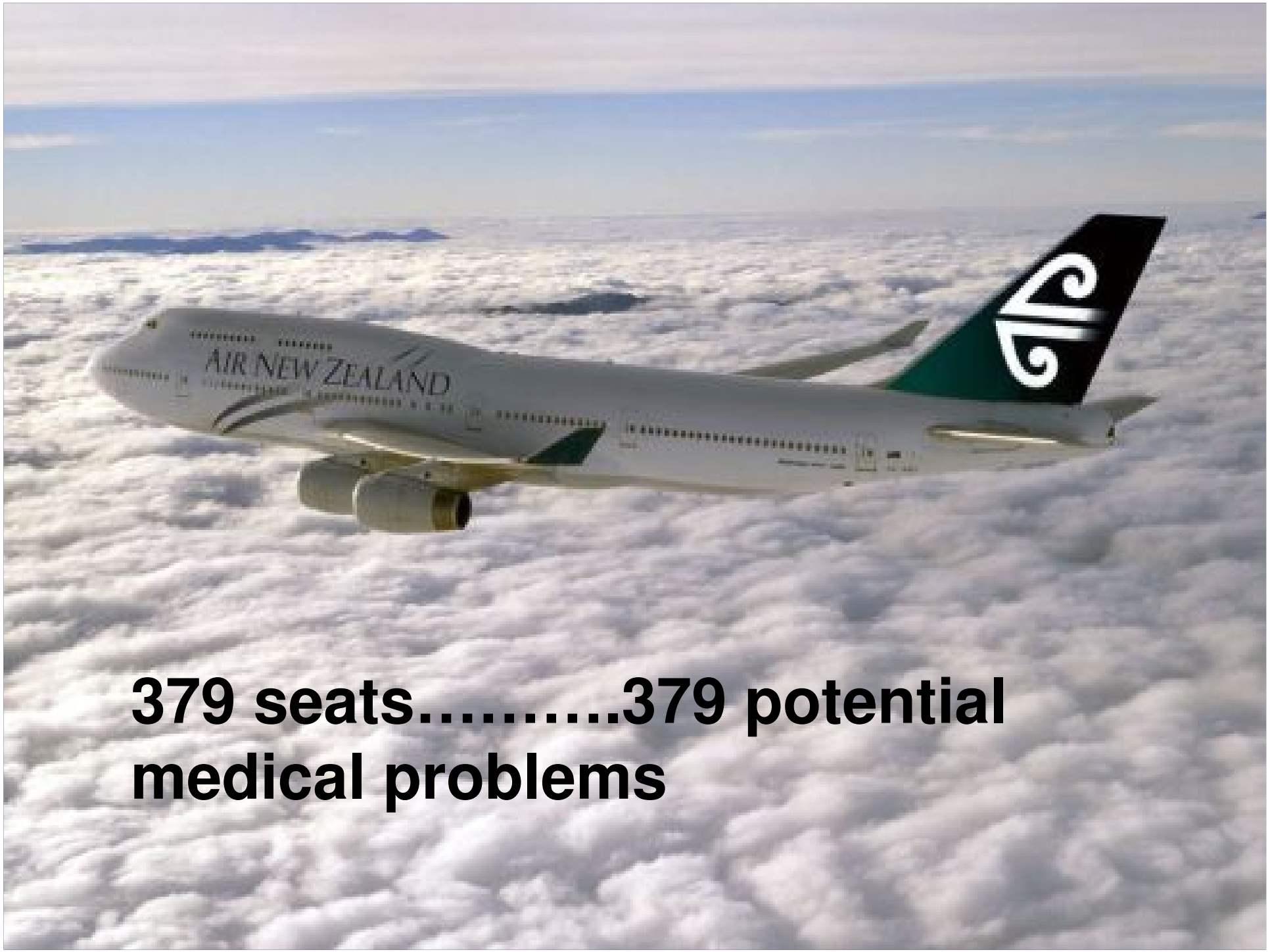
Passenger Health

Dr Sarah Aldington
Air New Zealand Medical Officer

Times are changing……



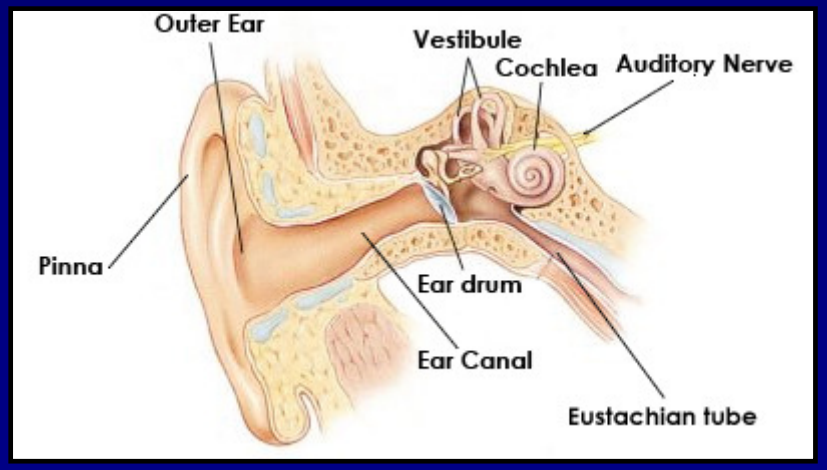
379 seats…….379 potential medical problems

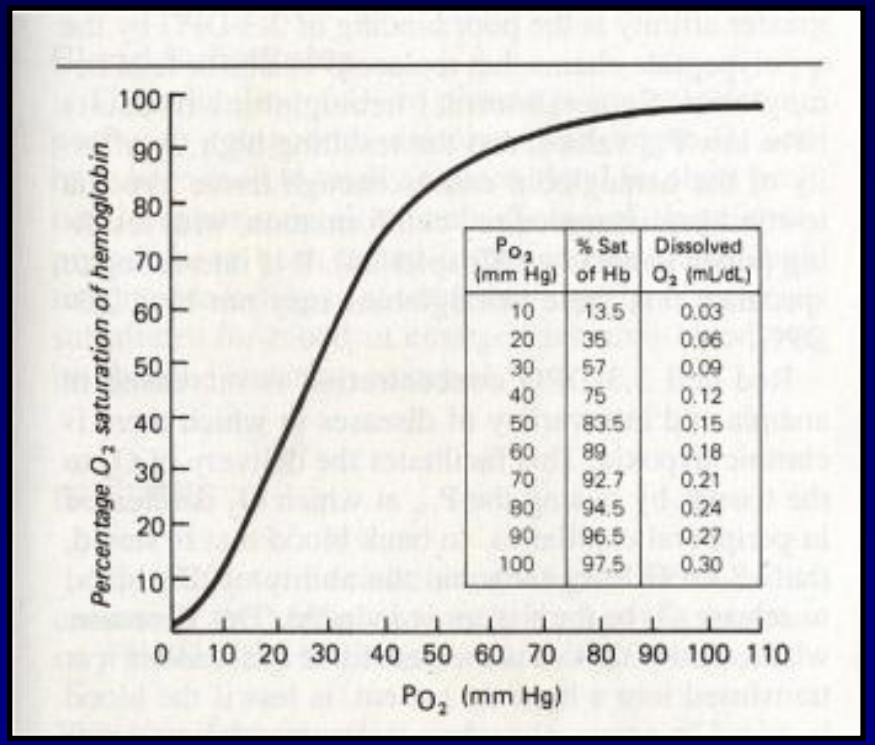

London
Stockholm
Copenhagen
Manchester
Frankfurt
Paris
Vienna
Munich
Beijing
Osaka
Tokyo
Shanghai
Hong Kong
Sao Paulo
Calgary
Vancouver
Toronto
Montreal
San Francisco
Los Angeles
Washington DC
New Orleans
Honolulu
Mexico
Guadalajara
Vanuatu
Niue
Papeete
Rarotonga
Brisbane
Perth
Sydney
Adelaide
Melbourne
Auckland
Wellington
Christchurch
Key
Air New Zealand
Key Air New Zealand codeshare partners
Star Alliance Hub Cities
Routes shown operated by key Air New Zealand codeshare partner airlines are subject to change without notice. Not all routes of partner airlines are shown.

