

Paediatric Anaesthesia in Papua New Guinea

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Paediatric anaesthesia and surgery are poorly resourced in developing countries which often have large young populations. However surgical conditions in children present a significant challenge and workload but emphasis is usually given to primary healthcare.

In 2000, leaders from 189 countries agreed on eight Millenium Development Goals to be achieved by 2015. MDG 4 was to reduce child mortality by 2/3 from the base year 1990 – it is unlikely most countries will achieve this goal.

Papua New Guinea is Australia's closest neighbour with a population approaching six million. Half the population is less than 16 years old and 10% of children do not live to age five. Most children live in villages which are often remote and will present late with acute conditions.

Common conditions requiring surgical expertise include:

- Congenital anomalies – cleft lip/ palate, hernias, anorectal anomalies, myelomeningocele, talipes, Hirschsprungs, hypospadias
- Trauma – burns, falls, road trauma, violence and sexual assault.
- Infections – pyomyositis, osteomyelitis
- Abdominal emergencies – appendicitis, intussusception, bowel obstruction

Many children have concurrent malaria, TB and parasitic infections.

Currently there are two active paediatric surgeons for 3 million children in PNG.

There are about eleven anaesthetists in PNG but none have done any specific higher paediatric training. There are 7 registrars training and several service registrars. All tend to be in a few main centres. The majority of anaesthesia in the country is provided by non-medical anaesthetic scientific officers (ASO).

There are old Boyle anaesthetic machines with only halothane available. Other drugs available include thiopentone, diazepam, morphine, pethidine, sux, pancuronium and atracurium. Local anaesthetics are usually plain and in short supply. Ketamine is widely available and used commonly for short procedures. Blood usually comes from relatives. Appropriate sized equipment and disposables, especially for children < 10kg, are often in short supply and oxygen and power supply can be erratic. Monitoring is limited but there is usually a pulse oximeter. Recovery is often done by the anaesthetist.

Visiting surgical paediatric teams occur only twice a year but are important for teaching and support for local staff. More difficult cases are often presented to these teams.

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