Editorial

The lightening strike

No-one will be unaware that the dominant issue in the last few weeks has been the emergence of novel influenza A(H1N1), originating in Mexico.

Most of you will have been incredibly busy dealing with this. This edition of the newsletter is given over to reviewing the current situation.

Dr Nicol Black

SHIPSAN TRAINET Editor

New Influenza H1N1 virus
Preparedness on passenger ships

How it started

The disease came to light on the 17th April when 2 children in southern California were recognised to be infected with a novel strain of swine flu. Historically, the US would expect about one case of swine influenza in humans every 1-2 years.

By 24th April, there were 8 confirmed cases in the US, an outbreak in a New York high school and confirmation of cases in Mexico. By 27th April there were cases in Canada and New Zealand and the first confirmed cases in Europe appeared in Spain and Scotland, prompting the World Health Organisation (WHO) to raise its pandemic alert level to Phase 4 and then to Phase 5 on the 29th. The WHO definition of level 5 is that the virus has caused sustained community level outbreaks in at least two countries in one WHO region and a pandemic is considered imminent.
Summary of current knowledge
At the time of going to press (26 May) 46 countries have reported 12,954 cases of influenza A(H1N1) worldwide. There are 360 cases in 19 EU countries. The virus is a novel influenza A (H1N1) strain of swine origin. Early indications are that this novel virus spreads rapidly and efficiently with substantially higher transmissibility than seasonal influenza and comparable with previous pandemics (www.sciencexpress.org 11 May 2009 10.1126/science.1176062). Generally the illness is mild, but the percentage of patients requiring hospitalisation is higher than expected with seasonal influenza. In Mexico, the attack rate in children was twice that of adults, with an estimated overall case fatality ratio of 0.4%, comparable with the 1957 pandemic. Updates on current activity can be found at:

- www.cdc.gov/h1n1flu/
- www.who.int
- www.ecdc.europa.eu
- www.hpa.org.uk

Swine influenza
Swine Influenza is a respiratory disease of pigs caused by type A influenza viruses and outbreaks in pigs happen regularly. People do not normally get swine influenza though cases of swine influenza in humans can occur, usually after direct or close contact with infected pigs. The person-to-person transmission that is being investigated in Mexico has been previously reported but is rare. Infection with swine influenza virus has been detected occasionally in humans since the 1950s. It is rare in Europe; a single case with mild symptoms was reported in November 2008 in Spain. In the US there is an active swine influenza surveillance programme to monitor pig viruses as they see more diversity in viruses there than in any other country.

Clinical illness novel influenza A (H1N1)
So far, most people who have contracted the novel influenza A (H1N1) virus have had relatively mild symptoms (sore throat, cough, runny nose, fever, malaise, headache, joint/muscle pain, vomiting/diarrhoea) and have recovered without antiviral treatment. Antiviral drugs may reduce the severity and duration of illness, particularly in people with underlying chronic disease. The current virus is sensitive to Oseltamivir and Zanamivir with the potential emergence of resistance being closely monitored. The apparently high initial mortality in cases in Mexico is not yet explained.

Travel restrictions
The escalation of the WHO categorisation to phase 4, then 5, very quickly prompted most countries to activate their national influenza pandemic preparedness plans and some recommend against non-essential travel to Mexico. Many travel companies quickly suspended holiday charter flights to there. The US Centers for Disease Control and Prevention (CDC) lifted their recommendation against non-essential travel to Mexico on 15th May, as did the UK.
Cruise industry response

The swift response from the cruise industry was to drop visits to Mexico from ships’ itineraries. On 1st May, the Cruise Lines International Association Inc (CLIA) (www.cruising.org) issued a protocol, developed in collaboration with CDC, “to prevent the introduction and spread of viruses, including influenza A (H1N1) on board cruise ships”.

The protocol introduced pre-boarding screening of passengers and identification of cases on board for isolation and treatment. Under the protocol, all passengers will be required to complete and sign a written questionnaire before boarding a CLIA member cruise ship anywhere in the world. Passengers will not be permitted to travel if they exhibit influenza-like illness or meet the CDC suspect case-definition for influenza A(H1N1) (www.cdc.gov/swineflu/casedef_swineflu.htm). These measures were being adopted to prevent further spread of the virus and to protect passengers, crew and ports of call. When CDC lifted its recommendation against non-essential travel, cruise lines immediately began returning to Mexico.

