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Objectives: During the COVID-19 surge, our hospital was overloaded due to the increasingly high volume of patients and lack of resources, which resulted in difficulties in complying with infection control and prevention (IPC) practices. In this study, we estimated healthcare-associated infection (HAI) incidence and relevant factors among COVID-19 patients in Hung Vuong hospital. **Methods:** This study included all SARS-CoV-2–positive adult patients hospitalized between September 1 and October 31, 2021. The Centers for Disease Control and Prevention definition of HAI in the acute-care setting was used. **Results:** Among 773 patients, 21 (2.72%) developed 26 separate HAIs. The cumulative days of hospitalization were 5,607. The incidence of HAI among COVID-19 patients was 4.64 per 1,000 days of hospitalization. The most frequent HAI was clinically defined pneumonia (46.2%), for which the ventilator-associated pneumonia (VAP) rate was 41.9 per 1,000 ventilator days. Among 21 positive cultures, the most frequently isolated microorganisms were *pseudomonas aeruginosa, Klebsiella pneumoniae*, and *escherichia coli*. HAIs were significantly associated with the number of central-line days (OR, 1.74; 95% CI, 1.33–2.78), the number of indwelling urinary catheter days (OR, 1.46; 95% CI, 1.05–2.03), the length of administration days (OR, 1.25; 95% CI, 1.07–1.45), antibiotics use prior to HAIs (OR, 0.01; 95% CI, 0.01–0.21), and the number of nasal cannula days (OR, 0.62; 95% CI, 0.44–0.85). **Conclusions:** COVID-19 makes patients more vulnerable and may require more invasive procedures, increasing the infection risk by opportunistic pathogens like gram-negative Enterobacteriaceae. Hence, fundamental IPC recommendations should be strongly implemented.

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Subject Category: COVID-19
Abstract Number: SG-APSIC1201

Knowledge and awareness of healthcare workers in a residential care home regarding the use of personal protective equipment (PPE) during the COVID-19 pandemic: A pilot study

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Background: According to the World Health Organization (WHO), as of April 9, 2022, there had been 494,587,638 confirmed COVID-19 cases and 6,170,283 deaths reported worldwide. In Hong Kong, in recent outbreak, ~55% of confirmed cases were residential care home (RCH) residents and >800 staff were infected. In 2016, ~15% of people aged ≥80 years were living in residential care homes. **Objectives:** To assess healthcare worker (HCW) knowledge level and attitudes about PPE use in residential care homes. **Methods:** This cross-sectional study, included participants who worked in the residential care homes, registered as healthcare workers (HCWs). HCWs who were part-time staff or worked <3 months in the residential care home were excluded. Ethical review approval from the faculty research committee of the university was obtained in January 2022. The Knowledge, Attitude, Practical (KAP) questionnaire was adapted. The questionnaire has 33 items pertaining to knowledge, attitude, and practice regarding PPE. **Results:** In total, 50 questionnaires were received; 32 respondents (64%) were female and 18 (36%) were male. Nearly half of the participants had completed a high diploma course, and 32% had graduated from secondary school. Using ANOVA, there were no significant differences of education level of participants or participant knowledge level of PPE [$F(2,47) = .181$; $P = .835$], attitudes [$F(2,47) = 1.995$; $P = .147$] and practice [$F(2,47) = .459$; $P = .635$]. The Pearson correlation was used to measure the relationship between knowledge level and PPE practices. Our results indicated a significant difference and moderate correlation between knowledge level and PPE practice among HCWs. **Conclusions:** Knowledge level does not directly affect HCW practice regarding PPE. PPE practice skills have been influenced by various factors during the pandemic situation, such as availability of PPE, manpower, workload, and communication.

