Change Notification for the UK Blood Transfusion Services

Date of Issue: 09 May 2023  Implementation: to be determined by each Service

No. 12 – 2023

Tropical Viruses
Zika and Sexual Contact

The following changes apply to:

<table>
<thead>
<tr>
<th>BM-DSG</th>
<th>CB-DSG</th>
<th>GDRI</th>
<th>TD-DSG</th>
<th>TL-DSG</th>
<th>WB-DSG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bone Marrow &amp; Peripheral Blood Stem Cell</td>
<td>Cord Blood</td>
<td>Geographical Disease Risk Index</td>
<td>Tissue – Deceased Donors</td>
<td>Tissue – Live Donors</td>
<td>Whole Blood &amp; Components</td>
</tr>
</tbody>
</table>

**Includes**
- Chikungunya Virus, also known as CHIKV
- Dengue Virus, also known as Dengue Fever
- Yellow Fever, also known as YF
- Zika Virus, also known as ZIKV, and Zika Virus Fever

**Definitions**
- **Tropical Virus Endemic Areas**: are shown in the 'Geographical Disease Risk Index' (GDRI) as a Tropical Virus Risk.

**Obligatory**
- **Must not donate if**:
  a) It is less than six months from a donor’s return from a Tropical Virus Risk endemic area and the donor has been diagnosed with Chikungunya, Dengue, Yellow Fever or Zika virus infection whilst there or following their return to the UK.
  b) It is less than six months from a donor’s return from a Tropical Virus Risk endemic area and the donor has either had a history of symptoms suggestive of Chikungunya, Dengue, Yellow Fever or Zika virus infection whilst there or following their return to the UK.
  c) In other cases it is less than four weeks from a donor's return from a Tropical Virus Risk endemic area.
  d) The donor has had sex in the last 28 days with someone who has had a confirmed Zika Virus infection in the three months preceding the sexual contact.

**Discretionary**
- All donors may be accepted six months after their return from an affected area or resolution of symptoms. This may be reduced to four weeks, if they have had neither symptoms nor evidence of infection.

**See if Relevant**
- Infection – General
- Malaria
- South American Trypanosomiasis
- The 'Geographical Disease Risk Index'
### Additional Information

«Chikungunya, Dengue, Yellow Fever and Zika virus are spread by the day-flying mosquito species Aedes aegypti and Aedes albopictus. As these mosquitos are typically found in tropical and subtropical regions, the main geographical areas affected by tropical virus infection are the Caribbean, South and Central America, Mexico, Africa, the Pacific Islands, Southeast Asia, Indian sub-continent, Hawaii and northern parts of Australia. The range of Aedes albopictus is also increasing into more temperate zones leading to outbreaks of tropical virus disease in new areas. There have been outbreaks of Dengue and Chikungunya in parts of Europe.»

Chikungunya is an alpha virus that can cause a wide spectrum of disease. This may range from no or minimal symptoms to death. Most commonly it causes arthritis (typically in the knee, ankle and small joints of the extremities), high fever and a maculopapular rash.

«Chikungunya virus is found in countries in Asia, Africa, Central and South America, and in the islands of the Caribbean. There is no evidence of person-to-person transmission except through blood transfer. Transfusion-transmission from an asymptomatic individual has not been documented. Nevertheless, restrictions after travel to a Chikungunya virus risk area were introduced to reduce any risk of transmission through blood or tissue donation.»

It is geographically widespread but since 2005 it has reached epidemic proportions in parts of India and islands in the Indian Ocean. It is known to be spread by blood in symptomatic cases and on theoretical grounds could be spread by transfusion and transplantation of tissues and organs from people with pre-symptomatic or asymptomatic disease. A number of visitors returning from endemic areas to the UK have been diagnosed with this infection.

Dengue Virus is a flavivirus that typically gives rise to abrupt high fever with a range of accompanying symptoms. Dengue fever (DF) is the most common «insect-» arthropod borne disease worldwide. Dengue is currently considered endemic in approximately «140» 128 countries. «Transfusion-transmission has been reported.»

«Overall, up to 75% of cases are asymptomatic or mild. If symptoms occur, they can range from non-specific acute febrile illness to severe disease including dengue haemorrhagic fever and dengue shock syndrome. Mild cases may be misdiagnosed as other febrile illnesses.»

Overall, 15-90% of cases may have an asymptomatic course of infection, but clinical presentation varies with age group. However there is a risk of change in disease presentation and potential for increased incidence of more severe disease in older age groups due to co-circulation of different dengue types and emergence of new types in endemic areas patterns.

Yellow Fever Virus is a «flavivirus which is found in Africa, South America, Central America and parts of the Caribbean.» Flavivirus. Symptoms of Yellow Fever include high temperature, headache, nausea and vomiting, muscle pains and backache. One in four individuals may suffer from jaundice and bleeding from the gastrointestinal tract and other sites.

«Zika Virus is a flavivirus which was known to occur in Africa and parts of Southeast Asia. More recently, Zika Virus has been associated with epidemic outbreaks in the Pacific region and in the Americas. As well as mosquito-borne infection, Zika Virus can be spread through sexual transmission. Infection is usually asymptomatic or presents as a mild self-limiting febrile illness. More severe disease and hospitalisation are rare but infection during pregnancy carries a high risk of congenital abnormalities in the baby. Zika Virus infection may be mistaken for Chikungunya or Dengue infections as these viruses often co-circulate.»
Zika virus is a flavivirus that is transmitted to humans through the bite of a carrier mosquito. Zika Virus can also be transmitted human to human through sexual contact. Zika infection is a rapid acute infection that in the majority of cases is asymptomatic or has very mild general symptoms. A small number of cases may have more apparent symptoms but hospitalisation is rare. Zika infection may be mistaken for Chikungunya or Dengue infections as the virus often co-circulate.

The main vector for these viruses is Aedes aegypti (Aedes albopictus is another emerging vector), which is found worldwide between latitudes 35ºN and 35ºS. There is no epidemiologically important animal reservoir for these viruses. The main geographical areas affected by these viruses include the Caribbean, South and Central America, Mexico, Africa, the Pacific Islands, SE Asia, Indian sub-continent, Hawaii. Additionally Dengue fever has been reported in Australia and there have been outbreaks of Dengue and Chikungunya in Europe.

Position statements are available in the JPAC Document Library.

<table>
<thead>
<tr>
<th>Information</th>
<th>This entry is compliant with the Blood Safety and Quality Regulations 2005.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reason for Change</td>
<td>«The deferral for donors who have had sexual contact with someone who has had confirmed Zika virus infection has been removed.» The scope of this entry has been extended to include Yellow Fever.</td>
</tr>
</tbody>
</table>

Dr Stephen Thomas
Professional Director – JPAC
jpac@nhsbt.nhs.uk