

# Surgical procedures performed by the Combined Health Element of the Bougainville Peace Monitoring Group

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## Synopsis

- ◆ The Combined Health Element of the Bougainville Peace Monitoring Group provided level three medical support for the operations of this group from December 1997 to September 2001.
- ◆ During this period the Combined Health Element performed 810 surgical procedures, mostly for Bougainville civilians with life- or limb-threatening emergencies.
- ◆ Seventy-seven procedures, mostly minor, were performed for Peace Monitoring Group personnel.
- ◆ A wide variety of procedures encompassing all surgical subspecialties have been performed by the Combined Health Element, emphasising the requirement for deployed health services personnel to possess a broad range of clinical skills.

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*The delivery by caesarean section of a live male baby to a young Bougainvillean woman who presented to the CHE in obstructed labour due to breech fetal lie. Sixty-one life-saving caesarean deliveries were performed by the CHE from 1997 to 2001.*

THE PEACE MONITORING GROUP (PMG) tasked with supporting and monitoring the peace process in Bougainville is formed by contributions of the defence forces of Australia, New Zealand, Fiji and Vanuatu. Monitoring group personnel have been conducting operations throughout Bougainville in support of the peace process since December 1997. The medical support to the PMG has been provided by the Combined Health Element (CHE), which maintained a level three support capability until September 2001, and has been staffed by personnel sourced from regular and reserve units of all three defence force services. The CHE included a surgical team capable of performing initial wound surgery and other life- or limb-saving surgical procedures before evacuation of patients to higher levels of care. The surgical team comprised

a surgeon and anaesthetist, a number of nursing officers with operating theatre training and experience and a non-commissioned officer operating theatre technician. The surgical facility was light-scaled and housed in a tent. It had access to medium- and high-dependency nursing care wards, radiology, pathology and blood-banking services.

The CHE existed to provide level three medical support to deployed PMG personnel and was also mandated to treat Bougainville civilian patients who had injuries or illnesses that threaten life or limb.

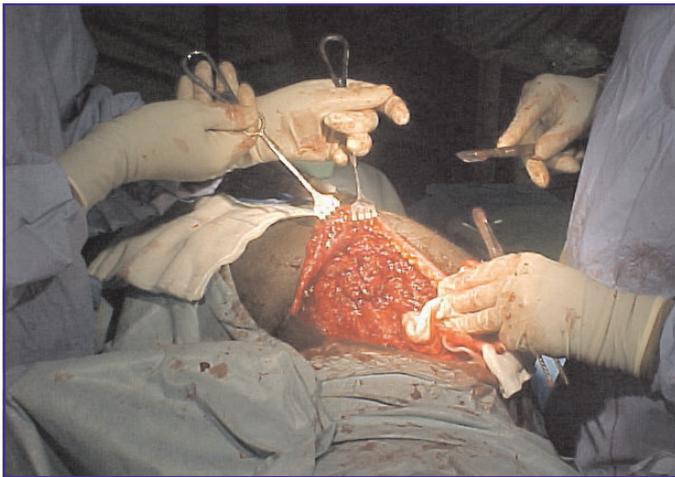
## Surgical procedures

From the opening of the facility in December 1997 to closure in September 2001, the CHE of the Bougainville PMG performed 810 surgical procedures. Seventy-seven procedures (10%) were performed for deployed PMG members with the remaining 733 (90%) being for Bougainville civilians. The types of surgical procedures performed by the CHE during this period are detailed in the Table. From

*Captain Anthony Chambers deployed to East Timor in 2000 as the RMO of the 9th Force Support Battalion and was deployed as surgeon to the Bougainville Peace Monitoring Group Combined Health Element in 2001.*

### **Combined Health Element, Bougainville Peace Monitoring Group, Bougainville.**

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The CHE surgical team performing initial wound surgery for a high velocity gunshot wound to the buttock of a young male Bougainvillean. The track of the missile has been laid open to reveal a cavity of necrotic tissue requiring thorough surgical debridement.

December 1997 to the end of 1998 there were 307 procedures, in 1999 there were 298, and in the year 2000 there were 144. In the first eight months of 2001, 62 surgical procedures were performed.

