

If a conflict arises between a Clinical Payment and Coding Policy and any plan document under which a member is entitled to Covered Services, the plan document will govern. If a conflict arises between a CPCP and any provider contract pursuant to which a provider participates in and/or provides Covered Services to eligible member(s) and/or plans, the provider contract will govern. "Plan documents" include, but are not limited to, Certificates of Health Care Benefits, benefit booklets, Summary Plan Descriptions, and other coverage documents. Blue Cross and Blue Shield of Illinois may use reasonable discretion interpreting and applying this policy to services being delivered in a particular case. BCBSIL has full and final discretionary authority for their interpretation and application to the extent provided under any applicable plan documents.

Providers are responsible for submission of accurate documentation of services performed. Providers are expected to submit claims for services rendered using valid code combinations from Health Insurance Portability and Accountability Act approved code sets. Claims should be coded appropriately according to industry standard coding guidelines including, but not limited to: Uniform Billing Editor, American Medical Association, Current Procedural Terminology, CPT® Assistant, Healthcare Common Procedure Coding System, ICD-10 CM and PCS, National Drug Codes, Diagnosis Related Group guidelines, Centers for Medicare and Medicaid Services National Correct Coding Initiative Policy Manual, CCI table edits and other CMS guidelines.

Claims are subject to the code edit protocols for services/procedures billed. Claim submissions are subject to claim review including but not limited to, any terms of benefit coverage, provider contract language, medical policies, clinical payment and coding policies as well as coding software logic. Upon request, the provider is urged to submit any additional documentation.

## Testing for Vector-Borne Infections

**Policy Number:** CPCPLAB052

**Version** 1.0

**Approval Date:** September 25, 2025

**Plan Effective Date:** January 1, 2026

## Description

The Plan has implemented certain lab management reimbursement criteria. Not all requirements apply to each product. Providers are urged to review Plan documents for eligible coverage for services rendered.

## Reimbursement Information:

For Lyme disease and testing for *Borrelia burgdorferi*, please see CPCPLAB044 Lyme Disease Testing.

- 1) For individuals suspected of having babesiosis (see **Note 1**), the use of a Giemsa- or Wright-stain of a blood smear, nucleic acid amplification testing (NAAT) or IgG or IgM indirect immunofluorescence antibody (IFA) assay for Babesia (initial testing and confirmatory testing should occur a minimum of two weeks apart) **may be reimbursable**.
- 2) For individuals suspected of having a relapsing fever caused by a *Borrelia* spp., the following testing **may be reimbursable**:
  - a) For individuals suspected of having hard tick relapsing fever (HTRF) (see **Note 2**): serologic assays to detect *Borrelia* antibodies or NAAT testing to detect *Borrelia miyamotoi*.
  - b) For individuals suspected of having louse-borne relapsing fever (LBRF) (see **Note 3**): peripheral blood smear microscopy or NAAT testing to detect *Borrelia recurrentis*.
  - c) For individuals suspected of having a soft tick relapsing fever (STRF)/tickborne relapsing fever (TBRF) (see **Note 4**): dark-field microscopy of a peripheral blood smear, microscopy of a Wright- or Giemsa-stained blood smear, NAAT testing to detect *Borrelia* spp., or serologic assays to detect *Borrelia* antibodies.
- 3) For individuals suspected of having a relapsing fever caused by a *Borrelia* spp., culture testing for *Borrelia* **is not reimbursable**.
- 4) For individuals suspected of having chikungunya (see **Note 5**), the use of viral culture for diagnosis, NAAT for the presence of chikungunya in a blood sample, **or** IFA assay for IgM antibodies during both the acute and convalescent phases **may be reimbursable**.
- 5) For individuals suspected of having Colorado tick fever (CTF) (see **Note 6**), the use of NAAT testing **or** IFA for CTF-specific IgM antibodies **may be reimbursable**.
- 6) For the detection of dengue virus (DENV), the use of NAAT, IgM antibody capture ELISA (MAC-ELISA), **or** NS1 ELISA, as well as a confirmatory plaque reduction neutralization test for DENV, **may be reimbursable** in the following individuals:

