



GUAM PUBLIC HEALTH LABORATORY GUIDELINES during Mass Gathering Surveillance

Prepared by: sign/date	Reviewed by: sign/date	Approved by: sign/date
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Introduction	This Laboratory services guideline provides information on laboratory tests and procedures performed by the Guam Public Health Laboratory (GPHL). The Laboratory procedures are allied with the standard case definitions of the syndromes that are under surveillance during mass gathering.
Purpose	This guide is intended to be used by clinicians, nurses, and healthcare assistants, and phlebotomists.
Specimen Submission Guidelines and Forms	Please see separate guidelines and forms for Chikungunya, Dengue, Influenza, Zika, and other tests requiring special handling.
System of Reference	<ul style="list-style-type: none"> • Hawaii State Laboratories Division Hawaii Department of Health 2725 Waimano Home Road Pearl City, Hawaii 96782 Phone: (808) 453-6652 Fax: (808) 453-6662 • CDC (Center for Disease Control) 1600 Clifton Road Atlanta, GA 30329-4027 USA Phone: (800) 232-4636/ (800) CDC-INFO
Specimen Collection Preparation	Request forms must have the following minimal information, clearly written: <ul style="list-style-type: none"> • Patient's full name (Last Name, First Name) • Date of birth • Sex • Type of specimen • Date of Collection • Test requested • Relevant and clinical information and <i>onset</i> date and symptoms of illness. • Signature, Name, Contact number of requesting physician.

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Specimen Collection Service	<ul style="list-style-type: none"> • Healthcare staffs at clinics and hospitals are responsible for collection and transport of their own samples to GPHL. • Available at the Guam Public Health Laboratory 8:00 am to 4:30 pm, from Monday to Friday.
Specimen Collection Kit Storage	<p>Store collection kit(s) at 2 C to 30 C. Note: Please do not use after the expiration date clearly printed on the outer box labels.</p>
Specimen/Test Submission and Turn Around Time (TAT)	<ul style="list-style-type: none"> • Specimen requirements: Please see Attachment A. • Test and specimen must be delivered to GPHL immediately. Otherwise, store the specimen 2-8 C (refrigerator) and stable for 8 hours. If need to be stored more than 8 hours, freeze specimen (-20 C). • Turn Around Time refers to the time elapsed between arrival of the specimen in the laboratory and the time results are reported in the patient registers (computerized or manual). • Routine specimens will be processed as efficiently as possible, with results reported usually the same day that the specimen was collected. • Specimens marked URGENT will be processed immediately, and the results will be reported to the requesting physician as soon as they are available. • Different tests require different processes and therefore TAT will not be the same for all requests.
Laboratory Results	<ul style="list-style-type: none"> • Prompt reporting of results will be available via the telephone but completed results will be updated in patient's original request forms which will be placed in a designated inbox for all clinics and sentinel sites. • Patients or clients should not be instructed to obtain their results from the Laboratory. The Clinicians in charge should communicate the Lab results to the patient before a patient may be given a copy of their results. • Results that fall within the Critical values will be reported to the requesting clinicians or respective clinics as soon as possible.

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Diagnostic Tests for Targeting Diseases under Enhanced Surveillance	Please see Attachment A.
Syndrome Definitions for Enhanced Surveillance	Please see Attachment B.
Laboratories collaborating with DPHSS Division of Public Health Enhanced Surveillance System	<ul style="list-style-type: none"> • Diagnostic Laboratory Services, Inc. Guam Main Office Tamuning ITC Bldg. Ste. #105 Phone:(671)646-5770 Fax:(671)6462461 • GMHA Laboratory Guam Memorial Hospital Authority 850 Gov. Carlos Camacho Rd. Tamuning Phone: (671)647-2474/5 Fax:(671)647-2183 • GRMC Laboratory Guam Regional Medical City 133 Route 3 Dededo, GU 96929 Phone: (671) 645-5500 Fax:(671) 969-4813 • Lab Tech, Inc. RAN-Care Bldg. 761 Marine Corp. Dr. Tamuning, GU 96913 Phone: (671) 646-4678/4690/4691 Fax: (671) 646-4677
Guam Public Health Central Laboratory Operating Hours	The Laboratory Hours of Operation are: Monday to Friday 8:00 am to 5:00 pm Blood Draws from 8:00 am to 4:30 pm
Contact Information	For further information contact the Guam Public Health Central Laboratory at (671) 735-7153/7158/7355. Anne Marie Santos, GPLH Administrator (671) 735-7153 <u>Annemarie.santos@dphss.guam.gov</u> Josephine T. O'Mallan, BCDC Administrator, DPHSS (671) 735-7142; (671) 888-9276 (emergency) <u>Josephine.omallan@dphss.guam.gov</u>

