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News

Draft guidelines for laboratory diagnosis and susceptibility testing of MRSA published for consultation

A joint working party comprising of the British Society for Antimicrobial Chemotherapy, Hospital Infection Society, and Infection Control Nurses Association, has published the draft document Guidelines for the Laboratory Diagnosis and Susceptibility Testing of Meticillin-Resistant Staphylococcus aureus (MRSA) at <http://www.bsac.org.uk/default.cfm?fuseaction=news.viewItem&itemID=447>. The draft guidelines are for open consultation for four weeks, beginning on 28 March 2005. Following the consultation period, the report will be amended and submitted for publication in the Journal of Antimicrobial Chemotherapy. Copies of the report will be freely available from the time of publication.

Responses to this draft publication should be submitted by, 22 April 2005, to: BSAC, 11 The Wharf, 16 Bridge Street, Birmingham B1 2JS; email <tguest@bsac.org.uk>.

Chagas' disease (American trypanosomiasis) in southern Brazil

An outbreak of acute Chagas' disease has been reported from Santa Catarina, southern Brazil (with one case also reported from Paraná state). From 1 February to 30 March 2005, there were 31 confirmed cases, including five deaths, and 64 suspected cases (1,2). The outbreak is thought to be associated with drinking sugar cane juice (garapa), which is popular all over South America and is made from crushed sugar canes. Ninety per cent of cases had consumed sugar cane juice from the Kiosk Barraao da Penha 2, between Navagantes and Pen-ha municipalities along the northern beaches of Santa Catarina, close to the federal road BR 101 (1). It is estimated that more than 50,000 people (including international travellers) may also have been exposed. The Ministry of Health in Brazil issued a national alert on 29 March 2005 and has advised that anyone who has consumed sugar cane juice between 8 and 26 February 2005 (3) in the following cities should seek medical advice if they experience relevant symptoms: Itapoa, Garuva, Joinville, Araquari, Sao Francisco do Sul, Balneario Barra do Sul, Barra Velha, Picarras, Penha, Navegantes, Itajai, Balnearion Camboriu, Camboriu, and Itapema.

Chagas' disease is caused by the protozoan *Trypanosoma cruzi,* and is typically transmitted during the bite of infected triatomine insects (also called kissing bugs). The bugs, while taking a blood meal from a human, simultaneously excrete trypanosomes in their faeces in small numbers, which may then enter the body through breaks in the skin, the conjunctiva, or through mucous membranes (4). Although Chagas' disease is endemic in Brazil, there have been no indigenous cases of vector borne disease in Santa Catarina for many years (5). It is possible, therefore, that the triatomine bugs or faeces from the bugs may have been inside the sugar cane when it was crushed and thereby high numbers of trypanosomes may have been present in the juice, which could explain the high number of severe infections. Past outbreaks and studies suggest that Chagas' disease can be transmitted orally, which would support this hypothesis (6-8).

Most infections with *T. cruzi* are mild or asymptomatic, and acute infections are usually more common in children (4). In this outbreak, the incubation period has ranged between seven and 28 days; the typical symptoms have included high fever for more than five days, myalgia, headache, orbital swelling, cutaneous rash, hepatosplenomegaly, and cardiac problems; the age range of cases is not currently available. Chagas' disease is an extremely rare infection in travellers, but anyone who has been to the area affected by the outbreak and is concerned should seek medical advice.

Chagas' disease is named after Carlos Chagas, a Brazilian doctor who first described the disease in 1909. It is endemic in 21 countries throughout South and Central America. The World Health Organization estimates that between 16 and 18 million people are infected and over 100 million people are at risk of acquiring the disease (9).

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Independent review of endoscope decontamination in Northern Ireland

Following an incident in Northern Ireland in May 2004 when a gastroscope may not have been adequately disinfected, a detailed observational audit of all endoscopes in use in hospitals throughout Northern Ireland was undertaken in June 2004 (1). This identified concerns with 16 endoscopes including gastroscopes, duodenoscopes, and colonoscopes. Concerns fell into two groups: in the first group, one narrow channel in the endoscope was not fully cleaned or disinfected despite going through the normal cleaning and disinfection process; in the second group, all the channels had been fully cleaned, but one channel may not have been fully disinfected despite going through the normal cleaning and disinfection process.

