



2026 GUIDELINES FOR THE REPORTING OF LYME DISEASE CASES USING THE MICHIGAN DISEASE SURVEILLANCE SYSTEM (MDSS)

BUREAU OF INFECTIOUS DISEASE PREVENTION

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INTRODUCTION

The following guidance is provided to aid the investigation and reporting of Lyme disease cases for surveillance purposes in MDSS. A complete description of Lyme disease reporting criteria can be found at the [2021 Council of State and Territorial Epidemiologists \(CSTE\) Surveillance Case Definition for Lyme disease.](#)

Effective Jan. 1, 2026, Michigan is considered a **high-incidence jurisdiction** for national Lyme disease surveillance. High-incidence jurisdictions are those that have had an average Lyme disease incidence of ≥ 10 confirmed cases/100,000 population for a period of three consecutive years.

Note: The Lyme disease CSTE case definition is intended solely for public health surveillance purposes and not for diagnosing patients with potential Lyme disease.

CHANGES FROM PRIOR REPORTING REQUIREMENTS

- Cases should no longer be classified as confirmed.
- Case classification is now determined based on laboratory results ONLY for all Michigan counties.
- Clinical criteria is no longer needed for case classification.

COUNTY LEVEL CATEGORY DEFINITIONS

To continue advancing the understanding and characterization of individuals with Lyme disease in Michigan, **all counties will be categorized as either high burden or low burden.** The designation is determined using historical data of county incidence, total number of cases and number of local health department (LHD) personnel available to conduct investigations. These county-level designations will be reviewed and updated at the beginning of each calendar year. The ongoing support from LHDs to collect this important public health data will guide decision making, response planning and resource management at the state level.

The designations are shown on pages 5-6 in figure 1 and table 1.

CASE INVESTIGATION / FOLLOW-UP DOCUMENTATION

The following information is required based on the predetermined burden status (Fig. 1, Table 1) for the case's county of residence. If the case resides in a:

- High Burden County
 - Demographics (name, date of birth, address, phone).
 - Detailed laboratory results.

- Low Burden County
 - Demographics (name, date of birth, address, phone).
 - *Exposure information.
 - Does the patient recall a recent tick bite?
 - Where was the patient most likely exposed?
 - Did the patient travel in the 30 days prior to onset?
 - *Clinical information (signs and symptoms).
 - Detailed laboratory results.

*Exposure information and clinical information are only required for cases that meet laboratory evidence. It is not required to collect this information if the case will be classified as suspect or not a case.

LABORATORY CRITERIA

Laboratory evidence:

1. Isolation of *B. burgdorferi* sensu stricto or *B. mayonii* in culture;
2. Detection of *B. burgdorferi* sensu stricto or *B. mayonii* in a clinical specimen by a *B. burgdorferi* group-specific NAAT assay;
3. Detection of *B. burgdorferi* group-specific antigens by immunohistochemical assay on biopsy or autopsy tissues; or
4. Positive serologic tests in a two-tier or equivalent format, including:
 - a. Standard two-tier test (STTT): a positive or equivocal first-tier screening assay, often an enzyme immunoassay [EIA] or immunofluorescence assay [IFA] for IgM, IgG, or a combination of immunoglobulins, followed by a concordant positive IgM or IgG immunoblot interpreted according to established criteria; or
 - b. Modified two-tier test (MTTT): positive or equivocal first-tier screen, followed by a different, sequential positive or equivocal EIA in lieu of an immunoblot as a second-tier test.

Presumptive laboratory evidence:

1. Positive IgG immunoblot, interpreted according to established criteria, without positive or equivocal first-tier screening assay.



CASE CLASSIFICATION: High-Incidence Jurisdiction

Confirmed: N/A.

Probable: A case that meets laboratory evidence.

Suspect: A case that meets presumptive laboratory evidence.

CRITERIA FOR ESTABLISHING A NEW CASE OF LYME DISEASE

A new case is one that has not been reported within the same calendar year (January through December).

