Background
Respiratory diseases account for approximately 20% of neonatal morbidity. Nearly all infants in need of respiratory support will die if this intervention is not provided quickly. Bubble nasal continuous positive airway pressure (nCPAP) is a low-cost yet efficient mode of respiratory support that has been used in neonatal care in developed settings for decades. However, it has not been used widely in MSF projects. We describe our experience and early results from introduction of this intervention.

Description
A 50-bed paediatric hospital was opened in May, 2011 in Quetta, Balochistan province, Pakistan. Newborns accounted for more than half the patients admitted, many of them premature. We soon realised that the active management of respiratory distress was an area where we could improve outcomes with new strategies. We introduced bubble nCPAP as a treatment modality in September. Severity of respiratory compromise was assessed clinically, using general condition, breathing effort, respiratory rate, apnoeas, oxygen requirement, and oxygen saturations. Importance was given to identifying the need as soon as possible, allowing for early intervention.

Lessons learned
From September, 2011, to February, 2012, we had 331 exiting neonatal patients. 105 infants (32%) presented with respiratory difficulties requiring respiratory support and were started on bubble nCPAP. Of these patients, 41 (39%) were born at less than 32 weeks, 38 (36%) at 32–36 weeks, and 26 (25%) at term. 35 infants (33%) survived to discharge. Average length of nCPAP treatment was 6.4 (<1–41) days for all and 11.1 (1–41) days for surviving infants. Introduction of bubble nCPAP has presented its own challenges since, apart from the expat doctor, nobody had previous experience with neonatal indications for nCPAP and most of the national staff had no previous experience with neonatal care. Despite this, staff did very well and continued improving with increasing experience. Further, as this is not a standard of delivered care, there were and continue to be logistical challenges. Our intention was to follow up infants to at least 6 months of age if they were sick or premature. We are currently collecting these follow-up data for future analysis.

Recommendations
It is possible to use bubble nCPAP in neonatal care in MSF settings. Further challenges lie with the identification of appropriate equipment and development of a training package to allow wider use across MSF projects and adaptation for rural settings.