healthcare network was of borderline significance and should be further explored in the NH setting.

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**Presentation Type:** Oral Presentation

**Evaluation of Care Interactions Between Healthcare Personnel and Residents in Nursing Homes Across the United States**

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**Background:** Certain nursing home (NH) resident care tasks have a higher risk for multidrug-resistant organisms (MDRO) transfer to healthcare personnel (HCP), which can result in transmission to residents if HCPs fail to perform recommended infection prevention practices. However, data on HCP-resident interactions are limited and do not account for intrafacility practice variation. Understanding differences in interactions, by HCP role and unit, is important for informing MDRO prevention strategies in NHs.

**Methods:** In 2019, we conducted serial intercept interviews; each HCP was interviewed 6–7 times for the duration of a unit’s dayshift at 20 NHs in 7 states. The next day, staff on a second unit within the

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**Table 3:** Proportion of interactions* where at least one task performed was high-risk for HCP contamination, stratified by unit type and HCP Role.

<table>
<thead>
<tr>
<th>Risk Level</th>
<th>All Types</th>
<th>Long-term</th>
<th>Mixed</th>
<th>Short Stay/Rehab</th>
<th>Ventilator/Skilled Nursing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N %</td>
<td>Facility IQR</td>
<td>N %</td>
<td>Facility IQR</td>
<td>N %</td>
</tr>
<tr>
<td>High</td>
<td>3213</td>
<td>45.6%</td>
<td>39.3-53.9%</td>
<td>1380</td>
<td>24.1%</td>
</tr>
</tbody>
</table>

**Note:** A “high-risk interaction” was a HCP-resident interaction where ≥1 task that posed high-risk for HCP contamination care activity was performed; a “low-risk interaction” did not include any high-risk care tasks during the interaction. Higher-risk care tasks included: dressing resident, hygiene, wound care, ventilator/tracheotomy care, device care, stool cleanup, and linen change. Includes interaction in common areas or outside patient rooms.

**Table 4:** Distribution of resident care tasks, stratified by unit type.

<table>
<thead>
<tr>
<th>Task Type</th>
<th>Long-term</th>
<th>Mixed</th>
<th>Short Stay/Rehab</th>
<th>Ventilator/Skilled Nursing</th>
</tr>
</thead>
<tbody>
<tr>
<td>N %</td>
<td>Facility IQR</td>
<td>N %</td>
<td>Facility IQR</td>
<td>N %</td>
</tr>
<tr>
<td>Tasks with Higher Risk of HCP Contamination</td>
<td>3223</td>
<td>57.6%</td>
<td>58.8%</td>
<td>2282</td>
</tr>
<tr>
<td>Tasks with Lower Risk of HCP Contamination</td>
<td>2370</td>
<td>42.4%</td>
<td>41.2%</td>
<td>2490</td>
</tr>
</tbody>
</table>

**Fig. 2.**
Facility were interviewed during the dayshift. HCP on 38 units were interviewed to identify healthcare personnel (HCP)–resident care patterns. All unit staff were eligible for interviews, including certified nursing assistants (CNAs), nurses, physical or occupational therapists, physicians, midlevel practitioners, and respiratory therapists. HCP were asked to list which residents they had cared for (within resident rooms or common areas) since the prior interview. Respondents selected from 14 care tasks. We classified units into 1 of 4 types: long-term, mixed, short stay or rehabilitation, or ventilator or skilled nursing. Interactions were classified based on the risk of HCP contamination after task performance. We compared proportions of interactions associated with each HCP role and performed clustered linear regression to determine the effect of unit type and HCP role on the number of unique task types performed per interaction. Results: Intercept-interviews described 7,050 interactions and 13,843 care tasks. Except in ventilator or skilled nursing units, CNAs have the greatest proportion of care interactions (interfacility range, 50%–60%) (Fig. 1). In ventilator and skilled nursing units, interactions are evenly shared between CNAs and nurses (43% and 47%, respectively). On average, CNAs in ventilator and skilled nursing units perform the most unique task types (2.5 task types per interaction, Fig. 2) compared to other unit types (P < .05). Compared to CNAs, most other HCP types had significantly fewer task types (0.6–1.4 task types per interaction, P < .001). Across all facilities, 45.6% of interactions included tasks that were higher-risk for HCP contamination (eg, transferring, wound and device care, Fig. 3). Conclusions: Focusing infection prevention education efforts on CNAs may be most efficient for preventing MDRO transmission within NH because CNAs have the most HCP–resident interactions and complete more tasks per visit. Studies of HCP-resident interactions are critical to improving understanding of transmission mechanisms as well as target MDRO prevention interventions.

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Disclosures: Scott Fridkin, consulting fee, vaccine industry (spouse)

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Presentation Type:
Oral Presentation

Feasible Surgical Site Infection Surveillance in Resource-Limited Settings: A Pilot in Sierra Leone

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Background: Surgical site infections (SSIs) are among the most common healthcare-associated infections (HAIs) in low- and middle-income countries (LMICs). SSI surveillance can be challenging and resource-intensive to implement in LMICs. To support feasible LMIC SSI surveillance, we piloted a multisite SSI surveillance protocol using simplified case definitions and methodology in Sierra Leone. Methods: A standardized evaluation tool was used to assess SSI surveillance knowledge, capacity, and attitudes at 5 proposed facilities. We used simplified case definitions restricted to objective, observable criteria (eg, wound purulence or intentional reopening) without considering the depth of infection. Surveillance was limited to post-cesarean delivery patients to control variability of patient-level infection risk and to decrease data collection requirements. Phone-based patient interviews at 30 days facilitated postdischarge case finding. Surveillance activities utilized existing clinical staff without monetary incentives. The Ministry of Health provided training and support for data management and analysis. Results: Three facilities were selected for initial implementation. At all facilities, administration and surgical staff described most, or all, infections as “preventable” and all considered SSIs an “important problem” at their facility. However, capacity assessments revealed limited staff availability to support surveillance activities, limited experience in systematic data collection, nonstandardized patient records as the basis for data collection, lack of unique and consistent patient identifiers to link patient encounters, and no quality-assured microbiology services. To limit system demands and to maximize usefulness, our surveillance data collection elements were built into a newly developed clinical surgical safety checklist that was designed to support surgeons’ clinical decision making. Following implementation and 2 months of SSI surveillance activities, 77% (392 of 509) of post-cesarean delivery patients had a checklist completed within the surveillance system. Only 145 of 392 patients (37%) under surveillance were contacted for final 30-day phone interview. Combined SSI rate for the initial 2-months of data collection in Sierra Leone was 8% (32 of 392) with 31% (10 of 32) identified through postdischarge case finding. Discussion: The surveillance strategy piloted in Sierra Leone represents a departure from established HAI strategies in the use of simplified case definitions and implementation methods that prioritize current feasibility in a resource-limited setting. However, our pilot implementation results suggest that even these simplified SSI surveillance methods may lack sustainability without additional resources, especially in postdischarge case finding. However, even limited phone-based patient interviews identified a substantial number of infections in this population. Although it was not addressed in this pilot study, feasible laboratory capacity building to support HAI surveillance efforts and promote appropriate treatment should be explored.

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Group Electronic Monitoring of Hand Hygiene on Inpatient Units: A Multicenter Cluster Randomized Quality Improvement Study

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