



NEO FOR NAMIBIA HELPING BABIES SURVIVE

TEAM

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A more detailed report
can be downloaded from
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MISSION REPORT 2019-2 SHORT VERSION

June 4 to 26, 2019

Mission goals

- To introduce invasive mechanical ventilation at Rundu State Hospital
- To train visiting doctors and nurses from Onandjokwe State Hospital
- To introduce on-line patient registries at Rundu and Onandjokwe State Hospitals
- To meet the former Health Minister, Dr. Bernard Haufiku and the new Permanent Secretary (PS) / Executive Director (ED) of the Ministry of Health and Social Services, Dr. Ben T. Nangombe

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Hospitals visited

- Rundu State Hospital

On the way to work at Rundu State Hospital: in June, during the Namibian winter, the sun rises shortly after 7 o'clock, and the temperature increases rapidly from around 6°C to more than 20°C, eventually reaching 28–30°C in the afternoon.



Equipment

It is encouraging to see that the donated equipment has stood the test of time: all 19 pulse oximeters are in working order. The same can be said about the 11 Pumani® bubble CPAP devices, the 7 Wallaby® warming tables, the 5 Colibri® phototherapy lights and the 11 MTTs LifeKit® infant cot beds.

Preterm baby getting prepared to undergo phototherapy for neonatal jaundice.



In the past, doctors and nurses had repeatedly expressed their frustration about the lack of a mechanical ventilator that could be used as a last resort in desperate situations. Given the lack of compressed air in the Prem Unit and the limited availability of technical support, a robust turbine-driven transport ventilator was chosen (EVE neo).

Nurse Cecilia Ndepaivali taking care of the first patient at Rundu State Hospital on the new EVE neo ventilator.

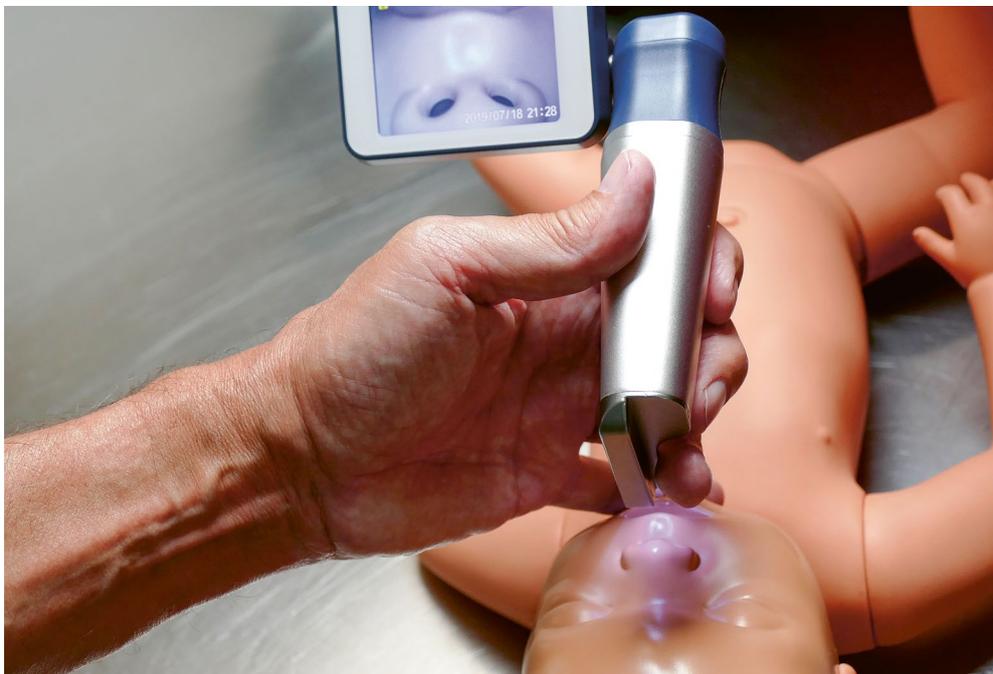


After 24 hours, the patient could be extubated and transitioned to CPAP.

Teaching sessions

With the mission's focus on invasive respiratory support, lectures covered the history of neonatal ventilation (to highlight risks and complications), patient selection for invasive mechanical ventilation, adequate preparation for intubation, principles of lung-protective mechanical ventilation and interpretation of blood gas analyses.

Intubation (insertion of an endotracheal tube (ETT) into the windpipe) requires skills; video laryngoscopy has been shown to increase success rates.



All the pediatricians (including the visiting doctor from Onandjokwe, Dr. Joy Shilongo) received one-on-one training in intubation and invasive mechanical ventilation.



CPAP - a success story

For several reasons, CPAP must remain the predominant form of respiratory support for babies with breathing difficulties. It is now a routine procedure in the Prem Unit at Rundu State Hospital and has been proven beyond doubt that it is successful. It has saved lives and will save even more lives in the future (see below).

Term infant on an open warmer supported with bubble CPAP.





Impact analysis

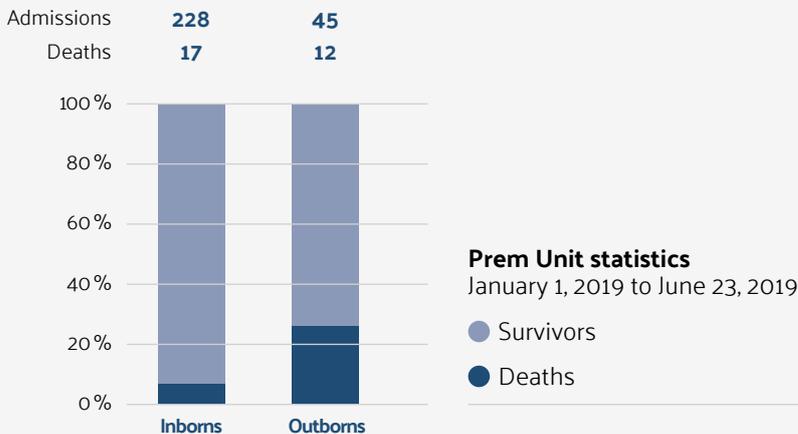
From January 1, 2019 to June 23, 2019, a total of 228 patients had been admitted to the Prem Unit at Rundu State Hospital. Inborn and outborn infants accounted for 83.5% and 16.5% of all admissions. During the same time period, there were 29 deaths resulting in an overall mortality rate of 10.6%. When analyzed separately, the mortality rate of inborn patients was 7.5% (down by 50% from an average of 14.7% in the years 2012 to 2015, and comparable to the 8.6% in 2017), indicating sustained success of our interventions.

One preterm babies have survived the acute phase of their illness, they become feeders & growers with an excellent prognosis for long-term survival.

CPAP registry data - August 2017 to June 2019

Total number of patients recorded	259
Median birth weight, g (range)	1690 (600–4700)
CPAP days (median, range)	915 (3, 1–20)
Survival rate	74% (n=192)

CPAP registry data (August 2017 to October 2018: Rundu only; November 2018 to June 2019: Rundu and Onandjokwe): the overall survival rate of infants requiring CPAP support has reached 74%.



Prem Unit statistics January 1, 2019 to June 23, 2019: improved mortality rates of inborn infants have been sustained; in contrast, mortality rates of outborn infants are very high.

Donate and help babies survive

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