

# **Shigellosis Investigation Guidelines**

## **Contents**

### **Investigation Protocol**

- **Investigation Guidelines**

### **Investigation Forms**

- **General Investigation Form**
- **Enteric Supplemental Form**
- **Enteric Supplemental Form, Daycare Staff**

### **Supporting Material**

- **Sample Letter, Enteric to Case**
- **Sample Shigellosis Letter, Parent**
- **Fact Sheet**

# SHIGELLOSIS

## Disease Management and Investigation Guidelines

---

### CASE DEFINITION (CDC, 2005)

#### A. Clinical Description for Public Health Surveillance:

An illness of variable severity; characterized by diarrhea, fever, nausea, cramps, and tenesmus. Asymptomatic infections may occur.

#### B. Laboratory Criteria for Case Classification:

Isolation of *Shigella* from a clinical specimen.

#### C. Case Classification:

- Confirmed: A case that meets the laboratory criteria for diagnosis. When available, O antigen serotype characterization should be reported.
- Probable: A clinically compatible case that is epidemiologically linked to a confirmed case.
- Suspect: Laboratory results indicating *Shigella* that were not confirmed by isolation of *Shigella*. (KDHE definition used for data management.)

#### D. Laboratory Testing:

- Collection: Use an enteric kit (bottle with a Cary-Blair medium (0.16% agar))
- Specimen: Feces
- Amount: Marble size or two rectal swabs per container.
- Timing: Collect >48 hours after the discontinuation of antibiotics.
  - For removal of work or school restrictions collect 2 specimens at least 24 hours apart.
- Submission of *Shigella* isolates to the Kansas Health and Environmental Laboratories (KHEL) is required by law. Pulsed-field gel electrophoresis (PFGE) is performed on all *Shigella* isolates at KHEL.
- For additional information and/or questions concerning isolate submission, specimen collection/transport and laboratory kits call (785) 296-1620 or refer to online guidance at [http://www.kdheks.gov/labs/lab\\_ref\\_guide.htm](http://www.kdheks.gov/labs/lab_ref_guide.htm).

#### E. Bioterrorism Potential:

*Shigella dysenteriae* is a category B agent and food safety threat, it is moderately easy to disseminate, results in moderate morbidity but low mortality, and requires specific enhancements of CDC's diagnostic capacity and disease surveillance. (In 1996, *Shigella dysenteriae* was used to intentionally contaminate food in a laboratory break room.)

#### F. Outbreak Definition:

- An unexpected, unexplained increase in cases clustered by time, place, or person; or
- Two or more cases in different households with the same strain or pulsed-field gel electrophoresis (PFGE) pattern clustered by person, place, or time (within the incubation period for the agent).

## INVESTIGATOR RESPONSIBILITIES

### A. Investigation Related Tasks and Activities:

- 1) Confirm diagnosis with appropriate medical provider.
  - Before contacting the patient, discuss with the health care provider what the patient has been told about his/her evaluation for disease.
  - Obtain information that supports clinical findings in case definition and information on the date of service or onset date of the symptoms.
  - Obtain information on laboratory tests performed and results.
    - If *Shigella* was not isolated from the clinical specimen, contact laboratory to have the stool specimen forwarded to state lab for isolation procedures.
    - If *Shigella* was isolated from clinical specimen, ensure bacterial isolate was sent to state lab.
  - If patient hospitalized, obtain medical records, including admission notes, progress notes, lab report(s), and discharge summary.
- 2) Conduct case investigation to identify potential source of infection.
- 3) Conduct contact investigation to locate additional cases and/or contacts.
  - Determine if case is involved in a high-risk occupation or if another special situation is involved (e.g. food handler, daycare provider or attendee, direct patient care provider).
- 4) Initiate control and prevention measures to prevent spread of disease.
  - Provide education that includes basic information about the disease and way to prevent transmission of illness.
  - If needed, work with appropriate regulatory personnel to ensure that work restrictions or exclusions are initiated for high-risk cases and/or contacts (e.g. food handler, daycare, direct patient care provider).
- 5) Report all cases to the KDHE Office of Surveillance and Epidemiology at KDHE using established methods.

### B. Notifications:

- No special notifications or additional reporting unless the case is associated with an outbreak. The investigator should then immediately notify the Local Health Officer, the local on-call epidemiologist and KDHE (1-877-427-7317).
- As appropriate, use the notification letter and the disease fact sheet to notify the case, contacts and other individuals or groups.

## EPIDEMIOLOGY

Shigellosis has a worldwide distribution with an estimated 600,000 deaths occurring annually throughout the world. Secondary attack rates can be as high as 40% in households and among close contacts. Outbreaks are often associated with person-to-person transmission. Transmission via contaminated food and/or water may occur. Certain populations, including homosexual men or conditions of crowding where personal hygiene may be poor; such as prisons, institutions for children, mental hospitals and refugee camps are at increased risk.

## DISEASE OVERVIEW

### A. Agent:

*Shigella* is a gram-negative bacillus divided into 4 groups, including: *S. dysenteriae* (Group A), *S. flexneri* (Group B), *S. boydji* (Group C) and *S. sonnei* (Group D). Group A infections are rare in the United States but are serious and often associated with a high fatality rate. Group B infections are often associated with persons who have come from, or traveled to, developing countries, or who have had contact with such individuals. Group D accounts for over 75% of all *Shigella* infections in the U.S.

### B. Clinical Description:

Acute gastroenteritis with diarrhea, fever, nausea, vomiting, cramps and/or tenesmus (difficulty passing stool). When severe, stools contain blood, mucus and pus. While usually self-limiting to 4-7 days, severe dehydration can occur; especially with infants and the elderly. Asymptomatic infections can occur.

### C. Reservoirs:

Humans.

### D. Mode(s) of Transmission:

Fecal-oral transmission; the infectious dose is low (10-200 organisms). Direct transmission is often associated with those who fail to wash their hands after defecation and with certain sexual behaviors (e.g., oral-anal). Indirect transmission may also occur via contaminated food, milk, or water and by contaminated inanimate objects (fomites) and houseflies (vectors).

### E. Incubation Period:

Range from 12 to 96 hours; usually 1-3 days. Up to 1 week for *S. dysenteriae*.

### F. Period of Communicability:

Variable as long as organisms are excreted, usually  $\leq 4$  weeks after onset. Asymptomatic carriers may transmit infection; rarely, a carrier-state persists for months. Antimicrobial treatment may decrease the shedding to a few days.

### G. Susceptibility and Resistance:

Susceptibility is general. The elderly, debilitated, and malnourished are more at risk for severe disease and death. Breastfeeding is protective for infants. There is evidence of serotype specific immunity but only for short durations.

### H. Treatment

Antibiotics have been shown to shorten the duration of illness and bacterial shedding. Their usage should be based on the clinical status of patient and sensitivity of organism. High levels of resistance to Ampicillin and TMP/SMX have been found in the United States. Fluid and electrolyte replacement may be necessary in severe cases. The use of antimotility agents is contraindicated.

## STANDARD CASE INVESTIGATION AND CONTROL METHODS

Standard investigation activities include the following:

- 1) Confirmation of diagnosis using case definition.
- 2) Collection of demographic data (birth date, county, sex, race/ethnicity)

- 3) Collection of clinical data (symptoms and laboratory results supporting case definition, onset date and time, and if available recovery date and time).
- 4) Determination of risk factors (e.g., association with daycare, hospital, restaurant or animals, travel history).
- 5) Investigation of epi-links among cases (cluster, household, co-workers, etc).

