

April 27, 2021

Dear Colleague:

RE: 2021 Tick Submissions for Identification and Testing

In anticipation of this year's tick season, I am writing to inform you of impending changes to the tick submission process and provide some information on the new tick identification platform (eTick).

As you are aware, blacklegged ticks (*Ixodes scapularis*) infected with the bacterium *Borrelia burgdorferi* can transmit Lyme disease to humans. There are no known established blacklegged tick populations in Saskatchewan; however, migrating birds transport small numbers of these ticks into the province, and a fraction are infected with agents that cause Lyme and other diseases. The majority of ticks collected in Saskatchewan are the American dog ticks (*Dermacentor variabilis*), which do not transmit Lyme disease (See Table 1).

As you are know, molecular testing conducted on ticks cannot be used to diagnose Lyme disease in humans. This information is collected for research and surveillance purposes only. The diagnosis of Lyme disease is primarily clinical, supported by a history of possible tick exposure. An additional diagnostic tool is the detection of antibodies using serological methods. Please continue to use current guidelines for Lyme diagnosis and treatment.

In previous years, health care providers submitted physical tick specimens, collected from patients, via mail to the Roy Romanow Provincial Laboratory (RRPL) for identification and pathogen testing. Last year, approximately 218 physical tick specimens were mailed to RRPL by patients or healthcare providers and only two were blacklegged ticks. The Ministry of Health collects this data from RRPL as part of the provincial passive tick surveillance program in addition to the ticks submitted by veterinarians and general members of the public. In an effort to improve the provincial passive tick surveillance program, last year, the Ministry of Health collaborated with researchers at the University of Saskatchewan to pilot a new online tick identification platform, eTick.

Since eTick has been successfully operating in Saskatchewan for the past year, we have opted to discontinue mail-in tick submissions. Effective May 1st, 2021, RRPL will no longer accept unsolicited mail-in tick specimens. If patients present ticks during their appointment, please direct them to use the eTick platform for tick identification. The eTick platform will provide submitters with timely information about the tick species and the associated health risks (if any). For more information on submitting ticks via eTick, please visit the Government of Saskatchewan website at saskatchewan.ca/lyme or www.etick.ca. If a tick identified through eTick is one of interest, program administrators will directly contact the submitter and request the physical tick specimen (via mail) for pathogen testing.

Similar to previous years, we will be distributing education and awareness materials to provincial parks and recreational areas with suitable habitat for blacklegged ticks this year. The purpose is to increase awareness of ticks, inform residents of precautionary measures, and encourage submissions to eTick. Appended is a sample of the poster. I encourage you to display a copy of the poster in your office or clinic.

Sincerely,



Dr. Julie Kryzanowski
Deputy Chief Medical Health Officer

Attachments

Table 1: Tick, animal, and human surveillance in Saskatchewan and Canada

Year	Ticks (all species)	Blacklegged ticks	Blacklegged ticks positive for <i>Borrelia burgdorferi</i> ¹	Human cases Canada	Human cases Saskatchewan	Samples tested
2008	N/A	5	0	N/A	0	N/A
2009	1,478	5	1	144	0	543
2010	1,139	3	0	143	0	801
2011	736	3	1	266	1 ³	599
2012	2,896	1	0	338	0	850
2013	1,726	10	1	682	1 ³	811
2014	3,176	5	0	522	0	1,174
2015	5,103	9	1	917	0	1,311
2016	5,300	9	0	992 ²	1 ³	1,428
2017	5,112	15	4	2,025	4 ³	1,639
2018	2,233	6	2	1,487	2 ³	1,652
2019	2,393	7	0	2,636	1 ³	1,514 ⁴
2020	2,678	12 ⁵	3	N/A	1 ³	N/A
Total	33,970	90	13	10,152	11	12,322

Notes:

¹*Borrelia burgdorferi* is the agent that causes Lyme disease.

²Based on the Public Health Agency of Canada Lyme disease case definition updated in 2016 includes confirmed and probable cases.

³2011 case possibly locally acquired but associated with travel; 2013 and 2016 cases linked to travel outside the province; in 2017, one case acquired locally and three cases linked to travel outside the province; in 2018, both travel-related cases; 2019 case acquired in the U.S.A.; 2020 case possibly acquired in SK, AB or BC

⁴Testing increased by 179% from 2009 to 2019.

⁵Of the 12 blacklegged ticks, 7 physical specimens were submitted for *Borrelia burgdorferi* testing.