

Figure 1. Extended-spectrum β -lactamase (ESBL)-producing Enterobacteriaceae Incident Positive Culture Rate per 10,000 Discharges, 2012–2017

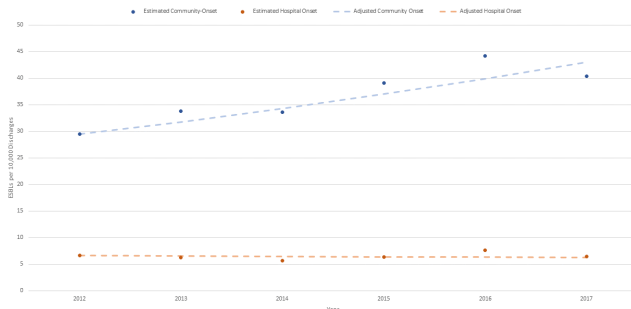
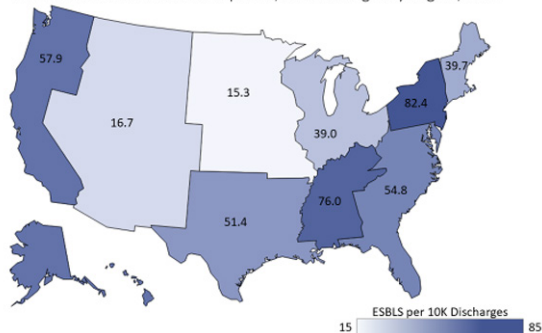


Figure 2. Estimated Extended-spectrum β -lactamase (ESBL)-producing Enterobacteriaceae Incident Positive Culture Rate per 10,000 Discharges by Region, 2017



Disclosures. All authors: No reported disclosures.

2480. Communication During Patient Transfers: Describing Gaps in the Infectious Status Information Pipeline

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Background. Fragmented communication of patients' infectious status across healthcare networks impact regional spread of multidrug-resistant organisms (MDRO). This study aimed to quantify gaps in communication of patient MDRO status across Utah healthcare facilities and to identify opportunities to improve.

Methods. This is a cross-sectional retrospective mixed-methods study of patient transfers from three purposively selected healthcare facilities: an acute care (ACF), long-term acute care (LTAC), and skilled-nursing facility (SNF). Patients with known MDRO transferred out of these facilities over the previous week were identified in bi-monthly samples spanning 2 months. Infection preventionists and admission nurses from facilities receiving these patients were interviewed.

Results. Of 293 patients transferred to another facility, 13% ($n = 38$) had an active infection or colonization with an MDRO. These 38 patients were transferred to 26 healthcare facilities within the state (4 ACF, 3 LTAC, 19 SNF). Gram-negative organisms with resistance to a carbapenem accounted for 15.8% of those transferred with an MDRO. There was no documentation of the state infection control transfer form (ICTF) at the sending facility for 68.5% of MDRO patient transfers. Of 22 admitting nurses interviewed, 19 (86.4%) did not receive an ICTF, 6 (27.3%) received no communication regarding patients' infectious status, and 11 (50%) had to contact the sending facility for additional information. Moreover, 18.2% of patients had not been put on appropriate precautions. Several nurses expressed confusion with MDRO definitions and lack of guidance regarding care of MDRO colonized patients. Among infection preventionists asked about general MDRO transfers ($n = 26$), 26.9% reported that communication on infectious status of MDRO patients was received in under 40% of incoming transfers. When asked about a planned statewide MDRO registry, 80.8% felt that such a system would be actively searched at their facility, and 96.2% felt that a system that pushes out alerts would be useful.

Conclusion. Given the widespread gaps in communication of infectious status of patients with MDROs transferred across the healthcare facilities sampled, efforts to standardize and improve MDRO communication in the region is warranted.

