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Brucella Total Antibody

<ul style="list-style-type: none"> ▪ A single titers of less than or equal to 1:40 are not indicative of infection with <i>Brucella abortus</i>. ▪ A single titer of 1:80 or greater is presumptive evidence of infection. ▪ Evidence of a fourfold titer increase between acute and convalescent serum suggest a recent infection. ▪ Acute serum specimens should be collected as soon as possible after onset. Convalescent specimens should be collected 14-21 days thereafter. <p>Cross-reactions may occur between <i>Brucella abortus</i> and <i>Francisella tularensis</i> antigens and antisera. Therefore, both assays will be run on one specimen.</p>	<p><i>Test Type:</i> Agglutination</p> <p><i>Reference Range:</i> ≤1:40</p> <p><i>Specimen Requirements:</i> 1.0mL serum (VDHL Kit #13/14)</p> <p><i>Transport Temperature:</i> -20°C (dry ice)</p> <p><i>Set up:</i> Monday-Wednesday as needed</p> <p><i>Results Available:</i> Within 5 working days</p> <p><i>CPT Code:</i> 86622</p>	
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Campylobacter jejuni (see also Enteric Screen)

	<p><i>Test Type:</i> Culture</p> <p><i>Reference Range:</i> No <i>C. jejuni</i> recovered</p> <p><i>Specimen Requirements:</i> Stool preserved in Cary-Blair based transport media (VDHL Kit #1)</p> <p><i>Transport Temperature:</i> Room temperature, must be received within 4 days from date of collection</p> <p><i>Set up:</i> Monday-Friday</p> <p><i>Results Available:</i> 3 days from date of receipt</p> <p><i>CPT Code:</i> 87046/87077</p>	
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Chlamydia trachomatis and Neisseria gonorrhoeae

<p>Single specimens are tested for both organisms.</p> <p>This assay should <u>not</u> be used for test-of-cure specimens.</p>	<p><i>Test Type:</i> Nucleic Acid Amplified Test</p> <p><i>Reference Range:</i> Negative for <i>C. trachomatis</i> Negative for <i>N. gonorrhoeae</i></p> <p><i>Specimen Requirements:</i> Gen-Probe Aptima Combo 2 assay collection kit (urine or swab) (VDHL Kit #7)</p> <p><i>Transport Temperature:</i> 2-25°C within 60 days of collection for swabs; 30 days for urine specimens</p> <p><i>Set up:</i> Monday, Wednesday, Friday</p> <p><i>Results Available:</i> Within 4-7 working days</p> <p><i>CPT Code:</i> 87801</p>	
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<i>Corynebacterium</i> spp.		
Culture and identification of <i>Corynebacterium</i> spp.	<i>Test Type:</i> <i>Reference Range:</i> <i>Specimen Requirements:</i> <i>Transport Temperature:</i> <i>Set up:</i> <i>Results Available:</i> <i>CPT Code:</i>	Culture No <i>Corynebacterium</i> recovered Pure isolate Room temperature As needed 3 days from date of receipt 87070/87077

Cryptosporidia		
Enzyme immunoassay for <i>Cryptosporidium parvum</i> . This assay should <u>not</u> be used for test-of-cure specimens.	<i>Test Type:</i> <i>Reference Range:</i> <i>Specimen Requirements:</i> <i>Transport Temperature:</i> <i>Set up:</i> <i>Results Available:</i> <i>CPT Code:</i>	EIA Negative Stool in Sodium-acetate formalin (SAF) (VDHL Kit #2) or 10% buffered formalin. Specimen is acceptable for up to two months in these preservatives Room temperature Monday, Wednesday, Friday Within 3 working days of receipt 87328

Cyclospora		
	<i>Test Type:</i> <i>Reference Range:</i> <i>Specimen Requirements:</i> <i>Transport Temperature:</i> <i>Set up:</i> <i>Results Available:</i> <i>CPT Code:</i>	Acid-fast stain No <i>Cyclospora</i> seen Stool in Sodium-acetate formalin (SAF) (VDHL Kit #2) or 10% buffered formalin. Specimen is acceptable for up to two months in these preservatives Room temperature As needed Within 4 working days 88312

<i>E. coli</i> O157:H7 (see also Enteric Screen)		
Isolation and Identification of <i>E. coli</i> O157:H7	<i>Test Type:</i>	Culture
	<i>Reference Range:</i>	No <i>E. coli</i> O157:H7 isolated
	<i>Specimen Requirements:</i>	Stool preserved in Cary-Blair based transport media (VDHL Kit #1)
	<i>Transport Temperature:</i>	Room temperature, must be received within 4 days from date of collection
	<i>Set up:</i>	Monday – Friday
	<i>Results Available:</i>	3 days from date of receipt
	<i>CPT Code:</i>	87046/87077

<i>E. coli</i> Shiga-like Toxin		
For the detection of Shiga-like Toxins I and II (Verotoxins) in stool specimens	<i>Test Type:</i>	EIA
	<i>Reference Range:</i>	Negative
	<i>Specimen Requirements:</i>	Stool preserved in Cary-Blair based transport media (VDHL Kit #1)
	<i>Transport Temperature:</i>	Room temperature: must be received within 4 days from the date of collection
	<i>Set up:</i>	Monday, Wednesday, Friday
	<i>Results Available:</i>	Results available 24 hours after specimen setup
	<i>CPT Code:</i>	87427

Enteric Screen		
Culture for <i>Salmonella</i> , <i>Shigella</i> , <i>Campylobacter</i> , <i>Yersinia enterocolitica</i> , <i>E. coli</i> O157:H7, and non-O157:H7 Shiga-toxin producing <i>E. coli</i> .	<i>Test Type:</i>	Culture
	<i>Reference Range:</i>	No pathogens isolated
	<i>Specimen Requirements:</i>	Stool preserved in Cary-Blair based transport media (VDHL Kit #1)
	<i>Transport Temperature:</i>	Room temperature: must be received within 4 days from date of collection
	<i>Set up:</i>	Monday – Friday
	<i>Results Available:</i>	3 days from date of receipt
	<i>CPT Code:</i>	87046/87077

