In SafeHandS

Newsletter of the SafeHandS network

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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.

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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.

Photos courtesy of Mahosot, Lao PDR & Chiang Mai University Hospital , Thailand.

Deadline for contributions for the next issue is February 10th, 2006.

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Editorial

Respiratory zoonoses: inevitable challenges

By Aileen J Plant

Professor of International Health and Deputy CEO, Australian Biosecurity CRC for Emerging Infectious Diseases, Division of Health Sciences, Curtin University of Technology, Perth, Australia.

Each year for the past 30 odd years, a new or previously unidentified organism has caused disease, ranging from those that are comparative scientific curiosities to those that challenge the health of millions. Most have been viruses.

From a scientific point of view, those zoonotic emerging infectious diseases that are most concerning are those with the potential to spread via the respiratory route when affecting humans. The reason they are concerning to scientists, health care workers and the general public is because the infection maybe caught passively whereas diseases spread by blood or sexual contact at least appear to be more avoidable. Exposure to respiratory organisms may be inadvertent, unknown and at times, unavoidable.

In the last three years two respiratory zoonoses that represent the risk of such zoonoses pose have preoccupied the global health community i.e. SARS and avian influenza. We now believe that SARS arose from bats and then entered the human population via wild animal markets. It spread readily between humans, especially in health care settings. As a newly identified disease there was no diagnostic test, vaccine or treatment. SARS was controlled by excellent infection control in health care settings, contact tracing to identify potentially infectious people and isolation of infectious patients.

Concerns exist that mutation could cause an avian influenza virus to spread between humans. For a pandemic to occur the influenza virus needs to jump from animals, cause significant disease and spread readily from human to human. Although the first two have been occurring recently in Asia with the H5N1strain of the virus becoming widespread in poultry and occasionally infecting humans, and leading to death in about 50 per cent of cases, thus far it has not spread from human-to-human in an efficient manner. Should it do so, it will challenge health services far more than SARS. This is because influenza has the potential to spread up to 24 hours prior to symptoms whereas people with SARS were not infectious to others until after they had symptoms. This provided the time to undertake contact tracing, isolate individuals and implement good infection control. With pandemic influenza these options are unlikely to be available and maintenance of infection control in hospitals is likely to be challenging and require considerable presumptive action for all patients if staff are to be safe from infection.

What can be done to avoid zoonoses crossing to humans, and if they do infect humans, how can humans protect themselves? Cooperation with the agricultural sector is essential. The rapid growth in poultry throughout the world and Asia in particular has significantly increased the human-poultry interface and thereby increased the risk of transmission of infectious organisms. Improving animal husbandry in the way animals are reared and sold provides considerable opportunity for decreasing the disease transmission risks. For health care workers worldwide, the emphasis has been on improving infection control processes however this is sometimes (especially by the media) concentrated on the use of personal protective equipment (PPE). While PPE is important, infection control also includes hospital layout, staff management, patient flow, appropriate air-conditioning (if used), emphasis on handwashing, operating theatre management, isolation of patients if indicated from the minute they present, including external (ie outside hospital doors) triage if necessary

In conclusion, our challenge as health care workers is to be prepared, and to assume each person is infectious and take appropriate action. Dealing with both old and new infectious diseases, zoonotic or not, requires actions that decrease the chance of transmission of infectious organisms occurring. More zoonotic respiratory infections are inevitable; the challenge is to halt or minimise their impact.

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/AIDS and other communicable diseases.

We know that health care workers are essential in responding to HIV/AIDS 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. This is a public health care facility based in Australia for the treatment, care and support of people living with or affected by HIV/AIDS. The team includes infection control specialists with international experience in health care worker safety.

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 organisations 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 and click on the 'membership' page, or,
- Cut off the form at the back of the *In SafeHandS* newsletter and send or fax the form to the Albion Street Centre.

You can elect to receive 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 we now have 45 members of SafeHandS. Members are from: India, Indonesia, Fiji, China, Viet Nam, Pakistan, Lao PDR, Taiwan, Cambodia, Malaysia, Nigeria, Turkey and Australia.

Our members' feedback on membership forms indicates that your priority services are:

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

In 2006 we will focus on expanding the "useful links and resources" page of the website to give you access to more resources on improving HCW safety in resource limited settings.

We will also be developing our own resources such as training materials, sample policies and protocols and tools (e.g. surveillance forms).

Potential pandemics: – the recent history of zoonotic respiratory diseases

by Maggy Tomkins

Zoonoses

Zoonoses, or zoonotic diseases are infectious diseases which are transmissible from animals to humans. Many diseases which spread from animals to humans need a vector (such as the mosquito for malaria or the rat flea for plague), but direct transmission has also been known for centuries.[1] Such old zoonoses include cowpox and rabies, while more recently emerging diseases include human immunodeficiency virus (HIV) and severe acute respiratory syndrome (SARS).[1]

Many common diseases originated from animals: influenza comes from birds and pigs; the common cold may have come from horses; and leprosy comes from water buffalo.

"Looking back on the past 40 years, probably 75 per cent of all newly emerged infections have been zoonotic in origin and probably at least 60 per cent of all the infectious diseases that affect human populations owe their origin to animal diseases." [2]

SARS

In 2003, the potential threat from zoonoses made international headlines with the epidemic of severe acute respiratory syndrome (SARS.)

It is now known that the earliest cases of SARS occurred in November 2002 in Guangdong Province, China. It was only diagnosed when it spread further after an infected person from Guangdong stayed in a hotel in Hong Kong in February 2003. 14 people who stayed on or visited the same floor of the hotel, became infected. They in turn infected people as they travelled to Canada, Hong Kong, Viet Nam, and Singapore [3]

The World Health Organization (WHO) issued a global alert on 12 March 2003 about atypical pneumonia in Guangdong Province and Hong Kong Special Administrative Region, China, and in Vietnam

Hospital staff caring for the earliest cases did not know the nature of the infection and so failed to protect themselves. The disease rapidly spread within hospitals, to staff, other patients, and visitors. It then became more widespread as their contacts became infected. Eventually 30 countries and areas reported cases. [3]

SARS is now known to be caused by a coronavirus. Symptoms include fever, body aches and pains, cough, and trouble breathing often with severe pneumonia needing ventilation. About ten percent of patients may die.[4]

While the exact source of SARS infection is not known, it is thought to have originated in wild animals. Initially, the highest prevalence of antibody was found among those who traded primarily masked palm civets (a type of wild cat).[5] Recent research suggests bats may be the natural reservoir. [6]

According to WHO in 2003: "SARS is the first severe and easily transmissible new disease to emerge in the 21st century. Its containment, however, has been achieved through the diligent application of control measures from centuries past. In the final analysis, it will be these old-fashioned measures that defeat SARS – at least for now." [3]

Avian influenza

Currently the disease most in the world headlines is avian influenza (bird flu.)