Passenger health Issues

At 8,000 ft……

- Reduced barometric pressure
- Reduced partial pressure of oxygen





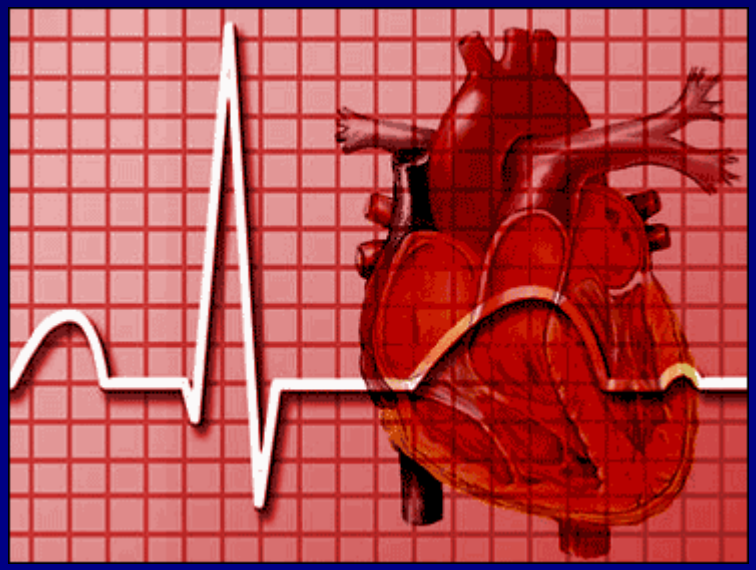
P_{O_2} (mm Hg)	% Sat of Hb	Dissolved O_2 (mL/dL)
10	13.5	0.03
20	35	0.06
30	57	0.09
40	75	0.12
50	83.5	0.15
60	89	0.18
70	92.7	0.21
80	94.5	0.24
90	96.5	0.27
100	97.5	0.30

The realities of air travel

- Forgotten medications
- Interaction with alcohol
- Fatigue and stress prior to trip

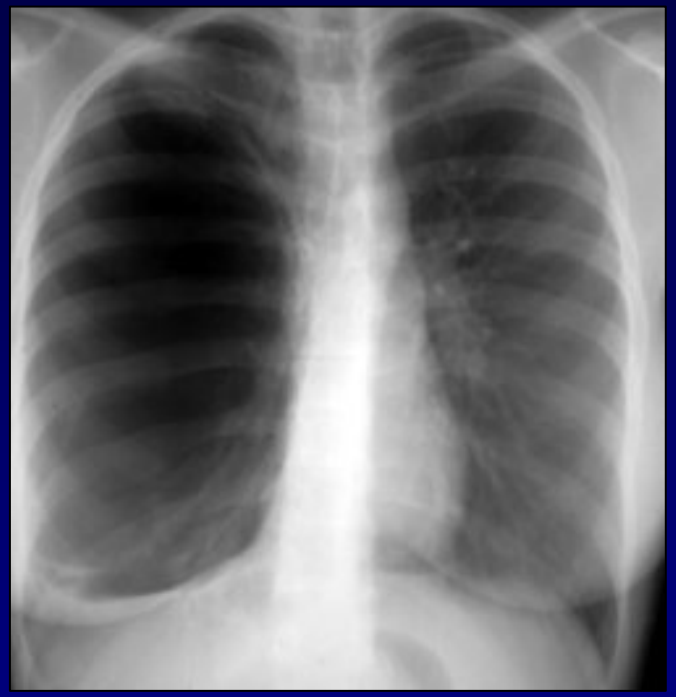
Cardiovascular disease

- Myocardial infarctions
- Angina
- Cardiac Failure
- Valvular heart disease



Respiratory disease

- Pneumothorax
- Asthma
- COPD



Oxygen assessments

- Complicated
  - Altitude chambers
  - 15% oxygen trial

- Simple
  - Can they walk 100m with their hand luggage unassisted?
  - SPO2 on the ground <88% *does* need oxygen, <93% *may* need oxygen

Diabetes

- Goal is to avoid hypoglycaemia in flight
- Westwards travel: additional short acting or ↑ dose of intermediate
- Eastwards travel: ↓ dose of intermediate and long acting insulin

- Storage of insulin

Broken bones

- Causes problems if limb swells within closed cast
- Lower limb casts split if <72 hours
- Long leg casts a problem if limited space
- Exit row not permitted!!

