



February 2012

IFH Newsheet (www.ifh-homehygiene.org)

CONTENTS

Note that by clicking on each topic listed here, you will be taken directly to the section of interest

1. **New Scientific Reviews and Materials from IFH**
2. **News**
3. **Expert Opinion**
4. **Highlights of Recent Publications**
5. **Conferences & Meetings**
6. **Library of Recent Publications**

1. **New Scientific Reviews and Materials from IFH**

Available now: Assessing the impact of hygiene on infectious disease rates

Based on the evidence indicating that a significant proportion of infections are preventable through improved food and respiratory hygiene, coupled with better hand and surface hygiene practices, IFH has drafted a new report which uses both microbiological and epidemiological data to assess the potential impact of hygiene practices on infectious disease rates. It addresses the infection risks associated with hands, hand and food contact surfaces, cleaning utensils, clothing and household linens, baths, washbasins, toilets, showers, etc. The major objectives of this report are:

- To assess the strength of the causal link between hygiene practice and infectious disease.
- To review the validity and applicability of the IFH risk-based approach to hygiene in home and everyday life settings.
- To review the key factors to be considered in applying targeted hygiene as part of hygiene promotion programmes.

This review is based on a previous 2002 IFH review, which has been updated to contain material from the literature accumulated by IFH since that time. The new report has been drafted by Professor Sally Bloomfield and is currently under peer review. The draft report entitled “**The chain of infection transmission in the home and everyday life settings, and the role of hygiene in reducing the risk of infection**” is now available from:

<http://www.ifh-homehygiene.org/IntegratedCRD.nsf/111e68ea0824afe1802575070003f039/29858aa006faaa22802572970064b6e8?OpenDocument>

Coming soon: Are we too clean for our own good? Re-assessing the hygiene hypothesis in 2012

In 2004 the IFH published a detailed review of the hygiene hypothesis and its implications for hygiene. This was followed by a publication in *Clinical Experimental Allergy* in 2006. The aim of this project is to prepare an update to reflect new data published since this time. The

report will focus on whether, and to what extent, new data implicates pathogens as a key exposure, and whether this in any way affects our previous conclusions, namely that hygiene per se is not a risk factor for the rise in allergies.

Although there is increasing evidence that microbial exposures in early childhood can protect against allergies, there is still no good evidence that we need exposure to clinical infection. Nor is there evidence that hygiene measures such as hand washing, food hygiene etc. are linked to increased susceptibility to atopic disease.

Coming soon: IFH home hygiene training resource to be translated into Bengali

The IFH training resource on home hygiene entitled “**Home Hygiene in developing countries – prevention of infection in the home and the peri-domestic setting**” is being translated into Bengali. This training resource, which was developed by IFH with the support of the Water Supply and Sanitation Collaborative Council, was first published in 2004. This simple, practical, language resource is intended to support community workers, teachers and others, at local level and across the whole social spectrum, who have responsibility for developing school and community hygiene promotion programmes – but it can be used by anyone who needs to obtain an overview of hygiene and hygiene practice in developing country situations. It is hoped that the resource will be available by August/September 2012. The English language version is available from: Home hygiene in developing countries: prevention of infection in the home and peri-domestic settings (2006) International Scientific Forum on Home Hygiene. <http://www.ifh-homehygiene.org/IntegratedCRD.nsf/571fd4bd2ff8f2118025750700031676/19155ab46073e67f8025752200546d83?OpenDocument>

2. News

Infection prevention and control in the domestic home setting – a new IFIC/IFH special interest group – contact us and join the group

The need for a special interest group on this issue stems from the increasing amount of healthcare, and care of other vulnerable groups, taking place in the domestic home. Healthcare workers are also now recognising that reducing HCAI in hospitals cannot be achieved without also reducing circulation of pathogens in the community. These factors are prompting increased demand for support materials on hygiene in the community. The inaugural meeting of this new special interest group took place at the International Federation on Infection Control in October 2011. The mission of the group is to provide healthcare workers and others with a resource through which they can obtain information, identify support needs, and exchange practical knowledge and views on infection prevention and control in home and everyday life settings.

