



Protecting, Maintaining and Improving the Health of All Minnesotans

May 18, 2023

Notification Letter to Minnesota Hospitals Infection Preventionists and Laboratories Regarding Reporting of Invasive *Escherichia coli*

Dear Hospital Microbiology Laboratorian and Infection Preventionist:

The Minnesota Department of Health (MDH) is adding invasive *Escherichia coli* to sentinel surveillance on June 1, 2023. MDH is conducting this surveillance pursuant to Minnesota Rules 4605.7000 to 4605.7900. Specifically, Minnesota Rules, 4605.7046 (sentinel surveillance), permits the Commissioner of Health to select diseases and sites for reporting if certain criteria are met. We are conducting sentinel surveillance for invasive *E.coli* for authorized purposes under the rule including that the surveillance is necessary to characterize the epidemiology of the pathogen.

E. coli is a gram-negative bacillus found in the intestines of healthy humans and animals. Although *E. coli* are a part of normal intestinal bacteria, there are strains capable of producing both intestinal and extraintestinal infections. Extraintestinal pathogenic *E. coli* cause infections of the urinary tract, bloodstream, soft skin and tissue, the lower respiratory tract, and other sites. Urinary tract infection (UTI) is the leading source for *E. coli* bacteremia (invasive infection), accounting for more than 50% of cases. Other common sources of *E. coli* bacteremia are biliary tract infection caused by bacteria ascending from the gastrointestinal tract and other intra-abdominal infections, which are predominantly complications of surgeries and procedures. Extraintestinal *E. coli* is also a frequent cause of neonatal sepsis and meningitis, particularly among premature infants. Risk for invasive *E. coli* infections is increased for older adults, people who are immunocompromised (e.g., cancer, diabetes, HIV), pregnant people, and the very young (e.g., newborns and children) and cause significant morbidity and mortality.

Despite the substantial burden of invasive *E. coli* infections, there is no surveillance system in Minnesota. As proposed, sentinel surveillance for invasive *E. coli* infection will provide adequate data to address important knowledge gaps including burden, outcomes, underlying risk factors for illness, clinical course and outcomes, health disparities, distribution of virulence factors, and antibiotic resistance in Minnesota. Additionally, with vaccines in development, baseline data collected by sentinel surveillance will be useful in monitoring the effectiveness of future interventions.

Reporting requirements:

- What: MDH is requiring reporting of invasive *E. coli* infection in the following groups:
 - Residents of Hennepin or Ramsey County, all ages
 - Residents of Minnesota, less than 90 days of age
- When: Similar to other reportable communicable diseases, you must report to MDH when the test result is finalized. Isolates should be sent to MDH with the appropriate lab submission forms.

- Isolates are considered to be from invasive disease if the specimen was collected from a normally sterile sites.
- How: Clinical and reference laboratories that have the capability to identify invasive *E. coli* are required to submit case isolates from invasive *E. coli* that meet criteria among Minnesota residents using a designated lab submission form.
- How: Infection preventionists are required to report invasive *E. coli* cases using a weekly linelist or another electronic method.

Your participation in this surveillance program is greatly appreciated. Thank you for all you do to protect the health and safety of Minnesotans. You can find documentation on why this surveillance is necessary and what laboratories need to know about reporting these cases at:

<https://www.health.state.mn.us/diseases/ecoli/iec/>.

For questions about case reporting contact Marco Garcia (marco.garcia@state.mn.us) or isolate shipment contact Paula Snippes (paula.snippes@state.mn.us).

Sincerely,

/s/

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Commissioner

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