Avian influenza is an infectious disease affecting birds which is caused by type A strains of the influenza virus. It was first identified in Italy more than 100 years ago, but is now seen worldwide. [7]

Infection with avian influenza has varying effects on birds, ranging from a mild illness to a highly contagious and rapidly fatal disease which causes severe epidemics. Migratory waterfowl are the natural reservoir of avian influenza viruses, but domestic poultry are particularly susceptible to these epidemics. [7]

Avian influenza viruses usually only infect birds or pigs. The first documented case of humans infected with an avian influenza virus occurred in Hong Kong in 1997. 18 humans experienced severe respiratory distress of

whom 6 died. Close contact with live infected poultry was determined to be the source of the human infection. [7]

There have since been epidemics of highly pathogenic avian influenza in several countries with direct spread to humans. The current epidemic is the largest that has been seen.2 However, unlike SARS, human to human spread of avian influenza has not yet been documented. [7]

There are 15 avian influenza virus subtypes, but H5N1 is the one which concerns scientists the most. It mutates rapidly, has been shown to acquire genes from viruses infecting other animal species and can cause severe disease in humans.[7]

Emerging infections

Infections which have existed for years become epidemic or a pandemic when there is a change in the environment, or the agent, or the host.

Environmental changes which enabled transmission of avian influenza to humans may include changes in farming methods, crowded living conditions (and sharing them with animals), trading in wild birds, increased use of antibiotics in animals leading to resistance and increased human movement and travel.

What is of most concern is that the avian influenza virus will mix with a human flu virus which will make a new sub-virus which is readily transmissible from human to human. [2] This could then trigger a flu pandemic.

Influenza pandemics are be expected to happen three to four times each century. This happens when new virus subtypes emerge which are readily transmitted from person to person. [7] The great influenza pandemic of 1918–1919, misleading known as the "Spanish Flu", caused an estimated 40 to 50 million deaths worldwide. "Experts agree that another influenza pandemic is inevitable and possibly imminent." [7]

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2. Curson P (2005) Disease - shaping history in a mobile world. *On Line Opinion* (E-journal) 29th September. Available at: http://www.onlineopinion.com.au/view.asp?article=131

3. WHO (2003) SARS: *breaking the chains of transmission*. July http://www.who.int/features/2003/07/en/

4. Ho A, Sung J, Chan-Yeung M (2003) An Outbreak of Severe Acute Respiratory Syndrome among Hospital Workers in a Community Hospital in Hong Kong. *Annals of Internal Medicine* (1397) Oct: 564-567

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7. WHO (2004) Factsheet: *Avian influenza*. 15 January. http://www.who.int/mediacentre/factsheets/avian_influenza/en/

Protection against Respiratory Diseases

In this issue we have included the text from two fact sheets on protection against the respiratory diseases discussed. To download the complete fact sheets (with photos) go to: http://www.uow.edu.au/health/safehands/useful_links_resources.html and scroll down to the section on 'Best Practice Documents for Health Care Worker Safety in Resource Limited Settings (General)'.

In the next issue we will include more strategies on protection against respiratory diseases. If readers have good low-cost infection control strategies that they have used effectively, please let us know so we can include them.

Fact Sheet 1

Cough Etiquette and Respiratory Hygiene

Influenza and the common cold are familiar respiratory infections to many. They often appear to be seasonal in nature but can persist in the community at any time. This persistence ensures ease of transmission especially in crowded living environments through airborne and droplet spread. The SARs epidemic and avian influenza have heightened the awareness of respiratory infections to both health care workers and the general public. As new infections emerge it is extremely important to be prepared for such threats.

There are many stages of being prepared; from development of global and national strategies to the simple common sense applications that are often taken for granted yet have the greatest impact in preventing transmission of respiratory illness.

Cough etiquette and respiratory hygiene protocols for staff, patients and visitors have become a key component in the prevention of respiratory illness.

Cough Etiquette/Respiratory Hygiene guide for health care workers

1. Cover your nose or mouth with your hand or a tissue when coughing or sneezing.
2. Dispose of the used tissue into the nearest garbage bin.
3. Remember to wash your hands with soap and water (if available) or you may use an alcoholic hand gel (if available).
4. It is important to see your doctor if you have a cough which lasts longer than a week.
5. Encourage cough etiquette/respiratory hygiene with patients and visitors.
6. If people are coughing in waiting areas, offer them a surgical mask or encourage them to sit a metre away from others.

Fact Sheet 2

“Achieving the perfect fit”
Donning and fit checking instructions for P2 (N95) masks

1. Separate the edges of the mask to fully open it.

2. Sightly bend the nose wire to form a gentle curve.

3. Hold the mask upside down to expose the two headbands.

4. Using your index fingers and thumbs, separate the two headbands.

5. Cup the mask under your chin and pull headbands up and over your head.

6. Place and position the lower headband at the base of your neck (under your ears).

7. Place the upper headband on the crown of your head. The band should run just above the top of the ears.

8. Gently conform/press the nosepiece across the bridge of your nose by pressing down with fingers until it fits snugly.

9. Continue to adjust the mask and edges until you feel you have achieved a good-facial fit.

Now it is time to do a fit check.

1. Gently inhale. When you breathe in the mask should draw in slightly towards the face and collapse.

2. Gently exhale. The mask should fill up with air. It is important at this stage that there is NO air leakage around edges of mask.

A fit check should be done each time a P2 (N95) mask is worn.

If you have not achieved a successful fit as instructed above it is important that you seek advice or have someone assist you with fitting and checking your mask, as an incorrectly fitted mask will not provide you with the intended level of protection.

Questions and Answers

As this issue of In SafeHandS is focused on avian influenza and other emerging zoonotic diseases, we have included some questions from the CDC and WHO web pages. Readers are invited to submit questions to the SafeHandS team and we will answer them in future newsletters. All names and identifying details will be removed before publication to preserve confidentiality (if you wish).

What is avian influenza?[1]
Avian influenza, or "bird flu", is a contagious disease of animals caused by viruses that normally infect only birds and, less commonly, pigs. Avian influenza viruses are highly species-specific, but have, on rare occasions, crossed the species barrier to infect humans.

What is special about the current outbreaks in poultry? [1]
The current outbreaks of highly pathogenic avian influenza, which began in South-east Asia in mid-2003, are the largest and most severe on record. Never before in the history of this disease have so many countries been simultaneously affected, resulting in the loss of so many birds.

The causative agent, the H5N1 virus, has proved to be especially tenacious. Despite the death or destruction of an estimated 150 million birds, the virus is now considered endemic in many parts of Indonesia and Viet Nam and in some parts of Cambodia, China, Thailand, and possibly also the Lao People's Democratic Republic. Control of the disease in poultry is expected to take several years.

The H5N1 virus is also of particular concern for human health, as explained below

What are the implications for human health? [1]
The widespread persistence of H5N1 in poultry populations poses two main risks for human health.
The first is the risk of direct infection when the virus passes from poultry to humans, resulting in very severe disease. Of the few avian influenza viruses that have crossed the species barrier to infect humans, H5N1 has caused the largest number of cases of severe disease and death in humans. Unlike normal seasonal influenza, where infection causes only mild respiratory symptoms in most people, the disease caused by H5N1 follows an unusually aggressive clinical course, with rapid deterioration and high fatality. Primary viral pneumonia and multi-organ failure are common. In the present outbreak, more than half of those infected with the virus have died. Most cases have occurred in previously healthy children and young adults.
A second risk, of even greater concern, is that the virus – if given enough opportunities – will change into a form that is highly infectious for humans and spreads easily from person to person. Such a change could mark the start of a global outbreak (a pandemic).

Does the virus spread easily from birds to humans? [1]
No. Though more than 100 human cases have occurred in the current outbreak, this is a small number compared with the huge number of birds affected and the numerous associated opportunities for human exposure, especially in areas where backyard flocks are common. It is not presently understood why some people, and not others, become infected following similar exposures.

