

January 2016 to December 2018. We collected baseline characteristics of the dVZV patient, and we evaluated whether the exposure occurred due to a delay in diagnosis or a progression from “localized” to disseminated VZV disease. **Results:** We identified 21 immunosuppressed patients with dVZV whose infection resulted in an occupational exposure during the specified study period. Average age was 58.6 years, with 10 males and 12 females. The immunocompromised patients included 11 with hematologic malignancy, 5 with solid-organ malignancy, 3 with rheumatologic disease on immunosuppressive therapy, and 2 with a solid-organ transplant. Most of the exposures (72.7%) occurred in an inpatient setting. The exposures resulted from either delayed recognition of dVZV or delayed initiation of appropriate precautions for all of the immunosuppressed patients. Two additional exposures occurred as a result of a change from “localized” to “disseminated” VZV. These patients whose diagnosis changed from localized to dVZV were considered previously immunocompetent, and dissemination took place 2 days after seeking healthcare evaluation. **Conclusions:** Most occupational exposures to varicella zoster are the result of delayed initiation of appropriate isolation precautions due to delayed diagnosis of dVZV infection or failure to recognize the need for instituting precautions in disseminated disease. Instituting preemptive airborne precautions for immunocompromised patients with localized varicella zoster would be unlikely to reduce occupational exposures.

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Poster Presentation

Occupational Health Hazards Among Medical Waste Handlers in Ahmadu Bello University Teaching Hospital Zaria Northwest Nigeria

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Background: Occupational injuries are important public health issues, especially among healthcare workers. The medical waste handler is at risk of hazards posed by medical waste as well as from the environment. The aim of the study was to determine occupational hazards that hospital waste handlers in Ahmadu Bello University Teaching Hospital, Zaria, were exposed to and to assess their knowledge and practice of safety measures. **Methods:** A cross-sectional descriptive study was conducted among 79 medical waste handlers in Ahmadu Bello University Zaria using a multistage sampling technique. Data were collected using structured self-administered and interviewer administered questionnaire and analyzed using SPSS version 20 software with significance set at $P < .05$. **Results:** More than half of the respondents (56.4%) were men, and most (70.3%) had <5 years work experience. Most of the respondents (60.8%) had had an injury in the previous 6 months. The most common injuries were falling on a slippery floor (48.1%), contact/irritant dermatitis (40.5%), and 34.2% from stress. Only 45.6% received treatment following

injury at the work place. Most respondents (75.9%) were aware of safety devices, and more than half (51.9%) received their information from special safety training. More than half of the respondents (51.1%) had poor knowledge of use of safety devices, and 60% had special training in occupational safety. Most respondents (89.9%) used heavy-duty rubber hand gloves, but only 5.1% used aprons. Also, 82.3% of respondents used these devices regularly at work, and more than half of respondents (62%) had been immunized against hepatitis. Also, 65.8% practiced universal precautions. Occupational injury was higher among those aged 15–19 years (occupational injury rate, 75%) compared to those aged 34–39 years (occupational injury rate, 16%). A positive association was detected between gender and injury in the last 6 months; injury was more common among men (43%) than among women (15%).

Conclusions: Among respondents, there was a high level of injury and poor knowledge of the use of protective devices. Regular use of protective measures was not commensurate with the reported level of awareness. Concerted efforts are needed to ensure the safety of the medical waste handlers in his work place.

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Octenidine Body Wash and Nasal Gel Reduces MRSA Bacteremia

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Background: Methicillin-resistant *Staphylococcus aureus* (MRSA) is highly prevalent in Singapore hospitals. The Ministry of Health (MOH) has set a reduction of MRSA bacteremia as a key performance indicator for publicly funded hospitals, resulting in the adoption of various strategies to achieve this goal. Decolonization regimens have been implemented in different institutions with variable outcomes. In Tan Tock Seng hospital (TTSH), octenidine was chosen instead of chlorhexidine for its gentler action on the skin, and nasal octenidine was chosen instead of mupirocin (which has a high resistance rate) for nasal decolonization. **Methods:** All patients admitted to TTSH are screened for MRSA on admission. Patients who are either colonized or infected with MRSA are either placed in isolation rooms (when available) or are placed in cohorts in MRSA wards. The Department of Infection Prevention and Control (IPC) keeps a database of all patients with positive cultures for MRSA, including bacteremia. We used this database to implement and evaluate targeted strategies in such MRSA wards. In January 2018 we began a pilot project in 1 ward, whereby all patients had intranasal octenidine gel applied twice a day for 5 days, as well as daily octenisan baths throughout their stay in the ward. The outcome of interest was MRSA bacteremia occurring ≥ 3 days after admission. This quasi-experimental before-and-after study was conducted from January 2016 to September 2019 with January 2018 excluded as a washout month. **Results:** In total, 44 observational months (24 months before the intervention 20 months after the intervention) and 4,309 patients were included. In the preintervention period, 12 bacteremia cases occurred among 2,333 patients (0.5%); in the postintervention period, 4 MRSA bacteremia cases occurred in 1,976 patients (0.2%); RR, 0.49 (95% CI, 0.13–1.22), 1-sided $P = .07$. The rate of MRSA bacteremia was halved, but it

