



**Australian High Commission**  
**Papua New Guinea**

**#PNGAusPartnership**



## SAVING LIVES- SPREADING SMILES: LIFE-SAVING INNOVATIONS IMPROVING NEONATAL SURVIVAL

**A SIMPLE MEDICAL DEVICE – KNOWN AS THE ‘BEBI KOL KILOK’ (THE BABY COLD CLOCK) – IS BEING ROLLED OUT ACROSS PAPUA NEW GUINEA (PNG) TO REDUCE HYPOTHERMIA RELATED DEATHS IN INFANTS. THIS FOLLOWS A SUCCESSFUL TRIAL SHOWING THE DEVICE IMPROVED NEWBORN CARE PRACTICES OF PARENTS AND HEALTH WORKERS.**

The first 28 days of life – known as the neonatal period – is when a child is at its highest risk of dying or being afflicted with a long-term disability. In PNG, up to 42% of the 5-6,000 annual neonate deaths are preventable with effective hypothermia prevention and management.

Hypothermia, when the body temperature drops below 36.5 degrees, elevates the risk of death in neonates by contributing to poor weight gain, hypoxia (less oxygen) and hypoglycaemia (less glucose). Hypothermia is preventable with regular temperature monitoring.

### HYPOTHERMIA BRACELETS

The simple medical smart device – the bebi kol kilok – was trialled at Goroka Provincial Hospital, Port Moresby General Hospital and among families in Henganofi District of the Eastern Highlands.

Findings from the Australian-supported trial being delivered by UNICEF, demonstrated the bracelets provide an effective mechanism to prevent hypothermia in neonates. The device, worn on an infant’s wrist, continuously monitors their temperature and flashes an orange color and alarm if their temperature declines. This alerts the service providers and caregivers to provide warmth through ‘kangaroo care’, whereby the baby is held in skin-to-skin contact with the parent.

The bracelet and associated training were found to be effective in changing behaviours among caregivers, facilitating decision making and encouraging good kangaroo care and breastfeeding practices. This led to higher rates of weight gain, recorded rates of hypothermia decreasing from 21% to 18% in Goroka Hospital and from 52% to 40% in Port Moresby General Hospital. The trial also found a 47% increase in males involved in newborn care.

### NATIONAL ROLL-OUT

In March 2018, an independent evaluation by the US Centers for Disease Control, Atlanta concluded that the hypothermia bracelet is a simple, easy to use, accurate and well-accepted means of increasing the hours of kangaroo care provided, leading to increased weight gain among neonates.

The evaluation recommended the bracelet and associated trainings be scaled-up nationally along with improvements to newborn care facilities and practices in PNG hospitals. This includes establishing ‘Kangaroo Mother Care Units’ and referral pathways (such as emergency transport options) at hospitals across the country.

The Australian Government is supporting the national roll out of this cost-effective initiative to reduce neonatal deaths and improve childhood health outcomes in PNG.



Newborn twins wearing the hypothermia bracelets. This alerts the mother if their body temperature drops, signalling them to provide kangaroo care.