

AN ANTARCTIC ADVENTURE – HOW LOW CAN YOU GO?

Clinical A/Prof Marcus Skinner

Clinical Director, Department of Anaesthesia and Perioperative Medicine,
Royal Hobart Hospital, Tasmania

“Below the 40th latitude there is no law; below the 50th no god; below the 60th no common sense and below the 70th no intelligence whatsoever.”
Kim Stanley Baker

This talk gives a documented account and outlines the logistical and operational requirements to successfully complete an aero-medical evacuation of a “critically ill patient” from Pegasus Ice Runway at the McMurdo Base Antarctica (Latitude 77.51S) in August 2012.

The Australian Antarctic Division (AAD) conducts and supports collaborative research programs with other Australian and International organisations in Australian Antarctic and Sub-Antarctic territories.

The AAD headquarters is based in Kingston, Tasmania, just south of Hobart. The division’s headquarters houses laboratories for science, electronics and equipment stores, communications and other operational and support facilities and the AAD maintains three permanently manned stations on the Antarctic continent, and one on Macquarie Island in the sub-Antarctic –

- Casey Station (including the seasonal camp at Wilkins Runway)
- Davis Station
- Mawson Station
- Macquarie Island Station



The AAD utilises an air transport system, both for transport to and from Antarctica, and for transport within the continent. Services to and from Antarctica are provided normally between November and February each year, by an Airbus A319 long range aircraft. This aircraft normally operates to and from the Wilkins ice runway, situated some 65 kilometres (40 mi) from Casey Station.

The Royal Hobart Hospital has had a long term clinical and educational supportive role with the Australian Antarctic Division Polar Medicine Unit located in Hobart. Our Anaesthesia and Peri-operative Service has for many years provided a “Lay-Surgical” in theatre education role for expeditioners and placement for up-skilling of the AAD Doctors.

An urgent request was received to undertake an aero-medical retrieval. Staff undertaking this remote location retrieval required a supportive set of skills in addition to clinical specialist skills in Anaesthesia and Intensive Care required to accomplish this mission.



Elements of the mission that will be presented and discussed include –

- Operational activation, mission directive and time critical constraints
- Logistical and clinical needs
- Cold weather medical and aviation operational limitations
- Principles of Aeromedical Retrieval from an isolated, remote “hostile” environment
- “What if” contingencies that were considered
- “Real Risk” issues / operational duration
- Particular issues of landing on ice runways
- A brief look at anaesthesia implications in such an environment

