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News

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HPA/LACORS Study on sandwiches from hospitals and residential/care homes with a focus on *Listeria monocytogenes* and other *Listeria* spp.

The Health Protection Agency (HPA) and the Local Authorities Co-ordinators of Regulatory Services have published its findings from study of sandwiches from hospitals and residential/care homes with a focus on *Listeria monocytogenes* and other *Listeria* spp. [1]. In England and Wales there have been four recent outbreaks of *L. monocytogenes* associated with sandwiches purchased from or provided in hospitals [2]. More recently in 2007 sandwiches contaminated with *L. monocytogenes* that were supplied to healthcare establishments in London and South East England were subject to a recall; a single case of *Listeria* infection was identified as probably linked with this incident [3]. However, there is a scarcity of information on the prevalence of *L. monocytogenes* in sandwiches purchased or provided within hospitals and residential/care homes. Elderly people, and those that have impaired immunity due to disease or treatment, are particularly vulnerable to infection, and hence the focus of this study on sandwiches served in hospitals and residential/care homes.

The study was carried out over a period of 12 months between April 2005 and March 2006, and was undertaken to determine the microbiological quality of sandwiches available to vulnerable residents/patients at residential homes and hospitals premises. Sandwiches were examined for the presence of *L. monocytogenes* and other *Listeria* spp. In addition *L. monocytogenes*, other *Listeria* spp., *Escherichia coli*, *Staphylococcus aureus*, and Enterobacteriaceae were enumerated to provide an indication of hygiene and levels of contamination.

Based on the microbiological guidelines for some ready-to-eat foods sampled at the point of sale [4], most of the sandwich samples (96.3%; 3,129 of 3,249) were of satisfactory/acceptable quality, while only 3.3% (120) were of unsatisfactory quality. Unsatisfactory results were due to high levels of Enterobacteriaceae ($\geq 10^4$ cfu/g for sandwiches not containing salad), and *E. coli*, *S. aureus*, and/or *Listeria* spp. (not *L. monocytogenes*) at $\geq 10^2$ cfu/g. Overall contamination of *Listeria* spp. in sandwiches was 7.6%. *L. monocytogenes* was detected in 2.7% (88) of samples, 87 at < 10 cfu/g and one at 20 cfu/g. Sandwiches were contaminated with *Listeria* spp. and *L. monocytogenes* more frequently when: from premises without a hazard analysis system in place; collected from cafeterias, shops or wards within hospitals; or stored or displayed above 8°C. The presence of *Listeria* spp. and *L. monocytogenes* were also associated with sandwiches that were: supplied; prepacked; with a main sandwich filling of poultrymeat; or where the sandwich contained salad ingredients, soft cheese, and/or mayonnaise.

Control of *Listeria monocytogenes* in sandwich manufacturing, and in storage and handling within healthcare establishments, is essential in order to minimise the potential for this bacterium to be present at levels hazardous to health at the point of consumption. The European Commission (EC) Scientific Committee on Veterinary Measures emphasized that although levels of $\leq 10^2$ cfu/g are usually not considered significant for human disease, vulnerable population groups may be more susceptible [5]. Current EC legislation [6] stipulates that levels of *L. monocytogenes* must be no greater than 10^2 cfu/g during the shelf-life of ready-to-eat foods; this includes those foods unable to support growth, such as sandwiches that have a shelf-life of less than five days. The processing areas and equipment

used in the manufacture of ready-to-eat foods must also be monitored for *L. monocytogenes*. Sandwiches have a high potential for contamination from *L. monocytogenes* due to extensive handling during preparation of the filling and sandwich assembly, or from cross-contamination from the environment. As sandwiches are ready-to-eat foods, this places the emphasis on high quality ingredients, hygienic manufacture, appropriate shelf-life, and correct storage for maintaining product safety. The findings from the LACORS/HPA study support the view that manufacturers supplying sandwiches to healthcare establishments should operate (as a matter of good practice rather than a legal requirement) to the *British Sandwich Association Manufacturer Code of Practice* [7] recommended target level of an absence of *L. monocytogenes* in sandwiches at the point of production.

