

healthcare-associated *C. difficile* infections. Staffing and logistical challenges imposed by the COVID-19 global pandemic have hampered this work because the quality liaison was redeployed to direct patient care intermittently. Correspondingly, from July to October 2020, the same infection rates increased between 30% and 353%. **Conclusions:** Having a designated quality liaison is an effective means to achieving quality improvements while remaining an integral member of the patient care team. As staffing has improved on this unit, the quality liaison has refocused efforts, and infection rates are beginning to improve. Given the success of the quality liaison role in improving quality outcomes on this unit, the hospital is exploring expansion of this model to additional units.

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Subject Category: Patient Safety

How Do Safety Climate Ratings Relate to Attitudes Towards and Knowledge About Surgical Site Infection Prevention Measures?

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Group Name: Watussi Study Group

Background: A positive safety climate is an important precursor of safe care outcomes. However, only limited evidence supports the association of low surgical-site infection (SSI) rates and positive safety climate. We investigated the role that perceptions of SSI prevention measures play for both safety climate level and strength as a subjective norm, that is, the social pressure perceived to perform the prevention measures, commitment to observe SSI prevention measures despite other situational pressures, and the level of knowledge about the prevention measures. **Methods:** The safety climate scale of the Safety Attitudes Questionnaire and 3 scales assessing subjective norm, commitment, and knowledge were used. All items were translated and retranslated from German to French and to Italian. All translated scales were pretested for understandability. Operating room (OR) personnel in 54 Swiss acute-care hospitals were surveyed, resulting in 2,769 analyzed responses with data aggregated on the hospital level. Two regression analyses were conducted: one using the percentage of positive responses per hospital as a safety climate level indicator, and another using the standard deviation of the safety climate ratings per hospital as a safety climate strength indicator. As independent variables, the hospital means of subjective norm, commitment, and knowledge were investigated and appropriately adjusted for number of respondents and sample composition. **Results:** The sample consisted of 1,495 nurses (54%) and 1,101 physicians (40%). Commitment and subjective norm were significant predictors ($p < 0.001$ and $p < .05$, respectively) of safety climate level, in the expected positive direction, but KNOW was not (R^2 , adjusted: 0.48); for safety climate strength, only COM was significant $p < 0.001$ (R^2 , adjusted: 0.27). **Conclusions:** The extent to which OR personnel were committed to perform the measures, such as timely administration of antibiotics, was associated with their safety climate rating level and strength. Thus, the rather general safety climate assessments are related to more specific safety behaviors necessary to achieve good outcomes such as low infection rates. Subjective norm was related to safety climate level only, indicating that in work environments with a good safety climate, the perceived social pressure to adhere to infection prevention measures may be higher. Knowledge about SSI prevention had no significant impact on safety climate, pointing to future research regarding the role of education in implementing prevention measures. Investigating how attitudes and knowledge about measures to prevent specific patient safety outcomes furthers our understanding of the role of safety climate in patient safety improvement.

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Risk of Methicillin-Resistant *Staphylococcus aureus* (MRSA) and Vancomycin-Resistant *Enterococcus* (VRE) Acquisition in Ambulances: A Retrospective Propensity Score-Matched Cohort Analysis

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Background: Infection following ambulance transport, or medical-transport-associated infection (MTAI), is understudied. Although medical-transport vehicles are routinely contaminated with methicillin-resistant *Staphylococcus aureus* (MRSA) and/or vancomycin-resistant *Enterococcus* (VRE), an association between vehicle exposure and disease development has not been identified. We estimated the relative risk (RR) of developing MRSA or VRE colonization or infection within 30 days of ambulance exposure. **Methods:** We performed a retrospective cohort study of patients with a principal diagnosis of chest pain presenting to our emergency department (ED) from January 1, 2016, through December 31, 2019. To control for confounding by healthcare exposure, patients were included if they presented from and were discharged to nonhealthcare locations without being admitted to the hospital. Encounters were stratified by whether the patient arrived at the ED via ambulance or private vehicle. Propensity scores were calculated using multivariable logistic regression with ambulance exposure as the dependent variable. Age, smoking status, history of myocardial infarction, congestive heart failure, peripheral vascular disease, cerebrovascular disease, dementia, diabetes mellitus, and chronic kidney disease were included as covariates because their standard differences were >0.10 . Propensity score matching was performed in a 2:1 ratio, but not all exposed patients received 2 matching unexposed patients due to a low sample size. A multivariable logistic regression was performed on the matched cohort to estimate the RR of newly diagnosed MRSA or VRE infection or colonization within 30 days following ambulance exposure. **Results:** In total, 321,229 patients had ED encounters during the study period. After applying inclusion criteria and propensity score-matching there were 11,324 patients: 3,903 in the ambulance group and 7,421 in the unexposed group. Moreover, 12 patients (0.11%) had the outcome of interest, including 9 (0.08%) with MRSA and 3 (0.03%) with VRE. The 30-day prevalences of MRSA and VRE were larger in the ambulance group than in the unexposed group: 8 (0.20%) and 4 (0.05%), respectively ($P = .02$). Patients who presented to the ED via ambulance were almost 4 times more likely to have MRSA or VRE within 30 days of their encounter (RR, 3.72; 95% CI, 1.09–12.71; $P = .04$). The RRs for MRSA and VRE alone were 3.33 (95% CI, 0.79–13.94; $P = .10$) and 4.14 (95% CI, 0.37–46; $P = .25$), respectively. **Conclusions:** To our knowledge, our cohort study is the first to demonstrate an association between ambulance exposure and the development of disease. These results represent the first step in evaluating MTAI burden to eventually develop targeted interventions with the purpose of reducing it.

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Cluster of Invasive *Pseudomonas aeruginosa* Infections in a Neonatal Intensive Care Unit

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Background: *Pseudomonas aeruginosa* uncommonly causes illness in neonatal intensive care units (NICU). A cluster of 4 infections was appreciated over 6 weeks in our inborn-delivery NICU, prompting an investigation. **Methods:** Upon recognition of a cluster of infections, we retrospectively audited all cultures positive for *P. aeruginosa* from all sites (sterile and non-sterile) over the prior year in the index NICU (NICU 1, inborn) and for