

## Annual emerging infection surveillance report for 2019

January 2020

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Transfusion Transmitted Infection (SACTTI)

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GDRI deferral/test	Type of incident	Comment	Review
Tropical	Surveillance	<p><b>On 26 December 2018, France notified through EWRS about dengue (DENV-1) cases in Guadeloupe and Saint-Martin islands in the Caribbean.</b> Vector control measures have been applied on all the affected islands. The risk of occurrence of further cases is high. The risk of further transmission of dengue in the EU from returning travellers to Martinique, Guadeloupe and Saint-Martin islands is currently very low due to currently unfavourable conditions for vector activity in the winter months in Europe. Safety measures to prevent the transmission of dengue virus through donations of SoHO by local donors or by travellers to affected areas should be applied. <b>[GDRI covered for Tropical although Dengue not listed specifically for St. Martin]</b></p>	<p><b>Action:</b> Inform Chair of SACCSO to add Dengue to GDRI for Saint Martin.</p>
Partial malaria	Research	<p><b>Widespread circulation of West Nile virus, but not Zika virus in southern Iran:</b> 20.6% of 494 human samples were IgG reactive to WNV while no antibodies against ZIKV were detected. WNV RNA genome was detected in three mosquitoes' pools. Despite the existence and circulation of WNV, no clinical cases have been described in Iran, so far. This region is on the coast with a warm and tropical climate suitable for inhabitation and expansion of the vectors harbouring these two viruses. <b>[Not completely covered by GDRI]</b></p>	<p><b>Action:</b> Partial malaria risk mitigation. March - November in rural Iran south of Kerman City. Country is covered by malaria risk. Study indicates 20.6% reactivity in WNV IgG assay (cross-reactivity with other flaviviruses?). No WNV reports for Iran on Promed/Travax. Maintain watching brief and meanwhile AK to email contact in Iran Blood Service.</p> <p>From: Sedigheh Amini To: AD KITCHEN Sent: Thursday, 14 February 2019, 19:39:15 GMT Subject: Re: West Nile Virus in Iran</p> <p>Dear Dr. Kitchen Thank you for kind message. It is my pleasure to give my information about blood donor selection in Iran and mentioned article. I think there are several bugs in the method of the article, such as the lack of confirmatory tests, sequencing, and an increase in the IgM titration. The Iranian Blood Transfusion Organization does not do donor selection according to this article. For WNV and other infections transmitted by insect vectors, IBTO uses the information from Iranian CDC. Until now, no endemic area has been reported. But collaborative research projects are being planned between the IBTO and CDC. A meta-analysis article has been published in the EMRO region with good information about Iran and other countries in East Mediterranean region (PLoS Negl Trop Dis. 2019 Jan 29;13(1):e0007081. doi: 10.1371/journal.pntd.0007081. eCollection 2019 Jan.) Let me have your view and in more information please don't hesitate to contact about this case. With best regards S. Amini M.D</p> <p>----- From: AD KITCHEN Sent: Wednesday, January 30, 2019 3:41:28 PM To: Sedigheh Amini Subject: West Nile Virus in Iran</p> <p>Dear Dr Amini I hope you are well and do not mind me contacting you. I am contacting you as Secretary</p>

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			<p>of the UK Standing Advisory Committee for Transfusion Transmitted Infections (SACTTI). Although I no longer work for the English Blood Service, I am still a member (secretary) of SACTTI, and we have a monthly teleconference to discuss emerging infectious threats. We are interested in a paper that has recently appeared in print which discusses WNV in Iran: <a href="https://journals.plos.org/plosntds/article?id=10.1371/journal.pntd.0007022">https://journals.plos.org/plosntds/article?id=10.1371/journal.pntd.0007022</a></p> <p>The above paper refers to a high seroprevalence of WNV in parts of Iran, and without reported clinical cases. We are interested in whether the Iranian Blood Service takes any specific precautions in relation to WNV in its donors. Our issue is whether we need to classify the areas of Iran referred to in the paper as having a WNV risk.</p> <p>Thank you very much for your help in this matter</p> <p>With best wishes</p> <p>Alan Kitchen</p>
Tropical	Risk assessment	<p><b>Dengue has been a growing threat for decades; its season is lengthening and spreading to less tropical areas.</b> A high number of cases occur in the rainy seasons of countries such as Bangladesh and India. Now, its season in these countries is lengthening significantly (in 2018, Bangladesh saw the highest number of deaths in almost two decades), and the disease is spreading to less tropical and more temperate countries such as Nepal, that have not traditionally seen the disease. An estimated 40% of the world is at risk of dengue fever, and there are around 390 million infections a year. WHO's Dengue control strategy aims to reduce deaths by 50% by 2020.</p>	<p><b>Action:</b> Inform Chair of SACCSO of countries at risk of Dengue but with no Dengue risk applied in GDRI. All have some other risk applied. Nepal (partial malaria), Tonga (CHK and Zika), Fiji (CHK and Zika), French Polynesia (CHK and Zika), Solomon Islands (Zika), Cook Islands (CHK and Zika), Vanuata (Zika) and Argentina (Zika)</p> <p><b>Action:</b> Vast majority of countries appear to have some form of deferral. LJ to ask JPAC if it feels that data gathering would be useful to gauge impact on blood, tissues and cells of blanket 28-day deferral as per the Netherlands model.</p> <p><b>Follow-up:</b> Minimum 28 day travel deferral for all overseas travel discussed at JPAC on 12 March 2015 (JPAC 15-04). JPAC had asked the SACCSO to produce a document based on the JPAC decision making framework for discussion. JPAC approved the recommendation of the SACCSO not to recommend such a deferral and that the situation should be reviewed if the epidemiological situation changes.</p>
	Review	<p><b>Review of Persistence and Sexual Transmission of Filoviruses:</b> Although EBOV transmission was largely controlled towards the end of the West African epidemic, sporadic transmission events continued to occur. Asymptomatic EBOV testicular persistence, and subsequent sexual transmission, contributed to these events. Longitudinal studies of EVD survivors have demonstrated great variability in the duration of viral persistence.</p>	<p><b>Action:</b> Ebola RA in preparation. Send reference to NOF.</p>
WNV	Research	<p><b>Multiple HBV transfusion transmissions from undetected occult infections:</b> revising the minimal infectious dose from approximately 100 to 16 copies (or 3 IU) of HBV DNA. 9 of 31 (29%) recipients were infected.</p>	<p><b>Action:</b> OBI TTI in NHSBT; missed in pool, weakly positive individual donation (Panther). SACTTI to discuss if any other measures need to be taken by UK Blood Services in response e.g. Prepare estimated residual risk including OBI risk.</p>