- a) For individuals suspected of having a DENV infection (see **Note 7**).
  - b) For individuals who are symptomatic for Zika virus infection (see **Note 8**).
- 7) For individuals suspected of having DENV (see **Note 7**), the use of IgG ELISA **or** hemagglutination testing **is not reimbursable**.
  - 8) For individuals suspected of having ehrlichiosis and/or anaplasmosis (see **Note 8**), the use of NAAT of whole blood, IFA assay for IgG antibodies, **or** microscopy for morulae detection **may be reimbursable**.
  - 9) For individuals suspected of having ehrlichiosis and/or anaplasmosis (see **Note 8**), the use of an IFA assay for IgM antibodies **or** standard blood culture **is not reimbursable**.
  - 10) For individuals suspected of having malaria (see **Note 10**), the use of a rapid immunochromatographic diagnostic test **or** smear microscopy to diagnose malaria, determine the species of *Plasmodium*, identify the parasitic life-cycle stage, and/or quantify the parasitemia (can be repeated up to three times within three days if initial microscopy is negative in suspected cases of malaria) **may be reimbursable**.
  - 11) To confirm the species of *Plasmodium* in an individual diagnosed with malaria, NAAT testing **may be reimbursable**.
  - 12) The use of IFA for *Plasmodium* antibodies **is not reimbursable**.
  - 13) For individuals suspected of having a rickettsial disease (see **Note 11**), the use of an IFA assay for IgG antibodies (initial testing and confirmatory testing should occur a minimum of two weeks apart) **may be reimbursable**.
  - 14) For individuals suspected of having a rickettsial disease (see **Note 11**), the use of standard blood culture, NAAT, **or** IFA assay for IgM antibodies **is not reimbursable**.
  - 15) For individuals suspected of having West Nile virus (WNV) disease (see **Note 12**), the use of IFA for WNV-specific IgG or IgM antibodies in either serum or CSF and a confirmatory plaque reduction neutralization test for WNV **may be reimbursable**.
  - 16) To confirm a WNV infection in individuals who are immunocompromised, nucleic acid detection of WNV **may be reimbursable**.
  - 17) For immunocompetent individuals suspected of having WNV disease (see **Note 12**), the use of NAAT for WNV **is not reimbursable**.
  - 18) For individuals suspected of having a yellow fever virus (YFV) infection (see **Note 13**), the use of NAAT for YFV **or** serologic assays to detect virus-specific IgM and IgG antibodies, as well as a confirmatory plaque reduction neutralization test for YFV, **may be reimbursable**.

- 19) For the detection of Zika virus, the use of NAAT **may be reimbursable** in the following individuals:
- a) Up to 12 weeks after the onset of symptom for symptomatic (see **Note 8**) pregnant individuals who, during pregnancy, have **either** lived in or traveled to areas with a current or past Zika transmission **or** who have had sex with someone who either lives in or has recently traveled to areas with a current or past Zika virus transmission (see **Note 14**).
  - b) For symptomatic non-pregnant individuals living in or with recent travel to an area with an active CDC Zika Travel Health Notice or an area with current or past Zika transmission (See Note 14) when symptoms presented within the last seven days.
- 20) Zika virus NAAT and Zika virus IgM testing, as well as a confirmatory plaque reduction neutralization test for Zika, **may be reimbursable** in **any** of the following situations:
- a) Up to 12 weeks after the onset of symptoms for symptomatic (see **Note 8**) pregnant individuals who, during pregnancy, have **either** lived in or traveled to areas with an active CDC Zika Travel Health Notice **or** who have had sex with someone who either lives in or has recently traveled to areas with an active CDC Zika Travel Health Notice (see **Note 14**).
  - b) For pregnant individuals who have a fetus with prenatal ultrasound findings consistent with congenital Zika virus infection (see **Note 15**).
  - c) For infants born from individuals who, during pregnancy, tested positive for Zika virus.
  - d) For infants born with signs and symptoms of congenital Zika syndrome (see **Note 15**) and who have a birthing parent who had a possible Zika virus exposure during pregnancy.
  - e) For symptomatic non-pregnant individuals living in or with recent travel to an area with an active CDC Zika Travel Health Notice or an area with current or past Zika virus transmission (see **Note 14**) when symptoms presented more than seven days prior to testing.
- 21) For non-pregnant individuals who have not traveled outside of the United States and its territories and who are symptomatic for Zika virus infection (see **Note 8**), NAAT and/or IgM testing for Zika detection **is not reimbursable**.
- 22) For asymptomatic individuals, testing for babesiosis, chikungunya virus, CTF, DENV, ehrlichiosis and/or anaplasmosis, malaria, rickettsial disease, TBRF, WNV, YFV, or Zika virus during a general exam without abnormal findings **is not reimbursable**.