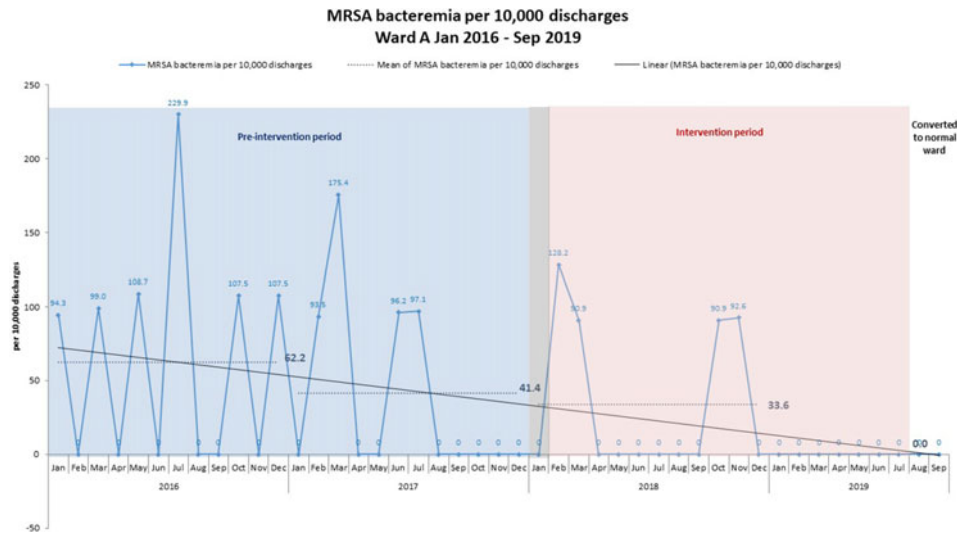


Fig. 1.

did not reach statistical significance due to the small number of cases overall. The products were well tolerated by patients and staff who applied them to nonambulant patients. **Conclusions:** Octenidine baths and nasal gel reduced risk of MRSA bacteremia in a cohort of MRSA-positive patients, and this strategy may be preferable to the universal use of antiseptic baths.

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Onsite-Assessment of Infection Prevention Preparedness in Community Healthcare Settings

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Background: Well-designed infection prevention programs include basic elements aimed at reducing the risk of transmission of infectious agents in healthcare settings. Although most acute-care facilities have robust infection prevention programs, data are sporadic and often lacking in other healthcare settings. Infection control assessment tools were developed by the CDC to assist health departments in assessing infection prevention

preparedness across a wide spectrum of health care including acute care, long-term care, outpatient care, and hemodialysis. **Methods:** The North Carolina Division of Public Health collaborated with the North Carolina Statewide Program for Infection Control and Epidemiology (SPICE) to conduct a targeted number of on-site assessments for each healthcare setting. Three experienced infection preventionists recruited facilities, conducted on-site assessments, provided detailed assessment findings, and developed educational resources. **Results:** The goal of 250 assessments was exceeded, with 277 on-site assessments completed across 75% of North Carolina counties (Table 1). Compliance with key observations varied by domain and type of care setting (Table 2). **Conclusions:** Comprehensive on-site assessments of infection prevention programs are an effective way to identify gaps or breaches in infection prevention practices. Gaps identified in acute care primarily related to competency validation: however, gaps presenting a threat to patient safety (ie, reuse of single dose vials, noncompliance with sterilization and/or high-level disinfection processes) were identified in other care settings. Infection control assessment and

Table 1. Assessments completed by facility type

Facility Type	Target	Completed
Acute Care	30	33
Long-Care Facilities (LTCFs)	80	113
Outpatient	100	91
Hemodialysis	40	40

Table 2. Compliance of key observations by health care facility type

Health care Setting	Observation(s)	Total # Observation(s)	Observation(s) in compliance (%)
Acute Care	Hand hygiene competency demonstrated	33	2 (6%)
	Selection/use of personal protective equipment (PPE) competency demonstrated	33	5 (15%)
	Preparing/administering injections/parenteral infusions competency demonstrated	33	6 (18%)
LTCFs	Adherence to injection safety/point of care testing/assisted monitoring blood glucose (AMBG) monitored	113	43 (38%)
	Antimicrobial Stewardship program addresses all steps in CDC tool	113	1 (1%)
	Monitors/documents adherence to hand hygiene	113	27 (24%)
Outpatient	Safe injection competency demonstrated	90	30 (33%)
	Process for high-level disinfection of reusable devices includes all steps outlined in CDC assessment tool	28	4 (14%)
	Terminal sterilization process for medical devices includes all steps outlined in CDC tool	68	11 (16%)
Hemodialysis	Routine application of antibiotic/povidone-iodine ointment to catheter exit sites	40	1 (2%)
	Storage/preparation injectable medication room separate from treatment area	40	8 (20%)
	Use of PPE competency	40	23 (57%)