Haematological conditions

- Severe anaemia
- Sickle cell (rare in New Zealanders)
- Thrombophilia

- Rule of thumb:
  <8g/dl assess need for transfusion or supplementary oxygen

Pregnancy

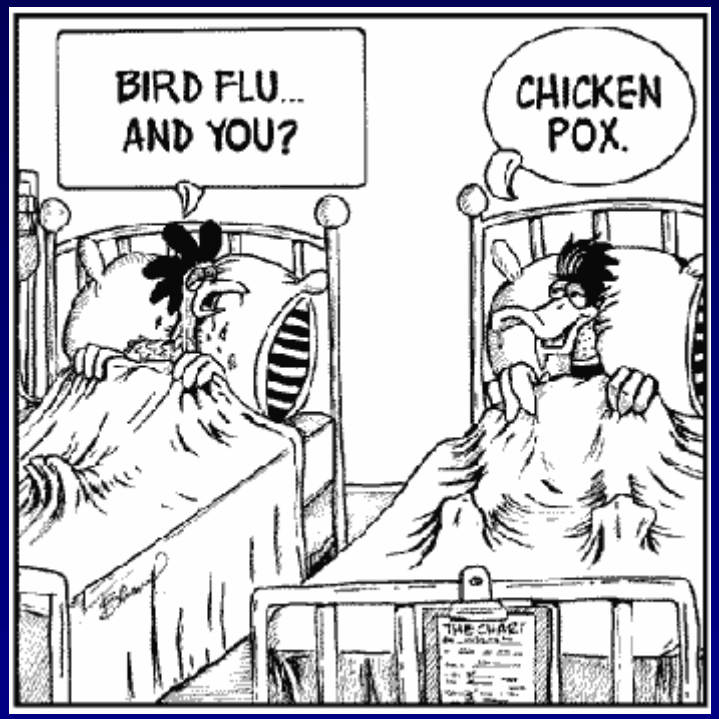
- Placental oxygen preferentially preserved
- Flying permitted up to 36 weeks
- Considerations:
  - Multiple pregnancy
  - Medical complications in foetus
  - History prem labour

Surgery

- Laparoscopic surgery
- Retinal detachment (SF6 – 6/52 to clear)
- Major abdominal surgery

Infectious passengers

- TB
- Chicken pox
- Measles
- Mumps



DVT prevention

- Risk secondary to air travel is controversial: 1 in 4656 flights
- Multi-factorial
- Related to duration of flight (>4 hours)

Slightly increased risk
Age >40 yrs
Obesity
Varicose veins
Polycythaemia

Moderate risk
Family history
Pregnancy
Post natal
OCP
Recent MI
Limb paralysis
Limb surgery or trauma

High risk
Previous VTE
Thrombophilia
Major surgery
Malignancy
Previous CVA

DVT Prophylaxis

All passengers	Slightly increased risk	Moderate risk	High risk
Avoid alcohol Remain mobile Leg exercises			
	Avoid sleeping pills Avoid sleeping for long periods Consider graduated compression stockings		
		Graduated compression stockings	
			LMW Heparin

Psychiatric conditions

- Anxiety and fear of flying
- Claustrophobia
- Major Psychoses

- Escort if unstable
- Medical +/- security

Special Needs

- Mobility
- Blind, Deaf
- Allergies
- Neonates
- Terminally ill

AIR NEW ZEALAND

Medical Fitness for Air Travel (MEDA) - Dec 2003

PLEASE PRINT IN BLOCK CAPITALS

Flight Details – **Your Travel Agent will complete this.** Air New Zealand Booking Reference: _____

NAME: _____ AGE: _____ DAYTIME TELEPHONE: ( )

Flight No: NZ _____ Date: _____ From: _____ To: _____

Flight No: NZ _____ Date: _____ From: _____ To: _____

Flight No: NZ _____ Date: _____ From: _____ To: _____

Flight No: NZ _____ Date: _____ From: _____ To: _____

Are you travelling with: (please circle): A companion? A doctor? A nurse?

