

In SafeHandS

Newsletter of the SafeHandS network

December 2008



Volume 3 Issue 3



In SafeHandS is the official newsletter of the SafeHandS network to promote health care worker safety in the Asia Pacific. It is compiled and distributed by the Albion Street Centre.

SafeHandS is funded by AusAID.

Editorial panel:

Maggy Tomkins; Philip Melling; Jeffrey Sheather & Charmaine Turton

Compilation & Publication:

Gary Wright

Contributions

We encourage members to contribute to *In SafeHandS* by:

- Participating in the 'Member Profile' by providing a brief profile about yourself and a brief example about your experience in improving health care worker safety in your workplace
- Providing information about recent articles, resources or upcoming events related to health care worker safety
- Submitting a question or concern or comment you have about health care worker safety

Editorial: Teleclass Education—A global training model	2
Member Profile—Sally Moore	4
What is SafeHands	5
E-Learning	6
E-Learning for Health Worker Safety	9
Current Resources	11
Calendar of Events	18

This issue focuses on: E-learning

The next issue will be published in March 2009

Deadline for contributions – 19 February 2009

Guidelines for contributors can be found on the SafeHandS website

The newsletter will have a new look in 2009!

SafeHandS

The Albion Street Centre
150-154 Albion Street
Surry Hills NSW 2010
Australia

Email:

safehands@sesiahs.health.nsw.gov.au

Tel: + 61-2 9332 9711

Fax: + 61-2 9380 6572

Web: <http://www.uow.edu.au/health/safehands/index.html>

Disclaimer

Unless stated otherwise, opinions expressed in this newsletter are those of the identified author and are not to be regarded as the official positions of SafeHandS, The Albion Street Centre (ASC) or AusAID. SafeHandS accepts no responsibility for opinions or information contained in this newsletter. SafeHandS does not receive any financial support or contribution from any commercial organisations or agencies.

SafeHands

..Information, support and practical solutions to promote health care worker safety in the Asia Pacific

Teleclass education – A global training model



Paul Webber

Paul Webber is a Canadian businessman, author, and speaker. He coordinates groups of volunteers around the world to provide the Teleclass Education lecture series

“For 45 minutes I stood at the front of a room of two thousand people, talking to a blank wall.”

As conference lecturers, we flatter ourselves by presuming that every member of our audience has cherished our every word and that real change will result. The truth, as my frustrated colleague describes above, is that few people pay attention beyond our opening comments, precious few indeed remember anything useful within just 12 hours, and maybe only one percent of those in attendance will make any use at all of the information contained therein. Wasting all of that breath for the sake of one percent becomes tedious and one man started to think that there had to be another way to effectively share information with diverse audiences.

A Little Idea

In early 2001, Professor Syed Sattar, Director of the University of Ottawa’s world-renowned Centre for Research on Environmental Microbiology, had a little idea. Through fortuitous timing I was present when it started to take shape as a plan and subsequently became immersed in, and impassioned by the vision. The vision - that anyone in the world should be able to easily access the very best of the best experts on infection control and patient safety topics, and whenever is convenient for them - evolved into a three-fold mandate: (1) present the very best information, (2) to the widest possible audience, (3) with the fewest barriers to access. On June 14, 2001 an educational programme called Teleclass Education was introduced (and my spare time has not been near as plentiful since).

The plan was to invite global experts to give a one-hour lecture over the telephone (a “teleclass”) to a live audience who would also be joining by telephone. The speaker’s PowerPoint slides, and a handout thereof would be made available to every participant

SafeHands

..Information, support and practical solutions to promote health care worker safety in the Asia Pacific

in advance of the teleclass. After the teleclass, a recording of the lecture would be made available for repeated access and reference. As plans go we felt that it had a strong pedagogical basis, although when shopped it around to a gaggle of communication experts the feedback was a polite lukewarmth ... at best.

Far More Interest Than Anticipated

Nevertheless, we resolved to try it out. For weeks before the June 2001 inaugural teleclass, I e-mailed almost every infection control practitioner and patient safety representative in my country, Canada. I sent the PowerPoint and handouts, and the dial-in information by e-mail to those who expressed an interest. That lecture was titled, “Glutaraldehyde, The Good, The Bad, and The Alternatives”, and our first mistake had already become evident.

We had anticipated that between 40 and 70 people would register for the teleclass. In reality, almost 500 people connected, and from the United States as well as Canada. The task of sending out the pre-teleclass information took a great many evenings and weekends (teleclasses were then, and have always been, run by volunteers - all of us gainfully employed elsewhere). In early 2002, when Dr. Didier Pittet of the University of Geneva Hospitals gave a teleclass lecture, the global audience numbered in the thousands and our error in anticipating the scale of interest in this teleclass necessitated a week-long absence from my day job to process the registrations.

Thanks in part to the generosity of a corporate sponsor, JohnsonDiversey (then Johnson Wax Professional), a web site was created to help manage the expanding Teleclass Education programme. Also, Webber Training Inc, was incorporated to administer Teleclass Education and to raise funds to support the programme.

I have ceased to keep track of the actual number of Webber Training “members” and the variety of countries in which they live, but it is safe to say that the membership total exceeds 65,000, from at least 83 nations, and every continent on the globe (including Antarctica).

The Lectures

In the years since the frantic beginnings of Teleclass Education some 190 lectures have been given and recorded, by experts from

North America, South America, Australasia, Africa, Europe, and even one by a speaker who happened to be on a cruise ship in international waters. They are some of the best of the best, and thankfully they've had a sense of humour when necessary.

In 2004 one of our faculty gave his teleclass lecture from the executive lounge of an American airport while awaiting an airplane. The topic of the teleclass being the microbiology of bioterrorism, the speaker was subsequently detained and interviewed at length by airport security.

In the early days of the teleclass programme we used technology that would not let us mute the audience, relying instead on the audience to mute themselves. When the late Denver Russell gave a teleclass lecture from a Japanese hotel room he had to raise his voice over the din of international phone static and unmuted, conversing audience members. It was the middle of the night in Japan. Twice Professor Russell had to interrupt his lecture to promise hotel security (we could hear them banging on his door) that he wouldn't be much longer. Despite that experience, we remained friends until his death ... but he never gave a teleclass lecture again.

