

When the passenger becomes the patient

In-flight medical problems are set to increase. David Newman outlines the most common ones.

AS THE POPULATION ages and passenger numbers increase, the number of in-flight medical problems will rise. Almost 2 billion people travel on commercial aircraft each year, and around 5 per cent of them have chronic illnesses.

Flying puts passengers under additional physiological stress from reduced oxygen levels, noise, vibration, dehydration and changes in pressure and temperature. Fatigue can also be a factor, particularly if the flight is long.

Meanwhile, the demands of modern air travel impose psychological stress on passengers, stress often amplified by the reason for the trip.

British Airways reports an in-flight medical incident rate of one in 11,000 passengers. In almost 1,000 of these incidents, cabin crew had to get help from a doctor or nurse on board.

And there were 13 in-flight medical incidents each day on US domestic flights from 1996 until 1997. The rate of in-flight medical events on international flights is estimated to be one event per 14,000 passengers. At a major US airport, there was some form of in-flight medical emergency on one out of every 750 flights.

There are no Australian data available on in-flight medical emergencies.

In-flight medical emergencies sometimes force aircraft diversions. Airlines do not take such decisions lightly, because diversions are expensive for airlines and inconvenient for passengers.

In 1998 and 1999, 18 Virgin Atlantic Airways flights were diverted for medical emergencies. The most common reasons were cardiac problems (28 per cent), neurological problems (20 per cent) and food poisoning (20 per cent).

According to the International Air Trans-



Supplies for any surprises:
On-board physicians' kits provide most of the equipment needed to deal with an in-flight medical emergency.

port Association, between 1977 and 1984, one in every 3 million passengers died in flight. Most of the deaths occurred in middle-aged men, and the main cause of death was heart disease.

Cabin crew can handle most medical problems. In 70 per cent of cases, British Airways flight attendants were able to cope with in-flight problems efficiently without help, according to one study. Passengers can often be enlisted to help with more serious cases. In 90 per cent of cases, one of the passengers is medically qualified. And many major airlines are now also using telemedicine, with the aircraft linked to a specialist ground-based medical centre.

Most in-flight medical events, including fainting, hyperventilation and ear problems, are not serious.

The most common emergencies are cardiac, gastrointestinal, neurological and respiratory illness.

Chest pain: Chest pain can indicate anything from indigestion, through heart pain (angina) to heart attack.

The symptoms of heart attack are chest pain, shortness of breath and perspiration. The passenger should be reassured, made comfortable, and given oxygen. Treatment of the symptoms is important. Aspirin and glyceryl trinitrate spray are indicated if angina or heart attack is suspected. These might relieve the symptoms.

Many airlines carry on-board cardiac monitors and automatic external defibrillators, and cabin crew should know how to use them, according to their standard operating procedures. In serious cases, a diversion might be necessary.

If the patient deteriorates and collapses due to cardiac arrest, full cardiopulmonary resuscitation will be necessary. This might not be easy in the confines of the cabin, and the patient might need to be placed on the floor or across a row of seats.

Collapse: In many cases the collapse will be a faint caused by dehydration, for example. In most cases, the passenger will recover quickly and feel better with leg elevation and the administration of fluids and oxygen. Make the patient comfortable and loosen their clothing.

The collapsed and unconscious patient is more difficult to assess. They might have had a heart attack, a stroke or, in the case of diabetics, low blood sugar levels (hypoglycaemia). You should go through the standard first aid steps – airway, breathing and circulation. Full cardiopulmonary resuscitation (CPR) might be necessary. Oxygen should be given, as well as glucose, either intravenously or orally, in case the cause of the collapse was hypoglycaemia.

Gastrointestinal problems: Generally, vomiting and diarrhoea are treated easily with fluid replacement and anti-vomiting or anti-diarrhoeal medication from the on-board medical kit. In severe cases, particularly with persistent vomiting, an injection of anti-vomiting agent and intravenous fluid replacement might be needed. Diversions might be necessary in food poisoning cases causing severe vomiting and/or diarrhoea in many passengers.

To minimise the risk of gastroenteritis incapacitating the entire flight crew, airlines, including Cathay Pacific, advise

staff to choose separate meals from the menu.

