World Health Organization Global Salm-Surv

Issue 2

November 2008

WHO Global Salm-Surv Newsletter

Building Global Capacity for Infectious Enteric Diseases

First WHO GSS / PNI Training Collaboration in South America

From 27-31 May 2008, the WHO Global Salm-Surv-PulseNet International (PNI) Advanced II Workshop for South America was held in Buenos Aires, Argentina. This was the first joint international training course between the two programmes. National microbiologists and epidemiologists from 13 Latin American countries received both theoretical and practical training on using molecular data for outbreak detection and investigation, International Health Regulations, burden of illness, attribution, Codex Alimentarius, and antimicrobial resistance in foodborne diseases. The course highlighted the various ways PulseNet data can be shared and applied between microbiologists and epidemiologists. Practical case studies were conducted, and at the end of the workshop, country participants engaged in discussions on ways to apply skills to new and/or existing country projects and to identify potential enhancements to an aspect of their public health systems. Trainers for the course were from the Pan American Health Organization (PAHO), Instituto Nacional de Enfermedades Infecciosas-ANLIS "Carlos G. Malbrán"-Argentina, Secretaría de Agricultura-Argentina, Ministerio de Salus-Chile, World Health Organization (WHO), US Centers for Disease Control and Prevention (CDC), Instituto de Salud Pública de Chile, and the Public Health Agency of Canada (PHAC).

Participants from the WHO Global Salm-Surv –PulseNet International Advanced Workshop II for South America

Dr. Norma Binsztein, South American Regional Center Coordinator, receiving a WHO GSS award for service from Dr. Fred Angulo

A WHO GSS Success Story in Nigeria

Dr Ibrahim obtained his DVM at the University of Ibadan in 1991 and further added to his education by obtaining a M.Sc. in Veterinary Microbiology at the University of Maiduguri, Nigeria, in 2008. His research was conducted on the isolation and characterization of *Salmonella* serovars from chickens in Maiduguri. Despite his years of training, he was unable to confirm the isolates within the country because of lack of reagents, problems with facilities, etc. He contacted several international reference laboratories for assistance and received a response from Rene Hendriksen, a steering committee member of WHO Global Salm-Surv.

Dr Raufu Ibrahim

Rene's team subtyped the *Salmonella* from Dr Ibrahim, performing serotyping, MIC, and PFGE, and provided detailed information on the isolates, protocol and results. With this help and support, Dr Ibrahim was able to locally identify a rare and new isolate of *Salmonella*, i.e. *Salmonella* Hiduddify, which has not been isolated in chickens in Nigeria or Africa. This has led to the discovery that *Salmonella* Hiduddify is prevalent not only in chickens, but also in the local environment.

Dr Ibrahim is grateful to the WHO GSS team for their support and is keen to learn more about the isolation, identification, molecular analysis and drug resistance of this important bacteria.

Inside this issue:

WHO GSS Steering Committee

Training Highlights: Western Africa and Russian Federation

Between January-September 2008, WHO Global Salm-Surv conducted six week-long training courses globally. Courses were held for approximately 200 individuals from 49 countries.

Francophone Western Africa - The WHO Global Salm-Surv Advanced Workshop II for Francophone Western Africa was held 23-29 March 2008 in Yaoundé, Cameroon, and focused on the Integrated Surveillance of Antibiotic Resistance and Quality Assurance. Twenty-three participants from 13 countries (Algeria, Cameroon, Central African Republic, Congo, Cote d'Ivoire, Democratic Republic of Congo, Madagascar, Mali, Morocco, Mauritania, Niger, Senegal, and Tunisia) attended the training. Lectures and applied exercises were offered on antibiotic resistance and quality assurance, and discussions were held regarding a group long-term project. Trainers for the course included those from Institut Pasteur (Morocco, Madagascar, Cameroon, France and Senegal), the World Health Organization (Geneva and Lyon), the Centers for Disease Control and Prevention (Atlanta), and the Public Health Agency of Canada (Quebec).

Participants from the Advanced Workshop II - Cameroon, March 2008

Russian Federation-A Level I Training Course for the Russian Federation and Kazakhstan was held 31 March—4 April , 2008 in Moscow, Russia. Thirty-five participants from the Russian Federation and Kazakhstan attended the training hosted by the Central Research Institute for Epidemiology, Institut Pasteur (Paris, St. Petersburg), the Centers for Disease Control and Prevention (Atlanta) and World Health Organization Regional Office for Europe. Training for the combined group focused on surveillance and outbreak detection and response, while training for epidemiologists only, included lectures on study design, evaluation of a surveillance system, antimicrobial resistance, and use of Epi Info. Microbiologists focused on practical bench work for *Salmonella* serotyping and antimicrobial resistance. A needs assessment was conducted.