ENTERING DATA INTO MDSS

- Case classification requires all laboratory criteria evidence to be entered into the MDSS using the detailed Lyme Disease Case Report form in MDSS (Key on pages 11-12). Tools to assist case investigation and classification are available on the CD info website, under "[Communicable Diseases \(A-Z\)](#)," Lyme Disease topic.
- For **high burden counties**, only demographic and laboratory information is required.
- For **low burden counties**, demographic, laboratory, exposure and clinical information (specified above) is required to be entered into the Lyme Disease Case Report form in MDSS.
- Once the laboratory information is obtained, the local level MDSS user can then determine if the reported case meets the 2021 CSTE Lyme Disease Surveillance Case Definition. Based on that assessment, choose the appropriate "Case Status" field: "Probable," "Suspect" or "Not a Case."
- State epidemiologists will review case investigations based on laboratory testing and might change "Case Status" or "Investigation Status" upon that review. The LHD will be notified when a change is made, either by notes left in the re-activated case investigation or by phone call or email to request further information.
- For any Lyme disease reporting questions, please contact your regional epidemiologist.

MANAGING ELECTRONICALLY REPORTED TICK IDENTIFICATION RESULTS

MDHHS Bureau of Laboratories does not test ticks for pathogens. However, they do continue to provide tick identification services. Occasionally, tick identification results may appear in MDSS. While these reports are often not associated with human illness, this information may be of interest to both local and state health authorities. Once noted, the entry can be completed as "Not a Case" in MDSS.



RESOURCES

[Centers for Disease Control & Prevention Lyme Disease website](#)

[MDHHS Emerging Diseases Lyme Disease website](#)

[Michigan Lyme Disease Risk Map](#)

[CSTE Lyme Disease Case Definition 21-ID-05](#)

[NNDSS Lyme Disease 2022 Case definition](#)

MMWR (1995): [Recommendations for Test Performance and Interpretation from the Second National Conference on Serologic Diagnosis of Lyme Disease](#)

MMWR (2005): [Caution Regarding Testing for Lyme Disease](#)

EID (2016): [Current Guidelines, Common Pitfalls, and Future Directions for Laboratory Diagnosis of Lyme Disease, United States](#)

MMWR (2019): [Updated CDC Recommendations for Serologic Diagnosis of Lyme Disease](#)

Association of Public Health Laboratories: [Suggested Reporting Language, Interpretation and Guidance Regarding Lyme Disease Serologic Test Results, May 2021](#)

