

Presentation Type:

Poster Presentation

Access to Alcohol-Based Hand Rub Is Associated With Improved Hand Hygiene in an Ebola-Threatened District of Western Uganda

Mohammed Lamorde, Infectious Diseases Institute, Makerere University; Matthew Lozier, Waterborne Disease Prevention Branch, Division of Foodborne, Waterborne, and Environmental Diseases, Centers for Disease Control and Prevention; Maureen Kesande, Infectious Diseases Institute, Makerere University, Uganda; Patricia Akers, Waterborne Disease Prevention Branch, Division of Foodborne, Waterborne, and Environmental Diseases, Centers for Disease Control and Prevention; Olive Tumuhairwe, Kabarole District Health Office, Uganda Ministry of Health, Fort Portal, Uganda; Martin Watsisi, International Research Centre – WASH (IRC-WASH), Fort Portal, Uganda; Winifred Omuut, Infectious Diseases Institute, Makerere University, Uganda; Margaret Person, Waterborne Disease Prevention Branch, Division of Foodborne, Waterborne, and Environmental Diseases, Centers for Disease Control and Prevention; Jen Murphy, Waterborne Disease Prevention Branch, Division of Foodborne, Waterborne, and Environmental Diseases, Centers for Disease Control and Prevention; Rob Quick, Waterborne Disease Prevention Branch, Division of Foodborne, Waterborne, and Environmental Diseases, Centers for Disease Control and Prevention; David Berendes, Waterborne Disease Prevention Branch, Division of Foodborne, Waterborne, and Environmental Diseases, Centers for Disease Control and Prevention

Background: Ebola virus disease (EVD) is highly transmissible and has a high mortality rate. During outbreaks, EVD can spread across international borders. Inadequate hand hygiene places healthcare workers (HCWs) at increased risk for healthcare-associated infections, including EVD. In high-income countries, alcohol-based hand rub (ABHR) can improve hand hygiene compliance among HCWs in healthcare facilities (HCF). We evaluated local production and district-wide distribution of a WHO-recommended ABHR formulation and associations between ABHR availability in HCF and HCW hand hygiene compliance. **Methods:** The evaluation included 30 HCF in Kabarole District, located in Western Uganda near the border with the Democratic Republic of the Congo, where an EVD outbreak has been ongoing since August 2018. We recorded baseline hand hygiene practices before and after patient contact among 46 healthcare workers across 20 HCFs in August 2018. Subsequently, in late 2018, WHO/UNICEF distributed commercially produced ABHR to all 30 HCFs in Kabarole as part of Ebola preparedness efforts. In February 2019, our crossover evaluation distributed 20 L locally produced ABHR to each of 15 HCFs. From June 24–July 5, 2019, we performed follow-up observations of hand hygiene practices among 68 HCWs across all 30 HCFs. We defined hand hygiene as handwashing with soap or using ABHR. We conducted focus groups with healthcare workers at baseline and follow-up. **Results:** We observed hand hygiene compliance before and after 203 and 308 patient contacts at baseline and follow-up, respectively. From baseline to follow-up, hand hygiene compliance before patient contact increased for ABHR use (0% to 17%) and handwashing with soap (0% to 5%), for a total increase from 0% to 22% ($P < .0001$). Similarly, hand hygiene after patient contact increased from baseline to follow-up for ABHR use (from 3% to 55%), and handwashing with soap decreased (from 12% to 7%), yielding a net increase in hand hygiene compliance after patient contact from 15% to 62%

($P < .0001$). Focus groups found that HCWs prefer ABHR to handwashing because it is faster and more convenient. **Conclusions:** In an HCF in Kabarole District, the introduction of ABHR appeared to improve hand hygiene compliance. However, the confirmation of 3 EVD cases in Uganda 120 km from Kabarole District 2 weeks before our follow-up hand hygiene observations may have influenced health-care worker behavior and hand hygiene compliance. Local production and district-wide distribution of ABHR is feasible and may contribute to improved hand hygiene compliance among healthcare workers.

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Accuracy of the NHSN Central-Line–Associated Bloodstream Infections (CLABSIs) Definition: The Experience of Two Geographically Proximal Hospitals

Carlene Muto, University of Virginia; Pamela Louise Bailey, Virginia Commonwealth University Health System; Amie Patrick, Virginia Commonwealth University Hospital; Olivia Hess; Barry John Rittmann, Virginia Commonwealth University; Rachel Pryor, Virginia Commonwealth University Health System; Kaila Cooper, Nursing VCU Health; Michelle Elizabeth Doll, Virginia Commonwealth University; Michael Stevens, Virginia Commonwealth University School of Medicine; Gonzalo Bearman, Virginia Commonwealth University VCUHS Epidemiology and Infection Control

Background: Central-line–associated blood stream infections (CLABSIs) are linked with significant morbidity and mortality. A NHSN laboratory-confirmed bloodstream infection (LCBSI) has specific criteria to ascribe an infection to the central line or not. The criteria used to associate the pathogen to another site are restrictive. This objective to better classify CLABSIs using enhanced criteria to gain a comprehensive understanding of the error so that appropriate reduction efforts are utilized. **Methods:** We conducted a retrospective review of medical records with NHSN-identified CLABSI from July 2017 to December 2018 at 2 geographically proximate hospitals. Trained infectious diseases personnel from tertiary-care academic medical centers, the University of Virginia Health System, a 600-bed medical center in Charlottesville, Virginia, and Virginia Commonwealth University Health System with 865 beds in Richmond, Virginia, reviewed charts. We defined “overcaptured” or O-CLABSI into different categories: O-CLABSI-1 is bacteremia attributable to a primary infectious source; O-CLABSI-2 is bacteremia attributable to neutropenia with gastrointestinal translocation not meeting mucosal barrier injury criteria; O-CLABSI-3 is a positive

Table 1.

Table 1. Summary of O-CLABSI Classifications between Hospitals A and B, July 2017–December 2018

	Hospital A		Hospital B		P values
Total NHSN CLABSI	59		133		
True CLABSI	25	42%	88	66%	
Total O-CLABSI	34	58%	45	34%	0.0020
O-CLABSI distribution	34		45		
O-CLABSI-1	22*	64%	34	76%	<0.0001
O-CLABSI-2	7	21%	3	7%	<0.0001
O-CLABSI-3	5*	15%	8	18%	<0.0001
O-CLABSI-4	1	3%	0	0.0%	

O-CLABSI-1: bacteremia attributable to a primary infectious source

O-CLABSI-2: bacteremia attributable to neutropenia with gastrointestinal (GI) translocation not meeting mucosal barrier injury (MBI) criteria

O-CLABSI-3: positive blood culture attributable to a contaminant.

O-CLABSI-4: Patient Injecting Line, NOT documented

*One CLABSI identified as both O-CLABSI-1 and O-CLABSI-3.