What are the symptoms of bird flu in humans? [2]
Symptoms of bird flu in humans have ranged from typical flu-like symptoms (fever, cough, sore throat and muscle aches) to eye infections, pneumonia, severe respiratory diseases (such as acute respiratory distress), and other severe and life-threatening complications. The symptoms of bird flu may depend on which virus caused the infection.

How is bird flu in humans treated? [2]
Studies done in laboratories suggest that the prescription medicines approved for human flu viruses should work in preventing bird flu infection in humans. However, flu viruses can become resistant to these drugs, so these medications may not always work. Additional studies are needed to prove the effectiveness of these medicines

What about the pandemic risk? [1]
A pandemic can start when three conditions have been met: a new influenza virus subtype emerges; it infects humans, causing serious illness; and it spreads easily and sustainably

among humans. The H5N1 virus amply meets the first two conditions: it is a new virus for humans (H5N1 viruses have never circulated widely among people), and it has infected more than 100 humans, killing over half of them. No one will have immunity should an H5N1-like pandemic virus emerge.

All prerequisites for the start of a pandemic have therefore been met save one: the establishment of efficient and sustained human-to-human transmission of the virus. The risk that the H5N1 virus will acquire this ability will persist as long as opportunities for human infections occur. These opportunities, in turn, will persist as long as the virus continues to circulate in birds, and this situation could endure for some years to come.

What are the most important warning signals that a pandemic is about to start? [1]
The most important warning signal comes when clusters of patients with clinical symptoms of influenza, closely related in time and place, are detected, as this suggests human-to-human transmission is taking place. For similar reasons, the detection of cases in health workers caring for H5N1 patients would suggest human-to-human transmission. Detection of such events should be followed by immediate field investigation of every possible case to confirm the diagnosis, identify the source, and determine whether human-to-human transmission is occurring.

Studies of viruses, conducted by specialized WHO reference laboratories, can corroborate field investigations by spotting genetic and other changes in the virus indicative of an improved ability to infect humans. This is why WHO repeatedly asks affected countries to share viruses with the international research community.

1. WHO (2005) Avian Influenza Frequently Asked Questions. November 3. http://www.who.int/csr/disease/avian_influenza/avian_faqs/en/

2. CDC (2005) Key Facts About Avian Influenza (Bird Flu) and Avian Influenza A (H5N1) Virus. November 18. http://www.cdc.gov/flu/avian/gen-info/facts.htm

Conference Report

Philip Melling, Manager, NSW Infection Control Resource Centre, Australia, represented SafeHandS at two recent meetings in Hanoi, Viet Nam – the Safe Injection Global Network (SIGN) Global Injection Safety and Infection Prevention and Control Meeting and the 2nd International Scientific Conference on Occupational & Environmental Health. Philip made oral presentations at both meetings about SafeHandS and was pleased to receive encouraging feedback about the network (and new members). Following is his report on the two meetings.

The Safe Injection Global Network (SIGN) was launched in 1999. 120 participants from over 28 countries participated in the 7th meeting of SIGN at the Sofitel Plaza Hotel, Hanoi, Viet Nam, 14-16th November 2005.

The conference was opened with welcome remarks from Mr Le Ngoc Trong, Vice Minister of Health, Viet Nam, and Professor Nguyen Khac Hai, National Institute of Occupational Environmental Health (NIOEH). Dr Neelam Dhringa, Coordinator, Blood and Injection Safety, World Health Organisation (WHO) made the Opening Address.

Following the opening address, Dr Dhringa went on to discuss the WHO strategic directions for injection safety and related infection prevention and control. Future priorities were identified as:

- promoting safe and appropriate use of injections
- providing advocacy and focus on injection safety and infection prevention and control at national level;
- seeking support of countries for implementation of WHA/EB resolutions on injection safety and infection prevention and control; and
- measuring the impact of global injection safety activities.

The remaining sessions on the first morning focused on global and country initiatives for injection and infection prevention and control. Ly Ngoc Kinh and Pham Duc Muc from the Ministry of Health, Viet Nam, reported that 26% of healthcare workers in Viet Nam were

experiencing needlesticks, with a reporting rate of 29%. In the following presentation Chean Rithy Men reported that the rate of needlestick injuries in Cambodia was 47% among healthcare workers, of which 57% were due to two-handed recapping. Selma Khamassi reported on improvement of injection practices with a post intervention evaluation in Syria, and Dina Pfeifer presented the WHO Report on the Immunisation Safety Priority Project (ISPP). Sophi Logez (WHO), in her presentation on Promoting Rational Use of Injections, reported that there are 16 billion injections administered every year, of which half are non-sterile.

The afternoon sessions concluded with a group discussion on lessons for scaled up approaches. Issues raised included alternative ways of giving drugs, strategies for training, overuse of injections and infusions, how to reduce injections, attitudes of health providers, and lack of recognition for good performers.

Delegates then adjourned for dinner and a safe injection technology exhibition sponsored by the International Association of Safe Injection Technology (IASIT). IASIT promotes the use of the most immediate and efficient methods to ensure safe injection worldwide. As an industry association, IASIT is working towards more responsible and safe delivery of injections. Exhibiting companies included BD, Emunio, Hindustan Syringes, Mediplast – Medical Plastic Company, Retractable Technologies, Tyco Healthcare and Unilife.

Day 2 began with five presentations focusing on heath care worker protection and occupational exposures to bloodborne pathens. Susan Wilburn commenced proceedings by presenting a new WHO tool kit to prevent needlestick injuries and occupational exposure to HIV. The tool kit was piloted in Capetown and revised based on input from 12 countries. All delegates attending the meeting received the tool kit on CD-ROM. The project was funded by the National Institute for Occupational Safety and Health (NIOSH) USA.

Julie Storr brought the second day to a close with details of the Global Patient Safety Challenge 2005-2006. The objective of the Global Patient Safety Challenge is to catalyse countries to achieve safer health care. The Challenge for 2005-2006 is titled “Clean Care is Safer Care: Clean Hands” with the objective to reduce heathcare associated infections globally based on the WHO Guidelines on Hand Hygiene in Health Care which is currently in advanced draft.

The final day of the meeting, Day 3, was devoted to quality and access to injection devices, and the challenges and issues of healthcare waste management in Central America and the Caribbean, Viet Nam, Ekraine, Indonesia and Turkey.

Allan Bass gave a report on the SIGNpost newsletter and website and the meeting was concluded and discussion on the way forward was led by Gerald Dziekan (WPRO). Two decades into the HIV pandemic and unsafe injection practices are still common.

The general consensus from the delegates, both formally and informally during social gatherings, was that the meeting was an invaluable forum for networking and sharing information, initiatives, experiences and issues. It was also frequently voiced that SIGN has expanded from its core purpose to improve injection safety to now encompass wider infection prevention and control. However SIGN remains committed to the challenges this may present.

The 2nd International Scientific Conference on Occupational & Environmental Health Conference was held from 16-18 November. It was organised by the Vietnam Association of Occupational Health (VINAOH) and NIOEH in collaboration with the University of Washington, USA. Delegates working in the field of occupational and environmental health and school health attended from USA, Australia, Southeast Asian countries and neighboring countries such as India, Thailand, Lao and Cambodia. The opening ceremony included speeches by Professor Le Van Trung, President of Vietnam Association of Occupational Health, Professor Matthew Keifer, University of Washington, USA, and the US Ambassador, Michael W. Marine.

