



Date: 4/11/2022

Priority: High Importance

Topic: *Shigella* cases in the Eureka 101 corridor area

Audience: Humboldt County medical community

#### Updates/Recommendations –

- Last week, there were a number of *Shigella* cultures and sensitivities conducted. There is now enough evidence to support the idea of a single strain of *Shigella* circulating in the community.
- Please note, **that culture and sensitivities are no longer needed for *Shigella* specimens** as there is sufficient data to profile a single strain. When ordering diagnostic tests, providers should **ONLY** order an enteric pathogen panel PCR or NAAT test.
- There was 1 new case of *Shigella* over the weekend, making a total of 14 cases to date. There were also 3 probable cases resulting in 17 probable cases to date.
- Providers should encourage patients to speak with Public Health, so potential sources can be identified.
- Since many cases are seen in the emergency rooms, which only identify persons who are severely ill, there is uncertainty about how widespread *Shigella* is in the community. Providers should remain vigilant for acute diarrheal symptoms and provide testing and treatment.
- Providers are strongly encouraged to provide timely appointments and stool sample testing to patients that have had diarrhea.
- To decrease the duration of bacterial shedding, providers should consider **testing and empirically treating** the following people experiencing acute diarrheal illness with antibiotics, **even if symptoms improve**:
  - High-risk occupations, such as food handling, health care, long-term care, childcare, elderly care, jail, and homeless shelters with antibiotics.
  - High-risk categories, such as persons experiencing homelessness, persons living in congregate settings, children under the age of 5, persons with weakened immune systems, and men who have sex with men, with antibiotics.
  - Persons with diarrhea that has lasted for **more than 3 days**.
  - For persons with severe symptoms, such as fever or bloody diarrhea, recommend treatment with ciprofloxacin rather than azithromycin. Consider renal dosing.
- **Treatments recommended** for *Shigella* (based on local data collected from sensitivity testing):
  - Azithromycin 500 mg oral daily for 3 days
  - Ciprofloxacin 500 mg oral twice daily for 3 days. *Consider renal dosing*
  - Ciprofloxacin 750 mg oral once daily for 3 days. *Consider renal dosing*
- Treatment of *Shigella* in **symptomatic patients** helps to quickly reduce the duration of illness and reduces the likelihood of spread to others in the household or the community at large.
- Treatment of *Shigella* is **not associated with HUS** (hemolytic uremic syndrome); HUS is associated with the treatment of *E. Coli* (EHEC) which produces Shiga toxin.
- Specific occupations at higher risk should exclude those with *Shigella* until stool is negative per Public Health Code (Title 17 Section 2613).



**Background:** Humboldt County Public Health has become aware of several confirmed and suspected cases of *Shigella* gastroenteritis with links to the **Eureka 101 corridor on the north and west sides of the town** throughout the past 4 weeks. Based on current and ongoing investigations we suspect the spread may be greater than our current understanding. Therefore, **we are alerting medical providers in the area to consider testing for and treating *Shigella*** to help both understand the extent of the problem and to help stop the spread of this highly contagious bacterial illness.

Infection with *Shigella* is generally self-limited; the average duration of symptoms associated with untreated *Shigella* gastroenteritis is seven days. **In the absence of specific antibiotic treatment, patients with *Shigella* gastroenteritis may shed the organism for up to six weeks after the resolution of symptoms;** risk factors for asymptomatic shedding are not known. Treatment of *Shigella* in symptomatic individuals can shorten the duration of symptoms in an individual patient as well as serve public health function to slow the spread of disease in the community.

**Symptoms:** *Shigella* infection typically presents within one to three days from exposure with constitutional symptoms such as fever, anorexia, and malaise. Initially, diarrhea is watery but may subsequently contain blood and mucus. The stool is frequent with abdominal cramping, bloating, and gas. Those with more severe cases and risk factors may require hospitalization.

