Prince Edward Island
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Prince Edward Island Infection Prevention and Control Surveillance Data Summary 2015

September 2016

Department of Health and Wellness
Chief Public Health Office

Prince Edward Island
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PRINCE EDWARD ISLAND
Infection Prevention and Control
Surveillance Data Summary
2015

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A special thank you to the Infection Prevention and Control Professionals for their contribution and on-going support of the provincial Surveillance Program, the Provincial Microbiology Laboratory, Dr. Greg German, the Provincial Infection Prevention and Control Advisory Committee (PICPAC), the program working groups and to ITSS, in particular, Ms. Sara Townsend for ongoing technical support.

March, 2016

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Introduction

Surveillance is a key component of the Infection Prevention and Control Program. Relevant data are gathered on health care and community-associated infections and the information is used to improve infection control outcomes. Surveillance data for community associated and health care associated Methicillin-resistant *Staphylococcus aureus* (CA-MRSA and HA-MRSA), *Clostridium difficile* infections (CDI), and hand hygiene compliance are presented in this report. Each section contains a short discussion about the data and provides a year to year comparison. PEI does not compare rates of MRSA (colonization/infection) and *C. difficile* infection to other provinces due to the diversity of data collection. Provincial data is compared based on previous years of reported data.

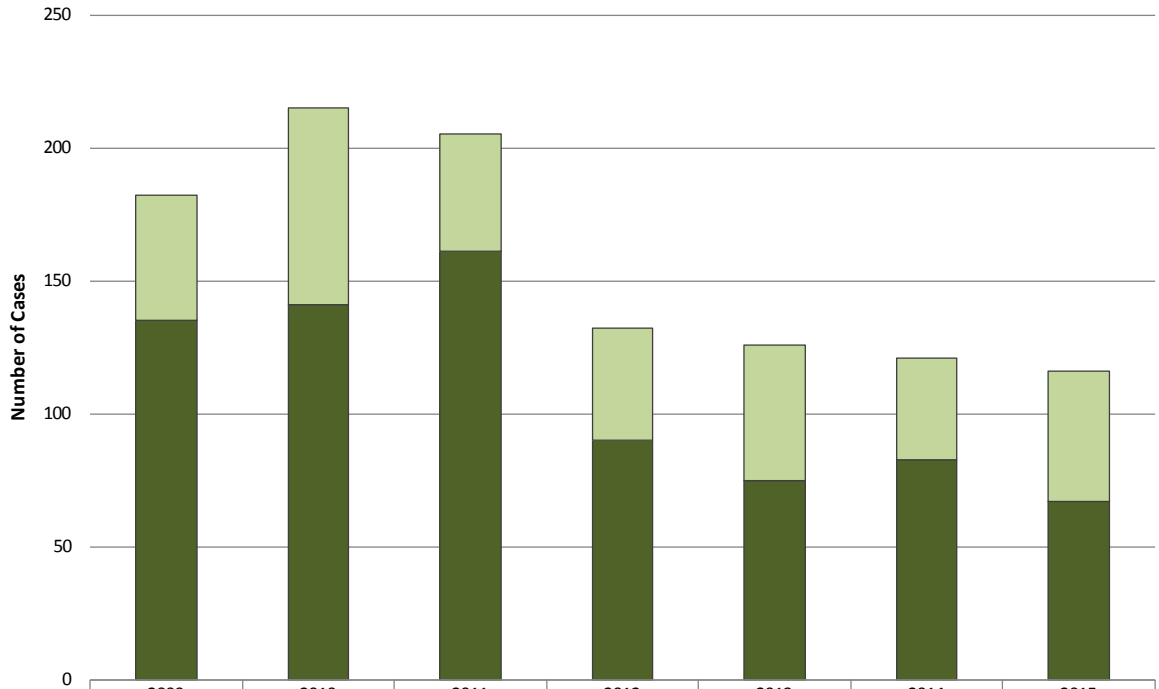
Methicillin-resistant Staphylococcus aureus (MRSA)

The overall incidence of MRSA infection/colonization on PEI has been decreasing since 2010. In 2008, the Provincial Infection Prevention and Control Strategy was launched. As a result, there was an increase in infection control professionals in Health PEI facilities across the Island in 2009. While instituting infection prevention and control programs in these facilities, more testing for MRSA was done, hand hygiene education was conducted with health care providers and point of care hand hygiene was introduced. Identifying cases and putting measures in place to prevent the spread of infections from person to person has contributed to a decrease in cases which is a key success of the program. MRSA Guidelines[1] are developed and available on the Department of Health and Wellness website.