Concurrent sessions were divided into four categories: Environmental Health – Industrial Hygiene; Psycho-Physiology of Work and Ergonomics; Occupational Diseases; and School Health and Other.

There were four papers presented that were directly related to healthcare worker safety and bloodborne pathogens.

Vu Huu Viet presented a paper on the Rate of Medical Officers Carrying HBsAg in Nam Dinh Province in 2004. The results showed that the rate of medical officers with positive HBsAg in 2004 was 14.09%. The HBV prevalence of medical officers more often exposed to patients and biological fluid in tuberculous and infectious departments was higher than that of other departments.

Nguyen Dinh Trung presented a paper on the Study of Infection of Health Care Workers Exposed to HIV/AIDS. The study showed that the rate of injuries by infected needles to the hands when caring for patients with HIV/AIDS was 10.4% (13.5% for nurse groups). The rate of splashing bio-liquid on mucous membranes was 16.1% with the highest rate experienced by midwives at 40%. However the HIV tests of 271 healthcare workers who took care of patients with HIV/AIDS showed no positive HV cases.

Le Thi Anh Thu presented a paper on the Surveillance and Management of Occupational Exposure to HIV at Cho Ray Hospital in Viet Nam in Five Years 2000-2004. Between February 2000 and December 2004, 43 heathcare workers sustained HIV occupational exposures at Cho Ray Hospital; 60.5% were percutaneous injuries and 25.6% were splashes to the eyes. There were no cases of seroconversion. Of 43 healthcare workers offered PEP, 12 (27.9%) failed to complete the full course of treatment mainly due to side effects. Staff who sustained exposures included 16 nurses, 14 surgeons and 9 doctors. The majority of exposures occurred during surgical procedures (52.4%).

On the final afternoon Philip Melling presented information on Safehands and encouraged delegates to join the network.

Once the new WHO tool kit to prevent needlestick injuries and occupational exposure to HIV is available on-line the link will be posted on the SafeHandS website. You will be able to access it on the 'useful links & resources' page under 'preventing needlestick injuries' (http://www.uow.edu.au/health/safehands/useful_links_resources.html). We have contacted WHO about posting the whole resource on our website. SafeHandS will also ensure that we share with you the WHO Guidelines on Hand Hygiene in Health Care once they are finalised.

To find out more about SIGN, you can visit the website at http://www.who.int/injection_safety/en/ or you can subscribe to the weekly SIGN newsletter (SIGN Post) by sending an email to sign@who.int

The Global Patient Safety Challenge 2005-2006

Health care-associated infection is a major issue in patient safety. In acknowledgement of this, the World Alliance for Patient Safety, part of the World Health Organization, addresses the problem of health care-associated infection through the Global Patient Safety Challenge programme with the theme "Clean Care is Safer Care". Information relating to the Alliance can be found at http://www.who.int/patientsafety/worldalliance/en/

The launch of the Global Patient Safety Challenge was held on Thursday, 13 October 2005. The implementation of the Challenge comprises three major strategies:

- global and national "Clean Care is Safer Care" campaigns
- country statements pledging to address health care-associated infection
- testing implementation in districts

As part of the implementation strategies, WHO Member States will be invited to make a formal statement pledging their support to implement actions to reduce health care-associated infection within their country and to share results and learning internationally.

Background on the Global Patient Safety Challenge for 2005-2006

The Global Patient Safety Challenge is a core element of the Alliance's work (see http://www.who.int/patientsafety/challenge/en/) . A key component of the Challenge has been the development of the new WHO Guidelines on Hand Hygiene in Health Care.

With hand hygiene as the cornerstone, the challenge aims to integrate a set of interrelated actions aimed at infection control and prevention drawn from existing WHO interventions, strategies and guidelines on infection control and prevention. These are: blood safety, injection safety, safe clinical practices, and safe water and sanitation in health care. Together, this package of interventions will be promoted by the Alliance to encourage its use in all Member States.

Hand hygiene, a very simple action, remains the primary measure to reduce health care-associated infection and the spread of antimicrobial resistance, enhancing safety of care across all settings, from advanced health care establishments to community health posts across countries. The new WHO Guidelines on Hand Hygiene in Health Care have been developed in collaboration with experts from research and academic institutions worldwide and technical experts from WHO.

An Executive summary is available at:
http://www.who.int/patientsafety/events/05/HH_en.pdf

For further information on the Challenge, please contact Julie Storr, Project Manager at WHO on storrj@who.int

Member Profile

To help link and support members, we provide a profile of a SafeHandS member.

Name: Umashankar

Title: Kumpatala

Contact Details:

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Describe your current job:

Immunisation Manager (field operations) Path-India (Hyderabad-Andhra Pradesh)

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

Joined as professional to work for Joint Forest Management (JFM), got into management of Small NGOs, shifted focus to Public health issues especially Mother & child, sharpened focus more into immunisation and injection safety. That's how joined the technical organisation Path at Hyderabad.

What do you like most about your job?

Support the implementation Government and Non-Government organisations technically about the critical issues about the immunisation and injection safety.

What do you like least about your job?

Nothing in particular.

What does health care worker safety mean to you?

Being healthy. Free from the infections, that generally crop up by unsafe practices in health.

What are you reading at the moment?

Guidelines for Management of Adverse Events following immunisation (AEFIs), India

What are you currently listening to?

Music

What is your favourite saying?

Be honest in whatever you do and say.

Current Resources

In this section, we list the abstracts of recent relevant articles about health care worker safety in the Asia Pacific. We will also list any new resources which might be helpful such as policies, protocols and training materials. In some instances we may include references from other regions if they can potentially be adapted to the region.

SafeHandS invites members to contribute by sending an e-mail to: safehands@sesiahs.health.nsw.gov.au

Title: **Influenza page**

Authors: Centre for Health Protection, Hong Kong

Date: Updated November 2005

Source: http://www.chp.gov.hk/view_content.asp?lang=en&info_id=590

Web site with information, health promotion resources and training materials for health professionals and the public on influenza, influenza pandemics and avian influenza.

Title: **Risk perception and impact of Severe Acute Respiratory Syndrome (SARS) on work and personal lives of healthcare workers in Singapore: what can we learn?**

Authors: Koh D, Lim MK, Chia SE, Ko SM, Qian F, Ng V, Tan BH, Wong KS, Chew WM, Tang HK, Ng W, Muttakin Z, Emmanuel S, Fong NP, Koh G, Kwa CT, Tan KB, Fones C

Date: July 2005

Source: Medical Care. 43(7):676-82

Abstract: INTRODUCTION: Healthcare workers (HCWs) were at the frontline during the battle against Severe Acute Respiratory Syndrome (SARS). Understanding their fears and anxieties may hold lessons for handling future outbreaks, including acts of bioterrorism. METHOD: We measured risk perception and impact on personal and work life of 15,025 HCWs from 9 major healthcare institutions during the SARS epidemic in Singapore using a self-administered questionnaire and Impact of Events Scale and analyzed the results with bivariate and multivariate statistics. RESULTS: From 10,511 valid questionnaires (70% response), we found that although the majority (76%) perceived a great personal risk of falling ill with SARS, they (69.5%) also accepted the risk as part of their job. Clinical staff (doctors and nurses), staff in daily contact with SARS patients, and staff from SARS-affected institutions expressed significantly higher levels of anxiety. More than half reported increased work stress (56%) and work load (53%). Many experienced social stigmatization (49%) and ostracism by family members (31%), but most (77%) felt appreciated by society. Most felt that the personal protective measures implemented were effective (96%) and that the institutional policies and protocols were clear (93%) and timely (90%). CONCLUSION: During epidemics, healthcare institutions have a duty to protect HCWs and help them cope with their personal fears and the very stressful work situation. Singapore's experience shows that simple protective measures based on sound epidemiological principles, when implemented in a timely manner, go a long way to reassure HCWs.

