Conclusion. This study demonstrated that a short educational intervention that included a video, a handout, and a verbal audio reminder has the potential to increase patient-centered infection prevention in the acute care settings with increasing the workload of healthcare workers. Findings can be used for future infection prevention studies in institutionalized patients to improve self-managed care.

Figure 1 Product Consumption Per Group

Disclosures. All authors: No reported disclosures.

1334. Hand hygiene: Knowledge and Practices of Clinical Teachers in Selected Teaching Hospitals in Kenya
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Session: 151. HAi: Hand Hygiene
Friday, October 6, 2017: 12:30 PM

Background. Healthcare-associated infections lead to substantial morbidity and mortality. WHO, and adequate hand hygiene (HH) in the clinical setting is essential for prevention. Clinical teachers are central to the training of healthcare workers (HCW) as they teach and model safe practices in the clinical environment. However, there is limited research on the knowledge and practices of clinical teachers related to HH in teaching hospitals, particularly in African settings. We describe the knowledge and practices of HH amongst clinical teachers in selected teaching hospitals in Kenya.

Methods. Data were collected through self-administered standardized questionnaires with basic demographic, knowledge and practices about HH from clinical teachers employed at two teaching hospitals. Participating clinical teachers were anonymously audited for HH practices using an adapted World Health Organization tool. The audits consisted of 20–30 minutes observations in each ward.

Results. Among 57 participants overall, 42 (73.7%) were nurses, 8 (14.0%) clinical teachers, and 5 (8.8%) therapists. Twenty-one (36.8%) of the participants had knowledge regarding the minimum time needed to practice HH using alcohol based hand rub, 14 (24.6%) knew that hand washing and hand rubbing should be performed in sequence. The combined knowledge score for each individual ranged from 0% to 94.1% with a mean of 50.1% (SD=20.1, CI 95% 44.7–55.4%). Hand hygiene compliance significantly varied by clinical instructor’s type; nurses (42.7%) and therapists (38.0%) had the highest adherence and clinicians had the lowest 33.7% (P = 0.0001).

Conclusion. Clinical teachers in this study demonstrated knowledge gaps and poor practices related to HH. Since they serve as role models for future generations of healthcare workers, clinical teachers must recognize the importance of HH in preventing hospital-acquired infections, including when and how HH should be performed while following recommended practices.

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1335. Painting the Gown Red: Using a Colored Paint Quality Improvement Process to Evaluate Healthcare Worker Personal Protective Equipment for Highly Pathogenic Infections
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Session: 151. HAi: Hand Hygiene
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Background. Personal protective equipment (PPE) and strict infection control techniques are the primary methods by which healthcare workers (HCW) can avoid exposure to the treatment of patients with highly pathogenic infections such as Ebola Virus Disease (EVD) or the Middle East Respiratory Syndrome coronavirus (MERS-CoV). There is currently no consensus for the types of PPE that are recommended to be worn by HCWs, nor is there a universal process for the donning and doffing of PPE.

Methods. HCWs from Bellevue Hospital participate in quarterly PPE trainings as part of the Special Pathogens Program (SPP), which consist of didactic sessions as well as an evaluation of donning and doffing techniques. A total of 56 HCWs completed the training curriculum in 2017. During the donning process, PPE trainees applied corn start powder paint (Chameleon Colors; American Fork, UT) to the Patient gown sleeves, gloves, and booties. Paint markings were used to identify areas to target in future PPE trainings.

Conclusion. The powder paint quality improvement process for donning and doffing PPE is a method to evaluate the correct PPE dressing procedure. It is particularly useful given the fact that it is incumbent on each hospital or healthcare system to develop its own processes and procedures for PPE, as well as maintain readiness through periodic trainings. Powdered paint can identify vulnerabilities in their process and identify areas to target in future PPE trainings.

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1336. Patients’ Family Empowering to Increase Hand Hygiene (HH) Compliance in Health-Care Workers (HCW) from a Hematology-Oncology Ward in Mexico City
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Session: 151. HAi: Hand Hygiene
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Background. HH is a key component to decrease infections in hospitals, but compliance in HCW remains low. We present a six-month strategy to empower patients’ caregivers on HCW HH compliance.

Methods. HH compliance in HCWs was evaluated between June 1 and August 31, 2017 as recommended by WHO. Between September 1, 2016 and March 31, 2017 we undertook the empowerment in the hematology-oncology ward (50 beds) from Instituto Nacional de Cancerología, a cancer referral, teaching hospital in Mexico. To empower patients and their caregivers, a member of the team visited the patient and their relatives during the first 24h of hospital admission, the standardized intervention on HH and the importance of HH compliance was given, along with a printed cartoon on HH opportunities (5 moments from WHO). Patients and their caregivers were trained to observe and record HH opportunities, an email was invited to remind HCWs if HH omissions were observed. Data on HH compliance was collected monthly during the empowerment and 1 month after. Data was compared with the HH compliance from the 6 previous. We compared overall compliance and for each 5 HH moments before and after the empowering (chi² test).

