



SUMMARY

- The second meeting of the Emergency Committee was convened by the Director-General under the International Health Regulations (2005) on 8 March 2016. The Committee advised that the clusters of microcephaly cases and other neurological disorders in some areas affected by Zika virus continue to constitute a Public Health Emergency of International Concern, and that there is increasing evidence that there is a causal relationship with Zika virus.¹
- Between 1 January 2007 and 9 March 2016, a total of 52 countries and territories have reported autochthonous (local) transmission or indication of transmission of Zika virus (41 since 1 January 2015). The Philippines is the latest to report autochthonous transmission of Zika virus. Five of these countries and territories reported a Zika virus outbreak that is now over. In addition, three countries have reported locally acquired infection in the absence of any known mosquito vectors, probably through sexual transmission.
- The geographical distribution of Zika virus has steadily widened since the virus was first detected in the Americas in 2014. Autochthonous Zika virus transmission has been reported in 31 countries and territories of this region.
- So far an increase in microcephaly and other neonatal malformations has only been reported in Brazil and French Polynesia, although two cases linked to a stay in Brazil were detected in the United States of America and Slovenia. Reported cases of microcephaly and/or congenital malformation in Colombia are under investigation.
- In the context of Zika virus circulation nine countries or territories have reported an increased incidence of Guillain-Barré syndrome (GBS) and/or laboratory confirmation of a Zika virus infection among GBS cases.
- A recently published cohort study in Brazil shows an increased risk of microcephaly and other congenital abnormalities associated with a Zika virus infection during pregnancy and provides further information to support the possible causal relationship between Zika virus and microcephaly and other congenital abnormalities.^{2,3}
- The global prevention and control strategy launched by WHO as a Strategic Response Framework⁴ encompasses surveillance, response activities and research, and this situation report is organized under those headings.

¹ <http://www.who.int/mediacentre/news/statements/2016/2nd-emergency-committee-zika/en/>

² <http://www.nejm.org/doi/full/10.1056/NEJMoa1602412#t=abstract>

³ <http://www.nejm.org/doi/full/10.1056/NEJMp1602708>

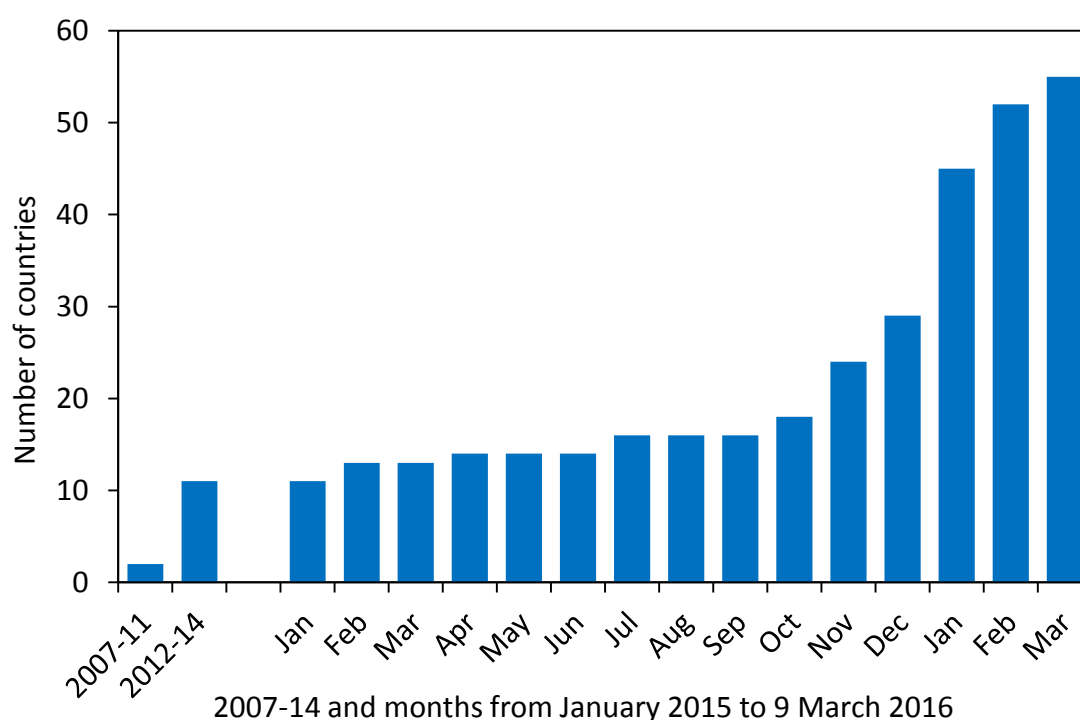
⁴ http://apps.who.int/iris/bitstream/10665/204420/1/ZikaResponseFramework_JanJun16_eng.pdf?ua=1