Title: **Human infection by avian influenza A H5N1**

Authors: Yuen KY, Wong SSY

Date: June 2005

Source: Hong Kong Medical Journal. 11 (3):189-99.

Abstract: The Southeast Asian outbreak of the highly lethal avian influenza A H5N1 infection in humans is unlikely to abate because of the enormous number of backyard farms providing poultry as the main source of food protein in developing countries. This increases the risk of the emergence of a reassortant pandemic influenza virus with improved human-to-human transmissibility. Currently triage of suspected cases by epidemiological risk factors remains the only practical way of case identification for laboratory investigation and infection control. The clinical usefulness of rapid diagnostic laboratory tests requires more vigorous evaluation. The lethality of this disease may reflect systemic viral dissemination, cytokine storm, or alveolar flooding due to inhibition of cellular sodium channels. The present circulating genotype Z is intrinsically resistant to amantadine and rimantadine. Prognosis

may be improved by early treatment with a neuraminidase inhibitor with good systemic drug levels, and post-exposure prophylaxis for health care workers is recommended. The role of immunomodulators and other modalities of therapy requires evaluation in randomised controlled trials, with prospective monitoring of the viral load and cytokine profiles in various clinical specimens. In view of the high fatality of the disease, a combination of contact, droplet, and airborne precautions are recommended as long as resources allow despite the fact that the relative importance of these three modes in nosocomial transmission of

Title: **Risk of respiratory infections in health care workers: lessons on infection control emerge from the SARS outbreak.**

Authors: Wilder-Smith A and Low JG

Date: March 2005

Source: Southeast Asian Journal of Tropical Medicine & Public Health. 36(2):481-8

Abstract: Close proximity of persons together with handling of human secretions (eg respiratory secretions) make health care workers (HCW) particularly vulnerable to transmission of droplet-transmitted respiratory infections. This was tragically highlighted during the international outbreak of severe acute respiratory syndrome (SARS) in 2003 with attack rates of more than 50% in HCW. The purpose of this article is to review common airborne and droplet-transmitted bacterial and viral respiratory tract infections with regard to their impact on health care workers. Lessons need to be learned from the SARS epidemic. The three main strategies to prevent or control occupationally acquired infections are relatively simple and cost-effective-droplet and contact precautions and for some pathogens also vaccination. Enforced implementation of stringent droplet precautions during the SARS crisis should be maintained; and this will most likely have a major additional impact on other nosocomial infections. Employee health services should proactively and creatively devise delivery systems that enhance compliance with vaccination programs for all health care workers. Hospital surveillance should be expanded to all respiratory diseases to facilitate early detection of nosocomial outbreaks, and this should also include surveillance of all HCW. Integrated syndromic and virological surveillance systems set up during the SARS epidemic will also further our understanding of other respiratory infections in the hospital setting. Even if pursuing early diagnosis for unspecific respiratory illnesses is expensive, identification of the causative organism may reduce unnecessary isolation, contact tracing and anxiety, in particular during an outbreak situation. We have a duty to protect our health care workers.

Title: **Infectious respiratory illnesses and their impact on healthcare workers: a review.**

Authors: Low JG and Wilder-Smith A

Date: January 2005

Source: Annals of the Academy of Medicine, Singapore. 34(1):105-10

Abstract: Respiratory illnesses are increasingly recognised as a growing concern for healthcare workers (HCWs) and patients. The recent hospital-based outbreak of Severe Acute Respiratory Syndrome (SARS) has once again highlighted the vulnerability of HCWs. The new epidemic of the 21st century resulted in tremendous economic and psychological impact with its high rates of mortality and nosocomial transmission. Even as the epidemic was brought under control within months, many details about the SARS coronavirus remained a mystery. The threat of another potential global outbreak continues to lurk in the background. Many valuable lessons have been learned through the SARS epidemic. It is, therefore, timely for us to review some of the respiratory pathogens that are well-known to cause nosocomial outbreaks. We need to be better armed to deal with future potential outbreaks and biohazardous situations. The importance of safeguarding the health of our medical staff and the community cannot be over-emphasised. In this paper, we review the incidence, transmission and various preventive strategies of respiratory illnesses in HCWs, in particular, new diagnostic tools, infection control management strategies, personal protective equipments, vaccination programmes and post-exposure prophylaxis.

Title: **Lack of H5N1 avian influenza transmission to hospital employees, Hanoi, 2004.**

Authors: Liem NT, Lim W, WHO International Avian Influenza Investigation Team, Vietnam

Date: February 2005

Source: Emerging Infectious Diseases. 11(2):210-5

Abstract: To establish whether human-to-human transmission of influenza A H5N1 occurred in the healthcare setting in Vietnam, we conducted a cross-sectional seroprevalence survey among hospital employees exposed to 4 confirmed and 1 probable H5N1 case-patients or their clinical specimens. Eighty-three (95.4%) of 87 eligible employees completed a questionnaire and provided a serum sample, which was tested for antibodies to influenza A H5N1. Ninety-five percent reported exposure to > or = 1 H5N1 case-patients; 59 (72.0%) reported symptoms, and 2 (2.4%) fulfilled the definition for a possible H5N1 secondary case-patient. No study participants had detectable antibodies to influenza A H5N1. The data suggest that the H5N1 viruses responsible for human cases in Vietnam in January 2004 are not readily transmitted from person to person. However, influenza viruses are genetically variable, and transmissibility is difficult to predict. Therefore, persons providing care for H5N1 patients should continue to take measures to protect themselves.

Title: **Low prevalence of subclinical severe acute respiratory syndrome-associated coronavirus infection among hospital healthcare workers in Hong Kong.**

Authors: Lai TS, Keung Ng T, Seto WH, Yam L, Law KI, Chan J

Date: 2005

Source: Scandinavian Journal of Infectious Diseases. 37(6-7):500-3

Abstract: We recruited 688 hospital healthcare workers who cared for patients with severe acute respiratory syndrome (SARS) and did not develop the disease in the Hong Kong outbreak in 2003. A questionnaire survey was conducted and serum samples were collected for SARS-associated coronavirus (SARS-CoV) antibody. The high-risk procedures performed and the types of unprotected exposures were recorded for analysis. Only 1 asymptomatic nurse had positive serological test. The result demonstrates the low rate of subclinical SARS-CoV infection in hospital healthcare workers and that the infection control practice against SARS in Hong Kong's hospitals during the outbreak was highly effective.

Title: **Asymptomatic SARS coronavirus infection among healthcare workers, Singapore.**

Authors: Wilder-Smith A, Teleman MD, Heng BH, Earnest A, Ling AE, Leo YS

Date: July 2005

Source: Emerging Infectious Diseases. 11 (7):1142-5

Abstract: We conducted a study among healthcare workers (HCWs) exposed to patients with severe acute respiratory syndrome (SARS) before infection control measures were instituted. Of all exposed HCWs, 7.5% had asymptomatic SARS-positive cases. Asymptomatic SARS was associated with lower SARS antibody titers and higher use of masks when compared to pneumonic SARS.

