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# THE EMPTY SKY

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**Abstract-** This article reviews the effects of global pandemic on aviation industry and gives the general overview of how air travel will look like during the pandemic. Also, this article lists some international airlines that were seriously affected by the virus outbreak. The preventative measures to stop the spread of the virus are also being discussed and opinions are given on their effectiveness.

**Key words:** Aviation, Air travel, Covid-19, IATA, FAA

## Introduction

The coronavirus pandemic has greatly changed our world, not only in the short term. Not only the healthcare- where people wearing gowns save lives working on 24/7 basis, but also world economy, stock prices, travel industry, airline operations and many more have been negatively influenced by this pandemic. Entire nations are being ordered to stay at home to stop the spread of the virus, airlines are on the verge of bankruptcy, travel companies are taking huge amounts of loans that make them barely keep afloat, luxurious hotels are now hospitals;- these are only a few examples of how the world looks like today. When using the search engines like Google or Yandex, I noticed that one of the most popular questions being asked: When will travel recover? Having performed an analysis, I found out that there is no definite answer to this question. Nobody knows for sure. There are some factors that will influence travel such as whether social distancing on planes brings more profit than loss, whether we can rely on Covid-19 testing, development and introduction of the vaccines. Many international organizations are exploring the way to speed up a 'restart' of international airline aviation. This is, by far, the first time when international travel is confined to the medicine aspects.

## Air travel during Covid-19.

The major concern that still questions whether there should be a restart for normal airline operations is in-flight transmission of the virus. There were various strategies discussed at 8 May 2020 IATA (International Air Transport Association) Medical Advisory group. One paper reports that after a long-haul flight, only one person was confirmed to have been sick at the time, with no secondary cases resulted. A recent public report shows that a flight on 31 March from USA to China Taipei with 12

people later confirmed to be symptomatic at the time of flight, generated no secondary confirmed cases from the 328 other passengers and crew members, who all tested negative. As we can see, there are not so many cases of passenger-to-passenger transmission of the virus have been recorded. The probable reasons for the low rate of in-flight of transmission can be the lack of face-to-face contact brought by social distancing and the physical barriers like seat backs. Moreover, almost in every airline, all the passengers are seated in accordance with the social distancing guidelines which means that one person occupies one row, while previously there were 3-4 people in a row, depending on the model of the airplane.

Still there are some measures can be taken to make air travel possible during global pandemic:

**Temperature screening-** higher than normal body temperature is an early sign of Covid-19 in people, but not in all. Handheld devices can be used to measure not only body temperature, but also respiration rate and pulse from the distance. This measure is highly recommended to be used at departure and arrival. Although, it may help to detect some people with the virus, this modern devices can miss people whose symptoms do not include fever or those who have taken medicine before a flight. All in all, this measure can be helpful if only is applied with other measures.

**Masks and PPE-** The main method of spreading of the infection is exhaling droplet and the spread via surfaces and hands. World Health Organization suggests the use of surgical masks and personal protective equipment such as hand sanitizers and gloves. In most of the countries, health authorities have been requiring the use of face coverings while being in public, especially in situations when social distancing is not possible (inside a plane)

**Symptom screening-** Some of the airports across the globe have introduced a questionnaire to ask travelers about symptoms such as fever, cough, headache, breathing difficulties and some others, usually when passengers arrive. The only problem that may happen is that people being surveyed may falsify the answers having a fear not to be allowed to travel if they are suspected of having symptoms of Covid-19.

**COVID-19 testing.** Some countries have already introduced a requirement for such testing either upon arrival, or before departure on all air travelers arriving in their territory. This measure is suggested to be introduced in every airport to detect infected people. Rapid tests will allow testing to be completed on the spot immediately before or after travel.

**Cleaning and Disinfection.** The secondary method of spread of the infection is transmission from surfaces. Cleaning and disinfection of frequently touched surfaces is advised by WHO. Research has shown that the virus can survive on a different surface for a few days. Cleaning agents having 60% of alcohol are very effective at eliminating the virus on surfaces, hence many airlines have increased the frequency of cleaning procedures. Also, passengers are given and encouraged to use material (alcohol wipes) to clean their seat area.

#### **Coronavirus and Aviation.**

There were almost no airplanes over the large cities at the end of April 2020. This can be seen using the flightradar24 service that tracks all the flights. The Financial Crisis caused by pandemic may lead to a loss of almost 50% of passenger turnover for Aviation industry (IATA). The total revenue of airlines is predicted to decrease by \$314 billion comparing to 2019. Two largest airlines of Europe Ryanair and EasyJet are thinking about cancelling all of their flights. Norwegian has cancelled almost 4000 flights and reduced staff and crewmembers by 50%. Delta is planning to reduce the proportion of flights by 40% and use only 300 airplanes during pandemic. On April 23, The FAA announced a reduction in the operating hours of more than 100 control towers and terminal radar approach control facilities, which demonstrates a drop in air traffic of as much as 96%. Pilots were advised that certain air traffic control services and ILS approaches may be periodically unavailable.

#### **Conclusion.**

In conclusion, Air travel will never be the same as it used to be a couple of month ago, unless there is a vaccine and the number of infected people in the world goes down. A lot of airlines have bankrupted already, while others stopped thinking about large revenues and now focus on just surviving the financial crisis caused by the virus. Furthermore, from the medical measures listed above there is no one particular that is most effective. The best alternative is to use a combination of the above approaches to reduce the risk. The air travel is still

possible during the pandemic, but only if the precautions are taken.

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