I. SURVEILLANCE

Incidence of Zika virus

- From 1 January 2007 to 9 March 2016, Zika virus transmission was documented in a total of 55 countries and territories (Fig. 1, Fig. 2; Table 1). Reports of possible sexual transmission of Zika virus in Argentina and New Zealand are under further investigation (adding to earlier reports from France, Italy and United States of America).
- A newly reported confirmed case of Zika virus infection in New Caledonia is under investigation: in particular whether this case is imported or locally acquired.

Figure 1: Cumulative number of countries, territories and areas reporting Zika virus transmission, 2007-2014, and monthly from 1 January 2015 to 9 March 2016.



- Towards the end of 2014, Brazil detected a cluster of cases of febrile rash in the Northeast Region of the country. The diagnosis of Zika virus infection was confirmed (RT-PCR test for viral RNA⁵) in May 2015. The Brazilian Ministry of Health estimates that there were 0.4-1.3 million cases of Zika virus infection in 2015.⁶
- Recently Zika virus has spread rapidly across the Americas. By 9 March 2016, 31 countries and territories in the Americas reported autochthonous transmission of the virus. The reported rate of its spread across South and Central America accelerated from October 2015 onwards (Table 1, Fig. 1).
- From 1 October 2015 to 20 February 2016, Colombia reported 47 771 suspected cases of Zika virus. The number of laboratory confirmed cases is 2090.⁷

⁵ Reverse transcriptase polymerase chain reaction (RT-PCR).

⁶ Full report in Portuguese available at: <http://portalsaude.saude.gov.br/images/pdf/2016/janeiro/22/microcefalia-protocolo-de-vigilancia-e-resposta-v1-3-22jan2016.pdf>

⁷ <http://www.ins.gov.co/boletinepidemiologico/Boletn%20Epidemiol%20gico/2016%20Boletin%20epidemiologico%20semana%207.pdf>

Table 1. Countries, territories and areas with autochthonous Zika virus circulation, 2007–2016.*

Classification [#]	WHO Regional Office	Country/Territory/Area
Reported or indication of autochthonous Zika virus transmission AND Guillain-Barré syndrome [°] AND microcephaly [§] (2)	AMRO/PAHO (1)	Brazil
	WPRO (1)	French Polynesia ⁺
Reported or indication of autochthonous Zika virus transmission AND Guillain-Barré syndrome [°] (7)	AMRO/PAHO (7)	Colombia, El Salvador, Martinique, Panama, Puerto Rico, Suriname, Venezuela (Bolivarian Republic of)
Reported or indication of autochthonous Zika virus transmission (39)	AFRO (2)	Cabo Verde, Gabon
	AMRO/PAHO (23)	Aruba, Barbados, Bolivia (Plurinational State of), BONAIRE, Costa Rica, Curaçao, Dominican Republic, Ecuador, French Guiana, Guadeloupe, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Paraguay, Saint Martin, Saint Vincent and the Grenadines, Sint Maarten, Trinidad & Tobago, United States Virgin Islands
	SEARO (3)	Indonesia, Maldives, Thailand
	WPRO (11)	American Samoa, Cambodia, Fiji, Lao People's Democratic Republic, Malaysia, Marshall Islands, Philippines, Samoa, Solomon Islands, Tonga, Vanuatu
Countries/territories/areas with outbreaks terminated (4)	WPRO (3)	Cook Islands, New Caledonia, YAP - Micronesia (Federated States of)
	AMRO/PAHO (1)	ISLA DE PASCUA - Chile
Locally acquired without vector-borne transmission** (3)	AMRO/PAHO (1)	United States of America
	EURO (2)	France, Italy

* Available information does not permit qualification of the intensity of viral circulation and therefore the risk of infection; the situation is extremely variable according to countries, and this information should be used with caution. For overseas territories/countries/provinces or islands, the affected area rather than the country is reported.