Our immediate planned actions are:

- To assemble a database of those with a special interest in infection prevention in home and everyday life settings and gain an understanding of their needs. Please contact the SIG Chairman, Professor Sally Bloomfield (sallyfbloomfield@aol.com) to register your interest and join the SIG. Please also let us know your ideas and needs.
- We have now have a dedicated SIG webpage on the IFIC website (<http://www.theific.org/sigs6.asp>) to give access to currently available materials (guidelines, training resources, public advice sheets etc.) on infection prevention in home and everyday life settings. We now need to grow this resource – so please send us any guidelines, training resources or fact sheets which you use on IP in home and everyday life settings, so that we can share them through the website with the rest of the group.

Danish Council for Better Hygiene – food hygiene conference held in Copenhagen

The historic buildings of the University of Copenhagen Life Sciences Campus provided the setting on, February 8th, for Danish efforts to promote better food hygiene, knowledge of food safety, and sharing of good control and hygiene practices between the health and veterinary sectors. With just over 100 attendees, a good debate and discussion unfolded as primarily Danish scientists and experts – with the addition of British HACCP expert Dr Kevin Kane – took turns in enlightening the participants on a range of issues and methods. Good food hygiene is the overall theme for the Danish Council for Better Hygiene in 2012 – with the slogan "**Clean Hands – Clean Table**" as the centrepiece for the upcoming annual Hygiene Week campaign. For more information see www.bedrehygiejne.dk - or contact Project Manager Lars Mürter at +45 6126 2621.

Denmark focuses on promoting better toilet hygiene in schools

A seminar on May 8th is scheduled to promote better awareness among school teachers and administrators as to the merits of stronger hygiene and cleaning efforts in school toilets. Several surveys and studies have shown that a poor standard of hygiene in school toilets has a strong and adverse effect on child health, ability to focus on daily lessons, and overall "comfort" with school. Just as adults would react negatively towards a poor or bad working environment – children are the same, with the school toilet as one key element that affects a range of other issues, last – but not least – the respect and awareness of hygiene as a valuable health and safety measure for life. The venue is Frederiksberg Town Hall, Copenhagen - see www.skoletoittdagen.dk for additional information or contact Lars Mürter at +45 6126 2621

Better hygiene in Sweden – a new initiative – conference to be held March 7th

In Sweden a group of organisations has decided to raise the ambition and scope of cooperation in the field of hygiene – directly inspired by the strong efforts in Denmark in recent years. Sweden – although experiencing many good and well-functioning hygiene measures – also faces the same issues and challenges that are also challenging most of Europe; multi-resistant strains, changes in demography, travel patterns (of people, food, and trade), possible pandemics, and also basic compliance to good hygiene measures in society as a whole. The ambition is – at the very least – to form a new cross-sectorial network of hygiene professionals from all fields of hygiene; hospitals, nursing homes, day care centres, schools, general health promotion, food services, food production, cleaning, hygienic design, and many more. The conference venue is Uppsala, just north of Stockholm, arranged in a collaborative venture between Uppsala University, Uppsala University Hospital, R3 Nordic, The Swedish Association of Industrial and Institutional Hygiene Products and KTF (the Swedish Cosmetic, Toiletry and Detergent association). More information can be found at www.nordichygiene.info or contact Project Manager Lars Mürter at +45 6126 2621.

e-Bug launches seven new educational hygiene games on its website



February is a month of new and exciting developments for the e-Bug website; this month we are launching SEVEN new games on the website, TWO new teacher lesson plans and, in addition, we are calling all primary schools to take up the hand hygiene challenge. Weblog analysis shows that students not only play the educational games, but they then return to the site for repeat game play. The new games being launched this month focus on microbes, hand hygiene, respiratory hygiene, food hygiene, antibiotics and vaccines.

