Appendix C: DSHS Laboratory Resources

• Basic Health Department Recommendations
• Getting a Lab Submitter ID and Submission Forms
• How To Order Specimen Collection Supplies
• Basic Steps To Ship Specimens
• Preferred Specimen Summary Table
BASIC HEALTH DEPARTMENT RECOMMENDATIONS

Health departments should be prepared to collect or to assist with the collection of specimens to support public health investigations and outbreak response. While large hospitals and clinic systems may have supplies on hand and experience with shipping specimens, many small clinics and private provider offices do not. It can also take 24 to 72 hours to coordinate and ship specimen collection materials to a health department. Given the short time period for collecting certain priority specimens (e.g., measles, suspected variant/novel flu, etc.), it is essential for health departments to maintain at least a handful of supplies that can be used while additional supplies are being ordered. If your local or regional health department is in need of specimen collection supplies, DSHS EAIDB can coordinate for specimen collection kits to be sent to your location.

Health Department Checklist

- Have a DSHS Laboratory submitter ID.
  - See ‘Getting a Lab Submitter ID and Submission Forms’ section.
- Have an electronic copy of each of the DSHS Laboratory submission forms with the health department’s submitter ID pre-filled (especially the G-2A, G-2B and G-2V).
  - Make sure you have the most up-to-date DSHS Laboratory Submission Form
  - See ‘Getting a Lab Submitter ID and Submission Forms’ section.
- Have at least 2 specimen shipping boxes on hand.
- Maintain a stock of viral transport media (VTM) and swabs for use in viral respiratory or VPD outbreaks.
  - Small health departments with a history of using little to no VTM should keep at least 2 unexpired VTM tubes on hand.
  - Larger health departments or health departments with a history of using the VTM should consider keeping more unexpired VTM tubes on hand.
  - Health departments with sub-offices should consider keeping at least 2 unexpired VTM tubes on hand at each sub-office unless the sub-office is located within 1 to 2 hours of another location with access to VTM.
- Maintain a stock of stool collection kits and transfer media (e.g., Cary-Blair transport media) for use in enteric pathogen outbreaks.
- Know how to ship specimens overnight using FedEx, Lone Star Overnight, or an approved courier.
- Know how to request specimen collection kits.
  - See ‘How to Order Specimen Collection Supplies’ section.
- For health departments with a Laboratory Response Network (LRN) laboratory (other than the DSHS Lab in Austin) in their area:
  - Keep copies of the LRN-specific laboratory submission forms on hand in addition to the DSHS lab submission forms.
  - Know if your LRN can assist with shipping specimens that need to go to the DSHS laboratory in Austin or to the CDC.
  - Check with your LRN or EAIDB to see if certain specimens can be sent to the LRN or should be sent directly to the DSHS Laboratory in Austin.
GETTING A LAB SUBMITTER ID AND SUBMISSION FORMS

The procedure for getting a DSHS lab submitter ID is the same for healthcare providers/facilities and for health departments. Any entity that may need to submit a specimen to the DSHS Laboratory will need to have a submitter ID.

How to get a DSHS submitter ID

- Complete the Submitter Identification (ID) Number Request Form found at www.dshs.texas.gov/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=8589956433.
- Fax the completed form to Lab Reporting at 512-776-7533 or email it to LabInfo@dshs.texas.gov.
- If you are not sure if your agency has a submitter ID number, call DSHS Lab Reporting at 512-776-7578 to find out.

How to get electronic copies of your DSHS submission forms

- Contact Lab Reporting to request electronic copies of the forms by calling 512-776-7578 or emailing LabInfo@dshs.texas.gov.
- A list of forms used by the DSHS lab is available at www.dshs.texas.gov/lab/MRS_forms.shtm.
- Please note that new forms are usually distributed each September. Each fall, you should check that you have the most current form.

