



Communicable Disease Case Reporting and Investigation Protocol **SHIGELLOSIS**

I. IDENTIFICATION AND DEFINITION OF CASES

A. **Clinical Description:** An acute infection of variable severity characterized by diarrhea (may be bloody or contain mucous), fever, nausea, cramps, and tenesmus (sensation of needing to pass stool, accompanied by pain, cramping, and straining). Asymptomatic infections may occur.

B. **Laboratory Criteria:**

- Confirmatory laboratory evidence: Isolation of *Shigella* from a clinical specimen.
- Supportive laboratory evidence: Detection of *Shigella* or *Shigella*/Enteroinvasive *E. coli* (EIEC) in a clinical specimen using a culture-independent diagnostic test (CIDT), such as a PCR or an antigen-based test.

NOTE: Some commercially available CIDTs are unable to distinguish between *Shigella* spp. and Enteroinvasive *E. coli*. Positive results may be reported as *Shigella*/Enteroinvasive *E. coli* (EIEC).

C. **Wisconsin Surveillance Case Definition:**

- **Confirmed:** A case that meets the confirmatory laboratory criteria for diagnosis.
- **Probable:** A case that meets the supportive laboratory criteria for diagnosis, **OR** a clinically compatible illness that is epidemiologically linked to a case that meets the supportive or confirmatory laboratory criteria for diagnosis.

NOTE: Clinical laboratories are requested to forward all isolates of *Shigella*, and all clinical specimens from which *Shigella*/Enteroinvasive *E. coli* (EIEC) was detected using a CIDT, to the Wisconsin State Laboratory of Hygiene (WSLH) for surveillance purposes. CIDT positive specimens from which *Shigella* was not isolated (culture negative or culture not performed) should remain classified as probable *Shigella* cases.

D. **Criteria to Distinguish a New Case:**

- A case should not be counted as a new case if laboratory results were reported within 90 days of a previously reported infection in the same individual.
- When two or more different species are identified from one or more specimens from the same individual, each should be reported as a separate case.

II. REPORTING

A. **Wisconsin Disease Surveillance Category II – Methods for Reporting:** This disease shall be reported to the patient's local health officer or to the local health officer's designee within 72 hours of recognition of a case or suspected case, per Wis. Admin. Code § [DHS 145.04 \(3\) \(b\)](#). Report electronically through the Wisconsin Electronic Disease Surveillance System (WEDSS), or mail or fax a completed Acute and Communicable Disease Case Report ([F-44151](#)) to the address on the form.

B. **Responsibility for Reporting:** According to Wis. Admin. Code § [DHS 145.04\(1\)](#), persons licensed under Wis. Stat. ch. [441](#) or [448](#), laboratories, health care facilities, teachers, principals, or nurses serving a school or day care center, and any person who knows or suspects that a person has a communicable disease identified in [Appendix A](#).

C. **Clinical Criteria for Reporting:** None.

E. **Laboratory Criteria for Reporting:** Laboratory evidence of infection by culture or non-culture-based methods. All positive results from any site (stool, blood, urine, etc.) should be reported, even if the patient is asymptomatic.

III. CASE INVESTIGATION

A. **Responsibility for case investigation:** It is the responsibility of the local health department (LHD) to investigate or arrange for investigation of suspected or confirmed cases as soon as is reasonably possible. A case

investigation may include information collected by phone, in person, in writing, or through review of medical records or communicable disease report forms, as necessary and appropriate.

B. Required Documentation:

1. Complete the WEDSS disease incident investigation report, including appropriate, disease-specific tabs. This may be facilitated by completing a [Routine Enteric Follow-Up Worksheet](#). See page 1 of the Worksheet for specific instructions regarding which sections should be completed during routine follow-up.
2. Upon completion of investigation, set WEDSS disease incident process status to “Final.”

C. Additional Investigation Responsibilities

1. Assess patient for high-risk settings or activities including food handling, providing patient care or child care, or attending a child care facility. If the patient works at or attends a child care facility, 4K program, or elementary school inquire about additional clinically compatible illnesses among children or staff.
2. Source investigation by LHD.
3. If the case is potentially outbreak-related, notify the Wisconsin Division of Public Health (DPH), Bureau of Communicable Diseases (BCD), and begin a cluster or outbreak investigation.