Following advice from an expert advisory group convened by the Health Protection Agency, a patient notification exercise offering testing for bloodborne viruses was undertaken for patients associated with endoscopes in the first group. One thousand seven hundred and seventy-one patients from three Trusts were contacted and offered testing. One thousand four hundred and seventy-six were tested and there was no evidence of any patient acquiring infection with hepatitis B, hepatitis C, or HIV following a procedure with these particular endoscopes.

A further 1788 patients, who had undergone a procedure with an endoscope in which one channel may not have been fully disinfected despite going through the normal cleaning and disinfection process, were contacted and reassured. The risk of acquiring infection from an endoscope was considered to be very low, given the estimated prevalence of bloodborne viruses in the Northern Ireland population to be less than 3 per 1000.

As a result of the audit, the Department of Health, Social Services, and Public Safety (DHSSPS) commissioned an independent review of the systems and processes used within Northern Ireland to achieve the cleaning and high-level disinfection of flexible endoscopes following their use in the investigation and treatment of patients. The Review Group, led by Dame Deirdre Hine, included specialists in gastroenterology, infection control and endoscope decontamination. Their investigations included interviews with relevant Trust staff, DHSSPS, the Health Estates Agency, Regional Supplies Services and representatives of the suppliers and manufacturers of the devices involved.

The DHSSPS published the Review Group's findings on 16 March 2005 (2). Fifty-five recommendations were made including:

- The need for a more systematic approach to the selection, procurement and replacement of equipment. This would enable the assessment of clinical and risk management issues.
- Regular training needs analyses of staff in endoscopy suites with a designated person in each Trust responsible for staff training, performance assessment, and maintaining training records of all staff.
- Improving governance arrangements by establishing a simple Trust committee structure, to ensure decontamination issues are appropriately addressed.
- The need for comprehensive audit arrangements covering the totality of the decontamination process.
- Clarifying the line of accountability for the safety of decontamination of re-usable medical devices including endoscopes.
- Improving microbiology support to staff responsible for decontamination policy and practice.
- Specific reference should be made in the British Society of Gastroenterology guidelines to endoscopes with wire channels and auxillary water channels when these guidelines are re-written.

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Controlling and preventing disease outbreaks in a complex emergency situation: discussion of the recent south Asia/east Africa tsunami aftermath

The tsunamis which hit countries in south Asia and east Africa on 26 December 2004 were considered to present a potential communicable disease threat immediately after the initial physical devastation. In similar complex emergencies in the past, communicable diseases have often accounted for many, if not the majority, of deaths taking place following the initial impact (1). The places hardest hit by the tsunamis were costal areas of Indonesia (Aceh region), Sri Lanka , Thailand , Myanmar , India , Somalia , and the Maldives (2,3). Damage to the public health infrastructure varied between countries. In some places, water supplies were disrupted and contaminated, making clean drinking water difficult to obtain. Sanitary facilities and sewage treatment works were damaged, and there were a large number of decomposing bodies of the initial victims, all of which were thought to have contributed to the threat of outbreaks of diarrhoeal disease (4).

An increase in diseases such as salmonellosis, typhoid, cholera, campylobacteriosis, hepatitis A, and shigellosis was expected, particularly in the emergency camps for the millions of displaced people, which soon became very overcrowded and lacked adequate sanitation. Injury-related tetanus was also an initial disease threat. The damage to the general infrastructure had an indirect, yet large, impact on healthcare and disease prevention. Many local healthcare personnel were killed, and medical supplies, storage, and transport facilities were lost. Increases in mosquito-borne diseases (malaria and dengue) were expected several weeks after the tsunamis struck, as normal insect and malaria control was disrupted, and there were pools of stagnant water left from the flooding. Other diseases, such as measles and acute respiratory infections, which are easily transmitted in overcrowded camps and which, in the past, have resulted in high mortality in disaster survivors, also posed a threat. In some places, existing situations and habits of the population made public health interventions after the disaster harder to coordinate. In some areas, people were already malnourished, making them more susceptible to disease.