Ninety-three procedures (12%) were performed for children aged 16 years or younger. Fifty-two procedures (6%) were for children under five years of age.

Six hundred and thirty-four procedures (78%) were performed under general anaesthesia, 122 (15%) using local or regional anaesthesia and 54 (7%) using spinal or epidural techniques.

## Discussion

The CHE has performed a wide range of surgical procedures during its period of support to the Bougainville PMG. These procedures encompass all surgical subspecialties, emphasising the requirement of deployed surgical facilities to be equipped with a broad range of surgical instrumentation and staffed by personnel with broad-based skills and training. Given the constraints of a relatively light-scaled facility with a small number of specialist personnel, the CHE has demonstrated a high level of professionalism in providing such a broad range of surgical interventions with its limited resources.

Only a small proportion of the surgical workload of the CHE has been for personnel of the PMG. Most of these procedures were relatively minor, such as the removal of skin or soft-tissue lesions. Few procedures performed for PMG personnel were for the management of trauma and injuries, and this highlights the safe operational environment maintained by the PMG.

A broad array of surgical procedures were performed for Bougainville civilians with life- or limb-threatening conditions, most commonly traumatic injuries and wounds. Surgery for abdominal emergencies was also common. There were a large number of procedures performed for obstetric emergencies also, emphasising the requirement for defence force health services members to be familiar with the management of these problems before deployment. The range of emergency procedures performed by the CHE encompassed the disciplines of general, orthopaedic and gynaeco-

### Surgical procedures performed by the Combined Health Element of the Bougainville Peace Monitoring Group (PMG), December 1997 to September 2001

Type of procedure	Number of procedures* (percentage of total)	Number of procedures for PMG personnel*
Wound debridement/closure	130 (16%)	8
Excision of skin lesion/mass	87 (11%)	45
Drain abscess/haematoma	69 (9%)	0
Caesarean section	61 (8%)	0
Dressing change	57 (7%)	1
Laparotomy	55 (7%)	1
Reduction/fixation of fracture	49 (6%)	3
Other orthopaedic procedure	32 (4%)	2
Dilatation and curettage/uterine evacuation	43 (5%)	0
Tendon/nerve repair	38 (5%)	1
Amputation	34 (4%)	0
Appendicectomy	26 (3%)	6
Urology procedure	24 (3%)	4
Hernia repair	22 (3%)	1
Skin grafting	20 (3%)	0
Removal of foreign body	18 (2%)	2
Hysterectomy	16 (2%)	0
Other obstetric/gynaecological procedure	20 (3%)	0
Anorectal procedure	12 (1%)	5
Dental procedure	12 (1%)	0
ENT/Head Neck procedure	12 (1%)	0
Vascular procedure	8 (1%)	0
Ophthalmology procedure	6 (1%)	0
Craniotomy/burr holes	5 (1%)	0
Other procedures	11 (1%)	0

\*Some patients had multiple procedures performed during a single anaesthetic.

logic surgery, and a large number of cases were for paediatric patients. Surgeons deploying on defence force operations need to possess a broad procedural background, as many of the patients they will be required to manage will not be defence force members with trauma or injuries expected from military activities. The manning and equipping of deployed medical facilities should also reflect this diversity. The CHE possessed instrumentation for obstetric, gynaecologic and paediatric surgical procedures, which would not be traditionally associated with military surgery, yet were essential to its role within the mission of the PMG. Exposure to local civilian patients with a broad range of life- or limb-threatening



*The CHE surgical team controlling haemorrhage after performing an emergency cricothyroidotomy for a 24-year-old Bougainvillean male who sustained a gunshot wound to the face. The patient was discharged from the CHE after a 10-day admission. He required transfusion of five units of blood, parenteral treatment of malaria and internal fixation of a fractured mandible during his admission.*



*The CHE surgical team using an external fixation device to stabilise an open fracture of the radius and ulna in a young Bougainvillean male. Surgeons deployed to the CHE performed procedures encompassing all subspecialties of surgery for the management of life- or limb-threatening conditions.*

conditions offered excellent training opportunities for deployed health services personnel. It also strongly demonstrates the commitment of the PMG to improving the wellbeing of the Bougainville community by providing acute medical services during the rebuilding of the local health-care infrastructure.

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