Most frequently used DSHS submission forms

- G-2A: Used for submitting serology specimens
- G-2B: Used for submitting bacteriology and parasitology specimens (also includes many molecular tests for bacterial and viral diseases)
- G-2E: Used for submitting MDRO isolates to the ARLN
- G-2V: Used for submitting virology specimens
- G-23: Used for submitting food samples
- G-27A: Used for submitting emergency preparedness specimens, including Clostridium botulinum and Ebola
HOW TO ORDER SPECIMEN COLLECTION SUPPLIES

The following specimen collection kits are available to be ordered:

- Influenza/Influenza-like illness
- Pertussis (PCR)
- Fecal specimens for bacterial culture
- Fecal specimens for intestinal parasites
- Mumps/Measles/Rubella

**Influenza/Influenza-like illness**

- These supplies should be used for collecting specimens from someone suspected of having influenza. These supplies may also be used for collecting specimens from someone suspected of infection with parainfluenza virus, rhinovirus/enterovirus, respiratory syncytial virus, adenovirus, or human metapneumovirus.
- The provided supplies include:
  - Commercially prepared viral transport media (VTM)
  - Nasopharyngeal (NP) swab
  - Plastic cylindrical tube with black screw cap (secondary container)
- The following supplies are optional and can be included if requested:
  - Specimen shipping boxes (cold boxes)
  - Cold packs
  - DSHS Influenza Laboratory Surveillance Protocol
- Influenza collection supplies should be ordered by contacting the EAIDB Flu Team by email at flutexas@dshs.texas.gov. An order form will be provided upon request.
- Note: Regional Influenza Surveillance Coordinators can assist with ordering supplies.

**Pertussis (PCR)**

- These supplies should be used for collecting specimens from someone suspected of having pertussis.
- The provided supplies include:
  - Nasopharyngeal (NP) swab (may be a urethral swab which can be used as an NP swab)
  - Specimen tube
  - Medium plastic bag
  - G-2B laboratory submission form
  - Collection information sheet
- The following supplies are optional and can be included if requested:
  - Specimen shipping boxes (cold boxes)
  - Cold packs
- Collection supplies should be ordered by contacting the EAIDB VPD Team at 512-776-7676.

Notes:

- Pertussis testing only in outbreak situations or by request.
- No media is used for specimens submitted for pertussis PCR at DSHS.
- Pertussis testing is not provided free of charge. Contact EAIDB for approval for DSHS payment.
Appendix C: DSHS Laboratory Resources

Fecal specimens for bacterial culture
- These supplies should be used for collecting specimens from someone suspected of having a bacterial diarrheal illness.
- The provided supplies include:
  - Instruction sheet
  - Feces transport medium: Cary-Blair culturette kit
  - One tall plastic liner tube (with lid) for every 3 swabs ordered
- Collection supplies should be ordered by calling 512-776-7661.

Fecal specimens for intestinal parasites
- These supplies should be used for collecting specimens from someone suspected of having an intestinal parasite.
- The provided supplies include:
  - Tall mailer (can with lid, liner with lid)
  - O&P media with instructions
  - Mailing label (for Refugee program submissions)
- Collection supplies should be ordered by calling 512-776-7661.

Mumps/Measles/Rubella
- These supplies should be used for collecting viral specimens from someone suspected of having mumps, measles or rubella.
- The provided supplies include:
  - DSHS or commercially prepared viral transport media (VTM)
  - Throat or nasopharyngeal (NP) swab
    - Mumps (buccal) testing uses a throat swab
    - A throat swab is preferred over an NP swab for rubella and measles but an NP swab is acceptable
  - Plastic tube with screw cap (secondary container)
  - Instruction sheet
- The following supplies are optional and can be included if requested:
  - Specimen shipping boxes (cold boxes)
  - Cold packs
- Collection supplies should be ordered by contacting the EAOIDB VPD Team at 512-776-7676.
- Serology kits can be sent from DSHS, but only under specific circumstances.
Appendix C: DSHS Laboratory Resources

BASIC STEPS TO SHIP SPECIMENS

Make sure to review the disease-specific specimen submission guidance in each disease section. The disease-specific guidance covers which form to use, temperature requirements for storage and shipping, timeframes for submission and specimen types that are acceptable for submission. The following steps are basic and apply to most specimens submitted to the DSHS laboratory. More detailed information is available at http://www.dshs.texas.gov/lab/mrs_shipping.shtm.

