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Editorials

Rapid communications

News

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A note from the editors: 2011 in numbers and developments foreseen for 2012

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Another year has passed by during which the public health community and *Eurosurveillance* faced both new and already familiar challenges. The toxin-producing *Escherichia coli* O104 outbreak in Germany captured the attention of many public health experts over several months. West Nile virus became established in Greece after the outbreak in 2010, and public health experts were faced with the re-emergence of malaria in the same country.

Online and open access journals are increasing in numbers. Moreover, with 1.4 million scientific articles published annually, scientific journals are not the only outlet for scientific communication anymore. With more modern ways, the timeliness of communication and good quality of scientific publications become increasingly important. So do the additional functionalities and services offered by journals. Where does *Eurosurveillance* stand and where will it go?

In 2011, *Eurosurveillance* was the first scientific journal to cover the large outbreak of enteroaggregative Shiga toxin-producing *E. coli* O104:H4. We published a rapid communication on 26 May shortly after the outbreak had started. It was followed by a further 11 articles including an e-alert, an ad hoc scientific communication about an important event that should not wait until the next regular publication of *Eurosurveillance*. The high level of interest confirms the ability of *Eurosurveillance* to publish manuscripts about new developments of key interest to public health experts in a timely manner. As of 5 January 2012, the e-alert had been downloaded some 2,500 times and cited 19 times, according to the Scopus database.

The recent occurrence of cefixime-resistant gonorrhoea was covered in three rapid communications from Sweden, the United Kingdom and Austria. A report from Australia highlighted the first case of a *Neisseria gonorrhoeae porA* pseudogene false-negative PCR result caused by sequence variation and the first description of a clinical *N. gonorrhoeae* strain harbouring an *N. meningitidis porA* sequence.

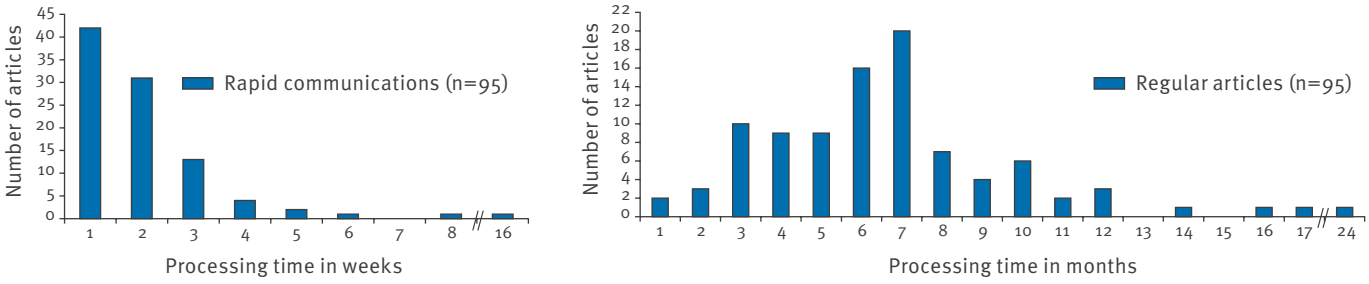
Eurosurveillance was also the first scientific journal to report on outbreaks of HIV in injecting drug users in two European countries and on the risk for similar outbreaks in other European countries.

A comprehensive special issue on Chagas disease highlighted the relevance of this neglected tropical disease for Europe.

Overall, *Eurosurveillance* published in 2011 around 190 rapid communications and regular articles, as well as 16 editorials, 10 letters and 39 other items (such as

Figure

Time from submission to publication of articles in *Eurosurveillance* in 2011 (n=190)



news and meeting reports). The average submission–to–publication time was 1.6 weeks for rapid communications and 28 weeks for regular papers. Some 77% (n=73) of the rapid communications were published within two weeks from submission, and 73% (n=69) of the regular articles were published within seven months (Figure). The rejection rate has remained at 43% in 2011 for rapid communications and increased to 75% for regular papers (63% in 2010). Submissions came from more than 37 countries and covered mostly EU countries as well as 12 countries not represented on the *Eurosurveillance* board.

A milestone for *Eurosurveillance* was a scientific seminar organised for the occasion of the 15-year anniversary celebration on 8 November 2011.

In 2011, as in previous years, the team has been supported by numerous experts from across the globe. Some had a formal role as board members, authors and peer reviewers; others played a more informal role providing ad hoc topical input and advice. In 2011, some 380 reviewers supported us and their names are published in this issue. We are grateful for their advice as well as for the informal input from our network of supporters.

