



# MED • VET • NET NEWS

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## HAPPY NEW YEAR!

Hello, and best wishes and much success for 2005!

This month we provide an overview of Workpackage 13 - Integrating risk assessment, epidemiology and economics to support decision making in food safety.

Thematic group representatives are also reminded of the Thematic Group Meeting to be held in Rome at the Istituto Maria SS. Bambina from 7-9 March 2005.

Teresa Belcher  
Med-Vet-Net Communications Director



## Workpackage 13: Risk Assessment



Workpackage 13: *Integrating risk assessment, epidemiology and economics to support decision making in food safety* aims to improve the knowledge base

for structured decision making in food safety by development and application of methods to evaluate the effectiveness and efficiency of food safety regulations. Effectiveness is defined first as the extent to which a regulation, when deployed in the field in routine circumstances does what it is intended to do. Efficiency is defined as the degree to which a regulation achieves the desired results in relation to the efforts expended in terms of money, time and resources. The project will integrate risk assessment, epidemiology and economics.

### Background

Decision making on food safety regulations involves consideration of a wide range of concerns including the health impact of foodborne illness, the economic importance of the agricultural sector and the perception of stakeholders of risks and interventions. Which of these concerns dominates the decision in a particular case is difficult to predict because a structured framework for decision making is currently not available.

In the past decade, quantitative microbial risk assessment has evolved as a powerful tool to analyse the transmission of foodborne pathogens in the farm-to-fork chain and to estimate the public health effects of interventions. Application of risk assessment methods has until now been restricted to studies at the national level, mainly in Northwestern Europe. The EU Zoonosis Directive has stimulated the collection and reporting of surveillance data on foodborne illness. Additionally, several countries have implemented special epidemiological studies that provide a more detailed picture of foodborne illness in Europe. Registry-based studies in Denmark have provided a deeper insight in the risks of mortality and complications following acute gastroenteritis. These

studies are an important base for evaluation of food safety regulations.

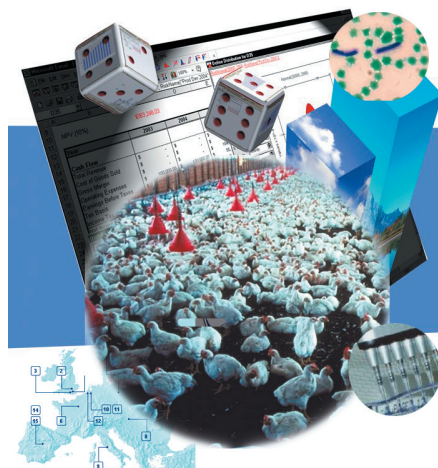
Different methods for the evaluation of the impact of foodborne illness on public health and well being have also been developed. These include monetary methods such as cost-of-illness, willingness-to-pay and contingent valuation techniques and disease burden methods such as quality or disability adjusted life years. There are also different methods of evaluation of interventions including cost-benefit analyses and cost-effectiveness analyses. All methods have specific strengths and weaknesses and represent societal concerns regarding food safety in a different way. A critical evaluation of these different methods with regard to food safety regulations has not yet been made.

### Research Approach

The knowledge base for structured decision making in food safety will be improved by:

- Providing an estimate of the disease burden and cost of illness of (selected) foodborne zoonoses in (selected) countries of the EU
- Evaluating the effectiveness and efficiency of selected interventions to reduce foodborne zoonoses in Europe
- Comparing different methods for the economic evaluation of food safety regulations
- Integrating risk assessment, epidemiology and economics

These are long term goals and the first steps will be taken in WP13.



*Risk assessment, epidemiology and economics all need to be integrated*

### Work Programme

**Task 1: Developing the network**  
In the first phase, the emphasis will be on building a network of key scientists in partner institutes and identifying other relevant contacts. A kick-off meeting has already taken place and three subgroup meetings for risk assessment, epidemiology and economics, will be organised.

**Task 2: Evaluation of the status of the different scientific disciplines.**  
The disciplinary subgroups will undertake reviews of the status of each of the areas of risk assessment, epidemiology and economics and will develop options for integration and improvement. These recommendations will be communicated with other workpackages.

**Task 3: Integrate the individual status reports.**  
A working conference on integration of different disciplines will be organised and an integrated report generated with recommendations for future research including case studies. Because there is an important synergy with WP14 (Pre-harvest risk assessment), at least two meetings (kick-off and integrative meeting) will be held jointly.

