

Editorial

The COVID 19 pandemic has thrown a spotlight on the microbiology laboratory. Clinical microbiologists and their contribution to the diagnosis of infectious diseases have come to the attention of the larger public. Even in resource poor settings, available funds have been diverted to the use of the microbiology laboratory. This gives the clinical microbiologist an unprecedented opportunity to reengineer the laboratory, including the introduction of novel technologies to improve accuracy and shorten time to diagnosis. However, with the profusion of new test ‘kits’ and protocols it is important for the clinical microbiologist to evaluate and use laboratory tests optimally to improve patient outcomes i.e. practice ‘evidence-based laboratory medicine’.

We have to ask ourselves which infections we need to prioritize in our clinical setting based on epidemiology. We need to identify what screening and diagnostic tests are available and critically evaluate current practice against newer options. While preserving tried and tested methods such as microscopy and culture, we may need to eliminate obsolete tests in favour of the new eg MALDI-TOF for speciation of bacteria instead of biochemical testing. However, we still need to appraise the evidence to determine the diagnostic accuracy of the novel tests in the clinical setting (vs as research tools) and their benefit over the existing tests. Even after we select and introduce a test we need to continue to assess the test for its effectiveness in improving patient outcomes in the real world setting.

There will be challenges in introducing new technologies to existing laboratories including space, labour, cost and time constraints, training and motivation of staff to adopt novel techniques, development of new standard operating procedures and protocols, reading and interpretation of results, trouble shooting, communication of results to clinicians in an user friendly format and ensuring that they are acted on appropriately to improve patient outcome. Performance of tests will need to be measured in terms of sensitivity, specificity, negative predictive value, positive predictive value, likelihood ratio and receiver operator curves.

Competencies in evidence based laboratory medicine needs to be included into clinical microbiology training programmes. Laboratory services should be audited and evaluated in relation to the whole care pathway to identify over or under utilization and optimum use.

We hope that you will continue to find the contents of this issue useful and thought provoking. Do let us have your feedback as well as contributions for publication in forthcoming issues. Please visit the journal’s submission and peer review website at <http://www.sljol.info/>. We would also invite you to register as a Reviewer, as the availability of a wide pool of subject specialists for this purpose would assist us in our task of continuously improving the quality of the Journal.

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