



ESP CASE DETECTION ALGORITHM

Lyme Disease

Document Version 6.2

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August 11, 2016

Modification History

Version	Date	Modification	By
6.2	10/11/2017	Added ESP Logo and MDPH branding	DPM
6.1	6/30/2017	Transferred to new template	DPM
6.0	8/11/2016		
4.0			



1. Overview

The purpose of this document is to describe the criteria used to identify Lyme Disease in MDPHnet data.

2. Criteria used to identify cases using ESP data

I. TIME WINDOW

Episode length 5 years.

II. CASE CRITERIA

Any one of the following:

- (Lyme ELISA or IGM EIA or IGG EIA) and (Lyme ICD-9 or ICD-10 or Lyme Antibiotics) w/in 30 day period
- Lyme western blot (IGM WB or IGG WB) or Lyme PCR positive result
- Lyme ICD-9 or ICD-10 and Lyme Antibiotics within 14 day period
- Rash ICD-9 or ICD-10 and doxycycline and (order for Lyme ELISA or IGM EIA or IGG EIA) within 30 day period

3. Specifications for reporting diseases/conditions to the Massachusetts Department of Public Health (MDPH)

I. DATA TO INCLUDE IN REPORTS TO MDPH

A. Demographics

Name	Last, first, middle
Date of birth	yyyy/mm/dd
Age	
Social security number	
Gender	Male / Female
Race	American Indian / Asian / Black / White / Other / Unknown
Ethnicity	Hispanic / Non-Hispanic / Unknown
Marital Status	Single / Married / Other, Unknown
Address	Line 1, line 2, city, state, zip, country
Phone	xxx-xxx-xxxx
Language spoken	
Medical record number	
PCP	Name, office address, phone number, email

B. Facility Information



Facility name	
Facility address	Line 1, line 2, city, state, zip
Facility contact person	
Contact person email	
Contact person phone	xxx-xxx-xxxx
Facility phone	xxx-xxx-xxxx

C. Encounter Data

Test ordering clinician	Name, office address, phone number, email
Treating clinician	Name, office address, phone number, email

D. Clinical Information

Diagnosis	Lyme disease
Lab tests	Report LOINC and result for each of the following tests within preceding 30 days (include positive and negative results) ELISA, IGG EIA, IGM EIA, IGG WB, IGM WB, PCR (include source)
Clinical Syndrome	Assess for clinical syndrome ICD9 codes noted within 30 days of the patient meeting criteria for lyme disease. If the patient meets one of these codes then report the ICD9 code and associated diagnosis. Dermatologic ICD9 = 782.1 (rash and other nonspecific skin eruption) Musculoskeletal ICD9 = 711.8 (arthropathy) Neurologic ICD9 = 320.7 (meningitis) ICD9 = 351.0 (bell's palsy) ICD9 = 723.4 (radicular syndrome of the upper extremities) ICD9 = 724.4 (radicular syndrome of the lower legs) Cardiac ICD9 = 422.0 (myocarditis) ICD9 = 426.0 (AV block, complete) ICD9 = 426.12 (AV block, second degree, Mobitz II) ICD9 = 426.13 (AV block, second degree, Mobitz I – Wenckebach) Other symptoms ICD9 = 780.6 (fever)
Treatment given	Report treatment with any of the following medications within 30 days of diagnosis (include date, drug, dose, route, frequency, and duration) <ul style="list-style-type: none"> • doxycycline 100mg PO bid x ≥10 days • amoxicillin 500mg PO tid x ≥10 days • cefuroxime 100mg PO bid x ≥10 days • ceftriaxone 1-2g IV or IM qd x ≥14 days • cefotaxime 1-2g IV q8h x ≥14 days

4. Codes, laboratory tests, and medications used to identify criteria listed in Sections 2 and 3.



I. DIAGNOSIS CODES USED TO IDENTIFY LYME DISEASE

Lyme disease	ICD-9	088.81	Lyme Disease
	ICD-10	A69.20	Lyme disease, unspecified
		A69.23	Arthritis due to Lyme disease
		A69.29	Other conditions associated with Lyme disease
		A69.21	Meningitis due to Lyme disease
	A69.22	Other neurologic disorders in Lyme Disease	
Rash	ICD9	782.1	Rash and other nonspecific skin eruption
	ICD10	R21	Rash and other nonspecific skin eruption

