Ambulance Victoria

Carriage of blood products on all flights

1/09/2011

•Air Ambulance Victoria (AAV) is the aviation department of the state run Ambulance Victoria.

•Ambulance Victoria has 3000 employees operating from 220 branches and responds to non emergency calls and in excess of 300,000 emergency calls pa.

•AAV has been using Fixed Wing since 1962 and Rotary Wing since 1970

Ambulance Victoria

The FW fleet consists of 4 King Air 200s

Total caseload approx 5000 per year

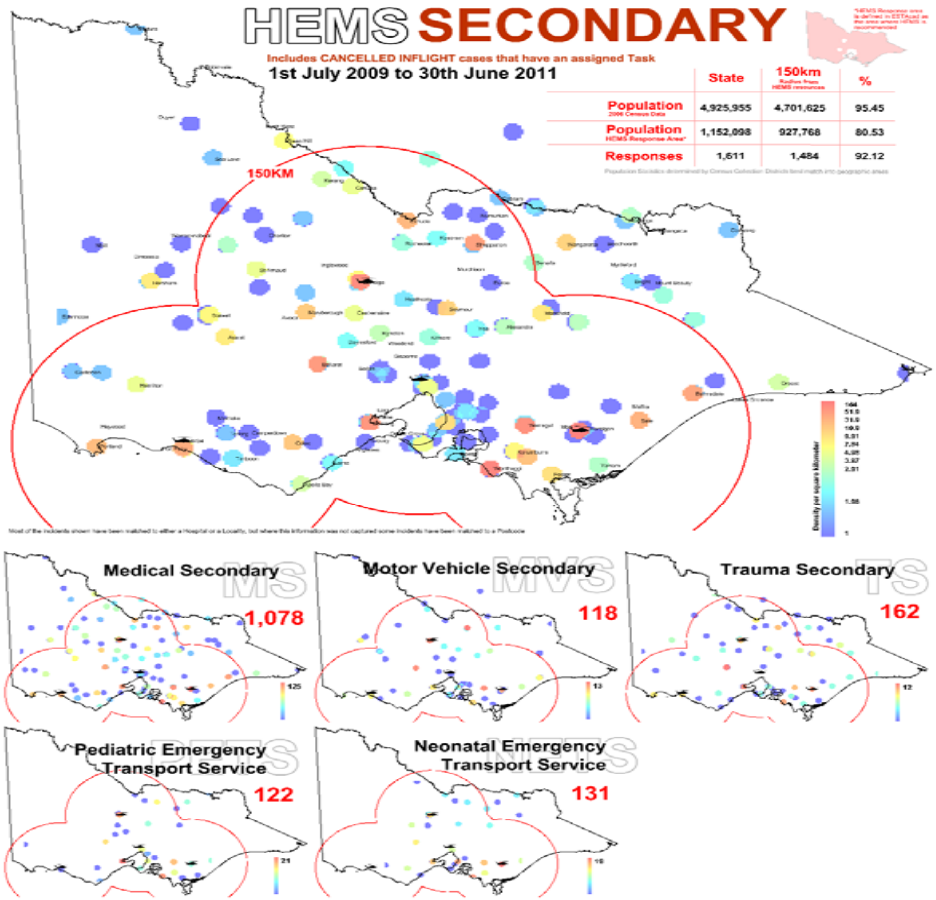
The rotary fleet is 4 x Bell 412s and 1 x N3 (2 central and 3 regional)

