

environment cleaning, and regulation of broad-spectrum antibiotics, are necessary to prevent secondary infections that may follow an index CRE infection in the NICU.

**Key words:** Carbapenem-resistant Enterobacterales; Neonatal intensive care unit

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### Evaluating competency and influential factors among infection control nurses in South Korean healthcare settings

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**Objectives:** The competency of infection control nurses (ICNs) plays a pivotal role in enhancing the quality of healthcare facilities. This descriptive study aimed to assess the competency level of ICNs in South Korea and identify influencing factors. **Method:** An online self-administered questionnaire survey was conducted through an announcement on the Korean Infection Control Nurses Association website. An online self-administered questionnaire was distributed via the Korean Infection Control Nurses Association website, garnering responses from 199 participants out of 450 approached. Statistical analyses, including descriptive statistics and multiple regression analysis, were conducted using SPSS/WIN 27.0 software. **Result:** Analysis reveals that participants had an average age of 34.8 ( $\pm 8.4$ ) years and an average of 5.0 ( $\pm 4.7$ ) years of experience in infection control. The competency score for infection control was 3.6 out of 5. Competency levels varied across domains, with the highest scores observed in employee safety and infection control domains, while the lowest scores were in infectious disease identification and communication domains. Significant variables affecting competency, as identified through univariate analysis, included awareness of infection control competency, age, education level, ICN experience, position, and possession of an infection control specialist license. Ultimately, factors influencing ICN competencies were determined to be awareness of infection control competencies, attainment of a master's degree or higher, over 5 years of ICN experience, and age over 50, collectively explaining 45.6% of the variance. **Conclusion:** Enhancing the competency of ICNs is crucial for effective infection control in medical settings. Strategies to improve awareness of infection control competencies and provision of continuous education support and career development programs for ICNs are essential to achieve this goal.

**Keywords:** Competency; Infection Control Nurse; Influencing factors

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### Carry out case-based scenario teaching in medical students to improve skills of occupational protection against infectious diseases

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**Objective:** Optimized teaching methods in medical students to improve skills of occupational protection against infectious diseases and reduce the risk of developing infectious occupational exposure in clinical practice. **Methods:** Establish a database of infectious occupational exposure cases in clinical practice based on monitoring data. Teaching guided by cases and videos-based scenario was carried out in the experimental group and traditional theoretical teaching was carried out in the control group in medical students. And then conducted a questionnaire survey on knowledge and skills of occupational protection against infectious diseases and observed the frequency and the prescriptive disposal measures of infectious occupational exposure in clinical practice in two groups. **Results:** The infectious occupational exposure database included a total of 95 typical cases in 6 categories, including various sharp weapon injuries and mucosal exposure.

There were 116 medical students involved in the study across the course of 12 months. The incidence of infectious occupational exposure in medical students during clinical practice internships was 18.9%. Compared with the control group, the awareness rate of knowledge and skills of occupational protection against infectious diseases significantly increased (91.8% vs 87.0%,  $P < 0.05$ ), the incidence of infectious occupational exposure during clinical internships has decreased (15.6% vs 23.1%,  $P < 0.05$ ), and the implementation rate of prescriptive disposal measures after exposure has increased (91.7% vs 83.3%,  $P < 0.05$ ) in the experimental group in medical students. **Conclusion:** The case-based scenario teaching in medical students improved skills of occupational protection against infectious diseases and decreased the incidence of infectious occupational exposure during clinical internships. The effect of the optimized teaching methods was significant which is recommended to carry out widely.

**Keywords:** Occupational Protection; infectious Diseases; Case-based Scenario Teaching; Medical Students

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### Trial-Off-Catheter (TOC) protocol at Yishun community hospital

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**Background/Aim:** Early removal of indwelling urinary catheters (IDC) is an effective strategy to prevent catheter-associated urinary tract infection (CAUTI). We hypothesized a standardized Trial-Off-Catheter (TOC) protocol would reduce catheter utilisation and CAUTI rates in a community hospital. We aim to reduce catheter utilisation ratio and CAUTI rate per 1000 catheter days by 10% over a period of three months (post-intervention) in three pilot wards with the highest catheter usage. **Methods:** An IDC review board and a TOC protocol were designed collectively as a team in Yishun Community Hospital based on literature reviews. Roadshows were conducted at the three pilot wards and implemented over 2 months. 2-weekly audit was conducted by Infection Control Nurses on 3 process measures, (1) IDC were reviewed appropriately with IDC review board, (2) Appropriate usage of TOC protocol, (3) Compliance with TOC protocol. **Results:** Within three months' post-intervention, IDC utilisation ratio reduced by 18%, CAUTI rate per 1000 catheter days reduced by 45%, percentage of IDC reviewed appropriately increased to 91%, zero CAUTI event related to the use of protocol and 77% successful catheter removal with TOC protocol. **Conclusion:** CAUTI prevention require continuous effort with multimodal strategies and support from various stakeholders. A standardized TOC protocol can reduce variation in practices among physicians/ nurses with different levels of experience with TOC. A standardized care process ensures efficient utilization of resources to achieve the desired clinical outcomes for patients.

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### Sustainability of hand hygiene compliance in a crowded emergency and trauma setting within a public tertiary healthcare facility

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**Introduction:** Crowded Emergency and Trauma Department (ETD) have been associated with adverse patient outcomes and higher mortality rates. Crowding and lack of alcohol-based hand rubs (ABHRs) have been found