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Annual Results Report 2017

Health

CASE STUDY 11: PAPUA NEW GUINEA: A BRACELET SAVES NEWBORNS FROM HYPOTHERMIA

In Papua New Guinea, around 5,000–6,000 neonates die every year, mainly from preventable causes. Hypothermia remains a silent killer, as parents and caregivers are largely unaware of the symptoms and consequences. Hypothermia occurs when the body temperature falls below 36.5°C (the normal body temperature range is 36.5–37.5°C). It mostly occurs in low-birthweight and premature babies in resource-poor settings. Preventing hypothermia can save up to 42 per cent of neonatal deaths and ensure that all newborns can grow into healthy babies.

Regular and continuous temperature monitoring is the most effective way to prevent hypothermia. However, temperature monitoring is often difficult, not only immediately after birth in health-care facilities where nurses are few, but more critically upon return home.

The hypothermia bracelet, locally renamed *Bebi Kol Kilok*, is a simple, innovative device that is placed on a newborn's wrist immediately after birth. The bracelet detects when the baby's temperature drops below 36.5°C and alerts parents and caregivers. Parents know to initiate skin-to-skin contact via KMC, the simplest and most cost-effective way to warm the baby. If the alarm continues despite warming the baby, parents are advised to seek medical care immediately.

UNICEF is conducting implementation research, in collaboration with the nation's Department of Health, the Paediatric Association of Papua New Guinea and others, to evaluate the bracelet's impact. This study is being conducted at the Port Moresby General Hospital, the Goroka Provincial Hospital and the Henganofi district of Eastern Highland Province.

To date, 448 newborns have been enrolled to wear the *Bebi Kol Kilok* bracelet, and 369 newborns enrolled in the control group. Mothers in both groups were trained on thermal care and other essential newborn care. After hospital discharge, parents continue to use the bracelets at home for four continuous weeks.

Findings are very encouraging. Recorded rates of hypothermia decreased by 11.4 percentage points (from 51.6 per cent to 40.2 per cent) in health-care facilities. The device has been reliable in accurately detecting hypothermia. Acceptance, usage and compliance by mothers is 100 per cent. The device is triggering behavioural changes, facilitating decision-making and encouraging good KMC practices and breastfeeding. Newborns wearing the bracelets gained more weight than those in the control group. About 43 per cent of males have been involved in the care of newborn babies through this programme – a significant cultural development, as most men in the country regard baby care as a woman's responsibility.