Map: Michigan Counties by Burden Category (High and Low), 2026

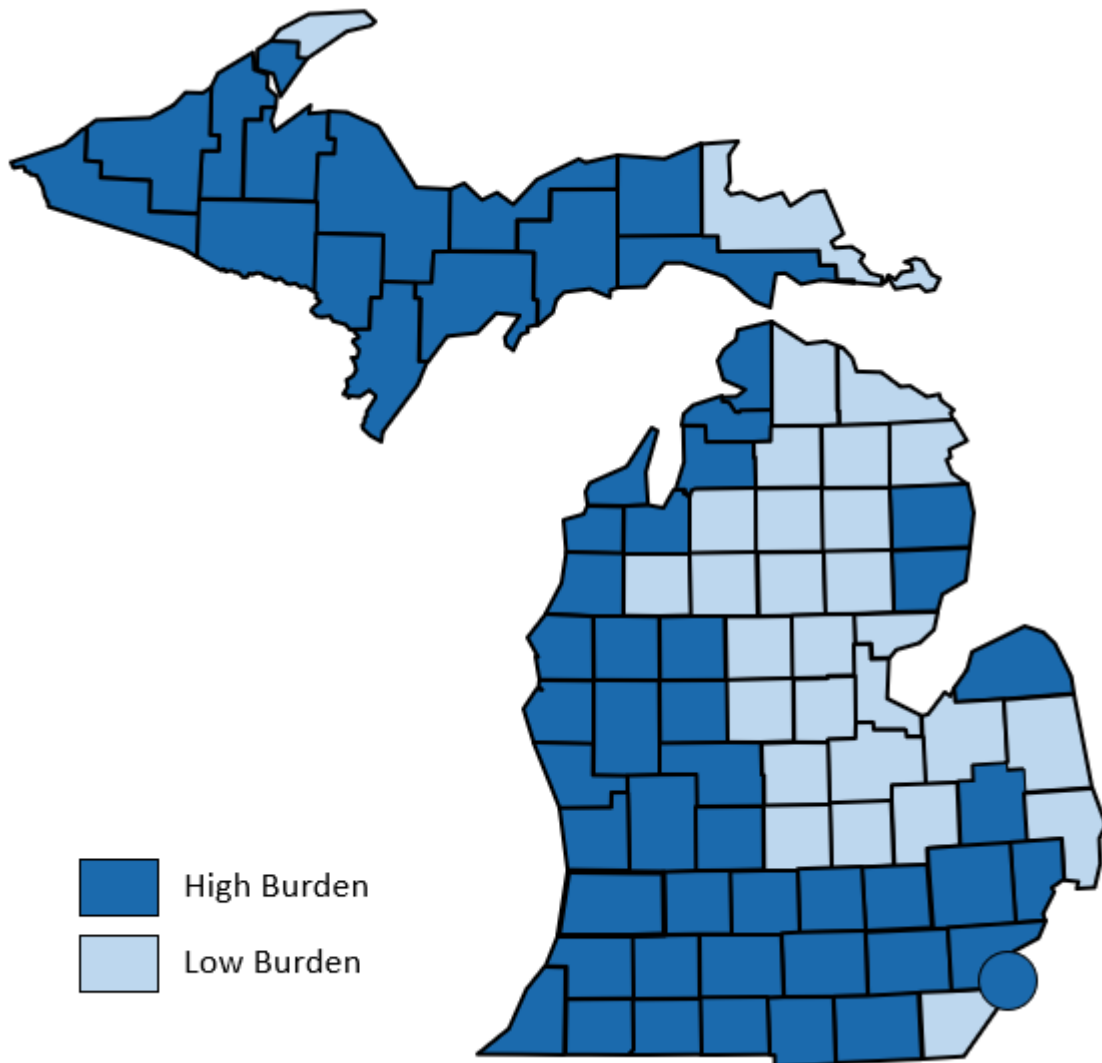


Figure 1. Map of Michigan counties separated by burden categorization, 2026.

Table: Michigan Counties by Burden Category (High and Low), 2026

High Burden Counties				
Allegan	Kalamazoo	CMDHD	LMAS	WUPHD
Barry-Eaton	Kent	Osceola	Alger	Baraga
Benzie-Leelanau	Lapeer	DHD2	Luce	Gogebic
Berrien	Lenawee	Alcona	Mackinac	Houghton
Branch-Hillsdale-St. Joseph	Livingston	Iosco	Schoolcraft	Ontonagon
Calhoun	Macomb	DHD10	MMDHD	
Delta-Menominee	Marquette	Lake	Montcalm	
Detroit City	Muskegon	Manistee	NW MI	
Dickinson-Iron	Oakland	Mason	Charlevoix	
Huron	Ottawa	Mecosta	Emmet	
Ingham	Van Buren-Cass	Newaygo		
Ionia	Washtenaw	Oceana		
Jackson	Wayne	Wexford		
Low Burden Counties				
Bay	Saginaw	CMDHD	DHD4	MMDHD
Chippewa	Sanilac	Arenac	Alpena	Clinton
Genesee	Shiawassee	Clare	Cheboygan	Gratiot
Midland	St Clair	Gladwin	Montmorency	NW MI
Monroe	Tuscola	Isabella	Presque Isle	Otsego
Otsego		Roscommon	DHD10	WUPHD
		DHD2	Crawford	Keweenaw
		Ogemaw	Kalkaska	
		Oscoda	Missaukee	

Table 1. Table of Michigan counties separated by burden categorization, 2026.



Key Fields to Complete in Lyme Disease Case Report Form

Complete for all cases

Complete for probable cases in Low Burden Counties

Investigation Information				
Investigation ID	Onset Date (mm/dd/yyyy)	Diagnosis Date (mm/dd/yyyy)	Referral Date (mm/dd/yyyy)	Case Entry Date (mm/dd/yyyy)
Investigation Status Active	Case Status ☐ Confirmed ☐ Confirmed - Non Resident ☐ Not a Case ☐ Probable ☐ Suspect ☐ Unknown ☐ Non-Michigan Case			☐ State Prison Case
Patient Status Alive	Patient Status Date (mm/dd/yyyy)	Case Disposition	Case Updated Date (mm/dd/yyyy)	Case Completion Date (mm/dd/yyyy)
Date of Death (mm/dd/yyyy)	Investigator First Name: Last Name:		Part of an outbreak?	Outbreak Name
Patient Information				
Patient ID	First	Last	Middle	
Street Address				
City	County	State	Zip	
Home Phone (###-###-####)	Ext.	Other Phone (###-###-####)	Ext.	
Email Address				
Parent/Guardian (required if under 18)				
First		Last		Middle
Phone		Ext.		
Demographics				
Sex ☐ Male ☐ Female ☐ Unknown		Date of Birth (mm/dd/yyyy)	Age	Age Units ☐ Days ☐ Months ☐ Years
Race (Check all that apply) ☐ White/Caucasian ☐ Black/African American ☐ American Indian/Alaska Native ☐ Hawaiian/Pacific Islander ☐ Asian ☐ Other (Specify) ☐ Unknown ☐ Refused to answer				
Hispanic Ethnicity ☐ Hispanic/Latino ☐ Non-Hispanic/Latino ☐ Unknown ☐ Refused to answer			Arab Ethnicity ☐ Arab ☐ Non-Arab ☐ Unknown ☐ Refused to answer	
Worksites/School	Occupations/Grade		MDOC ID	

