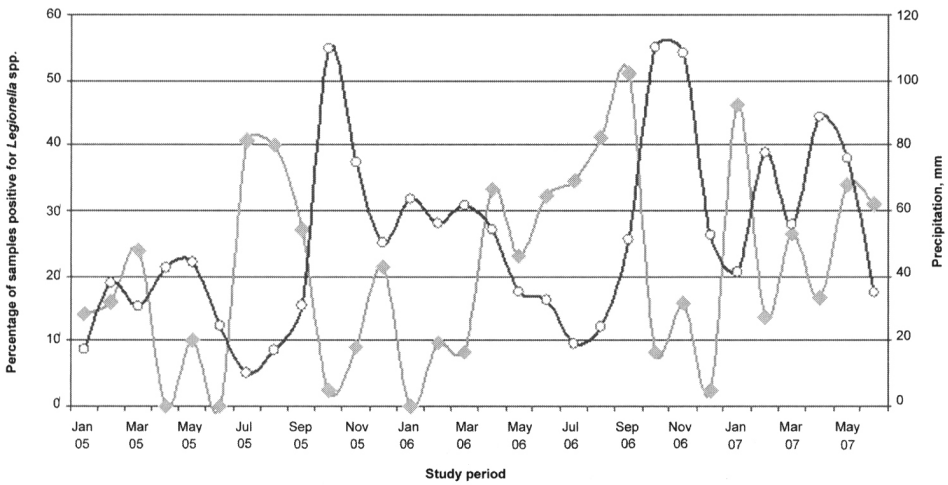

FIGURE 2. Relation between the percentage of all samples that were positive for *Legionella* species and the amount of precipitation during the study period. *Gray line with squares,* percentage of all samples that were positive for *Legionella* species; *black line with circles,* amount of precipitation.

rogroup 1 is noticeable and may have clinical translation. In this sense, it has been reported that, among immunocompromised hospitalized patients, at least 20% of *Legionella* infections are caused by strains other than *L. pneumophila* serogroup 1,[8] but this may be an underestimation, because etiological assignation depends on the *Legionella* urinary antigen test that is specific only for serogroup 1.[9]

In conclusion, in the present study, which was carried out in a country with low precipitation rates (Spain), there was an inverse relationship between the rate of precipitation and the rate of *Legionella* isolation. Further studies are needed to explore the translation of these facts to the clinical epidemiology of nosocomial legionellosis and the importance of its prevention by disinfection, mainly through hyperchlorination,[2] of potable water systems of healthcare facilities.

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Doctors' Compliance With Hand Hygiene Guidelines in the Surgical Ward

TO THE EDITOR—We read with great interest the study by Duggan et al.[1] suggesting an inverse correlation between healthcare workers' level of professional education and their rate of compliance with hand hygiene guidelines. To inves-

tigate further the relatively poor handwashing rate among medical staff, we recently conducted a similar study in our unit (a dedicated colorectal surgery ward). Over a 3-week period, all of the medical staff's contact with patients on the twice-daily ward rounds was observed. The overall rate of compliance with the departmental hand hygiene policy (which states that hands must be decontaminated immediately before and after every episode of direct patient contact and/or care with either soap and water or alcohol-based gel) was 10% (guidelines were followed during 14 of 140 interactions). Interestingly, the most junior medical staff (ie, senior house officers) appeared to be more compliant with the handwashing guidelines (they followed them during 8 [40%] of 20 patient interactions) than either specialist registrars (who followed the guidelines during 4 [4%] of 103 interactions) or consultants (who followed the guidelines during 2 [12%] of 17 interactions). These results were observed despite the large number of interactions for which bedside alcohol-based gel dispensers were available (136 [97%] of 140).

It is unclear why the rate of hand decontamination is so low in our unit compared with the rate observed in the unit evaluated by Duggan et al.[1] Numerous factors affect adherence to hand hygiene guidelines, although staff in technical specialties such as surgery are recognized to have a poorer rate of hand hygiene compliance than staff in other specialities.[2] However, our finding that more senior surgical staff are less compliant with hand hygiene guidelines has implications for infection control on surgical wards because junior medical staff are recognized to follow the hand hygiene behavior of senior staff.[3] We would, therefore, agree with the suggestion by Duggan et al.[1] that further research is required to investigate the motivating factors for hand hygiene among different types of healthcare workers.

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Use of Microbiologic Findings to Manage Antimicrobials in the Intensive Care Unit

To the Editor—The journal recently published articles by Dellit et al.[1] and by Cook et al.[2] that strongly highlight the need for multidisciplinary approaches to antimicrobial therapy in the fight against the ever-growing antimicrobial resistance of pathogens. Antimicrobial resistance is often due to antibiotic misuse, and therefore local microbiologic findings should contribute to drive a more appropriate treatment of hospital-acquired or intensive care unit (ICU)–acquired infections.

As part of a wider antimicrobial management program implemented since 2003 at Bolzano Central Hospital, a 1,400-bed, public referral hospital in the northeastern part of Italy, we performed an interdisciplinary, interventional program in our 18-bed, general ICU. The aims of the antimicrobial management program were to improve antimicrobial use and to reduce the resistance of pathogens. The most important interventions performed in the antimicrobial management program were (1) withdrawal of antimicrobial prophylaxis for patients in critical condition at the time of admission to the ICU; (2) empirical therapy for patients with suspected ICU-acquired infections, according to protocols based on local epidemiologic data and on pharmacokinetic and/or pharmacodynamic criteria; and (3) subsequent regular tailoring of antimicrobial therapy, according to microbiologic findings, with a commitment to streamlining.

Important variations in antibiotic consumption, measured in defined daily doses per 100 patient-days, have been observed over time: reductions of vancomycin (−73%), teicoplanin (−95%), ceftazidime (−79%), and imipenem (−60%), along with huge increases of oxacillin and antistaphylococcal β-lactams (at least 1,550% for each), from 2003 through 2007. At the same time, we monitored antimicrobial susceptibility in pathogens, recording for each patient admitted to the ICU only 1 isolate recovered within 30 days after admission, from 2002 (taken as a historical comparison) through 2007.[3] Some pathogens were analyzed differently than others: *Staphylococcus aureus* was monitored from lower respiratory tract specimens (bronchial and tracheal aspirate and bronchoalveolar lavage) either alone or together with other samples (blood, wound swab specimens, cerebrospinal fluid, and urine) that were collected because of clinical suspicion of infection. Isolates of pathogens belonging to each single species recovered from all specimen types were analyzed together. Pearson regression analysis was used to determine the significance of susceptibility trends.