Victoria

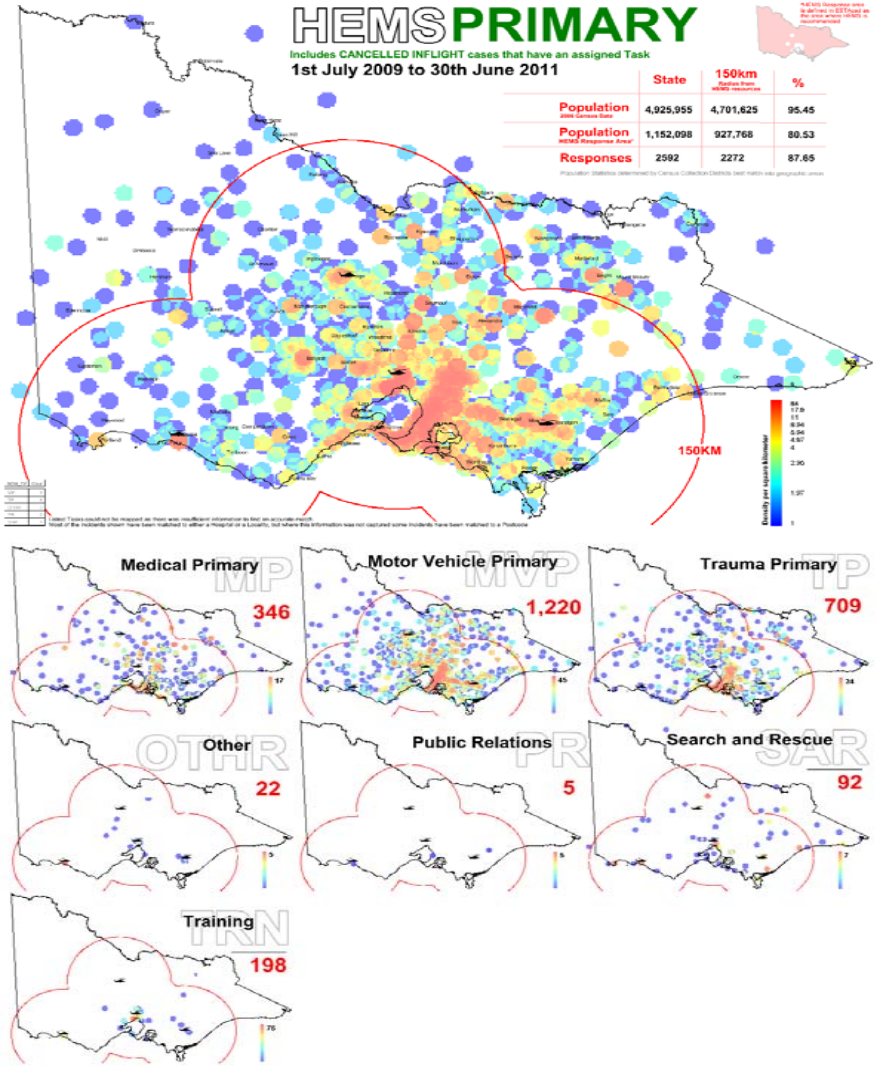
Dispatch

- There is a dedicated Air Ambulance control room.
- Calls originate from the Retrieval agencies
- The majority of calls originate from either of the 2 x AV communications centres. Primary calls are generally from an automatic notification system.

Ambulance Victoria



Total interhospital cases over 2 years. All HEMS aircraft



Total prehospital cases over 2 years. All HEMS aircraft

The case for blood products

- High trauma workload
- History of local hospital pick up
- Coronial case of ectopic pregnancy needing blood

Ambulance Victoria

Divine intervention would have helped getting the process operating

East Meckering arts festival

Ambulance Victoria

Development of the packed red cells project

Ambulance Victoria

The Red Cell Concentrate (RCC) had to be controlled through an acceptable pathology department, in this case the Royal Melbourne Hospital

