

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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#### Presentation Type:

Oral Presentation

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

Matthew Westercamp, Centers for Disease Control and Prevention; Aqueelah Barrie, World Health Organization, Freetown, Sierra Leone; Christiana Conteh, Sierra Leone Ministry of Health and Sanitation; Danica Gomes, Centers for Disease Control and Prevention; Hassan Benya, US Centers for Disease Control and Prevention; Jamine Weiss, US Centers for Diseases Control and Prevention; Anna Maruta, World Health Organization—Sierra Leone; Rachel Smith, Centers for Disease Control and Prevention

**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 post-discharge 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

Jerome Leis, University of Toronto; Jeff Powis, Michael Garron Hospital, Toronto, Ontario, Canada; Allison McGeer, Mount Sinai Hospital; Daniel Ricciuto, Lakeridge Health, Oshawa, Ontario, Toronto; Tanya Agnihotri, Sunnybrook Health Sciences Centre, Toronto, Ontario, Canada; Natalie Coyle, Sunnybrook Health Sciences Centre, Toronto, Ontario, Canada; Victoria Williams, Sunnybrook Health Sciences Centre; Christine Moore, Sinai Health System, Toronto, Ontario, Canada; Natasha Salt, Sunnybrook Health Sciences Center; Louis Wong, Sinai Health System; Liz McCreight, Sinai Health System, Toronto, Ontario, Canada; Sajeetha Sivaramakrishna, Michael Garron Hospital, Toronto, Ontario, Canada; Shara Junaid, St Michael’s Hospital; Xingshan Cao, Sunnybrook Health Sciences Centre, Toronto, Ontario, Canada; Matthew Muller, Unity Health, Toronto, Ontario, Canada