[#] Definitions:

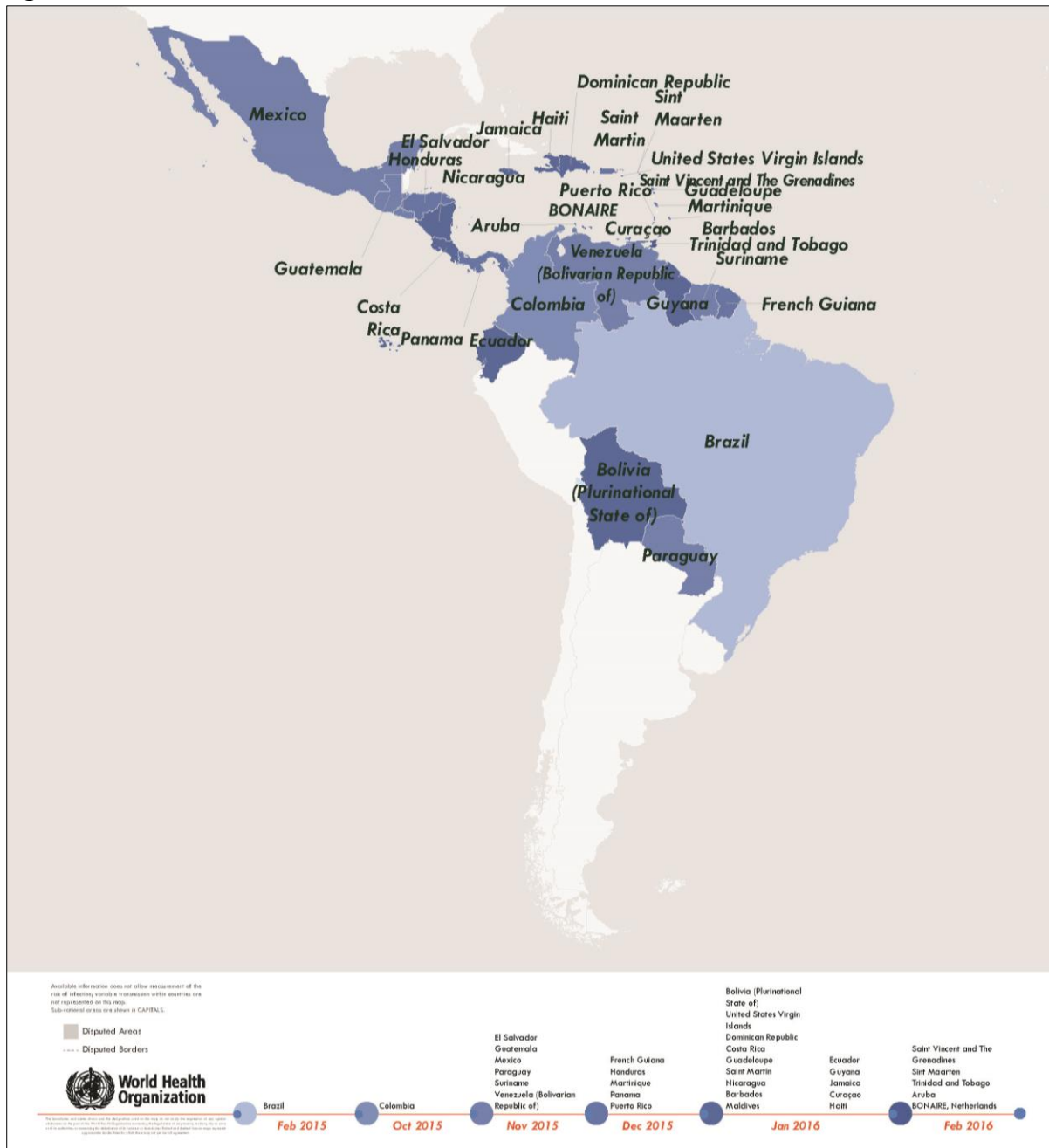
- Reported autochthonous transmission: Formal notification through IHR, of at least one (1) case of autochthonous transmission by the affected Member State or the Member State where the diagnosis has been performed (for travellers). Autochthonous infection is considered to be any infection acquired in the country i.e. among patients with no history of travel during the incubation period or travels exclusively to non-affected areas.
- Indication of viral circulation: Information of at least one Zika biologically confirmed case (by RT-PCR or seroneutralisation) either diagnosed domestically or exported and diagnosed abroad.
- Countries, territories or areas with outbreaks terminated: Countries or territories where the interruption of the viral circulation has been documented through the surveillance data (including syndromic surveillance, laboratory confirmation of suspected cases, etc.) and/or where no suspect case has been reported since 31 December 2014.
- Locally acquired without vector-borne transmission: Autochthonous infection but through another mode of transmission than vector borne (including sexual, blood-borne, or organ transplant) and where vector population is unlikely to allow sustained vector-borne transmission.

