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# 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)

Common Treatments		Common Complaints	
Oxygen	IV Saline	Light-headedness	Syncope
Aspirin	Antiemetic	Nausea and Vomiting	Respiratory Distress



### What medical kits are carried?

On most flights the following are available:

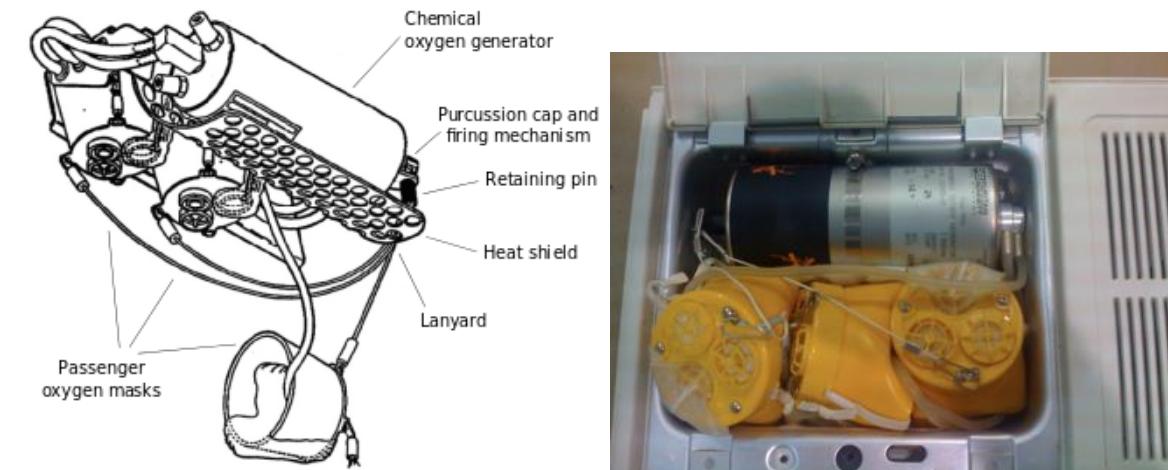
- Limited Emergency Drugs (see below)
- Limited equipment including bandages
- A Defibrillator (AED)



- 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

