

Maintaining Cold Chain Storage in the Australian Outback

The Central Australian Retrieval Service (CARS) responds to requests for medical evacuation across an area of 1.6 million square kilometres in Central Australia. This includes remote Aboriginal communities of between 20 and 1000 people, cattle stations, and the tourist areas of Uluru and Watarrka. Due to the distances involved, the vast majority of these retrievals take place by fixed wing aircraft, utilising the resources of the Royal Flying Doctor Service (RFDS) Central Operations. Most of the medications required for treatment of these patients are carried by RFDS, but on occasion, the retrieval doctor needs to bring additional therapeutic agents from the hospital, such as blood products or snake antivenom.



Photo: Dr Jasmine Koh, Retrieval Registrar, Alice Springs Hospital

Snake antivenom is heat sensitive and needs to be stored between 2-8°C. In Central Australia where outdoor temperatures can go up to 40°C or higher in summer, it is paramount that we have a means of cold chain storage for transportation of antivenom. If the antivenom is exposed to high temperatures for a significant amount of time, it may need to be discarded as its stability may be affected. This results in significant wastage and costs involved to the hospital.

In order to maintain cold chain storage during transport of antivenom, the service will trial a cool storage container. The trial will utilise the iCOOL Cube from MedActiv to store antivenom during transportation. We will be placing a temperature probe inside the bag in order to monitor the temperatures to which the antivenom is exposed to. Once a month, the data log from the temperature probe will be downloaded and any temperature excursions will be reviewed. It is our hope that with this new system in place, we will be able to preserve the integrity of the antivenom during our missions and return them into circulation if they have not been used.



Photo: Rex Neindorf, Director, Alice Springs Reptile Centre