Basic Steps to Ship Specimens

- Verify that the correct transport media was used for the specimen/pathogen you want tested.
  - Verify the transport media is not expired.
  - Check the disease-specific guidance for approved transport media.
- Verify that all specimens are labeled correctly.
  - Most specimens require at least two identifiers on the specimen tube/container such as patient name and date of birth.
  - Multiple specimen types from the same person may also require the tube to be labeled with the specimen type or time of collection.
- Verify that one specimen submission form is completed for each specimen submitted.
  - If 5 specimens are collected from the same person then complete 5 forms.
  - Make sure that the forms are completely filled out. Specimens could be rejected if key information is missing such as date of collection.
  - Make sure that the information on the form exactly matches the information on the specimen.
- Verify whether the specimens need to be shipped at room temperature, cold or frozen.
  - Check the disease-specific guidance for approved transport temperatures.
  - If a specimen needs to be cold upon arrival at the DSHS Laboratory, make sure that a sufficient amount of wet ice or cold packs is included especially during the summer.
  - If a specimen needs to be frozen upon arrival at the DSHS Laboratory, make sure dry ice is used. Use as much as will fit but no more than 5 pounds. Blocks are better than pellets. Check with the shipping company to verify dry ice limits.
- Specimens should be triple contained.
  - The primary container is typically the tube or bottle in which the specimen is placed (e.g., the VTM tube for influenza specimens). It must be leak proof. It must also be labeled with patient identifiers (name and date of birth).
  - The secondary container may be a larger plastic tube with a screw cap or even a zipper storage bag. The secondary container should be filled with absorbent material (e.g., paper towels or absorbent pads) to fully absorb the contents of the primary container if it leaks. The secondary container should have a biohazard sticker on it and must be leak proof.
  - The tertiary container is the shipping box which must be clearly labeled for shipping biological substances.
Appendix C: DSHS Laboratory Resources

- Specimens should be shipped according to International Air Transport Association (IATA) standards.
  - Most specimens that a health department will ship are considered Category B (infectious substance that does not meet criteria for Category A) and will need the following on the outside of the shipping box:
    - UN 3373/Category B Biological Substances label
    - Directional arrows labels
    - Submitter’s address and contact person’s information
    - Shipping address and contact person’s information
    - Dry ice label (if applicable)
  - Isolates (pure cultures) or specimens from patients suspected of having an exotic, newly emerging or extremely rare pathogen may be classified as Category A agents. Check with the DSHS Laboratory directly for shipping Category A agents.

- Most specimens should be shipped overnight to arrive at DSHS Monday through Friday.
  - Do not ship a specimen to arrive on Saturday, Sunday or a state holiday.
  - If testing outside of normal business hours is needed, approval from EAIDB or the DSHS lab must be obtained before the specimen is shipped.

- Notify EAIDB and/or the DSHS lab when specimens for these diseases are being shipped:
  - Acute Flaccid Myelitis (AFM)
  - Botulism
  - Coronavirus, Novel (MERS)
  - Diphtheria
  - Ebola
  - Gastroenteritis outbreaks
  - Influenza, Novel/variant
  - Measles
  - Mumps
  - Polio
  - Rubella
  - Varicella
  - VISA/VRSA
  - Other rare pathogens
Properly labeled primary container with patient specimen

Tighten cap, then pack specimen inside a secondary container

Fill secondary container with enough absorbent material to absorb entire liquid volume (e.g., paper towels)

If specimens need to be shipped cold, refrigerate at 2-8°C and ship overnight on cold packs.
If specimens need to be shipped frozen, freeze at -70°C and ship overnight on dry ice.
If specimens need to be shipped at ambient temperature, do not use ice or cold packs.
Place a sufficient number of ice packs on top of secondary containers to keep specimens at the appropriate temperature

