

EAN NEWS

Second edition, March 2007

From the EAN Board

Introduction

Welcome to this second EAN newsletter! If you wonder whether you missed the first one - this came out in April 2000, and in fact was the newsletter of the EPIET Network Alumni Association (ENAA), the predecessor of EAN. We thought it a good idea to restart the newsletter tradition, to update you on activities of EAN as an organisation and its members. We welcome feed-back - please share this with us by e-mailing to EANboard@gmail.com

The EAN board, Noordwijk, The Netherlands, January



2007. From left to right: Gabie, Susan, Lara, Mirna and Barbara (not on picture: Angie Rose (who recently moved to Barbados which definitely has a sunnier beach!!!))

EAN board meeting in Noordwijkerhout, The Netherlands, January 2007

The current EAN board met in the Netherlands from 14-16 January and besides having a full agenda (see minutes circulated among members), we also had time to go to the beach for a nice afternoon stroll (picture).



History of EAN

The foundation for EAN was laid by informal meetings of EPIET / FETP alumni which were partly social events and partly dedicated to sharing work. In 2000, 5 alumni (Ralf, Christine, Natasha, Richard and Olivier) managed to establish the EAN as an organization under French law, and formed the first EAN board. The rest is (also) history...

EAN Yearbook

This is approaching completion, and will be sent out (as pdf in an e-mail and hard copy in the post) to all current and former EPIET's / FETPs and external EAN members.

EAN membership fees

The yearly membership fee is €20. To introduce new fellows to EAN, we suggest that from cohort 12 onwards, new fellows are exempt from the fee for the first year of their fellowship. It is easiest to pay the fee in cash during the annual General Assembly (GA), which coincides with the EPIET Scientific Seminar (see below). If you can not attend the GA, we would prefer if you can ask somebody in your country to pass on your fee to us. We furthermore would suggest that members pay for a period of 3 or 5 years, to reduce the administrative burden.

Alternatively, you can wire your membership fees to the following bank account:

Name of Bank: Societe Generale

Account Name: Association EAN

Banque: 30003

Agence: 00100

Account number: 00037265432

Cle: 85

IBAN FR76 30003 00100 00037265432 85

BIC/Swift: SOGEFRPP

NB. Please indicate your name and membership year(s) as reference.

Or

Send a **French** cheque in Euros to:

Gabrielle Breugelmanns

10 Rue Rosset

69004 Lyon

France

For **one-year membership fee** only you can send cash in a double envelope to the above mentioned address, at your own risk.

Moving the registration of the EAN association from France to Sweden?

At the annual board meeting alternative country options were discussed for the registration of the EAN association, as there are some working constraints with its current registration in France. When the board will have finalised preparing a case for the move, this will be presented to the members for a vote.

Update on EAN website development

The EAN website committee, headed by Chikwe, has worked hard to lay down the foundations and specifications for an EAN website. The board sees clear benefits in developing a stand-alone EAN website in the coming year. The website will include a separate member's area. At this stage, we are comparing offers put forward by three website developing companies, with similar specifications for website design, hosting and maintenance. In mid-March, we expect to decide which company will develop the EAN website. It is important to recognize that a good functional website will take considerable work, several test runs and ongoing dialogue between EAN and the providers until the specifications we desire are realized. We hope to have the website up and running after a few months after the go-ahead is given.

Job offers

The EAN board sent an e-mail to WHO, WHO Euro, ECCDC and Epicentre to alert them of the possibility to use the EAN mailing list for dissemination of job and consultancy offers.

News and activities

EAN training module 'Lab-for-Epi'

On Dec 1-3 2006 the EAN conducted yet another EAN training module for its members. The objective of the EAN modules is to strengthen the capacity of its members in specific fields related to field epidemiology but not always covered during the training period. The theme of this training module was "Lab for intervention epidemiologists" because it scored highest in a survey conducted among the EAN members some months before.