[°] Guillain-Barré syndrome: Countries reporting an increase in the incidence of Guillain-Barré syndrome or at least one case of Guillain-Barré syndrome with documentation of previous Zika infection in the country or territory.

[§] Countries reporting an increase in the incidence of microcephaly and/or at least one case of microcephaly with documentation of previous Zika infection.

⁺ French Polynesia reported an increase in the incidence of Guillain-Barré syndrome and microcephaly. The Zika virus outbreak is terminated.

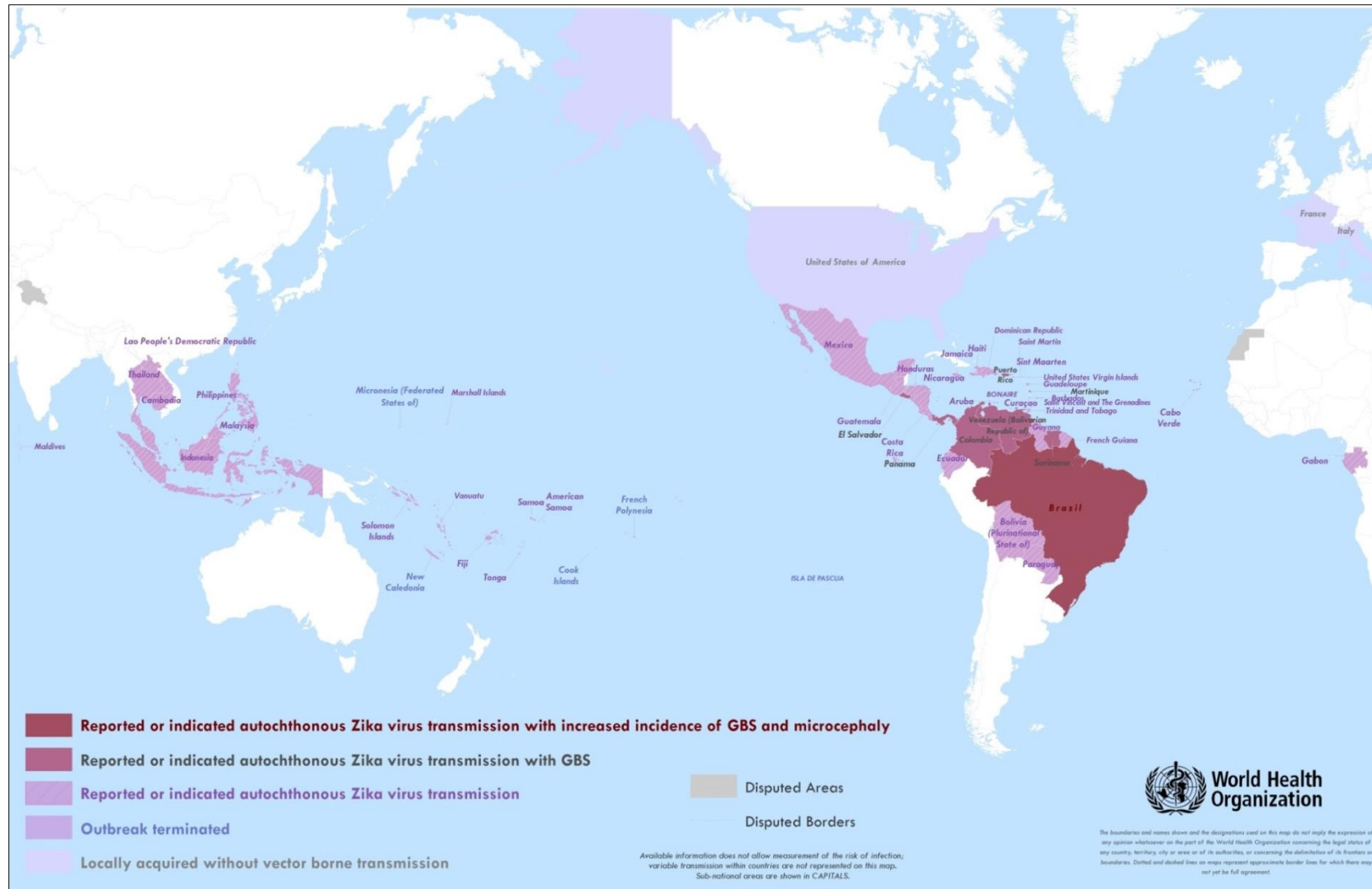
Figure 2: Timeline of introduction of Zika virus in the Americas, 2015-2016.⁸



Available information does not permit measurement of the risk of infection in any country; the variation in transmission intensity among countries is therefore NOT represented on this map. Zika virus is not necessarily present throughout the countries/territories shaded in this map. Countries where sexual transmission occurred are not represented in this map.

