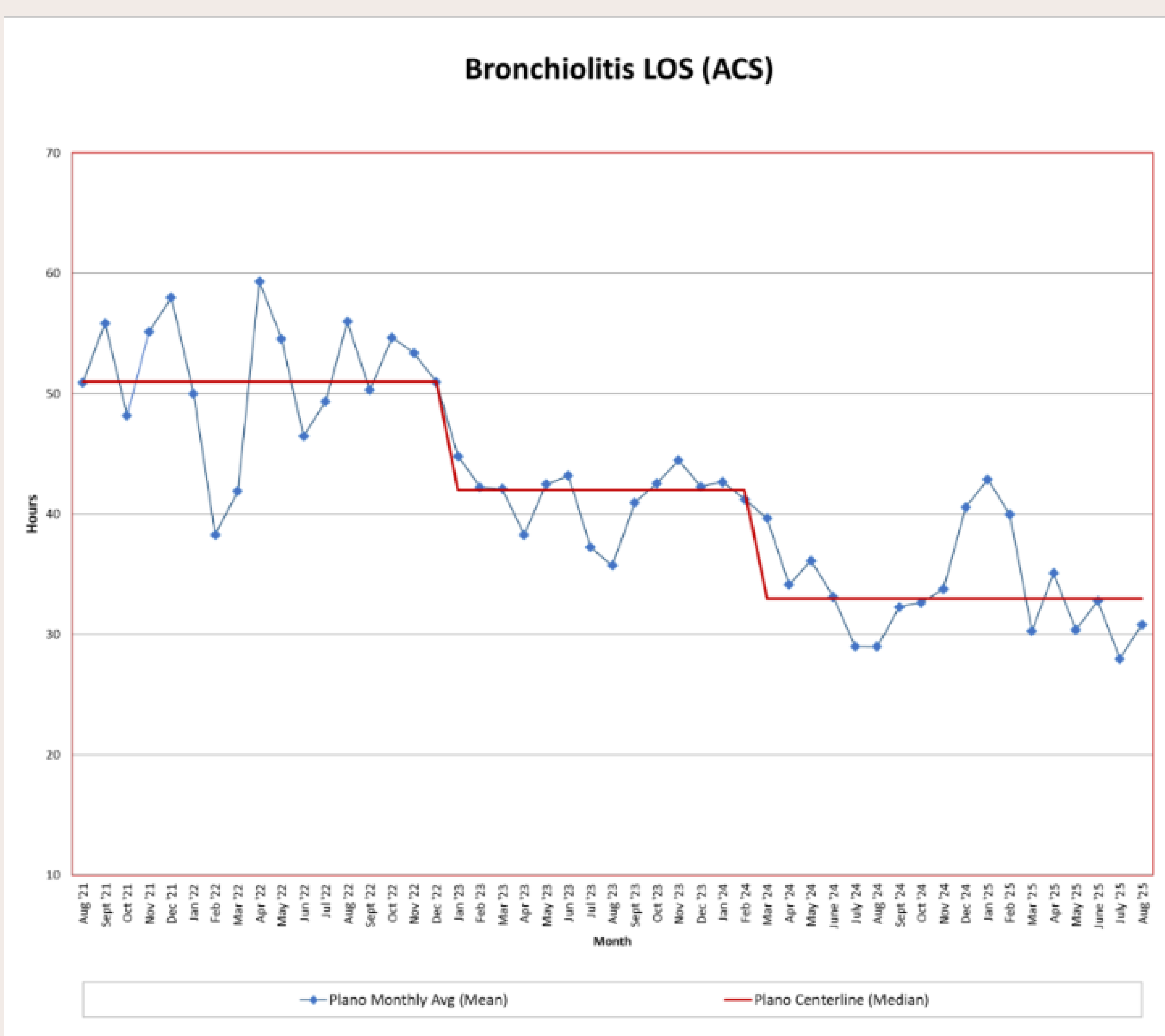


BACKGROUND

- Bronchiolitis is a leading cause of pediatric hospitalization. Despite American Academy of Pediatrics recommendations to reduce unnecessary care and costs, management variation persists.
- Modest reductions in length of stay (LOS) can meaningfully impact cost and hospital throughput. During our baseline period (August 2021-December 2022), our median LOS for bronchiolitis admissions was 51 hours, in comparison to 40.8 hours (1.7 days) for the 10th percentile of Children's Hospital Association peer hospitals.

PURPOSE

Our aim was to reduce the median LOS of patients with uncomplicated bronchiolitis by 12 hours between January 2023 and the end of 2024, without increasing our 72-hour readmission rate.



SUMMARY

This project highlights how standardizing bronchiolitis interventions and reducing practice variation across disciplines impacts cost efficiency and patient outcomes by reducing length of stay and readmission rates.

METHODS AND IMPLEMENTATION

- A multidisciplinary team of hospitalists, nurses, techs, and respiratory therapists in the acute care setting audited charts and surveyed staff to assess compliance with key bronchiolitis care practices, revealing significant variation.
- Guided by literature review, we implemented rapid Plan-Do-Study-Act cycles to improve adherence to an oxygen weaning pathway with room air trials, lower oxygen saturation thresholds requiring intervention, optimize pulse oximetry use (continuous vs. intermittent), and promote early discharge preparation.
- Interventions included electronic medical record order sets and Best Practice Alerts, staff education, and supporting materials.



OUTCOMES

- Our median LOS decreased from 51 hours at baseline to 33 hours by December 2024 (and has been sustained through August 2025), saving 1137 patient days and \$3.01M, with capacity for 444 additional patients.
- Protocol compliance for room air trials increased from 40% to 67%. Spot check orders increased from 45% to 91%, and patients removed from monitors within 6 hours of reaching room air increased from 58% to 71%.
- Physician alignment with target oxygen saturation orders increased from 19% to 61%.
- As a balancing measure, 72-hour readmission rate decreased from 0.7% to 0.2%.