WEEKLY EPIDEMIOLOGY BULLETIN NATIONAL EPIDEMIOLOGY UNIT, MINISTRY OF HEALTH & WELLNESS, JAMAICA

Zoonotic Diseases Series 5: Lyme Disease

Overview: Lyme disease is the most common vector-borne disease in the United States. Lyme disease is caused by the bacterium Borrelia burgdorferi and rarely, Borrelia mayonii. It is transmitted to humans through the bite of infected blacklegged ticks. Typical symptoms include fever, headache, fatigue, and a characteristic skin rash called erythema migrans. If left untreated, infection can spread to joints, the heart, and the nervous system. Lyme disease is diagnosed based on symptoms, physical findings (e.g., rash), and the possibility of exposure to infected ticks. Laboratory testing is helpful if used correctly and performed with validated methods. Most cases of Lyme disease can be treated successfully with a few weeks of antibiotics. Steps to prevent Lyme disease include using insect repellent, removing ticks promptly, applying pesticides, and reducing tick habitat. The ticks that transmit Lyme disease can occasionally transmit other tickborne diseases as well.

Early Signs and Symptoms (3 to 30 Days After Tick Bite): Fever, chills, headache, fatigue, muscle and joint aches, and swollen lymph nodes may occur in the absence of rash. Erythema migrans (EM) rash:
1. Occurs in approximately 70 to 80 percent of infected persons.
2. Begins at the site of a tick bite after a delay of 3 to 30 days (average is about 7 days).
3. Expands gradually over several days reaching up to 12 inches or more (30 cm) across.
4. May feel warm to the touch but is rarely itchy or painful.
5. Sometimes clears as it enlarges, resulting in a target or "bull's-eye" appearance.
6. May appear on any area of the body.
7. Does not always appear as a "classic" erythema migrans rash.

Later Signs and Symptoms (days to months after tick bite): 1. Severe headaches and neck stiffness. 2. .Additional EM rashes on other areas of the body. 3. Facial palsy (loss of muscle tone or droop on one or both sides of the face). 4. Arthritis with severe joint pain and swelling, particularly the knees and other large joints. 5. Intermittent pain in tendons, muscles, joints, and bones. 6. Heart palpitations or an irregular heart beat (Lyme carditis). 7. Episodes of dizziness or shortness of breath. 8. Inflammation of the brain and spinal cord. 9. Nerve pain. 10. Shooting pains, numbness, or tingling in the hands or feet.





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SENTINEL SYNDROMIC SURVEILLANCE Sentinel Surveillance in







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

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.



REPORTS FOR SYNDROMIC SURVEILLANCE

FEVER

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



KEY VARIATIONS OF **BLUE** SHOW CURRENT WEEK



All clinical

sites



INVESTIGATION REPORTS- Detailed Follow up for all Class One Events



HOSPITAL ACTIVE SURVEILLANCE-30 sites. Actively pursued



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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 $>38^{\circ}C$ /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 $> 38^{\circ}C / 100.4^{\circ}F$ (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.





Weekly visits to Sentinel Sites for Fever and Haemorrhagic 2019 and 2020 vs Weekly Threshold; Jamaica







NOTIFICATIONS-All clinical sites



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HOSPITAL ACTIVE SURVEILLANCE-30 sites. Actively pursued





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Comments

CLASS ONE NOTIFIABLE EVENTS -

			Confirmed YTD^{α}		AFP Field Guides
	CLASS 1 EVENTS		CURRENT YEAR 2020	PREVIOUS YEAR 2019	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.
NATIONAL /INTERNATIONAL INTEREST	Accidental Poisoning		54 ^β	65	
	Cholera		0	0	
	Dengue Hemorrhagic Fever ^{γ}		NA	NA	
	Hansen's Disease (Leprosy)		0	0	
	Hepatitis B		3	23	
	Hepatitis C		0	2	
	HIV/AIDS		NA	NA	
	Malaria (Imported)		0	0	
	Meningitis (Clinically confirmed)		1	20	γ Dengue
EXOTIC/ UNUSUAL	Plague		0	0	Hemorrhagic Fever data include Dengue related deaths; ^δ Figures include all deaths associated with pregnancy reported for the period.
H IGH MORBIDITY/ MORTALITY	Meningococcal Meningitis		0	0	
	Neonatal Tetanus		0	0	
	Typhoid Fever		0	0	
	Meningitis H/Flu		0	0	
SPECIAL PROGRAMMES	AFP/Polio		0	0	^ε CHIKV IgM positive cases ^θ Zika PCR positive
	Congenital Rubella Syndrome		0	0	
	Congenital Syphilis		0	0	
	Fever and Rash	Measles	0	0	cases ^β Updates made to prior weeks in 2020.
		Rubella	0	0	
	Maternal Deaths ^{δ}		37	61	$^{\alpha}$ Figures are cumulative totals for all epidemiological weeks year to date.
	Ophthalmia Neonatorum		23	222	
	Pertussis-like syndrome		0	0	
	Rheumatic Fever		0	0	
	Tetanus		0	0	
	Tuberculosis		29	54	
	Yellow Fever		0	0	
	Chikungunya ^ɛ		0	7	
	Zika Virus ^θ		0	0	NA- Not Available







INVESTIGATION REPORTS- Detailed Follow up for all Class One Events



HOSPITAL ACTIVE SURVEILLANCE-30 sites. Actively pursued



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NATIONAL SURVEILLANCE UNIT INFLUENZA REPORT

EW 46

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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



Dengue Bulletin

November 08, 2020 – November 14, 2020 Epidemiological Week 46

Epidemiological Week 46







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



Points to note:

- * figure as at November 23, 2020
- Only PCR positive dengue cases are reported as confirmed.
- IgM positive cases are classified as presumed dengue.



NOTIFICATIONS-All clinical sites



INVESTIGATION REPORTS- Detailed Follow up for all Class One Events

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HOSPITAL ACTIVE SURVEILLANCE-30 sites. Actively pursued



RESEARCH PAPER

ABSTRACT

Lessons Learned Preparing for Qualitative Fieldwork with Unpaid Family Carers in Jamaica -A Middle Income Country

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Objective: To present the methodological issues we encountered in developing a qualitative study on dementia care in Jamaica, delivered in partnership with high-income country researchers. Lessons learned may be relevant to similar studies and help ensure evidence is equitably produced.

Methods: The paper presents our analytical reflections on planning iterative fieldwork involving in- depth unstructured and semi-structured interviews with unpaid carers of people living with dementia across multiple socioeconomic strata in Jamaica.

Results: Lessons learned include: involving local researchers alongside investigative team members during project planning to ensure realistic timelines and to accommodate unexpected delays or logistical issues; investing in relationship-building through in-person and online meetings to enhance team communication and problem solving; building relationships with "gatekeepers"; to develop informed and customized recruitment strategies and sustainable knowledge translation approaches; involving research assistants in initial data collection and analysis to benefit from their intimate knowledge of the local context and to build research capacity; ensuring close collaboration between both research partners in planning analyses to discuss emerging ideas and clarify meanings within the country contexts; scheduling regular field team debriefings and e-meetings with the field team and the work package team will help to ensure the sustainability of long term collaboration.

Conclusion: Preparing for dementia-related research partnerships between developed and developing countries is complex. Our experiences emphasize the importance of building equitable partnerships between institutions and recognizing the value of 'local knowledge' in helping to interpret data. These lessons are relevant to partners in both settings when planning similar research.



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All clinical sites



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