

Key messages for clinical microbiologists

Tasks

1. Your tasks related to improving antibiotic use include [31,98-100] [expert consensus]:
 - a) Participating in the antibiotic stewardship team, as a key member of the team;
 - b) Collaborating with the infectious disease specialist and the hospital pharmacist to implement the antibiotic stewardship programme;
 - c) Supporting evidence-based hospital antibiotic guidelines for common infections and for surgical prophylaxis;
 - d) Timely identification and reporting of microorganisms (e.g. in blood cultures) and antimicrobial susceptibility testing;
 - e) Communicating critical results promptly to the treating physician;
 - f) Presenting data in a way that supports prudent antibiotic use, for example by selectively reporting to physicians a limited number of antimicrobial susceptibility results;
 - g) Providing guidelines for appropriate specimen collection, enforcing rejection criteria for specimens submitted inappropriately, and establishing procedures to limit the work-up of contaminants (e.g. blood cultures);
 - h) Guiding empirical antibiotic therapy by providing hospital and ward specific (e.g. intensive care unit or emergency department) cumulative antimicrobial susceptibility data;
 - i) Identifying critical trends in antibiotic resistance in the hospital and promptly communicating observations to the antibiotic stewardship team and the infection control team.
 - j) Managing your hospital's antimicrobial formulary (i.e., list of drugs available for prescribers).

Things you can do, or collaborate on

2. Provide guidelines for specimen collection, storage and transport [98,99].
3. Ensure that laboratory testing and antimicrobial susceptibility reporting follow treatment guidelines (including selective reporting), and include relevant comments on interpretation if needed [31].

4. Ensure that identification and antimicrobial susceptibility testing results are communicated to prescribers, nurses and the antibiotic stewardship team especially for critical results (e.g. blood cultures) [98-100].

5. Ensure that testing and reporting of microbiology results follow European and national standards (i.e. European Committee on Antimicrobial Susceptibility Testing - EUCAST) [31].

6. Provide data on antibiotic resistance at hospital level and ward level, and communicate trends to the antibiotic stewardship team and the infection prevention and control team [101].

7. Train hospital prescribers regularly on antibiotic resistance, and on use of rapid and point-of-care diagnostic tests [31,53].