in 17 patients who underwent ALCS insertion within 30 days of infection diagnosis compared to the other 33 patients. **Conclusions:** The 2-stage primary TKA for patients with infected knee arthritis with coexisting joint destruction showed satisfactory outcomes with a low infection recurrence. However, constrained prostheses or augmentation use may be necessary. Notably, some functional scores were better in the group that underwent ALCS insertion relatively early after the infection diagnosis.

Antimicrobial Stewardship & Healthcare Epidemiology 2023;3(Suppl. S1):
doi:10.1017/ash.2023.30

Subject Category: Emerging and re-emerging infectious diseases in the healthcare setting
Abstract Number: SG-APSIC1035
Prospective safety surveillance study of ACAM2000 smallpox vaccine in deployed military personnel
Kevin Yeo, Emergent BioSolutions, United Kingdom; Daniel Gordon, Sanofi Pasteur Inc, Swiftwater, Pennsylvania, United States; Lori Perry, Naval Health Research Centre, San Diego, California, United States; Ilfra Raymond-Loher, United Biosource Corp, Blue Bell, Pennsylvania, United States; Nita Tati, Sanofi Pasteur, Swiftwater, Pennsylvania, United States; Kevin Yeo, Emergent BioSolutions Inc, Gaithersburg, Maryland, United States; Grace Lin, Emergent BioSolutions Inc, Gaithersburg, Maryland, United States; Gina DiPietro, Emergent BioSolutions Inc, Gaithersburg, Maryland, United States; Alex Selmani, Sanofi Pasteur Inc, Swiftwater, Pennsylvania, United States; Michael Decker, Sanofi Pasteur Inc, Swiftwater, Pennsylvania, United States

Objectives: We compared rates of myopericarditis adverse events and evaluated potential risk factors of development. We compared rates of dermatological–neurological adverse events (severe and serious) with other adverse events in a specific population of deployed US military personnel who received or did not receive ACAM2000 vaccine (ie, Vaccinia smallpox live vaccine). **Methods:** Up to 20,000 military personnel recipients were enrolled in a prospective observational cohort study: up to 15,000 ACAM2000 recipients in cohort 1 and up to 5,000 military personnel who were eligible for ACAM2000 vaccination but were not vaccinated due to recent vaccination or characteristics of their contacts in cohort 2. Enrollment was at a 3:1 ratio, respectively. Serum specimens and data were collected at the initial visit and 10 days later (cf, window of 6–17 days). Study participants with evidence, either clinical or laboratory, of possible myopericarditis were referred to a blinded independent review committee for further evaluation and adjudication. The primary analysis was logistic regression with adjudicated myopericarditis as the dependent variable and age, sex, race, and exercise regimen as the independent variables. **Results:** Initial data and serum specimens were obtained from 14,667 participants (cohort 1, N = 10,825; cohort 2, N = 3,842). According to protocol, 2 visits were completed by 12,110 participants (cohort 1, N = 8,945; cohort 2, N = 3,165), and 125 participants (cohort 1, N = 111; cohort 2, N = 14) were referred for myopericarditis adjudication, of whom 1 had confirmed myocarditis, 5 had suspected myocarditis, 1 had suspected pericarditis, and 54 (cohort 1, N = 44; cohort 2, N = 10) had subclinical myopericarditis. The unadjusted myopericarditis rates were 5.7 per 1,000 (95% CI, 4.3–7.5) for cohort 1 and 3.2 per 1,000 (95% CI, 1.7–5.8) for cohort 2. The unadjusted and adjusted odds ratios for myopericarditis for cohort 1 and cohort 2 were 1.8 (95% CI, 0.9–3.6) and 1.3 (95% CI, 0.6–2.6), respectively. At least 1 serious adverse event was experienced by 117 participants (1.1%) in cohort 1 and 13 (0.3%) in cohort 2. No serious and severe neurological or dermatological adverse events were reported. **Conclusions:** ACAM2000 vaccination was associated with a modest but nonsignificant increase in the risk of myopericarditis in this prudently screened, young and healthy service-member population. The adjusted OR was 1.3 and the unadjusted OR was 1.8. Overall, all but 7 cases were subclinical. Citation: Faix DJ, Gordon DM, Perry LN, et al. Prospective safety surveillance study of ACAM2000 smallpox vaccine in deploying military personnel. *Vaccine* 2020;38:7323–7330.