Title: **The psychological impact of severe acute respiratory syndrome outbreak on healthcare workers in emergency departments and how they cope.**

Authors: Wong TW, Yau JK, Chan CL, Kwong RS, Ho SM, Lau CC, Lau FL, Lit CH

Date: February, 2005

Source: European Journal of Emergency Medicine. 12(1):13-8

Abstract:

OBJECTIVES: The objectives of the present study were to examine the degree and the sources of mental distress and the coping strategies adopted by healthcare workers (HCW) of emergency departments (ED) in Hong Kong during the outbreak of severe acute respiratory syndrome (SARS). METHODS: Questionnaires were sent to all doctors, nurses and healthcare assistants (HCA) working in the ED of all public hospitals. The overall degree of mental distress was measured by

a single-item 11-point Likert scale. The source of distress was measured by an 18-item questionnaire, which was designed based on the experience of clinical psychologist colleagues providing counselling to staff taking care of SARS patients. The Brief Cope questionnaire was used to study coping strategies adopted by staff.

RESULTS: A total of 1260 questionnaires were sent out and the response rate was approximately 37%. The mean overall distress level was 6.19 out of a 10-point scale. The mean overall distress levels for doctors, nurses and HCA were 5.91, 6.52 and 5.44, respectively ($F(2,420)=6.47$, $P<0.005$). The overall distress level for nurses was significantly higher than for HCA ($P<0.005$) but not doctors. The overall distress level was highly and significantly correlated with the six sources of distress: vulnerability/loss of control ($r=0.68$); health of self ($r=0.62$); spread of virus ($r=0.60$); health of family and others ($r=0.59$); changes in work ($r=0.46$); being isolated ($r=0.45$). The scores for nurses were significantly higher than for doctors in terms of the six sources of distress (all P values <0.01). HCA were significantly higher than doctors (but not nurses) in worrying about their family's and others' health ($P<0.05$). In terms of coping strategies, doctors were significantly more likely than nurses and HCA to use planning ($P<0.05$ and <0.01 respectively); nurses were significantly more likely than doctors to use behavioural disengagement ($P<0.01$); whereas HCA were significantly more likely than doctors to use self distractions ($P<0.05$).

CONCLUSIONS: SARS had caused a significant level of distress among ED staff. The distress level was highest for nurses, followed by doctors and HCA. The three most important variables that could account for the distress level were loss of control/vulnerability, fear for self-health and spread of the virus. Overall, the more frequently adopted coping strategies were acceptance, active coping, and positive framing.

Title: **Fear of severe acute respiratory syndrome (SARS) among health care workers.**

Authors: Ho SM, Kwong-Lo RS, Mak CW, Wong JS

Date: April, 2005

Source: Journal of Consulting & Clinical Psychology. 73(2):344-9

Abstract: In this study, the authors examined fear related to severe acute respiratory syndrome (SARS) among 2 samples of hospital staff in Hong Kong. Sample 1 included health care workers (n=82) and was assessed during the peak of the SARS epidemic. Sample 2 included hospital staff who recovered from SARS (n=97). The results show that participants in both samples had equal, if not more, concern about infecting others (especially family members) than being self-infected. Sample 1 participants had stronger fear related to infection than Sample 2 participants, who seemed to be concerned more about other health problems and discrimination. Participants with lower self-efficacy tended to have higher fear related to SARS. Fear related to SARS was also correlated positively with posttraumatic stress symptoms among respondents of Sample 2 (recovered staff). Interventions based on these findings are described.

Title: **Severe acute respiratory syndrome (SARS) and healthcare workers**

Authors: Chan-Yeung M

Date: October – December 2004

Source: International Journal of Occupational & Environmental Health. 10 (4):421-7

Abstract: The recent outbreak of severe acute respiratory synt drome (SARS) was spread by international air travel, a direct result of globalization. The disease is caused by a novel coronavirus, transmitted from human to human by droplets or by direct contact. Healthcare workers (HCWs) were at high risk and accounted for a fifth of all cases globally. Risk factors for infection in HCWs included lack of awareness and preparedness when the disease first struck, poor institutional infection control measures, lack of training in infection control procedures, poor compliance with the

use of personal protection equipment (PPE), exposure to high-risk procedures such as intubation and nebulization, and exposure to unsuspected SARS patients. Measures to prevent nosocomial infection included establishing isolation wards for triage, SARS patients, and step-down; training and monitoring hospital staff in infection-control procedures; active and passive screening of HCWs; enforcement of droplet and contact precautions; and compliance with the use of PPE.

Title: **Protecting health care workers from SARS and other respiratory pathogens: a review of the infection control literature**

Author: Gamage B, Moore D, Copes R, Yassi A, Bryce E, The BC Interdisciplinary Respiratory Protection Study Group

Date: March 2005

Source: American Journal of Infection Control. 33(2):114-21

Abstract:
BACKGROUND: Severe Acute Respiratory Syndrome (SARS) was responsible for outbreaks in Canada, China, Hong Kong, Vietnam, and Singapore. SARS focused attention on the adequacy of and compliance with infection control practices in preventing airborne and droplet-spread transmission of infectious agents.
METHODS: This paper presents a review of the current scientific knowledge with respect to the efficacy of personal protective equipment in preventing the transmission of respiratory infections. The effectiveness of infection control policies and procedures used in clinical practice is examined.
RESULTS: Literature searches were conducted in several databases for articles published in the last 15 years that related to infection control practices, occupational health and safety issues, environmental factors, and other issues of importance in protecting workers against respiratory infections in health care settings.
CONCLUSION: Failure to implement appropriate barrier precautions is responsible for most nosocomial transmissions. However, the possibility of a gradation of infectious particles generated by aerosolizing procedures suggests that traditional droplet transmission prevention measures may be inadequate in some settings. Further research is needed in this area

Title: **Protecting health care workers from SARS and other respiratory pathogens: organizational and individual factors that affect adherence to infection control guidelines.**

Authors: Moore D, Gamage B, Bryce E, Copes R, Yassi A, The BC Interdisciplinary Respiratory Protection Study Group

Date: March 2005

Source: American Journal of Infection Control. 33(2):88-96

Abstract:
BACKGROUND: Traditional infection control policies have focused on engineering controls, specific protocols, and personal protective equipment (PPE). In light of the variable success in protecting health care workers (HCWs) from Severe Acute Respiratory Syndrome (SARS) in 2003, organizational and individual factors related to self-protective behavior in health care settings may also play an important role.
METHODS: A critical review of the literature was conducted, directed at understanding what organizational and individual factors are important in protecting HCWs from infectious diseases at work.
RESULTS: Organizational factors, such as a positive safety climate, have been associated with increased HCW adherence to universal precautions. There is some evidence that appropriate training of HCWs could be effective in changing HCW behavior if appropriate follow-up is applied. Very little research into these factors has been conducted with regard to preventing exposures to respiratory tract pathogens, but there was evidence from the SARS outbreaks that training programs and the availability of adequate PPE were associated with a decrease risk of infection.
CONCLUSION: Variations in organizational and individual factors can explain much of the variations in self-protective behavior in health care settings. It is likely that these factors were also important determinants during the SARS outbreaks, but they have not been extensively studied.

