Health Service profile

The RAN Submarine and Underwater Medicine Unit

HMAS PENGUIN, home of SUMU

Main functions

- Expert advice on diving and submarine medicine to the ADF
- Health care for all ADF diving personnel, including emergency recompression for diving accident victims
- Monitoring and maintenance of health standards for ADF diving and (where appropriate) submarine personnel
- Diving-related research
- Training for service and non-service approved personnel in underwater medicine
- Providing the emergency medical system in event of a submarine accident
- Emergency treatment and advice to civilians suffering from diving illnesses

In February 1961, the RAN opened its first underwater medicine clinic at HMAS RUSHCUTTER. The need for such a clinic was confirmed on the first day for OIC Lieutenant Rex Gray when a diver suffering from an (unfortunately fatal) pulmonary barotrauma arrived unannounced.

The School of Underwater Medicine was officially established on 21 January 1963 with training and underwater medicine research functions. Laboratory facilities and civilian technical staff were provided. The School was relocated from HMAS RUSHCUTTER to HMAS PENGUIN in July 1968.

During the 1970s the RAN provided Australia's major treatment facility for injured divers. With the advent of civilian hospital-based hyperbaric medicine units, the RAN involvement in civilian diving accidents decreased, although this service is still provided under the Defence Aid to the Civil Community program.

The School of Underwater Medicine was renamed the Submarine and Underwater Medicine Unit (SUMU) in 1993 to reflect its reduced teaching role and increased involvement in Collins submarine medical matters.

◀ SUMU staff conducting triage on a Submarine Escape Training Facility instructor who has completed an open water 35 m submarine escape during Exercise Black Carillon 98.

▼ The SUBSUNK recompression chamber complex with the rescue vehicle "Remora" conducting a "mate"

Current research interests

- The role of non-steroidal anti-inflammatory drugs in the treatment of decompression illness
- Extension of heliox closed-circuit diving tables to 90 m of sea water (diving tables specify how long a diver can stay at a particular depth without risking decompression sickness on return).
- Wetsuit selection criteria for search and rescue swimmers.
- Acceptance trials for transfer lock for two man portable recompression chambers
- Evaluation of new mouthpieces for A5800 diving set
- Evaluation of surface-supplied gas panels for the Minehunter Coastals