Weekly Spotlight

WHO Guidelines on Ethical Issues in Public Health Surveillance

Key facts

- Measles is one of the leading causes of death among young children even though a safe and cost-effective vaccine is available.

- In 2015, there were 134 200 measles deaths globally – about 367 deaths every day or 15 deaths every hour.

- Measles vaccination resulted in a 79% drop in measles deaths between 2000 and 2015 worldwide.

In 2015, about 85% of the world's children received one dose of measles vaccine by their first birth.

A syndromic surveillance system is good for early detection of and response to public health events.

Sentinel surveillance occurs when selected health facilities (sentinel sites) form a network that reports on certain health conditions on a regular basis, for example, weekly. Reporting is mandatory whether or not there are cases to report.

Jamaica’s sentinel surveillance system concentrates on visits to sentinel sites for health events and syndromes of national importance which are reported weekly (see pages 2-4). There are seventy-eight (78) reporting sentinel sites (hospitals and health centres) across Jamaica.

### Table showcasing the Timeliness of Weekly Sentinel Surveillance Parish Reports for the Four Most Recent Epidemiological Weeks – 24 to 27 of 2022

<table>
<thead>
<tr>
<th>Epi week</th>
<th>Kingston and Saint Andrew</th>
<th>Saint Thomas</th>
<th>Saint Catherine</th>
<th>Portland</th>
<th>Saint Mary</th>
<th>Saint Ann</th>
<th>Trelawny</th>
<th>Saint James</th>
<th>Hanover</th>
<th>Westmoreland</th>
<th>Saint Elizabeth</th>
<th>Manchester</th>
<th>Clarendon</th>
</tr>
</thead>
<tbody>
<tr>
<td>26</td>
<td>Late (T)</td>
<td>Late (W)</td>
<td>On Time</td>
<td>On Time</td>
<td>On Time</td>
<td>On Time</td>
<td>On Time</td>
<td>On Time</td>
<td>On Time</td>
<td>On Time</td>
<td>On Time</td>
<td>On Time</td>
<td>On Time</td>
</tr>
</tbody>
</table>

Parish health departments submit reports weekly by 3 p.m. on Tuesdays. Reports submitted after 3 p.m. are considered late.

**KEY:**
- **Yellow** - late submission on Tuesday
- **Red** - late submission after Tuesday

### UNDIFFERENTIATED FEVER

Temperature of >38°C /100.4°F (or recent history of fever) with or without an obvious diagnosis or focus of infection.

### REPORTS FOR SYNDROMIC SURVEILLANCE

**Weekly Visits to Sentinel Sites for Undifferentiated Fever All ages: Jamaica, Weekly Threshold vs Cases 2022**

[Graph showing weekly visits to sentinel sites for undifferentiated fever]
FEVER AND NEUROLOGICAL

Temperature of >38°C /100.4°F (or recent history of fever) in a previously healthy person with or without headache and vomiting. The person must also have meningeal irritation, convulsions, altered consciousness, altered sensory manifestations or paralysis (except AFP).

FEVER AND HAEMORRHAGIC

Temperature of >38°C /100.4°F (or recent history of fever) in a previously healthy person presenting with at least one haemorrhagic (bleeding) manifestation with or without jaundice.

FEVER AND JAUNDICE

Temperature of >38°C /100.4°F (or recent history of fever) in a previously healthy person presenting with jaundice.

The epidemic threshold is used to confirm the emergence of an epidemic in order to implement control measures. It is calculated using the mean reported cases per week plus 2 standard deviations.

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NOTIFICATIONS - All clinical sites

INVESTIGATION REPORTS - Detailed Follow up for all Class One Events

HOSPITAL ACTIVE SURVEILLANCE - 30 sites. Actively pursued

SENTINEL REPORT - 78 sites. Automatic reporting
ACCIDENTS
Any injury for which the cause is unintentional, e.g. motor vehicle, falls, burns, etc.

VIOLENCE
Any injury for which the cause is intentional, e.g. gunshot wounds, stab wounds, etc.

GASTROENTERITIS
Inflammation of the stomach and intestines, typically resulting from bacterial toxins or viral infection and causing vomiting and diarrhoea.

INVESTIGATION REPORTS - Detailed Follow up for all Class One Events

HOSPITAL ACTIVE SURVEILLANCE - 30 sites. Actively pursued

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### CLASS ONE NOTIFIABLE EVENTS

<table>
<thead>
<tr>
<th>CLASS 1 EVENTS</th>
<th>CURRENT YEAR 2022</th>
<th>PREVIOUS YEAR 2021</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accidental Poisoning</td>
<td>109β</td>
<td>90β</td>
<td></td>
</tr>
<tr>
<td>Cholera</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Dengue Hemorrhagic Fever&lt;sup&gt;γ&lt;/sup&gt;</td>
<td>See Dengue page below</td>
<td>See Dengue page below</td>
<td></td>
</tr>
<tr>
<td>COVID-19 (SARS-CoV-2)</td>
<td>47084</td>
<td>37535</td>
<td></td>
</tr>
<tr>
<td>Hansen’s Disease (Leprosy)</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>8</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Hepatitis C</td>
<td>2</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>HIV/AIDS</td>
<td>NA</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Malaria (Imported)</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Meningitis (Clinically confirmed)</td>
<td>10</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Plague</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Meningococcal Meningitis</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Neonatal Tetanus</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Typhoid Fever</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Meningitis H/Flu</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>AFP/Polio</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Congenital Rubella Syndrome</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Congenital Syphilis</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Fever and Rash</td>
<td>Measles 0 0</td>
<td>Rubella 0</td>
<td></td>
</tr>
<tr>
<td>Maternal Deaths&lt;sup&gt;δ&lt;/sup&gt;</td>
<td>35 30</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Ophthalmia Neonatorum</td>
<td>48 40</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>Pertussis-like syndrome</td>
<td>0 0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Rheumatic Fever</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Tetanus</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Tuberculosis</td>
<td>13 19</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>Yellow Fever</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Chikungunya&lt;sup&gt;ε&lt;/sup&gt;</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Zika Virus&lt;sup&gt;θ&lt;/sup&gt;</td>
<td>0</td>
<td>0</td>
<td>NA- Not Available</td>
</tr>
</tbody>
</table>