Key Fields to Complete in Lyme Disease Case Report Form (continued)

Complete for all cases

Complete for probable cases in Low Burden Counties

Hospital Information			
Patient Hospitalized ☐ Yes ☐ No ☐ Unknown	Hospital 	Hospital City 	Hospital Record No.
Admission Date (mm/dd/yyyy) 	Discharge Date (mm/dd/yyyy) 	Duration of Hospital Stay in Days 	
Case ID	First Name	Last Name	Lyme Disease Case Report Page 3
Clinical Information			
Pregnancy Status ☐ Yes ☐ No ☐ Unknown		Subject Died ☐ Yes ☐ No ☐ Unknown	
Exposure Information			
Case Disease Imported Code 	Does the patient recall a recent tick bite? ☐ Yes ☐ No ☐ Unknown	Was a tick specimen submitted for identification and testing? ☐ Yes ☐ No ☐ Unknown	
Where was the patient most likely exposed?			
County: 	State: 	Country: 	
Did the patient travel in the 30 days prior to onset? ☐ Yes ☐ No ☐ Unknown			
Where did the patient travel?			
County: 	State: 	Country: 	
Symptoms and Signs of Current Episode			
Clinical Manifestation of Lyme Disease	Did the subject develop the specified manifestation as a result of the illness?		
Atrioventricular block	☐ Yes ☐ No ☐ Unknown		
Bell's palsy	☐ Yes ☐ No ☐ Unknown		
Other cranial neuritis	☐ Yes ☐ No ☐ Unknown		
Encephalitis	☐ Yes ☐ No ☐ Unknown		
Encephalomyelitis	☐ Yes ☐ No ☐ Unknown		
Erythema Migrans How was this verified?	☐ Yes ☐ No ☐ Unknown ☐ Healthcare Provider ☐ Medical Record		
Arthritis	☐ Yes ☐ No ☐ Unknown		
Lymphocytic meningitis	☐ Yes ☐ No ☐ Unknown		
Radiculoneuropathy	☐ Yes ☐ No ☐ Unknown		
Other Specify:	☐ Yes ☐ No ☐ Unknown 		



Key Fields to Complete in Lyme Disease Case Report Form (continued)

Complete for all cases

Complete for cases probable in Low Burden Counties

Laboratory Information				
Test Type 	If Other, please specify: 	Specimen Type 	Collection Date (mm/dd/yyyy) 	
Test Result 	Test Result Quantitative 	Unit 	Organism Name 	
Test Type 	If Other, please specify: 	Specimen Type 	Collection Date (mm/dd/yyyy) 	
Test Result 	Test Result Quantitative 	Unit 	Organism Name 	
Test Type 	If Other, please specify: 	Specimen Type 	Collection Date (mm/dd/yyyy) 	
Test Result 	Test Result Quantitative 	Unit 	Organism Name 	
Test Type 	If Other, please specify: 	Specimen Type 	Collection Date (mm/dd/yyyy) 	
Test Result 	Test Result Quantitative 	Unit 	Organism Name 	
Test Type 	If Other, please specify: 	Specimen Type 	Collection Date (mm/dd/yyyy) 	
Test Result 	Test Result Quantitative 	Unit 	Organism Name 	
Test Type 	If Other, please specify: 	Specimen Type 	Collection Date (mm/dd/yyyy) 	
Test Result 	Test Result Quantitative 	Unit 	Organism Name 	