## NOTES:

**Note 1:** Typical signs and symptoms of babesiosis can include hemolytic anemia, splenomegaly, hepatomegaly, jaundice, and nonspecific flu-like symptoms such as fever, chills, body aches, weakness, and fatigue (CDC, 2024j).

**Note 2:** Typical signs and symptoms of HTRF (caused by *Borrelia miyamotoi*) can include chills or shakes, fatigue, nausea or vomiting, headache, and muscle and joint aches (CDC, 2024a).

**Note 3:** Typical signs and symptoms of LBRF (caused by *Borrelia recurrentis*) can include fever, headache, chills or shakes, muscle and joint aches, and nausea. Though the clinical symptoms of LBRF are similar to STRF, LBRF is usually associated with fewer relapses (CDC, 2024b).

**Note 4:** Typical signs and symptoms of STRF/TBRF (caused by *Borrelia hermsii*, *B. turicatae*, and other *Borrelia* bacteria) can include fever, headache, muscle aches, chills, dizziness, joint pain, nausea and vomiting, appetite loss, and rarely, facial paralysis, eye pain or redness, or vision changes (CDC, 2024c).

**Note 5:** Typical signs and symptoms of chikungunya include high fever ( $>102^{\circ}\text{F}$  or  $39^{\circ}\text{C}$ ), joint pains (usually multiple joints, bilateral, and symmetric), headache, myalgia, arthritis, conjunctivitis, nausea, vomiting, and maculopapular rash (Staples et al., 2024).

**Note 6:** Typical signs and symptoms of CTF can include fever, chills, headache, myalgia, malaise, sore throat, vomiting, abdominal pain, and maculopapular or petechial rash (CDC, 2024e).

**Note 7:** Typical signs and symptoms of dengue include fever, headache, retro-orbital eye pain, myalgia, arthralgia, macular or maculopapular rash, petechiae, ecchymosis, purpura, epistaxis, gingival bleeding, hematuria, leukopenia, thrombocytopenia, hyponatremia, elevated AST and ALT, and nausea and/or vomiting (CDC, 2024f, 2024r).

**Note 8:** Typical signs and symptoms of Zika virus infection can include fever, rash, headache, joint pain, conjunctivitis (red eyes), and muscle pain (CDC, 2024t).

**Note 9:** Typical signs and symptoms of ehrlichiosis and/or anaplasmosis usually begin 5-14 days after an infected tick bite, and they include fever, headache, malaise, myalgia, and shaking chills. Ehrlichiosis can also present with gastrointestinal issues, including nausea, vomiting, and diarrhea (Biggs et al., 2016).

**Note 10:** Typical signs and symptoms of malaria can include fever, influenza-like symptoms (e.g., chills, headache, body aches), anemia, jaundice, seizures, mental confusion, kidney failure, and acute respiratory distress syndrome (Tan & Abanyie, 2024).