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Partial WNV	Surveillance	<p><b>As of 13 December 2018, 1503 human cases were reported in the EU/EEA</b> by Italy (576), Greece (311), Romania (277), Hungary (215), Croatia (53), France (27), Austria (20), Bulgaria (15), the Czech Republic (5), Slovenia (3) and Cyprus (1). In the EU neighbouring countries 580 human cases were reported by Serbia (415), Israel (128), Turkey (23) and Kosovo* (14). Earliest disease onset in the EU occurred on 31 May 2018 (week 22, Greece) and week 24 (Serbia) in the EU neighbouring countries. The last case of this transmission season in the EU had a date of onset from 12-18 Nov 2018 or week 46 (France), while latest date of onset in the EU neighbouring countries was week 39 (Turkey). During the 2018 transmission season, 285 West Nile fever outbreaks among equids were reported by EU: 149 in Italy, 91 in Hungary, 15 in Greece, 13 in France, 9 in Spain, 2 in Austria, 2 in Romania, 2 in Germany, 1 in Slovenia, and 1 in Portugal. This is a 30% increase compared to number of outbreaks in 2017. <b>[Czech Republic and Cyprus with human cases not covered by WNV in GDRI]</b></p>	<p><b>No action:</b> Maintain watching brief and apply to Czech Republic and Cyprus if more cases reported in 2019 (reported to SACCS D Nov 2018).</p>
WNV except Hawaii, Alaska and US Virgin Islands / partial tropical	Research	<p><b>Babesia microti blood donation screening in endemic areas effectively mitigates TTI risk.</b> The American Red Cross has prospectively screened donations in endemic areas for B. microti since 2012. Screening of 506,540 donations (June 2012–May 2018) yielded 1299 reactives, 177 of which were DNA and antibody positive and 25 DNA positive only. During the same time, 23 unscreened RBC units collected in Connecticut and Massachusetts were involved in TTB cases, making the risk of transmitting the infection from an unscreened donation in these two states 15.6-times greater than from a Babesia-negative unit. B. microti screening in Connecticut and Massachusetts has been associated with a reduction in TTB cases; none reported from blood donors residing in Connecticut since 2016. The positive donor rate has also decreased in Connecticut from 0.67% in 2013 to 0.23% in 2017.</p>	<p><b>No action:</b> Babesia risk assessment in place. Low risk to UK BTSs. Forward to Chair of SACTTI parasite committee.</p>
	Research	<p><b>Ebola Virus Infection Associated with Transmission from Survivors:</b> From the outbreak in West Africa during 2014–2016, we identified 13 possible events of viral persistence–derived transmission of EBOV (VPDTe). Five events met our criteria for sexual transmission (male-to-female). There have been a limited number of cases of recognized sexual transmission, even though &gt;10,000 persons are estimated to have survived. WHO’s interim advice on the sexual transmission of EBOV is that male EVD</p>	<p><b>No action:</b> No evidence of Tx from asymptomatic survivors. Send to NOF for Ebola RA.</p>

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		survivors should continue to practice safer sex for at least 12 months after symptom onset or until their semen has twice tested negative. This case series highlights 2 events of VPDTe that occurred >1 year after recovery by the source case. This, along with information about the duration of persistence of EBOV RNA in the semen of survivors and data showing that EBOV RNA can be detected intermittently needs to be considered in the development of recommendations for EVD survivors.	
WNV except Hawaii, Alaska and US Virgin Islands / partial tropical	Research	<b>Recent and occult hepatitis B virus infections among blood donors in the United States:</b> The overall rate of HBV-infected donors was 7.95 per 100,000; of these, 0.35 per 100,000 and 1.70 per 100,000 were RBI and OBI, respectively. RBI (n = 120) and OBI (n = 583) donors constituted 26% of all HBV-infected (n = 2735) donors. Detection of HBV DNA in 92% of OBI donors required individual donation nucleic acid testing. Donors with OBI compared to RBI were older with lower median viral loads. A higher proportion of OBI than RBI donors were born or resided in an endemic country. Seventy-seven percent of all RBI and OBI donors had multiple sex partners.	<b>Action:</b> See HBV action above
WNV	Case report	<b>A third human case of acute hepatitis caused by a novel rat hepatitis E virus strain was reported in Canada, for the first time in an immunocompetent individual.</b> Following extensive travel in Africa, the patient presented to hospital with a rash, jaundice, nausea and decreased appetite. A routine HEV PCR was negative and a broadly reactive PCR detecting divergent HEV variants was required to diagnose the infection. Phylogenetic analysis showed that the virus was genetically distinct from the recently described transplant patient infected with rat HEV in Hong Kong. The diagnostic challenges encountered may mean that rat HEV strains are under-recognised as a cause of hepatitis.	<b>Action:</b> Contact Grifols and Roche to determine if it is proposed to try and pick up these variants with HEV NAT assays.
Malaria/Tropical/VHF	Surveillance	<b>The incidence of Lassa fever in Nigeria has been steadily increasing since December 2018, and an outbreak was declared on 21 January.</b> As of 27 January, a total of 538 suspected cases, including 213 confirmed, have been reported since the beginning of the year. While the current resurgence is following a typical seasonal pattern, there has been a significant increase in cases compared to the same time period last year.	<b>Action:</b> With reduction in malaria deferral to 4 months, the potential issue of whether the longer deferral of 6 months for HV is being applied to relevant countries (e.g. Nigeria). LJ to inform Chair of SACCSD of concern. Not an issue if samples only are taken but more pertinent for NHSBT.