The HPA/LACORS study was carried out by the Health Protection Agency (HPA) Centre for Infections Department of Gastrointestinal Infections, HPA Regional Microbiology Network, NPHS Wales, Northern Ireland Public Health Laboratory, Public Analysts in Scotland, LACORS, and Local Authorities

The report on sandwiches from hospitals and residential/care homes with a focus on *L. monocytogenes* can be found at
<<http://www.lacors.gov.uk/lacors/ContentDetails.aspx?id=17269>>

References

1. Little L, Barrett NJ, McLauchlin J, Grant K, and the Food, Water and Environmental Surveillance Network. *LACORS/HPA Co-ordinated Food Liaison Group Studies: Microbiological examination of sandwiches from hospitals and residential/care homes with a focus on Listeria monocytogenes and other Listeria spp.* [online]. Available at <<http://www.lacors.gov.uk/lacors/ContentDetails.aspx?id=17269>>. [Accessed 16 August 2007.]
2. Gillespie IA, McLauchlin J, Grant K A, Little CL, Mithani V, Penman C, et al. Changing pattern of human listeriosis in England and Wales, 2001-2004. *Emerg Inf Dis* 2006; **12**: 1361-6.
3. Health Protection Agency. Listeria contamination of sandwiches – an update. *Health Protection Report* [serial online] 2007 [Accessed 3 August 2007]; **1** (13): news). Available at: <<http://www.hpa.org.uk/hpr/archives/2007/news2007/news1307.htm#listeria>>.
4. Gilbert RJ, de Louvois J, Donovan T, Little C, Nye K, Riberio CD, et al. 2000. Guidelines for the microbiological quality of some ready-to-eat foods sampled at the point of sale. *Comm Dis Public Health* 2000; **3** (3): 163-167.
5. European Commission. *Opinion of the Scientific Committee on Veterinary Measures relating to Public Health on Listeria monocytogenes*. European Commission Health and Consumer Protection Directorate General, 23 September 1999. Available at <http://ec.europa.eu/food/fs/sc/scv/out25_en.pdf> [Accessed 3 August 2007].
6. European Commission. Regulation (EC) No 2073/2005 of 15 November 2005 on microbiological criteria for foodstuffs. *Official Journal of the European Union* 2005; **L338**: 1-26.
7. *British Sandwich Association Manufacturer Code of Practice*. Chepstow: BSA, December 2005. Available at <http://www.sandwichesonline.org.uk/about/manufacture_code_of_practice.htm>. [Accessed 26 April 2007.]

Outbreak of gastrointestinal illness in tourists visiting the Dominican Republic

A large outbreak of over 600 cases of gastrointestinal illness has been reported in the Dominican Republic, originating at the Bahia Principe San Juan resort in Puerto Plata. The illness experienced has generally been self limiting of 12 to 24 hours duration. Vomiting and diarrhoea are the most commonly reported symptoms, with abdominal discomfort and fever reported much less frequently.

Two flights containing symptomatic and asymptomatic travellers returned to the United Kingdom on Thursday 9 August: to Glasgow (35 symptomatic) and to Gatwick (40 symptomatic). The planes were disinfected and then returned to service.

Passengers have been asked to see their GP if they develop symptoms, or, in those already affected, if their symptoms persist. General practitioners, infectious diseases doctors or other healthcare workers who may see patients recently returned from the Dominican Republic, are asked to request stool samples for microbiological and viral analysis, providing a full travel history.

The illness has features suggestive of a viral aetiology, and two specimens from cases in England and Wales have been confirmed as being positive for norovirus (one genotype G1 and one type G2). Several cases have had *Entamoeba histolytica* identified by local laboratories in the Dominican Republic but for the majority of cases the symptoms are not consistent with this being the cause of illness.

The Bahia Principe hotel is currently closed to new guests.