**Note 11:** Typical signs and symptoms of rickettsial diseases (including Rocky Mountain spotted fever, *Rickettsia parkeri* rickettsiosis, *Rickettsia* species 364D rickettsiosis, *Rickettsia* spp (mild spotted fever), and *R. akari* (rickettsialpox)) usually begin 3 – 12 days after initial bite and can include fever, headache, chills, malaise, myalgia, nausea, vomiting, abdominal pain, photophobia, anorexia, and skin rash. *Rickettsia* species 364d rickettsiosis can also present with an ulcerative lesion with regional lymphadenopathy (Biggs et al., 2016).

**Note 12:** Typical signs and symptoms of West Nile Virus (WNV) include headache, myalgia, arthralgia, gastrointestinal symptoms, and maculopapular rash. Less than 1% of infected individuals develop neuroinvasive WNV with symptoms of meningitis, encephalitis, or acute flaccid paralysis (Nasci et al., 2013).

**Note 13:** Typical signs and symptoms of yellow fever include symptoms of the toxic form of the disease (jaundice, hemorrhagic symptoms, and multisystem organ failure), as well as nonspecific influenza symptoms (fever, chills, headache, backache, myalgia, prostration, nausea, and vomiting in initial illness) (Gershman & Staples, 2024).

**Note 14:** The CDC provides information on the geographic risk classification of Zika (<https://www.cdc.gov/zika/geo/index.html>) as well as providing travel health notices for pathogens of concern (<https://www.nc.cdc.gov/travel/notices>).

**Note 15:** Typical signs and symptoms of congenital Zika syndrome can include microcephaly, problems with brain development, feeding problems (e.g., difficulty swallowing), hearing loss, seizures, vision problems, decreased joint movement (i.e., contractures), and stiff muscles (making it difficult to move) (CDC, 2024n).

## Procedure Codes

The following is not an all-encompassing code list. The inclusion of a code does not guarantee it is a covered service or eligible for reimbursement.

Codes
86280, 86382, 86619, 86666, 86750, 86753, 86757, 86788, 86789, 86790, 86794, 87040, 87164, 87166, 87207, 87449, 87468, 87469, 87478, 87484, 87662, 87798, 87899, 0043U, 0044U

## References:

1. Calisher CH. Medically important arboviruses of the United States and Canada. *Clinical microbiology reviews*. Jan 1994;7(1):89-116. doi:10.1128/CMR.7.1.89
2. CDC. A—Z Index of Vector-Borne Diseases and Conditions. Updated July 25, 2025. <https://www.cdc.gov/vector-borne-diseases/about/a-z-index-of-vector-borne-diseases.html>
3. Miller JM, Binnicker MJ, Campbell S, et al. Guide to Utilization of the Microbiology Laboratory for Diagnosis of Infectious Diseases: 2024 Update by the Infectious Diseases Society of America (IDSA) and the American Society for Microbiology (ASM). *Clin Infect Dis*. Mar 5 2024;doi:10.1093/cid/ciae104
4. CDC. Clinical Overview of Babesiosis. Updated February 13, 2024. <https://www.cdc.gov/babesiosis/hcp/clinical-overview/>
5. CDC. About Hard Tick Relapsing Fever (HTRF). Updated May 15, 2024. <https://www.cdc.gov/relapsing-fever/about/about-htrf.html>
6. CDC. About Louse-Borne Relapsing Fever (LBRF). Updated January 31, 2025. <https://www.cdc.gov/relapsing-fever/about/about-lbrf.html>
7. CDC. About Soft Tick Relapsing Fever (STRF). Updated July 19, 2024. <https://www.cdc.gov/relapsing-fever/about/about-strf.html>
8. Staples J, Hills S, Powers A. CDC Yellow Book 2025 Travel-Associated Infections & Diseases: Chikungunya. Oxford University Press. <https://wwwnc.cdc.gov/travel/yellowbook/2024/infections-diseases/chikungunya>
9. CDC. Clinical Features and Diagnosis of Colorado Tick Fever. Updated May 15, 2024. <https://www.cdc.gov/colorado-tick-fever/hcp/clinical-diagnosis/>
10. CDC. Clinical Features of Dengue. Updated May 15, 2025. <https://www.cdc.gov/dengue/hcp/clinical-signs/>
11. CDC. Symptoms of Dengue and Testing. Updated May 22, 2025. <https://www.cdc.gov/dengue/signs-symptoms/index.html>
12. CDC. Zika Symptoms and Complications. Updated January 30, 2025. <https://www.cdc.gov/zika/signs-symptoms/>
13. Biggs HM, Behravesh CB, Bradley KK, et al. Diagnosis and Management of Tickborne Rickettsial Diseases: Rocky Mountain Spotted Fever and Other Spotted Fever Group Rickettsioses, Ehrlichioses, and Anaplasmosis - United States. *MMWR Recommendations and reports : Morbidity and mortality weekly report Recommendations and reports*. May 13 2016;65(2):1-44. doi:10.15585/mmwr.rr6502a1