Giardia		
Enzyme immunoassay for <i>Giardia (lamblia) intestinalis</i> . This assay should <u>not</u> be used for test-of-cure specimens.	<i>Test Type:</i> <i>Reference Range:</i> <i>Specimen Requirements:</i> <i>Transport Temperature:</i> <i>Set up:</i> <i>Results Available:</i> <i>CPT Code:</i>	EIA Negative Stool in Sodium-acetate formalin (SAF) (VDHL Kit #2) or 10% buffered formalin. Specimen is acceptable for up to two months in these preservatives. Room Temperature Monday, Wednesday, Friday Within 3 working days of receipt 87329
Gonorrhea Culture		
Culture and identification of <i>Neisseria gonorrhoeae</i> , usually used for test-of-cure patients or in case of suspect sexual assault.	<i>Test Type:</i> <i>Reference Range:</i> <i>Specimen Requirements:</i> <i>Transport Temperature:</i> <i>Set up:</i> <i>Results Available:</i> <i>CPT Code:</i>	Culture No <i>N. gonorrhoeae</i> recovered Inoculated Jembec plate (VDHL Kit #8). Incubate plates 16-18 hours at 37°C prior to sending or deliver to laboratory w/n 1 hour of collection. Do not refrigerate. As needed 3 days from date of receipt 87077
Haemophilis influenzae		
Culture and identification of <i>Haemophilis influenzae</i>	<i>Test Type:</i> <i>Reference Range:</i> <i>Specimen Requirements:</i> <i>Transport Temperature:</i> <i>Set up:</i> <i>Results Available:</i> <i>CPT Code:</i>	Culture No <i>H. influenzae</i> recovered Pure isolate Room temperature As needed 3 days from date of receipt 87040/87077/87147

Hepatitis B Panel

<p>Includes:</p> <ul style="list-style-type: none"> • <input type="checkbox"/> Hepatitis B surface Antigen • <input type="checkbox"/> Hepatitis B core Total Antibody • <input type="checkbox"/> Hepatitis B surface Antibody <p>The Hepatitis B Core IgM Antibody test will be performed on all repeatedly reactive Hepatitis B core Total Antibody results.</p>	<p><i>Test Type:</i> EIA</p> <p><i>Reference Range:</i> Negative</p> <p><i>Specimen Requirements:</i> 1.50mL serum (VDHL Kit#13/14)</p> <p><i>Transport Temperature:</i> 2-25°C. Whole blood must be received within 7 days of collection.</p> <p><i>Set up:</i> Monday and Thursday</p> <p><i>Results Available:</i> 6-8 working days</p> <p><i>CPT Code:</i> 87340/86706/86704</p>	
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Hepatitis B Core Total Antibody (IgG and IgM) (Total Anti-HBc)

<p>Antibody to Hepatitis B core antigen is a marker of acute, chronic, or resolved HBV infection. It is not a marker of vaccine-induced-immunity. It may be used in pre-vaccination testing to determine previous exposure to HBV infection.</p> <p>IgG antibody subclass of anti-HBc is a marker of past or current infection with HBV. If it and HBsAg are both positive (in the absence of IgM anti-HBc), this indicates chronic HBV infection.</p>	<p><i>Test Type:</i> EIA</p> <p><i>Reference Range:</i> Non-reactive</p> <p><i>Specimen Requirements:</i> 1.0mL serum (VDHL Kit #13/14)</p> <p><i>Transport Temperature:</i> 2-25°C. Whole blood must be received within 7 days of collection.</p> <p><i>Set up:</i> Monday and Thursday</p> <p><i>Results Available:</i> 6-8 working days</p> <p><i>CPT Code:</i> 86704</p>	
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Hepatitis B Core IgM (IgM Anti-HBc)

<p>*Performed on all repeatedly reactive Hep B core Total antibody results.</p> <p>IgM antibody subclass of anti-HBc. A positive result indicates recent infection with HBV (<6 mos.). Its presence indicates acute infection.</p>	<p><i>Test Type:</i> EIA</p> <p><i>Reference Range:</i> Non-reactive</p> <p><i>Specimen Requirements:</i> 1.0mL serum (VDHL Kit #13/14)</p> <p><i>Transport Temperature:</i> 2-25°C. Whole blood must be received within 7 days of collection.</p> <p><i>Set up:</i> As needed</p> <p><i>Results Available:</i> 6-8 working days</p> <p><i>CPT Code:</i> 86705</p>	
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Hepatitis B Surface Antibody (Anti-HBs)

<p>Antibody to Hepatitis B surface antigen is a marker of immunity. Its presence indicates an immune response to HBV infection, an immune response to vaccination, or the presence of passively acquired antibody.</p>	<p><i>Test Type:</i> EIA</p> <p><i>Reference Range:</i> Non-reactive</p> <p><i>Specimen Requirements:</i> 1.0mL serum (VDHL Kit #13/14)</p> <p><i>Transport Temperature:</i> 2-25°C. Whole blood must be received within 7 days of collection.</p> <p><i>Set up:</i> Monday and Thursday</p> <p><i>Results Available:</i> 6-8 working days</p> <p><i>CPT Code:</i> 86706</p>
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Hepatitis B Surface Antibody Quantitation