“**Fun on the Farm**” has been developed in collaboration with Farming and Countryside Education (FACE) and is aimed at KS2, but easily adapted for KS1 students. The lesson is designed to be taught prior to a farm visit. Students learn about useful and harmful microbes on the farm, and what they can do to protect themselves from microbial hazards through a fun presentation, a social networking exercise and a board game. The lesson has been evaluated in the UK and has been shown to improve student knowledge, with 80% saying they enjoyed the lesson. The main things students learned were to wash their hands more often when on the farm and when handling animals, and that not all microbes are harmful.

Chlamydia infection rates in the UK are very high, particularly in the 16–24 year old age range. To combat this, Coventry University have teamed up with e-Bug to develop an STI lesson plan focussing on this disease aimed at KS3 and KS4. The lesson comes with a series of activities, which can be carried out in groups or individually, aimed at providing young people with the knowledge to make informed decisions about the risks of *Chlamydia*. For more information, go to: <http://www.e-bug.eu/> or contact: donna.lecky@hpa.org.uk

Webber training teleclass, March 1st 2012 @ 1:30 pm to 2:30 pm eastern (New York)

Professor Sally Bloomfield will deliver a teleclass entitled “**Developing a Sustainable and Effective Approach to Hygiene and Infection Prevention in Home and Everyday Life Settings**”. The class will address the following learning objectives:

- Why home hygiene is important – current trends in hygiene-related diseases
- Developing a risk-based (targeted) approach to hygiene
- Optimising the effectiveness of hygiene procedures – what are the challenges?
- Address the issues of environment, biocide resistance and the hygiene hypothesis
- Developing and promoting home hygiene – what do we need to do?

For more information and to register, go to:

<http://www.webbertraining.com/schedulep1.php?command=viewClass&ID=1065>

Other teleclasses which could be of interest include:

22 Mar. 12 [Hand Hygiene – Managing, Measuring & Marketing](#)

Speaker: Dr John Boyce, Yale University

07 May. 12 [WHO Teleclass – Europe\) Keeping the Hand Hygiene Agenda Alive: Acting on Data and the Influence of Global surveys](#)

Speaker: Prof. Didier Pittet, World Health Organisation

11 Jul. 12 [WHO Teleclass – Europe\) Patient Involvement in Infection Control - What Does it Mean and How can we Support It?](#)

Speaker: Claire Kilpatrick, World Health Organization

13 Sep. 12 [The Hand is Quicker Than a Sneeze in the Spread of Disease](#)

Speaker: Dr Chuck Gerba, University of Arizona

01 Nov. 12 [Current Trends and Infection Prevention Issues in Healthcare Laundry](#)

Speaker: Dr Lynne Schulster, CDC Division of Healthcare Quality Promotion

08 Nov. 12 [Surface Disinfection and Microbial Resistance](#)

Speaker: Prof. Markus Dettenkofer, University of Freiburg, Germany

Surface disinfection in infection prevention: Rudolf Schuelke Foundation, Nov 2011

The two-day meeting of the Rudolf Schuelke Foundation, which took place in Hamburg in November 2011 was devoted to examining the issue of surface disinfection and its important role in infection prevention. The meeting included presentations by Martin Exner, Yves Chartier, Juergen Gebel, Jean Yves Maillard, Phillippe Harteman, Axel Kramer and Hans-G

Sontag, all of which can be found at www.rudolf-schuelke-stiftung.de/index_FF7F391A79B34B59BD6C2133C94F9CF7.htm. The presentations examined data on the importance of surface disinfection, the work which is being carried out to develop "in use models" for comparing the effectiveness of surface cleaning and disinfection measures and concerns about toxicity and antimicrobial resistance.

