MEETING REPORT

First annual meeting of the food- and waterborne diseases surveillance network in Europe

Stockholm, 1–2 October 2008

Executive summary

Over 1–2 October 2008, food- and waterborne disease public health experts from across the European Union (EU) met at European Centre for Disease Prevention and Control (ECDC) to discuss the needs for future surveillance of six priority diseases: salmonellosis, campylobacteriosis, STEC/VTEC infection, listeriosis, shigellosis, and yersiniosis. Non-EU network members also participated in the meeting. For each disease working groups provided their opinion on specific questions regarding surveillance objectives and variables, reporting frequency, regular reports, current mechanisms to detect early dispersed international clusters and outbreaks (later referred to as the urgent inquiry network), molecular typing, and the training needs for country experts. European Union countries have been working together in these areas for several years and the experts at this meeting exchanged ideas on how to further enhance this cooperation.

This was the first meeting of newly nominated disease-specific surveillance experts for the six priority food- and waterborne diseases. The participants learned about recent developments at ECDC, ranging from a presentation on the ECDC programme for food- and waterborne diseases and zoonoses to the development of the new web platform for the exchange of information between experts. The experts, in turn, presented the status of surveillance of food- and waterborne diseases in their countries, laboratory method developments, disease trends and recent outbreak investigations. Representatives from important stakeholders such as the European Food Safety Authority (EFSA), the European Commission's Rapid Alert System for Food and Feed (RASFF), and WHO-Euro presented their activities within the field of food- and waterborne diseases. The meeting provided a good opportunity to learn from experiences in other countries on how to prevent and control foodborne outbreaks and enhance multidisciplinary collaboration between different partners.

The outcomes of the discussion groups are summarised in Session 5. The European Centre for Disease Prevention and Control will bring forward issues that require agreement at a higher administrative level (e.g., by the national surveillance contact points) and work towards implementing the suggested improvements. Regarding the web-based information platform, EPIS, ECDC will collaborate with the group of experts that signed up at the meeting in further developing this tool (Session 3).

Stockholm, August 2010

1 Background

The European Centre for Disease Prevention and Control (ECDC) is an EU agency[1] with a mandate to operate the dedicated surveillance networks (DSNs) and to identify, assess, and communicate current and emerging threats to human health from communicable diseases.

Since 1993, the European Union (EU) has had enteric pathogens under special surveillance. It began as a network for human *Salmonella* surveillance, Salm-net. Later, from 1998 to 2007, it continued as a dedicated surveillance network for the enteric pathogens *Salmonella* and *E. coli* as Enter-net (with *Campylobacter* included in 2003).

Enter-net was funded by the European Commission until October 2006 and continued its activities via a contract with ECDC until October 2007. In July of 2007, Enter-net was evaluated and assessed, and the coordination of network hub activities was transferred to ECDC on 2 October 2007.

In November 2007, a transition workshop on food- and waterborne disease (FWD) surveillance in the EU was held to discuss the challenges and new opportunities for further development of FWD surveillance and response at the EU level and to explore an opportunity to improve upon the past achievements of Enter-net. Many of the recommendations from that meeting have already been taken forward; for example, the integration of the revised list of Enter-net variables into TESSy, the first developments of a web-based urgent inquiry (UI) system, and the network broadened to include also shigellosis, listeriosis and yersiniosis. This provided a good platform for the first meeting of the new network in October 2008.

1.1 Objectives

The purpose of the meeting was to discuss the current status of, and future needs for, surveillance and outbreak-related activities for the six priority FWD at the EU level—including the development of a molecular typing surveillance strategy for the EU—and to share country-specific developments and issues in the area of FWD.

[1] Established by the European Parliament and Council Regulation 851/2004 of 21 April 2004. For more information about the structure and organisation of ECDC please refer to http://www.ecdc.europa.eu

2 Plenary lectures and working groups

2.1 Session one: Current status of food- and waterborne disease surveillance and outbreak related activities at the EU level

An overview of the Food- and Waterborne Diseases and Zoonoses programme (FWD) at ECDC was presented. The FWD work on surveillance, outbreak-related activities, harmonisation of data and urgent inquiries was followed by a brief description and demonstration of the proposed functionalities of the future web-based Epidemic Intelligence Information System (EPIS). Several presentations were given by representatives from relevant stakeholder organisations. The European Food Safety Authority (EFSA) held a presentation on the foodborne outbreak reporting system and gave an update on 2007 data. A presentation on foodborne outbreaks and the European Commission's Rapid Alert System for Food and Feed (RASFF) was given by RASFF, and WHO-Euro described the food safety activities occurring within the WHO-European Regional office.