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Subject Category: COVID-19
Abstract Number: SG-APSIC1062

The role of active surveillance in the primary-care setting during a pandemic in Singapore

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Objectives: In response to the COVID-19 pandemic, primary care swiftly transformed and re-established patient flow in clinics to red, orange, and green zones based on a set of screening criteria. To further manage the influx of suspected COVID-19 patients and their needs safely, a list of surveillance audit criteria was developed to ensure good infection control standards. **Methods:** The infection control team prepared the surveillance audit criteria based on recommended CDC/WHO guidelines for pandemic preparedness. These criteria were contextualized to the primary-care polyclinic setting. The surveillance audit criteria were grouped according to their category: screening, triage, early recognition and source control, inventory management of personal protective equipment (PPE), infection control measures in the red zone, precautionary measures during collection of nasopharyngeal swabs and environmental cleaning and disinfection for premises in the red, orange, and green zones, respectively. The infection control liaison nurses in each polyclinic were trained to use the checklist to ensure consistency in interpretation of the criteria. **Results:** Surveillance audits were conducted biweekly in the first 3 months then monthly once the compliance rate was steady at 90%–100% for all categories. The overall average compliance rate since commencing in March 2020 for all polyclinics was sustained at 90%–100%. Common findings included inappropriate use of PPE (eg, self-contamination during removal of gown or wrong sequence of doffing), inadequate ventilation, and inadequate cleaning processes. All findings were corrected immediately, and staff education was provided. **Conclusions:** Primary care plays an important role during a pandemic. It is essential that both patients and healthcare workers in the primary care setting are protected from infection risk during a pandemic. Having a good surveillance audit process helps ensure that primary care services can continue for the general population. Surveillance is an essential component of the health system's response to a pandemic.

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Environmental screening of SARS CoV-2 to support an outbreak investigation in Sardjito Hospital, Yogyakarta, Indonesia

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Objectives: Many healthcare workers and patients in intensive care units of Sardjito Hospital, a referral and academic hospital in Yogyakarta,

Indonesia, were infected with SARS-CoV-2 in June–August 2021, during the second wave of the COVID-19 pandemic. Much evidence has shown that SARS-CoV-2 persists on hospital environmental surfaces and medical equipment. We investigated the potential sources of virus in our cases, particularly environmental contamination. **Methods:** Environmental screening for SARS-CoV-2 was conducted using RT-PCR of swabs collected from case-related medical equipment and hospital surfaces. We examined the environmental cleaning method in these areas as well. **Results:** We swabbed medical equipment in close contact with patient droplets such as the ventilator, the high-flow nasal cannula, the nebulizer, and suction equipment, as well as some environmental surfaces near the patient, such as the bed rail, air conditioning unit, and portable HEPA-filter outlet. Among 19 samples, genetic material of SARS-CoV-2 was detected only on a sample from a nebulizer. The point of contamination was on the outer body of that nebulizer, which indicated that the contact transmission source might be from patient droplets and/or inadequate cleaning. No more positive results emerged from our screening, indicating that the environmental cleaning was adequate. The IPC team recommended that we no longer use nebulizers for COVID-19 patients and that the cleaning procedure be improved, particularly after the device is used. **Conclusions:** Environmental screening for SARS-CoV-2 can be used to support investigations of inpatient COVID-19 outbreaks in hospitals. Adequate cleaning and care procedures for medical equipment are very important in preventing the transmission of SARS-CoV-2 in the hospital setting.

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Subject Category: COVID-19
Abstract Number: SG-APSIC1178
Factors influencing COVID-19 prevention practices among healthcare personnel in Rajavithi Hospital
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Objectives: To determine the factors influencing COVID-19 prevention practices among healthcare personnel. **Methods:** The sample consisted of healthcare personnel working in the emergency department, inpatient wards, and the outpatient department in 250 Rajavithi hospitals selected using a purposive sampling method. Data were collected using questionnaires that were validated by 5 experts and had a content validity index of 0.83. The reliability of the questionnaires was 0.91. Data were analyzed using descriptive statistics and multiple regression. **Results:** Study participants had good attitudes toward behaviors, subjective norms, perceived behavioral control, and intention to prevent COVID-19. In addition, perceived behavioral control was the only factor that statistically predicted intention to perform COVID-19 infection prevention and may explain 25.6% of the variability of intention ($P < .001$). **Conclusions:** Based on the results of this study, relevant authorities, including wards and infection control units, should support perceived behavioral control among registered nurses to encourage COVID-19 prevention practices.

