

accounting for known risk factors of age, gender, body mass index (BMI), length of stay, emergency admissions, and comorbidity risk. This suggests that including and analyzing health inequity risk factors may help in early intervention to reduce or prevent HAIs.

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**Presentation Type:**

Oral Presentation - Top Poster Abstract

**Subject Category:** Pediatrics

**Impact of Shorter Contact Isolation Duration on Healthcare Associated Multidrug-Resistant Organisms in a Pediatric Medical Center**

Ayelet Rosenthal<sup>1</sup>, Nabgha Farhat<sup>2</sup>, Sneha Krishna<sup>3</sup>, Joseph Fishbein<sup>2</sup>, Amy Valencia<sup>4</sup>, Alison Prati<sup>5</sup>, Julianne Burns<sup>5</sup> and Roshni Mathew<sup>6</sup>

<sup>1</sup>Lurie Children’s Hospital of Chicago, Northwestern University; <sup>2</sup>Lurie Children’s Hospital; <sup>3</sup>Stanford Medicine Children’s Health; <sup>4</sup>Stanford Medicine Children’s Health; <sup>5</sup>Stanford University School of Medicine and <sup>6</sup>Stanford University

**Background:** Patients with multidrug-resistant organisms (MDROs) often require prolonged contact isolation, negatively impacting patient care and resource utilization. De-isolation criteria for MDROs vary across pediatric

hospitals, typically based on organism type and achieving negative cultures. This study assessed the impact of revised MDRO de-isolation criteria allowing shorter contact isolation (Table 1) on healthcare-associated (HA) MDRO incidence rates in a freestanding academic pediatric medical center. **Methods:** We measured HA-MDRO incidence (MDROs listed in table 1, identified on or after hospital day 3) per 1000 patient days during two periods: (1) Pre-intervention (January 2019 – February 2022), prior to revised de-isolation criteria, and (2) Post-intervention (March 2022 – July 2024). Negative binomial regression was used to compare the level and trend of HA-MDRO incidence rates between the periods. **Results:** The incidence rates of all HA-MDROs, extended-spectrum beta-lactamase (ESBL)-producing organisms and methicillin-resistant *Staphylococcus aureus* (MRSA) are shown in Figure 1. No significant difference was observed in the level (p=0.38, 0.37, 0.9) or trend (p=0.67, 0.82, 0.76) of HA-MDRO, ESBL, or MRSA incidence rates between the periods. Estimating a daily cost of about \$43 for personal protective equipment only, a minimum reduction of two weeks of contact isolation translates to approximately \$602 cost reduction per patient. **Conclusion:** Shortening the duration of contact isolation for MDROs did not increase HA-MDRO incidence rates in our children’s hospital and may offer cost savings. Carefully designed MDRO policies can enhance patient care without compromising infection prevention goals.

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**Relationship Between Area Deprivation Index (ADI) Ranking and Targeted Multidrug Resistant Organisms (MDROs) in Philadelphia, 2018–2023**

Taseen Karim<sup>1</sup>, Tiina Peritz<sup>1</sup>, Jenna Scully<sup>2</sup> and Jane Gould<sup>1</sup>

<sup>1</sup>Philadelphia Department of Public Health and <sup>2</sup>NA

**Background:** Antimicrobial-resistant pathogens cause more than 2.8 million infections and 35,000 deaths annually in the U.S. Risks for antimicrobial-

Table 1: MDRO de-isolation criteria

	Previous	Revised
Extended-spectrum beta-lactamase organism (ESBL)	Off all antibiotics for 2 weeks + negative culture	Off targeted antibiotics + resolved infection
Methicillin-resistant <i>Staphylococcus aureus</i> (MRSA)	Off all antibiotics + infection resolution + negative culture	
Vancomycin resistant <i>Enterococcus</i>	Off all antibiotics + infection resolution + negative culture + 2 negative stool or rectal cultures	Off targeted antibiotics + resolved infection + 1 month after positive culture
Carbapenem-resistant Enterobacteriaceae (non carbapenemase-producing)	Off all antibiotics for 2 weeks + negative culture + 2 negative stool or rectal cultures	
Carbapenem-resistant Enterobacteriaceae (carbapenemase-producing)	Indefinite isolation	Indefinite isolation
<i>Candida auris</i>		

Figure 1: Incidence rate of (a) total HA-MDROs, (b) HA-ESBL and MRSA before and after the change in de-isolation criteria

