

Hospital-Acquired *Clostridium difficile* Infections

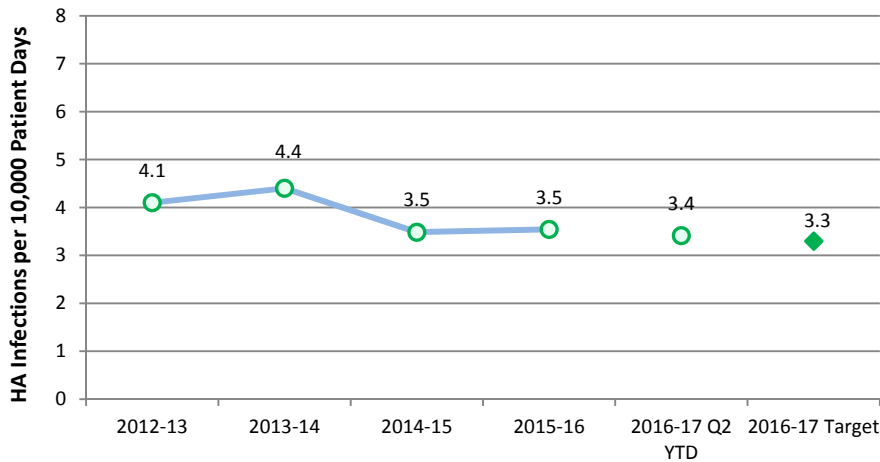
Measure Definition

The number of *Clostridium difficile* infections (CDI) acquired in hospital for every 10,000 patient days. A rate of 4.0 means approximately 100 patients per month acquire CDI infections in Alberta. CDI infection cases include patients with a new infection or re-infection while in hospital. Patients are considered to have a CDI if they exhibit symptoms and confirmation by a laboratory test or colonoscopy. This measures safety.

Understanding this Measure

Some individuals carry CDI in their intestines while others may acquire it while in hospital. CDI is the most frequently identified cause of hospital-acquired diarrhea. This infection complicates and prolongs hospital stays and impacts resources and costs in the health care system. Monitoring CDI trends provides important information about effectiveness of infection prevention and control strategies. NOTE: This measure is reported a quarter later due to the requirement to follow up with patients after the end of the reporting quarter.

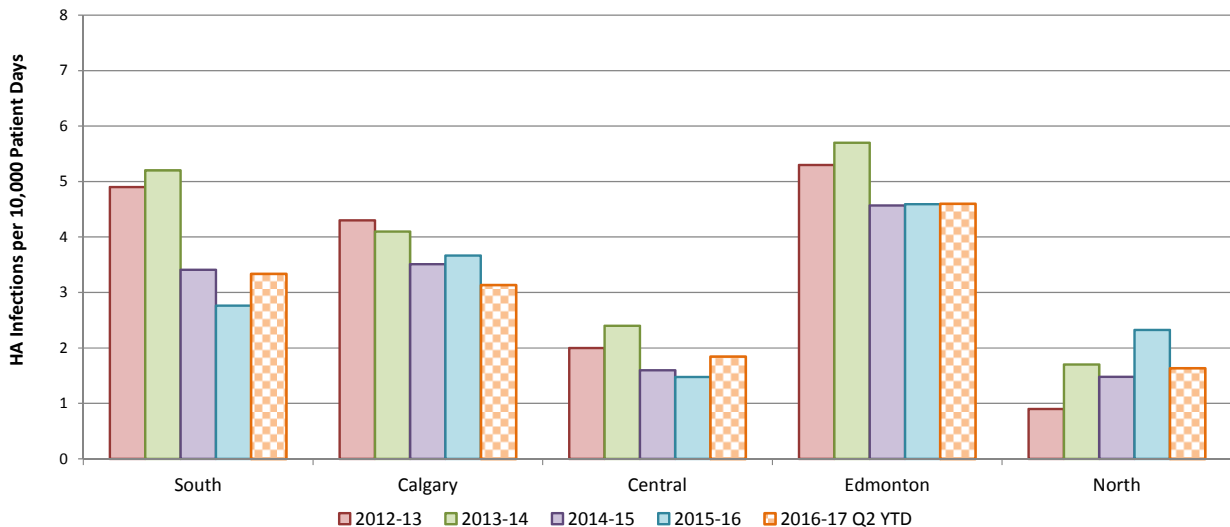
Hospital-Acquired *C-Difficile* Rate - Annual



How Do We Compare?

According to the Canadian Nosocomial Infection Surveillance Program based on 62 participating major Canadian hospitals, the Western region which includes Alberta has a lower rate of infections than the country overall. Alberta is performing better than the national average of 4.20 in January - June 2015.

Hospital-Acquired *C-Difficile* Infections - By Zone



Hospital-Acquired Infections

ACTIONS

Phase 1 of the Patient Clinical Equipment Program is being implemented at nine sites (Royal Alexandra Hospital, Glenrose Rehabilitation Hospital, University of Alberta Hospital, Sturgeon Community Hospital, Medicine Hat Regional Hospital, Chinook Regional Hospital, QEII Hospital, Northern Lights Regional Hospital, and Red Deer Regional Hospital).

All zones continue to implement the antimicrobial stewardship strategy. Zone Antimicrobial Stewardship working groups will review the defined daily dose/100 patient days for select antibiotics.

South Zone is implementing the *Clostridium difficile* infections (CDI) toolkit.

Calgary Zone is increasing the use of the CDI order set including the use of a CDI smartphone application by physicians to guide physicians when ordering antibiotics. Alberta Children's Hospital is developing and implementing guidelines for antibiotic use in several conditions (e.g. pneumonia, meningitis).

