Patterns-of-Practice Survey Demonstrates the Need for National Guidelines Regarding the Implementation of Microbiology Point-of-Care Tests Across Canada

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Background/Objectives

- POCT in microbiology have expanded and are being marketed directly to non-laboratory settings.
- POCT accreditation standards exist for laboratories but knowledge and adherence to these is not expected if POCT are implemented without laboratory knowledge.

The goal of this survey was to describe laboratory awareness and involvement in POCT based on laboratories participating in IQMH proficiency testing.
Methods

• In January 2018, a web-based patterns-of-practice qualitative survey was sent by the IQMH Centre for Proficiency Testing to all 73 participating microbiology laboratories [all licensed Ontario laboratories (majority) and voluntary non-Ontario laboratories] to assess the present state of microbiology POCT

➢ Primary question addressed POCT awareness
➢ Secondary questions addressed adherence to POCT laboratory standards
All 73 laboratories submitted results for this survey, with a response rate of 100%.
Results

Inpatient POCT
- Line Immunoassays: 60%
- Molecular assays: 30%
- Other: 10%
- Total: 9

Outpatient POCT
- Line Immunoassays: 60%
- Molecular assays: 20%
- Other: 20%
- Total: 4
Results

Reasons for Implementing POCT

- Reduction of multiplex resp PCR: 5%
- Lab hours of operations and staffing: 5%
- Unsure: 5%
- Reduction in number of chest x-rays: 5%
- Cost savings: 10%
- Reduction in antimicrobial prescriptions: 25%
- Improved TAT: 45%
Results

Laboratory Involvement

Decision to Use POCT

- Yes: 55% (Total=11)
- No: 45%

Device Selection

- Yes: 60% (Total=10)
- No: 40%
Results

Adherence to POCT Quality Standards

- No verification study performed or were unsure: 40%
- No SOP written: 20%
- Unaware who had responsibility for device operation: 20%
- Personnel operating the device did not undergo training: 20%
- Unaware if competency assessments were performed: 30%
- Unaware if ongoing validation of devices occurred: 30%
- No ongoing maintenance of the device: 70%
- No overall monitoring of outcome measures: 89%
Discussion

• Lack of lab involvement in implementing and using POCT
• A significant proportion of laboratories were aware of lack of adherence to routine laboratory quality standards in implementing and using POCT and yet did not intervene
• Survey of attendees of 2018 AMMI Canada-CACMID:
  ➢ 41% of 136 responders were unsure whether POCT was performed
  ➢ 69% felt microbiology laboratories should be responsible for oversight of these tests
Conclusions

1. Low level of laboratory awareness and involvement with microbiology POCT

2. Concerning proportions of institutions lacking standard quality management of POCT

- In anticipation of the expanding adoption of microbiology POCT, establishing guidelines requiring laboratory oversight of POCT should be a priority
- In addition, creating a framework to assure adherence to these guidelines is required
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