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WNV except Hawaii, Alaska and US Virgin Islands / partial tropical	Surveillance	<b>The US states reported 64 cases in travellers returning from affected areas in 2018 and 116 cases in US territories acquired through presumed local transmission</b> via mosquitoes	<b>No action:</b> 10 blood donors detected with ZIKV RNA in 2018 (none locally acquired). Remove Florida risk? Discuss at next SACTTI
	Risk assessment	<b>PHE and NaTHNaC have reviewed and updated their Zika travel and sexual transmission advice and have made changes to the risk ratings in some countries.</b> PHE is now recommending that if a male partner has travelled, couples should wait three months (instead of the original six months) to conceive. Countries will now be rated as having either a 'risk' or 'very low risk'. Countries that have never reported transmission will not appear on the list. The advice for pregnant women travelling to affected countries has been updated and is now as follows: For some 'risk' countries where there is the evidence of a current outbreak of Zika virus non-essential travel should be postponed until after the pregnancy and UK travellers generally should avoid becoming pregnant while in these countries. In other 'risk' countries with less evidence of a current outbreak, pregnant women are advised to consider postponing all non-essential travel until after pregnancy. No travel advice is provided for countries with very low risk.	<b>Action:</b> Take to next SACTTI Meeting
	Surveillance	<b>Brazil, Cambodia, Malaysia, Singapore and Thailand have observed an increasing trend in the number of cases compared with 2018.</b> New outbreaks have been reported in Jamaica, Kenya, Oman and Tanzania. Cases have also started to significantly increase in Réunion.	<b>Action:</b> All have Dengue risk applied in GDRI except Oman. In Oman 67 cases in 2018 (30 imported), 48 locally acquired infections in 2019 to date. Inform Chair of SACCCSD.
	Surveillance	<b>A total of four imported WNV cases were reported in 2018 in comparison to one case reported in 2017 with travel to South Africa.</b> These imported case reports are in line with reports of increased incidence in Europe and North America in 2018 compared to previous years. Two cases of imported WNV were reported in the last quarter of 2018. One case reported recent travel to Hungary and the other reported travel to North America. Two further cases of West Nile virus were reported in Q3 of 2018 one of whom reported travel to North America and the other to multiple destinations (including North America and Hungary).	<b>Action:</b> Contact Kevin/Samreen for contact. Has Usutu been ruled out in these cases?
	Risk assessment	<b>ECDC published a risk assessment for Zika virus transmission worldwide.</b> This is in response to the recent update of World Health Organization (WHO) guidelines for the prevention of sexual	<b>Action:</b> See February EI Report. Zika deferral for sexual contacts to be discussed at next SACTTI

GDRI deferral/test	Type of incident	Comment	Review
		transmission of ZIKV, the recent identification of three Zika travel-associated cases in travellers from Denmark and Norway returning from Thailand, and a case of sexual transmission from one returning traveller. The report assesses the risk for EU/EEA travellers, the risk for pregnant women, the risk related to sexual transmission, the risk related to substances of human origin and the risk of importation into the EU/EEA.	
Partial malaria / <i>T. cruzi</i> risk / tropical (US)	Media	<b>Two people in New Mexico have tested positive for HIV after getting vampire facials on 2 May 2019.</b> The VIP Spa in old town Albuquerque (the largest city in New Mexico) shut down last year [2018] after reports of an unidentified infection being imparted to the visitors. Now, it has been made public that 2 visitors had contracted HIV after obtaining a vampire facial.	<b>Action</b> - Discuss deferral period with Chair of SACCSO; cosmetic surgery minor surgery - minimum 7 days
None	Media	<b>Alicante records the first case in Spain of chikungunya infection by tiger mosquito bite.</b> "It is the first autochthonous case of Spain", the Ministry of Health told the newspaper. Health experts from Alicante explain in turn that the fact that the tiger mosquito has already colonized up to two thirds of the Community does not imply that the Mediterranean basin is infected.	<b>No action:</b> Since this report it has been confirmed that the infections in the travellers were NOT Chikungunya.
Partial malaria / Partial WNV	Media	<b>Algeria has been certified malaria-free by WHO.</b> The country reported its last indigenous cases in 2013.	<b>Action:</b> Notify Chair of SACCSO
Partial malaria / <i>T. cruzi</i> / Zika	Media	<b>Argentina has been certified malaria-free by WHO.</b> The country reported its last indigenous cases in 2010.	<b>Action:</b> Notify Chair of SACCSO
Partial WNV	Case	<b>On 15 May 2019, ECDC was informed by the Greek National Public Health Organization about one case of <i>P. vivax</i> malaria diagnosed in the previous week.</b>	<b>No action:</b> Small numbers of malaria cases ( <i>P.vivax</i> ) reported annually in Greece. Refer to previous advice from P. Chiodini.
Partial topical	Case	<b>A locally-acquired case of dengue fever on 24 May 2019 in the city of Rockhampton, Australia has been reported by the Central Queensland Public Health Unit.</b> The person has reported no overseas travel, nor travel to North Queensland, where dengue outbreaks occasionally occur. <i>Aedes aegypti</i> , a mosquito that transmits dengue, is present in some areas of Rockhampton, but this is the first locally-acquired case of the disease in several decades.	<b>Action:</b> Corresponded with Clive Seed, Australia Red Cross: 'all recent outbreaks have occurred in north Queensland - with the exception of the current Rockhampton outbreak which is in Central Queensland. The case in northern Western Australia was actually attributed to an imported mosquito infecting a local. So it would be accurate to change your definition to restrict it to Northern and Central Queensland - noting that we are unsure if the Rockhampton outbreak is just a 'one off' or whether (as predicted in the Williams modelling I sent you) the transmission zone will extend southwards. Central Queensland includes Rockhampton but excludes Brisbane and SE Queensland (where most of the

