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Strengthening the aviation sector to minimize the risk of spread of COVID-19 infection

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Abstract

The Corona Virus Disease-2019 (COVID-19) outbreak became a public health emergency of international concern owing to its ability to spread across international borders through travelers. The epidemiological analysis suggest that the spread of the disease from one nation to another was through the travelers and thus to contain the further spread of the infection, many of the nations have temporarily closed international as well as domestic airline travel. However, this lockdown and travel restrictions cannot go for prolonged periods of time, as it has affected the global economy. Thus, sooner or later the aviation services are expected to start and it is the responsibility of the concerned stakeholders to take adequate measures for the detection of suspect cases during their journey and assist the public health authorities in initiating a timely emergency public health response. In conclusion, the aviation sector is expected to play a very important role in reducing the further transmission of the COVID-19 infection and thus it is the responsibility of all the concerned authorities to improve their readiness to respond to the demands and challenges linked to air travel in these difficult times.

Keywords: COVID-19 pandemic, Aviation, Infection prevention

Introduction

The Corona Virus Disease-2019 (COVID-19) outbreak became a public health emergency of international concern owing to its ability to spread across international borders through travelers and due to its novel nature [1]. Till date, 4338658 cases and 297119 deaths have been reported and it is anticipated that the number of cases is expected to rise further in the coming days [2]. The epidemiological analysis suggest that the spread of the disease from one nation to another was through the travelers who were exposed to the causative virus and thus to contain the further spread of the infection, many of the nations have temporarily closed international as well as domestic airline travel and even imposed lockdown to restrict the movement of people [1,3].

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Aviation sector after lifting travel restrictions

However, this lockdown and travel restrictions cannot go for prolonged periods of time, as it has affected the global economy and even resulted in social disruption of millions of people across the world. Thus, sooner or later the aviation services are expected to start and it is the responsibility of the concerned stakeholders to take adequate measures for the detection of suspect cases during their journey and assist the public health authorities in initiating a timely emergency public health response [4]. This is the need of the hour as we all cannot afford the importation of a new case and emergency of multiple new chains of transmission of the disease once again, especially after the disease has already outstretched the health system, created a sense of fear and compromised almost each and every domain of the human lives [1,3,4].

Areas to be strengthened

The first and foremost priority is to increase the awareness about the infection with regard to signs & symptoms of the disease and the methods to prevent the transmission of the infection (viz. physical distancing, frequent hand washing, respiratory hygiene, environmental cleaning, when and how to use & remove masks,

disposal of contaminated wastes, etc.) among different cadres of aviation personnel [4-6]. The personnel who are working in settings with conclusive evidence of community transmission should strictly adhere to the standard infection prevention and control measures, including wearing of personal protective equipment [5,6]. Further, they should be aware about the protocol to be adopted, once a suspect case or ill traveler is identified. On the personal front, these personnel should avoid public transportation & rush hours and self-monitor themselves for the development of signs-symptoms of the disease and seek immediate medical attention to reduce the probability of the transmission of infection [4]. It is very important to ensure that both airport personnel as well as the passengers should strictly adhere to all the specified recommendations regardless of travelling through domestic or international flights.

In all the aircrafts, special attention needs to be given towards the seating arrangement of the passengers as we have to ensure that appropriate physical distancing is maintained between any two passengers and we are reducing the potential risk of disease transmission. In addition, the airlines have to take the strict call based on the recommendations of the Government authorities to limit of the number of passengers travelling in each flight. This is once again needed as by limiting the number of passengers, we are reducing overcrowding in the flight, and in case a scenario emerges wherein one passenger develop symptoms suggestive of COVID-19, lesser number of other passengers will be exposed to the causative virus.

Management of suspect cases

The management of a suspect case at the airport should be done as per the standard protocol and all the workforce at the airport should be informed about their roles and responsibilities. However, for the management of a suspect case during their flight will essentially require activation of the on-board procedures (like using the universal precaution kit, actions to minimize the exposure of the crew or other passengers with the ill person, instructing the ill person to wear mask and practice respiratory hygiene, designating one crew member to serve the ill person, use of personal protective equipment by the staff, etc.) by the cabin crew [4,6]. It is mandatory to inform the arrival airport authorities about the ill-traveler, so that the ground staff is ready with the necessary measures for the disembarkation of the suspect cases without exposing the other persons [1,3-5].

The suspect case should be subjected to laboratory tests and if found positive, should be isolated and given appropriate treatment. Apart from notifying the case to public health authorities, the aviation personnel have an important role in the holistic contact tracing and they should make all the arrangements to obtain their personal communication and address details so that they can be traced and quarantined [4,5]. In addition, the cleaning and disinfection services at the airports should be strengthened immensely and the process should be further expanded to aircrafts [3-5,7]. However, the process of cleaning an aircraft in which a symptomatic passenger has traveled has to be systematic and should be done by trained persons and steps should be taken to clean all the surfaces & safely dispose all soiled items [4,7].

Conclusion

In conclusion, the aviation sector is expected to play a very important role in reducing the further transmission of the COVID-19 infection and thus it is the responsibility of all the concerned authorities to improve their readiness to respond to the demands and challenges linked to air travel in these difficult times.

Conflict of interest
The authors declare that they have no competing interest.

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