Central Zone is evaluating the use of CDI toolkit components across acute care facilities. They are also using tools to reduce CDI with a focus on equipment cleaning of Personal Protective Equipment and waste management.

Edmonton Zone is targeting units at the Stollery Children's Hospital with high infection rates with antimicrobial stewardship education. The zone is piloting a compact portable disinfection system at Royal Alexandra Hospital to help mitigate physical barriers to improving CDI and is also conducting a trial of enhanced room disinfection on the burn unit.

North Zone will roll out the CDI patient orders and care map across the zone.

SUMMARY

The most recent data for this measure is a quarter behind. This analysis is based on Q2 YTD 2016-17.

In AHS, there are established protocols for the cleaning of patient care areas which include increased cleaning for isolation rooms and focused attention on cleaning of shared patient equipment. Current initiatives in environmental services include: cleanliness audits with real-time reporting to support best practice in cleaning, introduction of designated equipment cleaners with accountability for cleaning of shared patient equipment such as wheelchairs, stretchers, IV poles, vital sign monitors, etc., and a pilot project using room disinfection technology.

Provincially and Edmonton Zone performed better than the same period as last year, Calgary Zone achieved target.

South and Central Zones experienced sporadic CDI cases during Q2 2016/17, there were no large clusters of infections. Work continues to implement the CDI toolkits.

DID YOU KNOW

AHS Infection Prevention and Control works collaboratively with physicians, staff and public health by providing *C. difficile* rates and assisting with intervention and control strategies.

Antimicrobial stewardship is the practice of minimizing the emergence of antimicrobial resistance by using antibiotics only when necessary and, if needed, by selecting the appropriate antibiotic at the right dose, frequency and duration to optimize outcomes while minimizing adverse effects.

Current Canadian Standards for construction of healthcare facilities advocate for the use of **single-patient rooms** and new acute care facilities in Alberta are being designed in alignment with these standards. However, in our existing healthcare facilities there are predominately multi-patient rooms, with four patients sharing a single bathroom. Clean patient care environments are so important.

Hospital-Acquired Infections

The number of *Clostridium difficile* infections (C-diff) acquired in hospital for every 10,000 patient days. A rate of 4.0 means approximately 100 patients per month acquire C-diff infections in Alberta.

Hospital Acquired <i>C-Difficile</i> Infections	2013-14	2014-15	2015-16	Q2 YTD		Trend	2016-17 Target
				2015-16 Last Year	2016-17 Current		
Trend: ★ Achieved Target, ✓ better or ⇔ stable than prior period*, ✗ Area requires additional focus							
Provincial	4.4	3.5	3.5	3.5	3.4	✓	3.3
South Zone Total	5.2	3.4	2.8	2.1	3.3	✗	2.8
Chinook Regional Hospital	7.5	5.4	4.4	3.8	5.3	✗	4.4
Medicine Hat Regional Hospital	2.8	1.7	1.3	0.5	1.4	✗	1.3
All Other Hospitals	4.3	2.0	1.9	1.5	2.5	✗	1.9
Calgary Zone Total	4.1	3.5	3.7	3.6	3.1	★	3.4
Alberta Children's Hospital	3.5	1.4	4.1	3.8	0.9	★	3.5
Foothills Medical Centre	5.4	5.2	4.6	4.7	4.9	⇔	4.8
Peter Lougheed Centre	3.4	2.8	3.7	3.9	1.7	★	2.7
Rockyview General Hospital	4.0	3.2	3.4	2.8	3.1	✗	3.0
South Health Campus	N/A	2.3	2.6	2.7	2.1	★	2.2
All Other Hospitals	1.5	0.9	1.2	0.7	1.2	★	1.8
Central Zone Total	2.4	1.6	1.5	1.5	1.8	✗	1.5
Red Deer Regional Hospital Centre	3.3	3.1	2.5	2.7	2.9	✗	2.8
All Other Hospitals	2.0	1.0	1.0	0.9	1.4	✗	1.0
Edmonton Zone Total	5.7	4.6	4.6	4.9	4.6	✓	4.3
Grey Nuns Community Hospital	5.9	3.5	3.5	3.4	2.5	★	3.4
Misericordia Community Hospital	6.3	3.9	4.1	3.5	10.7	✗	3.5
Royal Alexandra Hospital	7.3	6.7	6.8	6.7	5.8	★	6.1
Stollery Children's Hospital	3.1	4.0	5.9	6.4	4.0	★	4.0
Sturgeon Community Hospital	9.3	6.0	7.4	9.7	4.2	★	5.3
University of Alberta Hospital	8.6	7.1	5.9	6.5	6.0	★	6.9
All Other Hospitals	1.9	1.4	1.8	2.2	1.7	✓	1.3
North Zone Total	1.7	1.5	2.3	1.4	1.6	✗	1.4
Northern Lights Regional Health Centre	0.7	2.0	0.7	0.7	0.9	★	1.0
Queen Elizabeth II Hospital	3.0	1.2	2.6	1.8	0.4	★	1.7
All Other Hospitals	1.5	1.5	2.5	1.4	2.1	✗	1.4

N/A: No results available. South Health Campus opened February 2013.

North Zone results have been impacted by the temporary closure of Northern Lights Regional Hospital and displacement in Fort McMurray due to the wildfires in Q1.

* "Stable" trend indicates when current period performance (Q3 year-to-date) is within 5% from the same time period as last year.

Number of Cases	2013-14	2014-15	2015-16	Q2 YTD	
				2015-16 Last Year	2016-17 Current
Provincial	1,265	1,065	1,082	527	514
South Zone	101	69	59	22	34
Calgary Zone	374	353	368	177	155
Central Zone	100	68	63	31	39
Edmonton Zone	650	539	535	280	267
North Zone	40	36	57	17	19

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