II. MEDICATIONS

Doxycycline
Amoxicillin
Cefuroxime
Ceftriaxone
Cefotaxime

III. LAB TESTS

TestType	CPT	Component	Component Name	Positive result	LOINC	LOINC term
ELISA	866 17	221	LYME AB ELISA	≥1.1	5061- 7	Borrelia burgdorferi Ab : Titr : Pt : Ser : Qn : IF
ELISA	863 18	221	LYME AB ELISA	≥1.1	5061- 7	Borrelia burgdorferi Ab : Titr : Pt : Ser : Qn : IF
ELISA	863 18	404 8	LYME IGG,IGM	≥1.1	5061- 7	Borrelia burgdorferi Ab : Titr : Pt : Ser : Qn : IF
ELISA	886 18	404 8	LYME IGG,IGM	≥1.1	5061- 7	Borrelia burgdorferi Ab : Titr : Pt : Ser : Qn : IF
ELISA	863 18	284 0	LYME AB SCREEN	POSITIVE or DETECTED	31155 -5	Borrelia burgdorferi Ab : ACnc : Pt : xxx : Qn : EIA
ELISA	866 17	222	LYME INTERPRETATION	POSITIVE	31155 -5	Borrelia burgdorferi Ab : ACnc : Pt : xxx : Qn : EIA
ELISA	863 18	222	LYME INTERPRETATION	POSITIVE	31155 -5	Borrelia burgdorferi Ab : ACnc : Pt : xxx : Qn : EIA
IGG EIA	866 18	439 1	B. BURGDORFERI IGG	≥1.1	16481 -4	Borrelia burgdorferi Ab.IgG : ACnc : Pt : Flu : Qn : EIA
IGG EIA	838 90	439 9	B.BURGDORFERI IGG	≥1.1	16481 -4	Borrelia burgdorferi Ab.IgG : ACnc : Pt : Flu : Qn : EIA
IGG EIA	866 18	437 9	LYME AB ISOTYPE IGG	≥1.1	16481 -4	Borrelia burgdorferi Ab.IgG : ACnc : Pt : Flu : Qn : EIA



IGM EIA	866 18	439 0	B. BURGDORFE RI IGM	≥1.1	16482 -2	Borrelia burgdorferi Ab.IgM : ACnc : Pt : Flu : Qn : EIA
IGM EIA	838 90	440 0	B.BURGDORF ERI IGM	≥1.1	16482 -2	Borrelia burgdorferi Ab.IgM : ACnc : Pt : Flu : Qn : EIA
IGM EIA	866 18	437 8	LYME AB ISOTYPE IGM	≥1.1	16482 -2	Borrelia burgdorferi Ab.IgM : ACnc : Pt : Flu : Qn : EIA
IGM WB	866 17	218 5	LYME AB IGM WB	POSITIVE or DETECTED	23982 -2	Borrelia burgdorferi Ab.IgM : ACnc : Pt : Flu : Ord : IB
IGG WB	866 18	439 6	IMBLOT B.BURG 49736	≥5 bands*	29898 -4	Borrelia burgdorferi Ab.IgG : ACnc : Pt : xxx : Ord : IB
IGG WB	866 17	218 4	LYME AB IGG WB	POSITIVE or DETECTED	29898 -4	Borrelia burgdorferi Ab.IgG : ACnc : Pt : xxx : Ord : IB
IGG WB	866 18	400 3	LYME DISEASE AB, IGG, WB	POSITIVE or DETECTED	29898 -4	Borrelia burgdorferi Ab.IgG : ACnc : Pt : xxx : Ord : IB
PCR	866 18	477 8	LYME ANTIBODY, FLUID	POSITIVE or DETECTED	4991- 6	Borrelia burgdorferi DNA : ACnc : Pt : xxx : Ord : Probe.Amp.Tar
PCR	874 76	401 6	LYME DISEASE DNA, PCR	POSITIVE or DETECTED	4991- 6	Borrelia burgdorferi DNA : ACnc : Pt : xxx : Ord : Probe.Amp.Tar

IV. CODE MAINTENANCE STRATEGY

Screen component names for any test with the terms, 'lyme' 'borrelia' or 'burgdorf*'