Thre is a notable decrease in new MRSA cases in the private nursing home sector since 2014. Numbers of cases are reported but a rate is unable to be calculated. Targeted surveillance for each private nursing home is required in order to explain the number of cases and this is in the process of development.

Figure 1

MRSA Incidence by Attributable Setting, PEI 2009-2015



	2009	2010	2011	2012	2013	2014	2015
CA-CDI	47	74	44	42	51	38	49
HA-CDI	135	141	161	90	75	83	67
Total	182	215	205	132	126	121	116

[1] Provincial Infection Prevention and Control Guidelines for MRSA (2009)

Incidence rates of HA-MRSA cases in 2014 and 2015 for long term and acute care facilities on PEI are presented in Table 1; additionally, changes in the incidence rate of HA-MRSA per 10,000 patient days by facility are illustrated in Figure 2. Overall incidence of MRSA is decreasing; changes in the incidence of HA-MRSA over time in smaller facilities should be interpreted with caution due to the relatively small number of new cases each year. A very small change in the number of new MRSA cases may cause a change in the rate that appears alarming, when in fact it is not.

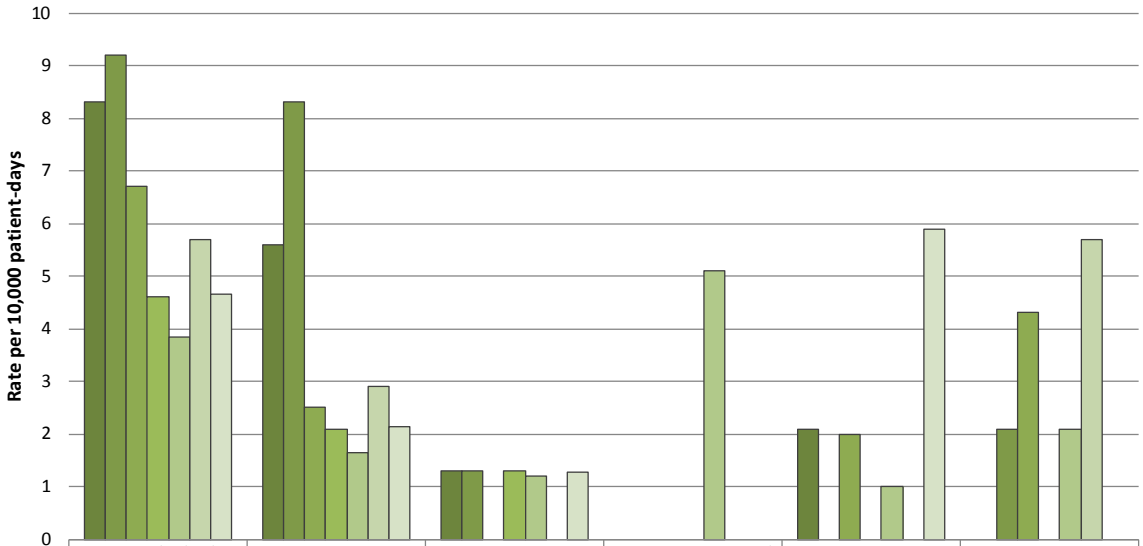
Table 1. MRSA Incidence and Rate by Attributable Facility, 2014-2015

