

2.1 Logic Model

Successful <i>Clostridioides difficile</i> (CDI) Prevention Practices				
Inputs	Activities	Outputs	Outcomes	Impact
Hospital Staff	Assess patient’s signs and symptoms for CDI LabID events and implement infection control practices to reduce CDI LabID events.	Data showing the number of patients that developed a CDI LabID event.	<u>Short-Term</u> Leaders at the facility understand if they are an outlier for CDI LabID events.	Decreased cost due to reduced infections and need for hospitalization. Decreased patient length of stay.
Clinical Practice Guidelines	Guide patient care and infection control practices.	Decreased CDI LabID events and facility SIRs.	<u>Intermediate Term</u> Reduction of facility SIR. <u>Long-Term</u> Optimal patient care and prevention of CDI LabID events.	Decreased readmissions due to CDI LabID events.
Healthcare Personnel Education	Train patient care staff on appropriate hand hygiene, transmission-based isolation precautions, environmental cleaning and other infection control practices. Daily audits.	Decreased CDI LabID events and facility SIRs.		Decreased morbidity and mortality from CDI LabID events.
Surveillance	Document source of patient signs and symptoms and care provided.	Leaders at the facility understand if they are an outlier for CDI LabID events.		
Feedback Mechanisms				
CDC’s National Healthcare Safety Network (NHSN): NHSN, the nation’s most widely used healthcare associated infection (HAI) surveillance system, is a shared resource for HAI prevention. More than 38,000 active hospitals, long-term care facilities, and other healthcare facilities provide data to NHSN, which in turn is used for national- and state-level analyses, such as the HAI Report, and for targeted prevention initiatives by healthcare facilities, states, regions, quality groups, and national public health agencies, including CDC. Care Compare: Care Compare is a tool that provides the public with facility SIRs for HAIs. This allows the public to make more informed decisions about where to get their healthcare. CMS Hospital Inpatient Quality Reporting Program (HIQR): Under HIQR, CMS collects data on healthcare quality from hospitals paid through the Inpatient Prospective Payment System, with the goal of driving quality improvement through measurement and transparency by publicly displaying data to help consumers make more informed decisions about their health care. It is also intended to encourage hospitals and clinicians to improve the quality and cost of inpatient care provided to all patients.				
Assumptions				

Facility leadership will implement clinical practice guidelines to reduce CDI LabID events in their patients.
External Factors
Changes to government policies and regulations.

A collection of prevention efforts has been identified to reduce the incidence of CDI LabID events. These interventions include (i) hand hygiene; (ii) transmission-based isolation precautions; (iii) implementation of best practices for environmental cleaning; (iv) implementation of best practices for disinfection and sterilization; and (v) surveillance, audits, and feedback.

Adherence to recommendations in the clinical guidelines published for the management of CDI LabID Events can result in decreased rates of CDI transmission and infection. Decreasing rates of infection will result in a lower standardized infection ratio (SIR), which indicates improved performance.

Reference: McDonald LC, Gerding DN, Johnson S, Bakken JS, Carroll KC, Coffin SE, Dubberke ER, Garey KW, Gould CV, Kelly C, Loo V, Shaklee Sammons J, Sandora TJ, Wilcox MH. Clinical Practice Guidelines for Clostridium difficile Infection in Adults and Children: 2017 Update by the Infectious Diseases Society of America (IDSA) and Society for Healthcare Epidemiology of America (SHEA). Clin Infect Dis. 2018 Mar 19;66(7):e1e48. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6018983/pdf/cix1085.pdf>