### First workpackage meeting

The first meeting of WP13 took place on 26-27 October 2004 in Copenhagen, Denmark. Arie Havelaar presented an introduction on the Dutch CARMA project as a possible model for integration of risk assessment, epidemiology and economics. It was concluded that risk assessment is mainly used for estimating the effects of interventions relative to a baseline level. Epidemiology is more suitable for measuring the current level of illness in the population, and for source attribution. A priori evaluations of the efficiency of control measures in the food chain are not yet common, neither are structured evaluations of interventions once they are implemented. Kåre Mølbak presented register-based studies on mortality, sequelae and hospitalizations due to acute gastro-intestinal illness. Such studies can be done in Denmark because of the unique system of personal registration numbers. Other countries do not use such a system. It would be interesting to evaluate if the matching of different registries could also be done by other countries, based on information such as postal code and date of birth. Annet Velthuis presented some initial ideas about integrating



on microbial hazards. For this purpose, the process of scientific advice to food safety risk managers and the critical scientific questions that should be addressed in order to provide better support for decision making will be reviewed. The evaluation of the process will start with a description of the principles for risk analysis as outlined by Codex Alimentarius. These principles will be contrasted against some examples of the actual practice in the European Union

(both individual EU member states and also at overall the Community level). The discussion of scientific questions will include issues in veterinary and medical epidemiology, risk assessment for the farm-to-fork food chain as well as agricultural and health economy.

The aim is not to provide a comprehensive review of the different fields but rather focus on integration and to identify critical questions. Med-Vet-Net's perspective is the European Union and as such questions relating to this specific region need to be considered. In what specific areas should scientific methods be developed and data be obtained in order to answer crucial risk management questions? To what extent can data, models or results obtained in one country be transferred to other countries or to the Community as a whole?

economics in food safety decision making. Points to be considered are which costs and benefits to include in an analysis, how to include incentives for compliance with a risk management strategy, distribution of costs and benefits over different sectors in society, and how to promote innovation by industry.

The meeting then split into three breakout groups to identify and discuss the major issues and review considerations for each area: Epidemiology, Risk assessment and Economics.

#### Aims and objectives of the review

The aim of the present review is to discuss how an integrated approach, based on epidemiology, risk assessment and economics, can support food safety decision making

The review will make recommendations for improved interaction between scientists and decision makers in the field of food safety. Research questions that can promote integration of the fields and facilitate the development of more comprehensive models of the efficiency of food safety interventions will be identified. Within the mountain of lacking data, the aim is to identify the most important data gaps and suggest ways to address these priority needs. This will include recommendations on continuous surveillance as well as on focused studies.

#### New workpackage proposals

In addition, ideas for new workpackages within Med-Vet-Net have been generated. Short descriptions will be formulated and these will be presented at the strategic meeting in Rome, 7-9 March 2005. Topics include

- the importance of pork and pork products in the EU in relation to food safety and food supply;
- health consequences for man by using antimicrobials in animal husbandry;
- prioritizing zoonotic hazards at the EU level
- evaluation of an intervention at the European level;
- intervention studies to control a public health problem; and
- new food processing technologies.

For more information about Workpackage 13, contact Project Leader Dr Arie H. Havelaar, RIVM, The Netherlands, Email: arie.havelaar@rivm.nl

## PEOPLE



#### Leader of Workpackage 13 and Institute Representative, RIVM

Dr Arie Havelaar graduated in Chemical Engineering with specialisation in Technical Microbiology (with honours) at the Delft University of Technology. He obtained his PhD at Utrecht University (Bacteriophages as virus models in water treatment) and also obtained a MSc in Epidemiology at the Netherlands Institute of Health Sciences (Erasmus University, Rotterdam).

Arie is deputy head of the Microbiological Laboratory for Health Protection at the National Institute for Public Health and the Environment (RIVM) in Bilthoven, the Netherlands. He is also director of the WHO Collaborating Centre for Risk Assessment of Pathogens in Water and Food at RIVM.

Arie's research covers the broad field of public health aspects of pathogens in food and the environment, and the effectiveness of preventive measures. Currently, his attention is mainly focussed on development and application of microbiological risk assessment.

He is (co-) author of more than 100 scientific publications, several books and numerous scientific reports. He is internationally active as expert for WHO, FAO, EU and EFSA, chair of working groups, organiser and invited speaker at symposia etc. His contributions to microbiology were honoured by election as Fellow of the American Academy of Microbiology, and he was awarded the German Rudolf Schülke Hygiene Preis.

Dr Havelaar plays a number of roles in Med-Vet-Net. He is the leader of the Workpackage 13, *Integrating risk assessment, epidemiology and economics to support decision making in food safety*, is the Institute Representative of the National Institute for Public Health and the Environment (RIVM) in The Netherlands and a member of the Coordinating Forum.

#### New representative for AFSSA

During December 2004, AFSSA announced the replacement of its Institute Representative Dr Maxime Schwartz by Dr Michel Aubert.

Dr Aubert is the Director of AFSSA's Laboratory located in Sophia Antipolis, near Nice in the South East of France. Dr Aubert can be contacted by email on [m.aubert@sophia.afssa.fr](mailto:m.aubert@sophia.afssa.fr)

**Dr Michel Aubert, Institute Representative, AFSSA**



## ADMIN BUREAU UPDATE

The Co-ordinator's Representative André Jestin and the Administration Bureau staff would like to wish all of you a very Happy New Year.