Facility	2015			2014		
	Number of Cases (n=83)	Rate (per 10,000 patient-days)	Rate (per 1,000 admissions)	Number of Cases (n=75)	Rate (per 10,000 patient-days)	Rate (per 1,000 admissions)
Long Term Care						
Private Nursing Homes	8	n/a	n/a	16	n/a	n/a
Colville Manor	1	0.5	n/a	0	0.0	n/a
Riverview Manor	2	1.1	n/a	0	0.0	n/a
Beach Grove Home	2	0.4	n/a	2	0.4	n/a
Prince Edward Home*	0	0.0	n/a	1	0.2	n/a
Provincial Palliative Care Centre	0	0.0	n/a	0	0.0	n/a
Sherwood Home	0	0.0	n/a	0	0.0	n/a
Maplewood Manor	0	0.0	n/a	0	0.0	n/a
M. Stewart Ellis Wing (CHO)	0	0.0	n/a	0	0.0	n/a
Summerset Manor	0	0.0	n/a	0	0.0	n/a
Wedgewood Manor	0	0.0	n/a	1	0.3	n/a
Stewart Memorial	0	0.0	n/a	3	1.1	n/a
Total Public Long Term Care	5	0.2	n/a	7	0.3	n/a
Acute Care						
Queen Elizabeth Hospital	34	4.7	3.8	44	5.7	4.6
Prince County Hospital	7	2.1	1.6	10	2.9	2.3
Western Hospital	1	1.3	2.0	0	0.0	0.0
Community Hospital O'Leary	0	0.0	0.0	0	0.0	0.0
Kings County Memorial Hospital	6	5.9	9.9	0	0.0	0.0
Souris Hospital	0	0.0	0.0	3	5.7	8.1
Other						
Community Care Facilities	5	n/a	n/a	2	n/a	n/a
Provincial Corrections Facility	0	n/a	n/a	0	n/a	n/a
Provincial Addicitons Treatment Facility	1	n/a	n/a	0	n/a	n/a
Hillsborough Hospital	0	0.0	0.0	1	0.4	7.4

* Includes palliative care beds (n=8) in 2014, but not in 2015

Figure 2

HA-MRSA Incidence by Attributable Acute Care Facility, 2009-2015



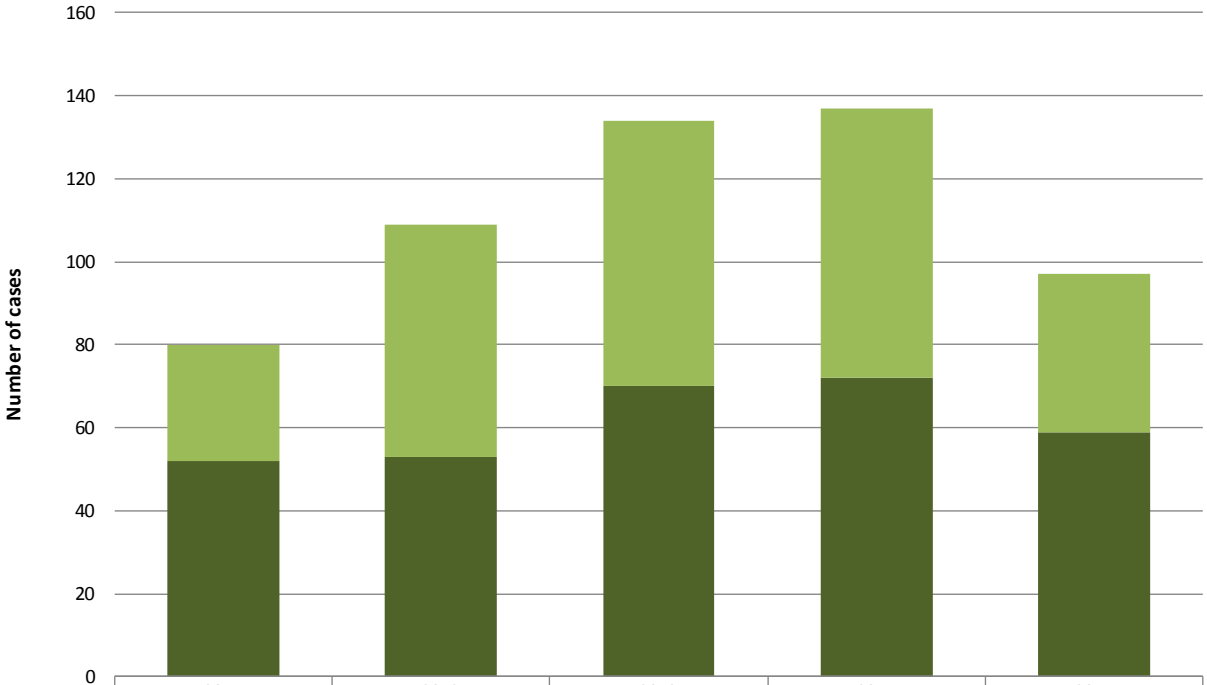
	Queen Elizabeth Hospital	Prince County Hospital	Western Hospital	Community Hospital O'Leary	Kings County Memorial Hospital	Souris Hospital
2009	8.3	5.6	1.3	0.0	2.1	0.0
2010	9.2	8.3	1.3	0.0	0.0	2.1
2011	6.7	2.5	0.0	0.0	2.0	4.3
2012	4.6	2.1	1.3	0.0	0.0	0.0
2013	3.8	1.6	1.2	5.1	1.0	2.1
2014	5.7	2.9	0.0	0.0	0.0	5.7
2015	4.7	2.1	1.3	0.0	5.9	0.0

