Concert Infectious Disease: Multisystem ~~Lab~~ Testing

Reference Number: LA .CG.CP.MP.~~28~~02 Coding implications
Date of Last Revision 7/25 Revision Log

See Important Reminder **at the end of this policy for important regulatory and legal information.**

OVERVIEW

~~Some pathogens cause infections with symptoms that affect a primary body system, while others cause infections that affect multiple body systems.~~ This policy ~~outlines~~addresses the ~~appropriate~~ use of tests for pathogens that can cause multisystem symptoms and/or infections. ~~Tests for pathogens that infect multiple body systems can be targeted to detect a specific pathogen(s) or non-targeted to broadly detect nucleic acid from any potential pathogen.~~

~~Cytomegalovirus (CMV) is a common infection that does not usually cause problems in healthy individuals. However, it is of particular concern in individuals with weakened immune systems (e.g., organ transplant recipients), and can lead to signs and symptoms such as fever, sore throat, swollen glands, extreme fatigue/malaise, mononucleosis, or hepatitis, and increased risk of poor outcomes (morbidity/mortality). Additionally, infections during pregnancy can lead to infection of the fetus (congenital CMV infection). One in 5 babies with congenital CMV infection will have long term health impacts, such as hearing loss, vision impairment, or small head size (microcephaly).~~

~~Metagenomic sequencing, a newer, more generalized technique, can detect multiple organisms' genomes within a single specimen. While these new tests have potential benefits, challenges remain to be explored prior to routine clinical adoption, such as whether they can reliably discern predominantly host genomic material from a small amount of pathogen genomic material or active infection from colonization, among others.~~

~~This policy is~~These criteria are intended for use in the outpatient setting.

For additional information see the Rationale and References section.

The tests, CPT codes, and ICD codes referenced in this policy are not comprehensive, and their inclusion does not represent a guarantee of coverage or non-coverage.

POLICY REFERENCE TABLE

~~Criteria Sections~~ Criteria Sections	Example Tests (Labs)	~~References~~ Support
Cytomegalovirus Tests		
~~Cytomegalovirus (CMV) Antibody Tests~~Cytomegalovirus (CMV) Antibody Tests	Cytomegalovirus Antibodies (IgG, IgM) (Quest Diagnostics)	~~1, 3, 4~~Rationale/ References
~~Cytomegalovirus (CMV) Nucleic Acid/PCR or Antigen Detection Tests~~Cytomegalovirus (CMV) Nucleic Acid/PCR or Antigen Detection Tests	Cytomegalovirus DNA, Qualitative Real-Time PCR, Saliva (Quest Diagnostics)	~~1, 2, 3, 5, 7~~Rationale/ References
	Cytomegalovirus (CMV), Quantitative, Plasma, PCR (Labcorp)	
Metagenomic Sequencing Tests		
~~Untargeted Metagenomic Sequencing Tests for Pathogen Detection~~Untargeted Metagenomic Sequencing Tests for Pathogen Detection	Karius (Karius Inc)	~~6~~Rationale/ References
	Johns Hopkins Metagenomic Next Generation Sequencing Assay for Infectious Disease Diagnostics (Johns Hopkins Medical Microbiology Center)	
	Bacteria, Viruses, Fungus, and Parasite Metagenomic Sequencing, Spinal Fluid (MSCSF) (Mayo Clinic Laboratories)	
	NeXGen Fungal/AFB NGS Assay (Eurofins Viracor)	

CRITERIA

It is the policy of Louisiana Healthcare Connections that the specific tests noted below are **medically necessary** when meeting the related criteria:

CYTOMEGALOVIRUS TESTS

Cytomegalovirus (CMV) Antibody Tests~~-~~

I. Cytomegalovirus (CMV) antibody tests ~~may be~~are considered **medically necessary** when:

A. The member/enrollee is a prospective organ transplant donor or recipient undergoing pre-transplant evaluation, **OR**

B. The member/enrollee has ~~suspected mononucleosis~~signs and symptoms of mononucleosis, **AND**

1. Had negative testing for Epstein-Barr Virus (EBV), **OR**

C. The member/enrollee is pregnant, **AND**

~~1. Has symptoms of active CMV infection, **OR**~~

~~2. Has ultrasound findings consistent with in utero CMV infection.~~

1. Has symptoms of active CMV infection, **OR**

2. Has ultrasound findings consistent with in utero CMV infection.

II. Current evidence does not support ~~the use of~~ cytomegalovirus (CMV) antibody tests for all other indications.

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Cytomegalovirus (CMV) Nucleic Acid/PCR or Antigen Detection Tests

I. Cytomegalovirus (CMV) nucleic acid/PCR or antigen detection tests ~~may be~~are considered~~-~~ **medically necessary** when:

A. The member/enrollee is immunocompromised, **OR**

B. The member/enrollee is 12 months of age or younger, **AND**

1. Is a prospective organ transplant donor or recipient undergoing pre-transplant evaluation, **OR**~~-~~

C. The member/enrollee is undergoing post-transplant monitoring, **OR**

D. The member/enrollee is a newborn with very low birth weight (less than 1500 grams or 3 lbs 4.9 oz), **OR**

E. The member/enrollee is a premature newborn (born before 37 weeks 0 days gestation), **OR**

F. The member/enrollee is an infant with suspected ~~congenital CMV infection (signs/symptoms of congenital CMV infection~~congenital CMV infection (signs/symptoms of congenital CMV infection such as congenital hearing loss, documented maternal CMV infection, or ultrasound findings consistent with in utero CMV infection), **OR**

G. The member/enrollee is pregnant, **AND**
   ~~1. Has ultrasound findings consistent with in utero CMV infection, **OR**~~
   1. Has ultrasound findings consistent with in utero CMV infection, **OR**

H. The member/enrollee has ~~suspected mononucleosis~~signs and symptoms of mononucleosis, **AND**
   1. Had negative testing for Epstein-Barr Virus (EBV).

II. Current evidence does not support ~~the use of~~ cytomegalovirus (CMV) nucleic acid/PCR or antigen detection tests for all other indications.

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METAGENOMIC SEQUENCING TESTS

Untargeted Metagenomic Sequencing Tests for Pathogen Detection

I. Current evidence does not support untargeted metagenomic sequencing tests for pathogen detection for all indications.

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DEFINITIONS

1. **Congenital CMV infection** in a newborn can be characterized by features including rash, jaundice (yellowing of the skin or whites of the eyes), microcephaly (small head), low birth weight, hepatosplenomegaly (enlarged liver and spleen), seizures, hearing loss, and retinitis (damaged eye retina).

2. **Symptoms of active CMV infection** can include fever, sore throat, swollen glands, extreme fatigue/malaise, mononucleosis, or hepatitis.

3. **Symptoms and signs of mononucleosis** can include malaise/fatigue, sweats, sore throat, anorexia, nausea, headache, chills, swollen glands, fever, or splenomegaly.

~~2.~~4. **Ultrasound findings consistent with in utero CMV infection** may include microcephaly (smaller than normal head size), calcifications of the brain and liver, echogenic bowel, hepatosplenomegaly, various abnormalities of the brain (ventriculomegaly, intra/parenchymal cysts, abnormalities of the corpus callosum, cortical malformations), and intraventricular hemorrhages.

~~1. **Symptoms and signs of active CMV infection** can include fever, sore throat, swollen glands, extreme fatigue/malaise, mononucleosis, or hepatitis.~~

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~~1. **Symptoms and signs of mononucleosis** can include malaise/fatigue, sweats, sore throat, anorexia, nausea, headache, chills, swollen glands, fever, or splenomegaly.~~

BACKGROUND AND RATIONALE

CYTOMEGALOVIRUS TESTS

Cytomegalovirus (CMV) Antibody Tests
Centers for Disease Control and Prevention

"For most people, CMV infection is not a serious health problem. However, certain groups are at a high risk for serious complications from CMV infections:

1. Infants infected in utero (congenital CMV infection)
2. Very low birth weight and premature infants
3. People with compromised immune systems, such as from organ and bone marrow transplants, and people infected with human immunodeficiency virus (HIV)"

Cytomegalovirus (CMV) and Congenital CMV Infection. Centers for Disease Control and Prevention. Published November 6, 2024. https://www.cdc.gov/cytomegalovirus/hcp/clinical-overview/?CDC_AAref_Val=https://www.cdc.gov/cmv/clinical/overview.html.