Antimicrobial Stewardship & Healthcare Epidemiology 2023;3(Suppl. S1):s10
doi:10.1017/ash.2023.31

Subject Category: Emerging and re-emerging infectious diseases in the healthcare setting
Abstract Number: SG-APSIC1155
Drug susceptibility patterns of fulminant group G *Streptococcus* (GGS) infection as a re-emerging infectious disease in Japan
Masaaki Minami, Nagoya City University, Japan; Ryoko Sakakibara, Nagoya, Daido Hospital, Japan; Shunsuke Akahori, Nagoya, Nagoya City University, Japan

Objectives: Severe streptococcal infections are invasive, re-emerging infections that rapidly worsen and lead to death. Not only group A *Streptococcus* (GAS) but also group g *Streptococcus* (GGS) are the causative agents of this infection. Moreover, GGS produces hemolytic toxins, proteolytic toxins, and other toxins like GAS. Furthermore, drug-resistant *Streptococcus* spp, like other pathogenic bacteria, are on the rise worldwide. However, drug resistance has not been studied extensively in invasive GGS. Therefore, we investigated the drug susceptibility of GGS clinical isolates that are closely related to fulminant streptococcal infections. **Methods:** We used GGS strains isolated from sterile sites of invasive infections at a hospital in Nagoya City, Japan, from 2017 to 2021. Bacterial identification and drug-susceptibility testing were performed using a VITEK-2 system. **Results:** Overall, 53 strains were included in the study. The GGS strains examined in this study were resistant to 3 different antibiotics (erythromycin, clindamycin, and minocycline). Also, 18 strains (34%) were resistant to erythromycin, 9 (17%) were resistant to clindamycin, and 18 (34%) were resistant to minocycline. Moreover, there were 5 strains (9.4%) of 2-drug–resistant bacteria and 8 strains (15.1%) of 3-drug–resistant bacteria. **Conclusions:** Acquired resistance not only to individual antibiotics but also to multiple antibiotics suggests that GGS tends to become multidrug resistant. Continued surveillance of the drug susceptibility of GGS as a potential cause of fulminant streptococcal infections will be necessary in the future.

Antimicrobial Stewardship & Healthcare Epidemiology 2023;3(Suppl. S1):s10
doi:10.1017/ash.2023.32

Subject Category: Emerging and re-emerging infectious diseases in the healthcare setting
Abstract Number: SG-APSIC1011
Factors associated with improved knowledge of COVID-19 prevention and control following a training of healthcare workers in Vietnam
Hoang Nguyen, The Partnership for Health Advancement in Vietnam, Beth Israel Deaconess Medical Center, Hanoi, Vietnam; Tran Minh Dien, Vietnam National Children's Hospital, Hanoi, Vietnam; Le Thi Anh Thu, Ho Chi Minh City Infection Control Society, Ho Chi Minh City, Vietnam; Le Kien Ngai, Vietnam National Children's Hospital, Hanoi, Vietnam; Pham Thanh Thuy, The Partnership for Health Advancement in Vietnam, Beth Israel Deaconess Medical Center, Hanoi, Vietnam; Do Minh Loan, Vietnam National Children's Hospital, Hanoi, Vietnam; Ta Anh Tuan, Vietnam National Children's Hospital, Hanoi, Vietnam; Do Thien Hai, Vietnam National Children's Hospital, Hanoi, Vietnam; Phan Huu Phuc, Vietnam National Children's Hospital, Hanoi, Vietnam; Tran Huu Luyen, Thua Thien Hue Society of Infection Control, Thua Thien Hue, Vietnam; Huynh Minh Tuan, Ho Chi Minh City Infection Control Society, Ho Chi Minh City, Vietnam; Le Thi Thanh Thuy, Ho Chi Minh City Infection Control Society, Ho Chi Minh City, Vietnam; Nguyen Thi Thanh Ha, Ho Chi Minh City Infection Control Society, Ho Chi Minh City, Vietnam; Bui Nghia Thinh, Thu Duc District Hospital, Ho Chi Minh City, Vietnam; Do Quoc Huy, People's Hospital 115, Ho Chi Minh City, Vietnam; Todd M Pollack, The Partnership for Health Advancement in Vietnam, Beth Israel Deaconess Medical Center, Hanoi, Vietnam