Sources of Guidance

CDC Guidance

CDC issued Interim Novel Influenza A (H1N1) Guidelines for Cruise Ships on 4th May (www.cdc.gov/h1n1flu/guidance/cruiseships.htm). Its contents include;

- Advice to passengers to stay at home and not board the ship if they are sick.
- Symptomatic crew should have a medical evaluation before boarding the ship and, if allowed on board, should be confined to their quarters.
- Advice on hand washing, cough etiquette and social distancing (not using public areas and maintaining a distance of 2 metres between themselves and others).
- Use of gloves by crew members.
- Symptomatic passengers and crew should wear standard surgical face masks. Personnel assisting ill persons with influenza symptoms should wear approved particulate respirators.
- Passengers and crew who develop symptoms on board should be medically evaluated and confined to their cabin quarters for the duration of their illness.
- Passengers confined to their cabins should, where possible, have a family member or companion with them for ‘control, comfort or compliance’. The companion should take appropriate precautions to protect themselves.

There is also guidance on using antivirals on board, at www.cdc.gov/h1n1flu/recommendations.html, which recommends that people who are at high risk of complications for novel influenza A (H1N1), i.e. similar to seasonal influenza, and have been in close contact with a person who is a confirmed, probable or possible case, should start treatment, preferably within 48 hours of onset of illness. Close contacts of a case should also receive prophylactic antivirals.

There is also Guidance for Cleaning Passenger and Cargo Vessels during a Pandemic, at www.pandemicflu.gov/travel/cleaning_vessels.htm, which recommends procedures very similar to those in use for norovirus.

ECDC (www.ecdc.europa.eu)

ECDC publishes a daily Situation Report with the main developments in the past 24 hours. Of the 414 cases in Europe, most cases have been reported from Spain (138) and the UK (184). There is guidance on personal protective measures (social distancing, hand washing, respiratory hygiene and face masks).
WHO issues daily updates on the number of reported cases worldwide. It has guidance on:
- Healthcare management, including prevention and control and use of face masks
- Laboratory and virology protocols
- Pandemic preparedness
- Arrangements for surveillance and epidemiology
There are 27 guidance documents on Influenza A (H1N1).

International Maritime Health Association (www.imha.net)
The IMHA has published guidance for the maritime community, including ship operators as well as ships’ crews. It contains a straightforward explanation of the types of influenza, what a pandemic is and how it might affect a ship’s operations. It includes specific guidance on:
- Non-pharmaceutical measures
- Ship’s medical chest,
- Clinical use of antiviral medication
- Stockpiling antiviral medication and issues around international availability
- Immunization
- Management of suspected cases on board ship, including emphasizing the importance of declaring illness to the Master, isolation, personal protective equipment, health monitoring of contacts, disinfection and cleaning procedures, post-exposure prophylaxis for close contacts and deaths on board.
- International notification requirements and the role of the Port Health Authority
- Corporate influenza pandemic planning in the maritime environment

Port health issues
The major issues for port health will be what to do with disembarking passengers who meet the possible case-definition. If a passenger is unwell, then they will be transferred to the country’s health care system, but what about passengers who meet the case definition who are not unwell enough to require hospital admission? Can they travel home? Risk assessment may be difficult; some may have had a diagnostic test on board (though these are not highly reliable) and some may have had an antiviral for varying lengths of time. If they are clinically not too unwell to travel, the issues will be;
- Can they travel by private transport?
- Can they travel by surface public transport?
- When can onward air-travel be allowed?
- Should they be accommodated locally until swab results are available?
If they are travelling, they should be asked to wear a surgical mask, observe general hygiene measures and social distancing and have the minimum possible number of accompanying people.
It is likely that each country will have issued local guidance to port health authorities in line with their national influenza preparedness plans. It is likely that there will be differences in practice between countries in the EU.
The most difficult scenario will be a cruise ship arriving with several dozen cases of influenza-like illness, all at different stages of clinical progress, where there is no prior on-board confirmation of Influenza A (H1N1). Managing travel plans and finding suitable local holding areas may well be challenging, given the different approach in each country to legal powers, medical confidentiality and payment of costs of disrupted travel.
Also, our strategies will evolve as knowledge of this novel virus accumulates. It now appears to be more mild than first thought, with similar virulence to seasonal influenza, and looks unlikely to become another SARS-like experience. Effective containment measures will depend more on in-country measures than those taken at borders, e.g. advising returning travellers who become symptomatic to contact their health services. Good surveillance, including ships, will be crucial in developing understanding of the behaviour of the virus and maintaining public confidence.
The first report of novel influenza A (H1N1) on board ship appeared in the news on 26th May (www.abc.net.au/news/stories/2009/05/26/2581272.htm), with two children, one crew and one adult passenger reported to have the virus. Initially, two thousand passengers were asked to quarantine themselves for a week by the New South Wales health authorities, though this has been described as an “over-reaction” by others.
Vaccine
As this is a new virus, there is very little community immunity to it and seasonal influenza vaccines probably confer little or no protection against it. As yet WHO is advising continuing production of the expected seasonal influenza vaccine rather than switch to one for the new virus. If a vaccine to A (H1N1) is produced, it will be 5-6 months before the first doses become available. When a swine flu vaccine was used in the US in 1976, there was a marked rise in Guillain-Barre syndrome which led to its withdrawal.