<p>Anti-HBs is the only easily measurable correlate of vaccine-induced protection. Immunocompetent persons who achieve anti-HBs concentrations ≥ 10 mIU/mL after pre-exposure vaccination have virtually complete protection against both acute disease and chronic infection even if anti-HBs concentrations subsequently decline to < 10 mIU/mL .</p>	<p><i>Test Type:</i> EIA</p> <p><i>Reference Range:</i> Non-reactive</p> <p><i>Specimen Requirements:</i> 1.0mL serum (VDHL Kit #13/14)</p> <p><i>Transport Temperature:</i> 2-25°C. Whole blood must be received within 7 days of collection.</p> <p><i>Set up:</i> As needed</p> <p><i>Results Available:</i> Within 6-8 working days</p> <p><i>CPT Code:</i> 86706</p>
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Hepatitis B Surface Antigen

<p>Hepatitis B surface antigen is a marker of infectivity. Its presence indicates either acute or chronic HBV infection.</p> <p>Repeatedly Reactive HBsAg results are confirmed by neutralization.</p>	<p><i>Test Type:</i> EIA</p> <p><i>Reference Range:</i> Non-reactive</p> <p><i>Specimen Requirements:</i> 1.0mL serum (VDHL Kit #13/14)</p> <p><i>Transport Temperature:</i> 2-25°C. Whole blood must be received within 7 days of collection.</p> <p><i>Set up:</i> Monday and Thursday</p> <p><i>Results Available:</i> Within 6-8 working days</p> <p><i>CPT Code:</i> 87340/87341</p>
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Hepatitis C Antibody (Screen)

<p>Any specimen with a signal to cut-off ratio of >3.8 is considered positive and no supplemental testing will be done. For those positive specimens with s/co ratios of 3.8 or less the specimen will be sent to a reference laboratory for supplemental RIBA (Recombinant immunoblot assay) testing.</p>	<i>Test Type:</i>	EIA
	<i>Reference Range:</i>	Non-reactive
	<i>Specimen Requirements:</i>	1.0mL serum (VDHL Kit #13/14)
	<i>Transport Temperature:</i>	2-25°C. Whole blood must be received within 7 days of collection.
	<i>Set up:</i>	Tuesday and Thursday
	<i>Results Available:</i>	Within 4-6 working days
	<i>CPT Code:</i>	86803

HIV-1 Oral Fluid

<p>Confirmatory HIV-1 western blot testing will be performed on all HIV-/HIV-2 EIA repeatedly reactive specimens.</p>	<i>Test Type:</i>	EIA
	<i>Reference Range:</i>	Non-reactive
	<i>Specimen Requirements:</i>	Oral mucosal exudates collected with the OraSure collection kit.
	<i>Transport Temperature:</i>	2-25°C
	<i>Set up:</i>	Monday, Wednesday, Friday
	<i>Results Available:</i>	Within 4-5 working days for those specimens not needing repeat testing.
	<i>CPT Code:</i>	86701

HIV-1 Oral Fluid Western Blot

<p>Confirmation test for HIV-1.</p> <p>Performed on all HIV-1 Oral Fluid repeatedly reactive results.</p> <p>For HIV-1 western blot test only requests: Please include screen test results on the requisition form.</p>	<i>Test Type:</i>	Western Blot
	<i>Reference Range:</i>	Negative
	<i>Specimen Requirements:</i>	Oral mucosal exudates collected with the OraSure collection kit.
	<i>Transport Temperature:</i>	2-25°C
	<i>Set up:</i>	As needed
	<i>Results Available:</i>	Within 10 working days.
	<i>CPT Code:</i>	86689

HIV-1/HIV-2 (Screen)

<p>Confirmatory HIV-1 western blot testing will be performed on all HIV-/HIV-2 EIA repeatedly reactive specimens.</p>	<p><i>Test Type:</i> EIA</p> <p><i>Reference Range:</i> Non-reactive</p> <p><i>Specimen Requirements:</i> 1.0mL serum (VDHL Kit #13/14)</p> <p><i>Transport Temperature:</i> 2-25°C. Whole blood must be received within 7 days of collection.</p> <p><i>Set up:</i> Monday, Wednesday, Friday</p> <p><i>Results Available:</i> Within 4 working days for Non-reactive results Within 6 working days for those specimens needing Western Blot</p> <p><i>CPT Code:</i> 86703</p>	
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HIV-1 Western Blot

<p>Confirmation test for HIV-1.</p> <p>Confirmatory western blot testing will be performed on all HIV-1/HIV-2 EIA repeatedly reactive specimens.</p> <p>For HIV-1 western blot test only requests: Please include screen test results on the requisition form.</p>	<p><i>Test Type:</i> Western blot</p> <p><i>Reference Range:</i> Negative</p> <p><i>Specimen Requirements:</i> 1.0mL serum (VDHL Kit #13/14)</p> <p><i>Transport Temperature:</i> 2-25°C. Whole blood must be received within 7 days of collection.</p> <p><i>Set up:</i> As needed</p> <p><i>Results Available:</i> Within 6 working days</p> <p><i>CPT Code:</i> 86689</p>	
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Influenza A/B Culture (For Surveillance Purposes Only)		
<ul style="list-style-type: none"> ▪ Identification of Influenza A or Influenza B in culture. ▪ Specimens accepted from Sentinel Providers, Early Aberration Reporting System(EARS) Providers, and Long Term Care Facilities or other Institutions only. ▪ Suspect cases of Pandemic or Avian Influenza will be accepted for PCR testing with prior approval from Epidemiology. <ul style="list-style-type: none"> ▪ See also <u>Influenza PCR</u> <p>Please contact Epidemiology at 1-800-640-4374 or 863-7240 for guidelines.</p> <p>Specimens will NOT be tested without the following information:</p> <ul style="list-style-type: none"> ▪ Travel history ▪ Date of collection ▪ Date of onset ▪ Vaccination history 	<p><i>Test Type:</i> Culture</p> <p><i>Reference Range:</i> Influenza A and Influenza B not detected</p> <p><i>Specimen Requirements:</i> Throat swab and/or Nasopharyngeal swab (VDHL Kit #9)</p> <p><i>Transport Temperature:</i> 2-8 °C to arrive within 3 days of collection or freeze specimen at -70°C and ship on dry ice. Time in transit should not exceed 24 hours.</p> <p><i>Set up:</i> Tuesday and Friday</p> <p><i>Results Available:</i> 3 days after set up</p> <p><i>CPT Code:</i> 87275/87276</p>	