⁸ <http://www.who.int/emergencies/zika-virus/situation-report/en/>

Figure 3. Countries, territories and areas reporting Zika virus, microcephaly and Guillain-Barré syndrome*, 2007-2016.



*These reports do not exclude the possibility that Zika virus is present in other countries, notably in Africa and Asia.

- From 2007, locally acquired Zika cases have been reported in 15 countries and territories in the Western Pacific Region. Four Pacific Island countries and areas (American Samoa, Marshall Islands, Samoa and Tonga) have reported Zika infections in 2016.
- From 1 October 2015 to 28 February 2016, Cabo Verde (African region), reported 7457 suspected cases of Zika virus disease although only two cases have been confirmed by RT-PCR. The outbreak peaked during the week of 22 November 2015 and has been in decline since then. The outbreak appears to have begun in Praia and then spread to other municipalities. Preliminary information, subject to confirmation, indicates that this outbreak has been caused by an African strain of Zika virus. To date, 165 pregnant women with suspected Zika virus infection are being followed up. 44 (27%) of these women have delivered and there was no sign of microcephaly in any of the new-borns. No neurological abnormalities have been reported.

Incidence of microcephaly

- Between 22 October 2015 and 5 March 2016 a total of 6158 cases of microcephaly and/or central nervous system (CNS) malformation were reported by Brazil including 157 deaths. This contrasts with the period from 2001 to 2014, when an average of 163 microcephaly cases was recorded nationwide per year. A detailed description of this sharp increase is provided in a recently published paper.⁹ The prevalence of microcephaly in 15 states with laboratory-confirmed Zika virus transmission (2.8 cases per 10 000 live births) significantly exceeds that in four states without confirmed Zika virus transmission (0.6 cases per 10 000 live births).
- Microcephaly cases have been detected throughout Brazil but the reported increase is concentrated in the Northeast Region (Fig. 4).
- Of the 6158 cases of microcephaly reported in Brazil suspected to be associated with a Zika virus infection, investigations have been concluded for 1927 cases and 745 were confirmed for Zika virus (Table 2).¹⁰

Table 2. Countries, territories and areas reporting microcephaly cases potentially associated with Zika virus infection.

Reporting country	Number of reported microcephaly cases potentially associated with a Zika virus infection	Probable location of infection
French Polynesia	8	French Polynesia
Brazil	745	Brazil
Hawaii (United States of America) ¹¹	1	Brazil
Slovenia ¹²	1	Brazil

⁹ http://www.cdc.gov/mmwr/volumes/65/wr/mm6509e2er.htm?s_cid=mm6509e2er_w

¹⁰ <http://portalsaude.saude.gov.br/index.php/cidadao/principal/agencia-saude/22554-saude-investiga-4-231-casos-de-microcefalia>

¹¹ <http://governor.hawaii.gov/newsroom/doh-news-release-hawaii-department-of-health-receives-confirmation-of-zika-infection-in-baby-born-with-microcephaly/>

¹² <http://www.nejm.org/doi/pdf/10.1056/NEJMoa1600651>

Figure 4: Distribution of microcephaly cases associated with Zika virus infection in Brazil (745 cases reported up to 5 March 2016).



- Among the 6158 cases of microcephaly and/or CNS malformation reported in Brazil, 157 child deaths occurred after birth or during pregnancy (including miscarriage or stillbirth); 37 of these were confirmed as having microcephaly and/or CNS malformation potentially linked to congenital Zika virus infection, 102 remain under investigation and 18 were discarded.
- An outbreak of Zika virus in French Polynesia was followed by an increase in the number of CNS malformations in children born between March 2014 and May 2015. A total of 19 cases were reported including eight microcephaly cases compared to the national average of 0-2 cases per year.
- Cases of microcephaly and/or congenital malformation reported in Colombia are being investigated.
- Zika virus is not yet proven to be a cause of the increased incidence of microcephaly in Brazil. However, given the temporal and geographical associations between Zika virus infections and microcephaly, the repeated discovery of virus in fetal brain tissue, and in

the absence of a compelling alternative hypothesis, a causal role for Zika virus is a strong possibility that is under active investigation.¹³

Incidence of Guillain-Barré syndrome (GBS)

- In the context of Zika virus circulation nine countries or territories have reported increased GBS incidence and/or laboratory confirmation of a Zika virus infection among GBS cases (Table 3, Fig. 3).