The Real Force

In the years since that first teleclass, groups of volunteers around the globe have stepped up and have taken over much of the hard work of Teleclass Education (although I still manage to get the bulk of the credit for its success, something about which I rarely complain). This collection of amazing people include; Jane Barnett, Maria Bennallick, Jackie Daley, Rolande D'Amour, David Hammer, Lesley Harrison, Debbie King, Sharon Krystofiak, Ossama Rasslan, Victor Rosenthal, Lauren Tew, Julianne Toop, and Vanessa Whately. Of course Professor Syed Sattar's essential contribution goes without saying.

Free Stuff

The Teleclass Education programme has no profit mandate. Webber Training membership is free. Access to more than 130 recordings and handouts in the on-line Recordings Library is free. For Members in developing nations, teleclass registration is free and recordings are also available for free on CD (along with permission to duplicate and distribute). Members in developed countries pay a very modest fee

to register for a teleclass.

It is my hope that everyone involved in health-care safety and infection control will register as a Webber Training Member and use the Teleclass Education material as much as is convenient. I hope too that you will spread the word about this educational initiative (we have no budget for advertising). And lastly, your feedback is invaluable to our future plans. Please let us know how the Teleclass Education programme can be of most value to you and your colleagues. Contact me at paul@webbertraining.com, or refer to www.webbertraining.com.

Member Profile

To help link and support members, we provide a profile of one of our SafeHands members.



Name: Sally Moore

Title: (Occasionally Nonna but professionally at the moment) Consultant and HIV/Health Adviser

Contact Details:
salamo57@gmail.com

Describe your current job:

I am currently freelancing writing up the results of a HIV training review in PNG. I am about to start a job with CARE in Myanmar in early 2009 as a Health Adviser, I can tell you then what that job is about.

What was your career path that brought you to your current job?

Fairly eclectic. Nursing, HIV nursing, sexual health nursing, Masters of Public Health, University Department of Rural Health Western Australia, remote sexual health nursing, Red Cross basic training, HIV Program Manager in Yunnan China then Care Team Leader Xinjiang China, various consultancies in Tibet, Mongolia, India, Thailand, Bangladesh and PNG, New South Wales Health STI Programs.....next stop Myanmar.

What do you like most about your job?

Endless variety, interesting people and feeling like you make a small difference, plus all that good food of course.

What do you like least about your job?

Airports, waiting and travel delays (in airports).

What does health care worker safety mean to you?

Without it it's hard for people to do as good a job as they can. Protecting your workforce is critical to sustain their enthusiasm and to help them meet the ever emerging challenges. I like innovation though and an approach to trying to get it to work without all the high tech gismos.

What are you reading at the moment?

The Great Railway Bazaar, Paul Theroux

What are you currently listening to?

The birds and the sound of wind in the silence.

What is your favourite saying?

"She'll be right"

Do you have any training stories or resources?

The next edition of the In SafeHands newsletter will also be about different types of training. If you have any experiences, research, or resources that others may be interested in please send them to us.

safehands@sesiahs.health.nsw.gov.au.

Fax: + 61-2 9380 6572

Recently got email access? Changed your email address?

If you received this newsletter in the post, it means you have not supplied your email address or that the one you supplied is no longer working.

Please help to keep postage costs down by letting us know if you get access to email or if your email address changes.

Email access means your copy of the newsletter is available the day it is published.

The print version of the newsletter may also be smaller than the email version.

More importantly, you can join in email discussions with other member and receive up-to-date information by email.

Just email us at

safehands@sesiahs.health.nsw.gov.au

What is SafeHandS?

SafeHandS is a 'virtual' network designed to link and support health care workers across the Asia-Pacific region who are caring for people with HIV and other communicable diseases.

We know that health care workers are essential in responding to HIV and other communicable diseases. Without health care workers, there is no health system. We want this network to provide information, support and practical solutions to help health care workers in resource limited settings to feel safe and encouraged to provide optimal care.

SafeHandS is a forum where health care workers can share issues and ideas. We can encourage and learn from each other to find practical solutions to improve health care worker safety in resource limited settings.

SafeHandS is being funded by the Australian Agency for International Development (AusAID) and coordinated by the Albion Street Centre (ASC). ASC is a public health care facility based in Australia for the treatment, care and support of people living with or affected by HIV. The team includes infection control specialists with international experience in health care worker safety.

Become a member

Benefits of membership include:

- Receiving a newsletter (In SafeHandS) every 3 months
- Participating in a moderated group email discussion e-list for posting questions, comments and issues
- Access to a clearinghouse of new resources and publications produced by different organizations about health care worker safety (links are posted on the website).
- Access to resources developed by SafeHandS
- Joining a database of expertise.

Membership is free. To join, you can either:

- Go to our website:
<http://www.uow.edu.au/health/safehands/index.html>
- Send an email to:
safehands@sesiahs.health.nsw.gov.au

You can elect to receive a hard copy of the newsletter by post. However, this will be a shorter version than the electronic version.

Update on SafehandS membership

We are pleased to report that at the end of November 2008, we had 193 members of SafeHandS working in 34 countries.

Members work in:

Australia, Cambodia, Canada, China, Cook Islands, East Timor, Fiji, India, Indonesia, Kenya, Kiribati, Lao PDR, Malaysia, Marshall Islands, Nauru, New Zealand, Nigeria, Niue Island, Northern Mariana Islands, Pakistan, Palau, Papua New Guinea, Philippines, Qatar, Samoa, Solomon Islands, Sri Lanka, Taiwan, Thailand, Tonga, Turkey, Tuvalu, Vanuatu and Vietnam.

Feedback on membership forms indicates that the services that the members would most like are (in order of preference):

- Access to current publications on health care worker safety
- Training resources
- Tools (e.g. surveillance forms, checklists for health care worker safety)
- Sample policies and protocols
- Email discussion forum between members

E-learning

Maggy Tomkins

“E-learning”, “on-line learning”, “web-based training”, “computer-assisted learning”, “computer-based training”, “computer mediated learning” are terms we may hear commonly today. They are all describing a relatively new way of teaching and learning – one that depends on an electronic device to assist with delivery of information.

This article will look at what is meant by e-learning, what types there are, the advantages and disadvantages, some examples of how these could be used for training to improve health care worker (HCW) safety and what resources would be needed.

What is e-learning?

The delivery of a learning, training or education program by electronic means. E-learning involves the use of a computer or electronic device (e.g. a mobile phone) in some way to provide training, educational or learning material

E-learning is training which involves the use of an electronic device (usually a computer). It can be conducted via CD-ROM, a local area network, an intranet, the internet, satellite, or interactive television and can include a variety of techniques such as graphics, video, audio, animation, or virtual reality as well as text-based learning.

