Caribbean Public Health Agency

Preventing disease
Promoting and protecting health
Importance of Data Quality for Laboratory Services

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Preventing disease, promoting and protecting health
Uses of Laboratory Data

- Case management
- Surveillance and Response to pathogens in circulation; emerging and re-emerging
- Development of public health policies
- Rationalization of budgetary allocations
- Research
Importance of Quality Systems

- Quality of laboratory processes has a direct impact on the quality of surveillance data generated.
Review of Regional Data Jan-Jun 2014

Graph 1. Percentage of Request Forms without Data Parameter

Data Parameter

<table>
<thead>
<tr>
<th>Data Parameter</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>5%</td>
</tr>
<tr>
<td>Age</td>
<td>0%</td>
</tr>
<tr>
<td>DOO</td>
<td>25%</td>
</tr>
<tr>
<td>DOC</td>
<td>15%</td>
</tr>
<tr>
<td>Clinical Dx</td>
<td>35%</td>
</tr>
<tr>
<td>National PID</td>
<td>20%</td>
</tr>
</tbody>
</table>

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Key parameters used by the Laboratory

- Both the **DOO** and **DOC** are required to determine the appropriate laboratory test e.g. molecular vs serological methods
Example: Chikungunya Virus January-June 2014

GRAPH 2. CHIKUNGUNYA VIRUS TEST REQUESTS

- 76%
- 24%

DOO, DOC missing
10% CHIKV + result
Incomplete data – Effect on Turn Around Time

Pre-analytical phase

Day 1
Physician submits test request

Day 3
National laboratory submits request to CARPHA

Day 5
CARPHA Laboratory reviews request in accordance with acceptance criteria

Day 14
National laboratory contacts appropriate persons and collects data

Analytical phase

Day 5
Does request have all data parameters?

Day 14
Yes
• Sample/s tested using appropriate method

Post-analytical phase

Day 7
Test result/s reported to country (Laboratory, Epidemiologist)

Day 16
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Consequences

- Poor laboratory surveillance of pathogens of public health importance
- Under-reporting or non-reporting of pathogen/s in circulation e.g. EPI
- Further delays in response to emerging situations
- Impact on case management
- Loss of confidence in the system
Recommendations

• Review current system of referral (local, Regional)

• Feedback to primary care professionals essential

• Sensitization of physicians, nurses/phlebotomists, laboratory staff

• Strengthen collaboration between Epidemiology and Laboratory teams to ensure appropriate data is available for all submissions