902. Hospital Characteristics and Infection Prevention and Control Strategies Associated with Methicillin-Resistant *Staphylococcus aureus* (MRSA) and *Clostridium difficile* Infection (CDI) in Canadian Hospitals

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Background. Measurement of the prevalence of antibiotic resistance assesses the associated burden of disease while also identifying vulnerable patient populations and monitoring the effectiveness of interventions. The objective of this study was to determine institutional characteristics, and infection prevention and control (IP&C) policies associated with MRSA colonization/infection, and *C. difficile* infection.

Methods. In November 2012 a point-prevalence survey of MRSA and CDI was done in adult inpatients at Canadian acute-care hospitals with ≥50 beds. Information was also obtained regarding institutional characteristics and IP&C policies of each participating facility. Logistic regression models were designed using variables selected *a priori* and two-tailed *p* values less than 0.05 were considered significant.

Results. 132 (56% of eligible) hospitals representing all 10 Canadian provinces participated in the survey and were included in the analysis. 60% of facilities were located within the central region of Canada (Ontario and Quebec), the majority (54%) had fewer than 200 beds, and were non-teaching hospitals (68%). The median prevalence of MRSA colonization/infection was 3.9% (range: 0-26.8%) and median MRSA infection prevalence was 0.3% (range: 0-4.9%). The presence of pediatrics in the hospital ($p = 0.001$), performing targeted vs universal admission screening ($p < 0.001$), routine placement of MRSA carriers in a private room ($p < >0.001$), routine use of surgical masks by staff caring for patients with MRSA ($p = 0.005$), decolonization with mupirocin ($p < 0.001$), and enhanced environmental cleaning of MRSA rooms ($p = 0.006$) were independently associated with a lower prevalence of MRSA colonization/infection. The median prevalence of CDI for participating facilities was 0.9% (0-5.5%). Teaching hospitals ($p = 0.011$) and facilities with a shorter turn-around-time (< 24 hrs) for *C. difficile* toxin assay results ($p = 0.012$) were associated with a higher prevalence of CDI.

Conclusion. Although hospital characteristics are inalterable, this study identified IP&C policies that may be used to limit the spread of antibiotic resistance in acute-care hospitals.

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