



SANDF SPEARHEADS MOBILE TELEMEDICINE

The South African National Defence Force could boast the country's first mobile telemedicine laboratory by mid-year if the Surgeon General approves a prototype that Armscor's Defence Institute has successfully developed and tested.

Officially launched at Wynberg's 2 Military Hospital in Cape Town in December, the R2.5 million fully equipped pathology laboratory is set in a container which has two 'drawers' which hydraulically expand horizontally to provide ample room for three medical technologists to work.



Medical technologist, Captain Gerrie van Niekerk of 2 Military Hospital, Wynberg tests out the mobile laboratory.

Mounted on the roof is a satellite dish that provides instant access to expertise wherever it exists (including video-conferencing), while internal equipment is designed for sharing across disciplines, much of it computer-linked. The entire set-up operates autonomously, weighs 4.7 tons and can be flown into remote areas by heavy transporter plane — if offloading equipment exists at the target destination.

Explained the Defence Institute's Brigadier General (retired) Lee le Crerar: 'We can use our C130 cargo planes, but we'd have to rely on offloading equipment in a joint United Nations operation at a suitable airfield

or the destination country — otherwise we'd use a ship, trains and heavy vehicles.'

The laboratory would boost SANDF health care capacity in peace missions (including health support of local populations), disaster relief operations and combat deployments. It includes a R900 000 remote-controlled Zeiss microscope and IMX automated immunoassay analyser, the former manipulated via satellite or landline by any suitably equipped outside consultant with whom the technologist is conversing.

The container shell has a built-in generator, hot and cold water supply, waste water disposal tank and back-up batteries, plus a priority power management system. Le Crerar said it could be fully functional within 45 minutes of deployment.

Laboratory specimens are bar-coded before being loaded into a Disa data information system to facilitate

accurate tracking. 'As far as I'm aware there isn't a single functioning mobile telemedicine laboratory in South Africa at present,' said Le Crerar.

Its civilian applications for handling cholera or other epidemics plus basic primary health care support make it a very attractive proposition well beyond the SANDF that commissioned the development.

The project goes as far back as 1997 when the South African Military Health Service asked the Defence Research and Development Board (Armament Technology Acquisition Secretariat) to look into telemedicine. The conservative decision then was to monitor world

trends and wait for products to come onto the market rather than compete with world leaders in the field.

Today the US military has a world-wide integrated health care delivery network thanks to developments in data compression, fibre-optics, satellite communications, computer inter-networking, information technology, advanced medical imaging and diagnostics.

The South African prototype laboratory will be able to address pathology, dermatology, radiology, allergies, general surgery and psychiatry. Single discipline equipment is centred around histopathology and allergy, dermatology, chemical pathology, haematology and microbiology. Shared equipment includes two centrifuges, two microscopes (from 10x to 100x), variable focus-enabling illumination, two refrigerators, a freezer, transportation and cooler chests, stainless steel work benches, sinks and a system for contaminated and non-contaminated waste storage.

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A host of clinical items plus glass and plastic ware are kept in special spongelined, custom-designed drawers to prevent breakage during transportation. The container is divided into work areas for automatic analytical instruments, manual procedures, data processing and clerical work, and bulky fixed equipment.

According to Helmoed-Römer Heitman, South African correspondent



for *Jane's Defence Weekly*, there are currently 1 500 South African troops stationed in Burundi (part of the African Union Mission) — an upscaling since the early days when a VIP-protection company plus an infantry company backed by helicopters protected Hutu politicians returning from exile. With the ceasefire that was signed early last year, the South African presence was boosted to a full battalion for peacekeeping and monitoring disarmament.

Another 1 600 troops are part of the UN peacekeeping mission in the Democratic Republic of Congo, doing monitoring and verification of Rwandan and Ugandan troop withdrawals and disarming and demobilising guerilla forces. A specialist unit also provides aeromedical evacuation, fire and crash tender manning at airports, cargo handling and generic airport operations.

Another 'dozen or so' South African soldiers are attached to the UN/AU missions in Ethiopia and Eritrea.

Le Crerar told the *SAMJ* that the Defence Institute's report on the mobile telemedicine laboratory would be ready for submission to the SANDF's Surgeon General by March 2004. A decision was expected soon after this.

Chris Bateman

The South African Medical Journal

100 years ago:

To shew the estimate placed upon our profession by laymen of intelligence outside, one may be pardoned for quoting a remark made by a well-known Member of the Cape Parliament the other day. It was pointed out to him that, in the remoter districts of the Transkeian Territories, with next to no private practice, the salary of a District Surgeon was not enough to keep a decent medical man. He at once replied, 'But we do not expect to get decent medical men to go to these places.' All of which proves that, after all, the emoluments of medical officials are determined by the laymen accustomed to the laws of supply and demand, according to the readiness with which the posts are accepted by practitioners, and that this readiness again depends on the average emoluments of private practice. So long as competent men are willing to jump at anything in the shape of an official post, so long will the salaries of those posts remain what they are. When medical men can do better outside than in, salaries will rise.

In connection with this matter we notice that Dr. Gregory recently questioned the expediency of raising the salaries of the staff of the New Somerset Hospital, in face of a deficient revenue and increased demands upon the institution, and was met by the argument that the Resident Surgeon, did he practise privately, would earn more than the Board paid him. We should be doing an injustice to our brethren in private practice, who after all, are the majority of the profession, did we allow to go unchallenged the assumption that a man can go out into the street, "squat" in private practice, and jump into an income which, after all expenses are paid, will leave him the equivalent to the salary of a hospital superintendent, even on the present scale. He might do so if he had capital to purchase a good practice or partnership, or after he had spent years over building up a connection, but hardly otherwise. The lay mind, however, is given to regarding medical practice as something affording a potentiality of wealth beyond the dreams of avarice, also to ignoring the fact that the nominal gross, and the real nett, incomes are apt to be two very different things.

50 years ago: Chloromycetin for a baby

To the Editor — This morning I was called to see a 6 months-old baby. I found that the child had a normal temperature, injected pharynx and green diarrhoea. On the table in the same room stood a bottle of chloromycetin palmitate. On questioning the father, I learned that this was the 3rd bottle the baby had been given in the last 2 weeks, but the baby had had at least 10 bottles in its short life and that this had been given to them by a chemist without a doctor's prescription. This is not the first occasion that I have had this experience and I am wondering if there have been any cases of fatal agranulocytosis. Furthermore I don't think that chemists are qualified to give chloromycetin to patients, and I would suggest that my other colleagues be warned through the *Journal* to look out for this practice. I would also like to know whether any disciplinary action could be taken in such a case.

Dr D T Hendrie
Welkom