

A quality improvement project was initiated to reduce the overall dialysis CRBSI and CRBSI-MRSA by 50%. **Methods:** Following the formation of a multidisciplinary team, the catheter-insertion protocols and catheter-care protocols were standardized throughout the hospital. We adopted a well-established scientific quality improvement method, plan-do-study-act (PDSA) cycle model for all interventions that were implemented. The patients and general ward nursing staff were provided education and training in dialysis catheter care. **Results:** The project was initiated in January 2016, and the initial improvement was seen from July 2017 onward. Analysis of the data since 2016 showed a steady improvement in the overall CRBSI rates, as well as CRBSI-MRSA rates. The average CRBSI rate improved to 0.76 per 1,000 catheter days, and the average CRBSI-MRSA rates improved to 0.15 per 100 catheter days in the calendar year 2021. **Conclusions:** Because the causes of these infections are multifactorial, emphasis should be placed on improving care processes from the patient preparation phase prior to catheter insertion to regular catheter care in the inpatient wards and dialysis units. We attribute the success of our project to involving all stakeholders and obtaining constant feedback from the staff. We successfully applied PDSA cycles to make relevant incremental changes.

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Subject Category: Improvement science (quality improvement)

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Building and application of e-learning software for infection control, Cho Ray Hospital

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Objectives: In the context of the COVID-19 pandemic over the past 2 years, training regarding infection and prevention control (IPC) has become essential in responding promptly to the pandemic. Many healthcare workers from Cho Ray Hospital and provincial hospitals need IPC training; however, human resources and facilities for continuous education and training are lacking. Therefore, IPC e-learning has become necessary for medical staff, and we designed IPC e-learning courses to meet healthcare workers' needs for efficient, time and cost-saving training to ensure safety during the COVID-19 pandemic. **Methods:** All medical staff of Cho Ray Hospital were invited to participate in the infection control e-learning study. The software was developed based on the existing lectures from practical infection control protocols. Healthcare workers were asked to study the software and take a test on their training. **Results:** We built the e-learning course of IPC for 5,000 participants as well as management software to manage lessons, member data, and test results. After implementation for 2 months in the hospital, 207 participants had taken the exam 2,234 times. Overall, 70.5% of participants were nurses and 14.9% were doctors. Moreover, 66.4% of participants passed the test the first time they took it, and 33.6% took the test a second time. After the second test, the percentage of members who passed the exam was 100%. **Conclusions:** Building and applying e-learning software for IPC training has brought about efficiency and quality of training, has reduced the use of human resources for training, and has decreased costs. The software application is being expanded to all hospitals in Vietnam.

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Family caregivers in the patient room: Exploring the family involvement in care provision across hospital settings from an infection prevention and control (IPC) perspective

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Objectives: Across many Asian countries, family caregivers provide a wide range of patient care activities while staying in the patient's room. This unique care arrangement has been reported as a factor contributing to the spread of outbreaks including Middle East respiratory syndrome and coronavirus disease 2019 (COVID-19) in many Asian countries. We sought to understand the context in which direct patient care activities are provided by family caregivers and/or private caregivers in hospitals across Bangladesh, Indonesia, and South Korea from the infection prevention and control (IPC) perspective. **Methods:** We used a multimethod design with both quantitative and qualitative approaches. In total, 432 patients were surveyed from 5 tertiary-care hospitals across 3 selected countries, and 64 participants from 2 groups were interviewed: group A comprised patients, family caregivers and private caregivers and group B comprised healthcare workers. Survey data were analyzed descriptively, and the interview data were analyzed using thematic analysis. **Results:** The study findings highlight the different landscapes of care provision in the selected countries. Both the interviews and surveys highlighted 2 aspects of family caregiving. (1) Family caregivers inhabit in the patient zone for long periods, resulting in overcrowding, and (2) they provide a wide range of physically associated care activities, including those associated with the risk of healthcare-associated infections (HAIs). Despite the high number of family caregivers and their in-depth involvement in direct patient care, education and support provided to family caregivers around IPC/HAI were insufficient and varied. Also, challenges related to maintaining adequate hygiene in the environment for minimum IPC were reported. **Conclusions:** This study has elucidated the current landscape of family involvement in inpatient care provision and acknowledges their contribution to high risks of HAI, as well as their current lack of IPC knowledge and practice. These findings reveal that future updates in IPC strategy should acknowledge this arrangement with family caregivers and should address this role with IPC measures.

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The effectiveness of the infection control interventions in decreasing multidrug-resistant organism transmission in the Department of Neonatology of Hung Vuong Hospital

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Objectives: Infection control and prevention (IPC) is one of the most important factors in decreasing multidrug-resistant organism (MRDO) transmission. We evaluated the effectiveness of the IPC program in reducing the spread of MDROs at the Department of Neonatology of Hung Vuong Hospital. **Methods:** This research was conducted from April 2020 to September 2020 in the neonatology department in 3 phases: (1) We determined the compliance rate of hand hygiene and high-touch surfaces cleaning (via camera monitoring). (2) We conducted the following interventions: We developed specific cleaning protocols for the neonatology department. We provided training regarding MRDO transmission control and prevention for healthcare workers. We implemented a counseling program for active screening and isolation for hospitalized children; added isolation rooms for children with MRDO asymptomatic infections. And we improved feedback efficiency through an online group between the