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Antimicrobial susceptibility testing: Evaluation of the conformity of 3 medical bacteriology laboratories of Togo according to EUCAST/CA-SFM guidelines.

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ABSTRACT

Objective: Faced with the emergence of antibiotic resistance, the quest for reliable susceptibility test results is becoming a necessity in medical bacteriology laboratories. The aim of this study was to evaluate the conformity of the antimicrobial susceptibility testing of three (03) medical bacteriology laboratories in Togo.

Methodology and results: The conformity of the antimicrobial susceptibility testing was evaluated according to the EUCAST/CA-SFM V1.0 March 2017 guidelines. In addition, the turbidity of prepared inocula was assessed using 0.5 McFarland standard. Compliance rates recorded ranged from 27.78% to 41.05% with an average of 32.61%. At the pre-analytical phase, average compliance was low (16.67%). However, it was higher in the analytical phase (72.84%). As for the compliance rates for the quality control performance, it was very low (8.33%), ranging from 0% to 25%. The concentration of 30 inocula prepared in 2 laboratories were high compared to the threshold recommended by EUCAST (0.5 Mc Farland), 0.83 Mc Farland and 0.86 Mc Farland respectively.

Conclusion and application of results: The data generally showed a low compliance rate with the requirements of the EUCAST/CA-SFM and particularly high inocula concentrations. This may have a negative impact on the sensitivity profile of bacteria. Great efforts must be made by the

laboratories, notably in terms of equipment, staff training on the reference system and technological and documentary monitoring, in order to increase the quality level of these laboratories.

Keywords: Antimicrobial Susceptibility Testing, Conformity, EUCAST/CA-SFM, Togo.