Standard investigation **includes** completion of the General Investigation Form and Enteric Supplemental Form. Further investigative activity should include:

**A. Case Investigation - Identify Potential Source of Infection:**

Focus within the incubation period and on potential sources of infection:

- Exposure to others with diarrhea in or outside of household. Obtain relationship to case, occupation(s) and dates.
- Food history, 7 days prior to onset, including place of purchase (e.g. vegetables, fruits or foods that were bare-handed without further cooking.)
- Restaurant or group gathering history, 7 days prior to onset. Obtain name, location of restaurant / gathering, food eaten and exposure dates.
- In-state and out-of-state travel up to 2 weeks prior to onset. Obtain dates and locations.
- Drinking water sources. Specify type (e.g. private, treated, or bottled)
- Recreational water exposure. Obtain dates, locations and participation type.
- Association with childcare, residential facility/institution. Obtain dates and locations.
- Health history; underlying medical conditions, medical/surgical or GI procedures
- Sexual contacts within incubation period.
- Occupation; those at high-risk for transmitting illness include food handlers, childcare provider and persons involved in direct patient care.
- For infants  $\leq 3$  months of age, if a source is not identified, may need to obtain detailed epidemiologic data and cultures on caretaker(s), even if asymptomatic. Carefully review food-handling practices to determine whether cross-contamination of infant formula or food may be involved.

**B. Contact Investigation – Identify Exposed Individuals / Populations:**

With a secondary attack rate as high as 40% among certain populations, the identification of contacts is important to assure they receive the proper medical care should they exhibit symptoms associated with disease. Consider the following types of contacts during a contact investigation:

- General contacts: Household, close contacts and sexual partners of a case.
- Daycare contacts:
  - All direct caregivers and room/classmates of the case in a daycare with only children who are toilet trained or who are all over 2 years of age.
  - All employees and attendees of a daycare with non-toilet trained attendees, if one or more employee or child is infected or if household contacts of two or more separate attendees are infected.
  - All employees, attendees and household contacts of diapered attendees of a daycare in which outbreak recognition is delayed by  $\geq 3$  weeks.
  - Individuals who work the same shift in a daycare kitchen with an

infectious food handler are also considered contacts.

- Daycare attendees and employees who eat food prepared by an infected food handler, especially if the food handler handled ready-to-eat foods with bare hands or worked while experiencing diarrhea.
- With epidemiologic evidence of transmission in a school setting consider those who share similar exposure activities with the cases (e.g. common food/drink or recreational water sources).
- Food Service Contacts:
  - Co-workers who work the same shift as the infected food handler.
  - Patrons of the establishment of an infected food handler if (1) the food handler worked while infectious, (2) had poor personal hygiene, and (3) had the opportunity to have bare-hand contact with ready-to-eat food
- Residential Facility / Institutional Contacts (Crowded Living Conditions):
  - Room or cellmates and those who share common bathroom facilities.
  - In conditions where personal hygiene is poor or with issues of fecal incontinence or toilet use, those who share common areas with cases.

### C. Isolation, Work and Daycare Restrictions

- K.A.R 28-1-6 for *Shigella spp.*:
  - Enteric precautions followed for the duration of acute symptoms.
  - Each infected person shall be excluded from food handling, patient care, and any occupation involving the care of young children and the elderly, until two negative stool cultures are obtained at least 24 hours apart and no sooner than 48 hours following discontinuation of antibiotics.
- The Kansas Food Code has additional requirements. Consult **Table 1** on page 12 if any of the following situations are identified with a food handler:
  - Experiencing diarrhea, fever, or vomiting
  - Diagnosed with illness due to *Shigella spp.*
  - Past illness with *Shigella spp.* within the last month
  - Consumed or prepared food implicated in a foodborne outbreak or consumed food in a setting prepared by a person ill with *Shigella spp.*
  - Has a household contact that worked or attended a setting where there was a foodborne outbreak or was diagnosed with *Shigella spp.*
- School and daycare attendees are excluded until diarrhea, vomiting and fever ceases.
- Cases should not swim or engage in other form of recreational water use until 2 weeks after symptoms resolve.

### D. Case Management, Including Follow-up of cases:

- Educate case on measures to avoid future illness and its transmission.
- Follow-up is indicated if a case cares for young children, the elderly or patients or handles food to assure compliance with work restrictions.
- Additional stool cultures are not routinely indicated, except for the purpose of lifting work or school or daycare restrictions.
- If necessary, reference the [Kansas Community Containment Toolbox](#) for templates concerning isolation measures.

#### **E. Contact Management, Including Protection of Contacts:**

- Protection or prophylaxis: None.
- Provide education on avoiding further exposures and to ensure proper medical care is obtained and precautions taken if symptoms develop.
- Symptomatic contact: Considered a probable case; initiate any restrictions. Encourage to seek medical evaluation.
- Cultures to confirm epi-linked cases may be warranted in outbreak situations.
- A contact that is a food-handler should be restricted in facilities that serve highly susceptible populations. Consult **Table 1** on page 12.
- Follow-up of contacts may be needed to assure no transmission of disease.

#### **F. Environmental Measures:**

- None, unless a commercial food service facility, daycare center or public water supply is implicated in transmission. In which case the following activities should be coordinated through the proper regulatory agency:
  - Inspection of the facility.
  - Collection of food, drink or water samples
- Consult the [KDHE Foodborne Illness and Outbreak Investigation Manual](#).
- Proper chlorination or boiling of water prevents illness transmission.
- Clean and sanitize potentially contaminated surfaces with 1% bleach or proper germicides.

#### **G. Education:**

- Advise cases and contacts on measures to avoid future exposures.
  - Emphasis on hand washing, cleaning fingernails and personal hygiene.
  - Washing hands thoroughly with soap and water before eating/handling food, after using the toilet, after changing diapers or handling feces.
  - Symptomatic individuals should not prepare food / drinks for others. After symptoms cease, warm water and soap should always be used to wash hands and beneath fingernails before preparing food or drinks.
  - Avoid drinking or swallowing untreated surface water. Surface water should be boiled or otherwise disinfected before consumption.
  - When taking care of someone who has diarrhea scrub hands with plenty of soap and water after cleaning the bathroom, helping the person use the toilet, or changing diapers, soiled clothes or soiled sheets.
- As needed, inform of communicability, incubation period and symptoms.
- Use the “Public Health Fact Sheet on Shigella” to assist with education.

### **MANAGING SPECIAL SITUATIONS**

#### **A. Outbreak Investigation:**

- Notify KDHE immediately, 1-877-427-7317.
- Consult [KDHE Foodborne Illness and Outbreak Investigation Manual](#) for outbreaks involving food.
- Consult [KDHE Control of Enteric Outbreaks in Child-Care Facilities](#) for circumstances involving child-care.

- Organize and maintain all data related to outbreak:
  - Construct and maintain case listing which includes:
    - KS-EDSS ID,
    - Name, DOB (or age) and any other specific demographics,
    - Symptoms; onset date and time; recovery date and time
    - Source of exposure (i.e., case ID, setting, classroom),
    - Specimen collection date,
    - Lab results,
    - Case status (i.e., confirmed, probable, suspect)
  - Use tracking tools (logbooks, chalkboards or databases) to record actions needed for each suspected case (i.e., deliver stool kit, call)
- Identify population(s) at risk of infection based on the scope and spread of the outbreak; use the information collected in case investigations to define:
  - Person: who is becoming ill (i.e., age, gender, occupations)
  - Place: where are the cases (i.e. classrooms, address) and to what settings or activities are they associated
  - Time: when did it start and is it still going on
- Enhance surveillance and perform active case finding:
  - Maintain active surveillance with medical providers serving the affected communities for two incubation periods from last confirmed case.
- Outbreak control:
  - Target efforts on those population(s) identified as at risk.
  - Establish protocols for control measures necessary for all likely situations (i.e., exposure in child care center, school).