Objectives: SARS-CoV-2 is a novel and highly infectious virus. An effective response requires rapid training of healthcare workers (HCWs). We measured the change in knowledge related to COVID-19 and associated factors before and after training of HCWs in Vietnam. **Methods:** A quasi-experimental design was used to evaluate HCW knowledge related to prevention and control of SARS-CoV-2 before and after attending a

2-day training-of-trainers course. Between June and September 2020, 963 HCWs from 194 hospitals in 21 provinces received the training. HCW knowledge was assessed using a 20-item questionnaire consisting of multiple-choice questions at the beginning and closing of the training course. A participant received 1 point for each correct answer. He or she was considered to have improved knowledge the posttest score was higher than the pretest score with a score ≥15 on the posttest. We applied the McNemar test and logistic regression model to test the level of association between demographic factors and change in knowledge of COVID-19. **Results:** Overall, 100% of HCWs completed both the pretest and posttest. At baseline, only 14.7% scored ≥15. Following the training, 78.4% scored ≥15 and 64.3% had improved knowledge according to the predetermined definition. Questions related to the order of PPE donning and doffing and respiratory specimen collection procedures were identified as having the greatest improvement (44.6% and 60.7%, respectively). Being female (OR, 1.5; 95% CI, 1.1–2.0), having a postgraduate degree (OR, 2.5; 95% CI, 1.4–4.4), working in a nonmanager position (OR, 1.5; 95% CI, 1.1–2.1), previous contact with a COVID-19 patient (OR, 1.5; 95% CI, 1.1–2.0), and working in northern Vietnam (OR, 2.0; 95% CI, 1.4–2.6), were associated with greater knowledge improvement. **Conclusions:** Most HCWs demonstrated improved knowledge of COVID-19 prevention and control after attending the training. Particular groups may benefit from additional training: those who are male, leaders and managers, those who hold an undergraduate degree, and those who work in the southern provinces.

Antimicrobial Stewardship & Healthcare Epidemiology 2023;3(Suppl. S1):s10–s11
doi:10.1017/ash.2023.33

Subject Category: Emerging and re-emerging infectious diseases in the healthcare setting
Abstract Number: SG-APSIC1042
Cutaneous cryptococcosis in patient with advanced HIV disease: Is it possible to give antifungal monotherapy?
Visakha Revana Irawan, Internal Medicine Department, Faculty of Medicine, Sam Ratulangi University, Prof. Dr. R. D. Kandou General Hospital, Manado, Indonesia; Agung Nugroho, Division of Tropical Medicine and Infectious Diseases, Department of Internal Medicine, Faculty of Medicine, Sam Ratulangi University, Prof. Dr. R. D. Kandou General Hospital, Manado, Indonesia; Pearla Lasut, Division of Hematology and Medical Oncology, Department of Internal Medicine, Faculty of Medicine, Sam Ratulangi University, Prof. Dr. R. D. Kandou General Hospital, Manado, Indonesia

Objectives: *Cryptococcus* infection is one of the major human immunodeficiency virus (HIV)–related opportunistic infections, and the CD4 count falls below 100 per μL. Primary treatment for HIV-associated cutaneous cryptococcosis is amphotericin B (AmB) plus flucytosine. **Methods:** We present the case of a man with advanced HIV disease who developed whole-body cutaneous lesions yet improved with high-dose fluconazole alone. **Results:** A 33-year-old Asian man with a medical history of pulmonary tuberculosis and cryptococcal meningitis with complete treatment, injection drug use, and HIV infection with default of antiretroviral treatments (ART) 3 years earlier, presented to the emergency department with fever, oral thrush, and 30-pound weight loss over 6 weeks. He also had plaques, multiple hard papulonodules with central ulceration, and macular skin lesions all over his body of varying size. Blood cultures were negative for bacteria growth, but fungal microscopy of the blood culture showed unspecific hypha. Histopathology examination of the skin biopsy showed a classic "soap bubble" appearance, which is associated with *Cryptococcus* infection. Laboratory values revealed anemia (8.6 g/dL), leukopenia (2.9 $\times 10^9$/L), lymphopenia (58/μL), and thrombocytopenia (145 $\times 10^9$/L). The CD4 cell count was 18/μL, and the serum viral load was 638.665 copies/mL. Lumbar puncture could not be performed due to patient refusal. Treatment with high-dose fluconazole (1,200 mg) for 3 months was initiated and is planned to continue with consolidation and maintenance dose. ART was administered 4 weeks after starting antifungal therapy. His fever resolved and slow regression of the skin lesions occurred after treatment was given. **Conclusions:** Cutaneous cryptococcosis was assessed by biopsy of the cutaneous lesion, which is essential to confirming the diagnosis. In the case of cryptococcosis, skin infection may indicate a further progression of advanced HIV disease. In HIV-infected patients with Cryptococcus findings in any part of the body, a lumbar puncture should be considered to rule out central nervous system infection. Although neither AmB nor flucytosine was given due to unavailability in this area, the patient improved. In resource-limited settings, high-dose fluconazole alone may be useful as an alternative treatment, although it is also very challenging.