The future
Summer is the season of low levels of influenza transmission in the Northern hemisphere. How the pandemic will behave in the Southern hemisphere, and as it becomes established in less wealthy countries, remains to be seen. Historically, influenza pandemics have circled the globe in two or three waves. The 1957 pandemic had a mild phase followed by one with higher mortality, while the 1968 pandemic remained mild in both waves. How long this pandemic will last, and how it might evolve, is entirely unpredictable.

We may have to have prevention and control measures on passenger ships for a considerable time to come. We should try to establish and maintain a surveillance system for influenza-like illness on board passenger ships as soon as possible, to guide and support these efforts (Eurosurveillance, Preparedness for the prevention and control of influenza outbreaks on passenger ships in the EU: the SHIPSAN TRAINET project communication).
EU MS response to the new Influenza A(H1N1) virus

**UK**

Health Protection Agency, UK, ([www.hpa.org.uk](http://www.hpa.org.uk)). The HPA publishes a daily update of cases in the UK and has guidance for the public and health professionals. The public advice includes advice for people entering the UK with influenza-type symptoms and advice on exclusion from schools and workplace. It also has on-line educational games for children, called e-Bug, covering hand-washing and respiratory hygiene.

The professional advice includes;
- Advice to clinicians for investigating individuals with possible swine influenza infection.
- Algorithm for the management of suspected cases in returning travellers.
- Algorithm for post-exposure prophylaxis for close contacts.
- Personal protective equipment for healthcare workers.

There is also in-country advice for non-travel settings.

*Dr Nicol Black, Editor*

**Estonia**

Currently Estonia are developing a lot of national guidelines and info materials in accordance with ECDC and WHO health information.

*Dr Jelena Rjabina, Health Protection Inspectorate, Estonia*

**Germany**

The Robert Koch-Institut together with the Geman Association on Ship Sanitation (AKKÜ) and the See-Berufsgenossenschaft/National Coast Guard released these recommendations:

1. recommendations for the management of crew members or passengers which are suspicious of having influenza (only in German)
   - [http://www.rki.de/cln_100/nn_200120/DE/Content/InfAZ/I/Influenza/IPV/Schweine_Schiffsp_01_en.pdf](http://www.rki.de/cln_100/nn_200120/DE/Content/InfAZ/I/Influenza/IPV/Schweine_Schiffsp_01_en.pdf)
   - [http://www.rki.de/cln_100/nn_200120/DE/Content/InfAZ/I/Influenza/IPV/Schweine_Schiffsp_01_templateId=raw_property=publicationFile.pdf/Schweine_Schiffsp_01.pdf](http://www.rki.de/cln_100/nn_200120/DE/Content/InfAZ/I/Influenza/IPV/Schweine_Schiffsp_01_templateId=raw_property=publicationFile.pdf/Schweine_Schiffsp_01.pdf)

2. health recommendations for crew members or passengers (in English and in German):
   - [http://www.rki.de/cln_100/nn_200120/DE/Content/InfAZ/I/Influenza/IPV/Schweine_Schiffsp_03_en.pdf](http://www.rki.de/cln_100/nn_200120/DE/Content/InfAZ/I/Influenza/IPV/Schweine_Schiffsp_03_en.pdf)
   - [http://www.rki.de/cln_100/nn_200120/DE/Content/InfAZ/I/Influenza/IPV/Schweine_Schiffsp_03_templateId=raw_property=publicationFile.pdf/Schweine_Schiffsp_03.pdf](http://www.rki.de/cln_100/nn_200120/DE/Content/InfAZ/I/Influenza/IPV/Schweine_Schiffsp_03_templateId=raw_property=publicationFile.pdf/Schweine_Schiffsp_03.pdf)