#### **B. Daycare Worker or Attendee:**

For one case, proceed with the following activities:

- Interview the operator and request review of attendance records to identify other possible cases among staff or attendees in the past 2 weeks.
- Coordinate the collection stool specimens or rectal swabs from any other attendees or staff with a history of diarrheal illness within the past 2 weeks.
- Reinforce the need to exclude symptomatic children until diarrheas ceases and/or the need to exclude caretakers until after the submission of two negative stool samples taken from the excluded person 24 hours apart and, if treated, 48 hours after the discontinuation of any antibiotic treatment.
- Educate on how to prevent disease transmission at center and at home.
- If >1 case or suspected case is identified among attendees or workers at a daycare facility, a thorough inspection of the facility is indicated.
  - Contact KDHE and refer to the “Outbreak Investigation” section above.
  - Coordinate additional activities with the local daycare inspector and the KDHE Child-Care Licensing Program.
  - Request stool samples from the following:
    - Symptomatic children.
    - Asymptomatic children who are in rooms with sick children in day-cares enrolling non-toilet trained children.

- Symptomatic and asymptomatic food handlers and childcare givers.
- Symptomatic household/close contacts of ill individuals.
- Asymptomatic household/close contacts who are engaged in sensitive occupations such as food handling or direct patient care.
- Treatment should be recommended for all culture positive individuals (symptomatic or asymptomatic) if they attend or work at the daycare or are household members of those who attend or work at the daycare.
- Exclude all symptomatic children (tested positive/negative) until 24 hours the cessation of symptoms.
- Exclude the following individuals until they have had no diarrhea for 24 hours and have submitted two negative stool samples taken 24 hours apart and, if treated, 48 hours after the end of any antibiotic treatment.
  - Asymptomatic children that tested positive.
  - Symptomatic and asymptomatic food handlers and child-care givers.
- Cohorting may be used in those centers with the capability. Asymptomatic, stool positive children and staff may be placed in separate convalescent rooms away from healthy individuals, with provision of separate restrooms when possible.
  - Treated individuals may be released from the cohorting after completion of an effective antibiotic treatment and when stool no longer yields *Shigella*. (Note: When an antibiogram is available, completed treatment may be assumed to have cured infection without the testing occurring prior to release.)
  - Untreated individuals may be released after two consecutive stool samples taken 24 hours apart are negative.
- Investigate hand washing, diapering and disinfection procedures.
- Investigate for possible source of infection and routes of transmission:
  - Suspect index cases.
  - Animal contact (on-site and field trips).
  - Water-play areas.
  - For suspected point source outbreaks, collect menus of food and drinks served during the last 7 days from the first date of onset.
- Review findings with daycare operator and implement control measures.
- Consider closing daycare to new admissions if there is evidence of noncompliance. Closure to readmission or temporary closure is not recommended. Permanent closure/revocation of license occurs if deemed necessary the Child Care Licensing Program.
- The facility operator should be instructed to call the health department immediately if new cases of diarrhea occur.
- Call or visit each week for 2 weeks after the last case's onset to verify no further cases and that appropriate hygienic measures are being carried out.
- If there is no continued transmission after 2 weeks, consider lifting more stringent control measures (i.e., exclusion recommendations).
- If there is continued transmission with new cases occurring within two weeks after the initiation of above control measures, the local health officer/administrator or designee may use the following measures:

- Consider closing or continue to close the daycare to new admissions, but not to readmission or temporary closure.
- Consider testing all children regardless of the type of enrollees.
- Exclude all symptomatic and all asymptomatic culture positive individuals until cessation of symptoms for 24 hours and after submission of two negative stool samples taken 24 hours apart and, if treated, 48 hours after the end of any antibiotic treatment.
- Consider testing previously treated children that may have not been tested to assess treatment effectiveness, and to require two consecutive negative stool samples taken 24 hours apart, and 48 hours after treatment has ended before releasing from the convalescent room if cohorting was used.

**C. Case Is a Food Handler or Food Establishment Is Implicated:**

For one case, proceed with the following activities:

- Coordinate the following activities with the local food facility inspector and the Kansas Department of Agriculture (KDA) as needed.
  - KDA Division of Food safety and Lodging regulates grocery stores, convenience stores, restaurants, schools, senior meal sites, mobile food units, lodging facilities, food wholesalers and warehouses, food processors and food manufacturers.
- Interview the manager and identify other possible cases among staff or patrons within the past 2 weeks.
  - The first page of the “Gastrointestinal Employee Survey” in the KDHE Foodborne Illness and Outbreak Manual can be used as a tool.
- Coordinate the collection of stool samples or rectal swabs from any staff member with history of diarrheal illness within the past 2 weeks.
- Refer to the above “Isolation, Work and Daycare Restrictions” for further instruction on exclusion and restriction of food handlers.
- If one case or suspect case is identified among staff or if >1 case or suspected case is associated with the facility, a thorough inspection of the establishment is indicated.
  - For a suspected outbreak, notify the KDHE and refer to the “Outbreak Investigation” section above.
  - Coordinate inspection, collection of any food samples and survey delivery with the food facility inspector.
  - Emphasis on hand washing.
  - Use the complete “Gastrointestinal Employee Survey” to identify ill employees.
- The facility operator should be instructed to call the health department if new cases of diarrhea occur.

**D. Food Served at Public Gathering Implicated:**

- Determine if anyone who prepared food for the gathering had diarrhea at any time during the past 14 days.
- Conduct active case finding; determine if any other food preparers or attendees developed diarrhea within 7 days after the gathering.

- Collect stool specimens for culture from any symptomatic food handler.
- If a food establishment or distributor is implicated as the source of infection refer to “Case Is a Food Handler or Food Establishment Is Implicated.”

#### **E. Health Care Setting Associated:**

- Hospitals: *Shigella* has rarely been associated with nosocomial infections.
  - Nosocomial describes infections not present or incubating prior to the patient being admitted but acquired in hospitals and usually observed >48 hours after admission. As the incubation period will vary to some extent based on underlying health conditions, each infection should be assessed individually. Nosocomial infections include those acquired in the hospital but not evident until after discharge.
  - Coordinate investigation efforts with hospital infection control.
- Nursing home: Crowded communal living conditions and age-related risk factors including immune status and higher rates of dementia and incontinence may allow transmission of enteric pathogens.
  - Coordinate investigation efforts through nursing home administrator.
  - Kansas Department of Aging should be notified if a nursing home, adult care, or long-term care facility is involved in an outbreak.

#### **F. Residential Facility or Institutional Outbreaks:**

- Special measures may be required, including separate housing for cases and new admissions, vigorous program of supervised hand washing, and repeated cultures of patients and attendants.
- Groups that include non-toilet trained or young children, those who are mentally deficient and those without an adequate water or hand washing facilities are the most difficult to control.
- Coordinate efforts with institutional medical staff and appropriate regulatory agency. (For example, the State Department of Corrections should be notified of outbreaks involving state prisons.)