Upcoming Training Courses 2008 - 2009

Southeast Asia (Thailand) (Adv Wksp III), 9-13 Dec 2008

Central and Eastern Africa (Kenya) (Level II), 19-24 Jan 2009

Northern Pacific (Guam) (Level I), 23-27 Feb 2009

W/S Europe (Netherlands) (Adv Wksp I), 23-27 Feb 2009

Central America (Costa Rica) (Adv Wksp I), 15-21 Mar 2009

For more information contact:
Stephanie M. DeLong: snd7@cdc.gov

Country Databank

(Global *Salmonella* Database)

The WHO Global Salm-Surv Country Databank (CDB) is an open access database that can be explored by food safety and public health professionals all over the world. The databank includes national and regional data on *Salmonella* serotypes isolated from human and non-human sources, and is a unique tool that enables anyone to obtain a global perspective of *Salmonella* epidemiology.

The amount of data in the Country Databank and the focus on the CDB is increasing, with the current number of members at 1084 from 153 countries, and with 832 *Salmonella* serotype top 15 datasets uploaded from 81 countries. CDB members have the opportunity to upload data (depending on membership level) and to update contact information.

A number of new members have recently been welcomed to join the Country Databank as participants of the past few WHO GSS training courses have been included as CDB members. Additionally, as the CDB is designed as a so-called 'self-updating' database, a number of the members of the CDB have received a personal email encouraging them to upload datasets.

Readers of this newsletter, who are WHO Global Salm-Surv members, are kindly asked to check and update their contact information, if necessary. Readers, who are not yet members, are invited to join.

http://www.who.int/salmsurv/members/HowToJoin/en/index.html

You can find the Country Databank at:
http://www.who.int/salmsurv/activities/en/
Country Databank Administrator:
Susanne Karlsmose: suska@food.dtu.dk

Reference Services

The National Food Institute of Denmark (DTU Food), a WHO Global Salm-Surv Steering Committee Partner, conducts reference service testing, free of charge, to members of WHO Global Salm-Surv. A limited number of testing is offered. In 2007, DTU-Food contributed reference testing assistance for several projects. These included projects on I 9,12:l,v:-, *Salmonella* Hiduddify, *Salmonella* Concord and *Salmonella* Rissen. Since January 2008, DTU Food has performed reference testing for 86 *Salmonella* isolates. Shipping (including conditions for shipping) and high costs are thought to have prevented countries from sending even more isolates for testing. Some of the strains received in 2008 were also found to be problematic and unusable; after incubation, they were heavily contaminated with mainly *Bacillus* ssp., *Psedomonas* ssp. and *Proteus* ssp. In addition to testing in 2008, DTU Food hosted researchers from China, Cyprus and South Korea as part of its efforts to collaborate on reference projects. These relationships formed through WHO Global Salm-Surv Training Courses and Workshops.

If your lab is need of assistance with testing, please feel free to inquire to Rene Hendriksen as to whether WHO GSS may be able to assist you.

Rene Hendriksen: rshe@food.dtu.dk
http://www.antimicrobialresistance.dk

External Quality Assurance System

The WHO Global Salm-Surv External Quality Assurance System (EQAS) was launched in 2000. EQAS is organized by the National Food Institute, Denmark (DTU Food), in collaboration with partners and Regional Sites in WHO GSS.

WHO Global Salm-Surv EQAS 2008 includes serotyping and antimicrobial susceptibility testing (AST) of eight *Salmonella* strains, AST of one *E. coli* reference strain for quality control (ATCC 25922), identification of two *Campylobacter*, and identification of one 'unknown' bacterial isolate. Additionally, a few select laboratories have this year been given the option to take part in serotyping and AST of *Shigella*. (In the years to come, the aim is to offer serotyping and AST of *Shigella* to all participants.) The main objective of EQAS 2008 is to support laboratories to assess, and if necessary improve, the quality of serotyping and susceptibility testing of enteric human pathogens, especially *Salmonella*. Furthermore, another objective of this activity is to assess and improve the comparability of surveillance data on *Salmonella* serotypes and antimicrobial susceptibility reported by different laboratories.

