



Summary points and commentary on quarterly (October to December 2007) *Clostridium difficile* data derived from Mandatory Surveillance, April 2008

Key points: analyses of quarterly mandatory *Clostridium difficile* surveillance data

- Data are reported for 170 NHS acute Trusts.
- *C. difficile* quarterly counts are listed by Trust and are divided into two categories; patients aged 65 years and over (table 1) and patients aged between 2 and 64 years (table 2). Data for the two age categories are reported in separate tables.
- There are four English NHS acute Trusts which specialise in children's services; these four Trusts did not submit data to the *C. difficile* mandatory surveillance scheme until April 2007 as, prior to this, the scheme included only patients aged 65 years and over. Data for these Trusts thus only feature in the table/analysis relating to patients aged between 2 and 64 years of age.
- This publication includes a separation of cases by location of specimen into acute Trust hospitals and elsewhere. At the time of publication this split was not available for a small number of cases. In these instances the overall total will include cases not included in the specimen location totals.
- To date the published surveillance data have attributed all cases diagnosed by a laboratory to the diagnosing Trust. However, not all cases diagnosed by a laboratory will have occurred in its Trust and consequently the published figures are misleading for Trusts that test a large number of samples from other settings. *C. difficile* affects patients in other settings such as care homes and District General Hospitals and if we are to significantly reduce this infection, we need to look across the whole health economy and identify where cases occur and not just where they were diagnosed. The separation of cases by location of the first specimen in this publication is the preliminary step in making this difference apparent to users of the published data.
- The data included in this publication must be interpreted with extreme caution. Information on the many caveats surrounding the data can be found towards the end of this document.

- **Table 1 Quarterly counts (case episodes) of *C. difficile* October - December 2007 for patients aged 65 years and over:** 9,872 cases of *C. difficile* were reported from 166 Trusts in the last quarter of 2007 (October to December). This represents an 8% reduction on the count for the previous quarter (July to September 2007), when 10,751 reports were received and an apparent reduction of 2,905 cases (23%) from the same period in 2006. Of the 9,872 cases reported between October and December 2007 9,865 (99.9%) included details of the location where the first specimen was taken. 7,550 (77%) of these 9,865 cases were infection episodes where the first specimen was taken in an acute Trust setting and 2,315 (23%) were episodes where the first specimen was taken elsewhere. There are a remaining 7 cases where it was not possible to gauge the split. **Caution should be taken in interpreting these apparent reductions as there have been significant changes to the surveillance system that may have impacted on ascertainment (see Appendix 1).**
- **Table 2 Quarterly counts (case episodes) of *C. difficile* October 2007 – December 2007 for patients between 2 and 64 years of age:** 2,211 cases of *C. difficile* were reported from 170 trusts in the last quarter of 2007 (October to December). This represents a 12% reduction on the count for the previous quarter (July to September 2007), when 2,507 reports were received. Of the 2,211 cases reported between October and December 2007 2,210 cases included details of where the first specimen was taken. 1,833 (83%) of these 2,210 cases were infection episodes where the first specimen was taken in an acute Trust setting and 377 (17%) were episodes where the first specimen was taken elsewhere.
- Quarterly counts of *C. difficile* infections are summarised in the table below:

Quarter	Number of <i>C. difficile</i> reports in patients aged 2-64 years	Number of <i>C. difficile</i> reports in patients aged ≥65 years
January – March 2006	-	15,349
April – June 2006	-	14,689
July – September 2006	-	12,821
October – December 2006	-	12,777
January – March 2007	-	15,640
April – June 2007	2,879	13,522
July – September 2007	2,507	10,751
October – December 2007	2,211	9,872

- Annual data from 2004 to 2006 (table 3) can be found at the following link:- http://www.hpa.org.uk/infections/topics_az/hai/Mandatory_Results.htm
Given the caveats around the 2007 data (see appendix 1) and the fact that the 2007 data will be subject to change, annual data for 2007 have not been

published. 2007 data (annual counts and rates) will be included in the next publication, scheduled for July 2007.

Further details can also be found by following the below link (Letter from the Inspector of Microbiology and Infection Control – 13th February 2008):-

http://www.dh.gov.uk/en/Publicationsandstatistics/Lettersandcirculars/Dearcolleagueletters/DH_083048

Appendix 1 - Changes to the mandatory reporting system during 2007 as a result of introducing web-based reporting.

- **Definition criteria:** Change in recording of repeat positives from one count (case episode) per hospital admission back to the '28 day rule' as indicated in the Chief Medical Officer letter dated January 2008. Trusts were required to revisit all data from April 2007 onwards and ensure that this definition was applied by March 10th 2008 at the latest. During this period Trusts were also encouraged to add (where possible) NHS number and admission date to any incomplete records. In order to meet the Department of Health publication schedule it was necessary to produce data tables for publication before Trusts had finished reviewing the data (data were extracted from the system for publication in early February). It is recognised that these data will have been subject to significant change following extraction and any subsequent interpretation of published data should thus be treated with extreme caution. Future publications will however include all revisions received/made during this process.

From April 2007 Trusts were required to report all toxin positive *C. difficile* results for individuals aged 2 years or more that are detected by laboratories in their Trust. Previously only results for individuals aged 65 years or more were reported.

- **Introduction of sign-off process:** Trust Chief Executive sign-off for *C. difficile* was introduced on October 15th 2007 for the September 2007 data.

Appendix 2 - Format of the results:

- **The tables include quarterly counts of *C. difficile* infections giving national totals as follows:**
 - January 2006 to March 2006
 - April 2006 to June 2006
 - July 2006 to September 2006
 - October 2006 to December 2006
 - January 2007 to March 2007
 - April 2007 to June 2007
 - July 2007 to August 2007
 - September 2007 to December 2007

Appendix 3 - Health Warning: comment on trend, ascertainment and use of rates of *C. difficile* infection to compare Trust performance

- All the changes to the mandatory reporting system made during 2007 have had an effect on the continuity and resilience of the surveillance. Given the recent changes to the definition announced in the Chief Medical Officer letter dated January 2008 and referred to in Appendix 1, any apparent trends in the data should be treated with extreme caution.
- The definitions used for CDI and Trust counts (case episodes) include cases from GP practices, nursing homes and other Trusts, as well as cases from the reporting Trust. Data for each Trust are thus likely to include a variable number of cases from outside the Trust. We have already taken steps towards the identification of where the patient was when the specimen was taken (separation of specimens taken in acute Trusts and elsewhere) and will be developing this further in the near future. Relevant acute and other denominators are also being considered in parallel.