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Abstract (oral session)

Factors predicting high self-reported hand-hygiene compliance in 6 pilot sites

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Objective: To identify a change in perception predicting self-reported compliance $\geq 80\%$ in healthcare workers (HCWs) from pre- to post-intervention based on the WHO hand hygiene (HH) improvement strategy. Methods: HH perception questionnaires were distributed to HCWs in 6 pilot sites pre- and post-intervention. Composite scales were developed from items in the pre- intervention surveys and additional scales from items in the post-survey. A backwards multiple logistic regression analysis was used to predict high self-reported HH compliance ($\geq 80\%$). Separate models were built for nurses and doctors while controlling for the effect of country, service and ward. Results: 1863 and 1442 HCWs completed the questionnaire before and after implementation, respectively, including 2206 nurses and 1099 doctors overall. Prior to the intervention, three factors predicted high self-reported compliance in nurses: availability of alcohol based hand rub (ABHR) (adjusted odds ratio [aOR] 2.4, $p < 0.001$), perception of peers' high compliance (aOR 7.1, $p < 0.0001$), and perception that peers expected them to comply (aOR 1.6, $p = 0.003$). After the intervention, the following predictive factors were identified: perception of peers' high compliance (aOR 6.9, $p < 0.001$), perception that peers expected them to comply (aOR 1.6, $p = 0.043$), perception of high healthcare-associated infection (HAI) rates (aOR 1.62, $p = 0.023$), and ABHR availability as a cue to HH (aOR 1.8, $p = 0.005$). In doctors, the following predictive factors were identified prior to the intervention: perception of peer's high compliance (aOR 10.5, $p < 0.001$), perception of effectiveness of HH (aOR 3.3, $p = 0.014$), and perception that HH required little effort (aOR 2.2, $p = 0.004$). After the intervention, doctors remained influenced by the perception of peers' high compliance (aOR 21.5, $p < 0.001$), and 3 new predictors emerged: ABHR available in the hospital (aOR 11.5, $p = 0.024$), ABHR considered as a cue to HH (aOR 2.0, $p = 0.017$), and perception that HAI rates were low negatively influenced self-reported HH (aOR 0.64, $p = 0.053$). Conclusion: Several perception factors can predict HCWs' high self-reported compliance and can be used in ongoing awareness campaigns; in particular, perception of high HAI rates, perception of peers' high compliance, and ABHR as a cue to memory for HH. Nurses can also be influenced by a message that their peers expect them to comply, while doctors should be reminded that ABHR is always available.