Table 3. Countries, territories or areas reporting GBS potentially related to Zika virus infection.

Reported increase in incidence of GBS cases, with no GBS cases biologically documented of Zika virus infection	Reported increase in incidence of GBS cases, with at least one GBS case confirmed with previous Zika virus infection	No increase in GBS incidence reported but at least one GBS case confirmed with previous Zika virus infection
El Salvador	French Polynesia	Martinique
Colombia	Suriname	Puerto Rico
	Brazil	Panama
	Venezuela (Bolivarian Republic of)	

- Between October 2013 and April 2014, French Polynesia experienced the first Zika virus outbreak ever recorded in the country. During the outbreak, 42 patients were admitted to hospital with GBS. This represents a 20-fold increase in incidence of GBS in French Polynesia compared with the previous four years. A recently published formal analysis of these data (case-control study) showed a strong association between Zika infection and GBS.¹⁴
- In 2015 in the state of Bahia in Brazil, 42 GBS cases were reported, among which 26 (62%) had a history of symptoms consistent with Zika virus infection. A total of 1708 cases of GBS were registered nationwide, representing a 19% increase from the previous year (1439 cases of GBS in 2014), though not all states reported an increase in incidence.
- In Colombia, 201 GBS cases with a history of suspected Zika virus infection were reported in the nine weeks to 14 February 2016. To date, none of the cases of GBS have been laboratory confirmed for Zika virus infection, or other possible causes.
- El Salvador recorded 118 GBS cases from 1 December 2015 to 8 January 2016, including five deaths, while the annual average number of GBS cases is 169. To date, none of those reported GBS cases have been laboratory confirmed for Zika virus infection or other possible causes.
- On 29 January 2016, Suriname reported an increased incidence of GBS: 10 GBS cases reported in 2015 and three GBS cases were reported during the first three weeks of 2016, while Suriname registers on average approximately four cases GBS per year. A Zika virus infection was confirmed by RT-PCR in two of the GBS cases reported in 2015.

¹³ <http://www.nejm.org/doi/full/10.1056/NEJMp1602708>

¹⁴ Cao-Lormeau *et al* Published Online February 29, 2016 [http://dx.doi.org/10.1016/S0140-6736\(16\)00562-6](http://dx.doi.org/10.1016/S0140-6736(16)00562-6)

- Venezuela (Bolivarian Republic of) has also reported an increased incidence of GBS. Between 6 December 2015 and 14 February 2016, 578 GBS cases were reported, from which 235 presented symptoms of Zika virus infection. In 2016, a Zika virus was confirmed in six of the 27 GBS cases by RT-PCR.
- GBS cases with laboratory confirmed Zika virus infections were reported from Martinique (two cases), Puerto Rico (one case) and Panama (one case).
- A recent report describes the case of a 15-year old girl in Guadeloupe with Zika virus infection who developed an acute myelitis. This is the first such report which highlights the need to better understand the range of neurological disorder associated with Zika virus infection.¹⁵
- As with microcephaly, Zika virus is not yet proven to be the cause of the increased GBS incidence in Brazil, Colombia, El Salvador, Suriname or Venezuela (Bolivarian Republic of), though strongly suspected given the recent findings in French Polynesia. Confounding factors include the contemporary circulation of dengue and chikungunya in the Americas, which are transmitted by the same species of mosquito. Further investigations are needed to identify the potential role of other factors (including infections) known to be associated, or potentially associated, with GBS.

II. RESPONSE

- The principal activities being undertaken jointly by WHO and international, regional and national partners in response to this public health emergency are laid out in Table 4.
- WHO and partners are working together to develop and maintain the Joint Operations Plan that combines activities within the six main areas of work; coordination, surveillance, care, vector control, risk communication and community engagement, and research at the global, regional and country level.
- WHO and partners are appealing for the sum of US\$ 56 million for an inter-agency, international response to the spread of Zika virus disease and subsequent spikes in cases of microcephaly and neurological disorders. The request represents the consolidated requirements of 23 partner organizations to address this emergency over the next six months. US\$ 25 million is required to fund the WHO and PAHO emergency response and US\$ 31 million to fund partners' activities. Approximately 45 donors attended a meeting to discuss the Strategic Response Framework. Donors are reviewing stated needs and requirements.
- On 18 February 2016 the World Bank Group announced that it had made US\$ 150 million immediately available to support countries in Latin America and the Caribbean affected by the Zika virus outbreak. This amount follows the WHO declaration of a Public Health Emergency of International Concern (PHEIC) on 1 February 2016 for the recent cluster of microcephaly cases and other neurological disorders reported in the Americas amid the growing Zika virus outbreak. The World Bank Group has engaged with governments

¹⁵ [http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(16\)00644-9/fulltext](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(16)00644-9/fulltext)

across the region, including sending technical experts to affected countries. If additional financing is needed, the World Bank Group stands ready to increase its support. These initial estimates assume that the most significant health risks are for pregnant women.