#### **G. Community Water Source Implicated:**

- Consult with the State epidemiology staff when the investigation implicates that a community drinking water system.

#### **H. Intentional Contamination**

- If suspected, notify local law enforcement and state public health officials.
  - Consider epidemiologic clues and law enforcement guidance.
  - Observations during environmental assessments may provide evidence.
- Implement “Chain of Custody” procedures for all samples collected, as they will be considered evidence in a criminal investigation.

## **DATA MANAGEMENT AND REPORTING TO THE KDHE**

- A. Organize, collect and report data utilizing the “General Investigation Form” and “Enteric Disease Supplemental Form”.
- B. Report data electronically via KS-EDSS or by fax, include:
  - All essential data that was collected during the investigation, especially data that helps to confirm or classify a case.
  - All information collected on the supplemental form.

## **ADDITIONAL INFORMATION / REFERENCES**

- A. **Treatment / Differential Diagnosis:** American Academy of Pediatrics. 2006 Red Book: Report of the Committee on Infectious Disease, 27th Edition. Illinois, Academy of Pediatrics, 2006.
- B. **Epidemiology, Investigation and Control:** Heymann. D., ed., Control of Communicable Diseases Manual, 18th Edition. Washington, DC, American Public Health Association, 2004.
- C. **Case Definitions:** CDC Division of Public Health Surveillance and Informatics, Available at: [http://www.cdc.gov/ncphi/diss/nndss/casedef/case\\_definitions.htm](http://www.cdc.gov/ncphi/diss/nndss/casedef/case_definitions.htm)
- D. **Quarantine and Isolation:** Kansas Community Containment Isolation/ Quarantine Toolbox Section III, Guidelines and Sample Legal Orders <http://www.waldcenter.org/Quarantine%20and%20Isolation%20Information%20for%20Health%20Officers.pdf>
- E. **Kansas Regulations/Statutes Related to Infectious Disease:** <http://www.kdheks.gov/epi/regulations.htm>
- F. **KDHE Foodborne Illness and Outbreak Investigation Manual:** [http://www.kdheks.gov/epi/download/kansas\\_foodborne\\_illness\\_manual.pdf](http://www.kdheks.gov/epi/download/kansas_foodborne_illness_manual.pdf)
  - Section 5, Environmental Health Assessment, including Intentional Contamination of Food investigation guidance.
  - Appendix D, Exclusion and Restriction Requirements for Food handlers.
- G. **KDHE Control of Enteric Disease Outbreaks in Childcare Facilities:** [http://www.kdheks.gov/epi/download/Enteric\\_Disease\\_in\\_Day\\_care\\_centersver4.pdf](http://www.kdheks.gov/epi/download/Enteric_Disease_in_Day_care_centersver4.pdf)
- H. **KDHE Foodborne Illness Resources:** <http://www.kdheks.gov/epi/foodborne.htm>
- I. **Additional Information (CDC):** <http://www.cdc.gov/health/default.htm>

Table 1. Managing a Food Handler That is Associated to <i>Shigella spp.</i>					
Diarrhea?	Diagnosed with <i>Shigella spp.</i> ?	Illness in last month with <i>Shigella spp.</i>	Exposed † to <i>Shigella spp.</i>	Restriction or Exclusion ‡	Reinstatement of Employee to Full Duties
Yes	Yes			<b>Exclude</b> from all facilities. Reduce to <b>restriction</b> in facilities not serving highly susceptible populations* after asymptomatic for 24 hours.	With the approval from regulatory authority. §
Yes	No			<b>Exclude</b> from facilities that serve highly susceptible populations*. <b>Restrict</b> in other situations.	After asymptomatic for 24 hours or with written medical documentation that the symptom is noninfectious.
No		Yes		<b>Exclude</b> from facilities that serve highly susceptible populations*.	With the approval from regulatory authority. §
No	No	No	Yes	<b>Restrict</b> from facilities that serve highly susceptible populations*.	3 days after employee was exposed or after household contact became asymptomatic.

(Refer to the **KDHE Foodborne Illness and Outbreak Investigation Manual** for additional information)

† Exposure is defined as a food handler consuming or preparing food implicated in a foodborne outbreak of STEC or that was prepared by a person infected with STEC or a food handler who has a household contact that attended or worked at a setting where there was a foodborne outbreak of STEC or who was diagnosed with STEC.

‡ Exclusion is not allowing the employee to work at the food establishment. Restriction is not allowing the employee to work with food; to clean equipment, utensils or linens; or to un-wrap single-use articles in the food establishment.

\* A highly susceptible population is more likely to experience foodborne disease because they are immunocompromised or older adults and in a facility that provides health care or assisted living services, such as a hospital or nursing home; or preschool age children in a facility that provides custodial care, such as a daycare center.

§ Approval by a regulatory authority (i.e. local health officer) requires written documentation of 2 consecutive negative stools taken 48 hours after discontinuance of antibiotics and 24 hours apart or a declaration that the person has been asymptomatic for 7 days.

# Kansas Disease Investigation Guidelines

## General Investigation Form

Investigation Information		
<b>Case Type:</b> <input type="checkbox"/> Human Case <input type="checkbox"/> Non-human Case	<b>Disease Name:</b> _____	
<b>Classification:</b> <input type="checkbox"/> Suspect <input type="checkbox"/> Probable <input type="checkbox"/> Confirmed	<b>KS-EDSS Investigation ID:</b> _____	
<b>Outbreak:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No	<b>Outbreak Name:</b> _____	<b>Outbreak #:</b> _____
<b>Onset Date:</b> _____	<b>Diagnosis Date:</b> _____	<b>Report Date:</b> _____
<b>Assigned to (Investigator):</b> _____	<b>Patient Died:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
Patient Information		
<b>Name Type:</b> <input type="checkbox"/> Default/Common <input type="checkbox"/> Legal <input type="checkbox"/> Maiden <input type="checkbox"/> Nickname		
<b>Last:</b> _____	<b>First:</b> _____	<b>Middle:</b> _____
<b>Street:</b> _____	<b>City/State:</b> _____	<b>Zip:</b> _____
<b>Evening Phone #:</b> _____	<b>Daytime Phone #:</b> _____	
<b>Sex:</b> <input type="checkbox"/> Failure to Report <input type="checkbox"/> Female <input type="checkbox"/> Male <input type="checkbox"/> Other <input type="checkbox"/> Transexual <input type="checkbox"/> Unknown		
<b>Race:</b> <input type="checkbox"/> American Indian or Alaska Native <input type="checkbox"/> Asian <input type="checkbox"/> Black or African American <input type="checkbox"/> Native Hawaiian or Other Pacific Islander <input type="checkbox"/> White <input type="checkbox"/> Unknown		
<b>Hispanic / Latino Ethnicity:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No		
<b>Date of Birth:</b> _____	<b>Age:</b> _____	<b>Age Unit:</b> <input type="checkbox"/> Days <input type="checkbox"/> Weeks <input type="checkbox"/> Months <input type="checkbox"/> Years
Parent Information (if under 18)		
<b>Last:</b> _____	<b>First:</b> _____	<b>Middle:</b> _____
<b>Street:</b> _____	<b>City/State:</b> _____	<b>Zip:</b> _____
<b>Evening Phone #:</b> _____	<b>Daytime Phone #:</b> _____	
Work / Occupation or School / Grade		
<b>Worksites / School:</b> _____		
<b>Occupations / Grade:</b> _____		
Travel History		
<b>1<sup>st</sup></b>	<b>Destination:</b> _____	<b>Depart Date:</b> _____ <b>Return Date:</b> _____
<b>2<sup>nd</sup></b>	<b>Destination:</b> _____	<b>Depart Date:</b> _____ <b>Return Date:</b> _____
<b>3<sup>rd</sup></b>	<b>Destination:</b> _____	<b>Depart Date:</b> _____ <b>Return Date:</b> _____
<b>4<sup>th</sup></b>	<b>Destination:</b> _____	<b>Depart Date:</b> _____ <b>Return Date:</b> _____