GDR1 deferral/test	Type of incident	Comment	Review
			population lives). However, your current definition is still valid and perhaps more manageable in the context of a simple rule.'
	Surveillance	<b>Brazil and Réunion have observed a sharp increase in dengue in the past months.</b> Côte d'Ivoire, Mauritius, the Maldives and Timor-Leste reported new outbreaks.	<b>Action:</b> Maldives and Timor-Lest Dengue risk due to be applied (approved at recent JPAC EWG). Note: Ever increasing TV deferrals being applied. Discuss at SACTTI whether UK Blood Services should look at feasibility of screening for TV as alternative to deferral.
WNV except Hawaii, Alaska and US Virgin Islands / partial tropical	Media	<b>Alberta Health Services confirms there have been 2 cases of hantavirus [infection], an illness that affects the respiratory system, in Alberta this year [2019].</b> In the previous 5 years, there were 15 confirmed cases of hantavirus [infections] including one that proved fatal.	<b>No action:</b> NHSBT currently in design phase of a study looking at Lyme Disease in blood donors. IUL to discuss possibility of including seroprevalence study on hantavirus? ?suitable assays
Partial Malaria / Tropical	Case	<b>In May 2019, Hong Kong reported three cases of rat hepatitis E virus (rat HEV), including one death, in Kowloon City and Southern Districts and Tuen Mun.</b> Kowloon City borders Wong Tai Sin, where previous cases of hepatitis E virus were reported in Hong Kong in 2018. The cases reported no direct contact with rodents or their excreta nor noticed rodents in their residence. All cases were male, over 65 years of age and had underlying conditions.	<b>Action:</b> Grifols have reported that the HEV screening assay will not detect rat HEV variants. Still waiting to hear from Roche.
Malaria	Research	<b>Of the 160 patient serum samples analysed, 33 were found to have antibodies against Zika virus infection.</b> Among the sero-positives 30 (91%) of the cases were anti-Zika virus IgM with the 21-30-year age group recording the highest number of 8 (26%) and 2 (7%) cases being the least for the 61 years and above age group. All sero-positive febrile patients developed at least one symptom consistent with Zika virus infection.	<b>No action:</b> Malaria deferral applied. No TV risk applied. No action until evidence of active outbreak? Literature search only revealed one other small study, again with no active human infections reported. Discuss at SACTTI what evidence is sufficient to apply a risk in absence of national statistics/good surveillance systems and in countries where it is likely that an agent is endemic.
Malaria	Research	<b>Evidence suggests that ZIKV is maintained in NHP reservoirs in Zambia.</b> PRNT revealed that sera from NHPs (African green monkeys and baboons) exhibited neutralizing activity against ZIKV (34.4%; 33/96), whereas a PRNT for yellow fever virus using NHP sera showed no neutralization activity. ZIKV genomic RNA was not detected in splenic tissues from NHPs, suggesting that the presence of anti-ZIKV neutralizing antibodies represented resolved infections.	<b>No action:</b> Malaria deferral applied. No TV risk applied. No action until evidence of active outbreak. Literature search did not reveal any reports of human Zika infections in Zambia.
Malaria partial/tropical	Risk assessment	<b>On 2 July 2019, the WHO added Ethiopia to their list of countries in their Zika virus (ZIKV) classification: 'Countries and territories with current or previous Zika virus transmission'</b> Pregnant women should consider postponing non-essential travel to this	<b>Action:</b> Inform Chair of SACCSD to add ZIKA to Ethiopia in GDR1. Current TV risk in place (Dengue)

GDR1 deferral/test	Type of incident	Comment	Review
		country until after the pregnancy. <b>[GDR1 has tropical deferral specifically listing dengue]</b>	
None	Research	<b>Anti-HBc screening has improved blood safety in Germany. HBV-NAT-positive donations were identified after ID-NAT triggered by initial reactive anti-HBc result.</b> The observed loss of donations was sustainable for maintaining an adequate blood supply in Germany. Anti-HBc testing was added to HBsAg screening in Germany in 2006. Of 31 562 556 donations screened, 70 671 were anti-HBc reactive but HBsAg negative (0.22%). A total of 54 203 anti-HBc-reactive units were discarded either due to possible infectiousness (NAT positive or anti-HBs concentration <100 IU/l) or because no further testing was performed. In our evaluation, 82 HBsAg-negative and anti-HBc-reactive donors were also NAT positive, 47 of these were only identified by ID-NAT.	<b>Action:</b> Relevant for anti-HBc discussion within NHSBT?
Partial malaria / Tropical	Research	<b>Results demonstrated a prevalence of HPgV-1 RNA in 9.5% of the tested blood donors.</b> Genotypes with European, Asiatic and African endemicity were found in Amazonian blood donors. More investigations, including information for the prevalence of HPgV-1 RNA in blood donors from other Latin American countries are needed to estimate the viraemic rates and genotype distribution of this virus in a highly diverse continent like South America.	<b>Action:</b> Chair of SACTTI to review literature to determine if any new clinical associations reported in recent years. No associations in literature found.
None	Research	<b>An assessment of the risk, cost-effectiveness, and perceived benefits of anti-parvovirus B19 tested blood products:</b> To prevent transfusion-transmitted B19V infection of at-risk patients, B19V antibody screening of blood donors was implemented. The costs of preventing one transfusion transmitted B19V infection are estimated at €68,942 (€42,045 – €102,080). On average, 1.25 cases of morbidity and 0.12 cases of mortality are prevented annually. Although the perceived risk of transfusion transmitted B19V infection was low, half of the treating physicians favoured anti-B19V screening. The cost-effectiveness ratio is similar to other blood safety screening measures. No guidance exists to evaluate the acceptability of this ratio.	<b>Action:</b> SACTTI Horizon Scanning agenda item - any possible studies that could be performed to determine if any evidence of human B19 causing clinical symptoms in UK transfused populations.
None	Research	<b>Seasonal USUV infection in Dutch blood donors is common.</b> Cross-reactivity in molecular assays for WNV-screening occurs, but can be resolved using USUV- and WNV-specific PCR-primers and sequencing of viral RNA.	<b>Action:</b> For discussion at next SACTTI. Netherlands does not have a WNV deferral.