The Third International Consensus Guidelines on the Management of Cytomegalovirus in Solid-organ Transplantation

The following pertinent recommendations are made in the consensus guidelines:

- We recommend performing donor and recipient CMV IgG serology pretransplantation for risk stratification (strong, high).*

* In children 12 months and younger with seropositivity, nucleic acid testing may be warranted to further confirm results, as false-positives may occur due to passive antibodies transferred via

breastfeeding. (p. 903)

Kotton CN, Kumar D, Caliendo AM, et al. The third international consensus guidelines on the management of cytomegalovirus in solid-organ transplantation. Transplantation. 2018;102(6):900-931. doi:10.1097/tp.0000000000002191

American Academy of Family Physicians

"The possibility of acute CMV infection should be explored if a negative heterophile antibody test rules out EBV mononucleosis. The best diagnostic test for establishing CMV mononucleosis is serology for CMV IgM antibodies, which should be positive in the majority of patients during the symptomatic phase of the illness." (p. 521)

Taylor GH. Cytomegalovirus. Am Fam Physician. 2003 Feb 1;67(3):519-24. PMID: 12588074.

Cytomegalovirus (CMV) Nucleic Acid/PCR or Antigen Detection Tests

Centers for Disease Control and Prevention (CDC)

"For most people, CMV infection is not a serious health problem. However, certain groups are at a high risk for serious complications from CMV infections:

1. Infants infected in utero (congenital CMV infection)
2. Very low birth weight and premature infants
3. People with compromised immune systems, such as from organ and bone marrow transplants, and people infected with human immunodeficiency virus (HIV)."

The CDC lists the following symptoms that may be present in about 10% of infants with congenital CMV:

- Rash
- Jaundice (yellowing of the skin or whites of the eyes)
- Microcephaly (small head)
- Low birth weight
- Intrauterine growth restriction (low weight)
- Hepatosplenomegaly (enlarged liver and spleen)
- Seizures
- Retinitis (damaged eye retina)

Additionally, they list the following long-term problems that may occur in about 40 to 60% of infants born with signs of congenital CMV disease:

- Hearing loss
- Vision loss
- Intellectual disability
- Microcephaly (small head)
- Lack of coordination or weakness
- Seizures

It is important to note that some infants with hearing loss may not be detected by newborn hearing tests.

The "Laboratory Testing for CMV and Congenital CMV" section of this article states that the standard laboratory test for evaluation of suspected congenital CMV infection is polymerase chain reaction (PCR) on saliva, with subsequent confirmatory testing on urine.

Cytomegalovirus (CMV) and Congenital CMV Infection. Centers for Disease Control and Prevention. Published November 6, 2024. https://www.cdc.gov/cytomegalovirus/hcp/clinical-overview/?CDC_AAref_Val=https://www.cdc.gov/cmv/clinical/overview.html.

The Third International Consensus Guidelines on the Management of Cytomegalovirus in Solid-organ Transplantation

The following pertinent recommendations are made in the consensus guidelines:

- We recommend performing donor and recipient CMV IgG serology pretransplantation for risk stratification (strong, high).*
- We recommend using QNAT calibrated to the WHO standard for diagnosis, surveillance to guide preemptive antiviral treatment, and for therapeutic monitoring due to the ability to harmonize and standardize these tests (strong, high).
- We recommend when monitoring response to antiviral therapy, that QNAT is performed weekly (strong, moderate).