# Supplemental Laboratory Report Form

**Lab Reports**

Laboratory Name: \_\_\_\_\_

Lab Report Date: \_\_\_\_\_

Ordering Provider Name: \_\_\_\_\_

Phone: \_\_\_\_\_

Facility: \_\_\_\_\_

Specimen Accession Number: \_\_\_\_\_

Specimen Collection Date: \_\_\_\_\_

Organism Name: \_\_\_\_\_

Organism Species: \_\_\_\_\_

Organism Serogroup: \_\_\_\_\_

Organism Serotype: \_\_\_\_\_

**PFGE Results**

Pattern 1      KS: \_\_\_\_\_

Other State: \_\_\_\_\_

CDC: \_\_\_\_\_

Pattern 2      KS: \_\_\_\_\_

Other State: \_\_\_\_\_

CDC: \_\_\_\_\_

Pattern 3      KS: \_\_\_\_\_

Other State: \_\_\_\_\_

CDC: \_\_\_\_\_

**Additional Results Information**

Reported Test Name:

Coded Result:

Text Result:

Numeric Result:

Comments:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# Supplemental Contact Form

**Contacts**

**Last:** \_\_\_\_\_ **First:** \_\_\_\_\_ **Middle:** \_\_\_\_\_

**Street:** \_\_\_\_\_ **City/State:** \_\_\_\_\_ **Zip:** \_\_\_\_\_

**Evening Phone #:** \_\_\_\_\_ **Daytime Phone #:** \_\_\_\_\_ **E-mail:** \_\_\_\_\_

**Sex:**  Failure to Report  Female  Male  Other  Transexual  Unknown

**Race:**  American Indian or Alaska Native  Asian  Black or African American  Native Hawaiian or Other Pacific Islander  White  Unknown

**Hispanic / Latino Ethnicity:**  Yes  No

**Date of Birth:** \_\_\_\_\_ **Age:** \_\_\_\_\_ **Age Unit:**  Days  Weeks  Months  Years

**Worksites / School:** \_\_\_\_\_

**Occupations / Grade:** \_\_\_\_\_

**Exposure Information**

**Contact Type:**  Household  Sexual  Other: \_\_\_\_\_ **Partner / Cluster Code:** \_\_\_\_\_

**Date of First Exposure:** \_\_\_\_\_ **Date of Last Exposure:** \_\_\_\_\_ **Frequency:** \_\_\_\_\_

**Nature of Exposure:** \_\_\_\_\_ **Comments:** \_\_\_\_\_

**Testing and Treatment Information**

**Clinic Code:** \_\_\_\_\_ **Examination Date:** \_\_\_\_\_

**Examination Test:** \_\_\_\_\_ **Examination Result:** \_\_\_\_\_

**Prophylaxis/empiric treatment date:** \_\_\_\_\_ **Drug / Dosage:** \_\_\_\_\_

**Provider (Name / Facility):** \_\_\_\_\_

**Disposition and Diagnosis Information**

**Initiation Date:** \_\_\_\_\_ **Disposition Date:** \_\_\_\_\_ **Disposition:** \_\_\_\_\_

**Diagnosis:** \_\_\_\_\_ **Referral Type:**  Patient  Provider **Post-test Counseled :**  Yes  No

**Currently Assigned To:** \_\_\_\_\_ **Follow-up Date:** \_\_\_\_\_

**Risk Factors**

**Pregnant:**  Yes  No **If Yes, # of Weeks:** \_\_\_\_\_

**Risk factors for complications in contact:**  None  Pregnant Woman  HIV Seropositive  Unimmunized  Index case is a super-spreader

Child younger than 5  Age > 65  Otherwise immunosuppressed (s/p transplant, high dose steroids, etc)

# Enteric Disease Supplemental Form

Kansas Department of Health and Environment

## Epidemiologic Case History

Condition	
<i>Calicivirus/Norwalk-like virus (norovirus)</i>	<i>Campylobacter Infection (Campylobacter spp.)</i>
<i>Cryptosporidiosis (Cryptosporidium parvum)</i>	<i>Enterohemorrhagic Escherichia coli (EHEC)</i>
<i>Enterohemorrhagic Escherichia coli O157:H7</i>	<i>Enterohemorrhagic Escherichia coli shiga toxin positive (not serogrouped)</i>
<i>Enterohemorrhagic Escherichia coli shiga toxin positive (serogroup non-O157)</i>	<i>Giardiasis (Giardia lamblia)</i>
<i>Salmonellosis (Salmonella spp.)</i>	<i>Shigellosis (Shigella spp.)</i>
<i>Cyclosporiasis (Cyclospora cayetanensis)</i>	<i>Hepatitis A</i>
<i>Listeriosis (Listeria monocytogenes)</i>	

\* indicates required fields

Case Type*		Classification*					
<i>Human Case</i>	<i>Non Human Case</i>	<i>Confirmed</i>	<i>Not a Case</i>	<i>Probable</i>	<i>Suspect</i>	<i>Deleted</i>	<i>Unknown</i>

Supplemental Form Status				
<i>Not Done</i>	<i>Form Complete</i>	<i>Form in Progress</i>	<i>Form Approved</i>	<i>Form Sent to CDC</i>

Report Date\*  
mm/dd/yyyy

Date Investigation Started  
mm/dd/yyyy

# Patient Demographic Information

\* indicates required fields

<b>Last Name*</b>	<b>First Name*</b>	<b>Middle Name</b>	<b>Name Type*</b>	<b>Age</b>
-------------------	--------------------	--------------------	-------------------	------------

<b>Age Unit</b> <i>Days    Weeks    Unknown    Months    Years</i>	<b>Date of Birth</b> <small>mm/dd/yyyy</small>
---	---

**Race\***  
(Check all that apply)

*American Indian or Alaska Native      Asian      Black or African American*  
*Native Hawaiian or Other Pacific Islander      White      Unknown*

**Ethnicity\***  
*Hispanic or Latino    Not Hispanic or Latino    Unknown*

**Sex\***  
*Failure to Report    Female    Male    Other    Transexual    Unknown*

**Street Address**

<b>City</b>	<b>County</b>	<b>State</b>	<b>Zip</b>
-------------	---------------	--------------	------------

<b>Evening Phone</b> <small>###-###-####</small>	<b>Daytime Phone</b> <small>###-###-####</small>
---	---

**Occupation**

**High Risk Potential:**  
(Check all that apply)

<i>Contact to a confirmed case _____</i>	<i>Contact to a suspected case _____</i>
<i>Daycare attendee _____</i>	<i>Food handler _____</i>
<i>Direct patient care worker _____</i>	<i>Institutional resident or staff _____</i>
<i>Daycare worker _____</i>	<i>Animal handler _____</i>
<i>Other _____</i>	

If enrolled in day care, please complete the information below.