2.2 Session two: Disease-specific country presentations

Several participants presented brief updates regarding developments in surveillance, laboratory methodologies, recent trends, outbreaks, and the integration of laboratory and epidemiologic data related to the six priority diseases.

2.3 Session three: Disease-specific working groups on improving food- and waterborne disease surveillance and outbreak detection and response

The participants signed up for one of the six disease-specific working groups on the first day. The topics for discussion were the same for each group but focused on a specific pathogen. As a starting point, the groups got a number of background documents intended to clarify the context and stimulate discussion. These dealt with general surveillance issues such as the disease-specific surveillance objectives and variables, or the outputs from TESSy in the form of systematic reports and how these were applied to specific diseases.

3 Results and main conclusions

Working group discussions focused on disease-specific surveillance objectives, variables and reports, as well as molecular typing, outbreak detection and response (i.e., UI and EPIS), and training needs for experts in the countries.

The general conclusions of the meeting included the following:

- The need to have human data integrated with animal and food data, in particular molecular typing data;
- future meetings should continue to include country-specific presentations;
- further discussion on methods (between microbiologists), through meetings and other opportunities for discussion, should occur with a separate forum suggested;
- a need to continue having disease-specific working groups;
- additional support and capacity-building is needed for several EU countries; and
- participation by non-EU countries in network activities is welcomed and should be maintained.

The following subsections are conclusions culled from the discussions.

3.1 General food- and waterborne disease surveillance issues:

Surveillance objectives and variables

- The drafted disease-specific surveillance objectives were largely accepted, with some suggested revisions (i.e., salmonellosis and verocytotoxin-producing Escherichia coli (VTEC) infection). For campylobacteriosis, more discussion may be needed, while additional disease-specific objectives were suggested for shigellosis and yersiniosis.
- Although it was agreed that a geographical variable is important for surveillance, the level of precision needs to be realistic and needs further discussion. For listeriosis and yersiniosis, it was agreed that a geographical variable would not be necessary. The VTEC working group recommended that NUTS 2 codes or a more detailed level be used.
- For campylobacteriosis, salmonellosis and VTEC infection, the current antibiograms data collected at the EU level were deemed appropriate. For shigellosis, it was recommended that an antibiogram be added to the EU level surveillance; this was not deemed necessary for listeriosis and yersiniosis.
- Additional molecular typing data or strain characteristics to be captured as part of routine surveillance at the EU level were not deemed feasible for campylobacteriosis, but were suggested for salmonellosis, VTEC infection and shigellosis.
- Additional variables to be included in the enhanced dataset for disease-specific surveillance were suggested for VTEC infection (serologic diagnosis alone) and listeriosis (clinical presentation), in addition to minor revisions to existing variables and drop-down menus.

Surveillance reports and outputs

- The frequency of reporting data should be linked to the frequency of outputs.
  - Regarding quarterly reports, the utility was questioned for campylobacteriosis, and for listeriosis and yersiniosis, annual reporting seemed sufficient depending on the surveillance objective. Quarterly reporting was determined to be appropriate for shigellosis, and for salmonellosis and VTEC infection, it was recommended that efforts be made towards more frequent reporting (i.e., monthly).
- Various suggestions were provided for regular outputs including continuation of quarterly reports, basic descriptive analyses with graphs and maps, and additional tables summarising clinical and epidemiological data (not otherwise presented in other reports). It was also suggested that an editorial working group be created for *Salmonella*-specific reports that could lead the discussion (potentially in EPIS) regarding regular outputs.
- In general, tables that could be generated by TESSy upon upload of data and that could be reviewed and approved immediately would be possible to post on the ECDC website without approval. Appropriate, publicly available content could be EU level incidences, reported cases and relevant strain characteristics. It would also be useful to include maps with incidences.

Molecular typing working group proposal

- Various opinions were offered regarding the proposed procedure for the working group, including the following: the need for pathogen-specific groups; clarification of objectives; inclusion of representatives from external organisations (e.g., MedVetNet); referring to work already done by PulseNet Europe (e.g. *Listeria*); inclusion of one epidemiologist and one microbiologist per disease for a maximum of 12 people; and inclusion of experts from countries with lesser capacity for molecular typing work to ensure that the methods selected are ultimately feasible in all EU countries.
- Suggestions were offered for additional or revised tasks for the working group, with a focus on ensuring that work already done by PulseNet Europe is not duplicated.
- Overall, it was suggested to outsource the reference databases for molecular typing data while ensuring strict confidentiality and ownership of the data and also the ability to link data to other databases (e.g., TESSy).

