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### Privacy curtain contamination in six post-acute care facilities in Michigan

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**Background:** Patient privacy curtains are high-touch surfaces that are cleaned infrequently and could contribute to pathogen transmission. The aim of this study was to evaluate curtain contamination with multidrug-resistant organisms (MDROs) in skilled nursing facility (SNF) rooms to inform curtain hygiene protocols. Within the US, SNFs care for both post-acute care patients (average length of stay ~22 days) and long stay residents (average length of stay up to 2 years).

**Materials/methods:** A prospective cohort study was conducted in six SNFs in southeast Michigan. After obtaining informed consent, research staff obtained cultures from several patient body sites and high-touch surfaces in the patient's room upon admission, at D14, D30 and monthly up to 6-months. 1521 samples were collected from privacy curtains (near the edge where they were most frequently touched) in 625 short-stay patient's rooms. We were particularly interested in concordance between patient colonization and curtain contamination with an MDRO at the same visit and whether this contamination was intermittent or persistent among those with 6 months of follow-up.

**Results:** A total of 334 (22%) curtain cultures (facility range 11.9%-28.5%) were positive for MDROs; including 210 (13.8%) with vancomycin-resistant enterococci (VRE); 94 (6.2%) with resistant Gram-negative bacilli (R-GNB); and 74 (4.9%) with methicillin-resistant *Staphylococcus aureus* (MRSA). No difference between private rooms (6/26 [23.1%]) and shared rooms (328/1492 [22.0%]) was observed. In 15.7% (238/1518) of sampling visits, patients and their privacy curtain were concurrently colonized with the same MDRO. Patient colonization with MRSA and VRE were each associated with contamination of the bedside curtain. For example, of the 210 visits where curtains were colonized with VRE, 57.6% of patients were also colonized with VRE. VRE was not detected on the curtain in 73.3% of visits when VRE was not found on the patient ( $P < .001$ ). Among 18 patients with follow-up of 6 months, curtain contamination was often intermittent.

**Conclusions:** Privacy curtain contamination with MDROs is common. Patients and their privacy curtain are often contaminated with the same MDRO. Further studies are needed to determine whether contaminated privacy curtains are a source of MDRO transmission to patients.