Attachment A: Diagnostic Tests for Targeting Diseases under Enhanced Surveillance

#	Target disease	Test available Locally and Method	Test sent to Reference Laboratory	Screen or Confirmatory Testing	Turn Around Time	Specimen Volume/ Type	Specimen Container
1	Amoebiasis	Diagnostic Laboratory Services (DLS, Tamuning) Microscopy: Ova and Parasite	Ova & Parasite Test at LabTech & DLS lab Indicate specific E. histolytica screening LabTech refer to Primex or Quest Diagnostics; DLS refer to DLS Hawaii (5 to 10 working days)	Screen (DLS: Microscopy)	2 to 4 hours on working days (Screen) 5 to 10 working days (Confirm)	2 mL Stool	Sterile Cup; Clean, leak-proof container with screw-cap lid; PVA/ Formalin Containers
2	Avian Influenza	Guam Public Health Laboratory (GPHL, Mangilao) Rapid Test: Quikvue Influenza A+B Guam Public Health Laboratory (GPHL, Mangilao) Method: PCR(GeneXpert)	No	Screen (GPHL: Quikvue) Confirmatory (GPHL: GeneXpert)	2 to 4 hours on working days (Screen) 24 to 48 hours on working days (Confirm)	Nasopharyngeal Swab	Sterile Swab; Dacron/ Nylon Swab in transport media tube
3	Chikungunya	No	Hawaii State Laboratory	Hawaii State Lab (Screen) CDC/WHO (Confirm)	5-10 working days	2 mL Serum	SST ; Serum Separator Tube
4	Chlamydia	Guam Public Health Laboratory (GPHL, Mangilao) Method: PCR (GeneXpert)	No	Confirmatory (GPHL: GeneXpert)	24 to 48 hours on working days (Confirm)	2 mL Urine or Swab Discharge F:Vaginal M:Urethral	Sterile Cup; Clean, leak-proof container with screw-cap lid. Sterile Swab Dacron/ Nylon in transport tube
5	Cholera	Guam Memorial Hospital Lab. (GMHA, Tamuning) Method: Culture and Sensitivity (Vitek)	Guam Memorial Hospital Lab. Microbiology dept.	Confirmatory (GMH Lab: Vitek)	48 hour on day shift (Preliminary) 3-5 working days (Final)	2 mL Stool Or Swab	Sterile Cup; Clean, leak-proof container with screw-cap lid Or Sterile Swab
6	Dengue fever	Guam Public Health Laboratory (GPHL, Mangilao) Method: PCR (ABI 7500)	No	Confirmatory (GPHL: ABI 7500)	24-48 hours on working days (Confirm)	2 mL Serum	SST; Serum Separator Tube
7	Ebola Virus Disease (EVD)	No	CDC/WHO Laboratory ReEBOV rapid test is First Antigen rapid test for Ebola through WHO Emergency Assessment	CDC/WHO Confirmatory	5-10 working days	Please call Public Health before collection.	Please call Public Health before collection.