Wet ice or freezer/cold packs or dry ice

If specimens go on top of the closed Styrofoam box and inside of the cardboard box
Remember to include 1 form per specimen

Place shipping waybill on outside of cardboard box

Example Packaging Diagram for Category B Specimens
## PREFERRED SPECIMEN SUMMARY TABLE

### Table Notes:
- This table includes only the preferred specimen. Additional specimens may also be acceptable. Check the disease-specific sections for additional acceptable specimens and the appropriate media, transport temperature and timeframe for those specimens.
- The timeframe for receipt by the lab is for the preferred specimen shipped as recommended. Some specimens may be received after the recommended time period if shipped on different media or shipped frozen. Refer to the disease-specific sections to see if that is possible.
## Appendix C: DSHS Laboratory Resources

<table>
<thead>
<tr>
<th>Condition/Pathogen</th>
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<th>Media</th>
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<th>DSHS laboratory form</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Flaccid Myelitis (AFM)</td>
<td>DSHS will forward specimen to CDC. Do not ship directly to CDC.</td>
<td>Yes</td>
<td>CSF, Serum, Whole Blood, and Stool</td>
<td>Depends on specimen type</td>
<td>Depends on specimen type</td>
<td>Depends on specimen type</td>
<td>None</td>
<td>Call EAIDB VPD team at 512-776-7676 See AFM section for additional details</td>
</tr>
<tr>
<td>Amebiasis</td>
<td>Outbreaks or by request only</td>
<td>Yes</td>
<td>Raw stool</td>
<td>PVA &amp; Formalin</td>
<td>Ambient</td>
<td>Not specified; within expiration date of PVA &amp; Formalin vials</td>
<td>G-2B</td>
<td>See amebiasis section for additional details</td>
</tr>
<tr>
<td>Ascariasis</td>
<td>Yes</td>
<td>Yes – Stool</td>
<td>Raw stool or Adult Worm</td>
<td>Raw Stool - PVA &amp; Formalin Adult Worm - Formalin or Ethanol</td>
<td>Ambient</td>
<td>Not specified; within expiration date of PVA &amp; Formalin vials</td>
<td>G-2B</td>
<td>See ascariasis section for additional details</td>
</tr>
<tr>
<td>Botulism</td>
<td>Isolate required by law</td>
<td>No</td>
<td>Raw stool (&gt;10g) (and serum or wound, if appropriate)</td>
<td>None</td>
<td>Cold</td>
<td>Not specified; within expiration date of media</td>
<td>G-27A</td>
<td>Require epi approval before submitting. See botulism section for additional details</td>
</tr>
<tr>
<td>Campylobacteriosis</td>
<td>Yes</td>
<td>No</td>
<td>Isolate</td>
<td>Agar slant</td>
<td>Ambient</td>
<td>Not specified; within expiration date of media</td>
<td>G-2B</td>
<td>See campylobacteriosis section for additional details</td>
</tr>
<tr>
<td>Carbapenem- resistant Enterobacteriaeae (CRE)</td>
<td>No</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>Lab confirmation is not necessary</td>
</tr>
</tbody>
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*Emerging and Acute Infectious Disease Guidelines-Jan 2018* 440
## Appendix C: DSHS Laboratory Resources