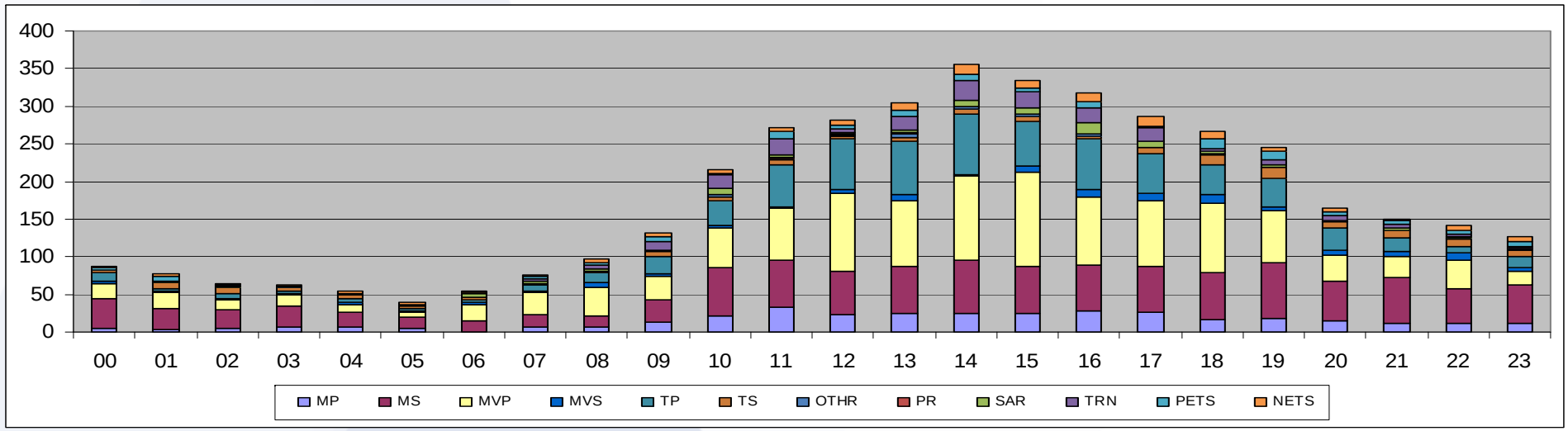
Ambulance Victoria

Defined parameters for storage

- Minus 6^{o} Celsius
- Plus 40^{o} Celsius
- 4 x units of red cell concentrate
- For 9 hours without external power
- Suitable for use in the aircraft

Ambulance Victoria

Examination of tasks, tasking



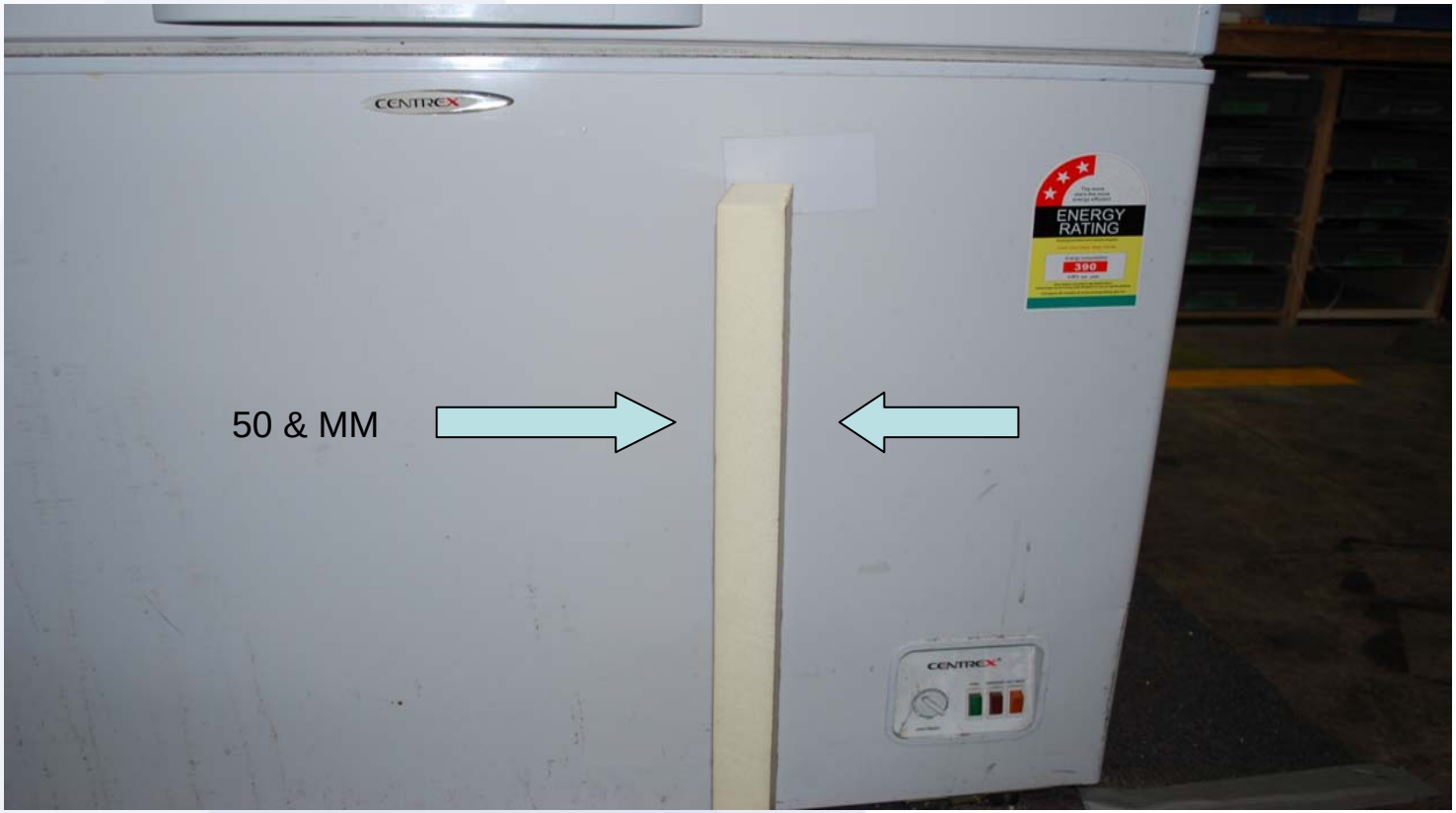
Total HEMS workload July 2009 to June 2011 based on time of day