Pax who meet the case definition (clinical, epidemiological, lab results positive) will be isolated and are not allowed to travel. Pax who meet possibly the case definition (clinical and epidemiological positive) are not allowed to travel until receipt of the lab results (PCR). ALL other passengers (without symptoms) get the health recommendations (see 2.) and can move freely. The Port Health Officer collects the relevant data and contact details of all pax, so that all pax can be contacted if by the PHA if necessary.

*Dr. med. Tobias Riemer, Hamburg Port Health Center, Germany*
France

France has developed guidelines for the surveillance of ships and the management of possible cases.

**Routine surveillance:**
- Cruise ship personnel should be aware of the possible symptoms of novel influenza A (H1N1) virus.
- Every ship is claimed to send its last month itinerary and its Maritime Declaration of Health before entering into the port if it made a call in an affected area (sustainable community transmission).
- If a suspect H1N1 influenza case is identified aboard a ship according to the WHO definition, the captain is required to report the illness to the Maritime Medical Consultation Center (CCMM) to confirm the diagnosis.
- Leaflets are distributed to all passengers coming from an affected area.

**Management of possible case:**

If the ship will not be arriving imminently at a port, the CCMM will assist ship officials with the management and isolation of the suspect case and the recommendations for other passengers and crew members:
- Minimize the number of personnel directly exposed to the ill person.
- Separate the ill person from others as much as possible. Move the sick person to an isolated area such as their cabin quarters. They should remain in their cabins for the duration of their illness.
- Ill people to wear a surgical mask in common areas, if it can be tolerated, to reduce the number of droplets coughed or sneezed into the air. Surgical masks should not be reused.
- Remind the basic hygiene measures (wash hands regularly...).
- Ensure that the cruise ship is adequately cleaned and disinfected by personnel wearing appropriate PPE.
- When the ship arrives in a port, the local public health authorities will manage medical transportation of the patient upon arrival and containment measures (use of antiviral, close contact management, cruise ship disinfection procedures...)

At the moment, every possible case is transported to the closest hospital and place in an isolation room until diagnosis confirmation.

It is also recommended that close contacts avoid public transport to come back home, except if they wear a surgical mask. It is recommended that they stay home and limit contact with others as much as possible. When not alone or in a public place, they are asked to wear a surgical mask.

*Mr Thierry Paux, Ministry of Health, France*
The SHIPSAN TRAINET partnership has considered the following actions as options to be implemented, in order to prevent the spread of influenza infections on board cruise ships and ferries:

SHIPSAN TRAINET published on the 28th May 2009 an article in Eurosurveillance titled: Preparedness for the prevention and control of influenza outbreaks on passenger ships in the EU: the SHIPSAN TRAINET project communication.

Pre-embarkation
- Before boarding a ship, all persons (passengers, crew members, visitors) should be required to complete and sign a written health questionnaire which is designed to screen for the symptoms of influenza.
- Passengers who have symptoms of influenza should not be allowed to board the ship, and should be referred for medical evaluation to one of the national health services to ensure diagnosis and appropriate treatment.
- Crew members who have symptoms of influenza should undertake a medical evaluation and be confined to their cabin quarters for the duration of the illness (http://www.cdc.gov/h1n1flu/guidance/cruiseships.htm).
- Leaflets should be disseminated to passengers and crew members including information about symptoms and hygiene rules (hand washing, coughing and sneezing etiquette, disposal of dirty tissues etc) and what to do in case of compatible symptoms.

