

## SURVEILLANCE REPORT

Annual Epidemiological Report for 2017

# Crimean–Congo haemorrhagic fever

### Key facts

- For 2017, Bulgaria reported two confirmed cases of Crimean–Congo haemorrhagic fever (CCHF).

### Methods

This report is based on data for 2017 retrieved from The European Surveillance System (TESSy) on 10 December 2018. TESSy is a system for the collection, analysis and dissemination of data on communicable diseases.

For a detailed description of methods used to produce this report, refer to the Methods chapter [1].

An overview of the national surveillance systems is available online [2].

A subset of the data used for this report is available through ECDC's online *Surveillance atlas of infectious diseases* [3].

For 2017, 27 EU/EEA countries reported data, of which one (Bulgaria) reported aggregated data. Denmark, Finland and the Netherlands did not report data on CCHF. Twenty-two countries used the EU case definition, three used an alternative case definition (Germany, Italy and the United Kingdom), and two did not specify the definition they used (Belgium and France). Surveillance is comprehensive in all reporting countries and mostly passive.

### Epidemiology

For 2017, Bulgaria reported two confirmed cases. CCHF is endemic in the Balkans and Bulgaria regularly reports a small number of cases (eight cases each in 2013 and 2014 and four cases each in 2015 and 2016).

The United Kingdom reported one case in 2014. In 2016, for the first time, autochthonous human cases were reported in south-western Europe. In August 2016, the autonomous Community of Madrid reported two cases of CCHF, one of which was fatal [4–5]. The primary case most likely became infected through contact with a tick (either through a bite by or crushing a tick) while hiking in Ávila Province. The secondary case was a healthcare worker who looked after the patient while in intensive care. Neither case had any recent travel history outside Spain before the onset of symptoms.

Suggested citation: European Centre for Disease Prevention and Control. Crimean–Congo haemorrhagic fever. In: ECDC. Annual epidemiological report for 2017. Stockholm: ECDC; 2019.

Stockholm, February 2019

© European Centre for Disease Prevention and Control, 2019. Reproduction is authorised, provided the source is acknowledged.

## Discussion

CCHF is endemic in Africa, the Balkans, the Middle East and western and south-central Asia. The main vector transmitting the virus, the *Hyalomma marginatum* tick, is widely distributed in Europe [6]. Its habitat lies south of the 50th northern parallel. Humans may also become infected through direct or indirect contact with the blood or organs of infected animals. In the WHO European Region, cases of human CCHF infection have been reported from Albania, Armenia, Bulgaria, Georgia, Greece, Kosovo<sup>1</sup>, Russia, Serbia, Turkey and Ukraine, as well as Kazakhstan, Tajikistan, Turkmenistan and Uzbekistan, with Turkey the most affected country [7].

Several sporadic cases are reported on a regular basis from Bulgaria [8]. Using an ecological niche modelling approach, the most suitable areas for CCHF transmission in the Balkans have been identified [9].

In 2010, the CCHF virus was detected for the first time in ticks in Spain [10], followed by the first autochthonous human case and one nosocomial infection in 2016 [4]. However, for 2017, no additional cases were reported from south-western Europe.

## Public health implications

CCHF has the potential for human-to-human transmission. Early clinical diagnosis and laboratory confirmation of cases is essential for initiating treatment and implementing protective measures [11]. Prevention of CCHF infection is achieved by avoiding or minimising exposure to infected ticks by using tick repellent, wearing protective clothing and early and correct removal of ticks. Contact with the blood or tissues of infected animals and humans should be avoided.

---

<sup>1</sup>This declaration is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo Declaration of Independence.

## References

1. European Centre for Disease Prevention and Control. Introduction to the Annual Epidemiological Report [Internet]. In: ECDC. Annual epidemiological report for 2017. Stockholm: ECDC; 2017 [cited 10 December 2018]. Available from: <https://ecdc.europa.eu/en/annual-epidemiological-reports/methods>.
2. European Centre for Disease Prevention and Control. Surveillance systems overview for 2017 [Internet, downloadable spreadsheet]. Stockholm: ECDC; 2018 [cited 10 December 2018]. Available from: <http://ecdc.europa.eu/publications-data/surveillance-systems-overview-2017>.
3. European Centre for Disease Prevention and Control. Surveillance atlas of infectious diseases [Internet]. Stockholm: ECDC; 2018 [cited 4 February 2019]. Available from: <http://atlas.ecdc.europa.eu/public/index.aspx?Dataset=27&HealthTopic=10>.
4. Negrodo A, de la Calle-Prieto F, Palencia-Herrejón E, Mora-Rillo M, Astray-Mochales J, Sánchez-Seco MP, et al. Autochthonous Crimean-Congo Hemorrhagic Fever in Spain. *N Engl J Med*. 2017 Jul 13;377(2):154-161.
5. European Centre for Disease Prevention and Control. Rapid risk assessment: Crimean–Congo haemorrhagic fever in Spain – 8 September 2016. Stockholm: ECDC; 2016. Available from: <http://ecdc.europa.eu/publications-data/rapid-risk-assessment-crimean-congo-haemorrhagic-fever-spain-9-september-2016>.
6. European Centre for Disease Prevention and Control. Tick maps [Internet]. Stockholm: ECDC; 2018 [cited 8 June 2018]. Available from: <http://ecdc.europa.eu/disease-vectors/surveillance-and-disease-data/tick-maps>.
7. World Health Organization. Geographic distribution of Crimean-Congo Haemorrhagic Fever [Internet, image]. Geneva: WHO; 2017 [cited 10 December 2018]. Available from: [http://www.who.int/emergencies/diseases/crimean-congo-haemorrhagic-fever/Global\\_CCHFRisk\\_2017.jpg](http://www.who.int/emergencies/diseases/crimean-congo-haemorrhagic-fever/Global_CCHFRisk_2017.jpg).
8. Papa A, Pappa S, Panayotova E, Papadopoulou E, Christova I. Molecular epidemiology of Crimean-Congo hemorrhagic fever in Bulgaria--An update. *J Med Virol*. 2016 May;88(5):769-73.
9. Messina JP, Pigott DM, Golding N, Duda KA, Brownstein JS, Weiss DJ, et al. The global distribution of Crimean-Congo hemorrhagic fever. *Trans R Soc Trop Med Hyg*. 2015 Aug;109(8):503-13.
10. Estrada-Peña A, Palomar AM, Santibañez P, Sánchez N, Habela MA, Portillo A, et al. Crimean-Congo Hemorrhagic Fever Virus in Ticks, Southwestern Europe, 2010. *Emerg Infect Dis*. 2012 Jan;18(1):179-80.
11. Roy KM, Ahmed S, Inkster T, Smith A, Penrice G, Incident Management T. Managing the risk of viral haemorrhagic fever transmission in a non-high-level intensive care unit: experiences from a case of Crimean-Congo haemorrhagic fever in Scotland. *J Hosp Infect*. 2016 Jul;93(3):304-8.