* In children 12 months and younger with seropositivity, nucleic acid testing may be warranted to further confirm results, as false-positives may occur due to passive antibodies transferred via breastfeeding. (p. 903-904)

Kotton CN, Kumar D, Caliendo AM, et al. The third international consensus guidelines on the management of cytomegalovirus in solid-organ transplantation. Transplantation. 2018;102(6):900-931. doi:10.1097/tp.0000000000002191

Society for Maternal-Fetal Medicine (SMFM)

In the 2016 Consult Series #39, the SMFM recommended the following:

- Diagnosis of suspected primary CMV infection in pregnant women should be either by IgG seroconversion or with positive CMV IgM, positive IgG, and low IgG avidity (grade 1B)
- Amniocentesis is the best option for prenatal diagnosis of fetal congenital CMV infection and should be performed at >21 weeks of gestation and >6 weeks from maternal infection (grade 1C)
- Routine screening of all pregnant women for evidence of primary CMV infection is **NOT** ~~recommended at this time (grade 1B) (p. B5)~~

recommended at this time (grade 1B) (p. ~~*Centers for Disease Control and Prevention*~~B5)

~~The CDC states that the standard laboratory test for evaluation of suspected congenital CMV infection is polymerase chain reaction (PCR) on saliva, with subsequent confirmatory testing on urine.~~

Hughes BL, Gyamfi-Bannerman C. Diagnosis and antenatal management of congenital cytomegalovirus infection. American Journal of Obstetrics and Gynecology. 2016;214(6):B5-B11.

~~The CDC lists the following symptoms that may be present in about 10% of infants with congenital CMV:~~

- ~~Rash~~
- ~~Jaundice (yellowing of the skin or whites of the eyes)~~
- ~~Microcephaly (small head)~~
- ~~Low birth weight~~
- ~~Intrauterine growth restriction (low weight)~~
- ~~Hepatosplenomegaly (enlarged liver and spleen)~~
- ~~Seizures~~
- ~~Retinitis (damaged eye retina)~~

~~Additionally, they list the following long-term problems that may occur in about 40 to 60% of infants born with signs of congenital CMV disease:~~

- ~~Hearing loss~~
- ~~Vision loss~~
- ~~Intellectual disability~~
- ~~Microcephaly (small head)~~
- ~~Lack of coordination or weakness~~
- ~~Seizures~~

~~It is important to note that some infants with hearing loss may not be detected by newborn hearing tests.~~

World Health Organization

The WHO defines very low birth weight as below 1.5 kg or 1500 grams, and a preterm infant as one who was born before 37 0/7 weeks of gestation. (p. vii)

WHO recommendations for care of the preterm or low birth weight infant. Geneva: World Health Organization; 2022. License: CC BY-NC-SA 3.0 IGO.

UpToDate

The UpToDate article entitled “Cytomegalovirus infection in pregnancy,” includes the following list of ultrasound markers as those that are suggestive, but not diagnostic, of a fetal CMV

infection:

- Periventricular calcifications
- Cerebral ventriculomegaly
- Microcephaly
- Pseudocysts, periventricular or adjacent to the occipital or temporal horn
- Hyperechogenic fetal bowel
- Fetal growth restriction
- Ascites
- Pleural and/or pericardial effusion
- Hepatosplenomegaly
- Hepatic calcifications
- Polymicrogyria
- Cerebellar hypoplasia
- Large cisterna magna
- Amniotic fluid abnormalities (oligohydramnios or polyhydramnios)
- Hydrops
- Placental thickening and enlargement, heterogeneous appearance, calcifications"

Boppana SB, Hui L. Cytomegalovirus infection in pregnancy. In: UpToDate, Wilkins-Haug L, Hirsch MS (Eds), Barss VA (Deputy Ed), Wolters Kluwer. Accessed October 22, 2024. https://www.uptodate.com/contents/cytomegalovirus-infection-in-pregnancy

American Academy of Family Physicians (AAFP)
"The possibility of acute CMV infection should be explored if a negative heterophile antibody test rules out EBV mononucleosis. The best diagnostic test for establishing CMV mononucleosis is serology for CMV IgM antibodies, which should be positive in the majority of patients during the symptomatic phase of the illness" (p. 521).

