892. Risk Factors for Adverse Events in Children Receiving Outpatient Antibiotic Therapy

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Background. Outpatient parenteral antibiotic therapy (OPAT) can decrease the length of hospital stay but is associated with adverse events (AEs). The purpose of this study was to quantify and identify risk factors for OPAT-associated AEs in children.

Methods. This is a retrospective, single-center study of patients aged ≤21 years discharged on OPAT from January 2016 to April 2019. Only patients with OPAT seen by the infectious disease service were included. Medication AEs included: rash, neutropenia, hepatitis, diabetes, 
C. difficile infection, increased serum creatinine, or others. Central line AEs included: central line dysfunction, line infection, rash around line site, or other. Wilcoxon rank-sum test, Pearson's \( \chi^2 \) test, Fisher's exact test, and multivariable logistic regression models were used for analyses.

Results. Demographic information can be found in Table 1. Among 176 patients included in the study, an AE occurred in 69 (39%). In a multivariable logistic regression model adjusting for age, county of residence, duration of OPAT, and duration line was in place, each additional day of antibiotics increased the odds of having a medication or line-related AE by 3% (OR 1.03; 95% CI 1.01–1.06; \( P = 0.005 \); Table 2). Medication AEs occurred in 30 patients (17%). The most frequent medication AEs were neutropenia (24%), rash (15%), and increased liver function tests (15%). Patients residing in a Large Fringe Metro area (suburb) had 33% lower odds of having a drug-related AE compared with those in a Large Central Metro area (OR 0.67; 95% CI 0.50 to 0.90; \( P = 0.008 \)). Line AEs occurred in 46 patients (26%), with 10 patients (21%) experiencing >1 line AE. The most common line AEs were line malfunction (56.5%) and line infection (13%). Seven patients experienced both a medication AE and a central line AE. Of the 176 patients, 20 (11%) were readmitted to the hospital due to medication or line AE and an additional 25 (14%) had a healthcare visit for an AE although did not require admission.

Conclusion. In our region, nearly 40% of children experienced an OPAT-associated AE and line AEs were more common than medication AEs. Longer durations of IV therapy was an independent risk factor for AEs. Converting to oral antibiotic therapy as soon as feasible may reduce OPAT-associated AEs.

Disclosures. All Authors: No reported Disclosures.

| Age (median [IQR]) | Total N (%) | Any AE (N [%]) | No-AE (N [%]) | p-value |
|---------------------|-------------|----------------|---------------|---------|
| 6.1 (1.7–15.5)     | 5.4 (5-14.8) | 8.6 (5.2-12.9) | 0.333* |

983. The SHIELD Orange County Project: A Decolorization Strategy in 35 Hospitals and Nursing Homes Reduces Multi-Drug-Resistant Organism (MDRO) Prevalence in a Southern California Region

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Table 2: Multivariable Analysis for Total Adverse Events

| Odds Ratio | 95% CI | p-value |
|------------|-------|---------|

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Declined 2.4% to 1.8% (OR = 0.74, 0.004). For ESBLs, raw reductions were 24% NHs (OR = 0.65, 0.001), and 11% CP patients (OR = 0.67, 0.001). The prevalence was reduced 22% in NHs (OR 0.58, P = 0.01), and 26% CP patients (OR = 0.64, P < 0.001). For CRE, raw reductions were 40% NHs (OR = 0.62, P = 0.001), 55% LTACs (OR = 0.26, P < 0.001), and 15% CP patients (OR = 0.67, P = 0.004). For ESBLs, raw reductions were 24% NHs (OR = 0.65, P < 0.001), 34% LTACs (OR = 0.53, P = 0.01), and 26% CP patients (OR = 0.64, P < 0.001). For CRE, raw reductions were 24% NHs (OR = 0.70, P = 0.05), and 23% LTACs (OR = 0.75, P = 0.05). CRE increased by 26% CP averaged across hospitals, although patient -level CRE declined 2.4% to 1.8% (OR = 0.74, P = 0.004).}

**Conclusions.** MDRO carriage was common in highly inter-connected NHs, LTACs, and hospitals. A regional collaborative of universal decolonization in long-term care and targeted decolonization of CP patients in hospitals led to sizeable reductions in MDRO carriage.

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