14. Ridpath AD, Wallender E. CDC Yellow Book 2025 Travel-Associated Infections & Diseases: Malaria. Oxford University Press. Updated April 23.  
<https://wwwnc.cdc.gov/travel/yellowbook/2024/infections-diseases/malaria>
15. CDC. Guidelines for West Nile Virus Surveillance and Control. Updated July 18, 2024. <https://www.cdc.gov/west-nile-virus/php/surveillance-and-control-guidelines/index.html>
16. Staples JE, O’Laughlin K. CDC Yellow Book 2025 Travel-Associated Infections & Diseases: Yellow Fever. Oxford University Press.  
<https://wwwnc.cdc.gov/travel/yellowbook/2024/infections-diseases/yellow-fever>
17. CDC. Congenital Zika Syndrome and Other Birth Defects. Updated January 31, 2025. <https://www.cdc.gov/zika/czs/>
18. WHO. Plague. Updated July 7, 2022. <http://www.who.int/news-room/fact-sheets/detail/plague>
19. Rosenberg R, Lindsey NP, Fischer M, et al. Vital Signs: Trends in Reported Vectorborne Disease Cases - United States and Territories, 2004-2016. *MMWR Morbidity and mortality weekly report*. May 4 2018;67(17):496-501.  
doi:10.15585/mmwr.mm6717e1
20. CDC. Rocky Mountain Spotted Fever. Updated May 15, 2024.  
<https://www.cdc.gov/rocky-mountain-spotted-fever/data-research/facts-stats/index.html>
21. McClain MT. Epidemiology, clinical manifestations, and diagnosis of Rocky Mountain spotted fever. Updated December 16, 2024.  
<https://www.uptodate.com/contents/epidemiology-clinical-manifestations-and-diagnosis-of-rocky-mountain-spotted-fever>
22. McQuiston JH, Wiedeman C, Singleton J, et al. Inadequacy of IgM antibody tests for diagnosis of Rocky Mountain Spotted Fever. *Am J Trop Med Hyg*. 2014;91(4):767-770. doi:10.4269/ajtmh.14-0123
23. McClain MT. Other spotted fever group rickettsial infections. Updated January 31, 2024. <https://www.uptodate.com/contents/other-spotted-fever-group-rickettsial-infections>
24. McClain MT. Human ehrlichiosis and anaplasmosis. Updated April 19, 2024.  
<https://www.uptodate.com/contents/human-ehrlichiosis-and-anaplasmosis>
25. Barbour AG. Clinical features, diagnosis, and management of relapsing fever. Updated May 29, 2024. <https://www.uptodate.com/contents/clinical-features-diagnosis-and-management-of-relapsing-fever>
26. CDC. Clinical Guidance for Soft Tick Relapsing Fever (STRF). Updated July 16, 2024. <https://www.cdc.gov/relapsing-fever/hcp/soft-tick-relapsing-fever/>



