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# BabyCam: revolutionising neonatal care in Townsville

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## Summary

Babycam, a ground-breaking innovation connecting families to their pre-term and critically unwell babies via a smart device application, is revolutionising neonatal intensive care in North Queensland. Webcams affixed to the cot live stream the babies, many from geographically and socially disadvantaged families for 24 hours a day. At the heart of this innovation are Neonatologist Dr Yoga

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Kandasamy and his team who have found an affordable solution to reducing the stress and anxiety of parents of pre-term and unwell babies. Babycam, supported by CSIRO, James Cook University and Optus Communications, has made a profound and positive difference to the families of North and Far North Queensland's smallest and sickest babies.

Key dates

Feb 2020

Feb 2020

## Key Contacts

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## Aim

Babycam aims to reduce the significant parental anxiety and stress associated with having a pre-term or critically unwell baby in neonatal intensive care for an extended period of time.

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## Benefits

As pre-term babies experience protracted admission times, Babycam has enabled parents, who have been forced to return home to jobs and other children, stay connected and involved. Many of these families are hundreds of kilometres away from home, family support and older children, which significantly impact their relationships and mental health. Another major positive benefit of Babycam has been mothers - watching their babies via live stream - being able to express breastmilk (vital for neonates to resist dangerous infection) much more easily and thereby significantly reducing the reliance on formula.

## Background

As pre-term babies experience prolonged lengths of stay, Babycam has enabled parents who have had to return home to jobs and other children stay connected and involved. Many of these parents are hundreds of kilometres away from home and family significantly exacerbating their worry, guilt and distress. Distance remains a significant and complexifying factor for the Townsville Hospital Neonatal Intensive Care Unit (NICU) which cares for around 900 preterm and critically unwell babies each year in a geographic footprint stretching from the Torres Strait Islands to Mackay and west to the Northern Territory border. The idea for Babycam germinated from the Queensland Health's strong agenda and vision to introduce telemedicine as a remedy to treating patients and supporting families living in rural and remote areas of Queensland.

## Solutions Implemented

Babycams are a solution to the decades-old challenge of equity of access for people living in rural and remote areas to modern healthcare. It is also a solution to addressing the extraordinary stress faced by young families, often with other children and financial and work pressures, with a pre-term or unwell baby. Babycam is bespoke, cutting-edge technology making a substantial, positive difference to the care of the smallest and sickest babies of some of Queensland's most geographically and socially challenged families.

## Evaluation and Results

The evaluation undertaken by Dr Kandasamy and his team has shown Babycam has substantially and quantifiably reduced the worry, distress and anxiety of parents of pre-term and critically unwell babies in the Townsville University Hospital NICU. Research led by Dr Kandasamy recruited 35 families over 12 months to measure the impact of Babycam on parental mental health and wellbeing. Babycam resoundingly reassured parents - mostly fathers - who must return to work, household commitments and other children, about their babies' wellbeing. They could see their babies in real time receiving care, growing stronger, and returning to health each hour, each day. Babycam also enabled mothers who live in supported accommodation, such as Ronald McDonald House, to take

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important time out for themselves to go for a walk or meet a friend. The opportunity to leave the NICU yet remain close by live streaming their babies had had a noticeable and measurable positive effect with 95 per cent of parents reporting significantly decreased levels of anxiety and stress.

## **Lessons Learnt**

The most important lessons learnt included the criticality of engaging clinical staff early inviting their input and working to ensure they can authentically drive the agenda for a changed model of care and service improvement. Another important lesson was engaging patients and families in the journey for change and innovation. Another important lesson was the engagement of expert industry partners in the collaboration.

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