OHIO DEPARTMENT OF HEALTH

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John R. Kasich / Governor

M E M O R A N D U M

DATE: May 3, 2016

TO: Healthcare providers in Ohio

FROM: Mary DiOrio, MD, MPH
Medical Director
State Epidemiologist

SUBJECT: Lyme disease cases in Ohio continue to increase

Cases of Lyme disease (see **attachment 1**) have steadily increased in Ohio over the past 4 years (66 cases in 2012, 93 cases in 2013, 119 cases in 2014, 154 in 2015). This increase in cases coincides with the increase in Ohio of the principal vector, *Ixodes scapularis* (the blacklegged tick). This tick is found in at least 66 Ohio counties (see **attachment 2**) and the Lyme disease pathogen, *Borrelia burgdorferi*, is endemic in at least 34 counties (see **attachment 3**). We expect cases of Lyme disease to continue to increase as the blacklegged tick continues to become established in new areas of the state. In addition to Lyme disease, the blacklegged tick is known to transmit two other diseases in Ohio: anaplasmosis and babesiosis.

To better understand the epidemiology of emerging tick-borne diseases in Ohio and to continue raising awareness, ODH would like to ensure that all cases are detected. For this reason, we recommend that healthcare providers consider Lyme disease and other tick-borne diseases in the differential diagnosis for patients who present with appropriate symptoms. The following tick-borne diseases are reportable diseases in Ohio, and any suspect or confirmed case should be reported to the local health department where the case resides:

Anaplasmosis & Ehrlichiosis (http://www.odh.ohio.gov/pdf/IDCM/ehrl.pdf)
Babesiosis (http://www.odh.ohio.gov/pdf/IDCM/babesia.pdf)
Lyme disease (http://www.odh.ohio.gov/pdf/IDCM/lyme.pdf)
Spotted Fever Rickettsiosis (http://www.odh.ohio.gov/pdf/IDCM/rmsf.pdf)

The Centers for Disease Control and Prevention (CDC) recommends a two-step process to properly test for evidence of antibodies against Lyme disease bacteria (see **attachment 4**). Additional information can be found at: http://www.cdc.gov/lyme/healthcare/clinician_twotier.html

Tick-borne diseases, including Lyme disease, typically occur during the spring and summer, although blacklegged ticks are active and may transmit disease year-round in Ohio (see **attachment 5**). More detailed information about blacklegged ticks and tick-borne diseases in Ohio can be found on the Ohio Department of Health website (http://www.odh.ohio.gov/ticks). Please contact your local health department or the ODH Zoonotic Disease Program at 614-752-1029, option 1 if you have questions.

Thank you for helping to improve tick-borne disease surveillance in Ohio.

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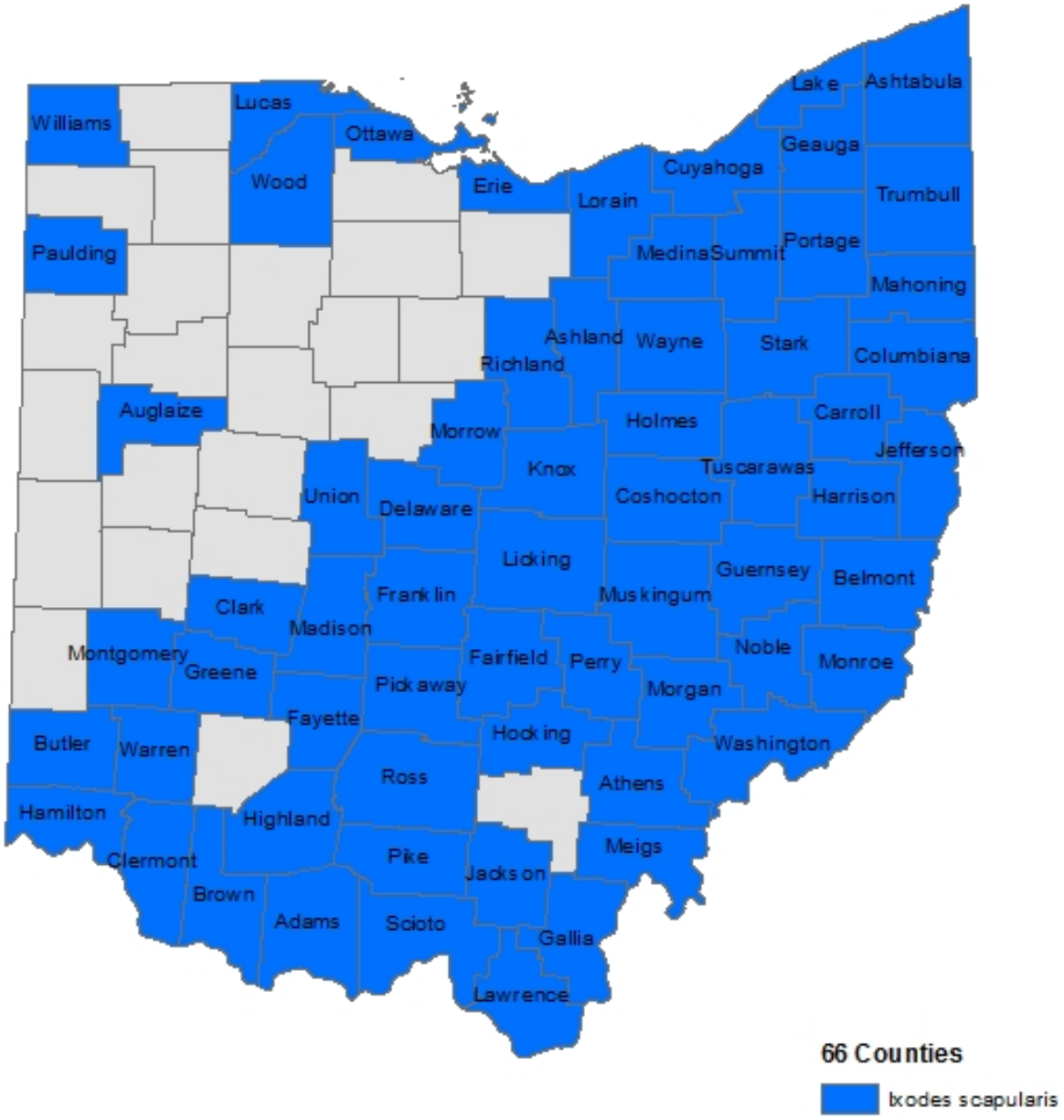
Lyme Disease in Ohio
Numbers At-A-Glance
2006-2015