Communicable disease prevention and control

Immediately following the tsunamis, the World Health Organization (WHO) and the United Nation's Children's Fund coo rdinated the visits of international teams of health professionals and sanitation engineers to the disaster areas. The Global Alert Outbreak and Response Network (GOARN) was activated and expert infection control teams were formed with specialists from many nations including European countries but especially drawing on the considerable expertise in the south Asia region (5). There was close co-operation between WHO's Health Action in Crisis (6) and Communic able Disease Surveillance and Response Divisions (7) along with many other international bodies and ministries of health in the affected countries. Through these mechanisms a rapid assessments of need was made to inform planning and resource allocation, and specialist staff were deployed in the affected areas to set up disease surveillance and outbreak early warning systems, and provide of healthcare and sanitation. Mobile laboratories to diagnose diseases likely to cause epidemics and assess water quality were brought in. There was strategic stockpiling of vaccines and drugs to treat diseases like ly to cause epidemics, and thousands of children have been vaccinated against measle s. Mosquito control measures have been used extensively – nearly 200,000 homes in Banda Aceh, Indonesia, have been sprayed with insecticide, and bed nets and plastic sheeting treated with insecticide have been distributed.

Where necessary, there is ongoing reconstruction of healthcare facilities and training of healthcare workers. Water supplies have been chlorinated, leakages in distribution pipes are being detected and repaired, and toilet facilities and water treatment have been set up or maintained. Solid waste disposal has been maintained by providing rubbish bins and waste collections. Hygiene promotion is still a priority, and there is ongoing training of workers and hygiene kits are being distributed.

Seventy-eight technical guidelines covering aspects of the crisis management have been produced and posted on WHO websites <http://www.who.int/hac/crises/international/asia_tsunami/en/>. Information was also produced for those going to the affected zones and for healthcare professionals treating travellers returning from affected areas (8).

Disease surveillance and early warning systems have been functioning. There have been reported cases of m ost of the above mentioned diseases, especially in Indonesia and Sri Lanka with tetanus, malaria, measles and dengue. These diseases have probably not been much above normal levels and no abnormal findings have been noted in the Maldives , Mynamar , India , and Thailand (9). C oncerns about potential epidemics transmitted via corpses have not been realised and it is now appreciated that the threat of infection from corpses was probably been overstated. Equally there have been very few imported infections with only some cases of meliodosis noted in (10). Whether the public health response measures were the major factor that kept the incidence of infection low will never be determined. From a public health perspective, however, the interventions were appropriate and provide a model for responding to future emergencies.

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Respiratory

Laboratory reports of respiratory infections made to CDSC from Health Protection Agency and NHS laboratories in England and Wales: weeks 09-12/05

Data are recorded by week of report, but only include specimens taken in the last eight weeks (*ie*, recent specimens).

Table 1 Reports of influenza infection made to CDSC, by week of report: weeks 09-12/2005

Week	09/05	10/05	11/05	12/05	
Week ending	**06/03/05**	**13/03/05**	**20/03/05**	**27/03/05**	**Total**
Influenza A	37	54	33	33	**157**
Isolation	2	16	3	–	**21**
DIF	12	6	10	1	**29**
Four-fold rise in paired sera	3	1	7	2	**13**
PCR	1	6	2	13	**22**
Other	19	25	11	17	**72**
Influenza B	2	5	8	8	**23**
Isolation	–	2	5	3	**10**
DIF*	–	–	2	1	**3**
Four-fold rise in paired sera	–	–	–	–	**–**
PCR	1	–	–	1	**2**
Other	1	3	1	3	**8**
Influenza (untyped)	–	–	–	–	**–**
Isolation	–	–	–	–	**–**
DIF	–	–	–	–	**–**
Four-fold rise in paired sera	–	–	–	–	**–**
PCR	–	–	–	–	**–**
Other†	–	–	–	–	**–**

*DIF = Direct Immunofluorescence.
†Other' = 'Antibody detection - single high titre' or 'method not specified'.