Influenza A PCR (For Surveillance Purposes Only)		
<ul style="list-style-type: none"> ▪ Suspect cases of Pandemic or Avian Influenza will only be accepted for PCR testing with prior approval from Epidemiology. <p>Please contact Epidemiology at 1-800-640-4374 or 863-7240 for guidelines.</p> <p>Specimens will NOT be tested without the following information:</p> <ul style="list-style-type: none"> ▪ Travel history ▪ Date of collection ▪ Date of onset ▪ Vaccination history <p>Swabs with calcium alginate or cotton tips and wooden shafts will not be tested.</p>	<p><i>Test Type:</i> PCR</p> <p><i>Reference Range:</i> Influenza A/H5 (Asian lineage) RNA not detected.</p> <p><i>Specimen Requirements:</i> Throat swab and/or Nasopharyngeal swab (VDHL Kit #9)</p> <p><i>Transport Temperature:</i> Contact the VDH Lab or Epidemiology for guidance.</p> <p><i>Set up:</i> As needed</p> <p><i>Results Available:</i> 1 working day</p> <p><i>CPT Code:</i> 87798</p>	

Lead, Adult Blood (Diagnostic)		
	<i>Test Type:</i> <i>Reference Range:</i> <i>Specimen Requirements:</i> <i>Transport Temperature:</i> <i>Set up:</i> <i>Results Available:</i> <i>CPT Code:</i>	Graphite Furnace Atomic Absorption <40.0µg/dL 100.0µL minimum whole blood; EDTA anticoagulant Refrigerate when not in transit (Recommended) Monday – Thursday Within 5 working days 83655

Lead, Childhood Blood (Diagnostic)		
	<i>Test Type:</i> <i>Reference Range:</i> <i>Specimen Requirements:</i> <i>Set up:</i> <i>Transport Temperature:</i> <i>Results Available:</i> <i>CPT Code:</i>	Graphite Furnace Atomic Absorption <10.0µg/dL 100.0µL minimum whole blood; EDTA anticoagulant Monday – Thursday Refrigerate when not in transit (Recommended) Within 5 working days 83655

Legionella Culture		
Isolation and Identification of <i>Legionella pneumophila</i>	<i>Test Type:</i> <i>Reference Range:</i> <i>Specimen Requirements:</i> <i>Transport Temperature:</i> <i>Results Available:</i> <i>CPT Code:</i>	Culture No <i>L. pneumophila</i> Isolated Sputum, pleural fluid, transtracheal aspirates, bronchial washings. (VDHL Kit #6) 2-8°C within 3 days of collection. If more than 3 days, ship frozen on dry ice. 7 days 87070/87077

Legionella IgG Antibody		
<p><i>Legionella pneumophila</i> serogroups 1-6</p> <ul style="list-style-type: none"> ▪ A standing or single titer of greater than or equal to 1:256 provides presumptive evidence of infection at an undetermined time. ▪ Solid evidence for a diagnosis of legionellosis is obtained when sero-conversion occurs with paired sera. A four-fold or greater rise in titer between the acute (within the first week) and convalescent (3-6 weeks after onset) specimen is an indicator of current infection. 	<p><i>Test Type:</i> IFA</p> <p><i>Reference Range:</i> Titer < 1:64</p> <p><i>Specimen Requirements:</i> 0.5mL serum (VDHL Kit #13/14)</p> <p><i>Transport Temperature:</i> 2-25°C. Whole blood must be received within 7 days of collection.</p> <p><i>Set up:</i> Tuesday and Thursday</p> <p><i>Results Available:</i> Within 5-7 working days</p> <p><i>CPT Code:</i> 86713</p>	
Legionella Urine Antigen		
<p><i>Legionella pneumophila</i> serogroup 1</p> <p>Results are reported as presumptive only.</p>	<p><i>Test Type:</i> Immunochromatographic membrane assay</p> <p><i>Reference Range:</i> Presumptive Negative</p> <p><i>Specimen Requirements:</i> Urine collected in standard containers.</p> <p><i>Transport Temperature:</i> 2-8°C. Specimens should be received at VDHL within 24 hours of collection.</p> <p><i>Set up:</i> As needed</p> <p><i>Results Available:</i> 1 day (verbal), 3 working days (written)</p> <p><i>CPT Code:</i> 87450</p>	
Listeria spp.		
<p>Culture and identification of <i>Listeria</i> spp.</p>	<p><i>Test Type:</i> Culture</p> <p><i>Reference Range:</i> No <i>Listeria</i> recovered</p> <p><i>Specimen Requirements:</i> Pure isolate</p> <p><i>Transport Temperature:</i> Room temperature</p> <p><i>Set up:</i> As needed</p> <p><i>Results Available:</i> 3 days from date of receipt</p> <p><i>CPT Code:</i> 87040/87070/87077</p>	