GDRI deferral/test	Type of incident	Comment	Review
	Surveillance	<b>Zika transmission persists, but has generally been at low levels throughout 2018 to the present.</b> As of July 2019, a total of 87 countries and territories have had evidence of autochthonous mosquito-borne transmission of Zika virus (ZIKV). These countries are distributed across four of the six WHO Regions: Africa, The Americas, South-East Asia, and Western Pacific. In 2018, Ethiopia was the only new country added to the list of countries with evidence of autochthonous, mosquito-borne transmission. Incidence of ZIKV infection in the Americas peaked in 2016 and declined substantially throughout 2017 and 2018.	<b>Action:</b> Inform Chair of SACCS D to add ZIKA to Ethiopia in GDRI. Current TV risk in place (Dengue) - see above
Partial malaria / Tropical	Media	<b>Piaui state has been following with attention and care the developments regarding the 3rd confirmed case of West Nile fever in Piaui, Brazil.</b> Since 2013, all suspected cases admitted to the municipal public network have been subjected to an investigation protocol implemented by the FMS that includes West Nile virus, among several others of important relevance. From 2014 to 2019, the FMS investigated 399 suspected human cases of severe West Nile fever disease from various cities in Piaui and neighbouring states: 319 were discarded, 35 had "undetermined" results, and 42 remain under investigation. <b>[Covered by tropical deferral?]</b>	<b>No action:</b> No specific WNV deferral. Covered by Tropical Virus deferral. One confirmed human case in 2014, 3 in 2019. Continue to monitor through horizon scanning
	Surveillance	<b>Since the previous update, Brazil, Ethiopia, Republic of Congo and Thailand have reported the majority of new cases.</b> The virus is largely spread in the Americas region, with several countries reporting cases in 2019. Chikungunya virus disease cases have also been reported in Asia and Africa during this period.	<b>Action:</b> One locally acquired case in Taiwan (others imported - TV for Dengue already applied) - no action. 3310 cases of Dengue in the Maldives (TV risk applied, but not dengue). 3756 cases Chikungunya in Ethiopia (TV applied, but not Chik). 73 cases in Sudan (TV risk applied, but not Chik). 8 cases Dengue in Benin (TV applied, but not Dengue) - Inform Chair of SACCS D
Partial malaria / Tropical / <i>T. cruzi</i>	Risk assessment	<b>Malaria epidemic in Venezuela: 2.5 million cases predicted for 2020.</b> In February this year, a consortium of five global health organizations reported over 1.3 million malaria cases during 2018, much higher than numbers produced by the Venezuelan Ministry of Health and the Pan American Health Organization (PAHO). Now these organizations are predicting the malaria situation will only get worse, forecasting 2.5 million malaria cases in Venezuela in 2020.	<b>Action:</b> Large increase in malaria numbers. Recommend apply malaria risk to whole country. Contact Chair of SACCS D
WNV except Hawaii, Alaska and US Virgin Islands / partial tropical	Surveillance	<b>West Nile virus (WNV) neuroinvasive disease incidence was nearly 25% higher in 2018 than the median incidence during 2008–2017.</b> WNV transmission via organ transplantation was	<b>No action:</b> 2 organ recipients infected from some donor. No information on testing. Report Powassan-TTI to SACTTI

GDRI deferral/test	Type of incident	Comment	Review
		reported for the first time since 2013. The first documented case of Powassan virus transmission via blood transfusion was reported.	
None	Surveillance	<b>A locally acquired case of dengue has been reported in a Barcelona resident.</b> Vector control measures are being implemented. This is the second locally acquired case in Catalonia, the previous case was reported in November 2018.	<b>No action:</b> No further cases reported. No measures implemented (see EBA Monitor papers - September 2019).
none	Research	<b>Seasonal Usutu virus infection in Dutch blood donors is common. Cross-reactivity in molecular assays for WNV-screening occurs but can be resolved.</b> The number of USUV RNA-positive, WNV RNA-negative donations was 0 of 2688 donations in July 2018, 6 of 4416 in August (1:736), and 1 of 4936 in September. For 6 donors, seroconversion for USUV-antibodies was demonstrated. All index donations tested positive in a commonly used PCR-assay for WNV donor screening. Three immunocompetent recipients of USUV RNA-positive blood components did not show signs of infection. This could suggest that USUV, is not a serious threat to blood safety, but a larger study, including immunocompromised patients, before this can be concluded.	<b>No action:</b> Discussed at SACTTI (September 2019). Netherlands have not implemented WNV NAT screening.
Partial WNV	Surveillance	<b>Since the beginning of the 2019 transmission season 291 human infections reported in EU and neighbouring countries:</b> 268 cases in Greece (171), Romania (33), Italy (24), Cyprus (16), Hungary (15), Bulgaria (4), Austria (3), France (1) and Slovakia (1). EU neighbouring countries reported 23 human cases in Serbia (13), Turkey (7) and North Macedonia (3). During the current transmission season, 26 outbreaks among equids have been reported by Greece (12), Germany (4), Italy (4), Hungary (2), France (2) and Austria (2). In addition, Germany reported 26 outbreaks among birds to ADNS. <b>[Slovakia not covered by GDRI]</b>	<b>No action:</b> Chair of SACCS has been informed about WNV case in Slovakia (11/09/2019). Weekly ECDC WNV reports are being monitored for more cases.
WNV except Hawaii, Alaska and US Virgin Islands / partial tropical	Surveillance	<b>Characteristics of transfusion-transmitted Babesia microti, American Red Cross 2010-2017:</b> Most donors identified in TTB cases investigated from 2010 through 2017 (73, 90%) were residents of six endemic states in the northeastern United States with five additional donors from Minnesota (3) and Wisconsin (2). The percent of collections that are Babesia screened in Connecticut has increased to almost all donations involving RBCs (96% in 2017 and 95% in 2018). Although the protective effect on the blood supply provided by Babesia screening is very encouraging, B. microti is endemic in an extended territory of the Northeast and Upper	<b>Action:</b> Babesia RA being reviewed for SACTTI (Jan 2020)