Table 4. Strategic Response Framework and Joint Operational Response Plan: response activities.

Public health risk communication and community engagement activities	<ul style="list-style-type: none"> ▪ Activate networks of social science experts to advise on community engagement. ▪ Coordinate and collaborate with partners on risk communication messaging and community engagement for Zika. ▪ Develop communication and knowledge packs and associated training on Zika and all related and evolving issues for communication experts. ▪ Engage communities to communicate risks associated with Zika virus disease and promote vector control, personal protection measures, reduce anxiety, address stigma, and dispel rumours and cultural misperceptions. ▪ Disseminate material on Zika and potentially associated complications for key audience such as women of reproductive age, pregnant women, health workers, clinicians, and travel and transport sector stakeholders. ▪ Conduct social science research to understand perceptions, attitudes, expectations and behaviours regarding fertility decisions, contraception, abortion, pregnancy care, and care of infants with microcephaly and persons with GBS. ▪ Support countries to monitor impact of risk communications.
Vector control and personal protection against mosquitoes	<ul style="list-style-type: none"> ▪ Regularly update and disseminate guidelines/recommendations on emergency <i>Aedes</i> mosquito control and surveillance. ▪ Support insecticide resistance monitoring activities. ▪ Support countries in vector surveillance and control, including provision of equipment, insecticides, personal protection equipment (PPE) and training.
Care for those affected and advice for their caregivers	<ul style="list-style-type: none"> ▪ Assess and support existing capacity and needs for health system strengthening, particularly around antenatal, birth and postnatal care, neurological and mental health services, and contraception and safe abortion. ▪ Map access barriers limiting women’s capacity to protect themselves against unintended pregnancy. ▪ Develop guidance for: families affected by microcephaly, GBS or other neurological conditions; women suspected or confirmed to have Zika virus infection, including women wanting to get pregnant, pregnant women, and women who are breastfeeding; health workers on Zika virus health care, blood transfusion services, tools for triage of suspected Zika virus, chikungunya and dengue cases; and for health services management following a Zika virus outbreak. ▪ Provide technical support to countries on health service delivery refinements and national level planning to support anticipated increases in service needs. ▪ Procure and provide equipment and supplies for prioritized countries and territories to prepare their healthcare facilities in provision of specialized care for complications of Zika virus.

- WHO has developed new advice and information on Zika case definitions; prevention of sexual transmission of Zika virus; blood safety; identification and case management of Guillain-Barré syndrome; breast feeding in the context of Zika; Pregnancy management in the context of Zika virus; psychosocial support for pregnant women and for families with microcephaly and other neurological complications in the context of Zika virus; case definition, and assessment of infants with microcephaly in the context of Zika; and monitoring and managing insecticide resistance in *Aedes* mosquito populations.¹⁶
- These materials are being transformed into many formats to support risk communication, community engagement and for the use of key stakeholders including health workers.
- Two applications for mobile devices were released by WHO this week to help Zika responders and health care providers access key information, guidelines and tools. The multi-lingual versions are under development. This platform will also house future training and briefing videos and other tools.
- A risk communication resource for field level response teams, led by UNICEF and co-branded by WHO, PAHO and IFRC is being finalized.
- Generic WHO Knowledge Attitude and Practices (KAP) surveys are being finalized for use by all partners.
- Agreement with the Communicating with Disaster Affected Communities (CDAC) network to develop a media mapping tools for all affected or at risk countries to better engage local reporters for Zika risk communication

III. RESEARCH

- Public health research is critical for establishing the causal link between Zika virus infection in pregnant women and microcephaly in their babies and for understanding the pathogenesis of Zika virus infection. Technical assistance is being coordinated with various partner agencies globally and in affected countries to identify and answer critical questions (Table 5).
- The first global consultation on Zika virus research – “Towards the development of a research agenda for characterizing the Zika virus outbreak and its public health implications in the America” was convened in Washington, D.C. from 1 to 2 March 2016. High-priority topics for research were identified in three areas: laboratory platforms for supporting surveillance: situation, limitations, and challenges; characterizations of the disease, risk factors, causality studies, and public health and clinical implications; and the dynamics of the arbovirus epidemics in the American region and characterization of the vector/Zika virus relationships.¹⁷
- A global consultation on research related to Zika virus infection was held from 7 to 9 March 2016. International experts agreed on the following as top priorities to advance

