

<p><b>IN THIS ISSUE:</b></p> <ul style="list-style-type: none"> <li>▪ Tick-borne disease risk in Peel Region</li> <li>▪ Tick-borne disease testing and clinical guidance</li> <li>▪ Tick species identification and reporting tick-borne disease</li> </ul>	<p><b>FROM:</b> Nicholas Brandon, MD, MA, MSc, CCFP, FRCPC Associate Medical Officer of Health</p>
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**Key Messages:**

- Tick-borne diseases are most commonly spread by blacklegged ticks, which are established in Peel region.
- Consider tick-borne illness as part of differential diagnosis when patients present with a non-specific febrile illness of unknown origin, if outdoor temperatures are above freezing and the ground isn't covered with snow.
- Residents and health care providers can use <https://www.etick.ca/>, an online image-based tick identification platform for fast, free, and reliable results in approximately 48 hours.
- Anaplasmosis, babesiosis, Lyme disease and Powassan virus are reportable diseases.

**Tick-borne disease risk in Peel Region**

- Tick-borne diseases are most commonly transmitted by the blacklegged tick (*Ixodes scapularis*) which are established in Peel region and across most of southern Ontario. Public Health Ontario's (PHO) [blacklegged tick established risk area map](#) provides a provincial picture of established blacklegged tick populations.
- Lyme disease is the most common tick-borne disease in Peel region and Ontario. Anaplasmosis, babesiosis, and Powassan virus are rare tick-borne diseases; however, with an established blacklegged tick population in Peel region local exposure is possible.
- Since becoming reportable diseases on July 1<sup>st</sup>, 2023, Peel Health has investigated three reports of anaplasmosis and babesiosis in Peel residents, including:

- Two confirmed cases of anaplasmosis acquired during trips to eastern Ontario and Quebec.
- One probable case of babesiosis locally acquired.
- Peel residents are most likely to contract a tick-borne disease while travelling to areas with higher numbers of infected blacklegged ticks (e.g. eastern Ontario, southern Quebec, Atlantic provinces); however, locally acquired cases are trending upwards with six local cases in 2021, thirteen local cases in 2022, seventeen local cases in 2023, and eighteen local cases to date in 2024.

**Tick-borne disease testing and clinical guidance**

- Consider tick-borne illness as part of differential diagnosis when patients present with a non-specific febrile illness of unknown origin, at any time outdoor temperatures are consistently above freezing and the ground isn't covered with snow.
- Public Health Ontario Laboratory (PHOL) can support with diagnostic test selection and interpretation test results. Refer to the disease specific [test information sheets](#) for details on test methods, testing indications, requisition forms and/or turn-around times. For additional information, contact PHOL's customer service by phone at 1-877-604-4567 or emailing: [Customerservicecentre@oahpp.ca](mailto:Customerservicecentre@oahpp.ca).
- Health Quality Ontario's [Clinical Guidance Document on the Management of Tick Bites and Investigation of Early Localized Lyme Disease](#) can assist clinicians with diagnosis and treatment decisions, including:
  - For asymptomatic patients who have had a recent tick bite, the document provides

- guidance on when antibiotic prophylaxis is warranted.
  - For symptomatic patients, the document provides a decision tree to assist with determining whether testing, treatment, or a combination are warranted.
  - For additional information on the management and treatment of tick-borne disease, refer to:
    - [Clinical Care of Anaplasmosis | Anaplasmosis | CDC](#)
    - [Clinical Care of Babesiosis | Babesiosis | CDC](#)
    - [IDSA 2020 Guideline on Diagnosis and Management of Babesiosis](#)
    - [IDSA 2020 Guidelines for the Prevention, Diagnosis and Treatment of Lyme Disease](#)
- symptoms (e.g. typical or atypical erythema migrans rash > 5cm) and risk of exposure to ticks but have not received additional serological testing.

## **Tick species identification and reporting tick-borne disease**

### **Tick species identification:**

- Peel Public Health no longer accepts tick submissions for identification and testing. Residents and health care providers can use <https://www.etick.ca/>, an online image-based tick identification platform, that provides fast, free and reliable results in approximately 48 hours.
- The most common tick species reported to etick.ca in Mississauga and Brampton is the American dog tick, which is NOT a vector of Lyme Disease, anaplasmosis, babesiosis, Powassan virus. The most common tick species reported to etick.ca in Caledon is the blacklegged tick.
- PHOL continues to accept tick submissions from health care providers for species identification; turnaround time is approximately three weeks.

**NOTE: Ticks are NOT tested for pathogens.**

### **Tick-borne disease reporting:**

- Lyme disease, anaplasmosis, babesiosis, and Powassan virus are reportable diseases. Report all suspect or confirmed cases by faxing Peel Public Health at (289) 801-0257. This includes cases of Lyme disease that have been diagnosed based on