Leprosy

Introduction

Leprosy is an infectious disease caused by Mycobacterium leprae, an acid-fast, rod-shaped bacillus. The disease mainly affects the skin, the peripheral nerves, mucosa of the upper respiratory tract, and the eyes. Leprosy is curable and treatment in the early stages can prevent disability.

Key facts

- Leprosy is an infectious disease caused by a bacillus, Mycobacterium leprae.
- M. leprae multiplies slowly and the incubation period of the disease, on average, is 5 years.
- Symptoms may occur within 1 year but can also take as long as 20 years or even more to occur.
- The disease mainly affects the skin, the peripheral nerves, mucosa of the upper respiratory tract, and the eyes.
- Leprosy is curable with multidrug therapy (MDT).
- Leprosy is likely transmitted via droplets, from the nose and mouth, during close and frequent contact with untreated cases.
- Untreated, leprosy can cause progressive and permanent damage to the skin, nerves, limbs, and eyes.
- There were 208,619 new leprosy cases registered globally in 2018, according to official figures from 159 countries from the 6 WHO Regions.
- Based on 184,212 cases at the end of 2018, prevalence rate corresponds to 0.2/10,000.

Brief history of the disease and treatment

Leprosy is an age-old disease, described in the literature of ancient civilizations. Throughout history, people afflicted have often been ostracized by their communities and families. Although leprosy was managed differently in the past, the first breakthrough occurred in the 1940s with the development of the medicine dapsone. The duration of treatment lasted many years, often a lifetime, making compliance difficult. In the 1960s, M. leprae started to develop resistance to dapsone, the only known anti-leprosy medicine at that time. In the early 1960s, rifampicin and clofazimine were discovered and subsequently added to the treatment regimen, which was later labelled as multidrug therapy (MDT).

In 1981, WHO recommended MDT. The currently recommended MDT regimen consists of medicines: dapsone, rifampicin and clofazimine. This treatment lasts for six months for paucibacillary and 12 months for multi-bacillary cases. MDT kills the pathogen and cures the patient.

Since 1995 WHO has provided MDT free of cost. Free MDT was initially funded by The Nippon Foundation, and since 2000 it is donated through an agreement with Novartis until at least 2020.

Elimination of leprosy as public health problem (defined as a registered prevalence of less than 1 case per 10,000 population) was achieved globally in 2000. More than 16 million leprosy patients have been treated with MDT over the past 20 years.

Source: https://www.who.int/news-room/fact-sheets/detail/leprosy
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**
Temperature of >38°C /100.4°F (or recent history of fever) with or without an obvious diagnosis or focus of infection.

**KEY VARIATIONS OF BLUE SHOW CURRENT WEEK**

**REPORTS FOR SYNDROMIC SURVEILLANCE**

<table>
<thead>
<tr>
<th>2</th>
<th>NOTIFICATIONS- All clinical sites</th>
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<td>INVESTIGATION REPORTS- Detailed Follow up for all Class One Events</td>
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<td>HOSPITAL ACTIVE SURVEILLANCE- 30 sites. Actively pursued</td>
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<td>SENTINEL REPORT- 78 sites. Automatic reporting</td>
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</table>
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. Visits for Fever and Haemorrhagic symptoms were reported in weeks 4 to 8, 39, 41, 42, 44, 46 and 49 year to date.

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. Visits to sentinel sites for Fever and Jaundice were reported in weeks 7, 10, 33, 43 and 47 year to date.
**ACCIDENTS**
Any injury for which the cause is unintentional, e.g. motor vehicle, falls, burns, etc.

**KEY VARIATIONS OF BLUE SHOW CURRENT WEEK**

**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.

**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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**Weekly visits to Sentinel Sites for Accidents by Age Group 2019 vs Weekly Threshold; Jamaica**

- Number of Visits
- Epidemiological weeks
- ≥5 Cases 2019
- <5 Cases 2019
- Epidemic Threshold <5
- Epidemic Threshold ≥5

**Weekly visits to Sentinel Sites for Violence by Age Group 2019 vs Weekly Threshold; Jamaica**

- Number of Visits
- Epidemiological week
- ≥5 y.o
- <5 y.o

**Weekly visits to Sentinel Sites for Gastroenteritis All ages 2019 vs Weekly Threshold; Jamaica**

- Number of visits
- Epidemiological Week
- 2019 <5
- 2019 >5
- Epidemic Threshold <5
- Epidemic Threshold >5
## CLASS ONE NOTIFIABLE EVENTS