Results. We empowered 82 caregivers (M: 25.6%) and F: 74.4%), mean age 44 years, 24.6% had completed primary education, and 13.1% had higher education. Mothers and spouses were the primary caregivers (28.1% and 36.6%). HH compliance increased in all 5 moments: Before touching a patient (M1) (B: 9.5%; A: 57.6%; P = 0.005); before a clean or aseptic procedure (M2) (B: 7.9%; A: 48%; P = 0.002); after body fluid exposure (M3) (B: 10%; A: 59%; P = 0.0003), after touching a patient (M4) (B: 7.4%; A: 57.9%; P = 0.0003), and after touching patient surroundings (M5) (B: 2.4%; A: 77.4%; P = 0.0008). Nurses achieved a higher increase on compliance compared with physicians. Caregivers recognition on HH increased for each opportunity, being more notorious for M2 (B31.7%, A: 61.5%); M3 (B: 7.3%, A: 31.5%), and M4 (B: 36.5%, A: 68.7%). Perception on the importance of preventing health-care-related infections increased from 80.5% to 90.3%.

Conclusion. Empowering patients’ primary caregivers was an effective intervention to increase HCWs HH compliance at a hematology-oncology ward. The effect of this intervention remains to be evaluated on the long-term basis, but demonstrate the importance of involving patients and their relatives on health-care delivery.

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1337. Performance of Zoster Vaccine Live (Zostavax): A Systematic Review of 12 years of Experimental and Observational Evidence
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Session: 152. Herpes Zoster Vaccine
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Background. One in three people in the U.S. will develop herpes zoster during their life. Zoster Vaccine Live (ZVL or Zostavax), has been licensed in the U.S. since 12 years of Experimental and Observational Evidence. ZVL was approved by the FDA in 2006 to prevent herpes zoster. ZVL protection has been shown to wane with time and estimates of effect can be improved. We performed a systematic review of the duration of efficacy and effectiveness of ZVL against herpes zoster (HZ).

Methods. We systematically searched PubMed, Embase, Cochrane, and clinicaltrial. gov for vaccine efficacy or effectiveness (VE) studies of ZVL. Two authors independently screened each title and abstract, and potential VE studies were reviewed in-depth. Eligibility criteria for inclusion were: 1) adults aged 50 years and older; 2) randomized controlled trials comparing ZVL to placebo or no vaccine; 3) at least 2 years follow up: F1: 6 months; or F2: 6 months + 6 months post-boost; 4) reports of incidence and VE. A total of 16 studies were included in the meta-analysis. A random-effects model was used to calculate VE estimates. We also report VE estimates for F1 and F2.

Results. ZVL was efficacious against first and recurrent zoster. The VE for first zoster was 72.3% (95% CI 57.9–82.0) at F1, and 80.9% (95% CI 75.2–85.5) at F2. The VE against recurrent zoster was 75.9% (95% CI 65.0–83.4) at F1, and 85.4% (95% CI 80.9–88.9) at F2. There was no significant heterogeneity among trials.

Conclusion. ZVL is highly efficacious against first and recurrent zoster, with efficacy lasting at least 12 years. The VE estimates from the current meta-analysis are consistent with the historical data. The duration of VE against recurrent zoster is consistent with that of first zoster. ZVL is highly efficacious against both first and recurrent zoster and provides long-lasting protection.

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Case Avoidance with Vaccination in the United States

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A Markov model called ZONA (ZOster ecoNomic Analyses) was developed for follow-up years 1 and 2, and 5 observational studies estimated VE during the period from vaccination up to 4 years following vaccination; estimates across studies ranged from 33%-55%. Two quasi-experimental and 3 observational studies estimated VE for 4-5 years following vaccination; estimates ranged from 19%-40%; the median estimate was 24% (Figure). Pooled VE was not calculated due to heterogeneity in length of follow-up, population, and choice of study endpoint,

**Results.** We screened 1302 articles; 17 underwent full text review and 8 met inclusion criteria and were abstracted for this review. Selected studies included 1 phase III randomized controlled trial, 2 quasi experimental and 5 observational studies. One experimental and 5 observational studies estimated VE during the period from vaccination up to 4 years following vaccination; estimates across studies ranged from 33%-55%. Two quasi-experimental and 3 observational studies estimated VE for 4-5 years following vaccination; estimates ranged from 19%-40%; the median estimate was 24% (Figure). Pooled VE was not calculated due to heterogeneity in length of follow-up, population, and choice of study endpoint.

**Conclusion.** The aim of this study was to compare the impact on HZ and PHN case avoidance of two candidate non-live adjuvanted HZ subunit vaccines (HZ/su), in the US population. The HZ/su vaccine would reduce the number of PHN cases by 0.23M and 0.18M in the two age cohorts, respectively, compared with 0.45M using the ZVL. Furthermore, the HZ/su vaccine would reduce the number of PHN cases by 2.12M and 1.55M in the two age cohorts, respectively, compared with 0.65M using the ZVL. Data from clinical trials and Hepatitis B seconddose completion.

**Disclosures.** We declared no conflicts of interest.