Hepatitis B (Series 2 of 5)

**Key facts**
- Hepatitis B is a viral infection that attacks the liver and can cause both acute and chronic disease.
- The virus is most commonly transmitted from mother to child during birth and delivery, as well as through contact with blood or other body fluids.
- WHO estimates that in 2015, 257 million people were living with chronic hepatitis B infection (defined as hepatitis B surface antigen positive).
- In 2015, hepatitis B resulted in an estimated 887 000 deaths, mostly from cirrhosis and hepatocellular carcinoma (i.e. primary liver cancer).
- As of 2016, 27 million people (10.5% of all people estimated to be living with hepatitis B) were aware of their infection, while 4.5 million (16.7%) of the people diagnosed were on treatment.
- Hepatitis B can be prevented by vaccines that are safe, available and effective.

**Who is at risk?**
The likelihood that infection becomes chronic depends on the age at which a person becomes infected. Children less than 6 years of age who become infected with the hepatitis B virus are the most likely to develop chronic infections.

**Symptoms**
Most people do not experience any symptoms when newly infected. However, some people have acute illness with symptoms that last several weeks, including yellowing of the skin and eyes (jaundice), dark urine, extreme fatigue, nausea, vomiting and abdominal pain. A small subset of persons with acute hepatitis can develop acute liver failure, which can lead to death. In some people, the hepatitis B virus can also cause a chronic liver infection that can later develop into cirrhosis (a scarring of the liver) or liver cancer.

**Treatment**
There is no specific treatment for acute hepatitis B. Therefore, care is aimed at maintaining comfort and adequate nutritional balance, including replacement of fluids lost from vomiting and diarrhea. Most important is the avoidance of unnecessary medications. Acetaminophen/Paracetamol and medication against vomiting should not be given. Chronic hepatitis B infection can be treated with medicines, including oral antiviral agents. Treatment can slow the progression of cirrhosis, reduce incidence of liver cancer and improve long term survival. Only a proportion (estimates vary from 10% to 40% depending on setting and eligibility criteria) of people with chronic hepatitis B infection will require treatment. WHO recommends the use of oral treatments - tenofovir or entecavir- as the most potent drugs to suppress hepatitis B virus. They rarely lead to drug resistance compared with other drugs, are simple to take (1 pill a day), and have few side effects, so require only limited monitoring.

Entecavir is off-patent. In 2017, all low- and middle-income countries could legally procure generic entecavir, but the costs and availability varied widely. Tenofovir is no longer protected by a patent in any country.

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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.
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.

There were no visits to sentinel sites recorded for fever and jaundice at sentinel sites as at EW 2 of 2020.
**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.

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**KEY VARIATIONS OF BLUE SHOW CURRENT WEEK**

<table>
<thead>
<tr>
<th>Week</th>
<th>Cases</th>
<th>Epidemic Threshold</th>
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<tbody>
<tr>
<td>1</td>
<td>1000</td>
<td>≥5 Cases 2020</td>
</tr>
<tr>
<td>2</td>
<td>700</td>
<td>&lt;5 Cases 2020</td>
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<tr>
<td>3</td>
<td>400</td>
<td>Epidemic Threshold&lt;5</td>
</tr>
<tr>
<td>4</td>
<td>200</td>
<td>Epidemic Threshold≥5</td>
</tr>
</tbody>
</table>

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**NOTIFICATIONS**
All clinical sites

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

**HOSPITAL ACTIVITY SURVEILLANCE**
30 sites. Actively pursued

**SENTINEL REPORT**
78 sites. Automatic reporting
### CLASS ONE NOTIFIABLE EVENTS

<table>
<thead>
<tr>
<th>CLASS 1 EVENTS</th>
<th>Confirmed YTD</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NATIONAL/INTERNATIONAL INTEREST</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accidental Poisoning</td>
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<td></td>
</tr>
<tr>
<td>Cholera</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Dengue Hemorrhagic Fever*</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Hansen’s Disease (Leprosy)</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Hepatitis C</td>
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<td></td>
</tr>
<tr>
<td>HIV/AIDS</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Malaria (Imported)</td>
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<td></td>
</tr>
<tr>
<td>Meningitis (Clinically confirmed)</td>
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<tr>
<td><strong>EXOTIC/UNUSUAL</strong></td>
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<td></td>
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<tr>
<td>Plague</td>
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<tr>
<td><strong>HIGH MORBIDITY/MORTALITY</strong></td>
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<tr>
<td>Meningococcal Meningitis</td>
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<td></td>
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<tr>
<td>Neonatal Tetanus</td>
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<td></td>
</tr>
<tr>
<td>Typhoid Fever</td>
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<td></td>
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<tr>
<td>Meningitis H/Flu</td>
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<tr>
<td><strong>SPECIAL PROGRAMMES</strong></td>
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<tr>
<td>AFP/Polio</td>
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<td>Congenital Rubella Syndrome</td>
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<td>Fever and Rash</td>
<td>Measles</td>
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<td></td>
<td>Rubella</td>
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<td>Maternal Deaths**</td>
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<td>Ophthalmia Neonatorum</td>
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<td>Pertussis-like syndrome</td>
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<td>Rheumatic Fever</td>
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<tr>
<td>Tetanus</td>
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<tr>
<td>Tuberculosis</td>
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<td></td>
</tr>
<tr>
<td>Yellow Fever</td>
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<td></td>
</tr>
<tr>
<td>Chikungunya***</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Zika Virus****</td>
<td>0</td>
<td></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.**
- **Dengue Hemorrhagic Fever data include Dengue related deaths;**
- **Figures include all deaths associated with pregnancy reported for the period. * 2019 YTD figure was updated.**
- **CHIKV IgM positive cases**
- **Zika PCR positive cases**
- **NA- Not Available**
**EW 02**

