

## Preparing for inflight respiratory incidents

By Robin Drake RN

**It happens every day. Passengers board aircraft with a range of serious ailments and medical conditions that they fail to mention to crew members.**

Consider, for instance, the elderly gentleman in 4A who begins to experience laboured breathing and starts 'puffing' shortly into the flight. He simply did not think to inform the airline of his recent bout with pneumonia. Unfortunately, he is one of many passengers who should have been medically evaluated before air travel.

According to statistics derived from airlines that subscribe to MedAire's telemedicine services, the number of respiratory incidents is increasing. In 2006, airport agents identified more than 900 passengers with respiratory concerns, 52% of which involved acute shortness of breath. In addition, MedAire managed more than 1,800 respiratory emergencies during flights in 2006, 77% of which also involved acute shortness of breath.

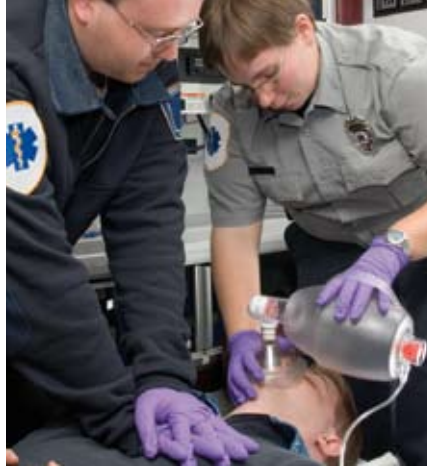
So, what can airlines do regarding inflight respiratory incidents? Prevention is the key and prevention begins before takeoff.

### The signs

With the proper training, airline employees can learn to recognise signs of respiratory distress before passengers board, preventing possible diversions. Such signs include:

- obvious shortness of breath, regardless of whether the passenger is complaining of difficulty;
- flushed, pale or cyanotic (bluish discoloration) skin colour;
- audible wheezing when exhaling, and;
- the inability to speak more than a few words before taking a breath.

Passengers with medical equipment, such as portable oxygen concentrators and oxygen cylinders, should attract the attention of airline personnel. While



In the case of respiratory problems, medical professionals can provide assistance such as the administration of oxygen.

Individuals with chronic respiratory ailments should obtain medical clearance before flying, they often do not. Furthermore, patients with chronic obstructive pulmonary diseases, such as asthma, chronic bronchitis and emphysema, experience increased risks when in flight.

### The complications of altitude

A commercial aircraft's cabin is pressurised equivalent to an altitude of 6,000-8,000 feet (1,800-2,400 metres), which presents problems even for passengers without severe respiratory complications. The aircraft environment is equivalent to a 3.2 kilometre-high mountain. In such a setting, the air is thinner and oxygen molecules are further apart. This combination results in laboured breathing and the feeling of not being able to 'catch one's breath'. Additionally, any exertion increases that feeling of discomfort, leading to a very rapid breathing pattern and an increased sense of concern.

For passengers with decreased lung capacity and respiratory problems, altitude exacerbates an already fragile situation. Most frequently, passengers experiencing respiratory distress in flight will be placed on oxygen, at the recommendation of a medical professional.

### The importance of a physician's opinion

While crew members can learn to identify respiratory ailments effectively, the expertise of a medical professional trained in altitude physiology can be invaluable.

A trained physician can gather the necessary medical history to assess a passenger's breathing difficulties and the possible cause – whether the individual is evaluated at the gate or in the air. This assessment will reveal treatment options or, in the case of pre-boarding, whether the passenger is able to continue on to the scheduled flight.

The physician will take into consideration factors such as morbid obesity, history of claustrophobia, anxiety or fear of flying, asking about any recent deep vein thrombosis or acute allergic reactions – all conditions that can result in acute shortness of breath or difficulty breathing.

The physician will also consider whether respiratory symptoms indicate the sudden onset of a cardiac event. Finally, a physician can provide assistance with further medical intervention, such as the administration of oxygen or the use of inhalers that typically supply medicine directly to the lungs. ■

Robin Drake has 10 years of experience in nursing including emergency room care. She also has 20 years of experience as a paramedic, flight medic and flight nurse. With multiple instructor certifications, she has worked as an RN case manager at MedAire for four years.

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