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Event: Zika virus infection: Update to Briefing Note 2016/004 published on 19 January 2016.

Notified by: Emerging Infections and Zoonoses (EIZ), Travel and Migrant Health (TMHS), Rare and Imported Pathogens Laboratory (RIPL): National Infections Service

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PHE NIRP Level: Level 3

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Background and Interpretation:

The outbreak of Zika virus (ZIKV) in the Americas continues to expand. As of 29 January 2016, 25 countries including 23 in South and Central America and the Caribbean have reported active Zika virus transmission (locally-acquired cases reported in the last 6 months). It is likely that ZIKV transmission will be reported in further countries where the mosquito vector is found in the coming weeks/months. To date, six confirmed cases of ZIKV have been reported in UK travellers (one ex Cook Islands in 2014, and five who had been to South or Central America).

Please refer to the [PHE Zika virus page](#) for information on affected countries and imported cases.

Potential association of ZIKV infection with congenital microcephaly

In October 2015, the Brazilian Ministry of Health reported an unusual increase in the number of babies born with microcephaly [1] and declared a public health emergency in November 2015. As of 23 January 2016, 4,180 suspected cases of microcephaly including 68 deaths have been reported across 24 states in Brazil [2] compared to the expected 150-200 cases per year that were reported 2010 - 2014.

The increase in microcephaly cases started within five months of the emergence of ZIKV in northern Brazil. The Ministry of Health of Brazil has proposed this increase is associated with the ongoing ZIKV outbreak. There is increasing evidence to support this hypothesis but investigations to establish whether there is a causal relationship continues. The virus has now been demonstrated to cross the placental barrier and has been detected in blood and tissues of eight affected foetus/infants; the mothers of six of these cases presented with symptoms consistent with ZIKV during pregnancy [3].

An increase in cases of microcephaly has yet to be reported from other countries affected by ZIKV, but an increase of central nervous system malformations in fetuses and new-borns was reported in French Polynesia following an epidemic of ZIKV infection. At least 17 such cases were reported in 2014–2015, coinciding with the ZIKV outbreaks on the French Polynesian islands. Four women were tested and had detectable IgG antibodies to flavivirus and further tests are ongoing [3]. Although this evidence does not prove causality, it seems increasingly likely that the increase in microcephaly in Brazil may be associated with the ongoing ZIKV outbreak.

Guillain-Barré Syndrome

A number of countries, including Brazil, French Polynesia and El Salvador have also reported cases of Guillain-Barré Syndrome in individuals with a history of symptoms consistent with ZIKV infection. This potential association is being investigated further.

UK travellers to Central/South America and the Caribbean

Between 2010 and 2014, almost 1.4 million UK residents travelled to South and Central America and the Caribbean on average each year; of these, 25% (335,809) were women of childbearing age (16-44 years).

Advice to travellers, in particular pregnant women

Transmission of ZIKV is primarily by *Aedes* mosquitoes (predominantly day-biters often found in urban environments); these are not present in the UK. **There is one report of sexual transmission of the infection. A small number of cases have occurred by transmission from mother to foetus via the placenta.**

All travellers to countries where there is active ZIKV transmission (locally-acquired cases reported in the last 6 months) should seek travel health advice from their GP or a travel clinic well in advance of their trip and consult the National Travel Health Network and Centre (NaTHNaC) website <http://travelhealthpro.org.uk/> for up to date information on current outbreaks and country information.



Travellers should follow standard mosquito protection advice. Since the vectors of ZIKV are predominantly day-biters, advice to avoid being bitten during the daytime (especially during mid-morning and late afternoon to dusk, when the mosquito is most active) should be emphasised. Protection against night time biting mosquitoes may also be necessary in areas where malaria is a risk.

Pregnant women should consider avoiding travel to an area where an active ZIKV outbreak is reported. If travel is unavoidable, or they live in areas where an ongoing ZIKV outbreak is being reported, they should take scrupulous [insect bite avoidance measures](#), during the day and night. Tailored advice for pregnancy and travel is available at: <http://travelhealthpro.org.uk/pregnancy>.

