

# Hospital-acquired C.difficile infection (CDI)

## Alternate Name\*

Rate of hospital-acquired C. difficile infection per 1,000 inpatient days

## INDICATOR DESCRIPTION

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### Description\*

The indicator measures the incidence rate of hospital acquired Clostridium difficile infection (CDI) per 1,000 inpatient days.

### Indicator Status\*

Active

### HQO Reporting tool/product

Public reporting

### Dimension\*

Safe

### Type\*

Outcome

## DEFINITION AND SOURCE INFORMATION

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### Unit of Measurement\*

Rate per 1,000 inpatient days

### Calculation Methods\*

Numerator divided by the denominator times 1,000

### Numerator including inclusion/exclusion\*

Total number of new nosocomial (i.e. hospital acquired) CDI cases

*Inclusions:*

1. All publicly funded hospitals
2. Inpatient beds
3. Laboratory-confirmed CDI cases (i.e. confirmation of a positive toxin assay (A/B) for *Clostridium difficile* together with diarrhea OR visualization of pseudomembranes on sigmoidoscopy or colonoscopy, or histological/pathological diagnosis of pseudomembranous colitis)
4. New nosocomial case associated with the reporting facility defined as - the infection was not present on admission (i.e., onset of symptoms > 72 hours after admission) or the infection was present at the time of admission but was related to a previous admission to the same facility within the last 4 weeks and the case has not had *Clostridium difficile*-Associated Disease (CDAD) in the past 8 weeks.

*Exclusions:*

Patients less than 1 year of age

**Outbreak Classification:**

CDI outbreak definitions incorporate the concept of notification thresholds that optimally trigger action and dialogue between the local public health unit and the facility to determine if an outbreak is occurring.

Facilities should use the following CDI notification thresholds to assist them in determining the need for consultation with their local public health unit. Facilities with limited experience in managing CDI should consult with the local public health unit and/or with the local regional infection control network. These thresholds were developed by the Ministry of Health Long-Term Care (the 'Ministry') and can also be found in the Provincial Infectious Diseases Advisory Committee's *Annex C: Testing, Surveillance and Management of Clostridium difficile in All Health Care Settings*.

Notification thresholds are defined as:

1. For wards/units with  $\geq 20$  beds, three (3) new cases of nosocomial CDI identified on one ward/unit within a seven day period OR five (5) new cases of nosocomial CDI within a four-week period; **OR**
2. For wards/units with  $< 20$  beds, two (2) new cases of nosocomial CDI identified on one ward/unit within a seven day period or four (4) new cases of nosocomial CDI within a four-week period; **OR**
3. Facilities that have a facility nosocomial CDI rate that exceeds their annual nosocomial baseline rate for a period of two consecutive months. NOTE: this is not valid for a small community hospitals with a single case of nosocomial CDI which artificially elevates the facility rate.

It should be noted that exceeding a threshold does not necessarily imply that an outbreak will be declared. Following consultation between the facility and the local public health unit, decisions on the declaration of an outbreak will be made based on the following criteria:

- There has been a significant\* (as determined by the facility and the local public health unit) increase in CDI numbers or rate compared to own baseline and/or that of comparator institutions
- Recognized control measures are in place and are being used.
- There is epidemiologic evidence of ongoing nosocomial transmission within the ward/unit or facility

\*Significance may be determined by reviewing:

- number of new nosocomial cases associated with the reporting ward/unit or facility;
- historic level of CDI activity of the ward/unit or facility;
- current trend in ward/unit CDI activity or facility rate;
- location of current cases and possible epidemiologic links between cases;

**Denominator including inclusion/exclusion\***

Total number of inpatient days

*Inclusions:*

- All publicly funded hospitals
- Inpatient beds

*Exclusions:*

Patients less than 1 year of age

Hospital-acquired *C. difficile*  
infection (CDI)

### Adjustment (risk, age/sex standardization)- detailed

None

### Data Source

Self-Reporting Initiative (SRI)

### Data provided to HQO by

Ministry of Health and Long-Term Care (MOHLTC)

### Reported Levels of comparability /stratifications (defined)

Province

Time

Institution

## RESULT UPDATES

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### Indicator Results

[Click here to view Health Quality Ontario results for this indicator](#)

## OTHER RELEVANT INFORMATION

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### Caveats and Limitations

Data are self-reported by hospitals. Results include only hospital-acquired infections. The following cases are not included in the rate calculation: 1. New nosocomial case associated with other health care facilities: The infection was present on admission (i.e., onset of symptoms < 72 hours after admission) and the patient was exposed to another health care facility (including LTC) other than the reporting facility within the last 4 weeks and the case has not had CDAD in the past 8 weeks. 2. New case associated with a source other than a health care facility or unknown/indeterminate source: The infection was present on admission (i.e., onset of symptoms < 72 hours after admission) and the patient was not exposed to any health care facility (including LTC) within the last 4 weeks or the source of infection cannot be determined and the case has not had CDAD in the past 8 weeks.

### Comments Detailed

Self-Reporting Initiative (SRI) (July 2012 to present) and Web Enabled Reporting System (WERS) (April 2010-June 2011), Ministry of Health and Long-Term Care; Operating Room Benchmarking Collaborative (ORBC), Cancer Care Ontario

## TAGS

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### TAGS\*

Acute Care/Hospital

Outcome

Patient Safety and Never Events

Safe

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Hospital-acquired C.difficile  
infection (CDI)

Self-Reporting Initiative (SRI)

## PUBLISH

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### PUBLISH DATETIME\*

20/11/2018 15:41:00