

Joint UKBTS Professional Advisory Committee (1)

Position Statement

Chikungunya Virus

May 2022

Approved by: Standing Advisory Committee on Transfusion Transmitted Infections

Chikungunya was first described in Tanzania in 1952. The name is derived from a local Tanzanian word meaning 'that which bends up', a reference to the stooped posture many patients develop as a result of painful inflammation of the joints commonly associated with the disease.

Chikungunya is a self-limiting febrile illness caused by an alpha virus spread by the same day-biting mosquito as dengue (usually of the *Aedes* species). It is characterized by arthralgia or arthritis typically in the knee, ankle and small joints of the extremities, which may be persistent, high fever, followed by a maculopapular rash. Buccal and palatal lesions can occur as may nausea and vomiting. Thrombocytopenia may be present leading to bleeding, especially in children. Rarely there may be fulminant liver failure and death. It is known from antibody studies that many infections are asymptomatic. Immunity is long lasting. The virus is known to infect humans, primates, other mammals and birds. There is no evidence of person-to-person transmission except through blood transfer. At present the only treatment available is symptomatic. No vaccine is available.

Although it is possible that chikungunya could be transmitted by transfusion, or by tissue or organ transplantation, the Standing Advisory Committee on Transfusion Transmitted Infections is not aware of any proven instance of transmission by these routes.

Until relatively recently chikungunya had usually occurred in Africa and South and East Asia but affected areas have been increasing over recent years. In late 2004, large outbreaks of chikungunya fever in the Indian Ocean, including Reunion, Mauritius and the Seychelles, raised serious public health concerns. Commencing in 2011, countries and territories in the Pacific Island Region have also reported several chikungunya outbreaks.

In December 2013 islands in the Caribbean started reporting confirmed cases of chikungunya. By 2014 cases were being reported among U.S. travellers returning from affected areas in the Americas and local transmission was identified in Florida, Puerto Rico, and the U.S. Virgin Islands; surveillance for chikungunya infections was enhanced in the region and continues. Since 2014 only one locally acquired case, in Texas in 2015, has been identified in continental USA. Chikungunya is now well established in Central and South America and the islands of the Caribbean and local transmission has been identified in 45 countries or territories throughout the Americas with more than 2 million suspected cases reported. Annually Brazil represents more than 90% of the cases reported in the Americas and the Caribbean since the beginning of 2017.

Although the virus is widespread across the Americas region, cases are also reported in Asia and Africa. Towards the end of 2020 Brazil, India and Thailand reported the majority of new cases and across the whole of 2020 the majority of cases were reported in Brazil and Thailand. In 2021 just over 225,000 cases were reported globally, 56% were from Brazil and 40% from India.

Indigenous infection does not occur in the United Kingdom, but a number of cases are reported each year in travellers returning from endemic areas which until recently were mostly acquired in the Indian sub-continent and Southeast Asia. However, of the 295 cases of chikungunya reported in England, Wales and Northern Ireland in 2014, 80% had been acquired in the Caribbean. Case numbers and probable source of infection for 2015 onwards are available from European Centre for Disease Prevention and Control (ECDC) in their Chikungunya

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Annual Epidemiological Reports. In the years 2015 to 2019 the number of UK cases reported are 106, 169, 104, 59 and 94 respectively; however, fully detailed information on the source countries is not available (ECDC, 2019 Chikungunya Annual Epidemiological Report).

The first recognised outbreak in Europe occurred in the northeast of Italy in the summer of 2007; a result of an imported case from India. The vector mosquito has become widespread following importation through international trade. It was first noted in Albania in 1979 and by 2007 has been found as far north as Belgium. In September 2010 there were the first reported cases of indigenous infection in France: two 12-year-old schoolchildren resident in the south of France. Further small outbreaks occurred in the south of France in 2014 (11 cases) and 2017 (17 cases). The largest outbreak in Europe to date occurred in 2017 in central and southern Italy. Of the 277 confirmed cases, the majority were reported in the Lazio region (Rome, Lazio and Anzio) with a smaller focus of infection in Calabria (n=61). No autochthonous chikungunya cases have been reported in the EU/EEA since 2017.

The most recent available figures for the UK are from 2020 and provided by the UKHSA; as the UK left the EU in 2020 it no longer reports infectious disease case numbers to ECDC. A total of 36 suspected cases were identified of which 8 were confirmed (RT-PCR +ve and/or +ve virus isolation) and 28 were probable (IgM and IgG +ve and seroconversion between acute and convalescent samples). Information on the source countries is not currently available. The most recently published overall figures for Europe (ECDC, 2020 Annual Epidemiological Report, published April 2022) identified 59 cases of chikungunya disease in 2020, 52 of which were confirmed, and all travel related. This is the lowest number since 2016, but it is important to consider 2 factors. Firstly, that travel by European residents was dramatically reduced due to the coronavirus pandemic - cases of all travel related illnesses were reduced for that period. Secondly that figures from the UK are no longer included in ECDC reports and previously the UK was one of the top 3 EU countries reporting most cases. In 2020 Germany reported 44% of cases and France reported 22% of cases. The majority of cases were likely acquired in Thailand (24%) and Brazil (22%). No autochthonous cases were reported.

Information about international outbreaks of chikungunya is available on the National Travel Health Network and Centre (NaTHNaC) website: <https://travelhealthpro.org.uk>

Visitors to some chikungunya affected areas will be excluded from donation for four months under current malaria guidelines. Visitors to chikungunya affected areas which are not subject to longer deferral periods because of the presence of other infectious agents, should not donate blood or tissues for four weeks from their return to the UK if they have had no symptoms suggesting that they may have been infected with chikungunya or for six months from their return if they have been diagnosed with chikungunya or had symptoms which may be suggestive of chikungunya infection.

Countries affected by chikungunya and any applicable time limits are shown in the Geographical Disease Risk Index (GDRI) and any associated Change Notifications.

⁽¹⁾ Joint United Kingdom Blood Transfusion Services Professional Advisory Committee