*DIF = Direct Immunofluorescence.
†Other' = 'Antibody detection - single high titre' or 'method not specified'.

Table 2 Respiratory viral detections by any method (culture, direct immunofluorescence, PCR, four-fold rise in paired sera, single high serology titre, genomic, electron microscopy, other method, other method unknown), by week of report: weeks 09-12/2005

Week	09/05	10/05	11/05	12/05	
Week ending	06/03/05	13/03/05	20/03/05	27/03/05	Total
Adenovirus*	27	22	18	22	**89**
Coronavirus	–	–	–	1	**1**
Parainfluenza†	13	20	29	21	**83**
Rhinovirus	3	2	3	1	**9**
Respiratory syncytial virus (RSV)‡	37	28	38	24	**127**

*Respiratory samples only. Excludes diagnoses made by electron microscopy (EM).
†Includes parainfluenza types 1, 2, 3, 4, and untyped.
‡ Excludes diagnosis made by electron microscopy (EM).

Table 3 Respiratory viral detections by age group: weeks 09-12/2005

Age group (years)	<1 year	1-4 years	5-14 years	15-44 years	45-64 years	≥65 years	Unknown	Total
Adenovirus*	17	21	4	42	4	1	–	**89**
Coronavirus	–	1	–	–	–	–	–	**1**
Influenza A	13	13	8	39	27	56	1	**157**
Influenza B	2	5	1	10	2	2	–	**22**
Parainfluenza†	48	17	2	6	7	2	1	**83**
Rhinovirus	8	–	1	–	–	–	–	**9**
Respiratory syncytial virus (RSV)	97	9	1	5	8	6	1	**127**

*Respiratory samples only, and excludes diagnoses made by electron microscopy (EM).
†includes parainfluenza types 1, 2, 3, 4, and untyped.

Table 4 Laboratory reports of infections associated with atypical pneumonia, by week of report: weeks 09-12/2005

Week	09/05	10/05	11/05	12/05	
Week ending	06/03/05	13/03/05	20/03/05	27/03/05	Total
Coxiella burnettii	–	–	1	–	**1**
Respiratory *Chlamydia* sp*	2	1	3	–	**6**
Mycoplasma pneumoniae	11	8	15	12	**46**
Legionella sp	2	1	4	8	**15**

*Includes *Chlamydia psittaci*, *Chlamydia pneumoniae*, and *Chlamydia* sp detected from blood, serum, and respiratory specimens.

Table 5a Reports of legionnaires' disease (pneumonic and non-pneumonic*) cases in England and Wales, by week of report: weeks 09-12/2005

Week	09/05	10/05	11/05	12/05	
Week ending	06/03/05	13/03/05	20/03/05	27/03/05	Total
Nosocomial	–	–	–	1	**1**
Community	2	1	2	3	**8**
Travel abroad	–	–	2	4	**6**
Travel UK	–	–	–	–	**–**
Total	**2**	**1**	**4**	**8**	**15**
Male	–	1	4	7	**12**
Female	2	–	–	1	**3**

*Represents non-pneumonic cases where present..

Fifteen cases were reported with pneumonia: 12 males aged from 31 to 76 years and three females aged 47 to 71 years. Eight cases had community-acquired infection and one was nosocomially acquired. One death M 76y was reported.

Six cases were travel associated: Belize (1), Egypt (1), Italy (1), Kenya (1), Morocco (1) and Spain (1).

Table 5b Reports of Legionnaires' disease (pneumonic and non-pneumonic*) cases by region of report in England and Wales: weeks 09-12/2005

Region	Nosocomial	Community	Travel (Abroad)	Travel	Total
North East	–	1	–	–	**1**
Yorkshire & the Humber	–	1	1	–	**2**
East Midlands	–	–	1	–	**1**
East of England	–	1	1	–	**2**
London	–	1*	-	–	**1**
South East	1	–	2	–	**3**
South West	–	1*	–	–	**1**
West Midlands	–	2	1	–	**3**
North West	–	–	–	–	**–**
Wales	–	1*	–	–	**1**
Total	**1**	**8**	**6**	**–**	**15**

*Case with date of onset of symptoms in 2004.