Taylor GH. Cytomegalovirus. Am Fam Physician. 2003 Feb 1;67(3):519-24. PMID: 12588074.

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Untargeted Metagenomic Sequencing Tests for Pathogen Detection
Kaur, et al.
Kuar, et al. undertook a 2025 retrospective cohort analysis of 1,000 patients undergoing Karius metagenomic next-generation sequencing for suspected infection. They found no clinical impact of testing in 82.2% of cases, concluding that "(f)uture prospective studies are needed to better define the role of (Karius testing)" (pp.3,7).

Kaur I, Shaw B, Multani A, et al. Real-world clinical impact of plasma cell-free DNA metagenomic next-generation sequencing assay. Infect Control Hosp Epidemiol. Published online 2025:1-8. doi:10.1017/ice.2024.242

Gu, ~~Miller, and Chiu~~et al.

In their 2019 review, Gu, Miller, and Chiu state the following: "While the emergence of these new mNGS technologies is exciting, their rapid evolution often outpaces clinical test validation and the comprehensive collection of clinical evidence. Similar to other types of clinical testing, the application of these new diagnostic testing methods should be accompanied by rigorous clinical studies that (a) demonstrate clinical utility, (b) guide usage, and (c) uncover potential areas of misinterpretation. As with any new technology, the clinical adoption of mNGS testing will take time as providers become familiar with it and new guidelines are developed." (p. 16)

Gu W, Miller S, Chiu CY. Clinical metagenomic next-generation sequencing for pathogen detection. Annu Rev Pathol. 2019;14:319-388. doi: 10.1146/annurev-pathmechdis-012418-012751

Casto, et al.

In their 2021 review of 36 studies on Untargeted Metagenomic Sequencing for detecting pathogens in immunocompromised populations, Casto et al. focused on the clinical performance findings from 14 of these studies

The authors note that studies on clinician-ordered metagenomic next-generation sequencing for pathogen identification (mNGSpi) show that these tests had clinical impact in a small minority of cases. This discrepancy arises from differences in study designs: clinician-ordered tests are often used after other testing and treatments in difficult cases, while researcher-selected cohorts use mNGSpi earlier and on less challenging cases. Current evaluations of clinical impact, based on chart reviews and clinician reports, are subjective and potentially biased. Moreover, all studies so far lack control groups, limiting the reliability of conclusions about mNGSpi's clinical impact (p. 10-11)

There are no professional guidelines or recommendations we identified to support the use of these tests.

Casto AM, Fredricks DN, Hill JA. Diagnosis of infectious diseases in immunocompromised hosts using metagenomic next generation sequencing-based diagnostics. Blood Reviews. 2022;53:100906. doi:10.1016/j.blre.2021.100906

Coding Implications

This clinical policy references Current Procedural Terminology (CPT®). CPT® is a registered trademark of the American Medical Association. All CPT codes and descriptions are copyrighted ~~2022~~2025, American Medical Association. All rights reserved. CPT codes and CPT descriptions are from the current manuals and those included herein are not intended to be all-inclusive and are included for informational purposes only. ~~-~~Codes referenced in this clinical policy are for informational purposes only and may not support medical necessity. Inclusion or exclusion of any codes does not guarantee coverage.~~–~~

Providers should reference the most up-to-date sources of professional coding guidance prior to the submission of claims for reimbursement of covered services.

NOTE: Coverage is subject to each requested code's inclusion on the corresponding LDH fee schedule. Non-covered codes are denoted (*) and are reviewed for Medical Necessity for members under 21 years of age on a per case basis.