UK *E. coli* O157 outbreak associated with soil on vegetables

Between December 2010 and July 2011, the UK Health Protection Agency (HPA), Health Protection Scotland and Public Health Wales received reports of 250 cases of infection with a particular subtype of *E. coli* O157 (Phage Type 8 (PT8)). The majority were mild to moderate but 74 people were hospitalised, four developed Haemolytic Uraemic Syndrome and one patient died. It was found that people who were ill were statistically more likely to have lived in households where leeks that had been sold "loose" (i.e. not pre-packed) and potatoes bought in, or sold, from sacks, than those who had not. Illness appears to have been caused by traces of soil-carrying *E. coli* O157 on the vegetables. An HPA spokesman said "The outbreak is a reminder that it is essential to wash all fruits and vegetables, including salad, before you eat them, unless they are labelled 'ready to eat', to ensure that they are clean. It is also important to wash hands thoroughly as well as clean chopping boards, knives and other utensils after preparing vegetables to prevent cross contamination." See:

<http://www.hpa.org.uk/NewsCentre/NationalPressReleases/2011PressReleases/110930Ecolioutbreakassocwithsoilonveg/>

3. Expert Opinion

The 'end of antibiotics' means a renaissance for hygiene in the community as well as hospitals – *Dr Jon Otter, Research Fellow, Clinical Infection and Diagnostics Research (CIDR), King's College London / Guy's and St. Thomas' NHS Foundation Trust.*

We are staring down the barrel of the end of antibiotics. Pan-drug resistant Gram-negatives have already been reported. And I mean pan-drug resistant, not just multidrug-resistant. As problems with antibiotic resistance continue, the focus must shift from treatment to prevention. Before the advent of antibiotics, hygiene was paramount because the consequences of infection were devastating. A scratched finger could result in a lethal infection. The introduction of antibiotics has made us take our eye off the hygiene ball, but this must change. This has implications for hospitals but also community settings. As evidence accumulates that contaminated surfaces, as well as hands, are an important vector in the transmission of a variety of pathogens, we need to ensure that human beings and their surrounding environment are as clean as possible.

An illustration comes from the emergence of community-associated methicillin-resistant *Staphylococcus aureus* (CA-MRSA). Until recently, MRSA was regarded almost exclusively as a healthcare-associated (HA) pathogen. However, in the late 1990s, CA-MRSA were first noticed as a cause of infection in community-based individuals without healthcare contact. These strains were distinct from traditional HA-MRSA and lacked the multi-drug resistance phenotype associated with HA-MRSA because they had emerged in the community without the selective pressure of antibiotics in hospitals. The first CA-MRSA cases receiving global attention occurred in previously healthy US children in the late 1990s. Since then, outbreaks have been reported in community groups characterised by crowded living conditions, skin to skin contact, compromised skin, contaminated items and poor cleanliness; the "5-Cs". Due to the association between CA-MRSA and prior use of antimicrobial agents, a "6th C",

capsules, has been proposed. Examples of community groups affected includes school children, prisoners, sports teams and military barracks. In high prevalence area, it seems that CA-MRSA have “overflowed” from these community groups into the general community.

As the global epidemic of CA-MRSA continues, CA-MRSA have begun to emerge as a cause of healthcare-associated infections, and hospital outbreaks have occurred worldwide. In areas where CA-MRSA has become established with high prevalence, e.g. in some parts of the USA, CA-MRSA are beginning to supplant or overtake traditional HA-associated clones as causes of HA-infection. This is a concerning development, which may erode the success of hospital programmes for the prevention and control of HA-MRSA.

The emergence of CA-MRSA presents difficult questions and challenges. In the healthcare environment, where screening and isolation are feasible, controlling MRSA is a very different prospect to preventing spread in the open community. Given the 5 (or 6 Cs) associated with spread of CA-MRSA, control strategies must include improved hygiene to reduce spread from human, animal and environmental reservoirs. There is an urgent need to clarify the prevalence and epidemiology of CA-MRSA and develop systems for identification and control of these organisms in the community, in hospitals and other healthcare facilities, and at the community-hospital interface.

Preventing community spread is paramount in prevent MRSA becoming the dominant type of *S. aureus* encountered in hospital and community settings, and improving hygiene is one of the only effective weapons that we have.

