

Chapter V

Methodological recommendations for surveillance of bacterial resistance

To be actively involved in antimicrobial resistance surveillance at the local (1, 2), national (3, 4) or european level (5, 6), microbiologists have to share common definitions and use a widely accepted methodology (1, 3). Therefore, in 2000, the Scientific Board of ONERBA issued recommendations on methodological questions regarding surveillance of bacterial resistance to antimicrobials (7), aimed at helping microbiologists working in private practice, hospitals, or veterinary settings to participate in surveillance activities. These recommendations have been used for the preparation of the european recommendations for antimicrobial resistance surveillance (8).

ONERBA's recommendations relate especially to non-microbiological aspects of surveillance because precise recommendations on technical aspects of antimicrobial susceptibility testing (susceptibility tests, interpretation criteria, etc.) have been in existence for many years in France (CA-SFM) (9). The main topics developed in ONERBA's recommendations are:

- different types of information, data collection, interpretation criteria, cross-resistance or co-resistance;
- definitions and thesaurus to be adopted in human or veterinary medicine with regard to the population under

surveillance (identity and characteristics), dates, types of samples, bacteria, antimicrobials;

- duplicates: definitions and practical use;
- data stratification: indicators of medical activity, definition of hospital- or community-acquired infection in the hospital setting, specific indicators for multidrug-resistant bacteria, indicators for veterinary medicine;
- external and internal quality controls, controls of likelihood.

Such recommendations are especially useful in order to implement french ruling 272 issued in May 2002 regarding the appropriate use of antimicrobials in a hospital setting. Indeed, this text underlines the pivotal role of hospital microbiologists in the exploitation of routine susceptibility data to produce cumulative susceptibility reports on bacterial resistance in their hospital. Therefore, annex 8 of the recommendations details principles for producing such reports and provides a standard plan for analysis.

The recommendations are available in french on ONERBA's website, <http://www.onerba.org>. The Scientific Board of ONERBA does not plan to update these recommendations because of the recent publication of european guidelines by the European Society for Chemotherapy, Microbiology and Infectious Diseases (ESCMID) in 2004 (8).

Références bibliographiques/References

1. *Le bon usage des antibiotiques à l'hôpital. Recommandations pour maîtriser le développement de la résistance bactérienne.* ANDEM, août 1996.
2. *The microbial threat: report from the invitational EU conference held in Copenhagen (9-10 september 1998).* Ed. Vibeke Thamdrup Rosdahl and Knud Borge Pedersen.
3. Monnet DL. *Toward multinational antimicrobial resistance surveillance systems in Europe.* *Int J Antimicrob Agents* 2000;15:91-101.
4. *Plan national d'action pour la maîtrise de la résistance aux antibiotiques.* France. Réseau national de santé publique. Saint-Maurice, janvier 1999.
5. *Maîtrise de la diffusion des bactéries multi-résistantes aux antibiotiques.* Ministère de l'Emploi et de la Solidarité. Secrétariat d'État à la Santé et à l'Action sociale, 1999.

6. *Recommandations méthodologiques pour la surveillance de la résistance aux antibiotiques.* Conseil Scientifique de l'ONERBA. Éd. La Lettre de l'Infectiologue/Edimark, 2000.

7. *Statens Serum Institut, Danish Veterinary & Food Administration, Danish Medicine Agency, Danish Veterinary Laboratory. Consumption of antimicrobial agents and occurrence of antimicrobial resistance in bacteria from food animals, foods and human in Denmark.* DANMAP 2000.

8. *European recommendations for antimicrobial resistance surveillance.* Cornaglia G., Hryniewicz W., Jarlier V., Kahlmeter G., Mittermayer H., Stratchounski L., Baquero F. *On behalf of the ESCMID Study Group for Antimicrobial Resistance Surveillance.* *Clin Microbiol Infect* 2004;10:349-83.

9. *Comité de l'antibiogramme de la Société Française de Microbiologie.* Communiqué 2004. Société Française de Microbiologie. <http://www.sfm.asso.fr/>

