Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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wards so that many patient and healthcare workers became the high-risk exposed. Many HCWs were quarantined so that there was shortage of personals. We redesigned the previous prevention program and adapted the new type of quarantine system so that they can still work without risk to the others.

Material and Method: We invent the bubble and seal system for HCWs. If the COVID-19 patient dodged to admit in ward and detected later. We did the COVID test for all the high-risk exposed and quarantine them. We seal the ward with no new patient admit and we arrange the room for those who needed quarantine near the sealed ward so that they can work, they were in the high-risk bubble. For those who went home they must go straight to their home and not stop anywhere and vice versa to hospital.

Result and Conclusion: In the 4th wave of pandemic. Our team did exposure investigation 5,019 times and got high risk exposure 886 persons (17.7%). There were 401 high-risk exposed HCWs (45.3%) who worked in high-risk bubble instead of staying home. Those high risk exposed cluster were support workers 35.1%, nurses and doctor clusters were 29.3% and 27.2%. There was no transmission among those who worked in high-risk bubble. The bubble and seal method and high-risk bubble can arrange the safe work and decrease the transmission of the virus and continue the business of the hospital.

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SARS-CoV-2 health facility assessment following the quality assurance system to protect health workers in Thailand

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Introduction: Health workers (HWs) are among the highest groups at risk of infection during the SARS-CoV-2 (COVID-19) pandemic. This study aimed to evaluate the performance of health facilities following the quality assurance system.

Material and Methods: This action research was divided into 3 phases including 1) assessment tool development 2) audit system establishment and 3) implementation and evaluation. The COVID-19 control measure tool was developed using expert opinions. Such tool was tried out and tested the reliable among 30 hospitals. The overall Cronbach was 0.78. The staffs of the Regional Office of Disease Prevention and Control have been trained to audit the hospitals using the tool. The performances of the hospitals have been classified into 3 levels including silver, gold and diamond. Data were analyzed using frequency and percentage.

Results and Conclusions: Such tool was divided into four aspects including 1) organizational management, 2) surveillance programme implementation 3) health assessment and the welfare support 4) COVID-19 training and guideline and 5) environmental and personal protective equipment management. Total 154 hospitals participated in this study. Hospitals have achieved diamond level, gold level, silver level and failure to meet the criteria for 69 (44.8%), 49 (31.8%), 29 (18.8%) and 7 (4.5%), respectively. The occupational health strategies should address on work tasks assessment, COVID-19 investigation, fitness for work assessment and ventilation improvement to prevent and control COVID-19 among HWs more effectively.

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Vaccine hesitancy and reasons for or against adherence among nursing students: comparison between flu and covid-19 vaccines

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Introduction: Healthcare workers are a target category for many vaccinations since they have an increased risk to contract and transmit communicable diseases to patients. The aim was to evaluate intentions to be vaccinated against flu and COVID-19 in a population of nursing students and to compare the reasons for or against adherence to these vaccinations.

Material and Methods: An anonymous online survey was conducted among 422 nursing students to collect data on demographic characteristics, vaccine attitudes, and specific reasons for intentions to be vaccinated or not for flu and COVID-19.
Results: About 70% and 81% students declared their intention to be vaccinated against flu and COVID-19, respectively. The participants’ main reasons for supporting COVID-19 vaccination were to protect oneself (87%) and to protect patients (73%), whereas for supporting COVID-19 vaccination the main reasons were to protect family and friends (95%) and to protect oneself (88%). Conversely, among participants who were opposed to receiving the flu vaccine, the main reasons were the opinion that the vaccine has suboptimal protective efficacy (24%) and the lack of information about the vaccination (22%). Considering the COVID-19 vaccine, the main reasons against it were the fear of adverse events (58%) and the lack of information about the vaccination (43%).

Conclusions: The lack of information was one of the main reasons for opposing vaccinations. It is fundamental to consider vaccine hesitancy reasons in healthcare students and face it properly, since they will have to provide recommendations to patients and promote adherence to vaccination programs.

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Prevalence and Determinant Factors of Health Workers Burnout during COVID-19 Pandemic in Indonesia

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Introduction: Health workers are people on the front lines who are at high risk of contracting COVID-19. This study aims to understand the prevalence and factors affecting burnout syndrome among health workers in Indonesia.

Materials and Method: A cross-sectional online survey using Google Form platform was disseminated to health workers from August 11th to 25th 2020. We used Indonesian version of Maslach Burnout Inventory (MBI) questionnaire to assess the three domains of burnout, i.e., emotional exhaustion, depersonalization, and personal accomplishment.

Results and Conclusions: A total of 1,461 health workers from 33 provinces in Indonesia participated in this study. About 82% of health workers reported moderate level of burnout. High emotional exhaustion was experienced in 22.1% respondents, high depersonalization among 11.2%, and low personal accomplishment in 29.4%. Job category was associated with high level of emotional exhaustion (RR = 1.66, 95% CI = 1.27-2.16, p < 0.05) and depersonalization (RR = 1.51, 95% CI = 1.12-2.04, p < 0.05). Experience in treating COVID-19 patients was also associated with high level of emotional exhaustion (RR = 1.62, 95% CI = 1.21-2.15, p < 0.05) and depersonalization (RR = 1.55, 95% CI = 1.11-2.15, p < 0.05). Moderate level of burnout syndrome was reported among health workers and was significantly associated with job category, marital status, and experience in treating COVID-19 patients.

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Safe health care for both patients and workers – what can we learn from health care workers’ narratives of workplace incidents posing risk for patient and worker injury?

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Introduction: Health care workers (HCWs) are at high risk for occupational injuries and 10% of patients are affected by an adverse event. Knowledge about how HCWs manage these risks is needed for improved safety. The aim of this study was to explore HCWs’ experiences of workplace incidents that led to injury or posed risk for patient and worker.

Material and Methods: This study has a qualitative design using the critical incident technique and an inductive approach for analysis. Semi-structured individual interviews were held with 34 HCWs from three regions in Sweden. An Ethical board approved the study.

Results: 71 workplace incidents were identified. Team interplay and trustful relationships were highly valued for patient and worker safety. Support and validation from colleagues and managers were important for disclosure. Insufficient manager response and unsatisfactory opportunities to debrief the incident could shape persistent negative emotions. Fear of being hurt was evident as well as sadness over being injured at work, and the HCWs described shame and self-regret. When the workplace had not taken the expected actions, anger and resignation were expressed turning into long-term distress.

Conclusions: Work situations leading to injury or posing risk for patient and HCW injury are emotionally distressing for HCWs. Team interplay may facilitate safe and dynamic practice and help HCWs to overcome negative emotions, but organizational support is imperative for individual closure. For safer healthcare for both patients and workers, employers need to develop strategies for active risk management and support after an incident.

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Occupational health information systems for health workers during the COVID-19 pandemic in South Africa

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