During the voyage
- Adequate supplies of anti-viral drugs, gloves, masks and disinfectants effective against influenza virus should be available on board.
- Rapid influenza diagnostic tests should be available. However, results of these tests should be interpreted with caution and false positive and false negative results should be taken into consideration.
- Treatment should be provided to cases and chemoprophylaxis contacts in accordance with WHO (http://www.who.int/csr/resources/publications/swineflu/clinical_management/en/index.html) and ECDC (http://ecdc.europa.eu/en/files/pdf/Health_topics/0905_Influenza_A(H1N1)_ECDC_public_health_guidance_on_case_and_contact_management.pdf) recommendations.
- Standardised surveillance data using a standardised definition for ILI should be collected in the ship medical log. Data that are collected should include, at a minimum: patient age, sex, onset date of symptoms, respiratory symptoms (fever and either cough or sore throat, malaise, myalgia, chest pain), signs of complications like: difficulty of breathing or shortness of breath, purple or blue discoloration of the lips, vomiting or signs of dehydration, pregnancy, chronic medical conditions (such as asthma, diabetes or heart disease), recovery or death, country of residence and/or destination, and results of diagnostic testing (e.g., rapid viral and bacterial tests, chest x-ray). Data should be routinely reviewed to assess trends in disease frequency (9).
- Active surveillance among passengers and crew members should be initiated by the ship’s medical staff to detect new cases of respiratory illness once an influenza outbreak has been identified. Active surveillance should include directly contacting passengers (e.g., passenger surveys) and crew members and should be recorded (9).
- Ill crew members and passengers should be isolated in cabins and a limited number of persons should come into contact with them. Surgical masks should be worn by patients.
- Health care workers and crew members that come into contact with patients should be trained in proper use of gloves and certified particulate respirators (EN 149:2001) (http://www.cdc.gov/h1n1flu/guidance/cruiseships.htm).
- Crew members should be trained in order to follow protocols for cleaning materials contaminated by body fluids and to properly manage waste (http://www.cdc.gov/h1n1flu/guidance/cruiseships.htm).

Before disembarkation
- For ships on international voyages, the Maritime Declaration of Health according to IHR should be completed and sent to the competent authority, if an infection has occurred on board and according to national legislation of the country of disembarkation. Ships may be required to report the previous itinerary for a given period before entering a port.
- The competent port health authorities should be informed of any support is needed (clinical specimen examination, disinfection, hospitalizations) before the ship arrives at port.

After disembarkation
- Preventive measures should be taken to avoid recurrent outbreak in the next voyage.

Early suspicion of potential cases of influenza among passengers and crew members and rapid implementation of a respiratory illness control protocols can probably limit the size of outbreaks.
The new Influenza A (H1N1) virus triggered the global community’s response plans and stressed the need for standardized and coordinated international information sharing and communication. SHIPSAN TRAINET activities involve the development of outbreak response and management procedures for communicable diseases. The SHIPSAN TRAINET partnership is currently preparing an Influenza Like Illness (ILI) syndromic surveillance system within the SHIPSAN Communication Network. The data collected through the surveillance system will give the necessary information to the EU MS for the expected number of cases (per ship, per itinerary, per season etc) in order to define an outbreak and implement control measures. The Communicable Disease Routine Surveillance Reporting Form for ILI has been prepared and disseminated for comments to the Working Groups. The forms will be used by the designated crew member and communicated to the Port Health Authority at the end of the cruise or by the ferries on a weekly basis through a web-based system. At the same time, the ships will be required to record on their medical logs each case of ILI on a daily basis. Finally, guidelines on outbreak prevention and control of airborne diseases will be prepared by an expert working group. The current situation of the new Influenza A (H1N1) virus highlights the need for routine standardized collection of data in order to better assess incidents or events of international concern.

Assoc. Prof. Christos Hadjichristodoulou, Prof. Jenny Kourea Kremastinou

Work Package 10: Pilot Communication Network
Start Date: 20th November 2008  Completion Date: 20th April 2011  Work Package Leader: University of Thessaly

Working Group Meeting in Malaga
The 4th Working Group meeting and site visit to the “Paris MoU on port state control” office took place on the 7th – 9th of February 2009 in Malaga, Spain.

The objectives of the meeting were:
- To prepare the first draft operating procedures for the port – to port communication network
- To explore the Paris MoU operating procedures and databases
- To review the first draft of the surveillance section of the Manual

Work Package 1: Coordination of the project
Moreover, last month the SHIPSAN TRAINET management team had the opportunity to attend an informal meeting with the Executive Agency for Health and Consumers (EAHC) in Luxemburg to discuss the progress made so far on all the project’s activities.