Healthcare Associated Infections

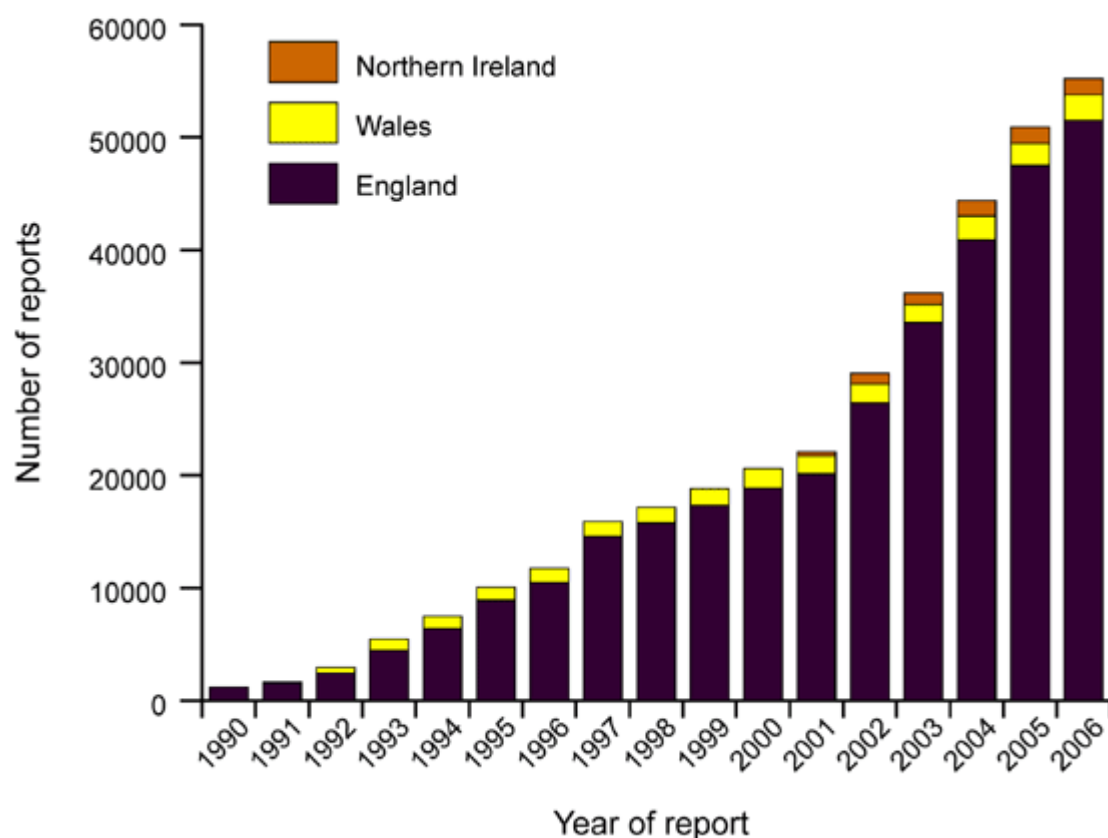
Voluntary surveillance of Clostridium difficile in England, Wales, and Northern Ireland, 2006

This report covers voluntary reports of *Clostridium difficile* positive faecal samples for all ages, made to the HPA in 2006 from laboratories in England, Wales, and Northern Ireland. It is not possible to distinguish, from the data collected, between hospital and community acquired infections.

Age specific rates of *C. difficile* were calculated using Office of National Statistics 2005 mid-year resident population estimates as denominators. Data were analysed and displayed according to current regional boundaries.

In 2006, the HPA received 55,213 reports of positive *C. difficile* laboratory samples, an 8.4% increase on the 50,912 reports received during 2005. The 2006 total comprised 51,519 positive samples from England, 2,261 from Wales and 1,433 from Northern Ireland. This reflected an increase of 8% in England and 15% in Wales (figure 1).