Women planning to become pregnant should discuss their travel plans with their healthcare provider to assess the risk of infection with ZIKV and receive advice on mosquito bite avoidance measures.

Pregnant women should inform their obstetrician or midwife if they have recently travelled to a country where there is active ZIKV transmission whether or not they have had an illness compatible with ZIKV infection during or within 2 weeks of returning home. [An Interim algorithm for assessing pregnant women with a history of travel during pregnancy to areas with active Zika virus transmission](#) has been developed for health professionals by PHE, Health Protection Scotland, the Royal College of Obstetricians and Gynaecology (RCOG) and the Royal College of Midwives. More detailed guidance will be published shortly on the RCOG [website](#).

If a female partner is at risk of getting pregnant, or is already pregnant, condom use is advised for a male traveller:

- for 28 days after his return from a Zika transmission area if he had no symptoms of unexplained fever and rash
- for 6 months following recovery if a clinical illness compatible with Zika virus infection or laboratory confirmed Zika virus infection was reported

This is a precaution and may be revised as more information becomes available.

Information for the public on ZIKV is available on [NHS Choices](#).

Implications and recommendations for PHE Centres

PHE Centres and Health Protection Teams should be aware of the increase in ZIKV cases in areas where UK residents frequently travel or countries from which people frequently visit the UK and the probable association between ZIKV infection and congenital and neurological complications. They should be aware of the information on the [Zika page of the PHE website](#) which includes:

An [Interim algorithm for assessing pregnant women with a history of travel during pregnancy to areas with active Zika virus transmission](#) is available on the PHE website.

Details on affected countries and imported cases are available on the [PHE Zika virus page](#).

Travel advice is available from [NaTHNaC](#).

Zika virus has now been added to HPZone so it can be added to cases or situations. The congregation **Zika 2016** has been added as a context, so please assign this to all cases, enquiries and situations so reported cases can be monitored nationally.

Implications and recommendations for PHE sites and services

In addition to the advice above, infectious disease physicians and microbiologists are advised to consider ZIKV in travellers with a febrile illness returning from South and Central America, the Caribbean, Africa, South and South East Asia and the Pacific region.

Referring diagnostic laboratories should send appropriate samples for testing (**including a full travel and clinical history, with relevant dates**) to the Public Health England, [Rare and Imported Pathogens Laboratory](#). The only reliable test for Zika at present is to use a PCR test which looks for the presence of the virus in a patient's blood during the acute disease, and so only cases with active or very recent symptoms can be reliably tested. Physicians can discuss cases and testing with the RIPL clinicians in working hours on 01980 612348.

The [Imported Fever Service](#) can provide advice on the clinical recognition and differential diagnosis for travellers for affected areas who present with fever. The IFS can be reached 24 hours a day on 0844 7788990.



Implications and recommendations for obstetricians and neurologists

Contact has been made with the appropriate professional organisations. Specific guidance for pregnant women has been produced by RCOG and the British Association of Neurologists will be informing its members about Zika virus next week. PHE will continue to liaise with these groups if further advice and guidance is required.

References/ Sources of information

1. Pan American Health Organization. 17 January 2016: Neurological syndrome, congenital malformations, and Zika virus infection. Epidemiological Update. Available at: http://www.paho.org/hq/index.php?option=com_docman&task=doc_view&Itemid=270&gid=32879&lang=en
2. Brazilian Ministry of Health. 23 January 2016: Weekly epidemiological update on suspected microcephaly cases (12 January 2016) Available at: <http://portalsaude.saude.gov.br/images/pdf/2016/janeiro/28/COES-Microcefalias---Informe-Epidemiologico-10---SE-03-2016---26jan2016---20h34.pdf> (In Portuguese)
3. ECDC. 21 January 2016: Rapid Risk Assessment: Zika virus epidemic: potential association with microcephaly and Guillain-Barré syndrome (first update). Available at: <http://ecdc.europa.eu/en/publications/Publications/rapid-risk-assessment-zika-virus-first-update-jan-2016.pdf>
4. NaTHNaC. Zika virus: update and advice for pregnant women (updated 26 January 2016). <http://travelhealthpro.org.uk/zika-virus-update-and-advice-for-travellers-including-pregnant-women/>