

HIFLO Abstract Submission for 2022 Pediatric Research Forum

- Title: Implementing a quality improvement project to decrease the overuse of high flow nasal canula in children with bronchiolitis
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Introduction:

This use of high flow nasal canula (HFNC) in the management of bronchiolitis in infants has increased over the last several years. However, there is no prospective data to indicate which patients would benefit from HFNC support. Research has shown that early initiation of HFNC has not decreased the rate of respiratory failure requiring intubation nor changed overall outcomes. In fact, research indicates that providers tend to overuse HFNC in the management of bronchiolitis.

To address this issue, UNM Children's Hospital is participating in American Academy of Pediatrics' national quality improvement: HI-FLO, which aims to decrease the overutilization of HFNC therapy in the treatment of healthy infants with bronchiolitis through implementation of standard HFNC initiation and weaning interventions. UNM was randomized to the Highflow Initiation Pause (HIP) intervention arm, where the primary aim was to reduce the proportion of infants with bronchiolitis treated with HFNC by 30%.

Methods:

Baseline data was collected from 11/24/19 to 3/14/20 and a total of 524 cases of infants (aged 30 days to 23 months) with bronchiolitis were identified. Infants with prematurity, chronic respiratory, cardiac or neuromuscular conditions were excluded.

The HIP intervention started Nov 28, 2021, with completion of 2 PDSA cycles. Data was collected and charts were reviewed to identify completion of HIP on patient started on HFNC, duration of HFNC, length of stay. Information was entered into QIDA for analysis.

Results: (as of December 2021)

- HFNC initiation rate has decreased from ~50% to ~30%
- HIP performed on patients started on HFNC: 11% (Nov) and 30% (Dec).

Conclusion:

We hypothesize that UNM will decrease the proportion of children with bronchiolitis who are treated with HFNC and decrease the total HFNC duration of therapy without an associated increase in ED length of stay (LOS) or total hospital LOS.