



Public Health
England

Protecting and improving the nation's health

Commentary on annual data on MRSA, MSSA, *Escherichia coli* bacteraemia and *Clostridium difficile* infection from Independent Sector Healthcare organisations in England:

April 2016 to September 2016

Experimental Statistics

April 2017

About Public Health England

Public Health England exists to protect and improve the nation's health and wellbeing, and reduce health inequalities. We do this through world-class science, knowledge and intelligence, advocacy, partnerships and the delivery of specialist public health services. We are an executive agency of the Department of Health, and are a distinct delivery organisation with operational autonomy to advise and support government, local authorities and the NHS in a professionally independent manner.

Public Health England
Wellington House
133-155 Waterloo Road
London SE1 8UG
Tel: 020 7654 8000
www.gov.uk/phe
Twitter: @PHE_uk
Facebook: www.facebook.com/PublicHealthEngland

For queries relating to this document, please contact: hcai.amrdepartment@phe.gov.uk

© Crown copyright 2017

You may re-use this information (excluding logos) free of charge in any format or medium, under the terms of the Open Government Licence v3.0. To view this licence, visit [OGL](http://www.nationalarchives.gov.uk/ogl/) or email psi@nationalarchives.gsi.gov.uk. Where we have identified any third party copyright information you will need to obtain permission from the copyright holders concerned.

Contact Us:

We are always striving to ensure that routine outputs meet user need as much as possible. If you have any suggestions for changes and/or additions please email IndependentSector@phe.gov.uk

Published April 2017

PHE publications gateway number: 2016727



Contents

About Public Health England	2
Summary	4
Introduction	5
Presentation of data	5
Intepreting the data	6
Specific data caveats	7
Summary of the data	8
Appendix 1: List of IS hospitals which opened, closed, changed ownership or ceased reporting during the reporting period (April to September 2016)	9

Summary

This is the 14th publication of healthcare associated infection (HCAI) surveillance data on meticillin-resistant *Staphylococcus aureus* (MRSA) bacteraemia and *Clostridium difficile* infection (CDI) from Independent Sector (IS) healthcare organisations. This also includes the eleventh publication of data on meticillin-sensitive *Staphylococcus aureus* (MSSA) bacteraemia and the tenth publication of data on *Escherichia coli* bacteraemia.

A total of one MRSA bacteraemia case, 15 cases of MSSA bacteraemia, 57 cases of *E. coli* bacteraemia and 23 cases of CDI were reported for April to September 2016. These figures include all cases reported by the IS and do not take into account whether or not the infection was thought to be associated with the IS organisation or not. This document summarises the data and discusses key caveats. In addition the summary of key differences between the NHS and IS should be considered (Table 1).

Table 1. Summary of key differences between the NHS and IS

Independent Sector Organisations	NHS acute Trusts
Data is not “apportioned” into cases thought to have been associated with the particular IS hospital admission.	Data are categorised into “Trust apportioned” and “non Trust apportioned” cases. “Trust apportioned” cases are those thought to have been associated with a given NHS Trust during a given hospital admission. Please note that only MSSA and CDI cases are apportioned
Primarily elective patient-mix	Broad patient-mix including emergency-based treatments
Constantly changing facility list	Mainly static list of providers
Large number of specialist facilities	Mainly general acute facilities
Organisations may comprise geographically diverse hospitals	Mainly local clusters of hospitals
Rates calculated using bed-days plus discharges due to the high proportion of day cases compared to the NHS	Rates calculated using bed-days (occupied beds at midnight ¹)

¹ Available here: <https://www.england.nhs.uk/statistics/statistical-work-areas/bed-availability-and-occupancy/bed-data-overnight/>

Introduction

Today sees the latest in a series of publications of HCAI surveillance data on MRSA, MSSA and *E. coli* bacteraemia and CDI reported by IS healthcare organisations to Public Health England. IS healthcare organisations providing regulated activities² undertake surveillance on HCAs and report to Public Health England (PHE) as specified in the Code of Practice³.

Patient-level data is provided to PHE via the secure Data Capture System (DCS). Data for this publication was extracted on 28 February 2017.