Their Name: _____ Their Air New Zealand Booking Reference : _____

Medical Details – **Your Doctor will help complete this.**

DIAGNOSIS OR CONDITION

DESCRIPTION : _____

SEVERITY Mild ☐ Moderate ☐ Severe ☐

Date of Injury/Illness/Surgery (if applicable): _____ Date of Discharge from Hospital (if applicable): _____

Services Requested – Your Doctor can help with this. Tick (✓) as required.

- ☐ Aisle Seat
- ☐ Seat Near Toilet
- ☐ Quadriplegic torso harness
- ☐ Wheelchair to the aircraft steps (can manage steps if required)
- ☐ Wheelchair to the aircraft door (cannot manage steps)
- ☐ Wheelchair to the aircraft seat (cannot walk from door to seat)

Note: Ambulance arrangements to/from airports are passenger/escort responsibility.

- ☐ Oxygen 2 litres per minute by Nasal Prongs needs to be **AVAILABLE CONTINUOUSLY** (extra charge applies see note page 2)

Note: Other flowrates available by special arrangement

- ☐ Stretcher
- ☐ Oxygen Bottles to drive ventilator
- ☐ Power Supply to drive incubator

Air New Zealand International Services Only. must be escorted by Qualified Doctor/Nurse with all necessary equipment for in-flight care. **(See Page 2)**

Other Requests: _____

PLEASE NOTE: Flight attendants can not provide assistance with heavy lifting, eating, personal hygiene, ostomy devices or administering medication. Passengers needing help with these need to be accompanied by someone who can assist.

DOCTOR'S CERTIFICATE

AIR NEW ZEALAND LIMITED acknowledges that in providing the requested/attached MEDA information the medical practitioner concerned is providing an opinion to the best of his/her knowledge and assessment of the subject and that the final decision as to whether to accept the subject for carriage on its services rests with Air New Zealand Limited alone.

I have read the considerations overleaf and on the notes attached to this form. In my opinion this person is safe to undertake the proposed flight, is not contagious, and is not likely to effect the safety or well-being of other passengers. I agree that the services requested above are appropriate in the circumstances. This passenger is able to take care of his/her own meals, transfers, personal hygiene, administering medication and other needs in flight. (or escorted by someone who can assist with these needs).

Office Use Only:

Additional Comments: _____

Doctor's Name: _____ Signed: _____ Date: _____

Qualification / Speciality: _____

Doctor's Email Address: _____

Contact Phone Number: _____ Address: _____

PLEASE FAX THIS PAGE ONLY TO AIR NEW ZEALAND CARINA Services : (+64 – 9) 336 2856 OR EMAIL TO CARINA.SERVICES@AIRNZ.CO.NZ

Considerations

1. Is the person a risk to others? (infectious diseases)
2. Will flying exacerbate or complicate the condition?
3. Might the condition cause problems in flight that are difficult to deal with? (seizures)
4. Are there special requirements e.g. oxygen, escort?

Stretchers

Is there a doctor on board?

