BAMO: Bronchiolitis Admissions Monitoring/Orders
Revisiting Guideline Adherence and Order Accuracy
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BACKGROUND
- Our institution’s Bronchiolitis Clinical Practice Guidelines (CPG) recommends:
  - intermittent pulse oximetry (SpO2) for patients with no respiratory support or on low flow nasal cannula oxygen (LFNC)
  - continuous SpO2 and cardio-respiratory monitoring (CRM) for patients on high flow nasal cannula oxygen (HFNC)
- Poor adherence to CPG was observed in a sample of children admitted for bronchiolitis during the 2018-2019 respiratory season.

OBJECTIVE AND MEASURES
- Improve monitoring and monitoring orders of patients admitted to American Family Children’s Hospital for bronchiolitis to 85% adherence to CPG by March 2020.
  - Outcome measure: observed monitoring CPG adherence.
  - Process measures: adherence of orders to CPG and concordance between orders and observed monitoring.

METHODS
- Stakeholders planned improvement interventions including: 1) resident/nursing (RN) education, 2) resident/RN newsletter reminders, 3) development of CPG materials for strategic locations, 4) CRM orders and decision support added to the HFNC and bronchiolitis admission order sets.
- General care bronchiolitis patients were observed Nov. 11, 2019 to Mar. 8, 2020.
  - Included: age 4 weeks to 23 months, primary diagnosis of bronchiolitis
  - Excluded: born <28 weeks gestation, unrepaired cyanotic congenital heart disease, pulmonary hypertension, tracheostomy, home O2/ventilator, neuromuscular disease, immunodeficiency, cancer and observation within 12 hours.
- Data collection: Presence of continuous SpO2, CRM and level of respiratory support and were observed day (7am-7pm) and night (7pm-7am). Demographic, clinical status, and active order data were collected from chart review and used to determine adherence to CPG.
- Data were analyzed using statistical process control p-charts.
- This study was exempt by the University of Wisconsin Institutional Review Board.

RESULTS
- TOTAL n = 230 patients

ADDITIONAL KEY INFORMATION
- Thank you to all the dedicated respiratory therapists who performed the observations during this busy respiratory season.
- Respiratory care protocols for management of patients with bronchiolitis can be found on UW Health U-Connect.

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DISCUSSION
- Conclusions:
  - Improving adherence to recommended monitoring for patients with bronchiolitis is challenging.
  - Further interventions are needed to improve both monitoring and order adherence to clinical practice guidelines.
- Limitations:
  - 2019 data included only a very small number of patients
  - Some planned interventions were implemented late in the season without time to see change
- Future directions:
  - Additional years of data collection and review are needed to show true trends and improvements