Case ID	First Name	Last Name	Lyme Disease Case Report	Page 5
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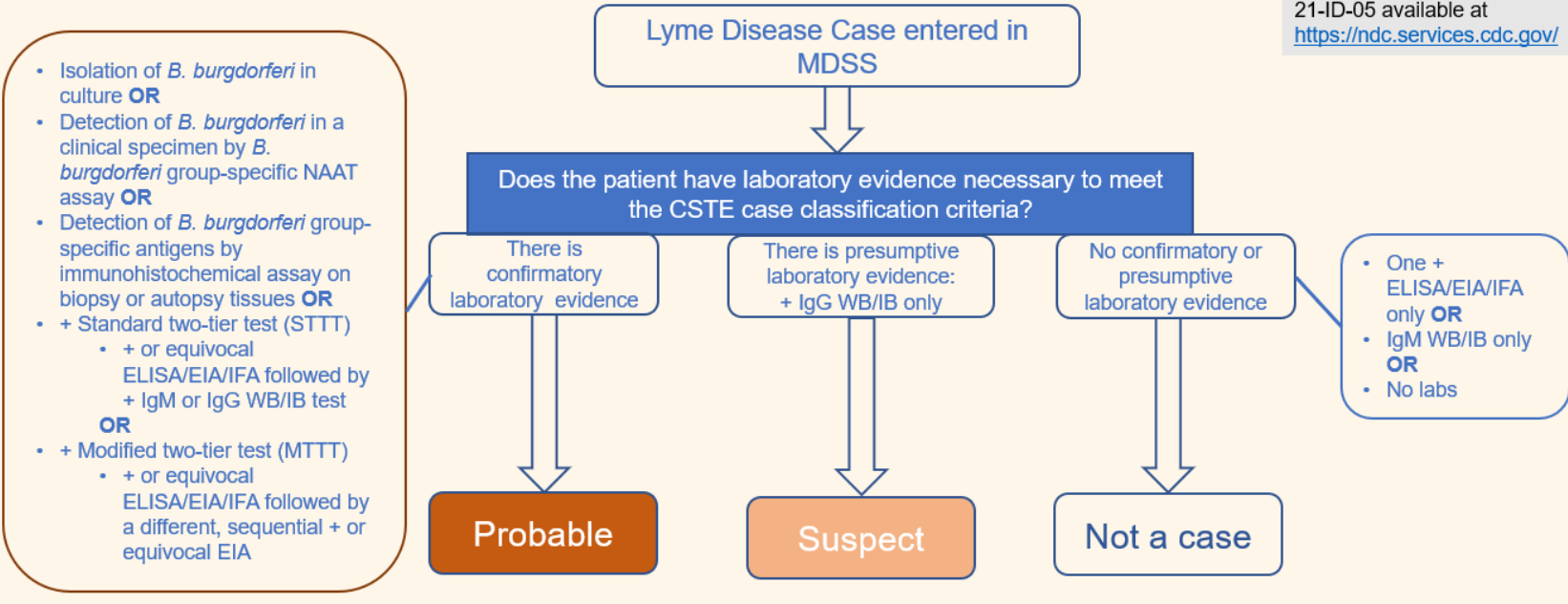
Other Information				
Local 1 		Local 2 		
Name of Person interviewed 	Relationship to patient 	Date of interview (mm/dd/yyyy) 		
Submitted by: 	Date (mm/dd/yyyy) 	Health Department 	Phone Number (###-###-####) 	Ext.
Comments or Additional Information 				

Michigan Department of Health and Human Services

Guidance for Local Health Department Lyme Disease Case Investigation and Classification

Revised July 2026

Adapted from the CSTE National Surveillance Case Definition 21-ID-05 available at <https://ndc.services.cdc.gov/>



Lyme Disease Case Classification Matrix

Serologic* Lab Evidence (choose topmost testing that applies)

EIA screening test	IgM EIA or WB	IgG EIA or WB	Classification
Positive or equivocal	Positive	Positive	Probable
Positive or equivocal	Negative	Positive	Probable
Positive or equivocal	Positive	Negative	Probable
Unknown or Neg	Positive	Positive	Suspect
Unknown or Neg	Negative	Positive WB	Suspect
Positive or equivocal	Negative	Negative	Not A Case
Unknown or Neg	Negative	Positive EIA	Not A Case
Unknown or Neg	Positive	Negative	Not A Case
Unknown or Neg	Negative	Negative	Not A Case
Unknown or not done			Not A Case

*Non-serologic lab tests for Lyme disease may include:

- Isolation of *B. burgdorferi* or *B. mayonii* in culture,
- Detection of *B. burgdorferi* or *B. mayonii* by specific NAAT assay
- Detection of *B. burgdorferi* group-specific antigens by immunohistochemical assay on biopsy or autopsy tissues.

When positive, these labs can be considered Probable.