The module was conducted under the scientific coordination of Marion Koopmans at the RIVM in Bilthoven, The Netherlands, and included facilitators from the RIVM and EAN members. It was an intense weekend that started on the Friday evening with a Johari-Windows exercise among lab personnel and epidemiologists, going on with theoretical and practical exercises on defining requirements for lab investigations, critical review of lab tests used for different scenarios, case studies, sampling and packaging, and specific diagnostic methods according to the pathogen being investigated.

Overall there were 27 participants from EAN and externals and the module as well as the facilitators received a very good evaluation from the participants. Thank you to all participants and facilitators for having made this a success!

We hope this module has laid the foundations for a similar lab module for EPIET. And the EAN will continue to offer training modules in the future. Just keep your eyes and ears open...

Marion Muehlen

On behalf of the EAN working group

The EPIET Scientific Seminar 2007

In 2007, the EPIET Scientific Seminar will take place in the form of a larger conference, the European Scientific Conference of Applied Infectious Disease Epidemiology (ESCAIDE). The ESCAIDE is being jointly organised by the ECDC, EPIET, EAN, and Tephinet Europe. It will take place in Stockholm, 18-20 October 2007. The EAN board is committed to encourage as many EAN members to attend the meeting as possible; in this way we hope to maintain the EPIET spirit in this event. Further information on the conference will be circulated through our e-mail list.

Optional modules

The EAN board has, as part of its membership of the EPIET steering committee, been involved in discussions on the development of optional modules within the EPIET training. The role of the EAN board in this discussion was to list the pros and cons of changing to optional modules. A consensus has been reached and a model with four optional modules (of which two should be chosen) and five core modules has been selected.

John Snow award for Lisa King

Lisa King (cohort 11) received the "John Snow Award" for a presentation delivered at the 4th Global Conference of the Training Programs in Epidemiology and Public Health Intervention Network (TEPHINET) held in Brazil, on 12-17 November. Lisa, who is from Ireland and based at the Institut de Veille Sanitaire in Paris presented the "Outbreak of *E.coli* O157:H7 infection linked to consumption of ground beef, France, 2005". The John Snow Award recognizes the excellence in science for the investigation of an infectious disease for oral presentation. It is named after a famous physician regarded as one of the founding fathers of intervention epidemiology due to his investigation of the London Cholera Epidemic in 1854 (source: www.ecdc.eu.int).

Development of Core competencies in intervention epidemiology for the EU

ECDC meeting, Stockholm 31 January 2007

Within the EAN objective of 'taking part and assisting in the promotion, development and delivery of training in field epidemiology and public health', Lara Payne represented EAN at an advisory expert meeting organised by the ECDC on one of its work tasks of defining core competencies for intervention epidemiology.

The development of a list of core competencies resulted from priorities identified by Member States in the consultation by ECDC in December 2006 on the Strategy on Training in Intervention Epidemiology, as there is currently no agreed definition of field epidemiologist as a profession in the EU.

This current meeting in Stockholm was step three in the development of the core competencies list, with EAN having been also involved in earlier steps.

Tasks of the day-meeting were twofold:

1. To review a proposed list of identified core competencies
2. Identify those considered essential for the practice of an intervention epidemiologist

The resulting report from the meeting will be presented at an Advisory Forum with the member states in April-May 2007.

EPIET cohort 13

The deadline for submission of applications is now closed.

Courses and conferences

“Is it just healed or fixed?”

Between February 26 and March 2, 2007, **Kenneth J. Rothman** held the course **Principles of Epidemiologic Data Analysis** in Lunteren, the geographic midpoint of the Netherlands, organised by the Netherlands Institute for Health Sciences (www.nihes.nl). The aim for the participant was to conceptualize the principles underlying the primary methods of epidemiologic data analysis. The course reviewed the analysis of crude data (probability, statistical distributions, precision and validity), advising the profound exploration of data, with strong emphasis on a quantitative approach (estimation) rather than a qualitative approach (statistical significance testing).