Human Case Statistics

Year	Human Cases	Deaths	Median Age (Years)	Age Range of Cases (Years)	Counties w/ Reported Lyme Cases
2006	43	0	41	3 - 68 years	23
2007	33	0	37	7 - 68 years	24
2008	45	0	30	5 - 74 years	28
2009	60	0	36.5	2 - 86 years	28
2010	44	0	36	3 - 63 years	24
2011	53	0	34	6 - 84 years	25
2012	66	0	34	3 - 86 years	30
2013	93	0	43	2 - 84 years	34
2014	119	0	36	1 - 78 years	32
2015	154	0	41	1 - 85 years	44
AVG	71	0	36	n/a	29
TOTAL	710	**0**	n/a	n/a	n/a

Source: Ohio Department of Health
Last updated: 03/31/2016

Blacklegged Deer Tick, *Ixodes scapularis*, Ohio*



* Ohio records through 2015

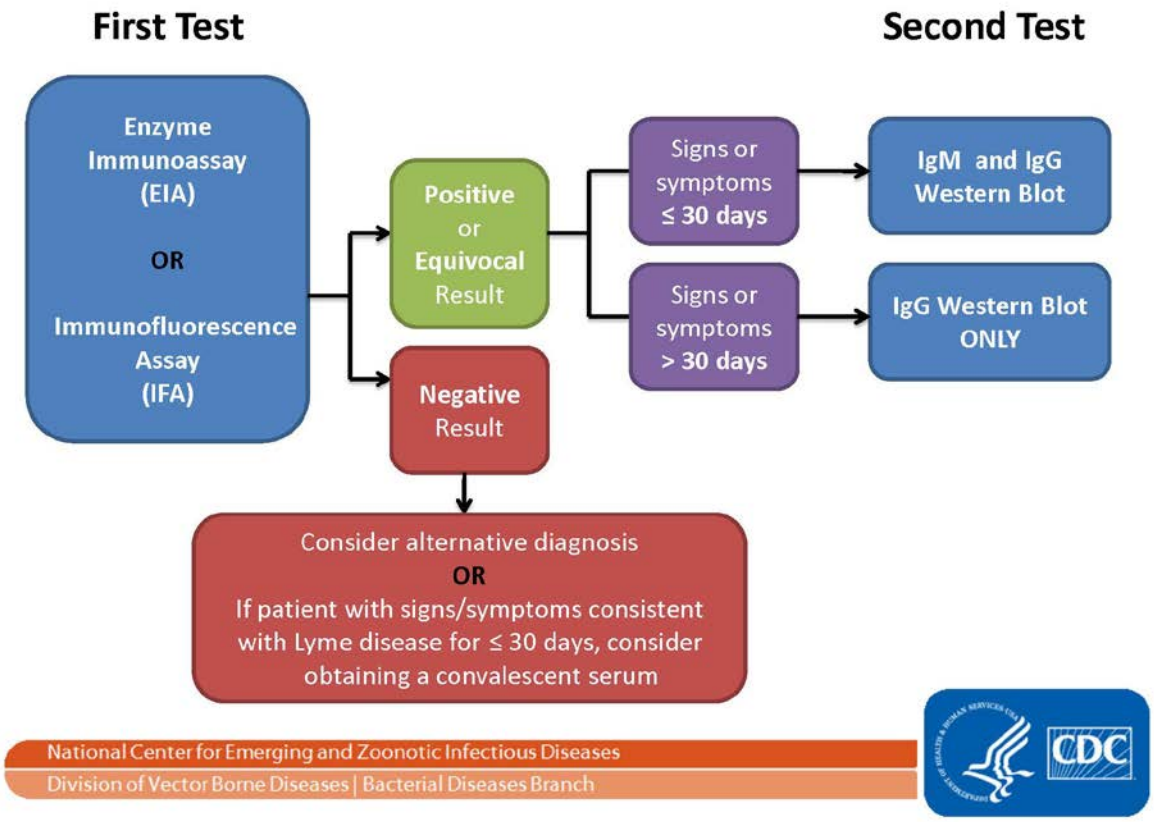
Lyme disease endemic counties identified in Ohio