**January 05, 2019 – January 11, 2020  Epidemiological Week 02**

<table>
<thead>
<tr>
<th>EW 02</th>
<th>YTD</th>
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<tbody>
<tr>
<td>SARI cases</td>
<td>4</td>
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<tr>
<td>Total Influenza positive Samples</td>
<td>1</td>
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<tr>
<td>Influenza A</td>
<td>1</td>
</tr>
<tr>
<td>H3N2</td>
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</tr>
<tr>
<td>H1N1pdm09</td>
<td>0</td>
</tr>
<tr>
<td>Not subtyped</td>
<td>0</td>
</tr>
<tr>
<td>Influenza B</td>
<td>0</td>
</tr>
<tr>
<td>Parainfluenza</td>
<td>0</td>
</tr>
</tbody>
</table>

**Epi Week Summary**

During EW 02, 4 (four) SARI admissions were reported.

*Ten percent (10%) positivity for EW 02*

**Caribbean Update EW 02**

Overall, influenza activity is low in the sub-region. In St. Lucia, influenza-like illness (ILI) activity increased among those aged ≥ 5 years and was above the seasonal threshold. Influenza activity remained low.

**Weekly visits to Sentinel Sites for Influenza-like Illness (ILI)**

All ages 2020 vs Weekly Threshold; Jamaica

**Jamaica: Percentage of Hospital Admissions for Severe Acute Respiratory Illness (SARI 2020) (compared with 2011-2020)**

**Distribution of Influenza and Other Respiratory Viruses in Surveillance by EW**
## Reported suspected and confirmed dengue with symptom onset in week 2 of 2020

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2019 YTD</th>
</tr>
</thead>
<tbody>
<tr>
<td>EW 2</td>
<td>0**</td>
<td>0**</td>
</tr>
<tr>
<td>YTD</td>
<td>542</td>
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<tr>
<td>Total Suspected Dengue Cases</td>
<td>0**</td>
<td>0**</td>
</tr>
<tr>
<td>Lab Confirmed Dengue cases</td>
<td>0**</td>
<td>0**</td>
</tr>
<tr>
<td>CONFIRMED Dengue Related Deaths</td>
<td>0**</td>
<td>0**</td>
</tr>
</tbody>
</table>

### Symptoms of Dengue Fever

- **Febrile phase**
  - sudden-onset fever
  - headache
  - mouth and nose bleeding
  - muscle and joint pains
  - vomiting
  - rash
  - diarrhea

- **Critical phase**
  - hypotension
  - pleural effusion
  - ascites
  - gastrointestinal bleeding

- **Recovery phase**
  - altered level of consciousness
  - seizures
  - itching
  - slow heart rate

## Suspected dengue cases for 2018, 2019 and 2020 versus monthly mean, alert, and epidemic thresholds

- **2018 suspected dengue**
- **2019 Suspected Dengue**
- **2020**
- **Epidemic threshold**
- **Alert Threshold**
- **Monthly mean**

### Points to note:

- **figure as at January 13, 2020**
- Only PCR positive dengue cases are reported as confirmed.
- IgM positive cases are classified as presumed dengue.
Risk Factors Associated with Glaucoma and Cataract among Patients Attending an Eye Clinic in Jamaica

Deborah Dietrich¹, Kenneth James², Donald Cameron-Swaby³, Paul Singh¹, Marsha-Lyn McKoy¹

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²Department of Community Health and Psychiatry, The University of the West Indies, Mona, Kingston 7, Jamaica.
³Department of Ophthalmology, University Hospital of the West Indies, Mona, Kingston 7, Jamaica.

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Objectives:
To determine association between demographic, medical and social variables and glaucoma and cataract in a Jamaican patient population.

Methods:
A descriptive cross-sectional study was done at the University Hospital of the West Indies Eye Clinic, where data was extracted from 370 randomly selected files of patients who attended the clinic between January and March 2017. Data extracted included demographic data and patient medical history. Ethical approval was obtained from the UHWI/UWI/FMS Ethics Committee. Statistical analyses were performed using SPSS Statistics software. To determine association between variables, Chi-squared tests and Spearman’s correlation analyses were done, p<0.05 indicating statistical significance.

Results:
Glaucoma (45.4%) and cataract (33.8%) were the most frequently reported chronic ocular diseases, and the cases increased with age (p<0.001). More females than males presented with glaucoma and cataract. Statistically significant associations were found between glaucoma and a patient history of cataract or pterygium (p<0.007); while cataract was significantly associated with a patient history of physical trauma or retinopathy (p<0.047). In relation to coexisting non-ocular conditions, cataract was significantly associated with hypertension, diabetes mellitus and hypercholesterolemia (p<0.001); while glaucoma was associated with hypertension (p<0.001). Family histories of hypertension, sickle cell disease, glaucoma or blindness were significantly associated with the presence of glaucoma (p<0.05), but not with cataract (p>0.1). Glaucoma and cataract were not significantly associated with alcohol drinking or smoking.

Conclusion: A significant association was found between presence of glaucoma and presence of cataract. Hypertension was significantly associated with glaucoma and cataract; higher frequencies being associated with glaucoma and cataract.