The discussion moved on to the control of confounding using stratified analysis and multivariate models avoiding stepwise algorithms. Other topics covered included multivariate confounding scores (propensity scores), standardisation, survival analysis, options for missing data, analysis of matched data, biologic and statistical interaction, estimation of trends and sensitivity analysis.

Computer lab exercises using Episheet and paper discussion supplemented the compact lectures in which Rothman addressed specific issues within the topics, and highlighted misuse of methods or misinterpretation of results. Although more practical examples could have been used, the course presented the participants - including three EAN members - with the invaluable: several lucid moments with the light bulb flashing on. The main message may be summarized with Rothman's question “Is it just healed or fixed?”. Originally referring to the recurrent problems with the microphone, it might as well promote critical thinking in applying or evaluating methods of data analysis.

Ágnes Hajdu

EPIET fellow C11

Norwegian Institute of Public Health, Oslo, Norway

IMED, Vienna, Austria

From Friday 23-25 February 2007, the first International Meeting on



Emerging Diseases and Surveillance was held in beautiful Vienna, Austria. A number of institutes had sent EPIET fellows and EPIET alumni to attend the meeting. Moreover, several current fellows, including the new cohort, had poster presentations. The meeting was organized as a recognition that (re)-emerging infectious diseases may be detected at any time, in any place. The threats of pandemic influenza and bioterrorism, and the recent SARS outbreak, have been at the center of the world's, and hopefully your, attention. The meeting was organized by the international Society for Infectious Diseases and was sponsored by the Program for Monitoring Emerging Diseases (ProMED-mail), The European Centre for Disease Prevention and Control (ECDC), and the World

Organization for Animal Health (OIE), The European Commission, and the WHO regional office for Europe. The aim of the conference was to bring human and animal health experts together under the so called “One Medicine” concept.

Topics of the meeting included; surveillance systems, animal reservoirs for emerging diseases, bioterrorism, outbreak response, vaccines against emerging disease, the revised international health regulations, and disease modeling. The variety of topics lead to an astounding collection of 250 posters. In this short article, the different surveillance and response initiatives that focus on the European Union are listed, and some key points from the presentations are highlighted.

The role of the EU.

The European Commission provides advice on measures to be taken in the event of a health crisis, and coordinates the response of the Member States. However, the EC does not have the mandate to decide on actions to be taken, this can only be decided on by the Member States. To increase the EC role in management and response to a health crisis, the Commission has developed an Health Emergency Operations Facility (HEOF). The HEOF consists of dedicated premises, and includes a Medical Intelligence tool (MedSys) (medusa.jrc.it), dedicated rapid alert systems, as well as a situational awareness and interface tool with Member States (HEDIS).

The EDEN Project

The EDEN (Emerging Diseases in a changing European Environment) project was erected as a response to the rising number of vector-borne, parasitic, or zoonotic diseases that have (re)-emerged and spread in Europe and elsewhere with major health, ecological, socio-economical, and political consequences. The project, aims to explore the impact of environmental and other changes on human health. To identify, evaluate and catalogue European ecosystems and environmental conditions linked to global change, which can influence the spatial and temporal distribution and dynamics of human pathogenic agents. The project develops and co-coordinates at the European level a set of generic methods, tools and skills such as predictive emergence and spread models, early warning, surveillance and monitoring tools, and scenarios which can be used by decision makers for

risk assessment, decision support for intervention, and public health policies. Part of EDEN's innovation is to combine spatial data (earth observation data, GIS etc.) with epidemiological data. EDEN has selected for study a range of indicator human diseases that are especially sensitive to environmental changes and will be studied within a common scientific framework (involving landscapes, vector and parasite bionomics, public health, and animal reservoirs). Some of these diseases are already present in Europe (tick- and rodent-borne diseases, leishmaniasis, West Nile fever), others were present historically (malaria) and so may re-emerge, whilst others are on the fringes of Europe (Rift Valley fever) in endemic regions of West and Northern Africa.