GDR1 deferral/test	Type of incident	Comment	Review
		Midwest US, where blood screening for Babesia is still absent or performed on a small percentage of collected blood units.	
WNV except Hawaii, Alaska and US Virgin Islands / partial tropical	Guidance	<b>AABB soliciting public comments on interim Babesia standard:</b> Under the interim revisions, the Blood Bank/Transfusion Service Standards Committee is proposing a requirement for testing of blood collected in states named in the FDA Guidance for Industry on transfusion-transmitted babesiosis. The proposed standard would have an effective date of May 10, 2020, and would carry over into the 32nd edition if approved. The standards also provide for the use of pathogen reduction instead of testing, in addition to donor re-entry.	
Partial: Malaria/ Chagas / tropical/ WNV	Surveillance	<b>In the Region of the Americas, a total of 2,384,029 cases of dengue (244.1 cases per 100,000 population) have been reported to epi week 35 in 2019, including 949 deaths.</b> The reported case-fatality rate was 0.04%. The number of cases reported in 2019 as of EW 35 (2,384,029) is higher than the annual totals reported in 2016, 2017, and 2018, and the total by the end of the year will likely exceed the total reported in the epidemic year of 2015. In 2019, the proportion of severe dengue (0.7%) has exceeded that observed in the previous four years.	<b>Action:</b> Inform Chair of SACCS D that there have been 1477 cases of Dengue in Belize (currently other TV deferrals)
Malaria / tropical (CHIKV) / VHF	Surveillance	<b>As of 12 September 2019, the WHO assessment for the DRC states that the risk of spread remains low at the global level, and very high at national and regional levels.</b> There is cause for concern linked to the increased risk of geographical spread, both within the Democratic Republic of the Congo and to neighbouring countries. Although there are possible early signs of the outbreak easing, this must be interpreted with caution and it is too soon to know if this is an indication of a decrease in transmission intensity of EVD.	<b>No action:</b> VHF deferral in place . Contact Chair of SACCS D to ensure that lifelong deferral for sexual contacts on individuals who have had Ebola (and other filoviruses) is in place.
Partial malaria / tropical (CHIKV)	Research	<b>A study in South African blood donors showed that Ultrio Plus detected twofold more window-period (WP) NAT yield donations and 1.7-fold more occult HBV infections than Ultrio.</b> When using the geometric mean values of 63 and 4.1 copies/mL as the 50% LOD for Ultrio and Ultrio Plus, the infectious WPs were estimated at 23.2 and 13.1 risk-day-equivalents for Ultrio and Ultrio Plus, respectively, reducing the 33.5-day pre-HBsAg WP. Residual risk decreased 2.1-fold from 136.5 per million RBC transfusions in the Ultrio screening period to 65.0 per million in the Ultrio Plus screening period.	<b>No action:</b> SaBTO to consider review of occult HBV in UK

GDRI deferral/test	Type of incident	Comment	Review
	Commentary	<p><b>Undetectable does not equal untransmittable for HIV and blood transfusion:</b> While there is strong evidence that U=U can be applied to sexual transmission, it does not extrapolate to transfusion transmission because of the larger inoculum and intravenous route of administration. TTI data shows that a transfusion of more than 5 ml of plasma from an individual with a viral load of 199 copies/ml (i.e. below the 200 copies/ml threshold for U=U) could lead to HIV transmission. A recent case suggests that the infectious dose may be well below 830 copies. People might feel their blood is now safe and so not disclose risk factors. HIV antibody levels in established HIV infection should make these individuals readily detectable, but wastes blood service resources. The potential for failure of PrEP to prevent acquisition of HIV carries potential for a donor on PrEP to be in the window period.</p>	<p><b>No action:</b> UK Blood Services defer donors on PrEP</p>
Partial WNV	Surveillance	<p><b>Between 6 and 12 Sep 2019, 5 EU member states reported 9 West Nile fever [WNV] outbreaks among equids to the Animal Disease Notification System (ADNS):</b> Germany (3), Austria (2), France (2), Hungary (1), and Italy (1). Since the beginning of the 2019 transmission season and as of 12 Sep 2019, 6 EU member states reported 26 WNV outbreaks among equids: Greece (12), Germany (4), Italy (4), Hungary (2), France (2), and Austria (2). In addition, Germany reported 26 outbreaks among birds to ADNS.</p>	<p><b>No action:</b> WNV deferrals in place for countries with human WNV infections (no human cases in Germany)</p>
Partial WNV	Surveillance	<p><b>On 10th September 2019 the Department of Epidemiology of the Public Health Authority received the reporting of 1 confirmed human case of WNV in Slovenia.</b> The laboratory confirmation was performed by serology testing and PCR. The WNV Infection was confirmed in a young-aged man after returning from a visit to the area near Bratislava city in the district of Pezinok. The disease showed the clinical symptoms such as fever, rash and flu-like symptoms.</p>	<p><b>Action:</b> WNV risk applied to Slovenia. One case reported from Slovakia; WNV reports being monitored on a weekly basis</p>
Partial WNV	Surveillance	<p><b>Four people with dengue have just been diagnosed in the Alpes-Maritimes. This brings to 5 the number of indigenous dengue cases in the department.</b> The new people are living in Vallauris, in the same neighbourhood as the first indigenous dengue case, reported by the Paca Regional Health Agency (ARS) on September 18th. All these people were identified following the survey that was conducted the next day near the neighbourhood. The neighbourhood has been subject to vector control several times.</p>	<p><b>No action:</b> Localised outbreak, 1 case plus 6 cases through case finding studies. WNV deferral in place but not a mitigation as WNV testing in place. End of mosquito season approaching</p>