Ambulance Victoria

The first units tested failed miserably

Ambulance Victoria

There is little option but to use dense insulation



Ambulance Victoria

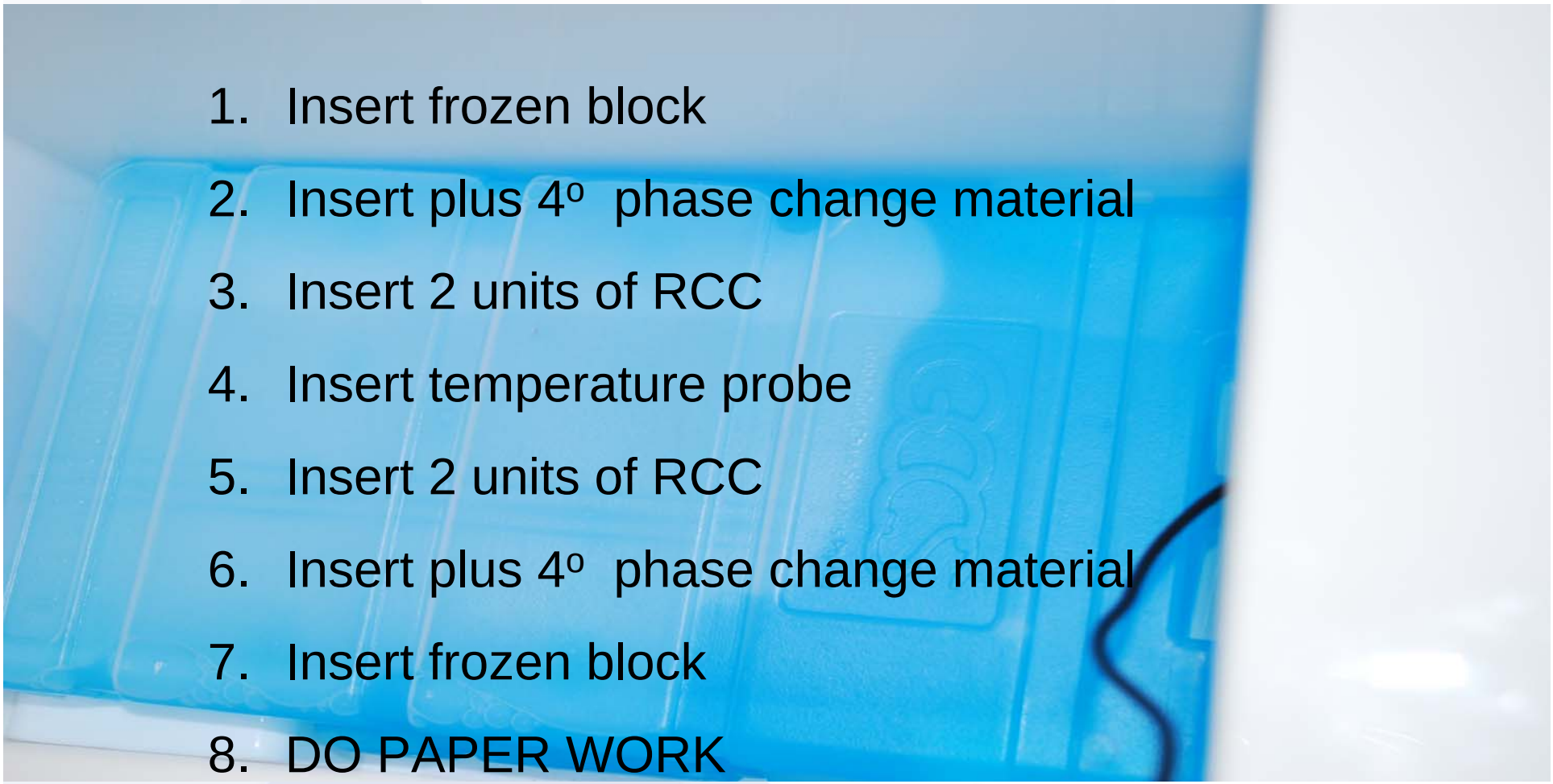
Phase Change Material (PCM) will store up to 15 times the energy of water

