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Training, observing, communicating: eHealth in infection control

Nosocomial infections (NIs), the majority of which is preventable, are a global problem and an enormous challenge for the hygiene management in hospitals. In European acute-care hospitals, the average prevalence of NI is 7.1 %. In Germany, the total prevalence is 5.1 %. Experts reckon that 90 % of the pathogens that trigger NIs are transmitted via the hands. Hence, hand disinfection is the most important individual measure to prevent infection – the rate of NI can be decreased by up to 40 % when improving the compliance with hand hygiene protocols. According to the World Health Organization (WHO), hand hygiene is only performed in approximately 30 % of the moments requiring hand hygiene. In Germany, the average compliance rate is approximately 50 %, with a wide range of variation.

The obstacles to complying with hand hygiene protocols are diverse. According to the current state of knowledge, multimodal hand hygiene programmes that address various levels offer the best chance to improve hand hygiene compliance sustainably. Essential elements of multimodal programmes are a system change, education and training, evaluation/monitoring and feedback, reminders at the workplace and an institutional safety climate.

The programmes intended to promote infection protection need to face the growing demand for digitisation in health care as well. Hence, the BODE SCIENCE CENTER has developed digital applications for training/education, evaluation/monitoring and feedback.

According to a recent study, e-learning courses can sustainably enhance the learning effect of infection control training: those having participated in the courses performed around 24 % better in a test on how to prevent nosocomial infection. After three months, the learning effect achieved was largely preserved with a plus of 18 % without further training. These findings correspond to the BODE SCIENCE CENTER's studies on its e-learning tool. Surveys among e-learning users showed that 93 % of the respondents could translate the contents of the "5 Moments E-Learning Tool" into practice successfully. 83 % said they could recognise the right moment for hand disinfection.

Also the eHealth app for observing the hand hygiene behaviour (evaluation/monitoring and feedback) of the BODE SCIENCE CENTER already has been used successfully, as shown by a study in Spain, where the digital application "Observe" as part of a multimodal programme replaced manual observation and evaluation of the hand hygiene behaviour. Under this programme and by applying the digital observation tool, the hand hygiene compliance increased by 32 %. The extensive digital evaluation scenarios allowed to obtain a realistic picture of the hand hygiene status. The analyses were used to point out gaps in hand hygiene policies to the hospital management. Thus, the quality of the digital observation and evaluation of the hand hygiene



behaviour also contributes to improve the institutional safety climate, which is one of the core criteria according to WHO.

Source:

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**Research for
infection protection**

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