Measles (Rubeola) IgG Antibody (Diagnostic)		
<p>*Specimen: 1.0mL of acute (at onset of symptoms) and convalescent (2 weeks later) serum.</p> <p>Report all suspect cases to Epidemiology at 1-800-640-4374 or 863-7240 before submitting specimen.</p>	<p><i>Test Type:</i> EIA</p> <p><i>Reference Range:</i> Measles IgG antibody not detected</p> <p><i>Specimen Requirements:</i> 1.0mL Acute serum* 1.0mL Convalescent serum* (VDHL Kit #13/14)</p> <p><i>Transport Temperature:</i> 2-25°C. Specimen should be received at VDHL within 2 days.</p> <p><i>Set up:</i> As needed</p> <p><i>Results Available:</i> 1 day (verbal), 3 working days (written)</p> <p><i>CPT Code:</i> 86765</p>	
Measles (Rubeola) IgG Antibody (Immune status)		
<p>A reactive result indicates immunity to Rubeola infection.</p>	<p><i>Test Type:</i> EIA</p> <p><i>Reference Range:</i> Measles IgG antibody not detected</p> <p><i>Specimen Requirements:</i> 1.0mL (minimum 0.25mL) serum (VDHL Kit #13/14)</p> <p><i>Transport Temperature:</i> 2-25°C. Specimen should be received at VDHL within 2 days.</p> <p><i>Set up:</i> Tuesday and Friday</p> <p><i>Results Available:</i> Within 6 working days</p> <p><i>CPT Code:</i> 86765</p>	
Measles (Rubeola) IgM Antibody (Diagnostic)		
<p>Report all suspect cases to Epidemiology at 1-800-640-4374 or 863-7240 before submitting specimen.</p> <p>*1.0mL serum drawn at least 3 days after rash</p>	<p><i>Test Type:</i> Capture EIA</p> <p><i>Reference Range:</i> Measles IgM antibody not detected</p> <p><i>Specimen Requirements:</i> 1.0mL serum* (VDHL Kit#13/14)</p> <p><i>Transport Temperature:</i> 2-25°C. Specimen should be received at VDHL within 2 days.</p> <p><i>Set up:</i> As needed</p> <p><i>Results Available:</i> 1 day (verbal) 3 working days (written)</p> <p><i>CPT Code:</i> 86765</p>	

Mumps IgG antibody (Immune status)

<p>A reactive result indicates immunity to Mumps infection.</p>	<p><i>Test Type:</i> EIA</p> <p><i>Reference Range:</i> Mumps antibody not detected</p> <p><i>Specimen Requirements:</i> 1.0mL (minimum 0.25mL) serum (VDHL Kit #13/14)</p> <p><i>Transport Temperature:</i> 2-25°C. Specimen should be received at VDHL within 2 days.</p> <p><i>Set up:</i> Tuesday and Friday</p> <p><i>Results Available:</i> Within 6 working days</p> <p><i>CPT Code:</i> 86735</p>	
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Mycology

<ul style="list-style-type: none"> ▪□ Mycology specimens are accepted only from specimens also submitted for mycobacterial analysis. ▪□ Yeasts are identified by the Vitek card system. ▪□ Filamentous fungi are referred to a reference laboratory. 	<p><i>Test Type:</i> Culture</p> <p><i>Reference Range:</i> No yeast recovered</p> <p><i>Specimen Requirements:</i></p> <p>Sputum: > 2.0mL (VDHL Kit #6)</p> <p>CSF: > 2.0mL</p> <p>Tissue: Sterile container with a small amount of sterile saline</p> <p>Blood: Collect in SPS tube. Do not use sodium heparin as an anti-coagulant</p> <p>Pleural fluid: > 2.0mL</p> <p>Bronchial wash /lavage: > 2.0mL</p> <p><u>Swab specimens will not be accepted</u></p> <p><i>Transport Temperature:</i> 2-8°C</p> <p><i>Set up:</i> As needed</p> <p><i>Results Available:</i> 21-28 days</p> <p><i>CPT Code:</i> 87102</p>	
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Mycobacteria	
<ul style="list-style-type: none"> ▪□ Standard procedures are used for the staining and culture of all mycobacteria. ▪□ Specimens are inoculated to both solid and liquid media using conventional and Versa-Trek ESP methods. ▪□ Acid fast bacilli growing in culture are identified by both Gen-Probe DNA and biochemical identification methods. ▪□ AFB positive smear specimens are automatically tested by Nucleic Acid Amplification for <i>Mycobacteria tuberculosis complex</i>. ▪□ Specimens are set up Monday –Friday and smear results are faxed to the provider the same day as specimen receipt. 	<p><i>Test Type:</i> (see left)</p> <p><i>Reference Range:</i> Smear: No acid-fast bacilli seen Culture: No mycobacteria recovered</p> <p><i>Specimen Requirements:</i> Sputum: > 2.0mL, three specimens, each more than 24 hours apart (VDHL Kit #6)</p> <p>CSF: > 2.0mL (VDHL Kit #6)</p> <p>Tissue: Sterile container with a small amount of sterile saline (VDHL Kit #6)</p> <p>Blood: Collect in SPS tube. <u>Do not use sodium heparin as an anti-coagulant</u></p> <p>Pleural fluid: > 2.0mL (VDHL Kit #6)</p> <p>Bronchial wash /lavage: > 2.0mL (VDHL Kit #6)</p> <p>Urine: >40.0mL. First morning, clean catch. <u>Do not pool specimens.</u> (VDHL Kit #6)</p> <p><i>Swab specimens will not be accepted.</i></p> <p><i>Transport Temperature:</i> 2-8°C</p> <p><i>Set up:</i> Monday – Friday</p> <p><i>Results Available:</i> Culture results : 6 weeks Smear results within 24 hours of arrival at VDHL (except weekends) Nucleic Acid Amp: 24 hours</p> <p><i>CPT Code:</i> Culture: 87118 Acid-Fast Smear: 87206 Nucleic acid Amp: 87556</p>