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2481. Comparing inter-hospital patient movement patterns to better understand mechanisms for regional dissemination of carbapenem-resistant Enterobacteriaceae

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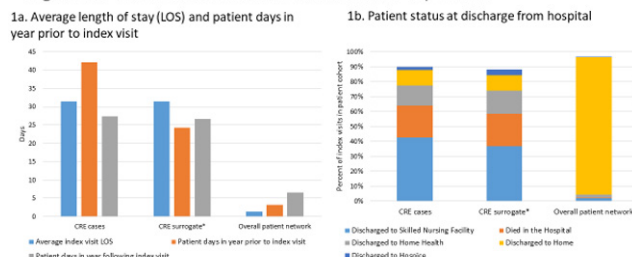
Background. Understanding inter-hospital movement of patients provides insight into regional transmission of multidrug-resistant organisms (MDROs) that can guide containment efforts. Movement of general patient populations are often used for this purpose, but movement of the specific patient population of MDRO carriers may be more useful. We sought to compare movement of CRE patients with that of other patient populations to explore whether CRE carriers move differently, and if so, to determine whether administrative data can be used to identify patient populations with transfer patterns that mimic CRE patients.

Methods. We used New York's Statewide Planning and Research Cooperative System (SPARCS), to create a patient network of all acute care hospital encounters ("overall hospital population") during 2013–2015. We identified the subset of CRE cases in the network by linking the SPARCS data to CRE cases reported to the National Healthcare Safety Network in 2014, matching on admission date, date of birth, gender, and facility. We described patient characteristics and movement patterns across 3 cohorts: (1) CRE cases, (2) overall hospital population, (3) CRE surrogate (patients clinically similar to CRE cases based on length of stay [LOS] ≥ 14 days and Clinical Classification Software [CCS] category of sepsis plus at least one of the following additional CCS categories: adult respiratory failure, acute renal failure, procedure complication or device complication). Correlations between cohorts were calculated using patient transfer matrices to determine similarities between the networks.

Results. The average LOS for CRE cases was 25 \times higher than the overall hospital population (31.4 vs. 1.3 days, Figure 1a), and CRE cases were more likely to die or be discharged to a skilled nursing facility (Figure 1b). CRE movement networks were only moderately correlated with the overall hospital population ($R^2 = 0.51$); there was higher correlation between CRE case and CRE surrogate networks ($R^2 = 0.73$).

Conclusion. CRE patients have different healthcare experiences in the hospital and between hospitals in New York compared with the overall hospital population. The CRE surrogate cohort transfer patterns were more similar, and could be used to understand CRE patient movement in the absence of CRE culture data.

Figure 1. Patient characteristics of index visits* by cohort



*index visit was defined as the first visit with a CRE culture for CRE patients, the first visit in 2014 meeting the cohort definition for the CRE surrogate and the first hospital visit (inpatient or outpatient) in 2014 for the overall patient network.

*defined as LOS ≥ 14 days and a Clinical Classification Software (CCS) diagnosis of sepsis with at least one additional CCS category: adult respiratory failure, acute renal failure, procedure complication or device complication

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2482. Clinical Outcomes of Once-Daily Darunavir in Treatment-Experienced Patients with Darunavir Resistance Associated Mutations Through 48 Weeks of Treatment

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Background. Darunavir (DRV) is a well-tolerated, potent protease inhibitor used once-daily in patients with no DRV resistance-associated mutations (RAMs) and twice-daily in those with DRV RAMs. Treatment guidelines encourage use of once-daily regimens to optimize patient adherence, convenience and tolerability. Several studies suggest that once-daily DRV retains efficacy in the setting of 1–2 DRV RAMs whereas 3 or more DRV RAMs (with multiple background PI RAMs) is needed for DRV resistance. Currently, there is little clinical data to support the long-term use of once-daily DRV in patients with DRV RAMs.

Methods. This is a retrospective study evaluating the 48-week clinical outcomes of 22 treatment-experienced patients with DRV RAMs switched to once-daily DRV between 2014 and 2017 at the Orlando Immunology Center. The primary endpoint was the proportion with virologic suppression (HIV-1 RNA < 50 copies/mL) at Week 48. Adherence, adverse events (AEs) and laboratory parameters were analyzed throughout the study.

Results. The median age (range) of the sample was 53 (21–77) years, median baseline CD4+ count was 609 cells/mm³, 18 (82%) had baseline HIV-1 RNA < 50 copies/mL, 15 (69%) had previously used 1 or more PIs and median number (range) of