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Subject Category: COVID-19
Abstract Number: SG-APSIC1027
COVID-19 vaccination strategy in Singapore—Perspectives and lessons from primary care
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Objectives: The disruptions wrought by COVID-19 have spurred the development of vaccines at a pace unprecedented in global history. We have witnessed vaccine development from in vivo testing to population-wide implementation in just under 1 year. Singapore's vaccination rate of 80%, attained at the start of September 2021, marks a milestone. It signals that plans to shift from a "zero transmission" approach to an endemic "living with COVID-19" approach is headed in the right direction, albeit cautiously and with some uncertainty. Although we ask ourselves at what rate our society should be reopened, we acknowledge that such questions are not easily answered because newer variants are proving more transmissible and, possibly, vaccine resistant compared to earlier variants. **Methods:** COVID-19 vaccination milestones were plotted. A timeline was used to map key events of Singapore's vaccination strategy in terms of legislation, logistics and operations, vaccination eligibility, vaccination sites, and measures implemented to encourage vaccine uptake. These factors were compared with Singapore's vaccination rate from December 2020 to early September 2021. **Results:** The successful vaccination strategy in Singapore has been explored in 4 main areas: good leadership and evidence-based decision making, use of communications, utilizing existing logistics, and an ever-ready primary care. **Conclusions:** As we transition to our second year of combating COVID-19, emerging variants, spread despite vaccination, and the contesting voices of antivaxxers pose new challenges. Vaccine-generated immunity is only one, albeit an important, element of a comprehensive COVID-19 strategy. The strategy must also entail surveillance, self-testing, contact tracing, quarantine, legislation, financial support, and strengthened social responsibility. As providers of vaccination and translators of upstream evidence and policy decisions in the community, primary care providers should be involved early in decision making regarding interventions in the community because they can foresee challenges on the ground. Let us put our continued trust in primary care providers to contribute to making Singapore a COVID-19–resilient nation.

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Subject Category: COVID-19
Abstract Number: SG-APSIC1116
Assessing COVID-19 symptoms in infected healthcare workers in Vietnam
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Objectives: In early 2021, when the COVID-19 vaccine was scarce in Vietnam, healthcare workers (HCWs) were prioritized for vaccination due to high risk of occupational exposure. However, there is some COVID-19 vaccine hesitancy within HCW communities. Assessing COVID-19 severity among vaccinated and nonvaccinated HCWs would contribute essential information to assure people of vaccine effectiveness and reduce vaccine hesitancy. **Methods:** We conducted a descriptive cross-sectional study at the National Hospital for Tropical Diseases in Hanoi, Vietnam, from May to June 2021. Clinical and epidemiological data from HCWs with positive polymerase chain reaction (PCR) results were collected. The severity of symptoms were classified according to Vietnam Ministry of Health guideline (Decision no. 3416 issued July 14, 2021) into 5 categories: asymptomatic, mild, moderate, severe, and critical conditions **Results:** Overall, 25 HCWs qualified for this study (14 women and 11 men), with a median age of 31 years. Among them, 3 HCWs were infected due to community exposure, and the rest were infected due to occupational exposure. Also, 3 HCWs received the Astra Zeneca vaccine before being infected with SARS-CoV-2 (one fully vaccinated with 2 doses and the other 2 had had the first dose). Categorized by the severity of infection, 28% were asymptomatic, 44% had mild symptoms, 20% had moderate symptoms, and 8% experienced severe symptoms. All 3 vaccinated HCWs showed only mild symptoms. Cough and sore throat were the main symptoms recorded (60%), followed by fever (56%). Blood test results did not show significant differences between the severe and mild COVID-19 groups. **Conclusions:** COVID-19 vaccination reduced the severity of COVID-19 in this small sample of HCWs. Full