<i>Mycobacteria tuberculosis</i> Amplified Direct Test		
<ul style="list-style-type: none"> ▪ This assay uses the Gen-Probe <i>Mycobacteria tuberculosis</i> complex Direct Test (MTD), an amplified diagnostic test for the detection of <i>M. tuberculosis</i> complex RNA directly from respiratory specimens. The MTD test is intended for use in evaluating AFB smear positive specimens from untreated patients suspected of having tuberculosis. ▪ This test is automatically performed on all respiratory specimens that are AFB smear positive. ▪ The MTD test may be ordered, <u>if the specimen is smear negative and the patient is suspected of having tuberculosis</u>. Please contact the VDHL prior to sending the specimen. ▪ A negative result does not exclude the possibility of isolating <i>M. tuberculosis</i> complex from the specimen. 	<p><i>Test Type:</i> Nucleic Acid Amplification</p> <p><i>Reference Range:</i> Negative for <i>M. tuberculosis</i> complex RNA</p> <p><i>Specimen Requirements:</i> Sputum: > 3.0mL Bronchial wash /lavage: > 2.0mL (Grossly bloody specimens are NOT recommended, and may result in invalid results.)</p> <p><i>Transport Temperature:</i> Specimens must be refrigerated and reach the laboratory within 72 hours of collection.</p> <p><i>Set up:</i> As needed</p> <p><i>Results Available:</i> 24 hours</p> <p><i>CPT Code:</i> 87556</p>	

<i>M. tuberculosis</i> Antimicrobial Susceptibility AFB Primary Drug Panel		
<p><i>M. tuberculosis</i> drug panel includes:</p> <ul style="list-style-type: none"> ▪ Ethambutol, Isoniazid, Rifampin, and PZA by Trek Diagnostics ESP® method. <p>Specimens can be forwarded to a reference laboratory for second-line drug susceptibility testing upon request.</p>	<p><i>Test Type:</i> (see left)</p> <p><i>Reference Range:</i> By report</p> <p><i>Specimen Requirements:</i> Pure culture: safely contained</p> <p><i>Transport Temperature:</i> Isolate: room temperature</p> <p><i>Set up:</i> As needed</p> <p><i>Results Available:</i> 14-21 days</p> <p><i>CPT Code:</i> 87184/87188</p>	

<i>Neisseria gonorrhoeae</i> and <i>Chlamydia trachomatis</i>		
<p>Single specimens are tested for both organisms.</p> <p>This assay should not be used for test-of-cure specimens.</p>	<p><i>Test Type:</i></p> <p><i>Reference Range:</i></p> <p><i>Specimen Requirements:</i></p> <p><i>Transport Temperature:</i></p> <p><i>Set up:</i></p> <p><i>Results Available:</i></p> <p><i>CPT Code:</i></p>	<p>Nucleic Acid Amplified Test</p> <p>Negative for <i>C. trachomatis</i> Negative for <i>N. gonorrhoeae</i></p> <p>Gen-Probe Aptima Combo 2 assay collection kit (urine or swab) (VDHL Kit #7)</p> <p>2-25°C within 60 days of collection for swabs, 30 days for urine specimens</p> <p>Monday, Wednesday, Friday</p> <p>Within 4-7 working days</p> <p>87801</p>

<i>Neisseria gonorrhoeae</i> Culture		
<p>Culture and identification of <i>Neisseria gonorrhoeae</i>, usually used for test-of-cure patients or in case of suspect sexual assault.</p>	<p><i>Test Type:</i></p> <p><i>Reference Range:</i></p> <p><i>Specimen Requirements:</i></p> <p><i>Transport Temperature:</i></p> <p><i>Set up:</i></p> <p><i>Results Available:</i></p> <p><i>CPT Code:</i></p>	<p>Culture</p> <p>No <i>N. gonorrhoeae</i> recovered</p> <p>Inoculated Jembec plate (VDHL Kit #8).</p> <p>Incubate plates 16-18 hours at 37°C prior to sending or deliver to laboratory w/n 1 hour of collection. <u>Do not refrigerate.</u></p> <p>As needed</p> <p>3 days from date of receipt</p> <p>87077</p>

<i>Neisseria meningitidis</i>		
<p>Identification and serotyping of <i>Neisseria meningitidis</i></p>	<p><i>Test Type:</i></p> <p><i>Reference Range:</i></p> <p><i>Specimen Requirements:</i></p> <p><i>Transport Temperature:</i></p> <p><i>Set up:</i></p> <p><i>Results Available:</i></p> <p><i>CPT Code:</i></p>	<p>Identification and serotyping</p> <p>No <i>N. meningitidis</i> recovered</p> <p>Pure isolate on Chocolate slant</p> <p>Room temperature</p> <p>As needed</p> <p>24 hours from date of receipt</p> <p>87040/87077</p>

Norovirus		
<p><u>For investigational use only.</u></p> <p>Please contact Epidemiology at 1-800-640-4374 or 863-7240 <u>before</u> submitting specimen.</p>	<p><i>Test Type:</i> PCR</p> <p><i>Reference Range:</i> No Norovirus nucleic acid detected</p> <p><i>Specimen Requirements:</i> Raw stool (VDHL Kit #23)</p> <p><i>Transport Temperature:</i> 2-8°C within 24 hours of collection</p> <p><i>Set up:</i> As needed</p> <p><i>Results Available:</i> 5 working days</p> <p><i>CPT Code:</i> 87798</p>	
Ova & Parasites (O&P)		
<p>Concentrated and permanent slides. Iron hemotoxilyn stain, and iodine stain for wet mounts</p>	<p><i>Test Type:</i> Microscopic examination</p> <p><i>Reference Range:</i> No parasites seen</p> <p><i>Specimen Requirements:</i> Stool in Sodium-acetate formalin (SAF) (VDHL Kit #2) <u>or</u> 10% buffered formalin. Specimen is acceptable for up to two months in these preservatives.</p> <p><i>Transport Temperature:</i> Room temperature</p> <p><i>Set up:</i> Monday – Friday</p> <p><i>Results Available:</i> Within 6 working days</p> <p><i>CPT Code:</i> 88313</p>	
Pertussis Culture		
<p>Isolation and identification of <i>Bordetella pertussis</i></p>	<p><i>Test Type:</i> Culture</p> <p><i>Reference Range:</i> No <i>B. pertussis</i> recovered</p> <p><i>Specimen Requirements:</i> Nasopharyngeal swab: Inoculate one Regan Lowe plate, then place swab into Regan Lowe transport tube (VDHL Kit #5)</p> <p><i>Transport Temperature:</i> 2-8°C within 24 hours of collection</p> <p><i>Set up:</i> As needed</p> <p><i>Results Available:</i> 7 days</p> <p><i>CPT Code:</i> 87070/87077</p>	