In flight emergencies

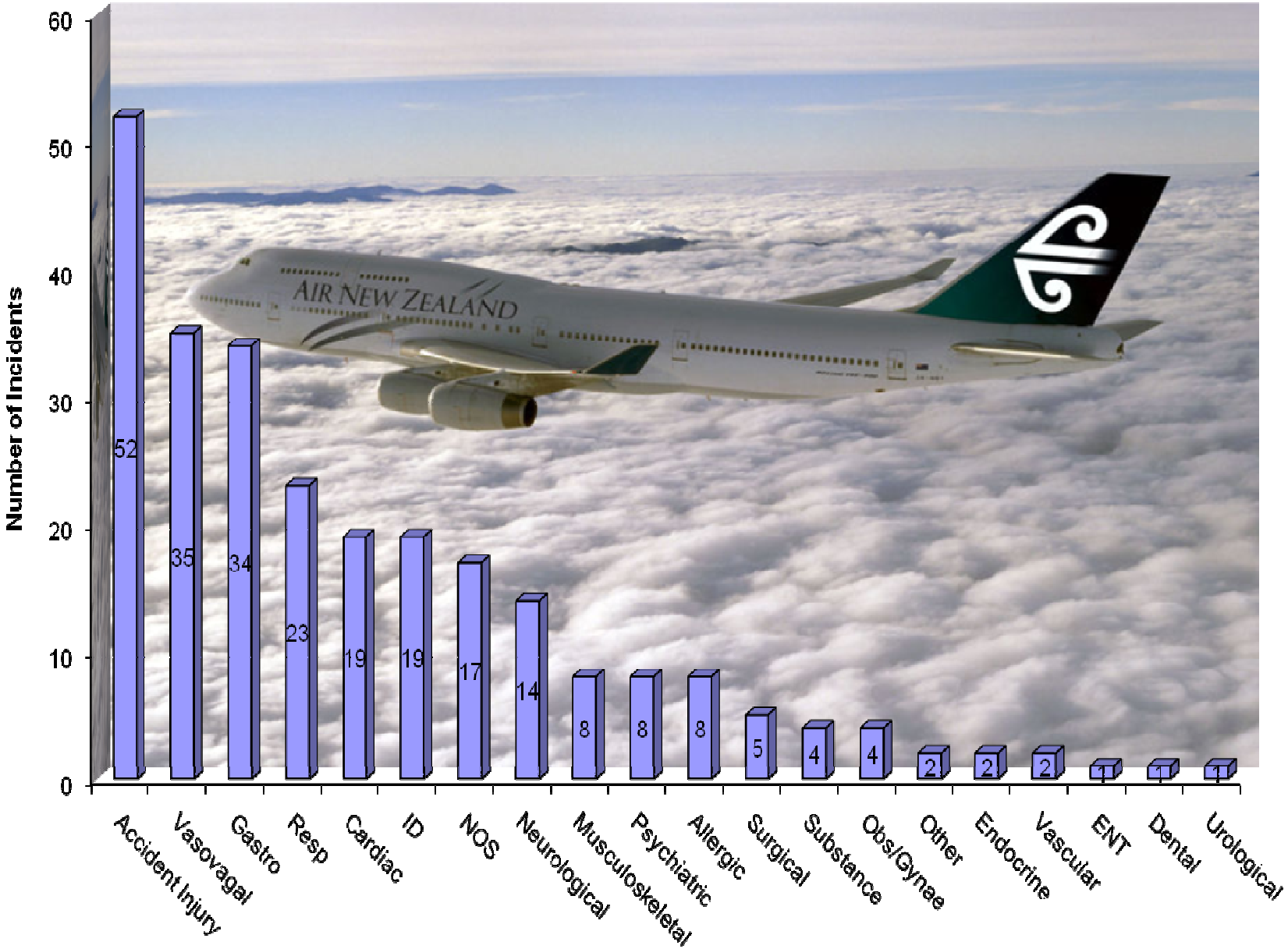
The logistical problems

- Facilities Limited
- Reduced Pressure
- Expertise
- Conditions
- Remote Location
- Legality

The medical problems

- Serious problems
  - Anaphylaxis
  - Choking
  - Cardiac Arrest
- Typical Problems
  - The 4 A's
  - Fear of Flying
  - Indigestion
  - Motion sickness