GDRI deferral/test	Type of incident	Comment	Review
Partial WNV	Case report	<b>The Auvergne-Rhône-Alpes region of France report a case of autochthonous dengue fever in the Rhône department.</b> The person who has been infected lives in Caluire-et-Cuire and has not made a recent trip abroad. This is the first known indigenous case in the region. Investigations are underway to identify possible other cases, and consider if necessary, adapted mosquito control measures.	<b>No action:</b> Localised outbreak, 1 case plus 1 case found though case finding study reported to date. End of mosquito season approaching
None	Case report	<b>The Epidemiological Surveillance Network of Catalonia (XVEC) has received the notification of a case of autochthonous dengue confirmed by laboratory.</b> The patient, resident in the Barcelonès, discards any history of travel to areas where the transmission of the virus is endemic. Vector control measures against the tiger mosquito are being implemented to prevent proliferation, and mosquito viruses are being monitored.	<b>No action:</b> No other cases reported to date, end of mosquito season approaching
WNV except Hawaii, Alaska and US Virgin Islands / Partial tropical	Surveillance	<b>A human case of locally-acquired dengue fever has been confirmed in Hillsborough County, Florida, USA.</b> There is a heightened concern additional residents will become ill. The Florida Department of Health in Hillsborough County is advising residents there has been an increase in mosquito-borne disease activity in the County.	<b>No action:</b> No other cases reported to date. WNV deferral in place but not a mitigation as WNV testing in place
None	Case report	<b>In September 2019, West Nile virus (WNV) was detected in Saxony for the first time in Germany as the cause of meningoencephalitis in humans.</b> The affected patient is a 70-year-old man with a rural home and work, without prior travel abroad and without significant previous illness. This evidence supports the findings from the data of the WNV testing of birds and horses that especially in East Germany WNV circulated this summer. The establishment of WNV north of the Alps can best be explained by the unusually warm summers of 2018 and 2019.	<b>No action:</b> Maintain a watching brief, end of mosquito season approaching
Partial WNV	Case report	<b>An autochthonous case of zika virus infection was confirmed by the French National Reference Center for arboviruses on 1st October 2019.</b> The case lives in the Var department in southern France. No imported cases have been reported in the area. To date, the patient did not report any information in support of a sexual transmission. Investigations are still ongoing to determine the possible route of transmission.	<b>No action:</b> One more case reported to date. WNV deferral in place but not a mitigation as WNV testing in place. End of mosquito season approaching

GDR1 deferral/test	Type of incident	Comment	Review
	Surveillance	<b>Since the previous update, Ethiopia, Brazil, Thailand, and Honduras have reported most of the new chikungunya cases. In July Suriname and Argentina reported their first case of 2019.</b> The virus is largely spread in the Americas region, with several countries reporting cases in 2019. Chikungunya virus disease cases have also been reported in Asia and Africa during this period.	One case of Chik reported in Argentina; no Chik flag but other TV risk applied. 3000 cases of Dengue in Belize in 2019; no Chik flag but other TV risk applied. 78 Chik cases in Taiwan (majority imported, 21 locally acquired infection); no Chik flag but other TV risk applied. 31147 Chik cases reported in Ethiopia; no Chik flag but other TV risk applied. 9 cases of Dengue reported in Benin; no Dengue flag but other TV risk applied. Report to Chair SACCS
	Surveillance	<b>Compared with the same time period in 2018, data for dengue infections so far in 2019 shows substantial increases.</b> Brazil, Thailand, the Philippines, Cambodia and Vietnam are particularly affected this year. On 17 September 2019, Spain reported its first autochthonous case of dengue this year.	
Malaria / Tropical (all)	Media	<b>A new mosquito-borne virus, West Nile Virus (WNV), has been found in Bangladesh.</b> However, detailed information about the virus has not been available yet as the government's concerned department didn't investigate to know its origin.	<b>No action:</b> Limited information in report. Maintain watching brief. Other deferrals in place.
WNV except Hawaii, Alaska and US Virgin Islands / Partial tropical	Media	<b>WNV neuroinvasive disease incidence was nearly 25% higher in 2018 than the median incidence during 2008-2017 in the USA.</b> WNV transmission via organ transplantation was reported for the first time since 2013. The first documented case of Powassan virus transmission via blood transfusion was reported.	<b>Action:</b> Report to SACTTI first documented case of TTI-Powassan virus
None	Case report	<b>Diagnosed in Madrid one of the first cases of sexual transmission of dengue in the world.</b> The Ramón y Cajal Hospital in Madrid has diagnosed dengue to a young man who contracted the disease by maintaining unprotected relationships with another person who had acquired the virus during a trip through the Caribbean, as confirmed by the Community of Madrid. This is one of the first sexually confirmed infections in the world, as there are only references in the scientific literature of another similar case in South Korea. The contagion, ratified by the National Center for Microbiology of the Carlos III Health Institute, occurred at the beginning of September and the patient's sexual partner was another man who had recently travelled to Cuba and the Dominican Republic, countries where the disease lives an important rebound. This imported case had developed symptoms compatible with the disease 10 days before. In addition to the patient's absence of trips to endemic areas, there is the fact that the tiger mosquito - <i>Aedes albopictus</i> - is not settled in Madrid, unlike in areas of Spain such as the Mediterranean coast where it has previously acted as a	<b>No action:</b> Report to next SACTTI Meeting as a case report of sexual transmission of TV other than Zika

