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Antimicrobial resistance surveillance for nosocomial pathogens

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Antimicrobial-resistant bacterial infections are widespread in developed and developing countries. There is no antimicrobial agent to which resistance has not developed over time. Increasing antimicrobial resistance presents a major threat to public health regarding: a) reduced effectiveness of antimicrobial treatment options, b) increased morbidity and mortality as a direct result of resistance, c) increased healthcare expenditure. Global strategies were introduced with two important priorities: a) to organize surveillance to determine the extent of the problem and b) to educate clinicians and the public on the appropriate use of antibiotics. The importance of drug resistance problems has raised the need for continued surveillance and systematically monitoring patterns and trends of antimicrobial resistance over time. Different countries have developed a variety of well-known global surveillance programs. Enhanced information retrieve better understanding of the problem; facilitate appropriate interventions including review of antimicrobial prescriptions policy and treatment guidelines that would emphasize prudent antimicrobial use. The ultimate long-term goal of patient management would be to preserve the effectiveness of currently available antimicrobial agents. Various surveillance networks focus on different pathogens acquired from community or hospitals and provide reliable sources of antimicrobial susceptibility data. Such data have been used to determine resistance patterns and monitor emerging antimicrobial resistance both nationally and internationally. The Group for Enteric, Respiratory and Meningeal disease Surveillance in South Africa (GERMS-SA) introduced the laboratory-based antimicrobial resistant surveillance (LARS) for common nosocomial pathogens since 2010 and basic data are now available and can be analyzed in the comparison to other systems. Furthermore surveys identified areas where procedures can be improved and further research is needed.

Biography

Dr Olga Perovic has completed her FC PATH in Microbiology with The Collages of Medicine of South Africa in 2000 and MMED in 2004 at University of Witwatersrand. She is Head of Microbiology External Quality Assessment and Antimicrobial Resistance Reference Units at National Institute for Communicable Diseases/ National Health Laboratory Service in South Africa. She has published in more than 30 and has been reviewer for numerous of reputable journals. She supervised number of master and Ph. D students. Dr Perovic is senior lecturer at University of Witwatersrand.