

MNF Interview

with Andrea Ammon,
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Strategies against food-borne diseases

Dr. Andrea Ammon is a medical epidemiologist at the Robert Koch Institute where she is the Head of the Department for Infectious Disease Epidemiology. Her special field of research is food-borne infections and zoonoses.

MNF:

What is the trend in the incidence of foodborne infections and intoxications in Europe?

Ammon:

The only data that currently allow the assessment of trends are those from the European Zoonoses Report. Data for zoonotic food-borne infections have been published since the 1990s. As regards the data on human illness, this report is based on national data. The overall trends in 2002 vary according to pathogen; for example it shows decreasing numbers for salmonellosis, an increasing trend for Shiga toxin-producing *E. coli* and yersiniosis, whereas the figures for campylobacteriosis and listeriosis are stable. But even for the single pathogens, there are differences between the Member States. For food-borne intoxications such data are not available at the European level.

MNF:

Are there new vehicles for foodborne pathogens?

Ammon:

Due to the increasing application of analytical epidemiological studies during outbreak investigations and risk factor studies, a number of new vehicles have been identified during the last few years. Examples are salmonella in aniseed herbal tea and *E. coli* O157 in cereals or alfalfa sprouts. The consequences of these findings are that we should have an open mind regarding vehicles when trying to identify the transmission pathways

during outbreak investigations and not make premature conclusions about the vehicles.

MNF:

Which factors contribute to the emergence and transmission of food-borne pathogens?

Ammon:

Demographics changes might contribute to the emergence of food-borne pathogens as well, i.e. an aging population which might be more susceptible to food-borne pathogens. Finally, there are changes in consumption habits, such as more meals being consumed outside the home, and the increasing demand for “natural” foods without any added stabilizers. Finally, changes might also occur in the microbes themselves by mutations or acquisition of plasmids that make them more pathogenic or resistant to antibiotics.

MNF:

Which measures must be taken to reduce food-borne diseases?

Ammon:

Measures should be implemented at all levels of the food chain. This requires a coordinated approach between all the disciplines and institutions involved. In order to be able to base the decisions on sound evidence, monitoring of food-borne pathogens in foods and food-producing animals as well as surveillance of illness in humans are essential. Furthermore, outbreaks suspected to be borne by food should be investigated carefully, with a trace back to the implicated foods. Ideally, these results should be evaluated by all parties involved on a regular basis. Using these results, recommendations should be developed and implemented, including information for consumers.

MNF:

How can harmonization and standardization be achieved between national authorities and laboratories in Europe?

Ammon:

This can only be achieved by networks involving all the disciplines working in the field of food-borne infections. However, a first step would be to describe the setup of surveillance systems and the kind of methods that are routinely used in the Member States, as has already been achieved for *Campylobacter* and *Listeria*. With this knowledge, differences

in the data from the individual European countries could at least be better interpreted. It would also allow the identification of the key persons for each disease in the European countries. This would be a good starting point for standardization.

“The emergence of food-borne infections is the result of a multifactorial development. An important role is played by the changes in food production and distribution, i.e. more centralized production but wider geographic distribution.”

MNF:

Are we prepared for the new European regulations on zoonoses?

Ammon:

The new directive on the monitoring of zoonoses (2003/99/EC) includes some changes compared to the one in place since 1992. Firstly, data for human illness due to zoonotic pathogens have to be reported on the European level (not via the single national reports as previously). Secondly, the new directive requires all outbreaks of food-borne infections to be reported to the European Food Safety Authority

(EFSA). And lastly, the EFSA is now in charge of publishing the report. To meet these demands, there are several working groups on the European level (with members from Member States, the Commission and ESFA) preparing the variables to be included in the report, the databases and the data flows. It is agreed that the 2005 data will be the first to be reported under the new scheme.

MNF:

Dr. Ammon, thank you very much for this interview.

Interview by Helge Karch