Antimicrobial Stewardship & Healthcare Epidemiology 2023;3(Suppl. S1):s11
doi:10.1017/ash.2023.34

Subject Category: Environmental hygiene
Abstract Number: SG-APSIC1065
The effectiveness of an ultraviolet-C device for terminal room disinfection in an intensive care unit
Zhi-Yuan Shi, Taichung Veterans' General Hospital, Taichung, Taiwan; Pei-Hsuan Huang, Taichung Veterans' General Hospital, Taichung, Taiwan; Chun-Hsi Tai, Taichung Veterans' General Hospital, Taichung, Taiwan; Hsin-Yi Hung, Taichung Veterans' General Hospital, Taichung, Taiwan; Yuh-Feng Chen, Taichung Veterans' General Hospital, Taichung, Taiwan; Ying-chun Chen, Taichung Veterans' General Hospital, Taichung, Taiwan; Hui-Mei Huang, Taichung Veterans' General Hospital, Taichung, Taiwan

Objectives: Medical devices and the hospital environment can be contaminated easily by multidrug-resistant bacteria. The effectiveness of cleaning practices is often suboptimal because environmental cleaning in hospitals is complex and depends on human factors, the physical and chemical characteristics of environment, and the viability of the microorganisms. Ultraviolet-C (UV-C) lamps can be used to reduce the spread of microorganisms. We evaluated the effectiveness of an ultraviolet-C (UV-C) device on terminal room cleaning and disinfection. **Methods:** The study was conducted at an ICU of a medical center in Taiwan. We performed a 3-stage evaluation for the effectiveness of UV-C radiation, including pre–UV-C radiation, UV-C radiation, and a bleaching procedure. The 3 stages of evaluation were implemented in the ICU rooms from which a patient had been discharged or transferred. We collected the data from adenosine triphosphate (ATP) bioluminescence testing, colonized strains, and their corresponding colony counts by sampling from the environmental surfaces and air. We tested 8 high-touch surfaces, including 2 sides of bed rails, headboards, footboards, bedside tables, monitors, pumping devices, IV stands, and oxygen flow meters. **Results:** In total, 1,696 environmental surfaces and 72 air samples were analyzed. The levels of ATP bioluminescence and colony counts of isolated bacteria decreased significantly after UV-C radiation and bleaching disinfection for both the environmental and air samples ($P < .001$). Resistant bacteria (vancomycin-resistant *Enterococcus*, VRE) were commonly isolated on the hard-to-clean surfaces of monitors, oxygen flow meters, and IV pumps. However, they were also eradicated ($P < .001$). **Conclusions:** UV-C can significantly reduce environmental contamination by multidrug-resistant microorganisms. UV-C is an effective device to assist staff in cleaning the hospital environment.

Antimicrobial Stewardship & Healthcare Epidemiology 2023;3(Suppl. S1):s11
doi:10.1017/ash.2023.35

Subject Category: Environmental Hygiene
Abstract Number: SG-APSIC1118
Introduction of carbapenemase-producing Enterobacterales (CPE) in the aqueous environment of the newly built National Centre for Infectious Diseases (NCID) in Singapore
Chong Hui Clara Ong, National Centre for Infectious Diseases, Singapore; Kyaw Zaw Linn, National Public Health & Epidemiology Unit, National Centre for Infectious Diseases, Singapore; Sharifah Farhanah, Infectious Disease Research and Training Office, National Centre for Infectious Diseases, Singapore; Huan Xiaowei, Infectious Disease Research and Training Office, National Centre for Infectious Diseases, Singapore;