EQAS test strains have been shipped to almost 200 participating laboratories in 90 countries. These laboratories should perform the testing by the use of the routine methods in the laboratory, and after uploading the results to the password-secured, web database, an evaluation report will be available immediately. Subsequently, all results will summarized in a report which will be made available to all participants. Individual results will, however, be anonymous and will only be passed on to the official WHO GSS Regional Centre in the different regions.

EQAS Administrator:
Rene Hendriksen: rshe@food.dtu.dk

Electronic Discussion Group

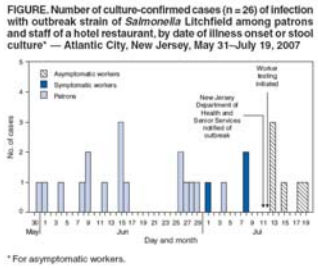
The WHO Global Salm-Surv Electronic Discussion Group (EDG) messages communicate important information about the programme, enteric diseases, conferences and training to individuals working on enteric diseases worldwide. Messages are sent in five different languages – English, Spanish, French, Portuguese and Chinese – to ensure the information reaches a broad audience. The messages are translated by members of the WHO Global Salm-Surv network into Spanish by Raquel Terragno and Norma Binsztein, into French by Marie-Christine Fonkoua, into Portuguese by Antonio Vieira and into Chinese by Ran Lu. Thank you everyone for all your hard work!

Did you know?
All the individuals that translate the messages do so voluntarily! Thank you again for all your hard work and dedication!
For more information about the EDG or to become a member, contact **Monica Montano: mon3@cdc.gov**

Epidemiology Subcommittee

As epidemiology is a primary component of WHO Global Salm-Surv Training Courses, the Epidemiology Subcommittee was formed in 2003 to address issues impacting training. Recent issues discussed on the monthly subcommittee calls include the South America Workshop and the roles played by WHO Global Salm-Surv Team Members as a course is organized. Discussions on the training course included a focus on the strengths and weaknesses of the course, case studies about molecular subtyping and antimicrobial resistance, and exercises on burden of illness and attribution. Discussions on the roles for a training course included a focus on lead trainer, among others. Future calls will focus on issues such as development of a web-based trainers' evaluation.

A WHO Global Salm-Surv Course



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Epi Subcommittee Contact:
Olga Henao: dot8@cdc.gov

Laboratory Subcommittee

The Laboratory Subcommittee was formed to address laboratory concerns related to WHO Global Salm-Surv. Subcommittee members meet every two months to discuss issues and projects.

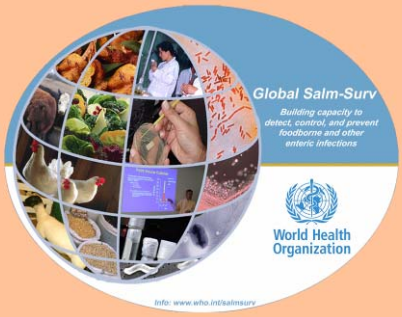
Current activities for the Lab Subcommittee include standardization of WHO Global Salm-Surv protocols, translation of all laboratory protocols and training materials, discussion of new pathogens being considered for the External Quality Assurance System, phage typing, and distribution of hard copies of the "WHO Manual for the laboratory identification and antimicrobial susceptibility testing of bacterial pathogens of public health concern in the developing world" to those who train at WHO Global Salm-Surv Training Courses.

(http://www.who.int/csr/resources/publications/drugresist/WHO_CDS_CSR_RMD_2003_6/en/)

Lab Subcommittee members are also working with the WHO AFRO Regional Food Safety Adviser to conduct a needs assessment of laboratories which participated in the Level I Training Course for Central and Eastern Africa in 2007.

Hard copy red lab manuals (Manual for the Laboratory Identification and Antimicrobial Susceptibility Testing of Bacterial Pathogens of Public Health Importance in the Developing World), are also available from US CDC.

To obtain one, contact: **Heena Joshi: glv8@cdc.gov**



BUILDING GLOBAL CAPACITY FOR INFECTIOUS ENTERIC DISEASES

Contact the WHO Global Salm-Surv Leadership:
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Food Safety, Zoonoses and Foodborne Diseases (FOS), Health Security and Environment (HSE)

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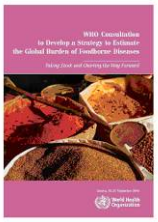
Vision:
All countries will prevent and control foodborne and other enteric infectious diseases

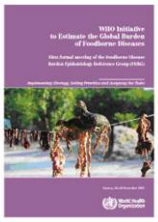
Mission:
To promote integrated, laboratory–based surveillance and foster inter-sectoral collaborations among human health, veterinary, and food-related disciplines, thereby enhancing the capacity of countries to detect, respond, and prevent foodborne and other infectious enteric diseases.