Pinworm		
<p>Specimen needs to be taken first thing in the morning, prior to rising.</p>	<p><i>Test Type:</i></p> <p><i>Reference Range:</i></p> <p><i>Specimen Requirements:</i></p> <p><i>Transport Temperature:</i></p> <p><i>Set up:</i></p> <p><i>Results Available:</i></p> <p><i>CPT Code:</i></p>	<p>Microscopic exam</p> <p>No pinworm seen</p> <p>Pinworm paddle (VDHL Kit #17) or scotch tape slide.</p> <p>Room temperature</p> <p>As needed</p> <p>Within 24 hours</p> <p>87172</p>

Rotavirus antigen		
<p>For use by <u>Designated Providers only</u> at this time.</p>	<p><i>Test Type:</i></p> <p><i>Reference Range:</i></p> <p><i>Specimen Requirements:</i></p> <p><i>Transport Temperature:</i></p> <p><i>Set up:</i></p> <p><i>Results Available:</i></p> <p><i>CPT Code:</i></p>	<p>EIA</p> <p>Negative</p> <p>Raw stool (VDHL Kit #20)</p> <p>2-8°C within 72 hours of collection</p> <p>Monday, Wednesday, Friday</p> <p>Within 24 hours</p> <p>87425</p>

Rubella IgG Antibody		
<ul style="list-style-type: none"> ▪□ Patient Rubella IgG results equal to or greater than 10 IU/mL indicate past exposure to either rubella virus or vaccine, and probable protection from clinical infection. ▪□ Antibody levels less than 10 IU/mL may be insufficient to provide protection from rubella virus infection. ▪□ For diagnosis of current or recent rubella infection, obtain paired sera (acute and convalescent). The acute specimen should be collected as soon as possible after the onset of a rash or at the time of exposure. The convalescent specimen should be obtained from 10-21 days after the onset of a rash or at least 30 days after exposure in the absence of clinical symptoms associated with a rubella infection. A four-fold or greater rise in antibody titer or seroconversion is indicative of a primary or recent rubella infection. ▪□ Seroconversion may also be seen after a vaccination procedure. Some persons previously exposed to rubella may demonstrate a rise in antibody titer. This is thought to represent re-infection and these patients rarely develop symptoms. 	<p><i>Test Type:</i></p> <p><i>Reference Range:</i></p> <p><i>Specimen Requirements:</i></p> <p><i>Transport Temperature:</i></p> <p><i>Set up:</i></p> <p><i>Results Available:</i></p> <p><i>CPT Code:</i></p>	<p>Latex Agglutination</p> <p>Rubella IgG antibodies <10 mIU/mL</p> <p>0.5mL serum (VDHL Kit #13/14)</p> <p>2-25°C. Specimen should be received at VDHL within 2 days.</p> <p>Monday, Wednesday, Friday</p> <p>Within 6 working days</p> <p>86762</p>

Rubella IgM Antibody		
<p>Report all suspect cases to Epidemiology at 1-800-640-4374 or 863-7240 prior to submitting specimen.</p>	<i>Test Type:</i>	EIA
	<i>Reference Range:</i>	Rubella IgM antibody not detected
	<i>Specimen Requirements:</i>	1.0mL serum (VDHL Kit #13/14)
	<i>Transport Temperature:</i>	2-25°C. Specimen should be received at VDHL within 2 days.
	<i>Set up:</i>	As needed
	<i>Results Available:</i>	1 day (verbal), 3 days(written)
	<i>CPT Code:</i>	86762

Salmonella spp. (see also Enteric Screen)		
<p>Isolation and Identification of <i>Salmonella</i> spp.</p>	<i>Test Type:</i>	Culture
	<i>Reference Range:</i>	No <i>Salmonella</i> isolated
	<i>Specimen Requirements:</i>	Stool preserved in Cary-Blair based transport media (VDHL Kit #1)
	<i>Set up:</i>	Monday – Friday
	<i>Transport Temperature:</i>	Room temperature: must be received within 4 days from date of collection
	<i>Results Available:</i>	3 days from date of receipt
	<i>CPT Code:</i>	87045/87077

Shigella spp. (see also Enteric Screen)		
<p>Isolation and Identification of <i>Shigella</i> spp.</p>	<i>Test Type:</i>	Culture
	<i>Reference Range:</i>	No <i>Shigella</i> isolated
	<i>Specimen Requirements:</i>	Stool preserved in Cary-Blair based transport media (VDHL Kit #1)
	<i>Transport Temperature:</i>	Room temperature: must be received within 4 days from date of collection
	<i>Set up:</i>	Monday – Friday
	<i>Results Available:</i>	3 days from date of receipt
	<i>CPT Code:</i>	87045/87077

Syphilis (RPR) (screen)		
<p>The Rapid Plasma Reagin (RPR) is a macroscopic, nontreponemal, screening procedure for the serologic detection of syphilis.</p> <p>Reactive RPR specimens are quantitated and a FTA-ABS test is performed to confirm reactive RPR results.</p>	<i>Test Type:</i>	Agglutination
	<i>Reference Range:</i>	Non-reactive
	<i>Specimen Requirements:</i>	0.5mL serum (VDHL Kit #13/14)
	<i>Transport Temperature:</i>	2-25°C. Specimen should be received at VDHL within 2 days.
	<i>Set up:</i>	Monday, Wednesday, Friday
	<i>Results Available:</i>	Within 4 working days for negative results
	<i>CPT Code:</i>	86592