The year 2012 has just started. Much will remain the same. We will keep our focus, which is on the surveillance, prevention and control of communicable diseases in Europe and remain vigilant for new developments in this area and related fields.

But there will also be some new developments. We will expand our editorial board and welcome Heath Kelly, Head of Epidemiology Unit, Victorian Infectious Diseases Reference Laboratory in Victoria, Australia as new associate editor.

We plan to improve the efficiency and transparency of our workflows by implementing an online submission system. Acknowledging the importance of social media, we will set up a twitter account in this month and hope that many of you will follow us.

In mid-2012, we will receive our first official impact factor. It will complement the acknowledged capacity of the journal to impact on public health through providing the public health community with information necessary for the implementation of measures to prevent and control communicable diseases.

Our main aim in 2012 remains to serve our audience and to balance timeliness, public health relevance, quality and scientific content for the benefit of all those concerned with surveillance, prevention and control of communicable disease in Europe and beyond. We count on the good collaboration with our board, authors, reviewers and readers to achieve this aim.

Three probable cases of cutaneous anthrax in autonomous province of Vojvodina, Serbia, June 2011

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Three probable cases of cutaneous anthrax were reported in June 2011 in the eastern part of the Autonomous Province of Vojvodina, Serbia. All cases were involved in slaughtering of a heifer that died and was suspected to have had anthrax. In the same village, anthrax was confirmed in other animals.

Introduction

Anthrax is an acute bacterial infection caused by the aerobic, spore-forming, Gram-positive organism *Bacillus anthracis*, found throughout the world. It is primarily an animal disease that occurs in wild and domestic livestock (such as cattle, sheep and goats) and rarely affects humans under normal circumstances. Humans can acquire anthrax by exposure to infected animals, animal products or spores in the soil and depending on the mode of transmission can develop one of four distinct clinical forms: cutaneous, respiratory, gastrointestinal and oropharyngeal [1].

The cutaneous form of disease is involved in 95% of human cases but the diagnosis can be very difficult in atypical presentations and in non-endemic regions when rarely encountered in clinical practice. Any delay in treatment, especially in systemic anthrax, may have fatal consequences, illustrated by case reports [2-4].

Anthrax spores and bacilli are present in the soil in some countries in Europe and continue to cause disease in animals and, occasionally, humans. In the middle and northern latitudes of Europe, anthrax in animals is either absent or found only in sporadic cases, while it remains relatively common in Turkey, Greece, the Balkan countries, Italy, Spain and the Russian Federation [5]. Given the proximity of the neighbouring countries in which human cases of confirmed anthrax have recently been found (Bosnia and Herzegovina, Bulgaria, Croatia and Romania) and uncontrolled transport of cattle across the border is very possible that there would be new cases of disease [6-9].

In Serbia anthrax occurs sporadically in animals and rarely in humans. During last five years, only five human cases were reported: four in 2008 and one in 2009 [10]. Human anthrax has been well known in the Autonomous Province of Vojvodina (APV) before 1988, a region of flat land in the north of Serbia where animal husbandry is one of the primary occupations. According to the Institute of Public Health of Vojvodina, human anthrax occurred after the Second World War with an incidence of 0.05 to 8.59 per 100,000 population [11]. The last case of human anthrax that occurred in the APV before 2011 was reported in 1988 [12].

We describe here cases of anthrax that occurred in humans and animals in Bocar, APV, in June 2011. Further cases among animals were also registered in early November 2011 in eastern Serbia, near the city of Pirot, close to the border of Bulgaria.

Anthrax in animals

In a household in the village of Bocar (Household A) in the north-eastern part of the APV, one heifer died on 2 June 2011. This death was not recognised at the time as caused by anthrax and was not reported to the veterinary authorities. The heifer was butchered in another household (Household B) on the next day.

A routine investigation of the unexplained death of the heifer took place four days later, on 6 June 2011 by the veterinary institute and veterinary centres of the two districts Zrenjanin and Kikinda, as Bocar is situated on the border of these districts. The veterinary inspection detected another two sick animals (horse and heifer) in Household A. Samples were taken from the ear muscles of those two animals. The presence of *B. anthracis* was established on 7 June by deep isolation agar and Ascoli precipitin test [13].

In Household B, a goat died on 19 June. The presence of *B. anthracis* was confirmed in a tissue sample. In another village Novo Milosevo, about 10 kilometres away from Bocar, a sick cow was reported on 17 June, which subsequently died on 22 June, with microbiologically confirmed anthrax.