Presentation of data

- counts of MRSA, MSSA, and *E. coli* bacteraemia and CDI are presented by IS organisation⁴ for the six-month period April to September 2016
- the modified IS denominator (bed-days plus discharges) is provided for the most recent financial year available (April 2015 to March 2016) as an indication of the size of each facility
- denominator data should not be used to calculate rates as cases (numerator) may not always be complete and lead to imprecise estimates
- the hospital type (large hospital, small hospital⁵, NHS treatment centre, diagnostic centre seeing mainly day case patients and women's health) is listed for the hospital(s) within a group - this indicates the type of service(s) provided⁶. This is correct as at 31 August 2016 as supplied to PHE
- the number of hospitals within an organisation is provided. This is correct as at 31 August 2016 and as supplied to PHE

The data tables only include data from those IS organisations which have reported at least once (either submitted a case(s) or have signed off their data as correct for the reporting period (April to September 2016)). Not all IS organisations included in the data tables may have been reporting for the entire period and data is provided for hospitals which may have opened or

² see: <http://www.legislation.gov.uk/ukxi/2010/781/contents/made>

³ The Health and Social Care Act 2008 (2010). Code of Practice on the prevention and control of infections and related guidance. Department of Health. Gateway Reference: 14808

⁴ An IS organisation can comprise a group of hospitals owned by one company or a single hospital. It is possible to identify a group versus a hospital using the "number of hospitals in organisation" field.

⁵ Large hospital: ≥50 beds, small hospital: <50 beds

⁶ Where a group comprises more than one hospital type, all types are listed

closed during the reporting period (Appendix 1). The publication is therefore not a comprehensive list of IS organisations. Cases amongst renal patients have been excluded pending a separate publication.

Duplicate reporting between the IS and NHS

Data entered onto the DCS by the NHS and IS are collected in two parallel systems. Please contact PHE for information on the de-duplication process.

Intepreting the data

What the data shows

- Table 1. Counts of MRSA bacteraemia by Independent Sector Healthcare Organisation; April to September 2016
- Table 2. Counts of *Clostridium difficile* infection by Independent Sector Healthcare Organisation; April to September 2016
- Table 3. Counts of MSSA bacteraemia by Independent Sector Healthcare Organisation; April to September 2016
- Table 4. Counts of *E. coli* bacteraemia by Independent Sector Healthcare Organisation; April to September 2016

What the data does not provide

- the data does not provide a basis for comparisons between different IS organisations due to their variable size and range of patients seen
- the data do not provide a basis for reliable comparison of data on MRSA, MSSA or *E. coli* bacteraemia and CDI between the IS and NHS

A full discussion of these issues is presented elsewhere⁷.

⁷ The reasons behind this are discussed in [Commentary on Reporting of *C. difficile* infections and MRSA bacteraemia from the Independent Sector](#), published 2009.

Specific data caveats

Below is a list of specific caveats to be considered in relation to the published data:

Data quality

Not all IS organisations have signed off their data or submitted data for the reporting period therefore we cannot be certain that data presented for these organisations is accurate. IS organisations that have incomplete data for the time period are indicated in the data tables with a blue highlight.

Duplicate entries

Data have only been de-duplicated against the NHS dataset for cases reported via the DCS. It is possible that cases reported via report forms also represent duplicate reports with the NHS. Additionally, NHS number, which is one of the variables used to de-duplicate records, is not always known for patients treated in the IS so potential duplicate records entered onto the DCS may not be identified.

Organisational changes

Some IS organisations included in the data tables may have not been open for the entire reporting period, whilst others may have closed over this time. This may reduce the count of MRSA, MSSA and *E. coli* bacteraemia and CDI in such IS organisations compared to those which have been open for the whole period. Such organisations are listed in Appendix 1.

Summary of the data

- data were extracted on 28 February 2017.
- 24 organisations have reported at least once for the time period, 11 of which are groups of more than one hospital and the remaining 13 single hospitals

MRSA bacteraemia (Table 1)

- a total of 1 MRSA bacteraemia cases was reported from April to September 2016 by Glenside Hospital for Neuro Rehabilitation.

CDI (Table 2)

- a total of 23 CDI cases were reported from April to September 2016 by the following organisations: HCA International [12 cases]; The Hospital of St John & St Elizabeth [4 cases]; BUPA Cromwell Hospital Nuffield Health and Spire Healthcare [2 cases each]; King Edward VII Sister Agnes [1 case].

MSSA bacteraemia (Table 3)

- A total of 15 MSSA bacteraemia cases were reported from April to September 2016 by the following organisations: HCA International [10 cases], Spire Healthcare and King Edward VII Sister Agnes [2 cases each]; The Kent Institute of Medicine & Surgery (KIMS) [1 case].

E.coli bacteraemia (Table 4)

- A total of 57 *E. coli* bacteraemia cases were reported from April to September 2016 by the following organisations: HCA International [30 cases], BUPA Cromwell Hospital [16 cases]; Nuffield Health and Ramsay Health Care UK [3 cases each]; The Hospital of St John & St Elizabeth [2 cases], King Edward VII Sister Agnes, Spire Healthcare and The Horder Centre [1 case each].

Appendix 1:

List of IS hospitals which opened, closed, changed ownership or ceased reporting during the reporting period (April to September 2016)⁸

- no organisational change occurred within this period

⁸ Correct as at 31 August 2016 and as supplied to PHE