High-Flow Nasal Cannula Support: A New Option for Pediatric Interfacility Transport

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*High-flow nasal cannula therapy reduced the need for intubation compared with low-flow oxygen supplementation and noninvasive ventilation in this single-center, retrospective study.*

High-flow nasal cannula (HFNC) therapy can reduce the work of breathing, provide continuous positive airway pressure, and possibly reduce anatomical dead space. It is increasingly being used in pediatric intensive care units, but whether HFNC therapy is safe and effective during interfacility transport is unclear. These investigators retrospectively studied 793 critically ill children (age, <2 years) who were transported by a specialized team from community hospitals to a single pediatric intensive care unit in Australia during 4-year periods immediately before and after implementation of HFNC therapy (2 L/kg/minute flow delivered via nasal cannula connected to a heated humidifier).

Mean transport time was 1.4 hours (range, 0.25–8 hours) and mean transport distance was 205 km (range 2–2856 km). Of 331 children transported before HFNC-therapy was implemented, 49% were intubated, 43% received low-flow oxygen supplementation, and 7% received noninvasive positive pressure ventilation (NIPPV). Of 462 children transported after implementation, 35% were intubated, 30% received low-flow oxygen, 2% received NIPPV, and 33% received HFNC therapy. The need for intubation was significantly lower in the post-HFNC group (odds ratio, 0.51). Complications were similarly low in the two groups.

**Comment:** High-flow nasal cannula support is a simple intervention that is well tolerated during interfacility transport of critically ill pediatric patients and could decrease the need for intubation. However, lack of control or randomization precludes any firm conclusion from this study, and current practice should not change.

**Citation(s):**

Schlapbach LJ et al. High-flow nasal cannula (HFNC) support in interhospital transport of critically ill children. *Intensive Care Med* 2014 Apr; 40:592. ([http://dx.doi.org/10.1007/s00134-014-3226-7](http://dx.doi.org/10.1007/s00134-014-3226-7))

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