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8	Gonorrhoea	Guam Public Health Laboratory (GPHL, Mangilao) Method: PCR(GeneXpert)	No	Confirmatory (GPHL: GeneXpert)	24-48 hours on working days	2 mL Urine Or Swab Discharge F:Vaginal M:Urethral	Urine: Clean, leak-proof container with screw-cap lid. Swab: Dacron/ Nylon in transport tube
9	Hepatitis A	No	LabTech refer to Primex or Quest Diagnostics; DLS refer to DLS Hawaii (5-10 working days)	Confirmatory LabTech/DLS	5-10 working days	2 mL Serum	SST; Serum Separator Tube
10	Hepatitis B	Guam Public Health Laboratory (GPHL, Mangilao) Method: HBsAg, EIA (Biorad Reader)	No	Confirmatory (GPHL: Biorad Reader)	2-3 working days	2 mL Serum	SST; Serum Separator Tube
11	Influenza	Guam Public Health Laboratory (GPHL, Mangilao) Rapid Test: Quikvue Influenza A+B Guam Public Health Laboratory Method: PCR (GeneXpert)	No	Screen (GPHL: Quikvue) Confirmatory (GPHL: GeneXpert)	2-4 hours on working days 24-48 hours on working days	Nasopharyngeal Swab	Sterile Swab Dacron/ Nylon Swab in transport media tube
12	Leptospirosis	Guam Public Health Laboratory (GPHL, Mangilao) LeptorapideScreening only	LabTech refer to Primex or Quest Diagnostics; DLS refer to DLS Hawaii (5-10 working days)	Screen (GPHL: Leptorapide)	2-4 hours on working days	2 mL Serum	SST; Serum Separator Tube
13	Hepatitis C	No	LabTech refer to Primex or Quest Diagnostics; DLS refer to DLS Hawaii (5-10 working days)	Confirmatory LabTech/DLS	5-10 working days	2 mL Serum	SST; Serum Separator Tube
14	Malaria	Diagnostic Laboratory Services (DLS, Tamuning) Microscopy: Malarial Smear	Confirmatory sent to Reference Laboratory: LabTech refer to Primex or Quest Diagnostics; DLS refer to DLS Hawaii (5-10 working days)	Screen (DLS: Malarial Smear)	24 hours (Screen) 5-10 working days (Confirm)	2 Thick and Thin Blood Smear from Fingerstick. 3mL Whole Blood	2 Glass Slides, double frosted 1 Lavendar top tube
15	Measles	Guam Public Health Laboratory (GPHL, Mangilao) Method: IgM only EIA Lab System Reader	No	Confirmatory (GPHL : ThermoLab System Reader)	2-3 working days	2 mL Serum	SST; Serum Separator Tube
16	Meningococcal disease	Guam Memorial Hospital Lab. (GMHA, Tamuning) BD DirectigenMeningitiesComboT est	Guam Memorial Hospital Lab. Microbiology dept.	Confirmatory (GMH Lab)	24 hours	2 mL CSF (Cerebro-Spinal Fluid)	Clean, leak-proof container with screw-cap lid

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17	Mers-coV	No	CDC/WHO Laboratory	CDC/WHO Confirmatory	5-10 working days	Please call Public Health before collection.	Please call Public Health before collection.
18	Mumps	No	LabTech refer to Primex or Quest Diagnostics; DLS refer to DLS Hawaii (5-10 working days)	Confirmatory LabTech/DLS	5-10 working days	2 mL Serum	SST; Serum Separator Tube
19	Norovirus	No	LabTech refer to Primex or Quest Diagnostics; DLS refer to DLS Hawaii (5-10 working days)	Confirmatory LabTech/DLS	5-10 working days	2 mL Stool Or 2mL Vomitus	Sterile Cup; Clean, leak-proof container with screw-cap lid.
20	Rotavirus	No	LabTech refer to Primex or Quest Diagnostics; DLS refer to DLS Hawaii (5-10 working days)	Confirmatory LabTech/DLS	5-10 working days	2 mL Stool Or 2mL Vomitus	Sterile Cup; Clean, leak-proof container with screw-cap lid.
21	Rubella	Guam Public Health Laboratory (GPHL, Mangilao) Method: IgM only EIA ThermoLab System Reader	No	Confirmatory (GPHL : ThermoLab System Reader)	2-3 working days	2 mL Serum	SST; Serum Separator Tube
22	Salmonella	Guam Memorial Hospital Lab. (GMHA, Tamuning) Method: Culture and Sensitivity Salmonella Serotyping BD Difco	Guam Memorial Hospital Lab. Microbiology dept.	Confirmatory (GMH Lab)	48 hours on day shift (Preliminary) 3-5 working days (Final)	2 mL Stool Or Swab	Sterile Cup; Clean, leak-proof container with screw-cap lid Or Sterile Swab
23	Shigella	Guam Memorial Hospital Lab. (GMHA, Tamuning) Method: Culture and Sensitivity Shigella Serotyping BD Difco	Guam Memorial Hospital Lab. Microbiology dept.	Confirmatory (GMH Lab)	48 hours on day shift (Preliminary) 3-5 working days (Final)	2 mL Stool Or Swab	Sterile Cup; Clean, leak-proof container with screw-cap lid Or Sterile Swab
24	Syphilis	Guam Public Health Laboratory (GPHL, Mangilao) RPR, Quali.andQuanti. Rapid Test: Syphilis Health Check Method: ASI RPR Card test kit Confirmation:Serodia TPPA	No	Screen (GPHL: Syphilis Health Check) Confirmatory (GPHL: SerodiaTPPA)	2-3 working days	2 mL Serum	SST; Serum Separator Tube

