

AMMA JOURNAL VOL 6 ISSUE 1

MARCH 1997

RAN Dental Officer participation in Indonesian Naval health operation¹

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Introduction

Following on from the Australian and Indonesian Governments' cooperation in the field of Defence since 1994, the Directors General of Naval Health Services from both Navies (DGNHS-RAN: Commodore Michael Dowsett AM RAN, and DGNHS-TNI-AL: Commodore Harijanto Mahdi TNI-AL) embarked on a series of Defence Health Exchange Programmes. Included amongst these programmes was the invitation for the RAN to participate in TNI-AL Naval Civil Health Operations, designated Operation Bhakti.

In 1995, the Australian Naval Attache Jakarta, Captain Jonathon Jones AM RAN, facilitated the posting of an Oral and Maxillofacial surgeon, Lieutenant-Commander Gregory Peek RAN, and Medical Officer, Lieutenant Richard Page RAN, for part of a mission which visited the remote islands of Irian Jaya.

The TNI-AL has previously mounted 31 such missions with the purpose of providing health services to remote locations in Indonesia. This involvement of the Indonesian Navy in their nation-building stands as an example of the Indonesian military principle of "Dual Function" for the Indonesian Defence Force: to serve their nation in the military and civil roles.

In May 1996, Royal Australian Naval Dental Officer, Lieutenant-Commander Cheng-Yee Rossiter, who was on an exchange posting with the Indonesian Navy (TNI-AL), participated in one of these Naval Civil Health Operations. The mission, from 2 to 22 May 1996, involved the deployment of personnel in KRI Teluk Penyu 513 from Jakarta to the remote islands of West Kalimantan, visiting five islands and ten villages off its South West coast.

Operation BHAKTI Surya Baskara Jaya 32/96

A TNI-AL landing ship sailed from Jakarta to Pontianak, the provincial capital of West Kalimantan. From the 7th to 21st of May 1996 the ship visited the tropical islands (pulau) of Pulau Pelapis, P. Serutu, P. Karimata, P. Maya and P. Padang Tikar. These islands have a total population approaching 100 000. Most of the inhabitants live a semi-traditional lifestyle without modern housing and the supply of electricity, telecommunications, town water or sewerage. There are no medical or dental services permanently available on the islands.

The ship, KRI Teluk Penyu 513, had its usual company of 120 personnel supplemented by 300 extra personnel, including 52 members of the Health Team.

The Health Mission

The Indonesian Archipelago consists of over 12 000 populated islands, many of which have no health services. The mission was to provide medical and dental primary care to remote island communities which do not normally have

access to it. Operation Bhakti deployments are aimed at returning to specific localities once every three to five years where the greatest need for health services exists.

The patients who attended were the economically poorer members of society. Often hundreds of people per day would seek treatment whilst the mission was in their village. These people would not have been able to afford transportation to the mainland of West Kalimantan to seek modern health services.

Primary Casualty Reception Facilities

During Operation Bhakti, the landing ship carried containerised medical operating rooms. In this particular deployment, however, they were not used as the ship did not land on the coral islands visited. Nevertheless, the containers are worth describing.

The modified containerised medical facilities can be compared to an RAN Primary Casualty Reception Facility (Level 3 health support). They consist of two modularised shelters made from modified shipping containers based on a Royal Navy design.

The Primary Casualty Reception Facilities (PCRf) are designed to receive patients and casualties for stabilisation prior to being aeromedevaced by helicopter. Alternatively, the patient can be treated onboard if specialist surgical care is available (i.e. surgeon and anaesthetist).

Thus, these PCRfs are useful for various roles, such as humanitarian support, disaster relief, a component of a medevac system, and peacekeeping operations.

The Health Team

During this Operation Bhakti, the Health Team of 53 personnel included generalist medical officers, paramedics, nurses, dental officers and dental nurses. All medical and dental officers deployed were general practitioners.

Treatment Modalities

The treatment modalities provided at each village and island included:

- Medical consultations with on the spot diagnosis, followed by primary care, e.g. drainage of an abscess.
- Minor operations, e.g. removal of growths.
- Dispensing of TNI-AL manufactured pharmaceuticals (all four Defence Force services manufacture their own pharmaceuticals), e.g. Antalgin, ampicillin and erythromycin.
- Health education, e.g. prevention of malaria.
- Prophylactic vaccinations, e.g. poliomyelitis
- Family planning, e.g. promoting the Government's policy of encouraging families of only two children.
- Procedures required by religious custom, e.g. circumcisions for young boys performed by the paramedics.
- Primary dental care for the relief of acute and chronic pain associated with dental disease.