For further information, see: Otter & French. Community-associated meticillin-resistant *Staphylococcus aureus* strains as a cause of healthcare-associated infection. *J Hosp Infect* 2011;79:189-193.

Sustaining hygiene behaviour change also depends on robust sanitation technology: a critical challenge – Professor Kumaryoti Nath (IFH South East Asia Office)

Sector leaders and policy makers in the developing countries are facing a dilemma. Software inputs for hygiene behaviour change are critical for creating demand for sanitation and maintaining the hardware facilities (toilets). In countries such as India, Bangladesh, etc., during the International Decade for Water Supply and Sanitation during the 1980s, much of the investment, in terms of Govt. subsidies for sanitation hardware, were lost as the programme did not have the software backing in terms of hygiene behaviour change and demand creation. Learning from the past mistakes, the NGOs promoting Total Sanitation Campaign (TSC) and Community Led Total Sanitation (CLTS) in countries such as India, Cambodia, Bangladesh, etc., have placed maximum emphasis on software issues to bring about change in hygiene behaviour in the community, and have motivated them to stop open defecation and to construct low-cost household toilets which possibly did not fulfil the basic minimum requirements of a sustainable sanitation technology. The result was that these toilets were washed away in the first rainy season and the people reverted back to open defecation. So, the behaviour change was sustained till the rains came! The point, I am trying to make is that, in their over enthusiasm for promoting behaviour change, the leaders of CLTS forgot that, for sustaining behaviour change for sanitation, it must be supported by sustainable technology – might be at the least cost. Just as, investment on sanitation hardware without software backing, will not result in the desired health benefits, promoting hygiene behaviour change, without minimum support for sustainable hardware, is unlikely to succeed. *Professor Kumaryoti Nath, Member, Scientific Advisory Board & SEA Regional Co-ordinator, IFH; President, Institution of Public Health Engineers (India), Former Director, All India Institute of Hygiene & Public Health, GOI,*

4. Highlights of Recent Publications

Human *Salmonella* infections linked to contaminated dry dog and cat food

There are several documented cases of human disease outbreaks resulting from contact with *Salmonella*-contaminated pet products. In a study carried out between January 2006 and December 2007 (*Pediatrics*. 2010;126:477-483), 79 human cases of salmonellosis were linked to *Salmonella*-contaminated dry dog food manufactured in the United States. Of the cases, 48% were children aged two years old or younger. Case-households were significantly more likely to report dog contact, and to have recently purchased manufacturer X brands of dry pet food. Illness among infant cases was significantly associated with feeding pets in the kitchen. The outbreak strain was isolated from opened bags of dry dog food produced at plant X, faecal specimens from dogs that ate the dry dog food, and an environmental sample and unopened bags of dog and cat foods from plant X.

Antimicrobial soaps – how effective are they?

Rebecca Montville and Don Shaffner (*Journal of Food Protection*. 2011;74(11):1875-1882) report a systematic quantitative analysis of the literature to evaluate if there is a difference between the efficacy of antimicrobial and non-antimicrobial soaps. A total of 25 publications, containing 374 observations were analysed, although the majority of studies included fewer than 15 observations with each treatment. Although differences in efficacy were small (0.5-log cfu reduction difference), antimicrobial soap produced consistently statistically significantly greater reductions. This difference was true for any of the antimicrobial compounds investigated where n was 20 (chlorhexidine gluconate, iodophor, triclosan, or povidone). Average log reductions were statistically significantly greater (2 log cfu) when either gram-positive or gram-negative transient organisms were deliberately added to hands, compared with experiments conducted with resident hand flora (0.5 log cfu).

Antibacterial soaps and antibiotic resistance – is there a link?

