



Health Protection Report

weekly report

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Health Protection Agency scientists and other public health experts from a wide range of disciplines will present papers at the *Health Protection 2010* conference and exhibition being held at Warwick University on 14 and 15 September, organised by the Health Protection Agency [1].

The conference programme reflects the wide scope of Agency's responsibilities, encompassing frontline response to emergencies with public health implications (such as chemical spillages, infectious disease outbreaks, etc) to purely scientific activities such as the public health epidemiology and laboratory service functions.

More than a hundred papers will be presented during five parallel streams of presentations over two days. The first day comprises four one-day conferences on: [public health epidemiology](#); [hepatitis and other blood-borne infections](#); [food-borne infections](#); and vaccines.

Five further one-day conferences on the second day cover: [tuberculosis](#); [healthcare-associated infections](#); [environmental public health](#); the Agency's emergency response activities; and the implications of [new genetic sequencing technological developments](#) for health protection.

The operational and other challenges presented by a number of high-profile infectious disease outbreaks that occurred during the past year are the subject two of the first day's conference streams (public health epidemiology and food-borne infections); these included outbreaks of gastro-enteric infections caused by food-borne pathogens in a variety of settings (eg salmonella in schools and nurseries, general enteric disease outbreaks associated with particular retail food outlets) or associated with a range of foodstuffs (eg oysters and other shellfish). A number of presentations in both these conference streams will describe responses to (and the conclusions of investigations following) a number of outbreaks at agricultural settings (eg Q fever on a Dutch dairy farm and *E. coli* and cryptosporidiosis on petting farms in the UK). The work of the Agency's Food, Water and Environmental Microbiology Network in developing national strategy for responding to outbreaks in healthcare settings is also covered in the food-borne infections conference.

Two half-day events – concerned with the HPA's contribution to the UK frontline response to the 2009 swine flu pandemic in the UK and HPA activities related to preparedness for chemical, biological and radiation/nuclear (CBRN) emergencies in the UK – complete the first day's programme.

A challenge for the Agency during the past year has been prevention and control of healthcare-associated infections. A second-day conference stream is concerned with the efforts that have been directed towards two particular concerns: significant rises in norovirus activity and the emerging international problem of gram-negative pathogens.

The environmental public health conference is jointly organised with the Chartered Institute of Environmental Health and includes papers on the potential public health implications of climate change and other environmental phenomena. The potential impacts on human health of climate change are the subject of the plenary Turnberg Lecture ("Climate change: reducing the risks to health in an uncertain future"), to be given by professor Sir Andy Haines, director, London School of Hygiene and Tropical Medicine.

Reference

1. Conference website: <http://www.healthprotectionconference.org.uk/>.

Update to UK immunisation handbook

The Department of Health's on-line handbook of immunisation practice and procedures in the UK [1], *Immunisation against infectious disease* ("the green book"), has been updated to take account of recent developments relating to influenza, including the 2009 pandemic. Most recently, this includes the CMO-announced arrangements [2, 3] for the seasonal influenza vaccination programme for the forthcoming (winter) 2010/11 season, starting September/October 2010.

The updated chapter 19 [4] provides guidance on the administration of influenza vaccine programme (target groups, dosages, contraindications, precautions, adverse reactions, vaccine supplies, etc); also a general introduction to history and epidemiology of the disease. It replaces both the previous influenza chapter, last updated on 29 October 2009, and the pandemic influenza A (H1N1)v chapter published on 16 February 2010.

References

1. Department of Health. *Immunisation against infectious disease*, 2006. Available at: http://www.dh.gov.uk/en/Publichealth/Healthprotection/Immunisation/Greenbook/DH_4097254.
 2. Department of Health. PL CMO (2010)1, PL CNO (2010)1, PL CPHO (2010)1: *The influenza immunisation programme 2010/11*.
 3. Seasonal influenza: immunisation programme for 2010/11, *HPR 4*(22).
 3. Immunisation against infectious disease: chapter 19: influenza, 19 August 2010. Downloadable at: http://www.dh.gov.uk/dr_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_118770.pdf (194k PDF).
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Infection reports

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Bacteraemia

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Voluntary reporting of *Staphylococcus aureus* bacteraemia in England, Wales and Northern Ireland, 2009