The revised International Health Regulations (IHR).

The new IHR contain a new international system for epidemic intelligence, and a new procedure for adopting recommendations to guide the response to public health emergencies of international concern. And finally, new international rules on routine measures against international disease spread. The IHR represent a shift of paradigm in several ways: Firstly, the objects of surveillance are events, not verified cases of a certain list of diseases. This increases the sensitivity, but lowers the positive predictive value of the surveillance. Secondly, the member states no longer have monopoly as suppliers of epidemic intelligence to WHO. Now the WHO is allowed to use multiple sources of information, including mass media and non-governmental organizations. Thirdly, the power to define an event that invokes the use of the full powers of the IHR has been moved from member states to the WHO. Even if a member state denies any event is occurring in the country, the WHO may ultimately recommend measures that affects that member state. Fourthly, there are clear obligations on member states to develop capacities for surveillance and response.

This means from a country perspective that the three main challenges with the new IHR are:

- To make sure that the national focal points can notify WHO of events independent from political concerns. Deciding to notify WHO of a potential event is a professional decision, not a political one.
- There is a need to improve the capacities for surveillance and response, to match the criteria set out by the new IHR
- The most important aspect of the IHR is that no information should be withheld, and that the effort to keep communicable diseases under control, is a joint effort.

Global Early Warning System and Response (GLEWS)

The OIE, FAO and WHO have developed and Early Warning, and Response System that collects, verifies, analysis and responds to information from a variety of sources, including official reports, unofficial media reports, and informal networks. GLEWS builds on the added value of combining and coordinating the alert and response mechanisms of OIE, FAP and WHO for the international community and stakeholders to assist in prediction, prevention and control of animal disease threats, including zoonoses, through sharing of information, epidemiological analysis and joint alert and response mechanisms.

The goals and expected outputs of GLEWS are to focus on predicting animal disease threats through epidemiological analysis, occurrence and spread of diseases and to develop and coordinate responses to animal health emergencies.

Some interesting key facts from the conference:

- The detection of three seropositive sheep and nine seropositive goats for Rift Valley Fever, born after the 1997-1998 outbreak in Kenya clearly indicates a more recent circulation of RVFV.

M. Rostal

- Most illegal bushmeat trade from Africa to America is transported through the Netherlands. *J.H. Mcquiston*

- An investigation of *Culex pipiens* revealed that West Nile Virus strains belonging to different genetic lineages are circulating in Central Europe. Improved diagnostic methods should be applied by the local public health and veterinary laboratories to detect both lineage 1 and 2 strains in routine diagnostic submissions. Investigations on the occurrence, ecology, and epidemiology of WNV strains circulating in Central Europe must be of high priority. *T. Bakonyi*

- As the mosquito *Aedes albopictus* has been identified in France and some other European countries, the potential risk of introduction of chikungunya has to be evaluated. This leads to an urgent need for global surveillance and articulation between public health and research. *I. Quatresous.*

- 14-27% of veterinary staff in the UK, is carrier of MRSA. And in 11% of dog owners, MRSA could be found in nasal mucosae. Molecular studies indicate that the MRSA isolates found infecting or carried by pets are in most cases epidemic human hospital strains and there is concern that such strains may be becoming established in domestic pets. *D.H. Lloyd*

- Dogs visiting hospitalised people can acquire hospital-associated pathogens during their interactions with patients. This stresses the need for explicit infection control practices to address the potential spread of pathogens through canine visitation programs. *S. Lefebvre*

Maarten Hoek

EPIET fellow C11

HPA South West, Gloucester, UK

Upcoming conferences

EIS Conference

16-20 April, 2007 Atlanta, USA

www.cdc.gov/eis/conference/conference.htm

5th European Congress on Tropical Medicine and International Health

24-28 May, 2007 Amsterdam, The Netherlands

www.trop-amsterdam2007.com/

14th International Workshop on Campylobacter, Helicobacter and Related Organisms (CHRO2007)