<b>Name of Facility</b>	<b>Evening Phone</b> <small>###-###-####</small>
-------------------------	---

<b>Street Address</b>		<b>City</b>
<b>County</b>	<b>State</b>	<b>Zip</b>

## Person Providing Report

**Name of Reporting Facility\***

## Clinical and Laboratory Data

<b>Individual diagnosed with</b> <i>Hemolytic Uremic Syndrome (HUS)    Thrombotic Thrombocytopenic Purpura (TTP)</i>	<b>Was a stool specimen collected?</b> <i>Yes    No</i>
---	--

<b>Diarrhea?</b> <i>Yes    No    Unknown</i>	<b>Number of Stools</b> <i>0 - 2    3 - 10    11 and above</i>	<b>Blood in Stool?</b> <i>Yes    No    Unknown</i>	<b>Vomiting?</b> <i>Yes    No    Unknown</i>
---	---	---	---

<b>Nausea?</b> <i>Yes    No    Unknown</i>	<b>Abdominal Cramps?</b> <i>Yes    No    Unknown</i>	<b>Muscle Ache?</b> <i>Yes    No    Unknown</i>	<b>Other Symptoms?</b> <i>other _____</i>
---	---	--	--

<b>What was the first Symptom</b>	<b>Date of Onset</b> <small>mm/dd/yyyy</small>	<b>Time of Onset</b>
-----------------------------------	---	----------------------

**Clinical and Laboratory Data cont.**

<b>Fever?</b> <i>Yes No Unknown</i>	<b>If Yes, specify highest temperature:</b>
--	---

**Physician Information**

<b>Was a physician consulted for this illness?</b> <i>Yes (please complete the information below) No</i>	<b>Name of physician:</b>
---	---------------------------

<b>Evening Phone</b> ###-###-####	<b>Street Address</b>		
<b>City</b>	<b>County</b>	<b>State</b>	<b>Zip</b>

**Antibiotic Information**

<b>Was case treated with antibiotics anytime in the 14 days prior to illness?</b> <i>Yes No Unknown</i>	<b>Type of treatment/antibiotic</b>	<b>Reason for taking</b>	<b>Date started</b> <small>mm/dd/yyyy</small>
--	-------------------------------------	--------------------------	--

<b>Date completed</b> <small>mm/dd/yyyy</small>	<b>Was case treated with antibiotics for this illness?</b> <i>Yes No Unknown</i>	<b>Type of treatment:</b>	<b>Date Started:</b> <small>mm/dd/yyyy</small>
--	---	---------------------------	---

<b>Date completed:</b> <small>mm/dd/yyyy</small>	<b>Was organism resistant to antibiotics?</b> <i>Yes No Unknown</i>	<b>If yes, specify resistance pattern:</b>
---	--	--

<b>Is the patient on any medication or receiving any treatment which may suppress their immune system (i.e. Corticosteroids or Cancer Chemotherapy)?</b> <i>Yes No Unknown</i>	<b>If yes please specify medication or treatment:</b>
---	---

<b>Did patient recover?</b> <i>Yes No Unknown</i>	<b>Recover Date</b> <small>mm/dd/yyyy</small>	<b>Recover Time</b>
--	--	---------------------

**Exposure/Transmission**

**Did anyone else (in your family ..) recently have similar symptoms?**  
*Yes (please complete below) No Unknown*

Name	Age	Sex	Relationship to Case	Occupation	Symptoms	Date of Onset
						<small>mm/dd/yyyy</small>

**Any restaurant, commercial food establishments, or group gatherings visited within the 7 days prior to onset of illness?**  
*Yes (please complete below) No Unknown*

Name of Establishment	City, County, State	Foods eaten	Date of Exposure
			<small>mm/dd/yyyy</small>

# Travel History

**Did the patient Travel prior to the onset of illness?**

*Yes No Unknown*

If yes, please complete below:

<b>Where:</b>	<b>Departure Date:</b> <small>mm/dd/yyyy</small>	<b>Return Date:</b> <small>mm/dd/yyyy</small>
<b>Where:</b>	<b>Departure Date:</b> <small>mm/dd/yyyy</small>	<b>Return Date:</b> <small>mm/dd/yyyy</small>

## Water Exposure

**Possible water sources:**

(Check all that apply)

*Municipal Water System* \_\_\_\_\_ *Bottled Water* \_\_\_\_\_ *Private Well* \_\_\_\_\_  
*Rural Water System* \_\_\_\_\_ *Other (specify):* \_\_\_\_\_

**Did patient drink water from other than a treated municipal system (i.e., stream, well)?**

*Yes No Unknown*

## Other Possible Exposure Information

**Was there contact with pets or animals within 7 days prior to onset?**

*Yes No Unknown*

**If yes, please indicate below:**

(Check all that apply)

*Caged Birds Cats Cattle Chickens Dogs Ducks*  
*Frogs Goats Guinea Pigs Hamsters Horses Lizards*  
*Mice Parakeets Pigeons Pigs Poultry Rabbits*  
*Rats Sheep Snakes Turkeys Turtles Other* \_\_\_\_\_

**Other Exposure Information**

<b>Other Birds?</b>	<b>If yes, please specify</b>	<b>Other Reptiles?</b>	<b>If yes, please specify</b>
<i>Yes No Unknown</i>		<i>Yes No Unknown</i>	

**Other Animals?**

*Yes No Unknown*

**If yes, please specify**

**Were any of these animals ill near the time of onset**

*Yes No Unknown*

**If yes, please describe:**

**Where were the animals located?**

(Check all that apply)

*Home Farm School Pet Store Zoo Petting Zoo Other* \_\_\_\_\_

## Other Possible Exposure Information cont.

Within 7 days prior to onset of illness, did the patient participate in:

Activity	Participation	Date	Location
		mm/dd/yyyy	
Outdoor Activities			
Swimming			
Chlorinated Pool			
Wading Pool			
River/Lake/Pond			

### Food History

Did case eat any of the following within 7 days prior to the onset of illness?

Food Product	Consumed	City, County, State	Variety or Brand(s)	Supplier	Supplier City
1. Chicken					
2. Hamburger					
3. Sausage					
4. Hot Dogs					
5. Lunch Meat					
6. Eggs					
7. Milk raw					
8. Milk past.					
8. Fresh juice					
10. Fresh berries					
11. Fresh melon					
12. Other fresh fruit					
13. Lettuce					
14. Alfalfa Sprouts					
<b>Other fresh vegetables</b>		<b>Other Food Item 1</b>		<b>Other Food Item 2</b>	

**At what store(s) do you regularly shop for groceries?**

## SEVEN-DAY ENTERIC QUESTIONNAIRE MODIFIED FOR CHILD CARE STAFF *(telephone interview)*

Hello, my name is \_\_\_\_\_. I am *(with/calling on behalf of)* the name of health department. We are currently investigating an outbreak of diarrhea and vomiting which has occurred at name of child-care facility. To assist us in our investigation, we are asking parents or guardians of **ALL** children enrolled at name of child-care facility to complete this questionnaire. Your participation is essential in this investigation. All information is confidential and will only be used for public health purposes. Do you have about 15 minutes to complete this questionnaire? (If they answer yes, continue. If they answer no, request a more convenient time to administer this questionnaire)

---

Diagnosis \_\_\_\_\_ Date: \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

Last Name: \_\_\_\_\_ First Name: \_\_\_\_\_

Date of Birth: \_\_\_\_/\_\_\_\_/\_\_\_\_ Sex: Male / Female

Street Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_ ZIP Code: \_\_\_\_\_

Home Phone: (\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_

---

What is your job title? \_\_\_\_\_

If teacher:

What is the age group of your class? \_\_\_\_\_

Have you been working at this child-care facility since \_\_\_\_/\_\_\_\_/\_\_\_\_? **YES / NO**

Do you prepare meals (this includes mixing formula) for the children? **YES / NO**

Do you serve meals to the children? **YES / NO**

Did you have a child with diarrhea or vomiting in your class?