Amidst continued calls for more research investigating the relationship between use of antibacterial wash products and antibiotic and antibacterial resistance, Eugene Cole and co-workers (*International Journal of Microbiology Research*. 2011;3:90-96) have carried out a study aimed to describe susceptibilities in staphylococcal skin isolates from community users of antibacterial wash products, compared to isolates from non-users. Participants (n=210) comprised 3 groups: 1) those that frequently used wash products containing triclosan (TCS); 2) those that frequently used products containing triclocarban (TCC); 3) control group that used no antibacterial wash products. Forearm swab samples were collected and processed for coagulase negative *Staphylococcus* species and *S. aureus*. There was no statistically significant increased antibiotic resistance (based on minimum inhibitory concentrations) in groups regularly using wash products containing TCC or TCS, as compared with participants using non-antimicrobial products. The authors concluded "This adds to and confirms previous yet limited community data showing lack of evidence that use of antibacterial wash products facilitates antibiotic resistance and antibiotic/antibacterial cross-resistance".

Environmental dissemination of bacteria from toilets during flushing

In view of recent work demonstrating the potential for airborne dissemination of *C. difficile* spores, from patients with recent onset diarrhoea, Wilcox and co-workers (*Journal of Hospital Infection*. 2012;80:1-5) evaluated aerosolisation and environmental contamination following flushing of lidless toilets seeded with faecal suspensions of *C. difficile* to simulate the bacterial burden found during diarrhoeal disease. Splashing occurring during flushing

was also measured. *C. difficile* was recoverable from air sampled at heights up to 25 cm above the toilet seat. The highest numbers of *C. difficile* were recovered from air sampled immediately after flushing, and then declined 8-fold after 60 min and a further 3-fold after 90 min. Surface contamination occurred within 90 min after flushing, demonstrating that relatively large droplets are released which then contaminate the immediate environment. The mean numbers of droplets emitted were 15–47, depending on toilet design. The study indicates that, when a person with fluid diarrhoea uses the toilet, aerosolisation and surrounding environmental contamination can occur when the toilet is flushed.

Hospital cleaning in the 21st century

This excellent review by Stephanie Dancer (*European Journal of Clinical Microbiology and Infectious Disease*. 2011;30:1473-1481) examines the emerging evidence on the importance of the clinical environment in the spread of hospital infection, and the role of cleaning and disinfection as an effective means of control. Much of the evidence cited in the review is equally applicable to understanding the extent of the infection risk and the role of hygiene in home and everyday life settings.

Foodborne infection – the continuing decline in England and Wales

A review of UK surveillance data over the period 1992–2008 (*Epidemiology and Infection*. 2011;139:688-699) showed that the number of reported foodborne outbreaks has continued to decline, the main reason being the reduction in *Salmonella spp* outbreaks. Similarly, the proportion of outbreaks caused by *Cl. perfringens* decreased, while those attributed to *Campylobacter spp.* and Verocytotoxin-producing *E. coli* O157 increased. Despite the significant health burden from sporadic campylobacteriosis in the community, outbreaks caused by this pathogen are relatively infrequent (4%) but this probably reflects the fact that *Campylobacter* outbreaks are difficult to detect. Poultry meat on sale in UK retail sites are commonly contaminated with *Campylobacter spp.* and cross-contamination was significantly associated with *Campylobacter* outbreaks in this study. Private settings accounted for 9.2% of the 2429 outbreaks. Contributory factors in most outbreaks were cross-contamination (41.6% of outbreaks), inadequate heat treatment (38.4%), and inappropriate food storage (37.8%). The authors concluded that, although the downward trend is encouraging, the proportion of outbreaks linked specifically to food service establishments has increased, with much of this related to cross-contamination in the kitchen. This is supported by studies showing how easily the environment becomes contaminated. This reinforces the need for more emphasis on food hygiene, training not only food service workers at work, but also by enhancing their awareness and understanding of food hygiene in the home and in everyday life.

IID2 study – UK incidence of infectious intestinal disease in the UK community

The results of the repeat “IID” study have now been published (*British Medical Journal* 2011, July 27th). The study, which is a repeat of the study carried out in the 1990s to estimate the overall incidence of infectious intestinal disease (IID) in the community, presenting to general practice (GP) and reported to national surveillance. It was estimated that there are up to 17 million sporadic, community cases of IID and 1 million GP consultations annually in the UK. Of these, per annum, norovirus accounts for 3 million cases and 130,000 GP consultations, and *Campylobacter* is responsible for 500,000 cases and 80,000 GP consultations. This compares with 1999 estimates of 55,000 cases of *Salmonella*, 418,000 cases of *Campylobacter*, 523,775 cases of rotavirus and 2,900,000 cases of norovirus.