2-5 September 2007 Rotterdam, the Netherlands.
www.chro2007.nl/

4th Congress of the European Society for Emerging Infections (ESEI)
30 September-3 October 2007 Lisbon, Portugal
www.insarj.pt/site/resources/docs/esei.pdf

European Scientific Conference on Applied Infectious Disease Epidemiology (ESCAIDE).
18-20 October, 2007 Stockholm, Sweden.
www.epiet.org/seminar/2007/Annoucement%20ESCAIDE%20Final.pdf

help in Lubango. In November the MSF staff in the CTC in Lubango noted a sudden increase in patients with bloody diarrhoea with a case fatality of about 50%. Once the centre got more organized, including an isolation tent, good 24h care and treatment with ciprofloxacin for any patient with bloody diarrhoea, the case fatality dropped, both for cholera patients and for patients with bloody diarrhoea. Nevertheless MSF-CH wanted to investigate the causes of this rise in bloody diarrhoea and prevent this disease from returning, so Epicentre was invited to assist in surveillance and investigate the outbreak.

From the field: mission report

'As an EPIET fellow on a cholera mission in Angola'

Lisanne Gerstel (cohort 11)

There I was, in Luanda airport, within a week of knowing I was leaving. I was carrying articles about cholera in my hand luggage and had three larivian tablets in my bloodstream. I had to hand in my passport (not to see it back for some weeks) and in the absence of a visa I showed the rapidly organized letters indicating my involvement in Médecins Sans Frontières, Switzerland (MSF-CH) and my official invitation by the Angolese government. I was thrilled that Epicentre decided they could use my help on this mission... As a second year EPIET-fellow in Spain, I hoped that I could contribute, firstly by practicing good epidemiology, and maybe by trying to communicate in Portuñol (mixture of Spanish and Portuguese) and besides I wanted to absorb impressions of everything that an emergency mission entails.



Upon arrival in the 'MSF-house' in the capital, an American nurse and I were directly briefed on the situation in Angola. Of course I had a briefing by telephone before I left, but this was my first mission and there were a lot of things I did not know. Angola is a country in which many NGOs were present, also all five operative sections of MSF, but as the civil war had ended in 2002, the government of this country full of oil, diamonds, fish and fertile grounds (and unfortunately, landmines) was now supposed to care for its population on its own accounts. Many organizations had left, and even MSF is expected to leave in the future.

After an absence of the disease for 10 years, Angola was hit in February 2006 by a cholera epidemic. Cholera treatment centres (CTC) were set up in different parts of the country with help of MSF, including in the city of Lubango, and were handed over in July to the local authorities when the number of patients declined. However in October 2006 numbers of patients increased again and MSF-CH returned to

We got a plane the next day to the city of Lubango. When I arrived another trainee and my Epicentre supervisor had already done great amounts of work organizing surveillance, data entry and sampling of patients. Unfortunately none of the patients with bloody diarrhoea of November, which were suspected to have had Shigellosis, had been lab confirmed due to logistical problems. The office of the EPI-team was full of patient files, each day about 50 new patients entered the CTC and the clinical information of every patient that left the centre were entered in a database. While entering data, I was shocked to see the numbers of vomits and diarrhoea patients had per day and the amounts of fluids they received.

Already on my first day I could visit the CTC. Upon entering the terrain they spray the soles of your shoes and you have to wash your hands with a chlorine solution. The CTC consisted of several tents, one for triage and then tents for children, women, and men in different stages of dehydration. The beds in the tents had a special design with a hole and a bucket with chlorine underneath to collect diarrhoea and a bucket next to the bed for vomit. Every tent had a supply of ORS solution (Oral Dehydration Salts) which was supplied in large amounts to the patients. The logistical team organized washing and cleaning of blankets and constantly inspected hygienic measures on the terrain. Both local and expat nurses and doctors checked on patients and their dehydration status. I thought a severely dehydrated patient a quite shocking sight, with almost absent skin turgor and sunken eyes. Luckily in a few hours of rehydration treatment these patients could return to reasonably healthy looking persons.