**YES / NO**

/ **DON'T KNOWS**

If

yes:

When did your first case occur? \_\_\_\_/\_\_\_\_/\_\_\_\_\_

Do you change diapers? **YES / NO**

Do you assist with toileting? **YES / NO**

Were there any activities in your class during the period of \_\_\_/\_\_\_/\_\_\_ to \_\_\_/\_\_\_/\_\_\_, which are not noted on your roster? **YES / NO**

If yes:

What	Where	When
_____	_____	___/___/___
_____	_____	___/___/___
_____	_____	___/___/___
_____	_____	___/___/___

Did the children in your class play with any animals during the period of \_\_\_/\_\_\_/\_\_\_ to \_\_\_/\_\_\_/\_\_\_? **YES / NO**

If yes:

What type?	Where?	When?
_____	_____	___/___/___
_____	_____	___/___/___
_____	_____	___/___/___
_____	_____	___/___/___

---

When did you start working at the child-care facility (hire on date)? \_\_\_/\_\_\_/\_\_\_ (mm/dd/yyyy)

Since \_\_\_/\_\_\_/\_\_\_ have you had diarrhea, vomiting or fever? **YES / NO**  
**If no, go to question 8.**

Did you completely recover? **YES / NO**

If yes, Date of recovery \_\_\_/\_\_\_/\_\_\_ (mm/dd/yyyy)  
Time: \_\_\_\_\_ am / pm

When did you first become ill? \_\_\_/\_\_\_/\_\_\_ (mm/dd/yyyy)

Indicate all symptoms:

Diarrhea (more than 3 loose stools in a 24 hour period)	<b>YES / NO</b>
Bloody Diarrhea: <b>YES / NO</b>	Number of stools/24 hours: _____
Stomach ache: <b>YES / NO</b>	Nausea: <b>YES / NO</b>
Vomiting: <b>YES / NO</b>	Muscle aches/pains: <b>YES / NO</b>
Fever/Chills: <b>YES / NO</b>	Highest temperature: _____
Other symptoms? _____	

Did you see a physician? **YES / NO**

If yes,

Name of physician: \_\_\_\_\_

Phone Number (\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_

Were you hospitalized? **YES / NO**

If yes,

Hospital name: \_\_\_\_\_

Is or was any other family member or close personal contact experiencing any of the above-mentioned symptoms? **YES / NO**

If yes; list names:

Name	Relationship to child	Date of Birth	Onset Date
_____	_____	___/___/___	___/___/___
_____	_____	___/___/___	___/___/___
_____	_____	___/___/___	___/___/___
_____	_____	___/___/___	___/___/___
_____	_____	___/___/___	___/___/___
_____	_____	___/___/___	___/___/___

In the 7 days prior to illness, did you have contact with any of the following animals?

Chicks? **YES / NO** Ducklings? **YES / NO**

Other Birds? **YES / NO** Specify \_\_\_\_\_

Reptiles (turtles, snakes, lizards, iguanas, etc.) **YES / NO**

Specify \_\_\_\_\_

Other pets or animals? **YES / NO**

Specify \_\_\_\_\_

Please indicate location and date of purchase of chicks, ducklings, other birds, or reptiles.

Store \_\_\_\_\_ City \_\_\_\_\_

Date: \_\_\_/\_\_\_/\_\_\_

Excluding activities at the child-care facility, did you visit a farm or petting zoo in the 7 days prior to illness? **YES / NO**

If yes:

Where \_\_\_\_\_ When \_\_\_/\_\_\_/\_\_\_ (mm/dd/yyyy)

Where \_\_\_\_\_ When \_\_\_\_/\_\_\_\_/\_\_\_\_ (mm/dd/yyyy)

Excluding activities at the child-care facility, did you swim in a lake, river, or pool in the 7 days prior to illness? **YES / NO**

If yes:

Where \_\_\_\_\_ When \_\_\_\_/\_\_\_\_/\_\_\_\_ (mm/dd/yyyy)

Where \_\_\_\_\_ When \_\_\_\_/\_\_\_\_/\_\_\_\_ (mm/dd/yyyy)

Have you traveled outside the State of Kansas in the 7 days prior to illness?

**YES / NO**

If yes:

City \_\_\_\_\_ State \_\_\_\_\_ Dates: \_\_\_\_/\_\_\_\_/\_\_\_\_ to \_\_\_\_/\_\_\_\_/\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Dates: \_\_\_\_/\_\_\_\_/\_\_\_\_ to \_\_\_\_/\_\_\_\_/\_\_\_\_

Have you traveled outside the United States of America in the 7 days prior to illness?

**YES / NO**

If yes:

Country \_\_\_\_\_ Dates: \_\_\_\_/\_\_\_\_/\_\_\_\_ to \_\_\_\_/\_\_\_\_/\_\_\_\_

Country \_\_\_\_\_ Dates: \_\_\_\_/\_\_\_\_/\_\_\_\_ to \_\_\_\_/\_\_\_\_/\_\_\_\_

What is the source of your drinking water (indicate all that apply)?

Public water system? **YES / NO** Name \_\_\_\_\_

Private well? **YES / NO**

Bottled water? **YES / NO** Name \_\_\_\_\_

Did you eat in any restaurants in the 7 days prior to illness? **YES / NO**

Please list the restaurants to the best of your recollection:

A) Name \_\_\_\_\_ City \_\_\_\_\_ Date \_\_\_\_/\_\_\_\_/\_\_\_\_

Foods eaten: \_\_\_\_\_

B) Name \_\_\_\_\_ City \_\_\_\_\_ Date \_\_\_\_/\_\_\_\_/\_\_\_\_

Foods eaten: \_\_\_\_\_

C) Name \_\_\_\_\_ City \_\_\_\_\_ Date \_\_\_\_/\_\_\_\_/\_\_\_\_

Foods eaten: \_\_\_\_\_

D) Name \_\_\_\_\_ City \_\_\_\_\_ Date \_\_\_\_/\_\_\_\_/\_\_\_\_

Foods eaten: \_\_\_\_\_

Did you attend any parties, fairs, carnivals, family/social gatherings, or other events at which food was provided, in the 7 days prior to illness? **YES / NO**

Name/description of event \_\_\_\_\_ City \_\_\_\_\_

Date \_\_\_\_/\_\_\_\_/\_\_\_\_

Foods eaten \_\_\_\_\_

Indicate which of the following foods that you ate in the 7 days prior to illness. If unsure, answer yes to any foods that you eat routinely. To the best of your recollection, also provide the brand names and the store names and locations where you purchased them.