Title: **Anti-SARS-CoV immunoglobulin G in healthcare workers, Guangzhou, China**

Author: Chen WQ, Lu CY, Wong TW, Ling WH, Lin ZN, Hao YT, Liu Q, Fang JQ, He Y, Luo FT, Jing J, Ling L, Ma X, Liu YM, Chen GH, Huang J, Jiang YS, Jiang WQ, Zou HQ, Yan GM

Date: January 2005

Source: Emerging Infectious Diseases. 11 (1):89-94

Abstract: To determine the prevalence of inapparent infection with severe acute respiratory syndrome (SARS) among healthcare workers, we performed a serosurvey to test for immunoglobulin (Ig) G antibodies to the SARS coronavirus (SARS-CoV) among 1,147 healthcare workers in 3 hospitals that admitted SARS patients in mid-May 2003. Among them were 90 healthcare workers with SARS. As a reference group, 709 healthcare workers who worked in 2 hospitals that never admitted any SARS patients were similarly tested. The seroprevalence rate was 88.9% (80/90) for healthcare workers with SARS and 1.4% (15/1,057) for healthcare workers who were apparently healthy. The seroprevalence in the reference group was 0.4% (3/709). These findings suggest that inapparent infection is uncommon. Low level of immunity among unaffected healthcare workers reinforces the need for adequate personal protection and other infection control measures in hospitals to prevent future epidemics.

Title: **Impact of severe respiratory syndrome on anxiety levels of front-line health care workers.**

Authors: Poon E, Liu KS, Cheong DL, Lee CK, Yam LY, Tang WN

Date: October 2004

Source: Hong Kong Medical Journal. 10 (5):325-30

Abstract:
OBJECTIVE: To identify anxiety levels among front-line health care workers during the 2003 severe acute respiratory syndrome outbreak.
DESIGN: Questionnaire survey.
SETTING: Regional hospital, Hong Kong.
PARTICIPANTS: All hospital staff were given a questionnaire; administrative staff who had not had any patient contact served as controls.
MAIN OUTCOME MEASURES: Levels of contact with patients who had severe acute respiratory syndrome were measured and correlated with anxiety levels as determined by the State-Trait Anxiety Inventory.
RESULTS: Of 4252 questionnaires distributed between May and June 2003, 2040 (48.0%) were returned and 1926 (45.3%) were valid for analysis. Overall, 534 (27.7%) respondents had had contact with patients with severe acute respiratory syndrome. Anxiety scores ranged from 20 to 80, and mean (standard deviation) scores were higher among staff who had had contact with patients with severe acute respiratory syndrome than among those who had not (52.6 [10.5] versus 49.8 [10.1], respectively; $P<0.01$). Mean anxiety levels were higher among workmen, health care assistants, and nurses than among administrative staff controls or doctors ($P<0.01$). Anxiety scores were correlated with burnout scores (Pearson's correlation coefficient, 0.52-0.59) and with discomfort from wearing protective gear (0.21-0.32).
CONCLUSION: Severe acute respiratory syndrome has likely stressed the public health care system. Prediction and early identification of adverse factors in a crisis situation would allow early implementation of interventions to reduce and counteract the impact of this stress.

Title: **Survey of stress reactions among health care workers involved with the SARS outbreak.**

Authors: Bai Y, Lin CC, Lin CY, Chen JY, Chue CM, Chou P

Date: September 2004

Source: Psychiatric Services. 55(9):1055-7

Abstract: The outbreak of severe acute respiratory syndrome (SARS) was unique because it was highly concentrated in health care settings and a large number of health care workers were infected. This study investigated stress reactions among 338 staff members in a hospital in East Taiwan that discontinued emergency and outpatient services to prevent possible nosocomial outbreak. Seventeen staff members (5 percent) suffered from an acute stress disorder; stepwise multiple logistic regression analysis determined that quarantine was the most related factor. Sixty-six staff

members (20 percent) felt stigmatized and rejected in their neighborhood because of their hospital work, and 20 of 218 health care workers (9 percent) reported reluctance to work or had considered resignation.

Title: **Factors associated with transmission of severe acute respiratory syndrome among health-care workers in Singapore.**

Authors: Teleman MD, Boudville IC, Heng BH, Zhu D. Leo YS.

Date: October 2004

Source: Epidemiology & Infection. 132(5):797-803

Abstract: Between 1 and 22 March 2003, a nosocomial outbreak of Severe Acute Respiratory Syndrome (SARS) occurred at the Communicable Disease Centre in Tan Tock Seng Hospital, Singapore, the national treatment and isolation facility for patients with SARS. A case-control study with 36 cases and 50 controls was conducted of factors associated with the transmission of SARS within the hospital. In univariate analysis, contact with respiratory secretions elevated the odds ratio to 6.9 (95 % CI 1.4-34.6, P= 0.02). Protection was conferred by hand washing (OR 0.06, 95% CI 0.007-0.5, P=0.03) and wearing of N95 masks (OR 0.1, 95% CI 0.03-0.4, P=0.001). Use of gloves and gowns had no effect. Multivariate analysis confirmed the strong role of contact with respiratory secretions (adjusted OR 21.8, 95 % CI 1.7 274.8, P=0.017). Both hand washing (adjusted OR 0.07, 95 % CI 0.008-0.66, P=0.02) and wearing of N95 masks (adjusted OR 0.1, 95% CI 0.02-0.86, P=0.04) remained strongly protective but gowns and gloves had no effect.

Title: **Reducing the risk of injuries to staff from insulin pens.**

Authors: Edwards C, Metcalfe L, Allan J, Haynes A

Date June 21-27, 2005

Source: Nursing Times. 101(25):34-6

Abstract: This article describes problems in the use and disposal of sharps used in the administration of insulin therapy in a hospital setting. Subsequent investigation and action taken to reduce the risk of needlestick injuries in staff who administer insulin therapy with an insulin pen delivery system are also discussed.

Title: **The epidemiology of the outbreak of severe acute respiratory syndrome (SARS) in Hong Kong-what we do know and what we don't.**

Authors: Yu IT, Sung JJ.

Date: October 2004

Source: Epidemiology & Infection. 132(5):781-6

Abstract: Severe acute respiratory syndrome (SARS) struck Hong Kong bitterly in the spring of 2003, infecting 1755 persons and claiming nearly 300 lives. The epidemic was introduced by travellers from southern China, where the disease had originated. It started in late February and lasted until early June. Two notable 'super-spreading' events were reported, one inside a teaching hospital and the other in a private housing estate. Other than in the super-spreading events, the infectivity in the community appeared to be low, and there were few, if any, asymptomatic or subclinical infections. Health-care workers were at particular risk and accounted for 22 % of all probable cases. The main modes of transmission were through droplet spread and close/direct contacts, but situations conducive to aerosol generation appeared to be associated with higher risk. Our review suggests that there are still many unknown factors concerning the mode of transmission and environmental risk that need to be clarified.

