

## Prevention of resistance in ICU

- P: Prophylactic administration of antibiotics should be discouraged unless clinically indicated in high-risk patients.
- R: Routine appropriate (*ie*, active against the identified pathogen) and adequate (*eg*, optimal dosing, duration of therapy) antimicrobial treatment of infections should be administered.
- E: Encourage avoidance of unnecessary use of antimicrobial agents (*eg*, empiric antibiotics in the absence of clinical and microbiologic data supporting the presence of infection).
- V: VAP and other specific infection prevention and treatment protocols should be established for the local ICU.
- E: Employ antiseptic techniques for all invasive procedures.
- N: Noncompliance with local infection prevention and antibiotic treatment protocols should not be tolerated.
- T: Try always to de-escalate to more narrow-spectrum antibiotic regimens on the basis of culture results and antimicrobial susceptibility data.
- R: Restricted formulary control for specific antimicrobial agents or drug classes if there are outbreaks of antibiotic-resistant bacteria.
- E: Evade antimicrobial homogeneity. Promote appropriate use of multiple drug classes (*eg*, avoid highly restricted antibiotic formularies; consider use of antimicrobial mixing).
- S: Strict isolation precautions for patients at high risk for (*eg*, patients transferred from long-term care facilities) or found to have infection/colonization with clinically important antibiotic-resistant bacteria.
- I: Infectious disease consultation for difficult-to-manage antibiotic-resistant infections and infection control problems.
- S: Systematic disinfection of commonly used instruments, devices, patient-care materials, and rooms between uses.
- T: Teach infection control procedures and optimal antibiotic utilization practices to all staff participating in the care of ICU patients.
- A: Active culture surveillance programs to identify patients infected/colonized with clinically important antibiotic-resistant bacteria.
- N: Narrow-spectrum antibiotics should be used when appropriate on the basis of microbiology data.
- C: Cease appropriate antibiotics for bacterial infections 24 to 48 h after achieving an appropriate clinical response.
- E: Embrace locally developed antibiotic guidelines and protocols aimed at balancing antimicrobial efficacy and preventing the emergence of resistance.