Raw unpasteurized milk? **YES / NO** Brand \_\_\_\_\_  
Store name \_\_\_\_\_ City \_\_\_\_\_

Pasteurized milk? **YES / NO** Brand \_\_\_\_\_  
Store name \_\_\_\_\_ City \_\_\_\_\_

Unpasteurized apple cider? **YES / NO** Brand \_\_\_\_\_  
Store name \_\_\_\_\_ City \_\_\_\_\_

Ground beef or hamburgers? **YES / NO** Brand \_\_\_\_\_  
Store name \_\_\_\_\_ City \_\_\_\_\_

Steaks? **YES / NO** Brand \_\_\_\_\_  
Store name \_\_\_\_\_ City \_\_\_\_\_

Chicken? **YES / NO** Brand \_\_\_\_\_  
Store name \_\_\_\_\_ City \_\_\_\_\_

Sausage? **YES / NO** Brand \_\_\_\_\_  
Store name \_\_\_\_\_ City \_\_\_\_\_

Hot Dogs? **YES / NO** Brand \_\_\_\_\_  
Store name \_\_\_\_\_ City \_\_\_\_\_

Lunch Meat? **YES / NO** Brand \_\_\_\_\_  
Store name \_\_\_\_\_ City \_\_\_\_\_

Eggs? **YES / NO** Brand \_\_\_\_\_  
Store name \_\_\_\_\_ City \_\_\_\_\_

Fresh Juice? **YES / NO** Brand \_\_\_\_\_  
Store name \_\_\_\_\_ City \_\_\_\_\_

Fresh Berries? **YES / NO** Brand \_\_\_\_\_

Store name \_\_\_\_\_ City \_\_\_\_\_

Fresh Melon? **YES / NO** Brand \_\_\_\_\_

Store name \_\_\_\_\_ City \_\_\_\_\_

Other Fresh Fruits? **YES / NO** Brand \_\_\_\_\_

Store name \_\_\_\_\_ City \_\_\_\_\_

Lettuce? **YES / NO** Brand \_\_\_\_\_

Store name \_\_\_\_\_ City \_\_\_\_\_

Alfalfa Sprouts? **YES / NO** Brand \_\_\_\_\_

Store name \_\_\_\_\_ City \_\_\_\_\_

Other Fresh Vegetables? **YES / NO** Brand \_\_\_\_\_

Store name \_\_\_\_\_ City \_\_\_\_\_

Other foods, which may have caused your illness? \_\_\_\_\_

Brand \_\_\_\_\_ Store name \_\_\_\_\_

City \_\_\_\_\_

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Date: \_\_\_\_\_

Dear \_\_\_\_\_,

**The stool sample for \_\_\_\_\_, collected on \_\_\_\_\_ has tested positive for the bacterial pathogen(s):**

- E. Coli: O157:H7       Campylobacter       Other \_\_\_\_\_
- Salmonella       Shigella

**The Following action(s) is necessary:**

- None.
- Contact your Local Health Department at \_\_\_\_\_ for an additional interview.
- Inform your physician that your laboratory tests are positive if he/she is not aware of these results. He/she will decide if antibiotics need to be prescribed. If your physician decides not to treat you with antibiotics please remember that the bacteria may be transmitted to others as long it is present in your stool. This may persist for several weeks even though you may no longer have symptoms. It is important to note that frequent and thorough hand washing will minimize risk of transmission to others.
- You may not work in food handling, direct patient care or occupations involving the care of young children or the elderly until:
- You experience no diarrhea for 24 hours.
  - Your stool specimens test negative 2 consecutive times. (Stool samples should be collected 24 hours apart and no sooner than 48 hours after you last dose of antibiotics.)
  - The local health officer or the Secretary of Health and Environment issues an order allowing you to return to work.
- Your child may not attend school or daycare until:
- He/she experiences no diarrhea for 24 hours.
  - His/her stool specimens test negative 2 consecutive times. (Stool samples should be collected 24 hours apart and no sooner than 48 hours after your last dose of antibiotics.)

Sincerely,

Investigator Name, Title

Phone #

Address Line 1

Address Line 2

City, State Zip Code

Date:

Dear Parent:

A child who attends the \_\_\_\_\_ has been recently diagnosed with Shigellosis. Symptoms associated with this disease include: mild to severe diarrhea, fever, nausea, vomiting, stomach cramps, and straining to have a bowel movement. Stools may contain blood, mucus and pus. The symptoms usually last for several days, but it may last for weeks.

If your child exhibits any of these symptoms please do not send your child to the daycare and see your physician immediately. If your child has diarrhea, they may not attend school or daycare until their diarrhea has ceased for at least 24 hours. Your child should also not participate in any swimming or water play activities until two weeks after symptoms cease.

An information sheet is enclosed. If you have additional questions, please contact your physician or the Health Department.

Sincerely,

Investigator Name, Title

Phone #

Address Line 1

Address Line 2

City, State Zip Code

# Public Health Fact Sheet

## Shigellosis

### What is shigellosis?

Shigellosis is a disease of the bowel caused by the bacteria called *Shigella*. It is treatable and most people get better quickly. However, some people develop severe diarrhea and dehydration that may be dangerous to the very young, very old and the chronically ill.

### What are the symptoms?

Symptoms associated with *Shigella* include: mild to severe diarrhea, fever, nausea, vomiting, stomach cramps, and straining to have a bowel movement. Stools may contain blood, mucus and pus. The symptoms usually develop within a week of exposure to shigella and usually last for several days, but can last for weeks. Some persons who are infected may have no symptoms at all, but may still pass the *Shigella* bacteria to others.

### How is shigellosis spread?

*Shigella* bacteria are found in the feces (stool) of an infected person. It is spread by close contact and by eating or drinking contaminated food or water.

### How is it diagnosed?

Your doctor, nurse or health center must send a stool sample or rectal swab to a laboratory for testing.

### How is shigellosis treated?

Most people recover without treatment. Persons with severe diarrhea, especially small children and elderly people, should see a doctor. Antibiotics may shorten the duration of the illness.

### How can you prevent shigellosis?

Some general guidelines include:

- Always wash your hands thoroughly with soap and water before eating or touching food and after using the toilet or changing diapers.
- If you are taking care of someone with diarrhea, wash your hands with soap and water after cleaning the bathroom, helping the person use the toilet, or changing diapers, soiled clothes or soiled sheets.
- Don't share food, drinks, spoons or straws.
- If you have a child in a daycare that has diarrhea, they should not attend daycare until after diarrhea stops for at least 24 hours and tell the providers so they can make sure it is not spread to other children.
- Don't let anyone who has diarrhea use a pool or swim in a pond while they are still sick until 2 weeks after their diarrhea has stopped. Be extra careful with small children, even if they are in diapers.

This fact sheet is for information only and is not intended for self-diagnosis or as a substitute for consultation. If you have any questions about the disease described above or think that you may have an infection, consult with your healthcare provider. This fact sheet is based on the Centers for Disease Control and Prevention's Health and Safety topic fact sheets.

**Are there any restrictions for people with shigellosis?**

Yes, since *Shigella* is found in the feces, people with diarrhea should not go to school or work. People may return to school or work when they no longer have diarrhea. Children who attend daycare should not attend daycare until diarrhea stopped. If more than one person is ill at the daycare, ill children and staff may be asked to stay at home until diarrhea has stopped for at least 24 hours.

People who handle food, should be treated, and have no *Shigella* in their stools (two negative stool cultures) before they return to work. This also applies to workers in schools, residential programs, daycare and health care facilities who feed, give mouth care or dispense medications to clients.

**Where can you get more information?**

- Your Local Health Department
- Kansas Department of Health and Environment, Epidemiologic Services
- Section (877) 427-7317
- <http://www.cdc.gov/health/default.htm>
- Your doctor, nurse, or local health center

This fact sheet is for information only and is not intended for self-diagnosis or as a substitute for consultation. If you have any questions about the disease described above or think that you may have an infection, consult with your healthcare provider. This fact sheet is based on the Centers for Disease Control and Prevention's Health and Safety topic fact sheets.