate communication caused by the wearing of protective equipment of the crew may affect the division of labor and handling of on-board security incidents.
Countermeasure: strengthening online collaborative preparation on the personal preparation platform for crew members to make up for the shortage of inadequate communication in on-site preparation.

5. Flights over 3 hours are prone to in-flight conflicts caused by passengers' anxiety due to passengers' long time wearing of personal protective equipment such as masks and goggles.
Countermeasures: relevant training is carried out for the crew and psychological counseling services for passengers are enhanced.

6. Mitigating the influence on the handling of acts of unlawful interference in flight.
Countermeasures: under the premise of reducing contact, more information transmission methods such as airborne phone, sign language and body gestures are used, and the emergency response plan is amended in timely way.

7. Boarding documents check of the Aircraft protection measures may increase the exposure risk of the crew.
Countermeasures: using contactless employee documents, passenger boarding

passes and travel documents to reduce the risk of contact.

8. Contact risks arising from aircraft security inspection.
Countermeasures: carrying out comprehensive disinfection before the security inspection of the aircraft, wearing gloves and other protective equipment, and replacing them in time after the inspection.

9. Crew members wear protective equipment, which makes it difficult to identify in the cockpit through the cabin door cat's eyes or monitoring equipment, which interferes with the procedures to ensure that only authorized personnel are allowed to enter the cockpit.
Countermeasure: mandatory use of inter-phones for pre-confirmation procedures to reduce certain risk.