

catheter-related bloodstream infection, and 1 patient with disseminated candidiasis. The remaining 40 patients (83%) were considered colonized. **Conclusions:** We report a descriptive series over 18 months of clinical isolates with *C. dubliniensis* recovery at a pediatric institution. Most isolates were identified as colonizing strains in patients with cystic fibrosis. *C. dubliniensis* was a rare cause of invasive disease in our institution, with only 8 cases identified.

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Poster Presentation

Risk Factors and Mortality in Pediatric Patients with *Stenotrophomonas maltophilia* Bacteremia

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Background: *Stenotrophomonas maltophilia* (*S. maltophilia*) is an opportunistic and nosocomial pathogen that can cause an invasive

and fatal infection, particularly in hospitalized and immunocompromised patients. However, little is known about the impact of *S. maltophilia* bacteremia in pediatric patients. Therefore, we aimed to identify risk factors for mortality, antibiotic susceptibility of *S. maltophilia*, and mortality rates in pediatric patients with *S. maltophilia* bacteremia. **Methods:** We conducted a retrospective cohort study by identifying all *S. maltophilia*-positive blood cultures in the microbiology laboratory database between January 2007 and December 2018 from hospitalized pediatric patients (age, 1–14 years) at King Faisal Specialist Hospital and Research Center, Riyadh, Saudi Arabia. After identifying patients with *S. maltophilia* bacteremia, medical charts were reviewed for demographics, clinical data, and outcome within 7 days of bacteremia diagnosis. Risk factors associated with mortality in *S. maltophilia* bacteremia patients were determined using univariate and multivariate analyses. **Results:** Overall, 68% of pediatric patients with *S. maltophilia* bacteremia were identified. The most common underlying primary diagnoses were malignancy (29.4%), congenital heart diseases (16.2%), anemia (14.7%), and primary immunodeficiency (11.8%). All infections were nosocomial infections, and (88.2%) bacteremia cases were central-line-associated bloodstream infections. The risk factors associated with mortality as determined by univariate analysis were ICU admission ($P < .001$), intubation ($P = .001$), neutropenia ($P = .008$), prior use of carbapenem ($P = .002$), thrombocytopenia ($P = .006$), and

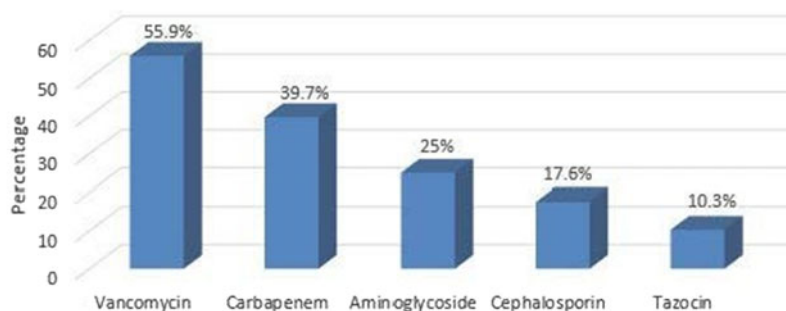


Figure 1: Antibiotics used 14 days prior to *S. maltophilia* bacteremia.

Fig. 1.

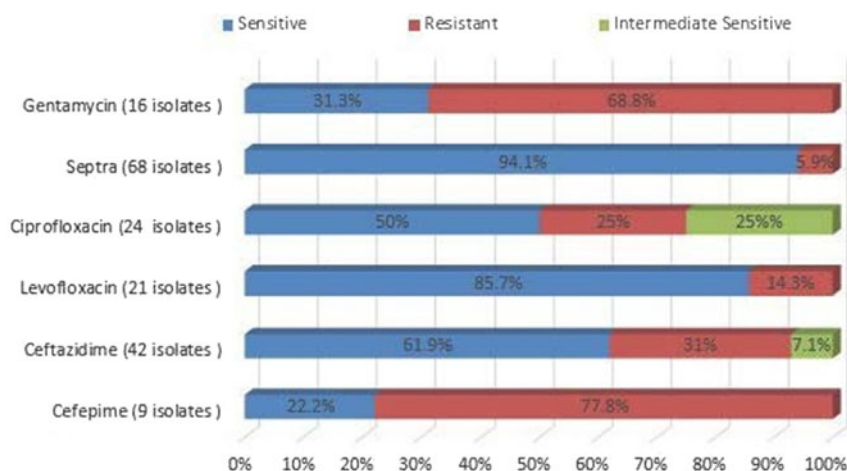


Figure 2: Antibiotic susceptibility of *S. maltophilia* blood isolates

Fig. 2.

respiratory colonization ($P < .001$). On multivariate analysis, ICU admission ($P = .007$; 95% CI, 0.003–0.406) and neutropenia ($P = .009$; 95% CI, 0.013–0.537) were the major risk factors associated with mortality. *S. maltophilia* was the most susceptible to trimethoprim and sulfamethoxazole (TMP/SMX, 94.1%), followed by levofloxacin (85.7%). In addition, 36 patients received TMP/SMX as monotherapy, and 11 patients received it in combination with other antibiotics (fluoroquinolone, ceftazidime, or aminoglycoside). Hence, no statistically significant difference was observed in patient mortality. The overall mortality rate within 7 days of *S. maltophilia* bacteremia diagnosis was 33.8%. **Conclusions:** *S. maltophilia* bacteremia is a devastating emerging infection associated with high mortality among hospitalized children. Therefore, early diagnosis and prompt management based on local susceptibility data are crucial. Various risk factors, especially ICU admission and neutropenia, are associated with *S. maltophilia* bacteremia mortality.

