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Take a public health approach to mass gatherings health, says ECCMID

This year's Summer Olympic and Paralympic Games will pose many challenges for London and other UK host cities, but preventing outbreaks of infectious disease could be one of the most important. This was the message of a symposium at the 22nd European Congress of Clinical Microbiology and Infectious Diseases (ECCMID) on the emerging specialty of 'mass gatherings health'.

According to Professor Jonathan Cohen, Dean of Brighton and Sussex Medical School and ECCMID Congress President: 'With the growth of the global population and the ease and increasing frequency of international travel, mitigating the risk of infectious outbreaks at mass gatherings has become critical, not only to the health of the host country, but also to global health security.'

Mass gatherings are defined as 'events attended by a sufficient number of people to strain the planning and response resources of a community, state or nation' (World Health Organization, 2008). NHS personnel have a great deal of experience in tackling the health impact of mass gathering such as festivals or sporting events, but the Olympic Games will pose particular challenges.

Professor Jonathan Cohen, Dean of Brighton and Sussex Medical School and ECCMID Congress President

About 3 million visitors are expected in London this summer, and some will inevitably bring with them micro-organisms that may pose a risk to public health. The Health Protection Agency will produce a daily report for the NHS and other key partners, highlight ing public health threats, incidents and patterns of disease across the UK. This will be based on surveillance and modelling technologies originally used to identify national and international risks at the time of the 2010 Winter Olympics in Vancouver.

Sue Lyon

World Health Organization (2008) Communicable disease alert and response for mass gatherings: key considerations. www.who.int/csr/Mass_gatherings2.pdf (accessed 9 April 2012)

Resistance rates vary despite standardized policies

Antimicrobial resistance may vary significantly between geographically close NHS units, even when there are unified antimicrobial and infection control policies, standardized laboratory practice and integrated infection specialists. This finding comes from a study by microbiologists at Imperial College Healthcare NHS Trust, London.

Between March 2010 and February 2011, susceptibility rates in the community were compared to those for five hospitals and a renal unit. Isolates were identified for AmpC/extended spectrum beta-lactamases (ESBL)-producing *Enterobacteriaceae* (20 142 isolates), glycopeptide-resistant enterococci (5277 isolates) and *Pseudomonas aeruginosa* (3777 isolates).

Of *Enterobacteriaceae* isolates, 9.4% in the community displayed ESBL/AmpC phenotypes, rising to 22.4–25.6% (P=0.173) in low-intensity and 28.1–56.5% (P<0.001) in high-intensity inpatient areas. In the enterococci isolates, community glycopeptide-resistant enterococci rates were 0.5%, rising to 7.7–17.3% (P=0.005) in low-intensity inpatient areas and 34.5–59.5% (P<0.001) in high-intensity areas.

According to the investigators, possible causes for these varying resistance rates may include differences in antimicrobial use and clinical factors driving choice of second- and third-line antimicrobial therapies. Unit-specific policies may be needed to allow for these variables.

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Moore LSP, Thomas CP, Brannigan E, Holmes AH (2012) Antimicrobial resistance prevalence at the United Kingdom's first academic health science centre. Abstract P1219

Alternative approach to *C. difficile* infection

A study from Cardiff suggests that less commonly used antimicrobial agents may be effective alternatives to metronidazole or vancomycin, the currently recommended empirical therapies for *Clostridium difficile* infection.

Investigators tested the susceptibility of 276 *C. difficile* isolates to rifaximin, rifampicin, fusidic acid and teicoplanin. The isolates were submitted to the UK Anaerobe Reference Unit between 2001 and 2011, and known to be susceptible to vancomycin or metronidazole.

Most isolates were susceptible to all agents, regardless of ribotype or year of isolation. However, one isolate was resistant to vancomycin but remained sensitive to teicoplanin. Furthermore, two isolates were resistant to both rifampicin and rifaximin, while four were resistant to rifampicin but remained sensitive to rifaximin.

The 35-fold increase in reported cases of *C. difficile* infection in the UK in the last 10 years and increasing rates of relapse and re-infection mean that alternatives to current standard therapy are urgently needed.

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Hughes H, Wootton M, Hall V, Daniel VE, Howe RA (2012) Susceptibility of *Clostridium difficile* from the UK to alternative agents. Abstract P2283