

Jackson Memorial Hospital

Validation of Lactic Acid and Pyruvate Rapid Testing Devices as an Effective Approach to Decreasing the Rise in Microbial Resistance

Background: In context of escalating deaths due to drug-resistant microbes, multi-faceted approaches have been tried; however, missing is rapid microbial testing. In different aspects of routine patient encounters rapid diagnostics has proven to be an effective strategy in point-of-care decision making for clinicians – example is rapid glycemic levels.

Objectives: To assess the effectiveness of the following rapid testing devices in antibiotic prescription: Pyruvate Rapid Testing Device. And Lactic Acid Testing Device.

Methods: In a span of six months, multi-center study using a population of 400, Clinicians will be provided with testing results on either pyruvate or lactic acid devices and data will be obtained on whether antibiotics were prescribed; this will be confirmed with blood or fluid cultures.

Results: It is well documented that about 50% of antibiotics prescribed are not needed. After adopting this study, retrospective data to suggest a difference or improvement in prescribing habit would validate routine use of such equipment as one modality to solving the problem.

Conclusion: The rise of antimicrobial resistance is on leaps and bounds hence need for different approaches such as rapid bacteria testing. In this project, we seek to use rapid lactic acid and pyruvate testing devices in guiding prescribing habits; this, as one approach to the solving the problem.