IV. PUBLIC HEALTH INTERVENTIONS AND PREVENTION MEASURES

- A. In accordance with Wis. Admin. Code § [DHS 145.05](#), local public health agencies should follow the methods of control recommended in the current editions of *Control of Communicable Diseases Manual*, edited by David L. Heymann, published by the American Public Health Association, and the American Academy of Pediatrics’ *Red Book: Report of the Committee on Infectious Diseases*, unless otherwise specified by the state epidemiologist.
- B. Educate the public about proper handwashing after using the toilet, changing diapers, assisting another with toileting, handling contaminated clothing or linens, before cooking, or when associating with high-risk individuals.
- C. Exclude symptomatic patients from high-risk settings including food handling, providing patient care or child care, or attending a child care facility or 4K program.
 1. Individuals should not return to high-risk settings following exclusion until they have been cleared by their LHD. Return to high-risk activities for sporadic cases or during small cluster investigations routinely requires evidence be provided to the LHD of one or more consecutive stool specimens negative for *Shigella*/EIEC by culture or CIDT. If laboratory evidence of clearance is required, specimens should be collected 1) after the individual is asymptomatic and 2) at least 48 hours after discontinuance of antimicrobial therapy. Specimens should be collected at least 24 hours apart.
 2. Exclusion, restriction, and reinstatement criteria used by the LHD for infected individuals who are food employees should comply with the [Wisconsin Food Code](#), and may be more restrictive than the Wisconsin Food Code.
- D. During outbreaks, especially large or complex outbreaks which often occur in child care settings and schools, the LHD may decide to implement management strategies or exclusion criteria other than those routinely recommended to manage sporadic cases or small clusters of shigellosis in high-risk settings. An outbreak management plan for these complex outbreaks may include a combination of strategies such as increased environmental cleaning, stringent hand hygiene practices, and cohorting of ill and well individuals. Additionally, alternative criteria for lifting exclusions can be considered, such as evidence of treatment with an appropriate antibiotic (based on antibiotic susceptibility results), being asymptomatic for a specified time period, or evidence of one or more negative stool specimens (via culture or CIDT).

Strategies should be tailored to minimize the risk of transmission to well individuals within the affected facility and community, and to contain spread to other facilities. Factors that should influence intervention strategies include the prevalence of infection within the facility, the at-risk population, the species of *Shigella* involved, and the antibiotic resistance profile of the outbreak strain. A management plan must also take into consideration the resources of both the affected facility and the LHD to implement the strategies effectively. Consultation with BCD epidemiologists is advised.

- E. As appropriate, educate the public on the prevention of contact and contamination with feces during sexual contact, including using barrier protection during oral/anal sex and washing hands after handling condoms used during anal sex and after touching the anus or rectal area.

V. CONTACTS FOR CONSULTATION

- A. Local health departments and tribal health agencies:
<https://www.dhs.wisconsin.gov/lh-depts/index.htm>
- B. Bureau of Communicable Diseases, Communicable Diseases Epidemiology Section: 608-267-9003
- C. Wisconsin State Laboratory of Hygiene: 1-800-862-1013

VI. RELATED REFERENCES

- A. Heymann DL, ed. Shigellosis. In: *Control of Communicable Diseases Manual*. 20th ed. Washington, DC: American Public Health Association, 2015: 556-561.
- B. Pickering LK, ed. *Shigella* Infections. In: *Red Book: 2015 Report of the Committee on Infectious Diseases*. 30th ed. Elk Grove Village, IL: American Academy of Pediatrics, 2015: 706-709.
- C. Aronson SS and Shope TR, eds. *Managing Infectious Diseases in Child Care and Schools*. 4th Ed. Elk Grove Village, IL: American Academy of Pediatricians, 2017: 37, 45, 84, 153-154.
- D. Centers for Disease Control and Prevention website: <https://www.cdc.gov/shigella/index.html>
- E. Wisconsin Food Code: http://docs.legis.wisconsin.gov/code/admin_code/atcp/055/75_.pdf