**Diagnosis:** PCR diagnostic screening on stool samples can generally return quick and accurate results to identify which bacteria or virus is causing the diarrheal illness and will often reflex to culture and antibiotic sensitivities depending on the lab. Lack of access to lab orders for culture and sensitivities should not be a barrier to ordering PCR stool testing. **See attached diagnoses codes to aid in ordering stool tests.**

**Treatment:** While culture with antibiotic sensitivities is the best predictor for treatment success, treatment can be initiated without culture and sensitivities based on PCR results or presumptively in high-risk patients. Based on the strain we are seeing in Eureka and based on broader studies of *Shigella* the current best choices for treatment locally are

- Azithromycin 500mg oral daily for 3 days.
- Ciprofloxacin 500 mg oral twice daily for 3 days (consider renal dosing).
- Ciprofloxacin 750 mg oral once daily for 3 days (consider renal dosing).

Symptoms should typically start to resolve within 1-2 days of initiating antibiotic treatment. If symptoms are not improving or are worsening despite three days of antibiotic treatment then further evaluation is warranted, especially if treatment was done presumptively without lab confirmation. Treatment failure could mean antibiotic resistance, or another organism is present. **Empiric treatment in high-risk individuals (homeless, known contact to confirmed case, severe illness) should be considered.** Otherwise, treatment should be guided by stool diagnostics mentioned above.

**Counseling:** Patients diagnosed with *Shigella* infection should be advised on measures to prevent transmitting the infection to others. **If antibiotics are not prescribed, the patient should be advised to employ diligent hand hygiene (washing hands with soap and water for at least 20 seconds), to avoid sex until two weeks after the resolution of diarrhea, and practice safe sex for several additional weeks, to avoid public swimming facilities, and to avoid preparing food for others.** These precautions should be continued for several weeks after diarrheal symptoms have improved because of the possibility of asymptomatic bacterial shedding. If antibiotics are prescribed, the patient should be advised to follow these same precautions for 48 hours of antibiotic therapy, after which time stool cultures are typically negative.



**Title 17 Section 2613 of the Public Health Code specifies that food handlers and persons involved in the direct care of children, the elderly, or patients in hospitals or other institutional settings shall be excluded until two stool specimens, taken at least 24 hours apart, beginning at least 48 hours after cessation of specific therapy, are negative for *Shigella*.** Conversion to negative stool cultures generally occurs after 48 hours of antibiotic therapy. Please call 707-268-2182 with questions.

Best regards,

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### **Stool testing resources:**

**\*\*Please check with each lab on specifications for stool collection and timing and handling of samples.**

#### **PCR screening test:**

St Joseph Hospital Outpatient Lab: Test code - LAB24179; Stool pathogen, NAAT 6 to 11 targets (PCR)

Labcorp: Test code – [183480](#); CPT - 0097U; Gastrointestinal Profile, Stool, PCR

<https://www.labcorp.com/tests/183480/gastrointestinal-profile-stool-pcr>

Quest: Test code – 37939; CPT - 0097U; Gastrointestinal Pathogen Panel, PCR, Feces

<https://testdirectory.questdiagnostics.com/test/test-detail/37939/gastrointestinal-pathogen-panel-pcr-feces?cc=MASTER>

#### **Culture and antimicrobial sensitivity**

Mad River Community Hospital: Please order “stool culture- if Shigella isolated, please do sensitivities as well.”

Labcorp: Test code – 008144; CPT: 87045; 87046; 87427; Stool culture with reflex to antibiotic sensitivities.

<https://www.labcorp.com/tests/008144/stool-culture>

Quest: Test code - 10019; CPT: 87045; Salmonella and Shigella Culture only, order 34192 for antibiotic sensitivities if shigella is detected.

<https://testdirectory.questdiagnostics.com/test/test-detail/10019/salmonella-and-shigella-culture?p=r&q=stool%20culture&cc=MASTER>

### **Web resources:**

<https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/IDBGuidanceforManagingSelectCommunicableDiseases.aspx>

<https://www.cdc.gov/shigella/audience-medical-professionals.html>

