Improving Hand Hygiene Compliance in a Ugandan Neurosurgery Ward Through Implementation of Hand Sanitization Interventions

Kelsey Graywill, Meggie Lund
Akash Patel, Sam Sadler

PROJECT SUMMARY
Duke Global Neurosurgery and Neuroscience (DGNN) has been working to improve neurosurgery facilities and training programs in Uganda at Mulago National Referral Hospital (MNRH) since 2007. Despite the successful implementation of a twinning program and an overall increase in the number of complex procedures performed, mortality rates have not decreased among neurosurgery patients. One identified contributor for this trend is a lack of pre- and postoperative interventions, including reducing hospital-acquired infections. Current literature suggests minimizing infectious disease rates through an easily-accessible, effective sanitization agent, which first requires a culture of hand hygiene compliance.

RESULTS & CONCLUSIONS
• Assessment Findings: Both training and educational signs increased sanitization pump usage, but direct staff training alone did not significantly influence usage. Pump location and usage suggested that areas of particularly high traffic experienced greater usage than sections of lower traffic or hindered accessibility. Count data showed an increase in staff usage. This data suggests that a culture of proper hand hygiene was being fostered.
• Areas for Improvement: This method can be applied to more effectively improve compliance with infection control measures, with potential to see decreased infection-related mortality rates in the neurosurgery ward.

METHODOLOGY
We aimed to augment hand hygiene practice through hand sanitization pumps by addressing accessibility, education, and visibility in the MNRH neurosurgical ward. Our intervention involved installing the pumps throughout the neurosurgical ward, holding a hospital staff training session, and introducing educational posters on hand hygiene. Compliance with this minimally-invasive intervention was measured through:
- Quantitative data on the mass of the sanitization gel in pumps over time based on location in the ward.
- Observational data detailing the interactions between staff, family, and patients where compliance was observed.
- Surveys providing staff feedback on effectiveness of interventions.

ACKNOWLEDGEMENTS: Project made possible by Emily Smith, João Ricardo Nickenig Vissoci, Anthony Fuller, Michael Haglund, Duke University Bass Connections, Duke Global Neurosurgery and Neuroscience, and Mulago National Referral Hospital.