### NATIONAL/INTERNATIONAL INTEREST

<table>
<thead>
<tr>
<th>CLASS 1 EVENTS</th>
<th>Confirmed YTD</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accidental Poisoning</td>
<td>106</td>
<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>24</td>
<td>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.</td>
</tr>
<tr>
<td>Hepatitis C</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>HIV/AIDS</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Malaria (Imported)</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Meningitis (Clinically confirmed)</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td><strong>EXOTIC/UNUSUAL</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plague</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Meningococcal Meningitis</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Neonatal Tetanus</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Typhoid Fever</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Meningitis H/Flu</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td><strong>HIGH MORBITIDITY/MORTALITY</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AFP/Polio</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Congenital Rubella Syndrome</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Congenital Syphilis</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Fever and Rash</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measles</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Rubella</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Maternal Deaths**</td>
<td>60</td>
<td>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.</td>
</tr>
<tr>
<td>Ophthalmia Neonatorum</td>
<td>222</td>
<td></td>
</tr>
<tr>
<td>Pertussis-like syndrome</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Rheumatic Fever</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Tetanus</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Tuberculosis</td>
<td>64</td>
<td></td>
</tr>
<tr>
<td>Yellow Fever</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Chikungunya</td>
<td>***</td>
<td></td>
</tr>
<tr>
<td>Zika Virus</td>
<td>****</td>
<td></td>
</tr>
</tbody>
</table>

### SPECIAL PROGRAMMES

- **AFP/Polio**
- **Congenital Rubella Syndrome**
- **Congenital Syphilis**
- **Fever and Rash**
- **Measles**
- **Rubella**
- **Maternal Deaths**
- **Ophthalmia Neonatorum**
- **Pertussis-like syndrome**
- **Rheumatic Fever**
- **Tetanus**
- **Tuberculosis**
- **Yellow Fever**
- **Chikungunya**
- **Zika Virus**

**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

__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 51, 13 (thirteen) SARI admissions were reported.

Caribbean Update EW 50

Influenza activity increased in some countries of the sub-region. In Cuba influenza activity continued to increase with influenza B viruses predominance; SARI cases decreased below levels observed in previous seasons for the same period. Influenza activity decreased to low levels of intensity in Jamaica with influenza A(H3N2) virus predominance and influenza A(H1N1)pdm09 virus co-circulating; SARI cases were at low levels.
**Dengue Bulletin**

December 15–December 21, 2019  Epidemiological Week 51

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**Reported suspected and confirmed dengue with symptom onset in weeks 1-51 2019**

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2018 YTD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Suspected Dengue Cases</td>
<td>1</td>
<td>7414</td>
</tr>
<tr>
<td>Lab Confirmed Dengue cases</td>
<td>0</td>
<td>137</td>
</tr>
<tr>
<td>CONFIRMED Dengue Related Deaths</td>
<td>0</td>
<td>21</td>
</tr>
</tbody>
</table>

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**Points to note:**

- **figure as at December 23, 2019**
- Only PCR positive dengue cases are reported as confirmed.
- IgM positive cases are classified as presumed dengue.

**Errata**

**Dengue EW 49 2019** – There were *79 Lab confirmed Dengue cases at EW 49 2019 YTD. (146 represented number for Total 2018 and 2019 YTD combined)

**Dengue EW 50 2019** - There were *125 Lab confirmed Dengue cases at EW 50 2019 YTD. (193 represented number for Total 2018 and 2019 YTD combined)

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**Symptoms of Dengue fever**

- **Fever 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

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

- 2018 suspected dengue
- Epidemic threshold
- Alert Threshold
- Monthly mean

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ABSTRACT

Title: “Anthropometry and food frequency in chronic non-communicable disease: associations in a clinic population”

Authors: S. Robinson, S. Dawson
E-mail address: stephenrobinson29@yahoo.com

Objective:

To investigate the relation of body mass index (BMI) and waist circumference (WC) to frequency of consumption of commonly consumed foods, in patients enrolled at a Type V Health Centre in Kingston.

Method:

Twenty-four adult patients (22 females) attending the CNCD Clinic were conveniently selected for the study, with a cross-sectional analysis being conducted on these patients. Participants were selected if they were diagnosed with at least one CNCD. Their weights, heights, and waist circumferences were measured and data on the frequency of consumption of selected foods acquired utilizing an administered questionnaire. The main outcome measure was a correlation between anthropometry and food frequency.

Results:

Of the 24 subjects, 23 had a BMI >25.0 with 22 having a waist circumference exceeding the recommended limit (Females= 89 cm and Males =101 cm). Mean BMI was 34.3 ± 7.4 with mean WC being 104.9 ± 17.7 cm.

Neither BMI nor WC was significantly associated with frequency of consumption of any food item from the different Food Groups, but positive correlations were identified between BMI and age (p<0.0001), and BMI and WC (p=0.00051).

Conclusion:

No statistically significant associations were found between BMI, Waist Circumference and food frequency in this population. A follow-up study (larger sample size, other food intake measures) is recommended to demystify whatever link may exist between anthropometry and food intake. Alongside BMI measurements, WC could be used routinely in the nutritional assessment of CNCD patients at Health facilities.