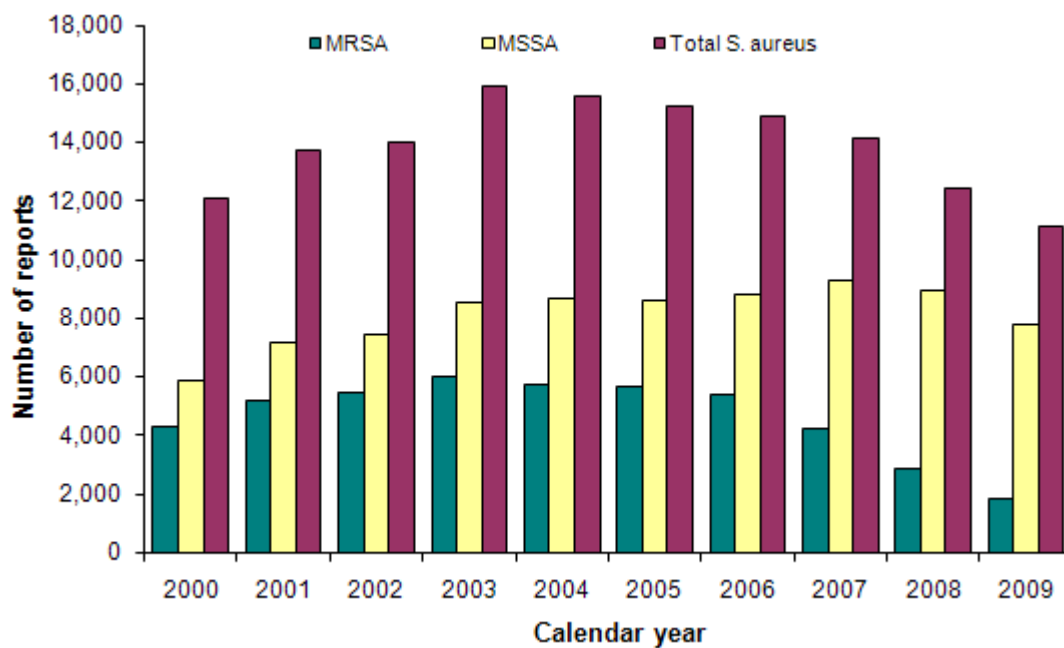
This is a summary of the update report on trends in *Staphylococcus aureus* bacteraemia [1]. The data set comprised voluntary reports made to the Health Protection Agency from January 2000 up to December 2009, from contributing laboratories in England, Wales and Northern Ireland. The analysis dataset comprises all reports of *S. aureus* isolated from blood cultures.

- ▶ There were 11,115 reports in 2009, comprising 10,039 from England, 585 from Wales and 491 from Northern Ireland. This represents a 10.8% decrease in the number of *S. aureus* laboratory reports compared to 2008 (12,454 reports);
- ▶ When the data are grouped by age, the rate per 100,000 population of meticillin susceptible *S. aureus* (MSSA) bacteraemia is significantly higher in males than females across most age groups. The rate for meticillin resistant *S. aureus* (MRSA) is significantly higher among older male patients. These patterns are well known and have been described in previous years;
- ▶ Antibiotic susceptibility testing results are presented. These demonstrate that the majority of tested MRSA are resistant to ciprofloxacin and erythromycin, continuing the pattern of the past four years. The population profile of antibiotic susceptibility for MSSA specimens has not changed since 2008, and MSSA remains susceptible to a broad range of antibiotics including ciprofloxacin and erythromycin;
- ▶ The downward trends in *S. aureus* reports and meticillin resistance/susceptibility in England since 2005 are confirmed by data taken from the mandatory reporting system. Northern Ireland and Wales have their own mandatory MRSA bacteraemia reporting schemes and are not covered in this report.

Rates were calculated using 2008 resident population denominators. Age- and sex- specific population denominators for England were calculated using tables of mid-year resident population estimates published by the Office for National Statistics (ONS) [2]. Data were extracted on 12 July 2010 and are provisional as the number of reports for 2009 may increase due to late reporting.

The figure shows the trend in *S. aureus* bacteraemia reports and meticillin susceptibility. In 2009 the downward trend in total number of *S.aureus* and MRSA reported has continued. Over the time period from 2004 when total numbers of *S.aureus* and MRSA reports started to decrease, the number of MSSA showed a moderately upward trend. With the addition of data from 2009, it appears that this trend had begun to reverse.

Trends in *Staphylococcus aureus* bacteraemia laboratory reports and meticillin susceptibility (voluntary reporting scheme): England, Wales and Northern Ireland 2000-2009