What types of e-learning are there?

E-learning can be categorised in several ways. Two are examined below.

1. Degree of contact with others. The possibilities (from least to most contact) include:

- Self-guided study with no contact with instructors or fellow learners
- Self-guided study with email access to instructors/experts
- Two-way interaction between instructor and learner
- Interactive learning in groups (group-led)
- Interactive learning in class groups (instructor facilitated)
- E-learning techniques and activities can also be used to support face to face classroom-based courses. Courses which do this, or which use a combination of different types of e-learning are called “hybrid” courses.

2. Time separation

- Asynchronous (not at the same time) – where learners and instructor are not in the same place and are not on-line at the same time. Study materials and communication are retrieved when convenient for the person’s schedule. This is e-learning as traditionally understood. Self-paced learning may include access to instructors and/or peers or may be totally self-contained. May include assessment by instructors or peers, or self assessment. May include on-line collaboration
- Synchronous (at the same time) – where learners and instructor are not in the same place but are communicating at the same time. This is done in real-time with a live instructor facilitating the training and lasts for a set amount of time. It may be done via internet websites, audio or video conferencing, internet telephony, or 2-way live broadcasts to students in a classroom.

What are the advantages of e-learning?

For the student

- Can learn in convenient location – home, work, community; or while travelling
- More education opportunities – access to greater range of subjects and instructors
- Potential to learn from instructors or experts the students would not normally have access to
- No (or greatly reduced) travel time and associated costs
- Other study costs usually reduced (accommodation, food, child care, stationery, etc)
- Increased access to learning for people with physical disabilities
- Education available when needed (e.g. for vocational training)
- May increase computer and internet skills – necessary skills for the future
- Can take responsibility for own learning
- Easier for people from different language background (it is often easier to read and write a second language that to understand and speak it)

For the instructor/institution

- Can reach students in any location with technology access
- Can teach from convenient location or while travelling

- Greater variety of instructors can be utilised
- Reduced infrastructure costs for learning environment (no classroom and fittings, heating/cooling, student books and stationery, public liability insurance, etc)

What are the disadvantages of e-learning?

For the student

- May have no or unreliable access to required technology
- Requires basic computing skills and literacy
- May be costs associated with technology (buying equipment, internet access fees)
- No face to face contact with other students
- May be environmental distractions to learning (e.g. demands of work or home)
- Some people find time management difficult

For the instructor/institution

- Difficult to verify student's identity
- Requires learning new teaching methodologies
- Need good instructional design to facilitate motivation in student
- Requires some computer skills
- Less appropriate for teaching students practical or clinical skills, which requires demonstration, observation, practice and mastery

How could e-learning be used for health care worker safety?

The following are some examples of how the different types of e-learning can be used to enhance HCW safety programs.

Self guided on-line study can be used for:

- Quickly accessible information on HCW safety for staff orientation
- Required reading before a formal class to ensure all participants start with the same knowledge base
- Providing information students can access after a formal class to reinforce learning
- Introducing staff to new products or protocols

On-line self-assessment can be used for:

- Ensuring all staff complete mandatory occupational health and safety education requirements

Peer led discussion groups can be used for:

- Networking to problem solve issues and to provide and receive support – especially for HCWs in isolated or rural settings
- Developing resources – such as policies – as a group

Two way interaction with instructor can be used for:

- Follow up, mentoring and support to assist with implementation of learning

Instructor-led e-learning can be used for:

- Teaching courses (for 10-25 learners) on aspects of HCW safety to a wide range of staff (can include people in any area and working any shift)

Video conferencing can be used for:

- On-line conferences on specific topics
- Short seminars by experts in the field
- Meetings of people to discuss issues (saves travel costs and scheduling difficulties)

What resources would be needed?

- Staff access to computers or other electronic devices which will deliver the training
- Education staff who are able to adapt information for on-line teaching. (Resources do not necessarily need to be developed, there may be existing ones which can be used or adapted)
- Technology to host the information (this may be done by outside companies)
- The type of internet connection will affect what resources can be used. (A slow internet connection will only support text-based information – which may be appropriate for some purposes)
- Discussion groups and most courses will require access to sending and receiving email
- Instructor facilitated courses are easier if course management software is used (Moodle is one which is open source – available free)
- More equipment is needed for video conferencing – such as broadband connection, headset, microphone and web-camera

Further reading and references for e-learning

C. Behrens, T. Furtwangler, S. Lissit, A. Narterker, S. Burnett, D. Hughes, M. Chung *Building clinical skills internationally through an innovative and inexpensive webcasting program*

<http://www.aids2008.org/Pag/Abstracts.aspx?AID=9497>

Conference abstract about University of Washington International Training & Education Center on HIV (UW I-TECH) which is providing targeted interactive training sessions over the internet to HIV/AIDS clinicians.

Blackroad Connections (2003) *Developing e-learning content*. Australian Flexible Learning Framework Quick Guides Series, Australian National Training Authority

<http://pre2005.flexiblelearning.net.au/guides/content.pdf>

This guide provides an overview of the processes and some of the things to consider when developing content for e-learning and describes some useful resources that may assist. It is particularly targeted at those working in the Australian vocational education and training (VET) sector.

Bloomsburg University of Pennsylvania. *Introduction to e-learning*

http://iit.bloomu.edu/etraining/Overview/Intro%20to%20elearning_files/frame.htm

A PowerPoint presentation on e-learning

E-learning Conferences Worldwide

<http://www.conferencealerts.com/elearning.htm>

Upcoming events in internet-based education, educational technology and related fields.

Joel Gendelman. *Energizing virtual instruction*
http://www.astd.org/LC/2008/1108_gendelman.htm

Some ideas to help duplicate anything that can be done in a physical classroom in the virtual environment.

International Council of Nurses (2004) *Guidelines for Assessing Distance Learning Programmes*

http://www.icn.ch/guideline_assessing.pdf

The guidelines highlight the need to look critically at the feasibility of undertaking this mode of learning, the quality of the programs available, and the credibility of the provider institution and the award given. The ICN hopes that the information provided will contribute to making informed decisions about undertaking distance learning.

tion and the award given. The ICN hopes that the information provided will contribute to making informed decisions about undertaking distance learning.

Moodle

<http://moodle.org>

Moodle is a free, Open Source software course management system (CMS) package. Moodle is designed to help educators create effective online learning communities. It can be downloaded and used on any computer, yet it can scale from a single-teacher site to a university with 200,000 students. Moodle has a large and diverse user community speaking over 75 languages in 193 countries.