Clostridium difficile Infection (CDI)

The 2015 data showed a marked decrease (Figure 3) in new cases of CDI, especially in Healthcare acquired cases. *C. difficile* Guidelines[2] are developed and available on the Department of Health and Wellness website. In the health care environment, CDI can spread from person to person by the fecal-oral route. All cases of CDI in Health PEI facilities are investigated.

Figure 3

CDI Incidence by Attributable Setting, 2011-2015



	2011	2012	2013	2014	2015
HA-CDI	28	56	64	65	38
CA-CDI	52	53	70	72	59
Unknown	2	0	0	0	0
Total	82	109	134	137	97

[2] Provincial Infection Prevention and Control Guidelines for *Clostridium difficile (2010)*

Incidence rates of HA-CDI cases in 2014 and 2015 for long term and acute care facilities on PEI are presented in Table 2; additionally, changes in the incidence rate of HA-CDI per 10,000 patient days by facility are illustrated in Figure 4. Given differences in hospital patient acuity and services provided, it is important to note that comparisons between acute care centers in the province should not be made. In addition, caution should be taken when interpreting facility rates given the small numbers of infections per facility; one case can cause a large fluctuation in rates.

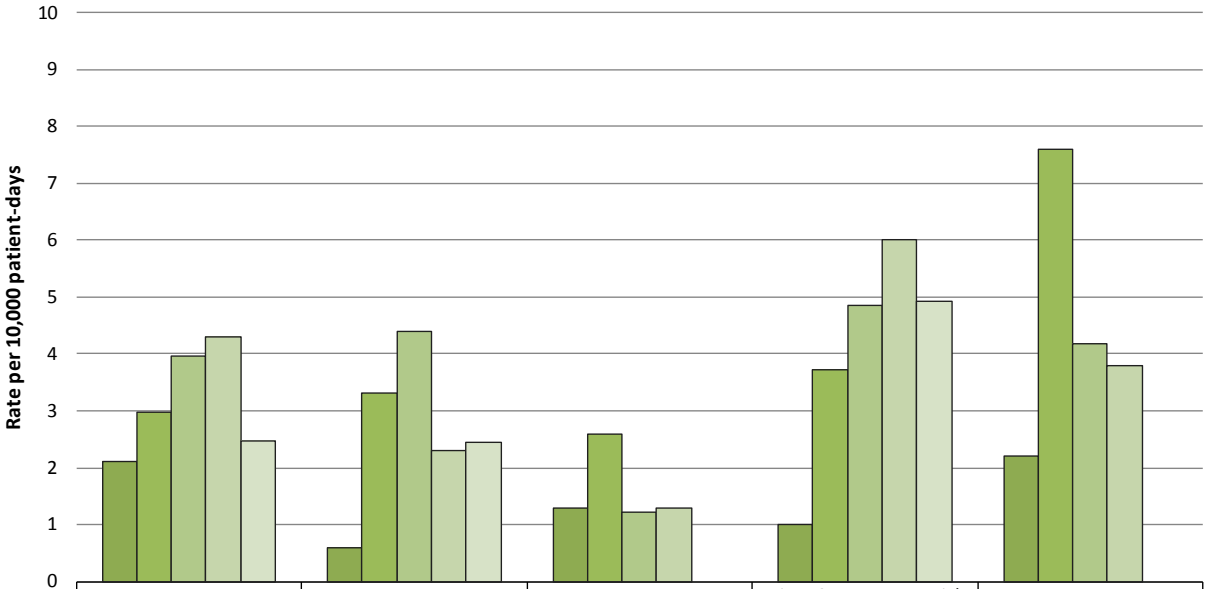
Table 2. CDI Incidence and Rate by Attributable Facility, 2014-2015

