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## Surveillance of microbial resistance in European Intensive Care Units: a first report from the Care-ICU programme for improved infection control

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**Abstract Purpose:** To report initial results from a European ICU surveillance programme focussing on antibiotic consumption, microbial resistance and infection control.

**Methods:** Thirty-five ICUs participated during 2005. Microbial

resistance, antibiotic consumption and infection control stewardship measures were entered locally into a web-application. Results were validated locally, aggregated by project leaders and fed back to support local audit and benchmarking. **Results:** Median (range) antibiotic consumption was 1,254 (range 348–4,992) DDD per 1,000 occupied bed days. The proportion of MRSA was median 11.6% (range 0–100), for ESBL phenotype of *E. coli* and *K. pneumoniae* 3.9% (0–80) and 14.3% (0–77.8) respectively, and for carbapenem-resistant *P. aeruginosa* 22.5% (0–100). Screening on admission for alert pathogens was commonly omitted, and there was a lack of single rooms for isolation. **Conclusions:** The surveillance programme demonstrated wide variation in antibiotic consumption, microbial resistance and infection control measures. The programme may, by providing rapid access to aggregated results, promote local and regional audit and benchmarking of antibiotic use and infection control practices.

**Keywords** Intensive care · Antibiotic consumption · Microbial resistance · Infection control