



## **Summary and Commentary on Annual Glycopeptide-Resistant Enterococcal Bacteraemia Data, June 2009**

This report covers the fifth year of the mandatory surveillance of Glycopeptide Resistant Enterococcal (GRE) bacteraemia, from October 2007 to September 2008. We have also published four previous years of data from October 2003 to September 2007. The data presented are based on reports of clinically-significant GRE bacteraemia in English NHS acute Trusts. Data are requested quarterly from each of the participating acute NHS trusts in England by the Health Protection Agency (HPA). This surveillance is operated by the HPA on behalf of the Department of Health.

Data are provisional as annual counts may be updated (see Appendix 1).

### **Key points: Glycopeptide-Resistant Enterococcal bacteraemia.**

- Data are reported for 170 NHS acute Trusts. Trusts with missing data for specific time periods are highlighted in the tables.
- The current year (October 2007 to September 2008) is based upon a significant number of Trusts that did not submit complete returns.
- The data is subjected to checks of quality and completeness and these indicate that the data for 2007/08 is not robust. Measures of data quality are summarised in the table below:

<b>Reporting Year</b>	<b>No. of Trusts with missing data for at least 1 quarter of a reporting year</b>
October 2003 – September 2004	1
October 2004 – September 2005	1
October 2005 – September 2006	2
October 2006 – September 2007	5
October 2007 – September 2008	23

- The increase in the number of trusts that have not supplied all the required data returns occurred after the introduction of a new electronic reporting system, in January 2007, and may have caused some confusion in the field. The Department of Health is investigating these missing data and the tables will be updated in due course. Until these issues have been resolved it is not possible to comment on trends.

- Annual counts for GRE bacteraemia reports are summarised in the table below (see [Table 7](#)):

Year	Number of GRE bacteraemia reports
October 2003 – September 2004	628
October 2004 – September 2005	757
October 2005 – September 2006	903
October 2006 – September 2007	911
October 2007 – September 2008	799 * 95% C.I. (748, 850)

- \* For the trusts that did not return complete data during the latest year (October 2007-September 2008) a statistical mixed effect model was used to provide an estimate of the unobserved total number of GRE bacteraemias at each trust. As this is an estimate from a statistical model the England total will not be a sum of the Trust totals. This model includes two random components to take into account the variation between and within trusts, together with three predictor variables; region, trust type and time.
- The combination of the predicted value in the trusts not returning complete data together with the reported counts in the other trusts provide an estimated total of 799 reports for the current year. The 95% confidence interval on this estimated total, derived from the uncertainty around the model predictions, is 748 to 850. This is indicative of a reduction in GRE bacteraemia cases compared to the previous year

### Case Definitions

The case definition for GRE bacteraemia is isolation of GRE from blood culture, either alone or as part of a mixed (polymicrobial) bloodstream infection. Positive blood cultures from the same patient within 14 days of the initial culture are considered to be part of the original episode and are not included in analyses. Duplicate reports more than 14 days apart are recorded as separate episodes. Enterococci from blood cultures should be tested for susceptibility to the antibiotic vancomycin. Teicoplanin is not an acceptable alternative to vancomycin for these purposes.

GRE-positive blood cultures are reported by the Trust whose laboratory processes the specimen, and that this may not always reflect where the bacteraemia was acquired. A patient may have acquired the GRE infection in the community or in another healthcare facility, but these aspects are not assessed in this scheme.

## **Appendix 1 – Caveats and Health Warnings**

- As this release is subject to under-reporting we used statistical models to produce an estimate in the total counts of GRE bacteraemia.
- Trusts are required to report GRE bacteraemia quarterly, including zero cases (“nil returns”); 23 Trusts have missing data for at least one quarter of the latest year October 2007 – September 2008 (i.e. have not reported any data to the HPA, including nil returns).
- Caution should be exercised when comparing Trusts. Numbers will be affected by a variety of factors such as Trust size, services offered, population served, etc.
- It is important to note that these data are provisional and year-on-year changes may be attributable to changes in ascertainment, for example changes in specimen testing guidelines or data abstraction methods.