

In Flight Emergencies

Mile High Medicine

March 2016 brings us the first [Emergency Medicine Interest Group \(EMIG\)](#) workshop of the year. We are looking forward to this week's session on inflight emergencies.



Here we present some brief information (workshop pre-reading) about 'in-flight emergencies' based on the recent NEJM article by Nable et al (2015) and [FOAMed](#).

What are the stats?

Over 2 year period: 16 Emergencies per million passengers	Aircraft diverted in 1 out of 10 Emergencies
An AED (defibrillator) was applied in 137 cases	12,000 Emergencies from 7,000,000 flights
1 out of 600 flights has a medical emergency	Births and Deaths are very rare (only 1/200 Emergencies)

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Common Treatments

Oxygen	IV Saline
Aspirin	Antiemetic

Common Complaints

Light-headedness	Syncope
Nausea and Vomiting	Respiratory Distress



What medical kits are carried?

On most flights the following are available:

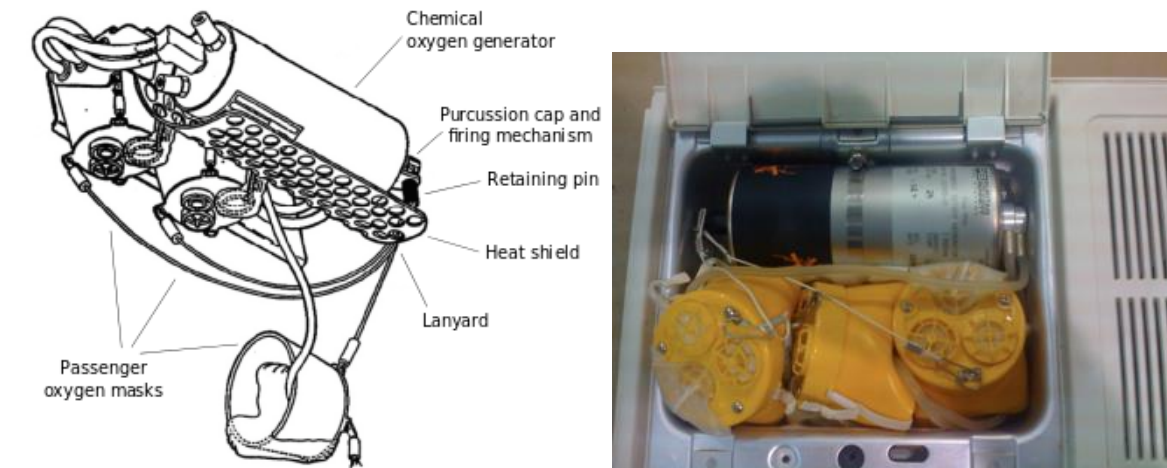
- Limited Emergency Drugs (see below)
- Limited equipment including bandages
- A Defibrillator (AED)



- Oxygen cylinders are not routinely carried on flights (but patients may apply to an airline to bring their own with them).
- Crew may be able to assist with providing limited oxygen or change of plane altitude (see [Dalton's Law CICM](#))
- Emergency oxygen via drop down masks is provided by '[chemical oxygen concentrating systems](#)' activated in an emergency decompression of the cabin.

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Oxygen System on board



What is the full list of typical equipment available on commercial airlines?

Medications

Analgesic tablets, nonnarcotic
 Antihistamine tablets
 Antihistamine, injectable
 Aspirin
 Atropine
 Bronchodilator inhaler
 Dextrose, 50%
 Epinephrine, 1:1000 solution
 Epinephrine, 1:10,000 solution
 Intravenous lidocaine
 Nitroglycerin tablets

Assessment Supplies

Sphygmomanometer
 Stethoscope
 Gloves

Airway and Breathing

Oropharyngeal airways
 Bag-valve masks (3 sizes)
 CPR masks (3 sizes)

Intravenous Access

Intravenous administration set
 Saline solution, 500 ml
 Needles
 Syringes



How common are emergencies in the air?

Emergencies occur approximately in one in every 600 flights. Births and Deaths are **very** rare but do occur. To prevent the former, pregnant women within a month of delivering (due date) are barred from flying (international flights).

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In the USA, domestic flights allow women to fly up to 7 days before due dates and after 7 days post-partum. Deaths occur very rarely, but may happen on occasion even where an expensive emergency diversion and effective CPR have occurred in the air.



What emergencies commonly occur?

- Lightheadedness or fainting (37%)
- Respiratory problems (12%)
- Nausea or vomiting (10%) – some articles say this is more common
- Cardiac symptoms (8%)
- Seizures (6%)
- Other Emergencies
 - (Lacerations 0.3%, Cardiac arrest ~0.3%, Ear pain ~0.4%, Obstetrical or gynecological symptoms ~0.5%, Headache ~1%)



Am I at risk if respond (in a legal sense)?

In a word, no.

“In 1998, Congress passed the Aviation Medical Assistance Act (AMAA), which protects providers who respond to in-flight medical emergencies from liability and thus encourages medical professionals to assist in emergencies”

TAKE HOMES FROM SIMS