George Siemens (2004) *Categories of e-learning*

<http://www.elearnspace.org/Articles/elearningcategories.htm>

A discussion of E-learning categories

The Peoples Open Access Educational Initiative

<http://peoples-uni.org>

The Peoples-uni offers a Certificate or Diploma in Public Health. The UK Royal Society for Public Health is the strategic partner and has accredited the Peoples-uni program

WorldWideLearn. *About online learning*

<http://www.worldwidelearn.com/elearning-essentials/index.html>

Introduction for people considering online learning

E-learning for health worker safety

Below are some examples of courses available via the internet which may have some relevance to health care worker safety. These sites offer free courses; there are many others which offer fee-based courses. Links to these sites are provided for interest and information only; SafeHandS is unable to endorse or recommend any of these courses. If you have used or know of other e-learning materials, please let us know and we will publish information about them in the next newsletter.

Centers for Disease Control. *Viral hepatitis serology: Hepatitis A–E*

<http://www.cdc.gov/hepatitis/Resources/Professionals/Training/SerologyStart.htm>

“This course is comprised of six animated tutorials with voiceovers and eight case studies. Learning Objectives: At the end of this training participants will be able to recognize the serologic interpretation for: hepatitis A virus infection, hepatitis B virus infection, hepatitis C virus infection, hepatitis D virus infection, hepatitis E virus infection.”

EngenderHealth

<http://www.engenderhealth.org/pubs/courses>

“EngenderHealth has developed computerized self-instructional courses for health care providers, supervisors, students, and trainers around the world—particularly for those in low-resource settings. Each self-instructional course is divided into different modules, each of which includes interactive exercises and quizzes, case studies, as well as educational materials that can be printed for use in health-care programs. Recognizing that internet connectivity is still an issue in most parts of the developing world, EngenderHealth has also made these courses available for offline use: each course can be downloaded for offline use, and the sexual and reproductive health courses can also be ordered on CD-ROM.”

EngenderHealth. *Infection Prevention*

<http://www.engenderhealth.org/pubs/courses/about-infection-prevention-course.php>

“This online infection prevention course is designed to help health care providers (including doctors, medical officers, nurses, midwives, and medical/surgical assistants), supervisors of health care facilities, and medical/nursing students develop or strengthen their ability to protect themselves, their clients, and members of the surrounding community from infections. The internationally accepted practices covered in this course use low-tech approaches that are practical, simple, easy to use, and generally inexpensive...”

Although the information provided in this course is applicable to any facility, this course is geared toward staff who work in low-resource settings. .. Wherever possible, we have attempted to provide guidance for the lowest-cost methods of infection prevention and have provided alternatives for facilities that may experience frequent power outages or may be without running water and other basic supplies.”

EngenderHealth. *HIV/AIDS minicourse*

<http://www.engenderhealth.org/res/onc/about/about-hiv.html>

“This online minicourse is designed for reproductive health care providers, staff, planners, and managers in resource-poor settings who would like to improve their knowledge of HIV/AIDS, with the end result of improving the services provided to their clients. Although these are the primary audiences for this course, the information may be useful to others interested in learning more about HIV/AIDS.”

I-TECH. *HIV/AIDS Clinical Seminar Series*

<http://globalhivlearning.org>

“The I-TECH HIV/AIDS Clinical Seminar Series is a monthly distance learning series aimed at health care workers treating HIV/AIDS in Africa, the Caribbean and India. HIV/AIDS experts present on a variety of advanced care, comprehensive management, and treatment topics via live sessions across several countries around the globe. These 60 minute sessions use a case based format during the live session and have a listserv that allows participants to engage in follow-up communication across sites after each session. Archived sessions are available for downloading from this website. Sessions are conducted in English.”

Pacific Open Learning Health Net
<http://www.polhn.com>

“The Pacific Open Learning Health Net (POLHN) provides online and hybrid course, course materials and health information to health professionals in the Pacific Island countries on its website. POLHN distributes digital and print products to learning centres located in hospitals, community health centres, and nursing schools throughout the region. Its purpose is to use eLearning to improve the quality and standards of practice of health professionals.”

“POLHN has established 16 learning centres in 12 Pacific Island countries to increase access to digital materials and online resources. Each centre consists of networked computers with Internet access, printers, scanners, video projectors, and conferencing equipment along with educational materials in both digital and print form.”

“Most courses and materials are developed by academic institutions and other organizations within the region to meet the specific needs of Pacific Island countries. Links are also provided to relevant courses from universities throughout the world as well as to providers of medical information, research and other health resources.”

USAID, Global health e-learning centre
<http://www.globalhealthlearning.org/login.cfm>

“The Global Health eLearning Center provides self-study internet-based courses that can be completed in one or two hours. The primary audiences for the Learning Center are USAID staff around the world. However, staff at other partners may also benefit from the Learning Center. The courses combine technical content with program principles, best practices, and case studies. They are intended to provide concrete examples and to stimulate your thinking about ways you can use the principles you have learned in the course to solve problems in the field.” Currently there are 27 courses – more are planned. None are yet specifically relevant to health worker safety but there are such courses as *HIV Basics* and *M&E Fundamentals*. Each course includes a final exam, the development of an action plan, course evaluation and a course certificate.

Webber training. Teleclass education
<http://www.webbertraining.com>

“Webber Training supports Teleclass Education, an international lecture series on topics of interest to infection control professionals and other healthcare professionals worldwide. Through this web site you can register as a Webber Training Member, you can sign up for live teleclasses (telephone-based lectures), you can listen to on-line recordings of the lectures, you can apply for Continuing Education Certificates, and you can order infection control education materials.”

Current resources

Title **Incentives for retaining and motivating health workers in Pacific and Asian countries**

Authors Henderson L, Tulloch J

Date September 2008

Source Human Resources for Health 2008, 6:18. Full text article: <http://www.human-resources-health.com/content/pdf/1478-4491-6-18.pdf> (2.2MB)

Country Asia-Pacific region

Abstract: This paper was initiated by the Australian Agency for International Development (AusAID) after identifying the need for an in-depth synthesis and analysis of available literature and information on incentives for retaining health workers in the Asia-Pacific region. The objectives of this paper are to:

1. Highlight the situation of health workers in Pacific and Asian countries to gain a better understanding of the contributing factors to health worker motivation, dissatisfaction and migration.
2. Examine the regional and global evidence on initiatives to retain a competent and motivated health workforce, especially in rural and remote areas.
3. Suggest ways to address the shortages of health workers in Pacific and Asian countries by using incentives.

