

PRESS RELEASE

New overview of surveillance data on tick-borne encephalitis in Europe

Stockholm, 18 September 2012

ECDC publishes today a report surveying the prevalence of Tick Borne Encephalitis (TBE) in Europe. The report has epidemiological data from 2000 to 2010 for 20 out of 30 EU/EFTA countries. The data shows that a number of key risk areas can be found in Europe in terms of geographic spread, seasonal peaks and at-risk age groups. Most countries in Europe have surveillance systems although some vary which greatly impedes comparability and analysis of TBE.

ECDC's report highlights that national and regional public health authorities could improve and harmonise their TBE surveillance systems, as TBE has been recently added on the list of notifiable disease within the EU. Increased importance should also be placed on the prevention of TBE through more precise information of areas at potential risk, the best ways to avoid tick bites, as well as vaccination availability both for residents and travellers to affected areas.

Overall the number of TBE cases remains relatively stable ranging from 1900 to 2630 cases a year in the sixteen countries reporting data with notable increases in 2003 (3113), 2006 (3206), 2009 (3397) and 2010 (3077).

The ECDC report identifies the main risk areas for TBE are located in the Nordic and Baltic countries, central and eastern Europe - extending west as far as Switzerland and Alsace, France, and southern Europe up to northern Italy and the Balkans. The highest risk for TBE was among males aged 40–60 years, indicating that those working outdoors may be at increased risk of TBE. A seasonal peak in TBE cases is seen in Europe, as to be expected, over the summer months of June to October.

"TBE is preventable. Modern vaccines against TBE have a good safety profile and the rate of protection is over 95%. So we should be seeing far fewer cases of TBE than we are. Those living in areas affected by TBE or visiting such areas should make sure they are fully vaccinated" said Marc Sprenger, ECDC Director.

"By bringing together this data (for the first time) we are looking to identify risk areas and patterns to help us understand the disease and its transmission better. This will enable TBE experts across Europe to tackle the disease" said Marc Sprenger.

The report contains country profiles for each of the countries that implemented TBE surveillance during 2000-2010, although data may not be available for all years for each country. These countries are: Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Italy, Latvia, Lithuania, Norway, Poland, Romania, Slovakia, Slovenia, Sweden and Switzerland.

A number of recommendations are put forward to improve the surveillance and to increase our understanding of TBE in European countries. Improvements in surveillance data could be achieved by:

- More detailed data at the sub-national level including the place of residence and of infection

- The implementation of the standard EU case definition for TBE
- The routine collection of surveillance data from EU countries
- The use of data from tick and animal surveys in addition to human case surveillance to define TBE endemic areas.

More information:

In September 2012 ECDC publishes a technical report about tick-borne encephalitis (TBE) in Europe. It provides a systematic overview of surveillance data about TBE occurrence in the EU and EFTA countries covering the period 2000-2010. The report provides an overview of the TBE surveillance systems in the countries, describes the current epidemiological situation of TBE in Europe and identifies risk areas for the disease (affected countries, seasonality, age groups at risk).

Tick-borne encephalitis (TBE) is a viral tick-borne infectious disease that occurs in endemic areas across large regions of Europe and Asia. It requires the presence of competent reservoir hosts, tick vectors and the pathogen. Humans are incidental and dead-end hosts. Infections with TBE virus cause thousands of cases of neuroinvasive illness in humans in Europe every year.

Overall the number of TBE cases remains relatively stable ranging from 1900 to 2630 cases a year in the sixteen countries reporting data with notable increases in four years of the range. The Czech Republic, Lithuania, Latvia and Germany and Slovenia reporting most cases. The comparison of seasonality data shows that the disease onset is during July-October, with all four months having similar numbers of cases.

The main vectors of TBE in Europe are ticks of the family Ixodidae, mainly *Ixodes ricinus* (central, northern and eastern Europe) and *Ixodes persulcatus* (parts of the Baltic States, Finland, Russia, Siberia). Humans are incidental and dead-end hosts. Except bites of infected ticks, in endemic areas, humans can acquire TBE infection also via consumption of infected raw dairy products. Approximately two-thirds of human TBE infections are asymptomatic.

In clinical cases, TBE often has a biphasic course. The first phase is associated with non-specific symptoms (such as fever, fatigue, headache, myalgia, or nausea). This phase is followed by an afebrile asymptomatic interval that precedes the second phase, when the central nervous system is affected (such as meningoencephalitis, myelitis, or paralysis). TBE clinical cases do not have distinct symptoms and their diagnosis needs laboratory confirmation.

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Links:

Epidemiological situation of tick-borne encephalitis in the EU and EFTA, ECDC Report (link to follow on 18/9/12) *Full text of report available on request.*

[ECDC Health Topic webpage on Tick-borne diseases](#)

[ECDC 'Tick maps' showing the presence of ticks across Europe at a 'regional' level of NUTS 3.](#)

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The European Centre for Disease Prevention and Control (ECDC) is an EU agency tasked with identifying, assessing and communicating threats to human health posed by infectious diseases. It supports the work of public health authorities in the EU and EEA/EFTA Member States.