27. Krause PJ, Vannier EG. Babesiosis: Clinical manifestations and diagnosis. Updated December 18, 2024. <https://www.uptodate.com/contents/babesiosis-clinical-manifestations-and-diagnosis>
28. Cohee L, Seydel K. Malaria: Clinical manifestations and diagnosis in nonpregnant adults and children. Updated January 28, 2025. <https://www.uptodate.com/contents/malaria-clinical-manifestations-and-diagnosis-in-nonpregnant-adults-and-children>
29. Hopkins H. Laboratory tools for the diagnosis of malaria. Updated January 28, 2025. <https://www.uptodate.com/contents/laboratory-tools-for-diagnosis-of-malaria>
30. Mayo Clinic. Test ID: LCMAL Malaria, Molecular Detection, PCR, Varies. <https://www.mayocliniclabs.com/test-catalog/Clinical+and+Interpretive/87860>
31. Padda H, Jacobs D, Gould CV, et al. West Nile Virus and Other Nationally Notifiable Arboviral Diseases - United States, 2023. *MMWR Morbidity and mortality weekly report*. 2025;74(21):358-364. doi:10.15585/mmwr.mm7421a1
32. Petersen LR. Clinical manifestations and diagnosis of West Nile virus infection. Updated December 17, 2024. <https://www.uptodate.com/contents/clinical-manifestations-and-diagnosis-of-west-nile-virus-infection>
33. CDC. Current Dengue Outbreak. Updated July 29, 2025. <https://www.cdc.gov/dengue/outbreaks/2024/index.html>
34. Thomas S, Rothman A, Srikiatkachorn A, Kalayanarooj S. Dengue virus infection: Clinical manifestations and diagnosis. Updated February 13, 2025. <https://www.uptodate.com/contents/dengue-virus-infection-clinical-manifestations-and-diagnosis>
35. LeBeaud AD. Zika virus infection: An overview. Updated February 7, 2025. <https://www.uptodate.com/contents/zika-virus-infection-an-overview>
36. Petersen LR. Arthropod-borne encephalitides. Updated June 2, 2025. <https://www.uptodate.com/contents/arthropod-borne-encephalitides>
37. Wilder-Smith A. Yellow fever: Epidemiology, clinical manifestations, and diagnosis. Updated December 12, 2024. <https://www.uptodate.com/contents/yellow-fever-epidemiology-clinical-manifestations-and-diagnosis>
38. Wilson ME, Lenschow DJ. Chikungunya fever: Epidemiology, clinical manifestations, and diagnosis. Updated August 27, 2025. <https://www.uptodate.com/contents/chikungunya-fever-epidemiology-clinical-manifestations-and-diagnosis>