Air New Zealand In-flight Medical Emergencies From 1 May 08 - 31 May 09



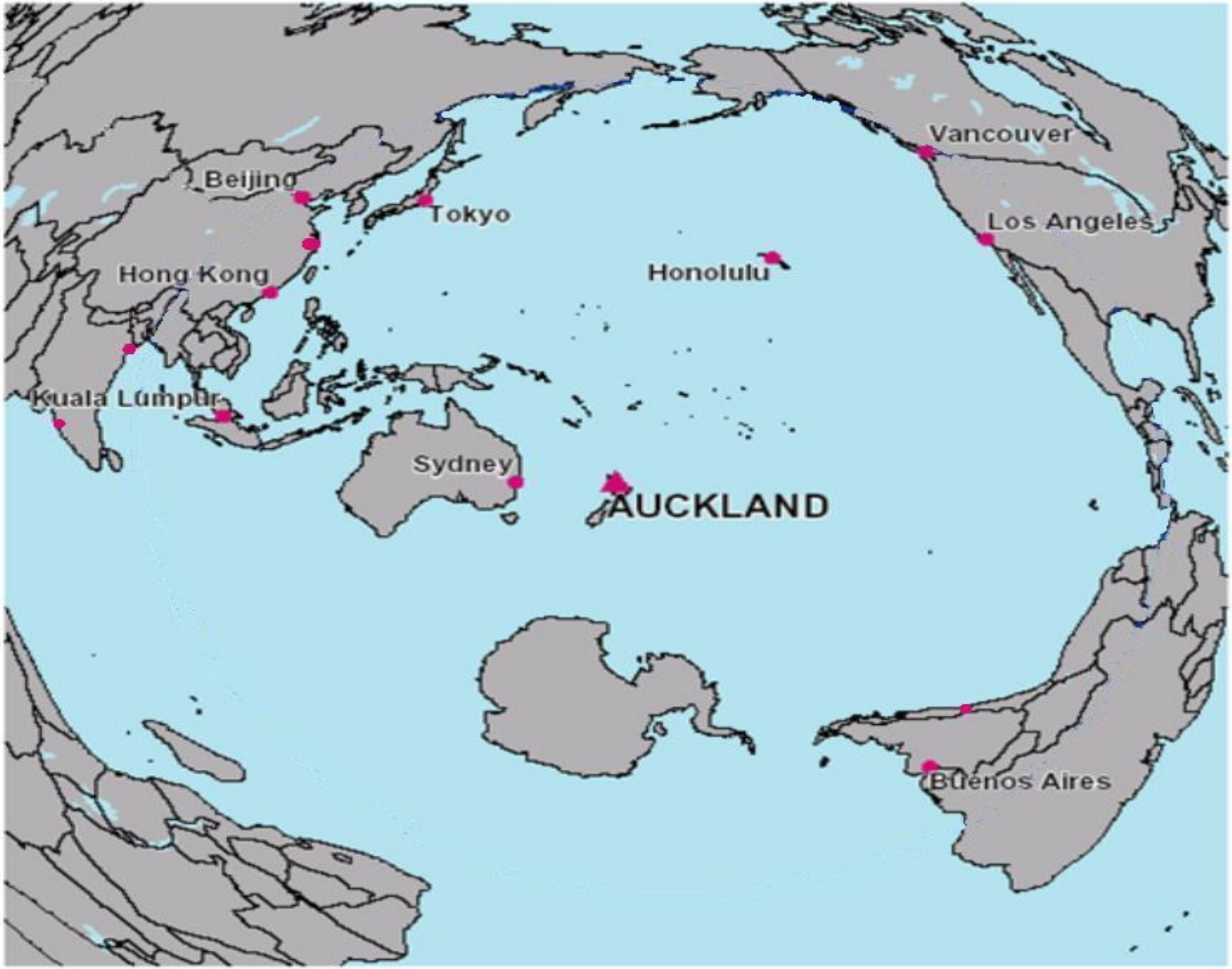

PROFEEL
RES-Q-VAC
EPIPEN
CSL
Ventolin
Nebules 2.5mg


HEARTSTART
HEARTSTART
HEARTSTART
1
2
3
1
2
3
PULL

Ground based assistance

To divert or not to divert?

- Location
- Fuel
- Medical facilities at destination
- Weather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Buenos Aires

Questions?