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<tbody>
<tr>
<td>Cryptosporidiosis</td>
<td>Outbreaks or by request only</td>
<td>Yes</td>
<td>Raw stool</td>
<td>PVA &amp; Formalin</td>
<td>Ambient</td>
<td>Not specified; within expiration date of PVA &amp; Formalin vials</td>
<td>G-2B</td>
<td>See cryptosporidiosis section for additional details</td>
</tr>
<tr>
<td>Cyclosporiasis</td>
<td>Yes</td>
<td>Yes</td>
<td>Raw stool</td>
<td>PVA &amp; Formalin</td>
<td>Ambient</td>
<td>Not specified; within expiration date of PVA &amp; Formalin vials</td>
<td>G-2B</td>
<td>See cyclosporiasis section for additional details</td>
</tr>
<tr>
<td>Diphtheria</td>
<td>Isolate required by law</td>
<td>Yes</td>
<td>Swab beneath membrane</td>
<td>Amies or Stuart's transport or Loeffler's Slant</td>
<td>2 – 25°C</td>
<td>Within 48 hours of collection</td>
<td>G-2B</td>
<td>Call EAIDB VPD team at 512-776-7676; Testing must be approved by EAIDB and CDC prior to shipping. Call 512-221-6852</td>
</tr>
<tr>
<td>Ebola</td>
<td>DSHS/LRN Pre-approval required.</td>
<td>No</td>
<td>Blood</td>
<td>Two plastic EDTA purple tops with ≥ 4 ml</td>
<td>Cold</td>
<td>Send by courier for over-night or more rapid delivery</td>
<td>G-27A</td>
<td></td>
</tr>
<tr>
<td>Fascioliasis</td>
<td>Yes</td>
<td>Yes</td>
<td>Raw stool</td>
<td>PVA &amp; Formalin</td>
<td>Ambient</td>
<td>Not specified; within expiration date of PVA &amp; Formalin vials</td>
<td>G-2B</td>
<td>See fascioliasis section for additional details</td>
</tr>
<tr>
<td><em>Haemophilus Influenza</em>, invasive disease</td>
<td>Isolate required by law on patients under 5 years old</td>
<td>No</td>
<td>Isolate</td>
<td>Chocolate agar slant</td>
<td>Ambient temp</td>
<td>Within 48 hours of subculture</td>
<td>G-2B</td>
<td>Isolates from sterile sites only</td>
</tr>
<tr>
<td>HAV</td>
<td>No</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>Widely available commercially</td>
</tr>
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<tr>
<td>HBV</td>
<td>No</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>Widely available commercially</td>
</tr>
<tr>
<td>HCV</td>
<td>No</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>Widely available commercially</td>
</tr>
<tr>
<td>Hookworm (ancylostomiasis)</td>
<td>Yes</td>
<td>Yes – Stool</td>
<td>Raw stool or Adult Worm</td>
<td>Raw Stool - PVA &amp; Formalin Adult Worm - Formalin or Ethanol</td>
<td>Ambient</td>
<td>Not specified; within expiration date of PVA &amp; Formalin vials</td>
<td>G-2B</td>
<td>See hookworm (ancylostomiasis) section for additional details</td>
</tr>
<tr>
<td>Influenza</td>
<td>Specimens of interest or surveillance specimens only</td>
<td>Yes</td>
<td>NP swab</td>
<td>Viral Transport Media approved for influenza viruses</td>
<td>Cold</td>
<td>Within 72 hours of collection</td>
<td>G-2V</td>
<td>See Flu Lab Surveillance Protocol for list of specimens of interest, additional specimens acceptable, and for specimens &gt;72 hours after collection</td>
</tr>
<tr>
<td>Legionellosis</td>
<td>Outbreaks or by request only</td>
<td>No</td>
<td>isolate</td>
<td>BCYE slant</td>
<td>Ambient</td>
<td>G-2B</td>
<td>See Legionellosis section for other acceptable specimen types</td>
<td></td>
</tr>
<tr>
<td>Listeriosis</td>
<td>Isolate required by law</td>
<td>No</td>
<td>Isolate</td>
<td>Non-glucose containing agar slants</td>
<td>Ambient</td>
<td>G-2B</td>
<td>See listeriosis section for additional details</td>
<td></td>
</tr>
<tr>
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</tr>
<tr>
<td>Measles - PCR</td>
<td>Yes</td>
<td>Yes</td>
<td>Pharyngeal swab</td>
<td>Viral Transport Media</td>
<td>Cold</td>
<td>Within 48 hours of collection</td>
<td>G-2V</td>
<td>See measles section for additional acceptable specimens and for specimens &gt; 48 after collection</td>
</tr>
<tr>
<td>Measles - Serology</td>
<td>Yes</td>
<td>No</td>
<td>Spun down serum</td>
<td>Red or tiger top tube</td>
<td>Cold</td>
<td>Within 48 hours of collection</td>
<td>G-2A</td>
<td></td>
</tr>
<tr>
<td>Meningitis/Encephalitis, Amebic</td>
<td>Testing done by CDC</td>
<td>No</td>
<td>Multiple</td>
<td>Varies</td>
<td>Varies</td>
<td>Varies</td>
<td>Call 512-776-7560</td>
<td>See amebic meningitis section for details</td>
</tr>
<tr>
<td>Meningococcal (Neisseria meningitidis)</td>
<td>Isolate required by law</td>
<td>No</td>
<td>Isolate</td>
<td>Blood or chocolate agar</td>
<td>Ambient temp</td>
<td>Isolates from sterile sites or purpuric lesions required to be sent; if isolate not available, EAIDB requests specimen from sterile site for PCR at CDC</td>
<td>G-2B</td>
<td></td>
</tr>
<tr>
<td>Multidrug-resistant Acinetobacter (MDR-A)</td>
<td>No</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>Lab confirmation is not necessary</td>
</tr>
<tr>
<td>Mumps - Serology</td>
<td>No</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>DSHS no longer offers mumps IgM testing. Commercially available.</td>
</tr>
</tbody>
</table>