CPT® Code Codes	Description
0068U*	Candida species panel (C. albicans, C. glabrata, C. parapsilosis, C. kruseii, C tropicalis, and C. auris), amplified probe technique with qualitative report of the presence or absence of each species
0086U*	Infectious disease (bacterial and fungal), organism identification, blood culture, using rRNA FISH, 6 or more organism targets, reported as positive or negative with phenotypic minimum inhibitory concentration (MIC)-based antimicrobial susceptibility
0112U*	Infectious agent detection and identification, targeted sequence analysis (16S and 18S rRNA genes) with drug-resistance gene
0140U*	Infectious disease (fungi), fungal pathogen identification, DNA (15 fungal targets), blood culture, amplified probe technique, each target reported as detected or not detected
0141U*	Infectious disease (bacteria and fungi), gram-positive organism identification and drug resistance element detection, DNA (20 gram-positive bacterial targets, 4 resistance genes, 1 pan gram-negative bacterial target, 1 pan Candida target), blood culture, amplified probe technique, each target reported as detected or not detected
0142U*	Infectious disease (bacteria and fungi), gram-negative bacterial identification and drug resistance element detection, DNA (21 gram-negative bacterial targets, 6 resistance genes, 1 pan gram-positive bacterial target, 1 pan Candida target), amplified probe technique, each target reported as detected or not detected
0152U*	Infectious disease (bacteria, fungi, parasites, and DNA viruses), microbial cell-free DNA, plasma, untargeted next-generation sequencing, report for significant positive pathogens
0311U*	Infectious disease (bacterial), quantitative antimicrobial susceptibility reported as phenotypic minimum inhibitory concentration (MIC)-based antimicrobial susceptibility for each organism identified
0323U*	Infectious agent detection by nucleic acid (DNA and RNA), central nervous system pathogen, metagenomic next-generation sequencing, cerebrospinal fluid (CSF), identification of pathogenic bacteria, viruses, parasites, or fungi
0351U*	Infectious disease (bacterial or viral), biochemical assays, tumor necrosis factor-related apoptosis-inducing ligand (TRAIL), interferon gamma-induced protein-10 (IP-10), and C-reactive protein, serum, or venous whole blood, algorithm reported as likelihood of bacterial infection

0441U*	Infectious disease (bacterial, fungal, or viral infection), semiquantitative biomechanical assessment (via deformability cytometry), whole blood, with algorithmic analysis and result reported as an index
0480U*	Infectious disease (bacteria, viruses, fungi, and parasites), cerebrospinal fluid (CSF), metagenomic next-generation sequencing (DNA and RNA), bioinformatic analysis, with positive pathogen identification
0531U*	Infectious disease (acid-fast bacteria and invasive fungi), DNA (673 organisms), next-generation sequencing, plasma
0588U*	Infectious disease (bacterial or viral), 32 genes (29 informative and 3 housekeeping), immune response mRNA, gene expression profiling by split-well multiplex reverse transcription loop-mediated isothermal amplification (RT-LAMP), whole blood, reported as continuous risk scores for likelihood of bacterial and viral infection and likelihood of severe illness within the next 7 days
0594U*	Infectious disease (sepsis), semiquantitative measurement of pancreatic stone protein concentration, whole blood, reported as risk of sepsis
0601U*	Infectious disease (periprosthetic joint infection), analysis of 11 biomarkers (alpha defensins 1-3, C-reactive protein, microbial antigens for Staphylococcus [SPA, SPB], Enterococcus, Candida, and C. acnes, total nucleated cell count, percent neutrophils, RBC count, and absorbance at 280 nm) using immunoassays, hematology, clinical chemistry, synovial fluid, and diagnostic algorithm reported as a probability score
0610U*	Infectious disease (antimicrobial susceptibility), phenotypic antimicrobial susceptibility testing of positive blood culture using microfluidic sensor technology to quantify bacterial growth response to multiple antibiotic types, reporting categorical susceptibility (susceptible, susceptible dose dependent, intermediate, resistant), minimum inhibitory concentration, and interpretive comments
83883	Nephelometry, each analyte not elsewhere specified
86308	Heterophile antibodies; screening
86612	Antibody; Blastomyces
86644	Antibody; cytomegalovirus (CMV)
86645	Antibody; cytomegalovirus (CMV), IgM
86663	Antibody; Epstein-Barr (EB) virus, early antigen (EA)
86664	Antibody; Epstein-Barr (EB) virus, nuclear antigen (EBNA)
86665	Antibody; Epstein-Barr (EB) virus, viral capsid (VCA)
86668	Antibody; Francisella tularensis
86684	Antibody; Haemophilus influenza
86744	Antibody; Nocardia
86747	Antibody; parvovirus
86757	Antibody; Rickettsia
86777	Antibody; Toxoplasma
86778	Antibody; Toxoplasma, IgM