Occurrence and control of foodborne viruses

A review of the biology, epidemiology, diagnosis and public health importance of foodborne viruses has been published by the European Food Safety Authority. One of the conclusions is that, at the EU-level it is unknown how much viral disease can be attributed to foodborne spread. Also that the relative contribution of different sources (shellfish, fresh produce, food handler including asymptomatic shedders, food handling environment) to foodborne illness has not been determined. For more details see: EFSA Journal 2011;9(7):2190.

Annual cholera report

The annual epidemiological information on cholera cases and outbreaks worldwide for the year 2010 has been published in the Weekly Epidemiological Record (WER) on 29th July 2011. Overall, in 2010 the global cumulative number of reported cholera showed a 43% increase compared to 2009. This increase is, to a large extent, the result of the outbreak that started in Haiti in October 2010. For more information:

<http://www.who.int/wer/2011/wer8631.pdf>

5. Conferences & Meetings

Antimicrobial-impregnated surfaces – the need for suitable standards

This event will take place at the BSI in London, on **Tuesday 28th February**, and will look at current antimicrobial standards and debate their suitability for hard surfaces. Members of IPS can attend the event for free by joining as a member of Materials KTN. It is completely free to join and membership can be cancelled at any time. For more details go to

http://www.ips.uk.net/uploads/emails/Antimicrobials_A4Flyer.pdf

Norovirus infection in health and social care – how do we deal with the problem?

The Royal Society for Public Health are holding a conference entitled: "**Norovirus infection in health and social care – how do we deal with the problem?**" on **2nd and 3rd May 2012**. This conference will explore the most effective ways in which health and social care professionals can deal with a norovirus outbreak while maintaining a normal level of services and activities. For more details go to: <http://www.rsph.org.uk/en/courses-conferences-and-events/events/index.cfm/eid/79C981F0-034E-453B-BC47BB3295177AD1>

Norovirus and other caliciviruses on the rise

Norovirus is on the rise. According to the Robert-Koch-Institute in Berlin, the outbreaks have increased by 20% between 2009 and 2010, and the disease is now #1 in Germany among reportable diseases. Research on norovirus shows that we now understand many details of host-range specificity, receptor binding, the immune response of the host, the replication mechanism of the virus, and epidemiology. And yet, there is no cell culture system, no vaccine and no drug available. The situation is aggravated by the recent finding that some patients may shed the virus for weeks after their recovery. These aspects will be discussed at "**noro2012 – norovirus and other caliciviruses on the rise**", which will take place in Lübeck, Germany, **March 20–22nd, 2012**. For more details go to: www.noro2012.com

6. Library of Recent Publications

Topic 1 – Disease Incidence

Breitenmoser A, Fretz R, Schmid J, Besl A, Etter R. Outbreak of acute gastroenteritis due to a washwater-contaminated water supply, Switzerland, 2008. *Journal of Water and Health*. 2011;9(3):569-576.

Ewig S, Birkner N, Strauss R, Schaefer E, Pauletzki J, Bischoff H, Schraeder P, Welte T, Hoeffken G. New perspectives on community-acquired pneumonia in 388 406 patients. Results from a nationwide mandatory performance measurement programme in healthcare quality. *Thorax*. 2009;64(12):1062-1069. Epub 2009 May 18.

Gormley FJ, Little CL, Rawal N, Gillespie IA, Lebaigue S, Adak GK. A 17-year review of foodborne outbreaks: describing the continuing decline in England and Wales (1992-2008). *Epidemiology and Infection*. 2011;139(5):688-699. Epub 2010 Aug 9.