Facility	2015			2014		
	Number of Cases (n=38)	Rate (per 10,000 patient-days)	Rate (per 1,000 admissions)	Number of Cases (n=65)	Rate (per 10,000 patient-days)	Rate (per 1,000 admissions)
Long Term Care						
Private Nursing Homes	3	n/a	n/a	11	n/a	n/a
Colville Manor	0	0.0	n/a	1	0.5	n/a
Riverview Manor	1	0.6	n/a	1	0.6	n/a
Beach Grove Home	1	0.2	n/a	1	0.2	n/a
Prince Edward Home*	0	0.0	n/a	1	0.2	n/a
Provincial Palliative Care Centre	0	0.0	n/a	-	-	-
Sherwood Home	0	0.0	n/a	0	0.0	n/a
Maplewood Manor	1	0.6	n/a	0	0.0	n/a
M. Stewart Ellis Wing (CHO)	0	0.0	n/a	0	0.0	n/a
Summerset Manor	0	0.0	n/a	0	0.0	n/a
Wedgewood Manor	1	0.4	n/a	0	0.0	n/a
Stewart Memorial	0	0.0	n/a	0	0.0	n/a
Total Public Long Term Care	4	0.2	n/a	4	0.0	n/a
Acute Care						
Queen Elizabeth Hospital	18	2.5	2.0	33	4.3	3.5
Prince County Hospital	8	2.4	1.8	8	2.3	1.9
Western Hospital	0	0.0	0.0	1	1.3	2.5
Community Hospital O'Leary	0	0.0	0.0	0	0.0	0.0
Kings County Memorial Hospital	5	4.9	8.2	5	6.0	7.9
Souris Hospital	0	0.0	0.0	2	3.8	5.4

* Includes palliative care beds (n=8)