Ambulance Victoria

Durability is also a key factor

The process

Ambulance Victoria



1. Insert frozen block
2. Insert plus 4º phase change material
3. Insert 2 units of RCC
4. Insert temperature probe
5. Insert 2 units of RCC
6. Insert plus 4º phase change material
7. Insert frozen block
8. DO PAPER WORK

Ambulance Victoria

The probe is inserted between the units

Ambulance Victoria

FOAM CUPS
237ml / 8oz
MADE IN AUSTRALIA
237ml
M.I.C.A.
PARAMEDIC

The data logger has a 2 year battery life & stores 16,000 recordings

Ambulance Victoria

Activation is via magnet

Ambulance Victoria

A backup lifesaver system is also used

Ambulance Victoria

Wrist band, sample collection vial & paperwork

Ambulance Victoria

N3 storage

RCC storage in the Bell 412

Carriage by FW is PRN

NATA certified fridges are at each base

In the event of alarms calls go to AAV comms

Fridge records are sent weekly (stored 25 years)

Daily data logger downloading

Ambulance Victoria

Weekly loading to pathology of records

Patient record storage for 25 years

Evidence based practice

AUDIT

Ambulance Victoria

Honesty is the best policy

Ambulance Victoria

Audit process

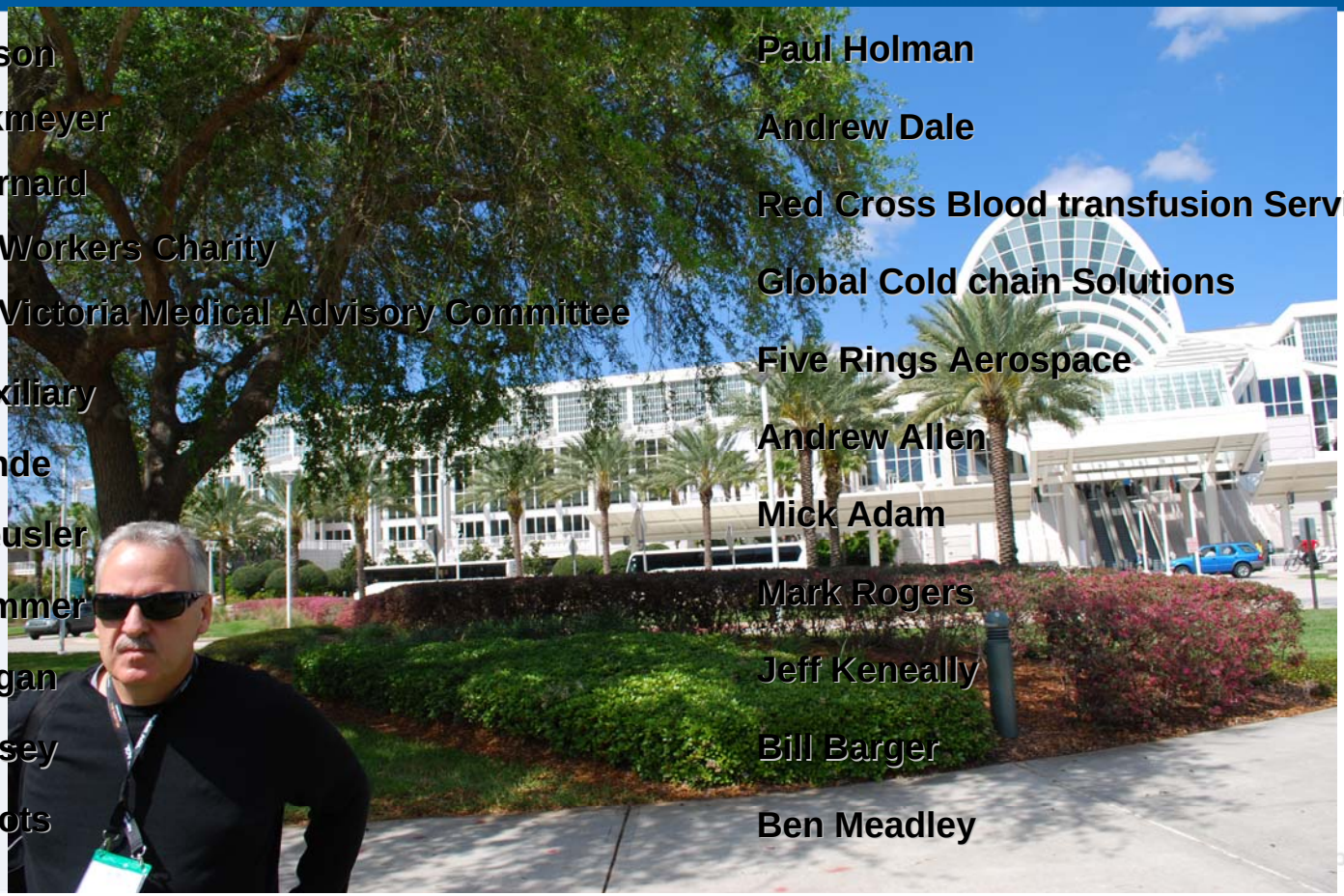
1. Self
2. Peer
3. Team Manager
4. Clinical Support Officer
5. Limited occurrence screening
6. AAV Clinical meeting review
7. Medical Advisory Committee
8. Sentinel Events Committee

