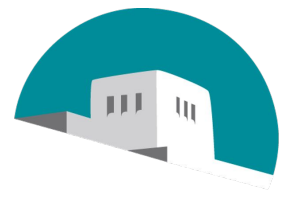


A Retrospective Study Tracking Patient Outcomes for the UNMH Pediatric ED Home Oxygen Pathway for Bronchiolitis Patients



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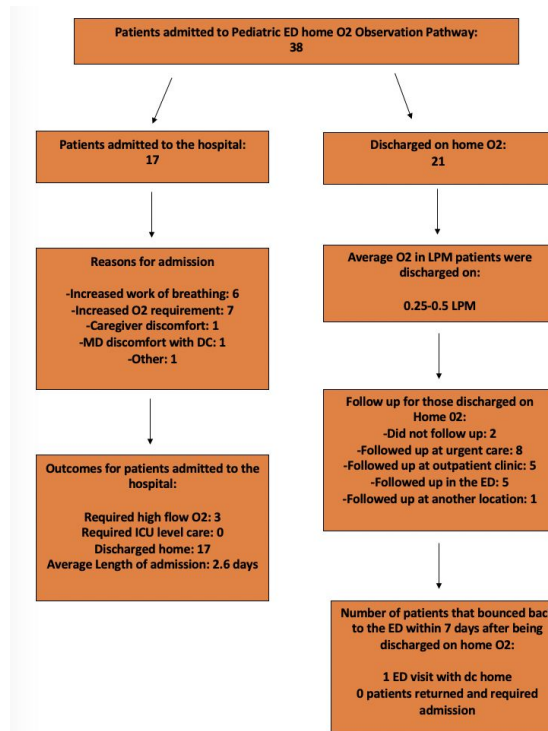
Introduction

- Bronchiolitis, a lower respiratory tract infection which predominantly affects children < 2 years of age, is a leading cause of hospitalizations in children
- Bronchiolitis may be mild or severe. Evidence suggests that non-severe cases can be treated safely with outpatient management
- Existing studies suggest it is safe and cost effective for a select group of hypoxic but otherwise low-risk patients to be discharged from the emergency department (ED) on home oxygen (O2).
- The University of New Mexico (UNM) Hospitalist Team and Pediatric Urgent Care have prescribed home O2 for several years but this is a new practice for the Pediatric ED.
- The UNMH Pediatric ED initiated an evidence-based Home O2 Pathway in 2017 with goals of reducing hospital admissions during bronchiolitis season, eliminating risk of patient exposure to additional infectious agents during admission, and providing patients and families with the appealing option of avoiding an inpatient stay.

Methods

- Low risk criteria for inclusion in the home O2 pathway include: diagnosis bronchiolitis, age 3-36 months and corrected gestational age >48 weeks, no chronic medical illness or history of apnea, no increased work of breathing, good oral hydration, SpO2 >89 on 0.5 LPM O2 by nasal cannula, caregiver comfort with dc plan, patient easily able to return/follow-up
- Home O2 patients are observed for at least 4 hours in the ED and undergo a 10 minute room air trial prior to discharge
- We completed retrospective review of all Home O2 Pathway cases
- We reviewed reasons for hospital admission in cases of patients who were admitted rather than discharged on home O2
- We determined whether discharged patients had any repeat ED visits and/or admission to the hospital within 7 days to evaluate for safety

Results



Discussion

- Many patients deteriorated during the required observation period and ultimately required admission, usually due to increased work of breathing or increased O2 requirement
- None of our discharged Home O2 patients returned to the hospital and required admission.
- Our current Home O2 protocol appears safe and effective
- The Home O2 Pathway has prevented 21 admissions to date
- Given the large number of bronchiolitis patients in a typical year, overall use of the Home O2 pathway is very limited
- Our strict inclusion criteria may be a factor; however, given the need to ensure safety, we do not plan to expand inclusion criteria at this time
- Future efforts should focus on trying to expand use of the Home O2 pathway through ED provider and nurse education to more effectively identify Home O2 candidates

Conclusion

- The Pediatric ED Home Oxygen Pathway is a safe alternative disposition option for patients with a non-severe form of bronchiolitis and may prevent some hospital admissions.
- Further study may compare this cohort with admitted bronchiolitis patients who are quickly discharged (within 24 hours) on home oxygen to identify further opportunities to prevent brief hospital admissions in favor of ED observation and discharge on home oxygen.
- We anticipate future steps to include ongoing case review and increased provider education for identifying home oxygen candidates.