Jung JH, Yoo CH, Koo ES, Kim HM, Na Y, Jheong WH, Jeong YS. Occurrence of norovirus and other enteric viruses in untreated groundwaters of Korea. *Journal of Water and Health*. 2011;9(3):544-555.

Mayet A, Andreo V, Bedubourg G, Victorion S, Plantec J, Soullie B, Meynard J, Dedieu J, Polveche P, Migliani R. Food-borne outbreak of norovirus infection in a French military parachuting unit, April 2011. *Euro Surveillance*. 2011;16(30). pii: 19930.

Milne LM, Lamagni T, Efstratiou A, Foley C, Gilman J, Lilley M, Guha S, Head F, Han T. *Streptococcus pyogenes* cluster in a care home in England April to June 2010. *Euro Surveillance*. 2011;16(47):20021.

Moellering RC Jr. MRSA: the first half century. *The Journal of Antimicrobial Chemotherapy*. 2012;67(1):4-11. Epub 2011 Oct 18.

Mostofsky E, Lipsitch M, Regev-Yochay G. Is methicillin-resistant *Staphylococcus aureus* replacing methicillin-susceptible *S. aureus*? *Journal of Antimicrobial Chemotherapy*. 2011;66:2199-2214.

Otter JA, French GL. Community-associated methicillin-resistant *Staphylococcus aureus* strains as a cause of healthcare-associated infection. *Journal of Hospital Infection*. 2011;79(3):189-193. Epub 2011 Jul 7.

Tam CC, Rodrigues LC, Viviani L, Dodds JP, Evans MR, Hunter PR, Gray JJ, Letley LH, Rait G, Tompkins DS, O'Brien SJ; IID2 Study Executive Committee. Longitudinal study of infectious intestinal disease in the UK (IID2 study): incidence in the community and presenting to general practice. *Gut*. 2012;61(1):69-77. Epub 2011 Jun 27.

Tate JE, Burton AH, Boschi-Pinto C, Steele AD, Duque J, Parashar UD; the WHO-coordinated Global Rotavirus Surveillance Network. 2008 estimate of worldwide rotavirus-associated mortality in children younger than 5 years before the introduction of universal rotavirus vaccination programmes: a systematic review and meta-analysis. *Lancet Infectious Diseases*. 2011 Oct 24. [Epub ahead of print]

Yeung WC, Rawlinson WD, Craig ME. Enterovirus infection and type 1 diabetes mellitus: systematic review and meta-analysis of observational molecular studies. *British Medical Journal*. 2011;342:d35. doi: 10.1136/bmj.d35.

Topic 2 – Infection Transmission

Aldabe B, Delmas Y, Gault G, Vendrely B, Llanas B, Charron M, Castor C, Ong N, Weill FX, Mariani-Kurkdjian P, Terrier F, Desjardin M, Simões J, Le Bihan B, Combe C, Rolland P. Household transmission of haemolytic uraemic syndrome associated with *Escherichia coli* O104:H4, south-western France, June 2011. *Euro Surveill*. 2011;16(31):pii=19934. Available online: <http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=19934>

Dancer SJ. Hospital cleaning in the 21st century. *European Journal of Clinical Microbiology and Infectious Diseases*. 2011;30(12):1473-1481. Epub 2011 Apr 17.

Friedrich AW. Enterohaemorrhagic *Escherichia coli* O104:H4: are we prepared now? *Euro Surveill*. 2011;16(31):pii=19938. Available online: <http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=19938>.

Galton J, Tovey E, McLaws ML, Rawlinson WD. The role of particle size in aerosolised pathogen transmission: a review. *Journal of Infection*. 2011;62(1):1-13. Epub 2010 Nov 19.

Heddema ER, van Bentem BH. Decline in incidence of *Clostridium difficile* infection after relocation to a new hospital building with single rooms. *Journal of Hospital Infection*. 2011;79(1):93-94. Epub 2011 Jun 8.

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Topic 7 – Hygiene Hypothesis

No new entries

Topic 8 – Safety Issues

No new entries



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