Prevalent diseases in the remote tropical islands include:

- malaria
- dengue fever
- tuberculosis
- gastroenteritis
- hepatitis A, B and C
- sexually transmitted diseases (although there is only one documented case of AIDS in West Kalimantan)

Dental Mission

Dental care was provided by LCDR Rossiter and Kapten Sulisty Wibowo TNI-AL, supported by two excellent dental sailors, SGT Munawir and PTE Anisa.

The demand for primary dental care was extremely high, such that it was the priority in dental services provided. In the period 7 to 22 May, over five islands and 10 villages were visited. There was no time allowed for the reviewing of patients or comprehensive dental treatment plans as there were too many patients waiting to be seen. Exodontia (tooth extraction) was the definitive treatment employed in every case for the relief of pain. This mode of treatment commenced daily at 08:00 and often continued beyond 20:00. Hundreds of patients waited patiently every day at the makeshift surgeries until they were seen, often the surgeries were located on the verandahs of primary school buildings.

In Operation Bhakti, over 800 dental patients were treated for the relief of pain, and over 1600 teeth were extracted.

Routine exodontia/ minor surgery was provided following administration of local anaesthetic. Contaminated waste following surgery was collected in buckets and ultimately buried in the fields.

Dental equipment provided included portable Dental Field Units, i.e. portable compressors for dental handpieces. However, in the villages visited, restorative and operative dentistry were not required in addressing urgent primary care needs.

School chairs were utilised as dental chairs and the school desks were used as makeshift instrument tables. There were no dental spittoons available, nor were there any dental operating lights or suction.

The typical patient had chronic debilitating dental health and had never used dentifrices due to the non-availability of dental care products. They had very poor oral hygiene and appeared to be malnourished, yet tended to be sweet-toothed. Consequently, rampant caries and aggressive/ rapidly progressive generalised adult-type periodontitis was present in all patients.

In one particularly interesting case, an 18-year-old male required the full clearance of his remaining 18 carious and periodontally diseased tooth root stumps. This example of chronic debilitating dental health was in fact very common in many of the villages visited.

A preventive dental programme and dental examinations were urgently required to improve the overall health of the islanders. As the demand for relief of chronic pain was the priority, civilian members of the health team provided basic oral hygiene instructions to children, whilst the dental team were constantly engaged in exodontia for the entire deployment.

Possible Future Research

The incredibly high prevalence of decayed, periodontally diseased and missing teeth requires epidemiological research, as do the possible aetiological factors.

Factors that could be investigated include:

- the malnutrition associated with the periodontal disease and caries
- malnutrition from low dietary calcium, vitamins and minerals
- high dietary refined carbohydrates, e.g. confectionary
- imbalance of food group intake, e.g. due to overreliance on one food group in the diet, such as fish, whilst lacking fruit, vegetables and meat
- absence of fluoridated water and the non-availability of dentifrices

Further RAN and TNI-AL cooperation in re- searching the aetiology of the dental diseases could be explored in future joint exercises between the two Navies. As this is a closed population with minimal outside influences and with no fluoridated water, it could be used for researching the effects of denitrifies and topical fluoride on dental health.

Successful RAN and TNI-AL Cooperation

Throughout the mission, the entire health team worked hard and played hard in the true Navy tradition. After working from sunrise (about 06:00) until beyond sunset (18:00), the health team observed a break and the nightly entertainment commenced.

The demand for dental services was so great that on the conclusion of the final day, all RAN and TNI-AL pharmaceuticals, local anaesthetics and infection control supplies were totally exhausted. As were the dental team.

Conclusion

The author was enriched by the unique operational and professional experience. The sheer quantity of people who required medical and dental treatment not only challenged and stimulated, but also instructed and rewarded the health team. The outpouring of gratitude of the hundreds of dental patients treated for the relief of pain alone was adequate reward for the dental team.

Working in the field also provided valuable lessons in the need to adapt to the tropical environment and its diseases, and the need to be well equipped and supplied for all facets of field medicine and dentistry, eg to be well supplied with the necessary infection control materials, local anaesthetics, pharmaceuticals and surgical instruments.

On completion of Bhakti SBJ (32/96), the Indonesian Director General of Naval Health Services formally thanked the Australian Naval Attache - Jakarta, and the Australian Director General of Naval Health Services for the RAN participation in the mission, and also extended an invitation to the RAN to participate in future missions.

The RAN and Indonesian joint exercises in health services have become a successful chapter in the developing friendship between the Australian and Indonesian Medical and Dental Services.

Reference

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