86787	Antibody; varicella-zoster
87290	Infectious agent antigen detection by immunofluorescent technique; Varicella zoster virus
87332	Infectious agent antigen detection by immunoassay technique, (eg, enzyme immunoassay [EIA], enzyme-linked immunosorbent assay [ELISA], fluorescence immunoassay [FIA], immunochemiluminometric assay [IMCA]) qualitative or semiquantitative; cytomegalovirus
87495	Infectious agent detection by nucleic acid (DNA or RNA); cytomegalovirus, direct probe technique
87496	Infectious agent detection by nucleic acid (DNA or RNA); cytomegalovirus, amplified probe technique
87497	Infectious agent detection by nucleic acid (DNA or RNA); cytomegalovirus, quantification
~~0152U*~~87531	Infectious agent detection by nucleic acid (DNA or RNA); Herpes virus-6, direct probe technique~~Infectious disease (bacteria, fungi, parasites, and DNA viruses), microbial cell-free DNA, plasma, untargeted next-generation sequencing, report for significant positive pathogens~~
87532	Infectious agent detection by nucleic acid (DNA or RNA); Herpes virus-6, amplified probe technique
87533	Infectious agent detection by nucleic acid (DNA or RNA); Herpes virus-6, quantification
89050	Cell count, miscellaneous body fluids (eg, cerebrospinal fluid, joint fluid), except blood;
89051	Cell count, miscellaneous body fluids (eg, cerebrospinal fluid, joint fluid), except blood; with differential count

Reviews, Revisions, and Approvals	Revision Date	Approval Date	Effective Date
Converted corporate to local policy.	03/24	5/1/24	7/1/24
Annual review. No changes.	7/25	9/22/25	10/22/25
~~REFERENCES~~Annual review. Updated~~Added~~ policy number into~~o~~ header from LA.CP.CG.28 to align with Corporate. In policy statements for the following criteria sections, changed policy to note that tests "are considered medically necessary" from the previous	04/26		

statement that they "may be considered medically necessary": Cytomegalovirus (CMV) Nucleic Acid/PCR or Antigen Detection Tests; Cytomegalovirus (CMV) Antibody Tests. For Untargeted Metagenomic Sequencing Tests for Pathogen Detection: Added Bacteria, Viruses, Fungus, and Parasite Metagenomic Sequencing, Spinal Fluid (MSCSF) (Mayo Clinic) to the Policy Reference Table and updated related background. References reviewed and updated. Changed all "investigational" policy statements to state that "current evidence does not support…" In Cytomegalovirus (CMV) Antibody Tests criteria I.B., ., changed "suspected mononucleosis" to "signs and symptoms of mononucleosis." In Cytomegalovirus (CMV) Nucleic Acid/PCR or Antigen Detection Tests criteria: in I.H., changed "suspected mononucleosis" to "signs and symptoms of mononucleosis." Policy description, reference table, and rationale updated. Congenital CMV infection definition changed to include hearing loss. Minor rewording without clinical significance. References moved to rationale section. Added CPT codes 83883, 86308, 86612, 86663, 86664, 86665, 86668, 86684, 86744, 86747, 86757, 86777, 86778, 86787, 87290, 87332, 87531, 87532, 87533, 89050, 89051, 0068U, 0086U, 0112U, 0140U, 0141U, 0142U, 0311U, 0323U, 0351U, 0441U, 0480U, 0531U, 0588U, 0594U, 0601U, 0610U to Coding Implications table.			

