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Proficiency testing/external quality assurance in the microbiology laboratory

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In many countries, the external quality assurance (EQA)/ Proficiency testing (PT) scheme for priority GHSA pathogens still needs to be strengthened, particularly concerning Antimicrobial Resistance (AMR) surveillance. EQA programs are usually organized by the national professional scientific society, professionals on behalf of government, or by commercial companies. Prior to the commencement of a program, several policy decisions need to be agreed upon such as participation being required or recommended. Another consideration is the organizational structure behind the coordination of the EQA scheme. This includes operating costs for the provision of the material, mailing expenses and clerical and professional time for programmatic administration. Other issues also need agreement such as the frequency of specimen distribution and the degree of interaction between the organizers and participants to ensure an understanding of the scheme's objectives and report distribution of interlaboratory comparisons. For EQA programs to be successful in providing independent, objective data and to act as an educational stimulus for improvement, participants must have confidence in the scientific validity of the scheme design as well as the reliability of its operations. One of the issues around the current implementation of AMR surveillance programs is the misidentification of bacterial isolates and the inaccurate performance of Antibiotic Susceptibility Testing (AST) which must be in place before the country starts reporting AMR data. A national AMR program is expected to organize and conduct EQA for all microbiology laboratories reporting data to WHO covering both quality-assured, standardized identification of bacteria and AST in patient management. Proficiency testing is essential for conducting high quality testing, verification of test results and effective antibiotic stewardship. Establishing a national PT program serves as a quality improvement activity and is vital for improving the laboratory's role in early disease detection, rapid public health response and achieving superior preventive care.

Biography

Martin R Evans is a Clinical Laboratory Director with a PhD in Medical Microbiology and Immunology. He currently serves as a Laboratory Consultant to the Association of Public Health Laboratories (APHL) USA and the American Society for Microbiology (ASM). He was an Associate Director at the NYC Public Health Laboratory and a Clinical Laboratory Director at Quest Diagnostics and SmithKline Beecham Clinical Laboratories. He also held academic positions at Temple University and the University of Zimbabwe, Faculty of Medicine.

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