#### Network Financial Management

Following the distribution of the 1st advance of the EC grant for the Joint Program of Activities 1 (JPA1) in November, the Administration Bureau has proceeded to transfer the 3% management fees in accordance with the breakdown of the management fees signed by the Chairperson on 21 September 2004. These funds were distributed to the Partners during the last week of December. Written notification has been sent to each Financial Officer providing details of this transfer of money and the Institute Representatives have also been informed.

#### Videoconference Link

Under the Co-ordinator's Representative leadership, the Administration Bureau is now drafting a proposal for a SSA application as was decided during the Videoconference Meeting in Copenhagen on the 1 December 2004. This application proposal will be reviewed by selected sub-committee within the Network before being submitted to the European Commission by 8 February 2005.

## SCIENTIFIC UPDATE

The last month has proved very busy for Med-Vet-Net scientists with several very successful workpackage workshops, including WP 11 TrichiNet run by P Boireau in AFSSA. The minutes of all the workshops will be placed on the website as soon as possible.

### Disseminating Knowledge

Several members of the network were involved in aspects of disseminating knowledge over this period. Teresa Belcher, Peter Silley and John Threfall all presented aspects of Med-Vet-Net at a UK national Zoonoses meeting in Liverpool; I presented an overview of the project to government and industry representatives at the VLA Christmas Review and Peter, Teresa, Henrik Wagener and I have written a piece on the need for zoonoses research for the journal for the British Association for the Advancement of Science (Science and Public Affairs) at the request of Prof David Fisk who is an adviser to the Prime Minister's Office.

### Integration Activity Teams

To ensure integration of Med-Vet-Net activities at the local level, The Consortium Agreement and Annex to the contract requires that each Institute develops an Integration Activity Team managed by the Institute Representative. In December, each of these representatives were asked to provide details of their activities to date (ie. three months into the project). The analysis of these reports indicated that Institute Activity Teams had met up to four times. Only two teams had not had any meeting to date. Many of the teams meet regularly – usually approximately monthly – and provided minutes of their meetings. The teams from DFVF and SSI had a joint meeting which was very innovative.

• The membership of each team seemed to vary considerably. All teams included the Institute and Thematic Representatives



Teresa Belcher, Prof. Diane Newell and VLA Chief Executive Prof. Steve Edwards at the VLA Christmas Review

but only one team included their Governing Board member. Ten teams included any scientists involved in workpackages but only eight included communications persons, seven finance/administration and three others (responsible for Intellectual Property Rights or Gender Issues).

- Most Team meetings had raised important issues. These included:
  - o The effects of the delay in funding
  - o That the research funding seemed inadequate
  - o The flexibility of the website pages and the importance of maintenance by workpackage leaders.
  - o Lack of awareness of funding from integration activities workpackages
  - o Variability in involvement, commitment and enthusiasm
  - o Harmonisation of databases

These are issues that clearly need to be dealt with and I will address these over the next month or so. The evidence from this survey suggests that most Integration Activity teams are working effectively, which is very important over the next few months as we develop the science strategy and the new workpackage programme.

### Diane Newell

## MED-VET-NET NEWS

### March Thematic Group Meeting - Rome

The next Thematic Meeting as part of WP2 will be held in Rome at the Istituto Maria SS. Bambina from 7-9 March. This meeting is to be attended by all thematic representatives. The local organiser is Edoardo Pozio (ISS) who will provide more detailed information closer to the event.

For assistance with the booking of hotels, please contact Susy Babsa on susan.babsa@iss.it or fax +0039 06 49902992.

### Med-Vet-Net Annual General Meeting

30 Jun – 1 July, 2005  
The AGM will be held at King Alfred's College Winchester, UK

### The European Programme for Intervention Epidemiology Training (EPIET)

is calling for applications for fellowships. See [www.epiet.org/Apply/Apply.htm](http://www.epiet.org/Apply/Apply.htm)

## CONFERENCE CALENDAR

### BioMicroWorld-2005

15 Mar, 2005 - 18 Mar, 2005: Badajoz, Spain  
1st International Conference on Environmental, Industrial and Applied Microbiology "Fostering Cross-disciplinary Applied Research in Microbiology and Microbial Biotechnology". For more information, visit <http://www.formatex.org/biomicroworld2005>

### International zoonoses Conference

### The Prevention and Control of Zoonoses: from Science to Policy.

15-17 June, 2005, Liverpool, UK.  
The aims of the conference will be to bring together leading national practitioners and policymakers in both human and veterinary medicine with their counterparts from Europe and other areas of the world.

The themes of this conference will be:

- policy setting
- surveillance and modelling of zoonoses
- food borne zoonoses
- new and emerging zoonoses
- globalisation and zoonoses

For more information visit:

<http://hpazoonosesconference.org> or send an email to [zoonosesconference@hpa.org.uk](mailto:zoonosesconference@hpa.org.uk)

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Contributions and suggestions are welcome.

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