Emerging and Acute Infectious Disease Guidelines-Jan 2018
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<tr>
<td>Mumps - PCR</td>
<td>If needed</td>
<td>Yes</td>
<td>Buccal swab (use throat swab on cheek)</td>
<td>Viral Transport Media</td>
<td>Cold</td>
<td>Within 48 hours of collection</td>
<td>G-2V</td>
<td>Preferred method of specimen submission</td>
</tr>
<tr>
<td>Norovirus</td>
<td>Yes</td>
<td>No</td>
<td>Raw Stool</td>
<td>None</td>
<td>Cold</td>
<td>As soon as possible</td>
<td>G-2B</td>
<td>Only raw stool accepted; do not freeze; See norovirus section for details</td>
</tr>
<tr>
<td>Paragonimiasis</td>
<td>Yes</td>
<td>Yes</td>
<td>Raw stool</td>
<td>PVA &amp; Formalin</td>
<td>Ambient</td>
<td>Not specified; within expiration date of PVA &amp; Formalin vials</td>
<td>G-2B</td>
<td>See paragonimiasis section for additional details</td>
</tr>
<tr>
<td>Pertussis - PCR</td>
<td>Outbreaks or by request only</td>
<td>Yes</td>
<td>NP swab</td>
<td>Dry tube/no media</td>
<td>Cold</td>
<td>Within 48 hours of collection</td>
<td>G-2B</td>
<td>See pertussis section for additional details</td>
</tr>
<tr>
<td>Polio</td>
<td>Testing done by CDC</td>
<td>No</td>
<td>Multiple</td>
<td>Varies</td>
<td>Cold</td>
<td>Within 48 hours of collection</td>
<td>G-2V</td>
<td>Call EAIDB VPD team at 512-776-7676</td>
</tr>
<tr>
<td>Rubella PCR</td>
<td>Yes</td>
<td>Yes</td>
<td>Pharyngeal swab</td>
<td>Viral Transport Media</td>
<td>Cold</td>
<td>Within 48 hours of collection</td>
<td>G-2V</td>
<td>Specimens will be forwarded to CDC or another state public health lab for PCR</td>
</tr>
<tr>
<td>Rubella - Serology</td>
<td>If needed</td>
<td>No</td>
<td>Spun down serum</td>
<td>Red or tiger top tube</td>
<td>Cold</td>
<td>Within 48 hours of collection</td>
<td>G-2A</td>
<td>Specimens may be submitted for serology if serology is not available from a commercial lab</td>
</tr>
<tr>
<td>Condition/Pathogen</td>
<td>Send specimens to DSHS laboratory</td>
<td>Collection kit available</td>
<td>Preferred specimen</td>
<td>Media</td>
<td>Transport temperature</td>
<td>Time period for receipt</td>
<td>DSHS laboratory form</td>
<td>Note</td>
</tr>
<tr>
<td>-------------------</td>
<td>----------------------------------</td>
<td>--------------------------</td>
<td>--------------------</td>
<td>-------</td>
<td>-----------------------</td>
<td>-------------------------</td>
<td>----------------------</td>
<td>------</td>
</tr>
<tr>
<td>Salmonellosis</td>
<td>Isolate required by law</td>
<td>No</td>
<td>Isolate</td>
<td>Agar slant</td>
<td>Ambient</td>
<td>Not specified; within expiration date of media</td>
<td>G-2B</td>
<td>Clinical specimen requested, if isolate not available. See Salmonellosis section for additional details</td>
</tr>
<tr>
<td>Shiga toxin-producing E. coli</td>
<td>Isolate required by law</td>
<td>No</td>
<td>Isolate</td>
<td>Agar slant</td>
<td>Ambient</td>
<td>Not specified; within expiration date of media</td>
<td>G-2B</td>
<td>Clinical specimen requested, if isolate not available. See STEC section for additional details</td>
</tr>
<tr>
<td>Shigellosis</td>
<td>Yes</td>
<td>No</td>
<td>Isolate</td>
<td>Agar slant</td>
<td>Ambient</td>
<td>Not specified; within expiration date of media</td>
<td>G-2B</td>
<td>See shigellosis section for additional details</td>
</tr>
<tr>
<td>Smallpox suspects</td>
<td>DSHS/LRN Pre-approval required.</td>
<td>No</td>
<td></td>
<td>Cold</td>
<td></td>
<td></td>
<td>G-27A</td>
<td>Testing must be approved by EAIDB and CDC prior to shipping. Call 512-221-6852</td>
</tr>
</tbody>
</table>