Title: **New paradigm for protection: the emergency ambulance services in the time of severe acute respiratory syndrome.**

Authors: Lateef F, Lim SH, Tan EH

Date July - September 2004

Source: Prehospital Emergency Care. 8(3):304-7

Abstract: Severe acute respiratory syndrome (SARS) is a newly emerging and highly infectious form of atypical pneumonia with a high rate of transmission, especially among health care workers. With SARS, certain policies had to be implemented rapidly by the emergency ambulance services and the Ministry of Health

to support and protect all personnel adequately. The authors discuss the changes in policies and personnel behavior, the training and education that had to be disseminated widely, and certain alternatives in policies such as transportation. The authors hope to share their experience in the implementation of these strategies by the Singapore Civil Defence Force and stress the importance of the psychological preparedness of the paramedics and prehospital care providers worldwide in this era of SARS

Title: **Psychological impact of the 2003 severe acute respiratory syndrome outbreak on health care workers in a medium size regional general hospital in Singapore.**

Authors: Chan AO, Huak CY

Date: May 2004

Source: Occupational Medicine (Oxford). 54(3):190-6

Abstract:
AIMS: To describe the psychological impact of severe acute respiratory syndrome (SARS) on health care workers in a regional general hospital 2 months post-outbreak. METHOD: Doctors and nurses were encouraged to participate. The survey consisted of self-report measures: demographics, the General Health Questionnaire (GHQ) 28 and Impact of Events Scale (IES). A questionnaire enquiring about changes in life's priorities due to SARS and circumstances that helped with coping was used. Participation was strictly voluntary and responses anonymous.
RESULTS: In total 177 out of 661 (27%) participants [40 out of 113 (35%) doctors and 137 out of 544 (25%) nurses] had a GHQ 28 score >or=5. Doctors [P = 0.026, odds ratio (OR) = 1.6 and 95% confidence interval (CI) = 1.1-2.5] and single health care workers were at higher risk (P = 0.048, OR = 1.4 and 95% CI = 1.02-2.0) compared to nurses and those who were married. Approximately 20% of the participants had IES scores >or=30, indicating the presence of post-traumatic stress disorder (PTSD). Four areas were classified as more important using factor analysis: health and relationship with the family, relationship with friends/colleagues, work and spiritual. The areas for coping strategies were clear directives/ precautionary measures, ability to give feedback to/obtain support from management, support from supervisors/colleagues, support from the family, ability to talk to someone and religious convictions. Support from supervisors/colleagues was a significant negative predictor for psychiatric symptoms and PTSD. Work and clear communication of directives/ precautionary measures also helped reduce psychiatric symptoms.
CONCLUSIONS: Many health care workers were emotionally affected and traumatized during the SARS outbreak. Hence, it is important for health care institutions to provide psychosocial support and intervention for their health care workers.

Calendar of Events

In SafeHandS *invites members to advise us about any future events related to health care worker safety which other members may be interested to attend. Send an email to: safehands@sesiahs.health.nsw.gov.au*

You can also access a calendar of global infection control conferences at:
http://www.chica.org/ific/ific.html#2005

16th Annual Scientific Meeting of the Society for Healthcare Epidemiology of America (SHEA)
18-21 March, 2006, Chicago, Illinois, USA

The goal of the meeting is to support SHEA's mission for the promotion, development, and application of scientific principles to healthcare epidemiology, in order to advance education, foster safe healthcare environments, and improve patient outcomes. The program includes issues such as antibiotic resistance, hand hygiene, healthcare worker and patient safety and emerging issues such as avian influenza, rapid detection methods, advances in epidemiologic methods and new paradigms for infection prevention.

For more information, visit the website: www.shea-online.org

International Conference on Emerging Infectious Diseases
19-22 March, 2006, Atlanta, Georgia, USA

This is the fifth International Conference on

on Emerging Infectious Diseases. The conference brings together public health professional to encourage the exchange of scientific and public health information on global emerging infectious disease issues. Major topics include current work on surveillance, epidemiology, research, communication and training, bioterrorism, and preventions and control of emerging infectious diseases, both in the United States and abroad.

Late-breaker Abstract Submission Deadline:
1 February 2006
Call for Abstracts at:
http://www.iceid.org/documents/Call4Abs_Final.pdf
For more information, visit the website:
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16th European Congress of Clinical Microbiology and Infectious Diseases
1-4 April, 2006, Nice, France

For more information, visit the website: http://www.akm.ch/eccmid2006/

Bridging Global Partnerships, Community and Hospital Infection Control Association Canada and Co-hosted by Southwestern Ontario Professionals in Infection Control, a Chapter of CHICA-Canada
6-10 May, 2006, London, Ontario, Canada

For more information, visit the website:
http://www.chica.org/2006conference.html

Association of Professionals in Infection Control and Epidemiology (APIC) Annual Educational Conference and International Meeting
11-15 June, 2006, Tampa, Florida, USA

APIC's Annual Educational Conference and International Meeting is considered an important educational opportunity for healthcare professional in all settings who have infection control and prevention responsibilities. It is also the meeting place for novice and experienced infection control practitioners to expand their knowledge base, establish practical expertise in infection control and epidemiology and network with infection control experts and colleagues.

For more information, visit the website:
http://www.apic.org/Content/NavigationMenu/Education/Annual/Conference_Conference1.htm

12th International Congress on Infectious Diseases (ISID)
15-18 June, 2006, Lisbon, Portugal

ISID has membership from more than 100 countries and focuses on both low and high resource settings. Abstract submission will begin no later than 1 October, 2005. If you pre-register with the conference, they will send you an announcement when abstract submission has begun.

For more information, visit the website:
http://www.isid.org/12th_icid/

"Infection Control: Evidence vs. Reality", 2nd International Conference of Infection Control, Hong Kong Infection Control Nurses' Association
16-18 June, 2006, Hong Kong Special Administrative Region, China

For more information, visit the website: http://www.theific.org/temp/HKICNA06.pdf

7th Annual Congress of the International Federation of Infection Control (IFIC)
3-5 July, 2006, Stellenbosch, South Africa

The programme includes international speakers from Latin America and the Middle East as well as Europe and North America, with the programme including sessions devoted to (amongst others):

- MRSA and other antibiotic resistant organisms
- Tuberculosis
- Transmission of blood borne viruses
- Institutions as amplifiers of infectious diseases
- Sterile services in developing countries
- Infection control in high care settings
- Antibiotic use and pressure
- The economics of infection control
- The effect of migration on communicable diseases
- Quality management and infection control Waste disposal

For more information, visit the website: http://www.theific.org/southafrica2006/default1.asp

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What are the 2 most important things you would like from SafeHandS network: (select 2 only)

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- [ ] Links to other organisations
- [ ] Sample policies and protocols
- [ ] Other (please specify) _____

Areas of expertise or resources in relation to health care worker safety I am willing to share with colleagues: (select 3 only)

- [ ] Education and training
- [ ] Education resources—training package
- [ ] Education resources—Web-based training
- [ ] Clinical consultancy—HIV or hepatitis
- [ ] Clinical consultancy—Infection control
- [ ] Policy development
- [ ] Sample policies and protocols
- [ ] Other (please specify) _____

Privacy

Individual information collected on this form will only be accessed by the SafeHandS secretariat (who are employees of the Albion Street Centre of the University of Wollongong) unless consent is given as below.

I give consent for any information in this form to be made available to other members of SafeHandS.

☐ Yes ☐ No

If you tick yes above, personal information provided in this form will only be disclosed to a third party if an individual or organisations are seeking advice or services from members with specific expertise or wishing to contact members with similar areas of interest. This will only be done with your prior consent.

Thank you for completing this for.

We look forward to sharing information through SafeHandS!

You can return this form by:

Email: **safehands@sesiahs.health.nsw.gov.au**

Or Fax: **61 2 9380 6572**

Or Mail: **SafeHandS, International Health Services Unit**
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