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I was born in Graz, Austria, where I graduated from the Karl-Franzenz University with a MBBS and a MD. After completion of my pediatric residency training, I moved to Melbourne, Australia to pursue neonatal fellowship and a PhD in neonatal resuscitation at the Monash University in 2008-2011. I was then recruited to join the Neonatal Research team in Edmonton as a postdoctoral fellow and Neonatologist. My research is currently supported by CIHR-Banting Postdoctoral and Alberta Innovates Health Solution Clinical Fellowships.



My research interests are physiological changes at birth and neonatal resuscitation, neonatal ventilation, systematic reviews and medical history.

There is increasing evidence that non-invasive ventilation has the potential to improve short- and long- term outcomes in babies born prematurely. However, none of the current studies has shown any benefits. In the current study we assessed the role of nasal continuous positive airway pressure (nCPAP) initiated at birth for the prevention of death and bronchopulmonary dysplasia (BPD) in very preterm infants. We performed a meta-analysis of published trials to evaluate the effects of nCPAP as compared to intubation and mechanical ventilation in preterm infants born at <32 weeks gestation on death and BPD (defined as need for oxygen support or mechanical ventilation at 36 weeks corrected gestation) during hospital stay. Neither BPD nor death were independently significant. However, the pooled analysis showed a significant benefit for the combined outcome of death and/or BPD for babies treated with nCPAP; risk ratio 0.90 (95% confidence interval 0.83 to 0.98), risk difference  $-0.04$  (95% confidence interval  $-0.08$  to  $-0.00$ ), number needed-to-treat of 25.

Our results show that one additional infant could survive to 36 weeks without BPD for every 25 babies treated with nCPAP in the delivery room rather than being intubated. This approach of non-invasive respiratory support for preterm infants has been recommended as an alternative to routine intubation in a recent policy statement of the American Academy of Pediatrics (January 2014).

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