

Washington State Healthcare-Associated Infections Epidemiology Program External Validation of 2024 HAI Data: *Clostridioides difficile* Infections and Surgical Site Infections Following Colon Surgeries

Hospitals in Washington state must report certain healthcare-associated infections (HAIs) to the Centers for Disease Control's (CDC) National Healthcare Safety Network (NHSN). These reports make health care safer, as they help us see the big picture of infections across the state. Reporting requirements are established by the Centers for Medicare & Medicaid Services (CMS) and the Washington State Healthcare-Associated Infection Reporting Statute.

The Washington Department of Health (DOH) HAI epidemiology team works with hospitals to review and validate the data reported to NHSN. The team also helps hospitals report their data upon request.

The DOH HAI Epidemiology team validated 2024 *Clostridioides difficile* (*C. diff*) infections (CDI) data reported by critical access hospitals (CAH) and surgical site infections following colon surgeries (COLO) data reported by acute care hospitals (ACH).

Understanding CDI

CDI is caused by highly contagious bacteria that can cause severe diarrhea, colitis, sepsis, and death. Most cases of CDI occur in people who are taking antibiotics or have taken them recently, which allows *C. diff* to colonize the gastrointestinal tract. *C. diff* poses a substantial infection prevention challenge in health care settings because the bacteria form spores that can linger in the environment and resist some disinfection methods.

CDI is 7 to 10 times more likely to occur with current or recent use of antibiotics because good gut bacteria are destroyed.



Understanding COLO

Colon (large intestine or bowel) surgeries involve a surgical incision made to access the intestinal cavity to repair or remove part of the large intestine. Some colon repairs include removing diseased or damaged colon (resection), attaching healthy parts of the colon together (anastomosis), or making an opening in the colon to remove waste (ostomy). COLO can affect the tissue around the incision and cause a superficial infection in the skin and subcutaneous tissue. It can also cause a deep infection in the muscles or connective tissues. An infection in the organs, like the gastrointestinal tract or the intra-abdominal area, can also occur.

Methodology

2024 CDI and COLO data reported to NHSN were validated in CAHs and ACHs, respectively. Eighteen CAHs were selected, but 16 accepted and completed the validation exercise. Twenty ACHs were selected, and 18 participated and completed the validation exercise. The facility selection method prioritized hospitals that were highly exposed to the HAI and high reporters. The selection process was guided by the [2024 NHSN External Validation Toolkit](#). Up to 40 CDI-positive lab results per CAH and 40 COLO procedures per ACH were reviewed using a standardized medical record abstraction tool. DOH validators determined whether each event met NHSN surveillance reporting criteria and compared our determinations with what the hospitals reported to NHSN.

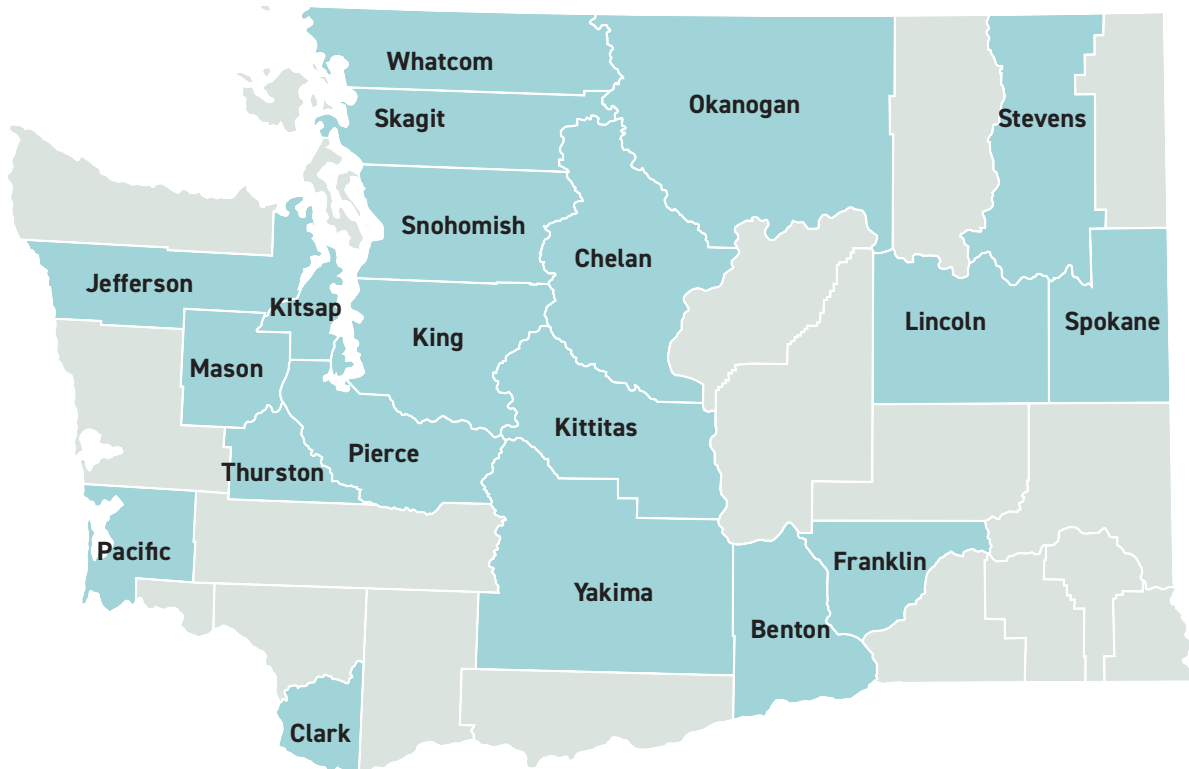
A SSI extends hospital length of stay by 9.7 additional days after surgery.



Validations by County

External validations were conducted in the following 20 counties:

Benton, Chelan, Clark, Franklin, Jefferson, King, Kitsap, Kittitas, Lincoln, Mason, Okanogan, Pacific, Pierce, Skagit, Snohomish, Spokane, Stevens, Thurston, Whatcom, Yakima.



Results

In total, 881 patient records were reviewed, which included 191 positive CDI lab results and 690 COLO procedures, from 34 hospitals across the state. Ten of those hospitals (29%) had no discrepancies, meaning those hospitals correctly identified the HAI events and reported to NHSN. Most of the validated events that were found to be discrepant were under-reported events, which meant these events were not reported to NHSN as CDI or surgical site infections when they should have been.

For the CDI validations, we found 82% of lab-identified CDI events were correctly reported or correctly not reported to NHSN. Half of the hospitals had discrepancies in 10% or fewer of their reported lab results that were validated.

For the COLO validations, we found 94% of procedures were correctly reported or correctly not reported to NHSN as surgical site infections. Most of the hospitals (78%) had discrepancies in 10% or fewer of their procedures that were validated.



20 Counties



34 Hospitals



881 Cases Reviewed



**212 Case
Review Hours**



**Hospital Bed Size
Range 12-691**



91% of all events validated were correctly identified and reported to NHSN

Please contact NHSNepi@doh.wa.gov with any questions.