The review draws on literature and information gathered through a targeted search of websites and databases. Additional reports were gathered through AusAID country offices, UN agencies, and non-government organizations.

The severe shortage of health workers in Pacific and Asian countries is a critical issue that must be addressed through policy, planning and implementation of innovative strategies – such as incentives – for retaining and motivating health workers. While economic factors play a significant role in the decisions of workers to remain in the health sector, evidence demonstrates that they are not the only factors. Research findings from the Asia-Pacific region indicate that salaries and benefits, together with working conditions, supervision and management, and education and training opportunities are important. The literature

highlights the importance of packaging financial and non-financial incentives.

Each country facing shortages of health workers needs to identify the underlying reasons for the shortages, determine what motivates health workers to remain in the health sector, and evaluate the incentives required for maintaining a competent and motivated health workforce. Decision-making factors and responses to financial and non-financial incentives have not been adequately monitored and evaluated in the Asia-Pacific region. Efforts must be made to build the evidence base so that countries can develop appropriate workforce strategies and incentive packages.

Title **The individual, environmental, and organizational factors that influence nurses' use of facial protection to prevent occupational transmission of communicable respiratory illness in acute care hospitals**

Authors Nichol K, Bigelow P, O'Brien-Pallas L, McGeer A, Manno M, Holness D

Date September 2008

Source American Journal of Infection Control 36 (7): 481-7

Country Canada

Abstract:

Background: Communicable respiratory illness is an important cause of morbidity among nurses. One of the key reasons for occupational transmission of this illness is the failure to implement appropriate barrier precautions, particularly facial protection. The objectives of this study were to describe the factors that influence nurses' decisions to use facial protection and to determine their relative importance in predicting compliance.

Methods: This cross-sectional survey was conducted in 9 units of 2 urban hospitals in which nursing staff regularly use facial protection.

Results: A total of 400 self-administered questionnaires were provided to nurses, and 177 were returned (44% response rate). Less than half of respondents reported compliance with the recommended use of facial protection (eye/face protection, respirators, and surgical masks) to prevent occupational transmission of communicable respiratory disease. Multivariate analysis showed 5 factors to be key predictors of nurses' compliance with the recommended use of facial protection.

These factors include full-time work status, greater than 5 years tenure as a nurse, at least monthly use of facial protection, a belief that media coverage of infectious diseases impacts risk perception and work practices, and organizational support for health and safety.

Conclusion: Strategies and interventions based on these findings should result in enhanced compliance with facial protection and, ultimately, a reduction in occupational transmission of communicable respiratory illness.

Title **Universal precautions in the era of HIV/AIDS: Perception of health service providers in Yunnan, China**

Authors Wu S, Li L, Wu Z, Cao H, Lin C, Yan Z, Jia M, Cui H

Date 2008

Source AIDS and Behaviour 12:806–814

Country China

Abstract: With a rising HIV/AIDS epidemic, it has become especially important for health service providers in China to understand and correctly adhere to universal precautions. Using qualitative interview data, perspectives from both health administrators and service providers working at all levels of China's health care system were examined. Service providers admitted selective adherence and non-adherence to universal precautions in their daily medical practice, and gave their explanations for such behaviors. Lack of time to put on protective gear, gear's interference with medical procedures, lack of administrative support, heavy workload in hospitals, inaccurate risk assessment, and beliefs that compliance with universal precautions is unnecessary, time consuming and costly were mentioned as reasons behind noncompliance. Effective universal precaution interventions need to target both administrators and providers, and address both structural barriers and individual attitudinal and behavioral factors.

Title **Perceptions of hand hygiene practices in China**

Authors Yuan CT, Dembry L, Higa B, Fu M, Wang H, Bradley E

Date 13 November 2008

Source Journal of Hospital Infection [Epub ahead of print]

Country China

Abstract: Hand hygiene is considered one of the most important infection control measures for preventing healthcare-associated infections. However, compliance rates with recommended hand hygiene practices in hospitals remain low. Previous literature on ways to improve hand hygiene practices has focused on the USA and Europe, whereas studies from developing countries are less common. In this study, we sought to identify common issues and potential strategies for improving hand hygiene practices in hospitals in China. We used a qualitative survey design based on in-depth interviews with 25 key hospital and public health staff in eight hospitals selected by the Chinese Ministry of Health. We found that hospital workers viewed hand hygiene as paramount to effective infection control and had adequate knowledge about proper hand hygiene practices. Despite these positive attitudes and adequate knowledge, critical challenges to improving rates of proper hand hygiene practices were identified. These included lack of needed resources, limited organisational authority of hospital infection control departments, and ineffective use of data monitoring and feedback to motivate improvements. Our study suggests that a pivotal issue for improving hand hygiene practice in China is providing infection control departments adequate attention, priority, and influence within the hospital, with a clear line of authority to senior management. Elevating the place of infection control on the hospital organisational chart and changing the paradigm of surveillance to continuous monitoring and effective data feedback are central to achieving improved hand hygiene practices and quality of care.

Title **Obligatory occupational health check increases vaccination rates among medical students**

Authors Schmid K, Merkl K, Hiddemann-Koca K, Drexler H

Date September 2008

Source Journal of Hospital Infection 70 (1): 71-75

Country Germany

Summary: In October 2002 an obligatory occupational health check for all preclinical students at the University of Erlangen-Nuremberg was introduced. Over the period 2005 to 2007, medical students started their clinical year either with or without a health check during their

preclinical years. The aim of the study was to evaluate the efficacy of health checks for pre-clinical students with respect to vaccination rates. At the beginning of the clinical year we examined 242 consecutive students, 121 with and 121 without a preceding preclinical occupational health check. The immunisation rate against hepatitis B increased during medical education from 50% to 96% in women and from 58% to 96% in men. In medical students without an initial occupational health check, vaccination rates were significantly lower (85% in women and 81% in men). A significant benefit from the preclinical check was seen in men regarding immunisation status for hepatitis B, tetanus, diphtheria, polio, rubella and mumps and in women for hepatitis B and rubella. This study demonstrates that it is possible to significantly increase vaccination rates, particularly for men. Even in medical students starting their clinical training, an individual occupational health check is necessary to optimise immunisation against infectious diseases. Routine occupational health checks could make an important contribution to closing gaps in vaccination coverage.