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25	Typhoid (Refer to Salmonella; Rule out for Salmonella typhi)	Guam Memorial Hospital Lab. (GMHA, Tamuning) Method: Culture and Sensitivity Salmonella Serotyping BD Difco	Guam Memorial Hospital Lab. Microbiology dept. LabTech refer to Primex or Quest Diagnostics; DLS refer to DLS Hawaii (5-10 working days)	Screen (GMH Lab) Confirmatory LabTech/DLS	48 hours on day shift (Preliminary) 5-10 working days (Confirm)	2 mL Stool Or Swab	Sterile Cup; Clean, leak-proof container with screw-cap lid Or Sterile Swab
26	Zika Virus	No	Hawaii State Laboratory	Hawaii State Lab (Screen) CDC/WHO (Confirm)	5-10 working days	2 mL Serum	SST; Serum Separator Tube

Attachment B Syndrome Definition for Enhanced Surveillance during Mass Gathering

Syndrome	Case Definition	Important diseases to consider
Influenza-like illness	Sudden onset of fever (> 38°C) AND cough or sore throat	Influenza, other viral or bacterial respiratory infections
Acute fever and rash	Sudden onset of fever (>38°C) AND acute non-blistering rash	Measles, dengue, rubella, meningitis, leptospirosis
Acute fever, rash, arthralgia, and conjunctivitis	Sudden onset of fever (>38 C) with maculopapular rash, joint pain, AND red eye	Zika
Watery diarrhea	3 or more watery stools in 24 hrs	Cholera
Non-watery diarrhea	3 or more non-watery stools in 24 hrs	Viral and bacterial gastroenteritis including food poisoning and ciguatera fish poisoning

Syndrome	Case Definition	Important diseases to consider
Prolonged fever	Any fever (> 38°C) lasting 3 or more days	Typhoid fever, dengue fever, leptospirosis, malaria
Fever and jaundice	Any fever (>38°C) AND jaundice	Hepatitis A
Acute fever and neurological symptoms	Sudden onset of fever with neurological symptoms; altered mental state; confusion; delirium; disorientation; seizure	Meningococcal meningitis; viral meningitis; other viral encephalitis (i.e West Nile virus)
Food-borne disease outbreak	Clustering of at least 2 cases having gastro-intestinal symptoms originating from same food outlet or catering site	Includes Salmonella, staphylococcus, clostridium, campylobacter and rotavirus infections

Syndrome	Case Definition	Important Diseases to consider
Heat-related illness	Dehydration due to heat; heavy sweating, paleness; muscle cramps; dizziness; headache , nausea and vomiting; fainting; extremely high body temperature (>40°C) ; rapid strong pulse	Heat cramps, heat exhaustion, heat stroke
Any unusual health event	Please report any unusual or unexplained health events that you see or are reported to you, including unexplained deaths and groups or clusters of illness	Emerging or re-emerging diseases, or sudden disease increases not otherwise identified in surveillance