1. ~~Cytomegalovirus (CMV) and Congenital CMV Infection. (2020, August 18). Centers for Disease Control and Prevention. https://www.cdc.gov/cmv/clinical/overview.html. Accessed December 27, 2023.~~

~~WHO recommendations for care of the preterm or low birth weight infant. Geneva: World Health Organization; 2022.~~

~~Kotton, CN, Kumar D, Caliendo AM, et al. The Third International Consensus Guidelines on the Management of Cytomegalovirus in Solid-organ Transplantation. Transplantation. 2018;102(6):900-931. Doi:10.1097/TP.0000000000021191~~

~~Taylor GH. Cytomegalovirus. Am Fam Physician. 2003;67(3):519-524.~~

~~Boppana, S and Hui, L. Cytomegalovirus infection in pregnancy. UpToDate. www.uptodate.com. Published October 5, 2023. Accessed December 27, 2023.~~

~~Gu W, Miller S, Chiu CY. Clinical Metagenomic Next-Generation Sequencing for Pathogen Detection. Annu Rev Pathol. 2019;14:319-338. doi: 10.1146/annurev-pathmechdis-012418-012751~~

~~Society for Maternal-Fetal Medicine (SMFM), Hughes BL, Gyamfi-Bannerman C. Diagnosis and antenatal management of congenital cytomegalovirus infection. *Am J Obstet Gynecol*. 2016;214(6):B5-B11. doi:10.1016/j.ajog.2016.02.042~~

2. ~~The American College of Obstetricians and Gynecologists. Cytomegalovirus, Parvovirus B19, Varicella Zoster, and Toxoplasmosis in Pregnancy Number 151. Published June 2015 (reaffirmed 2017). Accessed December 27, 2023.~~

Important Reminder

This clinical policy has been developed by appropriately experienced and licensed health care professionals based on a review and consideration of currently available generally accepted standards of medical practice; peer-reviewed medical literature; government agency/program approval status; evidence-based guidelines and positions of leading national health professional organizations; views of physicians practicing in relevant clinical areas affected by this clinical policy; and other available clinical information. LHCC makes no representations and accepts no liability with respect to the content of any external information used or relied upon in developing this clinical policy. This clinical policy is consistent with standards of medical practice current at the time that this clinical policy was approved.

The purpose of this clinical policy is to provide a guide to medical necessity, which is a component of the guidelines used to assist in making coverage decisions and administering benefits. It does not constitute a contract or guarantee regarding payment or results. Coverage decisions and the administration of benefits are subject to all terms, conditions, exclusions and limitations of the coverage documents (e.g., evidence of coverage, certificate of coverage, policy, contract of insurance, etc.), as well as to state and federal requirements and applicable LHCC administrative policies and procedures.

This clinical policy is effective as of the date determined by LHCC. The date of posting may not be the effective date of this clinical policy. This clinical policy may be subject to applicable legal and regulatory requirements relating to provider notification. If there is a discrepancy between the effective date of this clinical policy and any applicable legal or regulatory requirement, the requirements of law and regulation shall govern. LHCC retains the right to change, amend or withdraw this clinical policy, and additional clinical policies may be developed and adopted as needed, at any time.

This clinical policy does not constitute medical advice, medical treatment or medical care. It is not intended to dictate to providers how to practice medicine. Providers are expected to exercise professional medical judgment in providing the most appropriate care, and are solely responsible for the medical advice and treatment of members/enrollees. This clinical policy is not intended to recommend treatment for members/enrollees. Members/enrollees should consult with their treating physician in connection with diagnosis and treatment decisions.

Providers referred to in this clinical policy are independent contractors who exercise independent judgment and over whom LHCC has no control or right of control. Providers are not agents or employees of LHCC.

herein through the terms of their contracts. Where no such contract exists, providers, members/enrollees and their representatives agree to be bound by such terms and conditions by providing services to members/enrollees and/or submitting claims for payment for such services.