Title High risk for occupational exposure to HIV and utilization of post-exposure prophylaxis in a teaching hospital in Pune, India

Authors Gupta A, Anand S, Sastry J, Krisagar A, Basavaraj A, Bhat SM, Gupte N, Bollinger RC, Kakrani AL

Date 21 October 2008

Source BioMed Central Infectious Diseases 8(1):142

Country India

Background: The risk for occupational exposure to HIV has been well characterized in the developed world, but limited information is available about this transmission risk in resource-constrained settings facing the largest burden of HIV infection. In addition, the feasibility and utilization of post-exposure prophylaxis (PEP) programs in these settings are unclear. Therefore, we examined the rate and characteristics of occupational exposure to HIV and the utilization of a PEP among health care workers (HCW) in a large, urban government teaching hospital in Pune, India.

Methods: Demographic and clinical data on occupational exposures and their manage-

ment were prospectively collected from January 2003- December 2005. US Centers for Diseases Control guidelines were utilized to define risk exposures, for which PEP was recommended. Incidence rates of reported exposures and trends in PEP utilization were examined using logistic regression.

Results: Of 1955 HCW, 557 exposures were reported by 484 HCW with an incidence of 9.5 exposures per 100 person-years (PY). Housestaff, particularly interns, reported the greatest number of exposures with an annual incidence of 47.0 per 100PY. Personal protective equipment (PPE) was used in only 55.1% of these exposures. The incidence of high-risk exposures was 6.8/100PY (n=339); 49.1% occurred during a procedure or disposing of equipment and 265 (80.0%) received a stat dose of PEP. After excluding cases in which the source tested HIV negative, 48.4% of high-risk cases began an extended PEP regimen, of whom only 49.5% completed it. There were no HIV or Hepatitis B seroconversions identified. Extended PEP was continued unnecessarily in 7 (35%) of 20 cases who were confirmed to be HIV-negative. Over time, there was a significant reduction in proportion of percutaneous exposures and high-risk exposures ($p<0.01$) and an increase in PEP utilization for high risk exposures (44% in 2003 to 100% in 2005, $p=0.002$).

Conclusion: Housestaff are a vulnerable population at high risk for bloodborne exposures in teaching hospital settings in India. With implementation of a hospital-wide PEP program, there was an encouraging decrease of high-risk exposures over time and appropriate use of PEP. However, overall use of PPE was low, suggesting further measures are needed to prevent occupational exposures in India.

Title Letter: Participatory hospital infection control training programme among nurses working in selected hospitals of Karnataka, India: a clinical practice improvement project

Authors Sudhaker C, Rao S

Date November 2008

Source Journal of Hospital Infection 70 (3):292-294

Country India

Extracts: People will not readily attempt to change unless they perceive the change as

being important, desirable and feasible for them. The findings of the present study suggest that participatory infection control training enhanced core group nurses' ability to practice, develop teambuilding skills and to negotiate and obtain support from their supervisors to conduct ongoing education programmes. In addition, some of the core group nurses have produced educational material (e.g. low cost devices like sharps disposal methods to improve infection control practice)...

The present study provides an opportunity to think through strategies for change in infection control nursing activities, especially infection control education. Encouraging and allowing people to define their own problems, solve such problems in groups, share experiences, have constructive dialogue, reflect on their own behaviour and actions, adopt an inquisitive and critical mind-set, articulate and use their own local knowledge, and to develop a network. Such awareness in combination with organisational support helps to bring about the required clinical practice improvement.

Title **Infection control knowledge, attitude, and practice among Nepalese health care workers**

Author Paudyal P, Simkhada P, Bruce J

Date October 2008

Source American Journal of Infection Control 36 (8): 595-7

Country Nepal

Abstract: This study was designed to assess the knowledge, attitudes, and infection control practices among Nepalese health care workers (HCWs). The study comprised a questionnaire survey of 324 staff from acute care hospitals in Kathmandu, Nepal. A total of 158 doctors and 166 nurses participated, 27% of whom had received infection control training. Only 16%, 14%, and 0.3% of the respondents achieved maximum scores for knowledge, attitude, and practice items, respectively. Staff had good knowledge and positive attitude toward most aspects of infection control, although only half had heard of methicillin-resistant *Staphylococcus aureus*. Logistic regression revealed that profession, age, and having studied abroad significantly predicted markers of infection control knowledge, attitudes, and practice. This is the first survey of infection control practice among Nepalese HCWs and provides useful baseline data by professional group. There is ample opportunity

for improvement in current practice, which should be recognized by hospital managers and Nepalese health authorities.

Title **Three-year prospective study to improve the management of blood-exposure incidents**

Author va Wilk P, Pelk-Jongen M, Wijkmans C, Voss A

Date September 2008

Source Infection Control and Hospital Epidemiology 29(9): 871-7

Country The Netherlands

Abstract:

Objective: Throughout 2003–2005, all blood-exposure incidents registered by an expert counseling center in The Netherlands accessible by telephone 24 hours a day, 7 days a week, were analyzed to assess quality improvement in the center's management of such incidents. The expert center was established to handle blood-exposure incidents that occur both inside and outside of a hospital. Infection control practitioners carried out risk assessment, made the practical arrangements associated with managing incidents, and carried out treatment and follow-up, all in accordance with standardized procedures.

Design: We analyzed the time it took for exposed individuals to report the incident, the time required to perform a human immunodeficiency virus (HIV) test for the source individual when needed, occurrence of injuries, hepatitis B (HBV) vaccination status of exposed individuals, and adherence to protocol at the expert center.

Results: A mean of 465 incidents was registered during each year of the 3-year study period. Although 698 (50%) of 1,394 reported exposures took place in a hospital, 704 (50%) took place outside of a hospital, and 460 (33%) occurred at a time other than regular office hours. HIV tests for source individuals were performed increasingly quickly over the course of the 3-year study period because of earlier reporting and improvements in practical matters associated with performing and processing the tests. The percentage of healthcare workers employed outside a hospital who were vaccinated against HBV increased from 34% (52 of 152) to 70% (119 of 170) during the 3-year study period. Consequently, the administration of immunoglobulin and unnecessary laboratory testing were reduced. In assessing the quality of the expert center, flaws in the handling of incidents were identified in 148

(37%) of 396 incidents analyzed in 2003, compared with 38 (8%) of 461 incidents analyzed in 2005.

