

Conference abstract

Improving the Availability of Clean Stethoscopes for Inpatient Pediatric Patients on Isolation: Obstacles and Lessons Learned

Isabella Comsa McCormack, DO^{1a}, Anuoluwa Fasanmi, MBBS¹, Leighann Leslie, DO¹

¹ Pediatrics, Corewell Health William Beaumont University Hospital

Keywords: 2026 QI Summit Poster Presentation

<https://doi.org/10.69735/001c.163780>

INTRODUCTION

Infectious disease is a major cause of inpatient admissions for pediatric patients. While stethoscopes are a critical tool to aid in the diagnosis and evaluation of these patients, studies demonstrate they are a source of hospital-acquired infections. Stethoscopes can be contaminated with environmental pathogens such as methicillin-resistant *Staphylococcus aureus*, respiratory syncytial virus, and norovirus. It is critical that we protect our patients from contracting potentially dangerous infections. To limit spread of contagious illness between patients, we conducted a quality improvement (QI) project aimed to improve the availability of clean stethoscopes for pediatric patients by ensuring the presence of disposable stethoscopes for use at bedside for those on isolation.

METHODS

The QI process tool used was PDSA (Plan-Do-Study-Act). Patients included were admitted to general pediatric resident teams and on isolation precautions at Corewell Health William Beaumont University Hospital in Royal Oak, Michigan during the academic year of 2025-2026. Data was recorded for individual patients daily in an online database which captured date of assessment, isolation type, and whether disposable stethoscope was present for provider use (at bedside or in isolation cart directly outside of room). Each data collection duration spanned 14 days and was performed at time of family-centered rounds. Total number of patients on isolation and eligible for intervention was recorded separately to calculate data capture rates. Post-baseline data collection interventions included: senior resident bringing disposable stethoscope to patient bedside at time of admission and placement of the stethoscope beneath monitor in patient room. Outcome measure was the percentage of patients on isolation with disposable stethoscope present for use. Goal was to have a disposable stethoscope present for at least 80% of patients on isolation precautions.

RESULTS

Two PDSA cycles were completed. Baseline data demonstrated that 68% of patients on isolation precautions had a disposable stethoscope present at bedside or in cart outside room. Data capture rate was only 43%. Post-first intervention showed improvement in data capture rate to 78%. Only 60% of isolation patients had a disposable stethoscope present. Repeat data collection after review with team and ongoing intervention noted decrease in data capture rate to 63%. Only 53% of patients assessed had a stethoscope present.

CONCLUSIONS

Despite the proposed interventions, percentage of pediatric patients on isolation with disposable stethoscopes decreased between the baseline data collection and completion of the last data collection (68% to 53%). Potential obstacles to success of project include preference of providers to use their own stethoscope instead of the disposable stethoscopes due to poor quality. Other perceived barriers were inpatient service responsibilities preventing residents from timely data capture and delivery of disposable stethoscope to room. Decreasing spread of infection associated with stethoscope use remains a significant goal for future QI projects. Interventions for subsequent QI cycles include supplying disposable stethoscope covers or sanitizing cloths to be readily available at patient bedside. Future directions also include inclusion of patients admitted to Pediatric Hematology-Oncology service and Pediatric Intensive Care units who may be at higher risk of serious impact related to infection due to immunosuppression or critical illness.

Published: June 29, 2026 EDT.



This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CCBY-4.0). View this license's legal deed at <http://creativecommons.org/licenses/by/4.0> and legal code at <http://creativecommons.org/licenses/by/4.0/legalcode> for more information.