Syphilis Fluorescent Treponemal Antibody-Absorption (FTA-ABS)		
<p>FTA-ABS test has never been and is not now being recommended as a routine screening test for syphilis. Its recommended use is to confirm the reactive results of a sensitive, but less specific screening test for syphilis, such as the RPR or VDRL-CSF or as a specific diagnostic test in patients with signs or symptoms suggestive of late syphilis.</p>	<i>Test Type:</i>	Indirect Fluorescent Antibody
	<i>Reference Range:</i>	Non-reactive
	<i>Specimen Requirements:</i>	0.5mL serum (VDHL Kit #13/14)
	<i>Set up:</i>	Tuesday and Thursday
	<i>Transport Temperature:</i>	2-25°C. Specimen should be received at VDHL within 5 days.
	<i>Results Available:</i>	Within 6 working days
<i>CPT Code:</i>	86781	

Syphilis VDRL		
<p>The Venereal Disease Research Laboratory (VDRL) test is a slide micro-flocculation test for syphilis.</p>	<i>Test Type:</i>	Flocculation
	<i>Reference Range:</i>	Non-reactive
	<i>Specimen Requirements:</i>	0.5mL Cerebrospinal Fluid (CSF) ONLY
	<i>Set up:</i>	Tuesday and Friday
	<i>Transport Temperature:</i>	2-25°C. Specimen should be received at VDHL within 5 days.
	<i>Results Available:</i>	Within 5 working days
<i>CPT Code:</i>	86592	

Toxoplasma IgG Antibody		
<p>No single titer is diagnostic.</p> <p>The presence of active infection with <i>Toxoplasma gondii</i> may be confirmed by demonstrating a 4-fold or greater rise in IgG in a second serum specimen drawn three weeks after the first.</p> <p>A stable titer (+/- a single two-fold dilution) between acute and convalescent sera indicates past exposure.</p>	<p><i>Test Type:</i> IFA</p> <p><i>Reference Range:</i> <1:16</p> <p><i>Specimen Requirements:</i> 1.0mL serum (VDHL Kit #13/14)</p> <p><i>Set up:</i> Tuesday and Friday</p> <p><i>Transport Temperature:</i> 2-25°C. Specimen should be received at VDHL within 2 days.</p> <p><i>Results Available:</i> Within 5 working days</p> <p><i>CPT Code:</i> 86777</p>	

Toxoplasma IgM Antibody		
<p>The <i>Toxoplasma gondii</i> IgM EIA will be performed on specimens with an IgG titer of 1:256 or greater.</p>	<p><i>Test Type:</i> EIA</p> <p><i>Reference Range:</i> Negative</p> <p><i>Specimen Requirements:</i> 0.5mL serum (VDHL Kit #13/14)</p> <p><i>Set up:</i> As needed</p> <p><i>Transport Temperature:</i> 2-25°C. Specimen should be received at VDHL within 2 days.</p> <p><i>Results Available:</i> Within 6 working days</p> <p><i>CPT Code:</i> 86778</p>	

Tularemia Total Antibody		
<ul style="list-style-type: none"> ▪ A single titer of 1:20 or below are usually not diagnostic for infection with <i>Francisella tularensis</i> ▪ A single titer of 1:20 to 1:80 without clinical symptoms suggest of infection at some past time. These titers can persist for years following infection. ▪ A single titer of 1:20 to 1:80 with fever and symptoms indicates recent infection. ▪ A single titer of 1:160 or greater is presumptive evidence of infection. ▪ Acute serum specimens should be collected 2 weeks after onset. Convalescent specimens should be taken 2 weeks after the acute ▪ Evidence of a fourfold titer difference between acute and convalescent serum suggest a recent infection. <p>Cross-reactions may occur between <i>Brucella abortus</i> and <i>Francisella tularensis</i> antigens and antisera. Therefore, both assays will be run on one specimen.</p>	<p><i>Test Type:</i> Agglutination</p> <p><i>Reference Range:</i> <1:20</p> <p><i>Specimen Requirements:</i> 1.0mL serum (VDHL Kit #13/14)</p> <p><i>Set up:</i> Monday – Wednesday as needed</p> <p><i>Transport Temperature:</i> -20°C (dry ice)</p> <p><i>Results Available:</i> Within 4 working days</p> <p><i>CPT Code:</i> 86668</p>	

Varicella IgG Antibody		
A reactive result indicates immunity to Varicella infection	<i>Test Type:</i>	EIA
	<i>Reference Range:</i>	Varicella antibody not detected
	<i>Specimen Requirements:</i>	1.0mL (minimum 0.25mL) serum (VDHL Kit #13/14)
	<i>Set up:</i>	Tuesday and Friday
	<i>Transport Temperature:</i>	2-25°C. Specimen should be received at VDHL within 2 days.
	<i>Results Available:</i>	Within 6 working days
	<i>CPT Code:</i>	86787

Vibrio spp.		
Isolation and Identification of <i>Vibrio</i> spp.	<i>Test Type:</i>	Culture
	<i>Reference Range:</i>	No <i>Vibrio</i> isolated
	<i>Specimen Requirements:</i>	Stool preserved in Cary-Blair based transport media (VDHL Kit #1)
	<i>Set up:</i>	As needed
	<i>Transport Temperature:</i>	Room temperature: must be received within 4 days from date of collection
	<i>Results Available:</i>	3 days from date of receipt
	<i>CPT Code:</i>	87046/87077

<i>Yersinia enterocolitica</i> (see also Enteric Screen)		
Isolation and Identification of <i>Yersinia enterocolitica</i> .	<i>Test Type:</i>	Culture
	<i>Reference Range:</i>	No <i>Y. enterocolitica</i> isolated
	<i>Specimen Requirements:</i>	Stool preserved in Cary-Blair based transport media (VDHL Kit #1)
	<i>Set up:</i>	Monday – Friday
	<i>Transport Temperature:</i>	Room temperature: must be received within 4 days from date of collection
	<i>Results Available:</i>	3 days from date of receipt
	<i>CPT Code:</i>	87045/87077