Conclusions: The practical matters associated with management of blood-exposure incidents, such as timely reporting and administration of prophylaxis, should be optimized for incidents that occur at times other than regular office hours and outside of hospitals. The establishment of a 24-hour centralized counseling facility that was open 7 days a week to manage blood exposures resulted in significant improvements in incident management and better care.

Title **How to evaluate sharp safety-engineered devices**
Authors Ford J, Phillips P
Date 9 – 15 September 2008
Source Nursing Times 104(36):42-5.
 Full text at: <http://nursingtimes.notlong.com>
Country United Kingdom

Summary: With increasing concerns of occupational exposure to bloodborne viruses in healthcare settings, NHS trusts are under pressure to consider opting for safer sharps devices that are designed to protect users from needlestick injuries. However, with an ever-increasing range of 'sharp safety' devices on the market, deciding what to purchase is a complex issue. In addition, evidence shows that purchasing safety devices alone will not eliminate the problem of needlestick injuries. This article discusses the criteria that should be taken into account when trusts consider introducing sharp safety devices into their workplace.

Title **Choosing the right surgical glove: an overview and update**
Author Tanner J
Date 26 June – 9 July 2008
Source British Journal of Nursing 7(12): 740-4
Country United Kingdom

Abstract: Sterile surgical gloves are routinely worn during all invasive procedures to prevent the two-way transmission of pathogens between the surgical team and the patient. This reduces the risk of surgical-site infections and blood-borne diseases. Since their introduction to the operating room over 100 years ago, surgical gloves, and the materials used to make them, have continued to evolve in line with ever-changing healthcare demands. Following

recent developments in surgical glove technologies, including de-proteinized natural rubber latex and newer gloving methods such as triple gloving, it is timely that an overview and update of surgical gloves is given. By providing information on latex-associated allergies, glove materials, gloving methods and glove protection, this article will enable practitioners to choose the most appropriate surgical glove.

Title **The cost of needlestick injuries associated with insulin administration**
Author Trueman P, Taylor M, Twena N, Chubb B
Date September 2008
Source British Journal of Community Nursing 13(9): 413-7
Country United Kingdom

Abstract: The administration of insulin by a carer or healthcare professional is associated with a risk of needlestick injury. Such injuries create a burden for carers and professionals in terms of anxiety, stress and morbidity as well as the NHS in terms of lost productivity, treatment costs and litigation. This study estimates the economic burden of these injuries to the NHS in the UK based on published estimates of the incidence and cost of needlestick injuries. The findings suggest that such injuries cost the NHS approximately 600,000 pounds sterling per annum. Many of these injuries and their associated costs could be avoided through increased adoption of safety devices. Indeed, evidence suggests that the increased acquisition cost of safety devices could be more than offset by savings resulting from the reduced incidence of needlestick injuries. Trusts are encouraged to implement improved monitoring and surveillance procedures to inform the debate on the appropriate use of safety devices.

<i>Title</i>	Needlestick injury in 2008: Results from a survey of RCN members
<i>Author</i>	Ball J, Pike G
<i>Date</i>	2008
<i>Source</i>	<i>Materials Management in Health-Care</i>
<i>Country</i>	United Kingdom

Summary of key findings

4,407 nurses responded to a survey on needlestick injury... The surveys, which were managed by Employment Research Ltd and commissioned by the Royal Collage of Nursing (RCN), looked at the frequency of needlestick injury and explored nurses' perceptions of the risk they face whilst also detailing the measures taken to prevent injury.

Almost all (96%) the nurses taking part used needles as part of their jobs. At some point in their career a half (48%) had been stuck by a needle or sharp that had previously been used on a patient and 10% had sustained an injury in the last year.

Nurses gave details of their last injury through the online survey: in nine out of ten cases the injury drew blood and the nurse knew which patient the needle had been used on. The source patient was blood tested in a half of injuries, and 90% of nurses reported the injury. A third (34%) regarded the risk of contracting a blood borne disease from the injury as medium or high. However, in more than a quarter of cases (28%) nurses did not receive any advice about the risk of blood borne diseases following the injury. More community/non-hospital staff had not received advice following the injury (42%).

Whilst two-thirds regarded the support offered by employers as adequate, those working outside National Health Service (NHS) hospitals were less likely to be satisfied with employer support (45% of those outside the NHS were dissatisfied with the support offered).

The post-card survey revealed that although the vast majority of employers (94%) have a sharps policy that covers prevention and reporting, only a half (55%) of nurses have received any training from their employer on safe needle use.

A half of all nurses surveyed fear needlestick injury either 'a great deal' (23%) or a 'fair amount' (29%). Nurses in workplaces without a sharps policy covering prevention and re-

porting, are more likely to fear needlestick injury.

95% of nurses consider that the availability of safer needle devices is either essential (57%) or preferable (38%), yet only a half report that they currently have access to any of these devices. Nurses that already have access to these devices are more likely to regard them as essential – in 70% of cases compared with 40% of those who do not have them. The findings suggest those who have experience of these devices are more likely to see the benefit of them.

In response to this research report, the RCN is calling for:

A Preventive Approach – *less than 50% of respondents have access to safer needle devices.* Safer needle devices are an effective means of eliminating the risk of injuries and form an important part of an organisational wide approach to reducing needlestick injuries. All healthcare organisations should move towards the use of safer needle devices. Risk assessments should identify the need for such devices.

Comprehensive Policies - *nearly 20% of respondents working outside the NHS do not have access to a needlestick policy.* The existence of a policy is key to reducing the fear associated with needlestick injuries. Healthcare organisations must have comprehensive policies that cover prevention and support following an injury.

Effective Training - *nearly a half of respondents reported that they have not received training from their employer on safe needle use.* While training on its own may not reduce needlestick injuries it is an essential part of an organisation's approach to managing the risk of needlestick injuries. Training should include safe systems of work, use of safer needle devices, disposal of waste, actions to take post incident and how to access support.

Appropriate Support – *the respondents indicated varying levels of support following an incident. Of particular concern is the lack of support for those working outside the NHS and in the community setting.* All nurses should be able to access timely and competent advice following a needlestick injury, 24 hours 7 days a week. The emotional impact on staff and their family members can never be underestimated and access to effective counselling support is also essential.

Title Proactive planning for sharps safety

Authors Chiarello L, Bartley J

Date 29 September 2008

Source Materials Management in Health-Care.