Apart from assisting in surveillance of bloody diarrhea, interviewing patients, taking stool samples and data entry my task was to gather community data on bloody diarrhoea. The outbreak of bloody diarrhoea in the CTC might have been part of a community wide outbreak.

So on my second day I set down with the statistical department of the general hospital and in the following days I visited also the paediatric hospital, the local officer of the World Health Organisation (WHO), the civil registry and nine health posts where I copied data from the patient registers. I was surprised by the availability of all these registers that were never computerized, but sometimes better kept than the records in some European countries and also about the willingness of local services to assist in the

investigation. I was never denied any information. On these visits I sometimes went with the field team of MSF to the different areas of the city to make sure that local health posts had sufficient supplies of ORS and that they had telephone numbers of the CTC ambulance to pick up cholera patients. We drove in a minibus or jeep with a professional driver mostly over dirt roads. These trips were also for gathering surveillance data on cholera and inspecting local hygienic conditions. I was amazed at how green the country was, every few houses have a separate water source. People were advised about treating water for consumption and maintaining water sources. I informed about patients with bloody diarrhoea. The landscape was beautiful but the living conditions of the people were very poor. Sometimes they hardly had pots to boil water in, there were no latrines, residual water from (beer) factories drained in the fields.



Tents of the Cholera Treatment Centres with chlorine containers

My Portuguese was not always useful as many people only spoke local languages. We had interpreters for this purpose, who were also useful in explaining local habits. Especially shocking was the widespread alcoholism. Health posts had to be visited in the morning, as at noon some staff members could be drunk. People could be seen from a young age, lying around crossroads where local brewed alcohol (macao) was sold. This drink was sold from buckets and the content did not look very clean, so we advised about the use of safe water for the making of this drink.

The MSF team was fantastic to work with. There were people from many different countries (e.g. France, Italy, US, Canada, Argentina, Lebanon) with functions like 'watsan' 'fieldco' and 'log.' I was amazed not to find any Swiss on an MSF-Swiss mission. Some people had already ample experience in missions, for others, like me it was the first time. On Christmas day we missed our families and friends but nevertheless we managed to have a great Christmas dinner cooked by the Italians and we had a great new years party, outside, under the stars with music and dance from many different countries.

And before I knew it, three weeks had passed and I was back in Madrid. Now as I am correcting the last tables and graphs in the report, Angola seems already a long time ago. I was a bit disappointed that the

community data I collected did suggest the existence of a community wide outbreak, but due to the limitations of the study I could not confirm it. Still I learned a lot, about missions, working with MSF and about how to obtain data in a different country. Luckily the cholera outbreak has stopped now, and I hope that the disease will stay away when the rainy season starts again. I will never forget Angola or the look of a cholera patient.

EPI Quiz

1. The statistical distribution that is usually used as a model for random variation in a risk measure is the

- a) hypergeometric
- b) Poisson
- c) binomial
- d) ?

2. The statistical distribution that is usually used as a model for random variation in an incidence rate is the

- a) hypergeometric
- b) Poisson
- c) binomial
- d) ?

3. The p-value

- a) will only be small for small associations
- b) has a uniform distribution under the null hypothesis
- c) is the probability that the null hypothesis is correct
- d) ?

4. In a non-experimental study, as the study size increases, the probability that a 95% confidence interval for an effect estimate will include the correct value

- a) increases
- b) decreases
- c) remains constant
- d) ?

5. The main value in calculating a confidence interval is to

- a) determine if the null hypothesis lies within it
- b) assess the power of the study
- c) indicate generally the precision of the estimate
- d) ?

These questions are taken from a quiz given to the participants at Kenneth Rothman's course **Principles of Epidemiologic Data Analysis**. Answers will be given in the next newsletter.

EPI Cartoon