Figure 4

HA-CDI Incidence per 10,000 Patient Days by Attributable Facility, 2011-2015



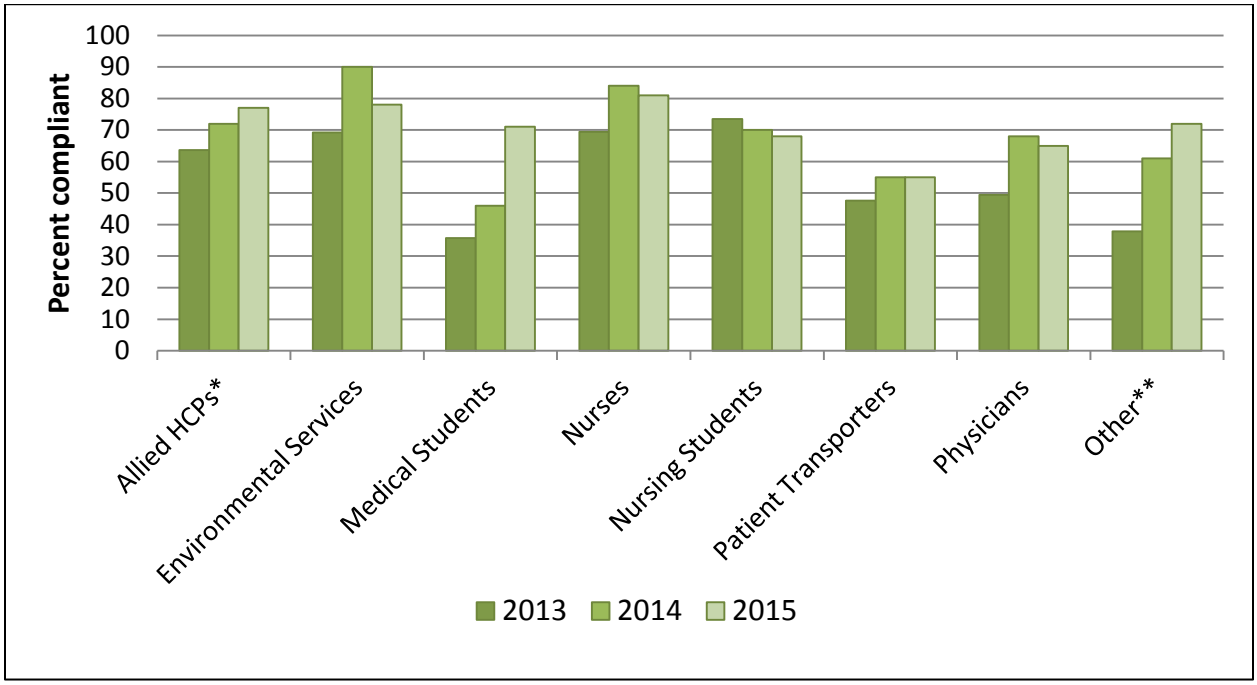
	Queen Elizabeth Hospital	Prince County Hospital	Western Hospital	Kings County Memorial Hospital	Souris Hospital
2011	2.1	0.6	1.3	1.0	2.2
2012	3.0	3.3	2.6	3.7	7.6
2013	4.0	4.4	1.2	4.9	4.2
2014	4.3	2.3	1.3	6.0	3.8
2015	2.5	2.4	0.0	4.9	0.0

Hand Hygiene Compliance

Best practice for hand hygiene calls for all healthcare providers to perform hand hygiene before and after touching a patient and/or touching any object that comes into contact with the patient. Hand hygiene compliance is audited in Health PEI acute care and long term care facilities using an audit tool adapted from the Canadian Patient Safety Institute[3]. Health care providers are observed by auditors to determine whether they use proper technique when they wash their hands or use an alcohol based hand rub product. In 2015 there were a total of 12,450 opportunities recorded in which hand hygiene should have been performed by the healthcare provider. Figure 5 represents the percentage of compliance by each healthcare provider.

Health PEI has implemented a provincial policy for hand hygiene in 2014 and continues to educate healthcare providers, patients and visitors on the importance of hand hygiene in preventing the spread of healthcare associated infections.

Figure 5. Hand Hygiene Compliance Rate by Health Care Provider 2013-2015



* Allied Health Care Providers includes: physical therapists, occupations therapists, speech therapy, respiratory therapists, social workers, pastoral care, blood collection/lab and radiology.

There was fluctuation in healthcare provider compliance groups in 2015. Compliance continues to be below 90% in all providers. Health PEI aspires to 100% compliance in non-emergency situations, and is striving to improve the compliance rate over the next year. Strategies to improve compliance include development of a standardized approach to education for healthcare providers and an increase in auditing and feedback.

[3]Canadian Patient Safety Institute STOP! Clean your hands Canada's Hand Hygiene campaign

References

1) Provincial Infection Prevention and Control Guidelines for MRSA. Prince Edward Island Department of Health and Wellness. May 2009. http://www.gov.pe.ca/photos/original/DHW_MRSA.pdf

2) Provincial Infection Prevention and Control Guidelines for Clostridium difficile. Prince Edward Island Department of Health and Wellness. September 2010. http://www.gov.pe.ca/photos/original/DHW_C.diffguide.pdf

3) Canadian Patient Safety Institute STOP! Clean your hands Canada's Hand Hygiene campaign http://www.handhygiene.ca/English/education/pages/default.aspx