TRAVEL MEDICINE

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Photos: Sr Andiswa Bombil of SAA

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Is there a doctor on board?

International Code of Medical Ethics:
A doctor must give emergency care as a humanitarian duty unless he is assured that others are willing and able to give such care

A young lady went into labour. This is an event that takes place every minute somewhere on earth, but it is unusual to occur in an aircraft. Especially if the aircraft is flying somewhere over the Atlantic ocean, en route to New York from Johannesburg, and is already on course for four hours. The young full-term lady somehow slipped through the standard airport screening procedures and boarded the South African Airways (SAA) flight in April 2013. Luckily, as happens in close to eighty percent of cases of in-flight medical emergencies, there were passengers who happened to be medically trained. In this case there was a gynaecologist as well as a nurse, and together they delivered the baby safely and the flight continued undiverted. Stories abound of these types of events. Probably the most celebrated case of rendering heroic medical assistance miles in the air was the one involving Professor Wallace in 1995. As an orthopaedic surgeon, he innovatively used an assortment of equipment, including a coat hanger, catheter, bottled water and some brandy to relieve a pneumothorax.

But, before we overtly romanticise the role of the doctor, nurse or paramedic who just happens to travel on a flight on which an emergency is taking place, we have to consider the resource setting. It is a lonely and isolated place high up in the sky! The conditions are cramped; the noise levels and standard of illumination are not conducive to proper medical examination, and often the desired instruments are not readily available. The 10-20% humidity of cabin air is way below the optimal range of 40-70%. This leads to drying effect on the cornea and respiratory passages, and can trigger irritations. The drying of the skin and increased insensible fluid loss, as well as decreased fluid intake, can lead to dehydration and postural hypotension. Gas expansion due to low cabin pressure is a common source of abdominal discomfort. The partial pressure of oxygen is lower than at sea level, and there are frequently language barriers frustrating communication. The same famous pneumothorax case bore out that reality: no one told the patient to always keep the drainage bottle BELOW the level of her chest. When she went to the bathroom she inadvertently placed the bottle above her and had water running into her thorax. Also, the examination was limited out of necessity, and a rib fracture on her was missed.

A coat hanger as a trochar, evian water as underwater seal, folley's catheter as drainage tube, towels as draping, sellotape as sealant, and some sterilising brandy: hey presto, pneumothorax managed!

A big emphasis has been put on cabin crew training over the last few years and they tend to manage most minor medical incidents very competently; over seventy percent of such events on SAA, our own national airline, are dealt by them. All crew members are obliged to be trained in basic first aid and have to attend refresher courses regularly. In fact, flight attendants' assessments in some instances had a concordance of over ninety percent with a later established medical diagnosis. Current data suggests that, though most in-flight

medical events are not serious, the percentage of severe emergencies is increasing. At least one cabin attendant will be trained on how to use the automatic external defibrillator (AED). Of course altercations, such as where a cabin attendant insisted that a passenger with an intractable nosebleed should tilt the head BACKWARDS whilst the volunteer ENT surgeon wanted it tilted FORWARD still occur!

The crew normally are aware of their limitations and, in the case of SAA, announce the dreaded call of 'Is there a doctor on board?' in about 25% of in-flight medical events. As mentioned before, there is a close to an 80% chance of a medically trained passenger being on board an international flight. This figure might be larger as it is suspected that the fear of liability, especially if flying on foreign airlines, inhibits some doctors of availing their services. Others might be reticent as emergencies might be outside their scope of specialised practice; a dermatologist close to retirement sitting in business class and who had just had a substantial quantity of alcohol indicated that the prospect of attending to a dyspnoeic passenger was too daunting.

Cabin attendees predominantly see a mixture of 'feeling faint' and other neurological afflictions, gastrointestinal complaints, traumatic events, as well as cardiac and respiratory complaints. The more serious cases that require medical attention and possibly aircraft diversion mainly involve cardiac, neurological and respiratory conditions. The leading cause of death on aircrafts is cardiac related, and all international aircrafts carry an AED on board. No, it is not as daunting as it seems! A number of airlines have telephonic links to ground based emergency specialist who are well versed with in-flight emergencies. All they need are some 'ears and eyes' in order to assess the seriousness of the patient.

So what are the duties of a medical professional? The International Code of Medical Ethics stated the following: "A doctor must give emergency care as a humanitarian duty unless he is assured that others are willing and able to give such care. When the legal aspects are considered, the words of Lord Justice Stuart-Smith should be borne in mind: 'The only duty of a medical officer as a matter of law is not to make the victim's condition worse.' Cabin attendants welcome medical input and a volunteer is considered part of a team. The advice of medical volunteers has been recognised; nearly half of physician directed diversions led to hospital admission whilst only 15% of diversions that did not have a medical volunteer's involvement did so. The first aid kit, which contains no medicine, is offered first and identification is often required before the medicine containing doctor's bag is offered. Volunteers should not fear litigation, and if in doubt, written indemnity can be obtained. If the airline has ground based medical support, contacting them would assist in the more difficult cases. Detailed record keeping is essential.

Cardiac afflictions resulted in over 25% of diversions and are probably the leading cause of in-flight deaths. This is a rare event; SAA had only one in-flight death in 2011, which translated to one death per five million passengers flown! The industry average is one death per two million passengers. The AED is a life-saving device, but when was the last time the ordinary doctor or nurse used it? It is far more sensible to advise the trained cabin attendant to affix it if indicated. The machine provides guidance and the ground support staff may assist if the volunteer is uncertain of his competence. The one absolute is to NEVER OFFCIALLY PRONOUNCE A PATIENT DEAD. This is especially relevant if flying to or from countries with dubious human rights records.

Duty of Medical Volunteer:
'His only duty as a matter of law is not to make the victim's condition worse.'
Lord Justice Stuart-Smith

The overwhelming number of interventions however is competently handled by the volunteer and is mostly gracefully acknowledged. Compensation may not be demanded from the airline, even if extensive time was spent resuscitating a passenger. Sometimes an upgrade is offered and should definitely not be turned down! It certainly does not cross ethical compensation issues. It is one of the positives, besides assisting a fellow human being, of answering the call of: 'Is there a doctor on board?' d

The doctor's bag contains oral and injectable medications as well as a suturing kit.

The first aid kit contains no medication.

One of the crew members is trained to use the automatic external defribillator; it is sometimes better to let them handle it.

The medical grab bag contains advanced life saving equipment such as intubation tubes and laryngoscopes.