Ambulance Victoria

Audit process cont.

1. Royal Melbourne Hospital for all cases
2. Royal Melbourne Hospital for EN and LTV bases
3. Healthscope for HEMS 4
4. Bendigo Health for HEMS 3
5. Joint pathologies/ Red Cross
6. VSTORM

I WOULD LIKE TO THANK THE FOLLOWING



Peter Davidson

Murray Barkmeyer

Dr Steve Bernard

Vic Forests Workers Charity

Ambulance Victoria Medical Advisory Committee

Helimed Auxiliary

Mary Comande

Michael Haeusler

Frances Hammer

Dr Chris Hogan

Dr Giles Kelsey

QANTAS pilots

Paul Holman

Andrew Dale

Red Cross Blood transfusion Service

Global Cold chain Solutions

Five Rings Aerospace

Andrew Allen

Mick Adam

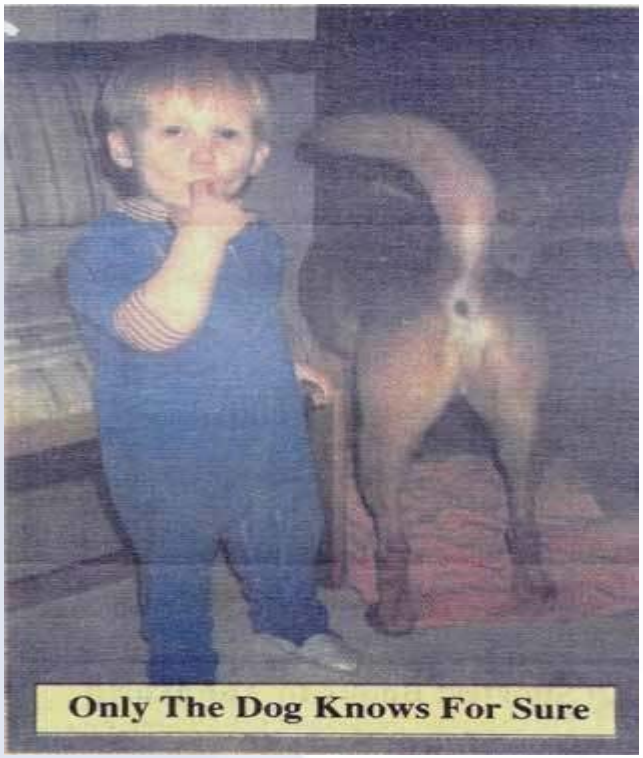
Mark Rogers

Jeff Keneally

Bill Barger

Ben Meadley

The End



Ambulance Victoria

Questions?