Dear Editor,

SUCCESSFUL NASAL CONTINUOUS POSITIVE AIRWAY PRESSURE FOR NEWBORN RESPIRATORY DISTRESS IN A REGIONAL CENTRE

We wish to present our experience using nasal continuous positive airway pressure (nCPAP) in a regional town over a 5-year period.

Kalgoorlie is located 595 km east of Perth in Western Australia, with a population of 31 107. With over 800 deliveries each year, around 100 infants require nursery care annually. The level 2 nursery caters for babies born 34 weeks and over with the intent to transfer those <34 weeks gestation in utero to the tertiary centre. Prior to 2008, most neonates presenting with respiratory distress were transferred to Perth.

In 2008, the team of three paediatricians started offering nCPAP therapy for infant respiratory distress. The Western Australian Neonatal Network facilitated up-skilling of nurses with CPAP training as well as a 1–2 week rotation at the tertiary hospital. A process of ongoing training for nurses and junior doctors supervised by a paediatrician and neonatal nurse was commenced at Kalgoorlie.

Bubble CPAP was commenced using Hudson prongs and Fisher and Paykel Healthcare Bubble CPAP System. We adhered to the King Edward Memorial Hospital Neonatal guidelines for CPAP.1 A paediatrician was available on site during working hours and as Kalgoorlie is a small town geographically could attend to emergencies out of hours within 10 min.

Fifty-five babies were treated with CPAP when they developed respiratory distress. Of these, over half were term gestation, 14 (25%) 35–37 weeks gestation and 11 (20%) 32–34 weeks. The conditions requiring nCPAP were transient tachypnoea of the newborn, hyaline membrane disease, meconium aspiration syndrome, sepsis and birth asphyxia. None of the babies developed nasal trauma or pneumothorax while on CPAP.

The majority 37 (67%) were discharged home without needing transfer to a tertiary centre (Fig. 1). Eighteen babies (33%) were transferred to the tertiary hospital. In eight instances, there was shortage of nursing staff; seven were sent for further investigations and management of complex conditions.

Nasal CPAP is safe and effective therapy for infant respiratory distress even in a regional hospital.2 With adequate training of the staff and availability of paediatrician cover, nCPAP therapy reduces the number of transfers to tertiary facility. Although we acknowledge there was a small number treated over 5 years, our experience suggests that nCPAP is a feasible treatment option for late preterm and term infants even in regional centres.

Fig. 1 Disposition of babies treated with nCPAP.

References