Neurological problems: The stress of travel, especially fatigue, can trigger epileptic seizures. In many cases, passengers inadvertently pack their medication in their suitcases rather than carry-on baggage. Oxygen can be given, and the patient's airway should be kept clear. In most cases, the seizure will end by itself. If it does not, flight attendants might need to get help from medically-qualified passengers or administer anti-seizure medication (if carried). The aircraft might need to be diverted if the seizure continues.

Confusion, unresponsiveness, slurred speech, collapse, weakness and paralysis could indicate a stroke due to a blood clot or brain haemorrhage. There is little that can be done on board other than giving oxygen and making the passenger comfortable. Diversion might be necessary.

Respiratory problems: According to a British Airways study, asthma is the most common potentially life-threatening condition reported on its aircraft. Most cases are minor, however. Attacks can be triggered by many causes, and passengers often forget to carry their medication with them. Reassure the passenger and give them oxygen. Bronchodilators (inhaled or injectable) from the on-board medical kit might be necessary.

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Doctor on board: A British study found that in 90 per cent of cases, one of the passengers was medically qualified.

ADVICE FOR CABIN CREW

"Excuse me but the person sitting beside me just clutched his chest and seems to have fainted!"

What do you do as a flight attendant when a worried passenger confronts you with that statement?

Cabin crew working for major carriers have standard procedures laid down in their companies' cabin procedures manuals. They will have practised managing many different medical emergencies so that each crew member knows their role as part of the team.

Cabin crew working for smaller operators might not have the same training and information available to them.

There are big differences in the resources and space available to cabin crew. For example, a single cabin attendant on a Saab 340 with a full load of passengers has far fewer options than an attendant on a Boeing 747 with colleagues to assist and lots of space and access to reclining or bunk type seats.

Minor illnesses like headache or gastroenteritis rarely present a major health risk, given that the passenger is unlikely to suffer any long-term ill effects.

Following is a series of prioritised steps that can be followed to manage an inflight medical emergency such as a collapse or near collapse.

- On every flight cabin crew should make an assessment of the cabin and the space available in case an inflight medical emergency occurs. You should think about where you would put a sick passenger and where you might move other passengers if it becomes necessary for you to create space around a sick passenger. If the aircraft is full this might mean getting passengers to vacate their seats and stand in the aisle. If there is a chance of turbulence you might need to move the sick passenger to an open area like the door vestibule or galley.

- If you are told of a collapsed passenger, go immediately to make an assessment. If you are not a solo cabin attendant, advise one of your colleagues to accompany you. Generally a quick glance will reveal whether your colleague needs to run for the resuscitation kit and enlist the help of other cabin attendants if available.

- If possible you should move other passengers away to give you room. However, do not send the patient's travel companions away because they might be able to tell you about past illnesses, medication and any history of the current problem.

- Following standard first aid principles you should assess airway, breathing and circulation. If you are unable to rouse the patient you will need the oxygen and resuscitation kit. Don't hesitate to use oxygen for any collapse, as very few conditions will be harmed by its use. The only risk is fire, but with non-smoking cabins this should not be a problem.

- Make the patient accessible. If arm rests can be retracted lie the patient on the seats or move the patient onto the floor in an aisle so a more thorough assessment can be made. If the patient is not breathing, artificial respiration using the resuscitator and oxygen must be started immediately.

- Enlist help from passengers if necessary. Make an appeal on the PA for medical personnel on board to help.

- Once a thorough assessment of airway, breathing and circulation has been performed, the level of ongoing resuscitation that is necessary will be obvious. Frequently at this point the passenger will wake up and look a little confused, having just had a simple faint as a result of anxiety or hyperventilation.

- Do not leave the patient unless there is someone else taking control of the resuscitation or the patient is conscious and breathing spontaneously.

- Once you are satisfied that the patient is breathing satisfactorily, but still not fully conscious, place them in the standard recovery position (left lateral) and nominate someone to monitor them.

Note: The information presented represents just one of several possible methods for dealing with the initial management of inflight medical emergencies. Check your company's cabin procedures. Pilots making a decision to divert should go to an airfield with the appropriate medical facilities, not just the closest.

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