Urgent inquiries and the Epidemic Intelligence Information System (EPIS)*

- Monthly summaries were deemed to be useful.
- Disease-specific urgent inquiries (UI) groups, in particular once EPIS is functional, would be appropriate.
- No criteria are needed for the launching of an UI as it is well understood.
- Positive and negative replies should be solicited.
- In the listeriosis group, it was agreed that monthly summaries should be shared but only with designated persons within RASFF (EC) and EFSA, ensuring that it is well established that the information is preliminary. Also, the need for better information exchange between ECDC, RASFF (EC) and EFSA was highlighted.
- Overall, although a standard form for UI in EPIS would be useful, it was noted that the exchange of information should remain more informal to promote communication and also to ensure that efforts are not duplicated with other warning systems.

**Only the campylobacteriosis, listeriosis, yersiniosis groups were able to address this topic.*

Training needs*

- For epidemiologists, opportunities to share experiences and design and administer case studies are useful while for microbiologists, the highest priority is External Quality Assurance programmes.
- Joint training among epidemiologists and microbiologists is important to increase collaboration and communication, and discuss opportunities for the integration of surveillance data.
- Hands-on training and online training could both be used depending on needs, and it would be useful to cross-train epidemiologists and microbiologists in each others' fields.

**Only the campylobacteriosis, shigellosis and yersiniosis working groups were able to address this topic.*

Overall, the participants felt the meeting was a success with many lessons learned and useful and concrete suggestions provided from working group discussions that will enable improvements to FWD surveillance in the EU.

Annex 1: Meeting programme

1 October 2008 — Day 1

09:00–09:15 **Welcome**
Zsuzsanna Jakab

09:15–12:00 **Session 1: Current status of FWD surveillance and outbreak-related activities at the EU level**
Chair: Andrew Amato-Gauci

09:15–09:35 **Overview of the FWD programme at ECDC**
Johanna Takkinen

09:35–09:55 **FWD surveillance: Harmonisation of data collection**
Therese Westrell

09:55–10:15 **Update on urgent inquiries, development of FWD SOPs for response at EU level**
Nadia Ciampa/Lara Payne

10:15–10:45 ***break***

10:45–11:05 **Epidemic Intelligence Information System (EPIS) demonstration**
Pedro Arias

11:05–11:25 **EFSA: Foodborne outbreak reporting system and updates**
Pia Makela

11:25–11:45 **RASFF: Foodborne outbreaks and RASFF**
Jan Baele

11:45–12:00 **WHO-Euro: Food Safety Activities**
Hilde Kruse

12:00–13:00 **lunch**

13:00–15:00 **Session 2: Disease-specific country presentations**
Chair: Ian Fisher

- **Salmonella Country Reports**
- **VTEC Country Reports**
- **Campylobacter Country Reports**

15:00–15:30 **break**

15:30–17:00 **Disease-specific country presentations continued**
Chair: Henriette De Valk

- **Listeriosis Country Reports**
- **Shigellosis Country Reports**
- **Yersiniosis Country Reports**
- **Other FWD**

17:00–18:00 **FWD coordination group meeting**
Chair: Johanna Takkinen

17:00–18:00 **Non-EU network members meeting**
Chairs: Nadia Ciampa and Therese Westrell

2 October 2008 — Day 2

08:30–08:45 **Brief overview of disease-Specific Working Group discussions**

08:45–10:30 **Session 3: Disease-specific working groups on improving FWD surveillance and outbreak detection & response** (Salmonella, VTEC, Campylobacter, Shigella, Listeria, Yersinia)
Chairs (6): Johanna Takkinen, Therese Westrell, Nadia Ciampa, Carmen Varela Santos, Ole Heuer, Lara Payne

1) General FWD surveillance issues:
- Disease-specific surveillance objectives
- Disease-specific variables
- Systematic reports/outputs (i.e. format & reporting frequency)

2) FWD Molecular Typing (MT) Working Group proposal:
- Discuss MT Strategy & Proposal for FWD MT Working Group
- Determine interest in participating in FWD MT Working Group

3) General FWD outbreak detection and response issues:
- EPIS & Urgent Inquiries

4) Training needs (E.g. lab and epi joint training needs)

10:30–11:00 **break**

11:00–12:30 **Working groups on improving FWD surveillance and outbreak detection & response continued**

12:30–13:30 **lunch**

13:30–15:30 **Session 4: Presentation of disease-specific working group discussions**
Chair: Panayotis Tassios
- Summary of discussions regarding FWD surveillance, molecular typing, outbreak detection & response issues and training: 6 groups with 15 minutes presentations each (10 min summary, 5 min discussion)

15:30–16:00 **break**

16:00–17:00 **Session 5: Discussion, conclusions and next steps**
Chair: Johanna Takkinen

Annex 2: Participants

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