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1: [Infect Control Hosp Epidemiol](#). 1996 Jan;17(1):36-41.

Resistant enterococci: a prospective study of prevalence, incidence, and factors associated with colonization in a university hospital.

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OBJECTIVE: To determine the prevalence of gastrointestinal tract colonization with antibiotic-resistant enterococci at ward entry and to study the incidence and risk factors for nosocomial acquisition of colonization with resistant enterococci. **DESIGN:** A prospective cohort study conducted between February 1 and March 15, 1993. **METHODS:** Rectal cultures were obtained within 24 hours of admission or transfer onto the study wards and repeated at weekly intervals and at the time of discharge. Patients harboring antibiotic-resistant enterococci at the time of admission or after admission were compared to patients who were not colonized with these organisms. Clinical and epidemiologic risk factors for colonization were abstracted prospectively by daily chart review. Following a univariate analysis of risk factors associated with colonization, a multivariate statistical analysis using three separate models was done. **SETTING:** A 1,125-bed, tertiary-care teaching hospital in North Carolina. **PATIENTS:** A total of 350 patients admitted to two general medical wards and the medical intensive care unit during the study period. **RESULTS:** Antibiotic-resistant enterococci were isolated from 52 patients: 19 were colonized at admission to the study, and 33 later acquired resistant strains. At the time of admission, 5.4% of the patients were colonized with ampicillin-resistant enterococci (ARE), including 1.1% that were colonized with vancomycin-resistant enterococci. Prior hospitalization was associated with colonization with ARE at admission ($P = .01$). Independent risk factors for nosocomial acquisition of ARE included treatment with more than three antibiotics, empiric use of antibiotics, use of third-generation cephalosporins, and the use of enteral tube feedings. Antibiotics used prophylactically were not associated with resistant enterococcal colonization. **CONCLUSIONS:** Our data help to elucidate the epidemiology of gastrointestinal tract colonization with resistant enterococci. We hypothesize that surveillance and control programs will be more likely to succeed if targeted at patients receiving more than three antibiotics, empiric antibiotics, and enteral tube feedings (*Infect Control and Hosp Epidemiol* 1996;17:36-41).

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