Figure 1 Total reports of *Clostridium difficile* isolated from faecal specimens under the voluntary reporting scheme: England, Wales and Northern Ireland* 1990-2006†



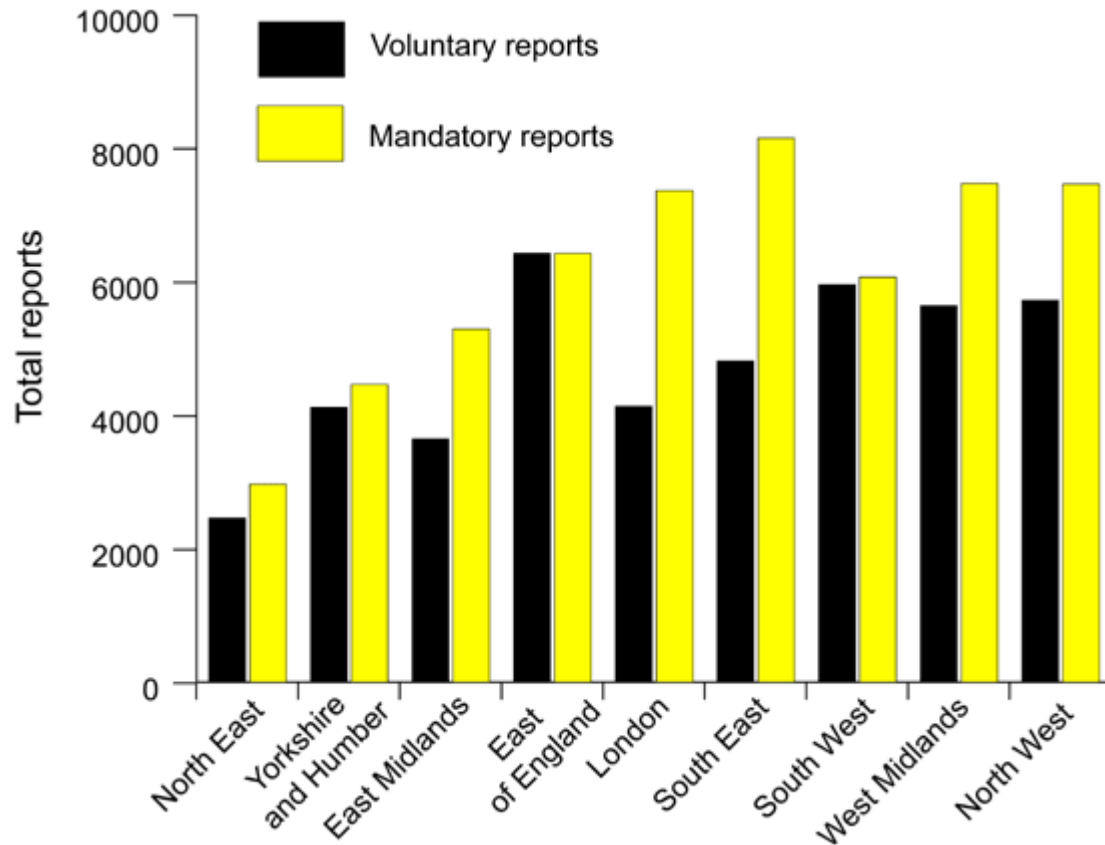
*Data from 2006 are provisional

† Data for Northern Ireland only included from 2001 onwards

Since 2004, regional differences in ascertainment have been appraised by comparing numbers of laboratory reports in each English region under voluntary and mandatory systems for people aged 65 years and over.

For 2006, the number of *C. difficile* cases reported through voluntary surveillance in London and the South East is less than 60% of the number reported through mandatory surveillance (figure 2). The variation is much smaller in the other English health regions; ascertainment of voluntary reports is greatest in the East of England region (figure 2).

Figure 2 Ascertainment of *Clostridium difficile* data for the mandatory and voluntary reporting schemes in England for patients aged 65 years and over in 2006*



*Data from 2006 are provisional

The complete data report, including data tables and graphs, can be viewed on the HPA website:

http://www.hpa.org.uk/infections/topics_az/clostridium_difficile/c_diff_voluntary_reports.htm