Clinically ill animals have fever, difficulty in breathing, with bloody discharges from natural openings in the heifer. The animals died within two or three days after beginning of symptoms. Common to all ill animals was that they were pastured in areas recently covered with high groundwater. The dead animals had not been vaccinated against anthrax.

Human cases of anthrax

From 5 to 9 June 2011, cutaneous anthrax was diagnosed in three workers who were in contact with the first dead heifer during slaughter, and had not had any contact to the other sick animals. They were classified as probable cases of anthrax based on epidemiological and clinical data. Skin manifestation occurred on the patients' hands after the incubation period of one to two days [13], followed by high fever, without any other symptoms. The infection started as a pruritic papula. In two days the papula enlarged and formed an ulcer, about 2 cm in diameter, with typical black central crust. There was oedema of the ulcer and surrounding skin. The skin lesions were painless. The patients were treated with antibiotic therapy 15 days at home and recovered. No laboratory diagnostic tests were done on the human patients.

A further five persons who had been exposed to dead animals were followed up for 24 days during the incubation period, but no clinical signs and symptoms appeared. No human deaths were reported in the area in that period which that could have been due to undiagnosed anthrax. Meat from infected animals was not consumed because the carcasses were destroyed after appropriate transport. The meat from the first slaughtered heifer was not available for investigation and may have been used to feed pets.

Control measures

After the outbreak was reported following the death of the second animal, the veterinary authorities ordered control measures:

- a ban on releasing animals from the infected pastures for the duration of the outbreak and the risk of spread (six weeks),
- a ban on the slaughter of sick animals,
- prohibition of the use of milk and dairy products, or meat, skin and other products, as well as the sale of animals with clinical manifestation of illness or suspected to infection,
- vaccination of cattle, sheep, goats and Equidae,
- prohibition of butchering of dead and sick animals,
- disinfection of places where a dead animal had been kept.

The population of affected areas was encouraged to report all animal deaths to the veterinary authorities, to treat carcasses of dead animals only in accordance with the instructions of experts, to limit the number of persons present in contaminated yards, to use protective equipment in contact with the animals and to disinfect it after use, and to contact a medical service immediately in case they developed fever or skin changes. Educational material about anthrax was distributed to households in affected areas.

Discussion

Currently, very few cases of anthrax occur in developed countries [14], but in developing countries anthrax continues to be an important infectious disease. The incidence of infection can be reduced dramatically by the vaccination of animals at high risk, along with improvements in industrial hygiene [15]. In Serbia routine vaccination of livestock against anthrax is not implemented regularly but is carried out only in areas where this bacterium is present in the soil and nature.

The three probable human cases of anthrax in Bocar we describe here could be a result of feeding cattle with hay and grass on pastures which had high ground water following heavy rains during spring. Several studies have shown that meteorological factors such as shifts between rainy and dry periods can contribute to the migration of anthrax spores on the surface of pasture land and contamination by anthrax spores [16-20]. Under adverse environmental conditions, e.g. after release into soil from dead or dying animals, the vegetative bacilli die but endospores survive. The spores are remarkably resistant to a range of adverse environmental conditions such as temperature, desiccation, pH, chemicals or irradiation, which makes decontamination difficult.

As anthrax spores can persist for a long time in the environment, decontamination of the ground and vaccination of animals are important public health measures to prevent further cases in animals and humans and they should be continued even after several anthrax-free years. Existing programmes of prevention and control of both animal and human anthrax need to be evaluated and the surveillance system enhanced, including the development of laboratory diagnostic capacities for human anthrax in Serbia. The enhanced surveillance system requires close collaboration between services for the prevention and control of human and animal diseases, and prompt reaction of both services after reports of possible cases of anthrax.

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Call for applications for EPIET fellows

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Applications are invited for fellow positions in the European Programme for Intervention Epidemiology Training (EPIET) which is coordinated and funded by the European Centre for Disease Prevention and Control (ECDC).

Closing date for the applications is 5 February 2012. The fellowship programme will start in September 2012.

The European Programme for Intervention Epidemiology Training (EPIET) is a two-year fellowship programme, which provides training and practical experience in intervention epidemiology at the national and regional centres for surveillance and control of communicable diseases in the European Union (EU) and Norway. The programme is aimed at EU medical practitioners, public-health nurses, microbiologists, veterinarians and other health professionals with previous experience in public health. Applicants should have a keen interest in epidemiology and be interested to learn how to control infectious diseases.

For more information and the application form see the ECDC home page and the EPIET website.