



Pre-hospital and retrieval medicine in Sydney (+beyond)

CareFlight/GSA-HEMS

Prior to commencing my final year of training, I undertook a ten month OOPE in Sydney working for a company called CareFlight. This is a medical charity that supplies 50% of the medical staff to the Greater Sydney Area-Helicopter Emergency Medical Service (GSA-HEMS) and New South Wales (NSW) retrieval system (both run by the NSW ambulance service).

CareFlight was first formed in 1986 after a breakaway from the Surf Lifesaving Australia, which was one of the first rescue helicopter organisations, founded in 1975. From humble beginnings, CareFlight has expanded its operation from a domestic service in 1990, to include international critical care retrieval. Initially operating out of Sydney, the last 20 years has seen the international arm of CareFlight's service expand dramatically and this service now operates out of bases in

Sydney, Cairns, Darwin and Perth. CareFlight have also been running the HIRT (Head Injury Research Trial) since 2005, the largest pre-hospital randomised controlled clinical trial to date comparing standard ambulance response vs helicopter/critical care doctor response. We, as CareFlight registrars, were able to do ride-a-longs on the HIRT helicopter and so had one to one teaching from the very experienced consultants.

For most of my time at CareFlight, we were seconded to the GSA-HEMS, where we worked a full shift rota of either a 12 hour resident shift on the helicopters, or on-call from home covering road or fixed wing retrievals. For someone who'd always done resident on-calls, an hour's mandatory response time, meaning you could respond from Bondi beach, was not too difficult to cope with. All retrievals (primary and secondary) in NSW are coordinated centrally through

the Medical Retrieval Unit. It is staffed 24/7 by trained ambulance staff and backed up by specialist retrieval consultants providing medical advice and support to the referring and retrieval staff. MRU has the job of tasking, and therefore deciding which resource to use, be it helicopter, fixed wing or road response based on factors such as distance and clinical urgency.

Sydney's geographical location, being situated between ocean and mountains, results in far more varied jobs than a more urban HEMS. From search and rescue, near drowning, MVAs in remote locations to rescuing (often British) back-packers who have either got lost or injured whilst canyoning in the Blue Mountains.

Although I've always had an interest in trauma, when I started I had no prior pre-hospital experience, but had a reasonable amount of inter-hospital retrieval having



previously done a 12 month PICU retrieval job. My lack of experience was not, as it turned out, an issue. We all underwent a comprehensive 4 week training programme. This involved medical training, including all the local operating procedures, Helicopter Underwater Escape Training, crew resource management, MIMMS, a 2 day pre-hospital trauma care course, aviation ground school plus a 2 day course on winching (including stretcher winching). During this time I had to pinch myself a number of times and remind myself that I was actually being paid to do this!!

Ongoing teaching and training are obviously important parts of any post, but are often uninspiring. The educational aspects of this job, however, were exceptional. Alongside some of the more traditional lecture based teaching, there was also extensive scenario training, including a day's cliff edge and canyon casualty rescue in the Blue Mountains. Also included was a 'disaster' scenario, run in collaboration with other services such as fire, police and ambulance. This involved a multi-casualty mock scenario complete with overturned bus full of volunteer 'patients', mostly medical students. It was an amazing day of 'teaching' especially as I was lucky enough to be doing a HIRT helicopter ride-along and so was the first to arrive on scene and had to triage all the patients inside the bus.

My overall experience included 100 cases (40% pre-hospital and 60% inter-hospital). The majority of the pre-hospital cases were MVA's, but also I seemed to attract a lot of paediatric cases - including one MVA which resulted in two critically injured children, who both required intubation and resuscitation. I was extremely thankful for my previous crew resource management (CRM) training as it required exceptional teamwork for one doctor-paramedic team to intubate two paediatric patients safely. When we were not seconded to the ambulance service we were undertaking international retrievals. This was an amazing chance to see lots of new places and a chance to test myself clinically in some unusual situations. I was fortunate enough to go to places such as Fiji, New Caledonia, East Timor, Papa New Guinea and Bali (amongst others).

One of the most interesting aspects of working closely with members of the aviation industry was that of crew resource management. The basic principle underlying this system is clear communication and the optimum use of all available resources to improve safety and efficiency and ensure the best possible teamwork. The respectful questioning of authority is encouraged, and hierarchical structures which can be deleterious to good teamwork are discouraged. There were briefings at the start of every shift and all potential problems and issues were discussed. Fatigue was also considered an important factor, which was taken seriously; often, previous sleep patterns were documented and put into various calculations. We were encouraged to partake in short 'fatigue management sessions' (ie a snooze) if we felt tired and there was a lull in the day's activities. A more enlightened view than that of some hospitals at home who have removed on-call rooms for people doing night shifts!

I believe that we can learn a lot about the appropriate and safe transfer of critically ill patients from this well established retrieval service, a role in the UK which is traditionally undertaken by the most junior trainee in an ill-prepared, ad hoc fashion. The learning experiences of CRM, teamwork, remote and independent practice in often highly stressful situations are excellent preparation for working as a NHS consultant. And all of this, whilst working with some of the best retrieval specialists and paramedics in the world and in arguably one of the most spectacular offices, as you look out of the helicopter window over Sydney harbor and wave at pedestrians on the bridge as you fly right by!

For further information about CareFlight, please email: jude.pettitt@careflight.org

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