AFP Field Guides from WHO indicate that for an effective surveillance system, detection rates for AFP should be 1/100,000 population under 15 years old (6 to 7) cases annually.

Pertussis-like syndrome and Tetanus are clinically confirmed classifications.

<sup>γ</sup> Dengue Hemorrhagic Fever data include Dengue related deaths;

<sup>δ</sup> Figures include all deaths associated with pregnancy reported for the period.

<sup>ε</sup> CHIKV IgM positive cases

<sup>θ</sup> Zika PCR positive cases

<sup>β</sup> Updates made to prior weeks in 2020.

<sup>α</sup> Figures are cumulative totals for all epidemiological weeks year to date.

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**NATIONAL/INTERNATIONAL INTEREST**

**EXOTIC/UNUSUAL**

**HIGH MORBIDITY/ MORTALITY**

**SPECIAL PROGRAMMES**

**NOTIFICATIONS-** All clinical sites

**INVESTIGATION REPORTS-** Detailed Follow up for all Class One Events

**HOSPITAL ACTIVE SURVEILLANCE-** 30 sites. Actively pursued

**SENTINEL REPORT-** 78 sites. Automatic reporting
Epi Week Summary

During EW 27, seven (7) SARI admissions were reported.

Caribbean Update EW 27

Caribbean: Influenza activity remained low. In Belize, SARS-CoV-2 and RSV detections continued to increase and in Haiti, SARS-CoV-2 activity continued elevated and increasing.
Notifications - All clinical sites

Investigation Reports - Detailed follow up for all Class One Events

Hospital Active Surveillance - 30 sites. Actively pursued

Sentinel report - 78 sites. Automatic reporting

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**Dengue Bulletin**

**July 3 – July 9, 2022**  
**Epidemiological Week 27**

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**Reported suspected and confirmed dengue with symptom onset in week 27 of 2022**

<table>
<thead>
<tr>
<th></th>
<th>2022*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EW 27</td>
</tr>
<tr>
<td>Total Suspected Dengue Cases</td>
<td>1</td>
</tr>
<tr>
<td>Lab Confirmed Dengue cases</td>
<td>0</td>
</tr>
<tr>
<td>CONFERMED Dengue Related Deaths</td>
<td>0</td>
</tr>
</tbody>
</table>

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**Points to note:**

- *Figure as at July 5, 2022
- Only PCR positive dengue cases are reported as confirmed.
- IgM positive cases are classified as presumed dengue.

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**Symptoms of Dengue fever**

- Febrile phase: sudden-onset fever, headache, mouth and nose bleeding, muscle and joint pains
- Critical phase: hypotension, pleural effusion, ascites, gastrointestinal bleeding
- Recovery phase: altered level of consciousness, seizures, itching, slow heart rate

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**Suspected dengue cases for 2020, 2021 and 2022 versus monthly mean, alert, and epidemic thresholds (2007-2021)**

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**Graph of Dengue Cases by Year: 2004-2022, Jamaica**

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**Graph of Suspected dengue cases for 2020, 2021 and 2022 versus monthly mean, alert, and epidemic thresholds (2007-2021)**
RESEARCH PAPER

Estimating Cost Effectiveness of HPV Vaccination or Pap Smear Expansion or VIA Screening
Introduction By Using the CERVIVAC Model

J Barnett, K Lewis-Bell
Ministry of Health, Jamaica

Objective: To examine the potential costs, health benefits and value for money (e.g. cost per DALY saved primarily) of introducing the HPV vaccination for a cohort of girls entering high school; or expanding pap smear screening; or introduction of Visual Inspection with Acetic Acid (VIA) screening method.

Method: Analysis was conducted using a prospective cohort-based model (CERIVAC) which incorporated meta-analysis to project the changes in the natural history of the disease based on the intervention’s scale and scope. Information required related to demographics and system costs and structure for each intervention.

Results: The VIA programme produced the highest cost-effectiveness result i.e. lowest cost per DALY averted, from the government and society perspective, US$75 and US$4,212 respectively. Societal, the least cost effective was the expanded pap smear screening option US$6,773.00 (US$2,094.00 – government). Cost per DALY averted for the vaccination intervention were US$5,360 and US$5,313 respectively and it produced the highest number of DALYs averted. Notwithstanding, the results of an incremental cost effectiveness analysis between VIA and vaccination supports the clear dominance of the former.

Conclusion: Using the WHO classification as our proxy income threshold, VIA (US$75 and US$4,212) is less than the country’s GDP per capita (US$4,471), thus it is highly cost effective and a justifiable investment for the country. Therefore on the basis of technical efficiency alone, Jamaica should select the VIA option.

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