For More Information:
http://www.who.int/salmsurv/links/GSSProgressReport2005.pdf

Spotlight: Burden of Disease

Precise information on the global burden of foodborne diseases, as well as its attribution to responsible source (s) of contamination and exposure route (s), are urgently needed to identify and prioritize effective food safety policies and interventions. To fill this long-standing data gap, the WHO Department of Food Safety, Zoonoses and Foodborne Diseases (FOS) has launched the *Initiative to Estimate the Global Burden of Foodborne Diseases,* in collaboration with multiple partners. The Initiative's expert reference group (FERG) will describe foodborne diseases from all major causes (enteric, parasitic and chemical) using health metrics that combine morbidity, mortality and disability in the form of the Disability Adjusted Life Years (DALY). The FERG is collaborating closely with relevant networks engaged in burden efforts, including WHO GSS. Several WHO GSS trainers are members of the FERG, and the WHO GSS curriculum will shortly be expanded to include training on burden of disease methods.





For more information on this activity, please contact foodsafety@who.int or view http://www.who.int/foodsafety/foodborne_disease/ferg/en/index3.html.

Meet a Partner

Dr Jaap Wagenaar

Dr Jaap Wagenaar has been active in microbiology for over 20 years and is an expert in the field of microbiological food safety, clinical veterinary microbiology, and zoonoses. He obtained a Veterinary Medicine degree and PhD from Utrecht University, The Netherlands, with his PhD study also being conducted at the United States Department of Agriculture (USDA), Ames, IA, USA. In 1996, Dr Wagenaar began his research group at the now Central Veterinary Institute in Lelystad, the Netherlands, focusing on food safety, and in particular, *Campylobacter*. Since that time, he has added antimicrobial resistance, including MRSA, to his research repertoire. During a sabbatical leave (2004-2006) he was seconded to WHO (Headquarters, Geneva, Switzerland and WHO Indonesia (Tsunami-relief operations)), CDC (Atlanta, USA) and the USDA (Albany, CA, USA). His main role is currently as professor at the Veterinary School in Utrecht University.

Dr Wagenaar is the Director of the WHO Collaborating Centre for *Campylobacter* and heads the World Organisation for Animal Health (OIE) reference laboratory for *Campylobacter*. Dr Wagenaar is an active member of WHO Global Salm-Surv, serving as a Steering Committee Partner, as a trainer in international training courses, and as the chair of the Laboratory Subcommittee. As a hobby, Dr Wagenaar collects the seeds of marigolds from WHO Global Salm-Surv Training Sites resulting in an orange-coloured backyard in Utrecht (see picture – raised from seeds from Chengdu, China).

Partner Update: TEPHINET, Inc.

Training Programs in Epidemiology and Public Health Interventions Network Inc. (TEPHINET) is a professional alliance of Field Epidemiology Training Programs (FETPs) located in 40 countries around the world and growing. Most FETPs are patterned after the Epidemic Intelligence Service (EIS), a programme of the US Centers for Disease Control and Prevention (CDC). WHO and CDC helped start TEPHINET, and both organizations continue to provide liaisons to the TEPHINET Board.

TEPHINET's credo is that public health policy should be based on good science, and that the standard of good science is demanded in FETP training. Trainees investigate actual outbreaks within their country. Graduates are moved into career positions as epidemiologists substantially adding to that country's competent human resource capacity. To encourage excellence, trainees and graduates present their work at TEPHINET global and regional scientific conferences. This year the global conference will be in Kuala Lumpur, 1-6 November.

TEPHINET is also linked to other international organizations including the WHO's Global Outbreak and Response Network (GOARN), Pacific Public Health Surveillance Network (PPHSN), the Americas Network of Chronic Disease Surveillance Officers (AMNET), and WHO Global Salm-Surv.

TEPHINET supports various regional FETP networks including those in Africa, Central America, the Central Asian Republics and proposed new regional programs in the Eastern Mediterranean, Southeast Asia and the Western Pacific.

TEPHINET will soon join the Task Force for Child Survival and Development. This new alliance, with cost sharing of administrative services, will assure the future of TEPHINET for many years to come.