Collect all specimens listed by disease stage at [https://www.cdc.gov/smallpox/lab-personnel/specimen-collection/specimen-collection-transport.html](https://www.cdc.gov/smallpox/lab-personnel/specimen-collection/specimen-collection-transport.html). Instructions include collection methods and materials for each type of specimen. Send by courier for over-night or more rapid delivery.
<table>
<thead>
<tr>
<th>Condition/Pathogen</th>
<th>Send specimens to DSHS laboratory</th>
<th>Collection kit available</th>
<th>Preferred specimen</th>
<th>Media</th>
<th>Transport temperature</th>
<th>Time period for receipt</th>
<th>DSHS laboratory form</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Streptococcus</em>, Group A (S. pyogenes)</td>
<td>Clusters/ outbreaks (if pre-approved) or by request only</td>
<td>No</td>
<td>Isolate</td>
<td>Agar slant</td>
<td>Ambient</td>
<td></td>
<td>G-2B</td>
<td>Commercial testing widely available for initial ID; PFGE testing at DSHS requires pre-approval from EAIDB IRID Team at 512-776-7676</td>
</tr>
<tr>
<td><em>Streptococcus</em>, Group B (S. agalactiae)</td>
<td>Clusters/ outbreaks (if pre-approved) or by request only</td>
<td>No</td>
<td>Isolate</td>
<td>Agar slant</td>
<td>Ambient</td>
<td></td>
<td>G-2B</td>
<td>Commercial testing widely available for initial ID; PFGE testing at DSHS requires pre-approval from EAIDB IRID Team at 512-776-7676</td>
</tr>
<tr>
<td><em>Streptococcus pneumoniae</em>, invasive disease</td>
<td>Isolate required by law on patients under 5 years old</td>
<td>No</td>
<td>Isolate</td>
<td>Agar slant</td>
<td>Ambient</td>
<td></td>
<td>G-2B</td>
<td>Isolates from sterile sites only</td>
</tr>
<tr>
<td>Tetanus</td>
<td>No</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>Lab confirmation is not necessary</td>
</tr>
<tr>
<td>Trichuriasis</td>
<td>Yes</td>
<td>Yes – Stool</td>
<td>Raw stool or Adult Worm</td>
<td>Raw stool - PVA &amp; Formalin Adult Worm - Formalin or Ethanol</td>
<td>Ambient</td>
<td>Not specified; within expiration date of PVA &amp; Formalin vials</td>
<td>G-2B</td>
<td>See trichuriasis section for additional details</td>
</tr>
</tbody>
</table>
### Appendix C: DSHS Laboratory Resources