Assoc. Prof. Christos Hadjichristodoulou

Work Package 4: State of the Art Report
Start Date: 20th November 2008  Completion Date: 20th April 2009  Work Package Leader: Hamburg Port Health Authority
The draft State of the Art Report has been delivered and shared with the partners in time. It summarizes currently recognized training programs and communication networks related to communicable disease surveillance and control and also assesses the training experience and training needs of port health and passenger ship employees. Currently, the State of the Art Report is subject to revision since we received comments and additions by the partners which will be drawn attention to, i.e. the International Training Centre (ITC) of the ILO and the European Invasive Bacterial Infections Surveillance Network (EBISN) will be added to the content.

Dr Tobias Riemer, Ms Maike Maria Lamshofter
The Bo'sun's locker – Quiz, Quiz, Quiz!

Firstly, I need to apologise for the photographs in the newsletter – they were so small it was looking down the wrong end of a telescope! My congratulations go to Keith Rowlands, not just for getting them all right but for his keen eyesight. The answers were a) Venice b) Dubrovnik c) Bergen and d) Grand Harbour, Valetta. The piper in the Venice photograph was neither being paid to scare the pigeons nor to go far away.

The quiz this time doesn’t rely on eyesight – who was the Captain’s daughter and why did you not want to meet her?

As always, answers to Elina (elkost@med.uth.gr) by 1st July please.

Editor

People from the Project

Mr. Thierry Paux
SHIPSAN TRAINET Collaborative Partner

After completing a Master’s degree in chemistry in a French graduate school and a MSc in Environmental Engineering at the Technical University of Denmark, I finally passed a new Master’s degree in Environmental Health at the French National School of Public Health in 2004.

I was then employed by the French National supplier of nuclear energy, where I worked on the development of a multimedia model for the risk assessment of nuclear plants on public health. In April 2005, I joined the French Ministry of Health, in which I took the Head of the Environmental Health unit in the Aube department (a territorial subdivision of France).

Finally I moved to the central administration of the Ministry of Health in April 2008. In its Department of alert, response and preparedness, I have been coordinating the national implementation of the International Health Regulations (2005) in their different dimensions (national system for surveillance and actions, points of entry, laboratories). I also manage different projects related to Environmental Health or such as the general framework of alerts management at a national level.

Editor

News from the Industry

The maiden voyage of Cunard’s new Queen Elizabeth sold out in 29 minutes and 14 seconds after going on sale. This is impressive for a ship whose keel is scheduled to be laid this month.

Never mind ships with rock-climbing walls, ice-rinks and whirlpool rapids, MSC Melody has just upped the game by providing a shooting gallery with real Somali pirates. The attack happened near the Seychelles in April. The ship’s security force exchanged fire with six attackers in a small speedboat firing automatic weapons. Some windows were shattered and an attempt to board the ship by rope ladder was foiled. There were no injuries to the 1000 passengers and 500 crew on board. Excitement or what?
Southampton, United Kingdom

One of the strange but true stories about Southampton is that some of our ships have been known to fly! Yes, here in Southampton in the early 1900’s ships flew. At this time, aircraft engines were not considered the most reliable and if a hasty landing was needed, water was a safer option than on land! With a long and varied maritime history, Southampton is now home to many of the most famous cruise liners in the world and is a major container port for international trade.

As in other UK ports, Southampton Port Health Officers work closely with all parts of the maritime community as they carry out a range of activities including preventing unsafe food getting into the human food supply and inspecting ships to prevent outbreaks of infectious diseases, and the port health team has a real sense of being part of a bigger community. Many port health officers will get to know ships and their crew very well over time, working with the ships through good and not so good times, and inevitably will experience ‘memorable events’.

For me, 2008 was sad as QE2 retired and left Southampton for the last time. One of many memories of QE2 is that she was the first cruise liner to design and implement her own food safety management system, and other cruise liners soon followed. But the best of all my memories is that I was honoured by the ship for services to public health by having a suite named after me.....the Westacott Suite, which could be found way below and housed a brand new set of crew toilets and showers.

Southampton belongs to the Association of Port Health Authorities whose members share expertise and best practice. Throughout its 109 year history the Association has built a reputation for influencing national and international policy for safeguarding public and animal health by working with government departments and agencies throughout the world. This was how UK joined the SHIPSAN project and now SHIPSAN TRAINET.

The idea that this network and the tools it will develop can make a real difference in protecting the health of travellers on ships is enormously exciting and really worth our best efforts.

Sandra Westacott
Southampton Port Health Authority
Association of Port Health Authorities