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Development and Usability Evaluation of a Mhealth Application for Health-...

Development and Usability Evaluation of a Mhealth Application for Health-Care Associated Infections among Health-Care Providers in Malaysia

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Abstract Background: The effectiveness of reducing healthcare-associated infections (HCAIs) depends on increasing healthcare providers' awareness, skills, and adherence to standard practices. Mhealth applications provide an innovative approach to enhancing access to information and resources while reducing time and expenses. Objective: The study aimed to develop and evaluate a mhealth application for healthcare providers that offers quick access to updated recommendations, evidence-based guidelines, and protocols for managing patients with HCAIs. Method: The study included the development of the app, followed by a pilot test of

its usability among physicians and nursing staff by using the Mobile Application Usability Questionnaire (MAUQ). Results: The mhealth application, named HCAI Shield, was developed with four main menus. The menu includes HCAI's care bundle: hand hygiene, personal protective equipment, and standard precautions. The information has been gathered following standards established by both national and international organizations. Twenty-one participants took part in the evaluation, and the mean score for the application's usability was 5.28 0.38. The areas of "ease of use," "interface and satisfaction" received high mean scores. Conclusion: The HCAI Shield app provides convenient access to evidence-based guidelines and standards for HCAI management. Further evaluation is recommended.

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