Lyme disease enemic county: 2 or more lab confirmed human cases with local exposure in county OR Infected ticks have been confirmed from county

endemic counties

* Ohio records through 2015, 34 endemic counties

Two-Tiered Testing for Lyme Disease



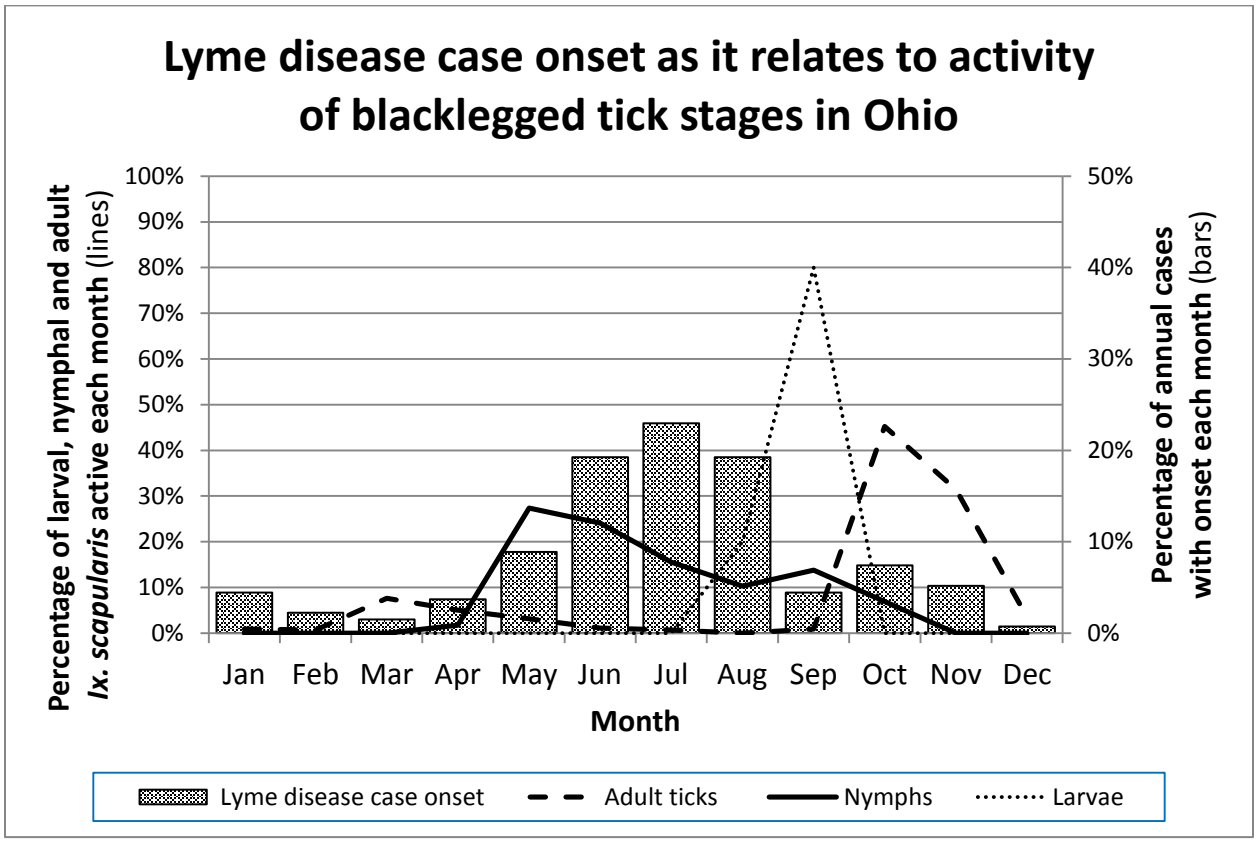


Figure. Unlike other ticks, *Ixodes scapularis* are active throughout the year in Ohio. The adults are active in spring, fall and winter. The nymphs are active in the spring and summer and the larvae are active late summer. The onset of most Ohio cases correspond to the emergence of the nymph stage in spring. (source: ODH, Bureau of Infectious Diseases)