39. Johnson AJ, Martin DA, Karabatsos N, Roehrig JT. Detection of anti-arboviral immunoglobulin G by using a monoclonal antibody-based capture enzyme-linked immunosorbent assay. *Journal of clinical microbiology*. May 2000;38(5):1827-31. doi:10.1128/JCM.38.5.1827-1831.2000
40. Kalish RA, McHugh G, Granquist J, Shea B, Ruthazer R, Steere AC. Persistence of immunoglobulin M or immunoglobulin G antibody responses to *Borrelia burgdorferi* 10-20 years after active Lyme disease. *Clin Infect Dis*. Sep 15 2001;33(6):780-5. doi:10.1086/322669
41. Granger D, Theel ES. Evaluation of a Rapid Immunochromatographic Assay and Two Enzyme-Linked Immunosorbent Assays for Detection of IgM-Class Antibodies to Zika Virus. *Journal of clinical microbiology*. Mar 2019;57(3)doi:10.1128/jcm.01413-18
42. Leski TA, Taitt CR, Swaray AG, et al. Use of real-time multiplex PCR, malaria rapid diagnostic test and microscopy to investigate the prevalence of *Plasmodium* species among febrile hospital patients in Sierra Leone. *Malaria Journal*. 2020/02/21 2020;19(1):84. doi:10.1186/s12936-020-03163-2
43. Mathison BA, Pritt BS. Update on Malaria Diagnostics and Test Utilization. *Journal of clinical microbiology*. Jul 2017;55(7):2009-2017. doi:10.1128/jcm.02562-16
44. Kim YH, Lee J, Kim Y-E, et al. Development of a Rapid Diagnostic Test Kit to Detect IgG/IgM Antibody against Zika Virus Using Monoclonal Antibodies to the Envelope and Non-structural Protein 1 of the Virus. *Korean J Parasitol*. 2018;56(1):61-70. doi:10.3347/kjp.2018.56.1.61
45. Kato CY, Chung IH, Robinson LK, Austin AL, Dasch GA, Massung RF. Assessment of real-time PCR assay for detection of *Rickettsia* spp. and *Rickettsia rickettsii* in banked clinical samples. *Journal of clinical microbiology*. Jan 2013;51(1):314-7. doi:10.1128/jcm.01723-12
46. Denison AM, Amin BD, Nicholson WL, Paddock CD. Detection of *Rickettsia rickettsii*, *Rickettsia parkeri*, and *Rickettsia akari* in skin biopsy specimens using a multiplex real-time polymerase chain reaction assay. *Clin Infect Dis*. Sep 1 2014;59(5):635-42. doi:10.1093/cid/ciu358
47. Ota-Sullivan K, Blecker-Shelly DL. Use of the rapid BinaxNOW malaria test in a 24-hour laboratory associated with accurate detection and decreased malaria testing turnaround times in a pediatric setting where malaria is not endemic. *Journal of clinical microbiology*. May 2013;51(5):1567-9. doi:10.1128/jcm.00293-13
48. Dimaio MA, Pereira IT, George TI, Banaei N. Performance of BinaxNOW for diagnosis of malaria in a U.S. hospital. *Journal of clinical microbiology*. Sep 2012;50(9):2877-80. doi:10.1128/jcm.01013-12
49. Meatherall B, Preston K, Pillai DR. False positive malaria rapid diagnostic test in returning traveler with typhoid fever. *BMC infectious diseases*. Jul 9 2014;14:377. doi:10.1186/1471-2334-14-377