References

1. Available online at:
<http://www.hpa.org.uk/web/HPAweb&Page&HPAwebAutoListName/Page/1191942169769>.
 2. <http://www.statistics.gov.uk>.
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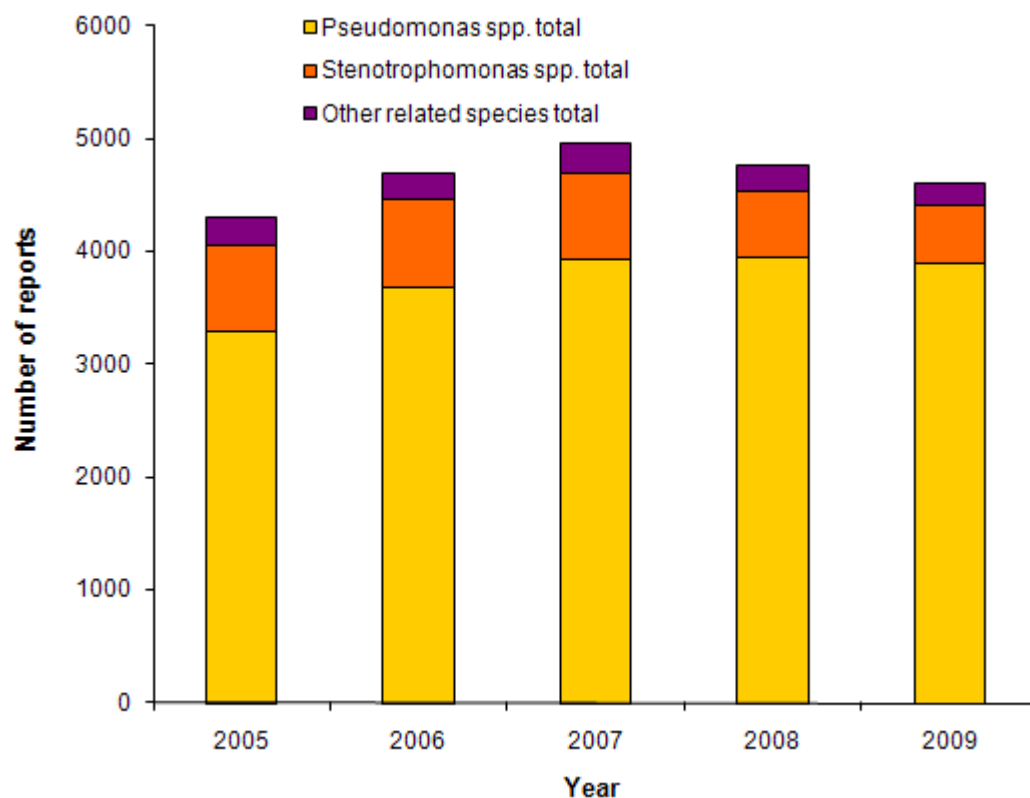
***Pseudomonas* spp. and *Stenotrophomonas maltophilia* bacteraemia in England, Wales and Northern Ireland, 2005 to 2009**

This report contains data voluntarily reported to the Health Protection Agency for bacteraemias due to *Pseudomonas* spp., *Stenotrophomonas maltophilia* and other related species in England, Wales and Northern Ireland from 2005 to 2009. These analyses are based on data extracted from our voluntary surveillance database on the 28 July 2010 for the period between 2005 and 2009. The data presented here differ in some instances from data in earlier publications due to the addition of late reports to the database.

The complete report may be found on the *Pseudomonas* spp. pages of the HPA's website.

- ▶ From 2005 to 2008, there was a 20% increase in the number of *Pseudomonas* spp. bacteraemias reported to the HPA (3,297 reports in 2005 compared with 3,957 reports in 2008), reducing slightly by 2% in 2009 to 3888 reports. In 2009, 90% of *Pseudomonas* spp. isolates from bacteraemia were identified to species level (3,483 reports), with 93% of these identified as *P. aeruginosa* (see figure);
- ▶ For *S. maltophilia* bacteraemia, there was a 31% decrease in the number of bacteraemias reported to the HPA between 2005 and 2009 (522 reports in 2009 compared with 753 in 2005);
- ▶ The overall incidence in 2009 for *Pseudomonas* spp. bacteraemia was 6.3 cases/100,000 population in England, Wales, Scotland and Northern Ireland. Infections were reported significantly more among those aged 65 years and older, especially among male patients. There was a significant increase in the proportion of isolates testing non-susceptible to imipenem and meropenem, increasing from 7% to 14%, and 8% to 11% respectively from 2005 to 2009. There was a statistically significant but small decrease in non-susceptibility to ciprofloxacin from 12% to 11% between 2005 and 2009. There were no significant changes in non-susceptibility to ceftazidime (8%) or piperacillin/tazobactam (8%);
- ▶ The overall incidence in 2009 for *S. maltophilia* bacteraemia was 0.9 cases/100,000 population in England, Wales and Northern Ireland. *S. maltophilia* was also reported more frequently for male patients. There were no significant changes in non-susceptibility to co-trimoxazole (7%).

Pseudomonas* spp. and *S. maltophilia* and other related species bacteraemia reports: 2005-09



* Data extracted 28 July, 2010.