Country USA

Abstract: Preventive measures and devices can save workers' lives

To achieve the ultimate goal of reducing sharps-related injuries, hospitals need to undertake a series of incremental organizational steps. These steps range from developing organizational capacity to address sharps injuries to assessing processes and identifying intervention priorities. Following the CDC's model on developing action plans as well as monitoring program performance and improvement are essential for optimal results.

Title Virus transfer from personal protective equipment to healthcare employees' skin and clothing

Authors Casanova L, Alfano-Sobsey E, Rutala W, Weber D, Sobsey M

Date August 2008

Source Emerging Infectious Diseases 14(8). Full text: <http://cdcarticle.notlong.com>

Country USA

Abstract: We evaluated a personal protective equipment removal protocol designed to minimize wearer contamination with pathogens. Following this protocol often resulted in virus transfer to hands and clothing. An altered protocol or other measures are needed to prevent healthcare worker contamination.

Title Deaths due to bloodborne infections and their sequelae among health-care workers

Author Luckhaupt S, Calvert G

Date November 2008

Source American Journal of Industrial Medicine 51 (11): 812-824

Country USA

Abstract:

Background: The odds of dying from blood-borne infections among health-care workers has not been well studied.

Methods: Using data from the National Occupational Mortality Surveillance (NOMS) system, a matched case-control design was employed to examine the relationship between health-care employment and death from HIV, hepatitis B (HBV), hepatitis C (HCV; non-A/non-B viral hepatitis), liver cancer, and cirrhosis from 1984 to 2004. We examined the whole health-care industry and specific health-care occupations.

Results: From 1984 to 2004, NOMS captured 248,550 deaths from bloodborne pathogens and their sequelae. Employment in the health-care industry was associated with increased risk of death from HIV (MOR = 2.27; 95% confidence interval [CI] = 2.11-2.44), HBV (MOR = 1.98; CI = 1.58-2.48), and cirrhosis (MOR = 1.09; CI = 1.04-1.15) among males, and death from HCV among both males (MOR = 1.46; CI = 1.22-1.75) and females (MOR = 1.22; CI = 1.05-1.40). Nursing was the occupation with the highest MORs among males for HIV and HBV, but female nurses were at decreased risk of dying from HIV (MOR = 0.69; CI = 0.57-0.83).

Conclusions: Employment in the health-care industry was found to be associated with deaths from several bloodborne pathogens and their sequelae among males, but only with HCV among females from 1984 to 2004 in this exploratory study

Calendar of Events

International Meeting on Emerging Diseases and Surveillance (IMED 2009)

13 – 16 February 2009, Vienna, Austria

ProMED, the Program for Monitoring Emerging Diseases, is pleased to invite you to the International Meeting on Emerging Diseases and Surveillance 2009. Along with our cosponsors, the European Centers for Disease Control, the World Organization for Animal Health, the European Commission, and the Wildlife Conservation Society, we are developing a conference that will bring together the public health community, scientists, health care workers and other leaders in the field of emerging infectious diseases.

Abstract submissions closed on 1 December

For more information visit the website: <http://imed.isid.org/>

The Society for Healthcare Epidemiology in America: 19th Annual Scientific Meeting

19 – 22 March 2009, San Diego, California, USA

SHEA's Annual Scientific Meeting is the premier scientific meeting for healthcare epidemiologists and other individuals working in the field of healthcare epidemiology and infection prevention and control.

Abstract submissions closed on 17 November

For more information visit the website:

http://www.shea-online.org/about/annual_meeting_overview.cfm

Community and Hospital Infection Control Association – Canada: 2009 National Education Conference

9 – 14 May, 2009, St. Johns, Newfoundland Labrador, Canada

Solid Foundations...Shifting Horizons

Infection Prevention and Control (IP&C) is based on a solid foundation of knowledge, skills and practice. All health care workers must be constantly updated their foundation as microorganisms and environments change and new knowledge and technologies emerge.

The 2009 Education Program will address core topics in IP&C while updating ICPs on science, methods and technology, and providing new ideas. The objectives of the 2009 National Education Conference are:

To provide educational opportunities to improve practice for all ICPs, regardless of practice setting or level of experience.

To provide a forum for the exchange of ideas related to the science and practice of IP&C.

For more information visit the website: http://www.chica.org/conf_registration.html

Association for Professionals in Infection Control and Epidemiology (APIC) Annual Conference

June 7-11, 2009, Fort Lauderdale, Florida, USA

Abstract submissions close on 19 December

For more information visit the website: <http://www.apic.org>

Asia Pacific Society of Infection Control, 4th International Congress

5 – 9 July 2009, Macau SAR, China

“Controlling Infection for Safer Hospital and Safer Community”, the theme of the Congress, explains a close connection between hospital and community. The organizing committee is delighted to hold this international infection control congress co-jointly with the Asia-Pacific Society of Infection Control. This congress offers the delegates great opportunity to meet leading speakers from all over the world who will share excellent thoughts, experience and scientific information in this field.

For more information visit the website: <http://www.apsic2009.org>

The 5th International AIDS Society Conference on HIV Pathogenesis, Treatment and Prevention**19 – 22 July, Cape Town, South Africa**

As the fifth conference in this series, IAS 2009 will continue its strong emphasis on basic, clinical and biomedical prevention science. However, for the first time, the scientific programme also will include a fourth track on Operations Research. This newest feature underscores one of the defining characteristics of the IAS conference: to examine how scientific advances increase knowledge and are instrumental, through very practical ways, to reach populations which need new and improved methods to prevent, treat, and effectively confront the epidemic.

Abstract submissions close on 25 February

For more information visit the website: <http://www.ias2009.org>

The 9th International Congress on AIDS in Asia and the Pacific**9 – 13 August, 2009, Nusa Dua, Bali, Indonesia**

The Theme of the 9th ICAAP is "Empowering People, Strengthening Networks". The 9th International Congress on AIDS in Asia and the Pacific in Bali in August 2009 aims to address, among others, issues of mobility, migration, as well as gender and people with disabilities in order to empower the people and strengthen networks to effectively respond to AIDS.

Abstract submissions close 31 January

For more information visit the website: <http://new.icaap9.org>

Australasian Society for HIV Medicine, 21st Annual Conference**9 – 12 September 2009, Brisbane, Australia**

Abstract submissions close 22 May

For more information visit the website: www.ashm.org.au/conference

10th International Federation of Infection Control (IFIC) Congress**8 – 11 October, 2009, Vilnius, Lithuania**

For more information visit the website: <http://www.theific.org/conferences.asp>