50. van Bergen K, Stuitje T, Akkers R, Vermeer E, Castel R, Mank T. Evaluation of a novel real-time PCR assay for the detection, identification and quantification of Plasmodium species causing malaria in humans. *Malar J*. Jul 12 2021;20(1):314. doi:10.1186/s12936-021-03842-8
51. Akoolo L, Schlachter S, Khan R, et al. A novel quantitative PCR detects Babesia infection in patients not identified by currently available non-nucleic acid amplification tests. *BMC Microbiol*. Jan 14 2017;17(1):16. doi:10.1186/s12866-017-0929-2
52. Reynolds MR, Jones AM, Petersen EE, et al. Vital Signs: Update on Zika Virus-Associated Birth Defects and Evaluation of All U.S. Infants with Congenital Zika Virus Exposure - U.S. Zika Pregnancy Registry, 2016. *MMWR Morbidity and mortality weekly report*. Apr 7 2017;66(13):366-373. doi:10.15585/mmwr.mm6613e1
53. Shiu C, Starker R, Kwal J, et al. Zika Virus Testing and Outcomes during Pregnancy, Florida, USA, 2016. *Emerging infectious diseases*. Jan 2018;24(1):1-8. doi:10.3201/eid2401.170979
54. CDC. Clinical and Laboratory Diagnosis for Rocky Mountain Spotted Fever. Updated May 15, 2024. <https://www.cdc.gov/rocky-mountain-spotted-fever/hcp/diagnosis-testing/>
55. CDC. Clinical Guidance for Hard Tick Relapsing Fever (HTRF). Updated May 15, 2024. <https://www.cdc.gov/relapsing-fever/hcp/hard-tick-relapsing-fever/index.html>
56. CDC. Clinical Guidance for Louse-borne Relapsing Fever (LBRF). Updated May 15, 2024. <https://www.cdc.gov/relapsing-fever/hcp/loose-borne-relapsing-fever/index.html>
57. CDC. Babesiosis: 2025 Case Definition. Updated September 18, 2024. <https://ndc.services.cdc.gov/case-definitions/babesiosis/>
58. CDC. Clinical Testing and Diagnosis for Malaria. Updated March 20, 2024. <https://www.cdc.gov/malaria/hcp/diagnosis-testing/index.html>
59. CDC. Clinical Testing Guidance for Dengue. Updated August 26, 2025. <https://www.cdc.gov/dengue/hcp/diagnosis-testing/>
60. CDC. Clinical Testing and Diagnosis for Zika Virus Disease. Updated February 12, 2025. <https://www.cdc.gov/zika/hcp/diagnosis-testing/>
61. WHO. Laboratory testing for Zika virus and dengue virus infections. [https://www.who.int/publications/i/item/WHO-ZIKV\\_DENV-LAB-2022.1](https://www.who.int/publications/i/item/WHO-ZIKV_DENV-LAB-2022.1)
62. American Society of Microbiology. Zika Virus: An Update on the Disease and Guidance for Laboratory Testing. Updated September 20, 2022. <https://asm.org/Guideline/Zika-virus-An-update-on-the-disease-and-guidance-f>
63. American Academy of Pediatrics. Babesiosis. *Red Book: 2021- 2024 Report of the Committee on Infectious Diseases*. 2021:235-237. doi:10.1542/9781610021470

64. American Academy of Pediatrics. *Borrelia Infections Other Than Lyme Disease. Red Book: 2021- 2021 Report of the Committee on Infectious Diseases.* 2021:252-255. doi:10.1542/9781610021470
65. American Academy of Pediatrics. *Ehrlichia, Anaplasma, and Related Infections. Red Book: 2021-2024 Report of the Committee on Infectious Diseases.* 2021:323-328. doi:10.1542/9781610021470
66. American Academy of Pediatrics. *Rocky Mountain Spotted Fever. Red Book: 2021-2024 Report of the Committee on Infectious Diseases.* 2021:697-700. doi:10.1542/9781610021470
67. American Academy of Pediatrics. *Rickettsialpox. Red Book: 2021-2024 Report of the Committee on Infectious Diseases.* 2021:696-697. doi:10.1542/9781610021470
68. American Academy of Pediatrics. *Chikungunya. Red Book: 2021-2024 Report of the Committee on Infectious Diseases.* 2021:271-272. doi:10.1542/9781610021470
69. American Academy of Pediatrics. *Dengue. Red Book: 2021-2024 Report of the Committee on Infectious Diseases.* 2021:317-319. doi:10.1542/9781610021470
70. American Academy of Pediatrics. *Malaria. Red Book: 2021-2024 Report of the Committee on Infectious Diseases.* 2021:527-537. doi:10.1542/9781610021470
71. American Academy of Pediatrics. *West Nile Virus. Red Book: 2021 - 2024 Report of the Committee on Infectious Diseases.* 2021:888-891. doi:10.1542/9781610021470
72. Venkatesan A, Tunkel AR, Bloch KC, et al. Case definitions, diagnostic algorithms, and priorities in encephalitis: consensus statement of the international encephalitis consortium. *Clin Infect Dis.* Oct 2013;57(8):1114-28. doi:10.1093/cid/cit458
73. FDA. Devices@FDA.  
<https://www.accessdata.fda.gov/scripts/cdrh/devicesatfda/index.cfm>

## Policy Update History:

Approval Date	Effective Date; Summary of Changes
09/25/2025	01/01/2026: New policy.