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Risk Factors Associated with Acute Hepatitis C in Mongolia

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Background: Hepatitis C virus (HCV) infection is endemic in Mongolia, with reported prevalence of HCV antibody (anti-HCV) positivity of 11%–16% in the adult population. Healthcare-related risk factors associated with development of acute HCV infection have not been evaluated in this population. **Methods:** We conducted a prospective, matched case-control study to identify risk factors associated with acute HCV infection in Ulaanbaatar, Mongolia. Cases were aged 18 years with discrete onset of symptoms consistent with acute viral hepatitis as well as jaundice or elevated serum alanine aminotransferase (ALT) levels who were admitted to the National Center for Communicable Diseases during January–October, 2019. Cases were both anti-HCV and HCV RNA positive and tested negative for acute hepatitis A, B, and E. Controls were randomly selected from the Population and Household Database, a national registry of all citizens, and were matched by age and gender. Data collection covered healthcare-associated and other risk factors in the 6 months before symptom onset (cases) or interview date (controls). Adjusted measures of association comparing cases and their matched controls were obtained using a multivariate conditional logistic regression model. **Results:** We enrolled 35 case patients and 104 controls. Median age

of all participants was 44 (range, 23–63) years and 19% (27 of 139) were men. All case patients reported jaundice and loss of appetite; most cases reported nausea, malaise, and abdominal pain (97%, 91%, and 83%, respectively). The median ALT level among case patients was 1,185 IU/L (range, 212–3,349). Case patients were more likely than controls to have been admitted as inpatients (matched odds ratio [mOR], 4.3; 95% CI, 1.5–11.9), to have visited an outpatient clinic (mOR, 3.6; 95% CI, 1.3–10.2), to have had phlebotomy (mOR, 3.3; 95% CI, 1.5–7.5) or endoscopy (mOR, 10.7; 95% CI, 2.2–51.2) as an outpatient procedure, and to have received an injection outside of healthcare settings (mOR, 2.2; 95% CI, 1.0–5.1). Cases were also more likely to have lived in a yurt (mOR, 2.3; 95% CI, 1.0–5.0) and to have lived with persons diagnosed with HCV infection (mOR, 3.0; 95% CI, 1.1–7.9). In a multivariate model, only outpatient endoscopy (adjusted OR, 10.8; 95% CI, 1.7–69.6) was significantly associated with case status. **Conclusions:** This is the first study to evaluate risk factors for acute HCV infection among adults in Ulaanbaatar, Mongolia. Outpatient endoscopy was associated with new HCV infections in this population; evaluation of gaps in infection control practices at settings providing these services are needed to prevent transmission of communicable diseases, including hepatitis C.

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Risk Factors Associated With Hospital-Onset MRSA Proportion—National Healthcare Safety Network, 2017–2018

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Background: *Staphylococcus aureus* is frequently implicated in healthcare-associated infections in the United States, and a substantial proportion of these infections are attributed to methicillin-resistant *Staphylococcus aureus* (MRSA). Although MRSA infections have decreased in health care settings, accurate estimates of the rate of decline call for risk-adjusted methods for calculating the resistant proportion (%R), that is, the proportion of *S. aureus* resistant to ceftazidime or oxacillin. Risk-adjusted %R also enables more accurate interhospital comparisons and can serve as a quantitative guide and evaluation metric for prevention efforts. **Methods:** To develop a risk-adjusted %R for *S. aureus*, we analyzed the antimicrobial susceptibility test (AST) results for *S. aureus* isolates reported to the CDC NHSN Antimicrobial Resistance Option during 2017–2018. Isolates were reported for cerebrospinal fluid (CSF), blood, lower respiratory tract (LRT), and urine. Isolates without ceftazidime and oxacillin test results, or from the facilities that had >10% missing test results were excluded. Test results were differentiated between those associated with community-onset and hospital-onset (HO) infections by defining the latter group as test results for isolates obtained 3 days or more after hospital admission. Logistic regression was used to evaluate the factors associated with oxacillin/ceftazidime resistance. Hospital, patient and isolate-level variables from NHSN annual survey and AR option were assessed as covariates. Variable entry into the models is based on significance level $P < .05$. **Results:** Among 9,992 hospital-onset SA isolates from 9,019 patients in 315 facilities, 5,488 (54.9%) were