<table>
<thead>
<tr>
<th>Condition/Pathogen</th>
<th>Send specimens to DSHS laboratory</th>
<th>Collection kit available</th>
<th>Preferred specimen</th>
<th>Media</th>
<th>Transport temperature</th>
<th>Time period for receipt</th>
<th>DSHS laboratory form</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Varicella PCR</td>
<td>Yes or send directly to CDC</td>
<td>No</td>
<td>Lesion/scab scraping</td>
<td>NO media</td>
<td>Ambient temperature</td>
<td>Within 48 hours of collection</td>
<td>G-2V</td>
<td>DSHS will forward the specimen to MN PH lab. Providers can also submit specimens directly to CDC.</td>
</tr>
<tr>
<td>Vibriosis</td>
<td>Isolates required by law</td>
<td>No</td>
<td>Isolate</td>
<td>Agar slant</td>
<td>Ambient</td>
<td>Not specified; within expiration date of media</td>
<td>G-2B</td>
<td>Clinical specimen requested, if isolate not available. See Vibriosis section for additional details</td>
</tr>
<tr>
<td>Viral Hemorrhagic Fever (non-Ebola)</td>
<td>Testing done by CDC</td>
<td>No</td>
<td>Multiple</td>
<td>Varies</td>
<td>Varies</td>
<td>Varies</td>
<td>Contact EAIDB</td>
<td>Approval from CDC is required before submitting specimen for testing. Contact EAIDB to arrange for testing.</td>
</tr>
<tr>
<td>VISA/VRSA</td>
<td>Yes</td>
<td>No</td>
<td>Isolate</td>
<td>Blood agar or BHI medium</td>
<td>Ambient</td>
<td>Within 48 hours of susceptibility results</td>
<td>G-2B</td>
<td>Call DSHS regional HAI Epidemiologist for the appropriate jurisdiction</td>
</tr>
<tr>
<td>Yersiniosis</td>
<td>Outbreaks or by request only</td>
<td>No</td>
<td>Isolate</td>
<td>Agar slant</td>
<td>Ambient</td>
<td>Not specified; within expiration date of media</td>
<td>G-2B</td>
<td>See shigellosis section for additional details</td>
</tr>
</tbody>
</table>

Cold = 2 – 8 °C
Ambient = room temperature
UPDATES

January 2018

- Updated the Basic Health Department Recommendations and How to Order Specimen Collections Supplies sections
- Updated How to Order Specimen Collection Supplies section for Pertussis PCR to include note about testing only in outbreak situations or by request
- In the Preferred Specimen Submission Table:
  - Added the word Lab to “Flu Surveillance Protocol” in the “Notes” column of the “Influenza” row
  - Minor edits to botulism, salmonellosis, STEC, and vibriosis
  - Changed *E. coli*, shiga toxin-producing to Shiga toxin-producing *E. coli* and moved to alphabetical place in chart
  - Acute flaccid myelitis row updated to send specimen to DSHS not directly to the CDC, and to contact EAIDB VPD team
  - Updated diphtheria notes section to contact EAIDB VPD team
  - Added words invasive disease to *haemophilus influenzae* and *streptococcus pneumoniae*