GDRI deferral/test	Type of incident	Comment	Review
		vector for autochthonous cases. The patient had not recently visited these areas. Genetic tests have shown that "the virus strain found in the samples taken from the two patients is identical and coincides with the one currently circulating in Cuba," according to epidemiologist Susana Jiménez and biologist Andrés Irisio.	
	Surveillance	<b>Sheep have been identified as a Host Species for Zoonotic Babesia venatorum, United Kingdom.</b> Babesia venatorum is an increasingly prominent zoonotic parasite that infects predominantly wild deer. A molecular examination of Babesia infecting mammals in the United Kingdom identified 18S sequences in domestic sheep isolates identical to zoonotic B. venatorum. Identification of this parasite in livestock raises concerns for public health and farming policy in Europe.	<b>Action:</b> Send report to NOF for inclusion in Babesia risk assessment review. Three human cases reported in Europe (all in asplenic individuals; 1 in Italy in 2003, 1 in Austria in 2003 and 1 in Germany 2007)
None	Research	<b>Among MSM in Amsterdam, incidence rates of HIV versus other STI show diverging trends.</b> The increase in STI incidence coincides with a decrease in condom use with casual partners. The decrease in HIV incidence, despite increased sexual risk behaviour, suggests that other HIV prevention methods have been successful in reducing HIV transmission among MSM.	<b>No action:</b> IUL noted a different paper from the Netherlands that reported increased levels of HHV-8 and other virus infections in MSM (? HHV-8 seroprevalence as seemed very high). PHE/NHSBT are developing a more specific HHV-8 tests, possibly to be used to screen organ donors. Previous studies hampered by lack of specific assays.
None	Case report	<b>Three clinical cases of Tick-borne encephalitis (TBE) are reported in patients hospitalised within a month and all residing at the boundary of the same forest in Northern Zealand.</b> In Denmark, TBE is endemic only on the island Bornholm, with an incidence of 4 per 100,000 inhabitants per year.	<b>Action:</b> TBEV risk assessment undergoing review. LJ to ask EID Monitor what, if any, regimes European Blood Services have in place for mitigating risk of tick-borne infection (particularly those with high levels of TBEV e.g. Germany, Switzerland, Slovakia. UK Tissue Services ask a question re. tick bites. Is data available? Vaccination is available.
None	Research	<b>A study shows epidemiological evidence that the tick-borne encephalitis season in Germany has shifted to start earlier over the last years, beginning approximately 12 days earlier in 2018 than it did in 2001.</b> There was no detectable seasonal variation regarding the occurrence of fatal outcome, CNS and myelitis. However, there was a significant changing trend regarding hospitalizations over the course of the year: The risk for hospitalization increases until August, decreases again from October on.	
None	Surveillance	<b>Over 250 cases of the tick-borne early summer meningoencephalitis (ESME) disease have been recorded in Switzerland so far in 2019,</b> the 2nd-highest number since the year 2000. In its weekly bulletin published [Mon 11 Nov 2019], the Federal	

GDRI deferral/test	Type of incident	Comment	Review
		Office for Public Health (FOPH) wrote that 251 cases of the disease had been reported up to the end of October [2019]. The government urged a nationwide vaccination against the disease at the start of the year.	
	Surveillance	<b>Tick-Borne Encephalitis Virus has been identified in the UK for the first time.</b> During February 2018–January 2019, large-scale surveillance was conducted for the presence and prevalence of tick-borne encephalitis virus (TBEV) and louping ill virus (LIV) in sentinel animals and ticks in the UK. Serum was collected from 1,309 deer culled across England and Scotland. Overall, 4% of samples were ELISA-positive for the TBEV serocomplex. A focus in the Thetford Forest area had the highest proportion (47.7%) of seropositive samples.	
	Case report	<b>AT the end of July 2019, a case of tick-borne encephalitis (TBE) in a 3-month-old infant was notified to the German mandatory surveillance system for infectious diseases.</b> The patient's family, resident in a TBE-non-endemic region in Germany, had holidayed in England during the incubation time.	
	Surveillance	<b>For 2018, 18 countries in the EU/EEA reported 441 cases of tularaemia, 358 (81%) of which were confirmed.</b> The EU/EEA notification rate for 2018 was 0.07 cases per 100 000 population. As in previous years, the notification rate among males was higher in most age groups except for the age groups between 5 and 24 years. Notification rates increased with age and peaked at 45–64 years.	<b>No action:</b> 2 cases reported in UK 2014-2018. Bacteria found in monocytes; asymptomatic bacteraemia has not been demonstrated. No known cases of transfusion-transmitted infection.
None	Research	<b>On 31 of July 2019, the Public Health Agency of Sweden was alerted about an increasing number of tularaemia cases in Gävleborg, a county in central Sweden.</b> The number of cases increased thereafter peaking at about 150 reports of illnesses every week. As of 6 October, a total of 979 cases (734 laboratory-confirmed) have been reported, mainly from counties in central Sweden. The outbreak is now considered over (as of 14 October).	
	Surveillance	<b>Between 8 and 14 November 2019, EU Member States reported a total of six human cases of West Nile virus infections: five in Italy and one in Germany.</b> No cases were reported from EU neighbouring countries. A human case was reported for the first	<b>No action:</b> Cases in Germany noted. PEI likely to implement WNV NAT testing in affected regions for next WNV season

GDRI deferral/test	Type of incident	Comment	Review
		time from a new area in Germany: in Leipzig, Kreisfreie Stadt. This week, three deaths were reported by Greece (2) and Romania (1).	
WNV except Hawaii, Alaska and US Virgin Islands / Partial tropical	Case report	<b>A probable case of fatal neuroinvasive transfusion transmitted WNV was linked to an infectious apheresis platelet unit undetected by WNV ID-NAT.</b> It is hypothesized that the suspect unit was collected early in the viraemic period when viral RNA was below the limit-of-detection of the ID-NAT assay. Implementation of ID-NAT screening of blood donors has not entirely eliminated the risk of TT-WNV infections, which may best be addressed by pathogen inactivation technologies.	<b>No action:</b> WNV flag for USA in GDRI. Transmission of low titre infection noted.