The European Union Summary Report on Trends and Sources of Zoonoses, Zoonotic Agents and Food-borne Outbreaks in 2010

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Abstract

The European Food Safety Authority and the European Centre for Disease Prevention and Control analysed the information on the occurrence of zoonoses and food-borne outbreaks in 2010 submitted by 27 European Union Member States. In 2010, 99,020 salmonellosis cases in humans were reported and the decreasing trend in case numbers continued. Most Member States met their *Salmonella* reduction targets for poultry, and *Salmonella* is declining in these populations. In foodstuffs, *Salmonella* was most often detected in fresh broiler and turkey meat. Campylobacteriosis was the most commonly reported zoonosis with 212,064 human cases. *Campylobacter* was most often detected in fresh broiler meat. The number of human listeriosis cases decreased slightly to 1,601. *Listeria* was seldom detected above the legal safety limit from ready-to-eat foods at retail. A total of 4,000 confirmed verotoxigenic *Escherichia coli* (VTEC) infections were reported and this number has been increasing since 2008. VTEC was also observed in food and animals. The numbers of human yersiniosis cases have been decreasing in recent years and, 6,776 cases were reported in 2010.*Yersinia enterocolitica* was isolated also from pig meat and pigs; 133 cases of *Mycobacterium bovis* and 356 cases of brucellosis in humans were also reported. The prevalence of bovine tuberculosis in cattle increased, and the prevalence of brucellosis decreased in cattle, sheep and goat populations. Trichinellosis and echinococcosis caused 223 and 750

confirmed human cases, respectively. These parasites were mainly detected in wildlife. The number of Q fever cases in humans decreased to 1,414. In animals Q fever was found in domestic ruminants. There were two human cases of rabies in 2010 and the number of rabies cases in animals slightly increased. Most of the 5,262 reported food-borne outbreaks were caused by *Salmonella*,viruses, *Campylobacter* and bacterial toxins and the main food sources were eggs, mixed or buffet meals and vegetables.

Summary

Zoonoses are infections and diseases that are naturally transmissible directly or indirectly, for example via contaminated foodstuffs, between animals and humans. The severity of these diseases in humans varies from mild symptoms to life-threatening conditions. In order to prevent zoonoses from occurring, it is important to identify which animals and foodstuffs are the main sources of infections. For this purpose information aimed at protecting human health is collected and analysed from all European Union Member States.

In 2010, 27 Member States submitted information on the occurrence of zoonoses, zoonotic agents and food-borne outbreaks to the European Commission and the European Food Safety Authority. Further, information on zoonoses cases reported in humans was provided by the European Centre for Disease Prevention and Control. In addition, four European countries that were not European Union Member States provided information. The European Food Safety Authority and the European Centre for Disease Prevention and Control jointly analysed the data, the results of which are published in this annual European Union Summary Report, which covers 15 zoonoses.

In 2010, the number of salmonellosis cases in humans decreased by 8.8 % compared with 2009, and the statistically significant decreasing trend in the European Union continued for the sixth consecutive year. In total, 99,020 confirmed human cases were reported in 2010. It is assumed that the observed reduction in salmonellosis cases is mainly due to successful *Salmonella* control programmes in fowl populations. Most Member States met their *Salmonella* reduction targets for poultry, and *Salmonella* is declining in these animal populations. In foodstuffs, *Salmonella* was most

often detected in fresh broiler and turkey meat. Products in non-compliance with the European Union *Salmonella* criteria were mainly observed in minced meat and meat preparations as well as live bivalve molluscs.

The notification rate and confirmed number of human campylobacteriosis in the European Union increased in 2010 compared with 2009. Human campylobacteriosis has followed a significant increasing five-year trend in the European Union, since 2006 and continued to be the most commonly reported zoonosis with 212,064 confirmed cases. The proportions of *Campylobacter*-positivefood and animal samples remained at similar levels as in previous years, with the occurrence of *Campylobacter* continuing to be high in broiler meat, at European Union level.

The number of listeriosis cases in humans slightly decreased, and 1,601 confirmed human cases were reported in 2010. As in previous years, a high fatality rate of 17 % was reported among the cases. *Listeria monocytogenes* was seldom detected above the legal safety limit from ready-to-eat foods at retail. There were no major changes in the occurrence of the bacterium in foodstuffs compared with the previous year.

A total of 4,000 confirmed verotoxigenic *Escherichia coli* infections were reported in 2010, and most of these cases were caused by the serogroup O157. The numbers of the reported verotoxigenic *Escherichia coli* human cases have been increasing in the European Union since 2008. In animals and food most verotoxigenic *Escherichia coli*-positive findings were made from cattle and bovine meat, but the bacteria were also detected in other animal species and foodstuffs.

The numbers of the reported yersiniosis cases have been decreasing during the past years, and in 2010 6,776 confirmed yersiniosis cases in humans were recorded at European Union level.*Yersinia enterocolitica* was mainly isolated from pig meat and pigs but also from other foodstuffs and other animal species.

Since 2006, the numbers of confirmed cases of tuberculosis in humans caused by *Mycobacterium bovis* haveincreased slightly. In 2009 (2010 data were not available) there were 133 confirmed cases in humans. The reported prevalence of bovine tuberculosis increased in cattle in the European Union, even though remaining at low level.

The numbers of confirmed brucellosis cases in humans continued to decline, and 356 confirmed cases were reported in 2010 at European Union level. The numbers of brucellosis-positive sheep and goat herds have shown a substantial decrease in the past years. Bovine brucellosis decreased only marginally compared with 2009.

In 2010, two parasitic zoonoses, trichinellosis and echinococcosis, caused 223 and 750 confirmed human cases in the European Union, respectively. Compared with the previous years, the number of human trichinellosis cases at the European Union level declined remarkably. In 2010, also, fewer *Trichinella*-positive pigs were reported than in the previous year.The parasite was more prevalent in wildlife. The number of human echinococcosis cases decreased slightly in 2010. *Echinococcus* was reported in farm animals by some Member States and *E. multilocularis* was often found in foxes in the central European Member States.

Only congenital toxoplasmosis cases (21) in infants less than one year old were reported in 2010 according to the new European Union case definition. In animals, the parasite was reported from several animal species.

Q fever cases in humans decreased sharply in 2010 compared with 2009. A total of 1,414 confirmed cases were reported in 2010, with the majority of cases reported from one Member State. In animals Q fever was reported from cattle, goats or sheep by most Member States.

Two human cases of rabies were reported in the European Union in 2010. The general decreasing trend in the total number of rabies cases in animals observed during previous years discontinued in 2010 and there was a slight increase in the rabies cases in animals, and rabies was reported in both domestic and wildlife animal species in the Baltic and some Eastern and Southern European Member States, mostly in farm animals and foxes.

A total of 5,262 food-borne outbreaks were reported in the European Union, causing 43,473 human cases, 4,695 hospitalisations and 25 deaths. Most of the reported outbreaks were caused by *Salmonella*,viruses, *Campylobacter* and bacterial toxins. The most important food sources were eggs and egg products and mixed or buffet meals and vegetables and products thereof. The numbers of outbreaks caused by vegetables and products thereof have increased compared to previous years. In addition, 14 waterborne outbreaks were reported in 2010 related to the contamination of private and

public water sources.

Keywords

Zoonoses, surveillance, monitoring, Salmonella, Campylobacter, parasites, food-borne outbreaks, food-borne diseases, rabies, Q fever, Listeria

See also

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