¹⁶ See resources listed at Annex 1

¹⁷ An interim report of the meeting is available at:

http://www.paho.org/hq/index.php?option=com_content&view=article&id=11754&Itemid=135&lang=en

research and development for Zika medical products: multiplex tests for ‘flaviviruses’ (viruses related to Zika virus, such as dengue and chikungunya), in addition to more traditional tests; protective vaccines based on killed virus (or other non-live) preparations for women of childbearing age; and innovative vector control tools that reduce the mosquito population.¹⁸

- The Emergency Use Assessment and Listing for Zika diagnostic tests was activated, and a call for submission has been published.¹⁹

Table 5. Strategic Response Framework and Joint Operational Response Plan: research objectives and activities.

Public health research	Investigate reported increase in incidence of microcephaly and neurological syndromes and their possible association with Zika virus infection.	<ul style="list-style-type: none"> ▪ Conduct research studies to assess link between Zika virus and microcephaly. ▪ Conduct research to assess potential sexual transmission and mother-to-child transmission. ▪ Research women’s and health workers’ perceptions of pregnancy risk and consequent decisions on contraceptive use, safe abortion and post abortion care in context of Zika virus.
Research and development	Fast-track research and development of new products including diagnostics, vaccines and therapeutics.	<ul style="list-style-type: none"> ▪ Identify research gaps and prioritize needs for products. ▪ Support the conduct of research related to Zika virus diagnostics, therapeutics, vaccines and novel vector control approaches ▪ Convene research actors and stakeholders. ▪ Coordinate introduction of products after assessment and evaluation. ▪ Coordinate supportive research activities including regulatory support and data sharing mechanisms.

¹⁸ <http://www.who.int/mediacentre/news/notes/2016/research-development-zika/en/>

¹⁹ http://www.who.int/diagnostics_laboratory/eual-zika-virus/160211invitation_to_mx_of_zika_virus_diagnostics_v2.pdf?ua=1

Annex 1: Additional information

Zika Virus

- Zika virus disease is caused by a virus transmitted by *Aedes* mosquitoes. Other transmission modes are still under investigation.
- People with Zika virus disease usually have a mild fever, skin rash (exanthema), and conjunctivitis. These symptoms normally last for 2-7 days.
- At present there is no specific treatment or vaccine currently available. The best form of prevention is protection against mosquito bites.
- Zika virus is known to circulate in Africa, the Americas, Asia, and the Pacific region. Zika virus had only been known to cause sporadic infections in humans until 2007, when an outbreak in Micronesia infected 31 people.

Microcephaly

- Microcephaly is an uncommon condition where a baby's head circumference is less than expected based on the average for their age and sex. The condition is usually a result of the failure of the brain to develop properly, and can be caused by genetic or environmental factors such as exposure to toxicins, radiation, or infection during development in the womb. Microcephaly can be present as an isolated condition or may be associated with other symptoms such as convulsions, developmental delays, or feeding difficulties.

Guillain-Barré syndrome

- Guillain-Barré syndrome in its typical form is an acute illness of the nerves that produces a lower, bilateral, and symmetrical sensorimotor development deficit. In many cases there is a history of infection prior to the development of the Guillain-Barré syndrome. The annual incidence of GBS is estimated to be between 0.4 and 4.0 cases per 100,000 inhabitants per year. In North America and Europe GBS is more common in adults and increases steadily with age. Several studies indicate that men tend to be more affected than women.

Resources from WHO

- Zika virus www.who.int/mediacentre/factsheets/zika
- Microcephaly www.who.int/emergencies/zika-virus/microcephaly/en/
- Guillain-Barré syndrome www.who.int/mediacentre/factsheets/guillain-barre-syndrome/en/
- Infants with microcephaly www.who.int/csr/resources/publications/zika/assessment-infants/en/
- Guillain-Barré syndrome www.who.int/csr/resources/publications/zika/guillain-barre-syndrome/en/
- Breastfeeding www.who.int/csr/resources/publications/zika/breastfeeding/en/
- Sexual transmission <http://www.who.int/csr/resources/publications/zika/sexual-transmission-prevention/en/>
- Psychosocial support for pregnant women and for families with microcephaly and other neurological complications <http://www.who.int/csr/resources/publications/zika/psychosocial-support/en/>
- Vector control <http://www.who.int/emergencies/zika-virus/articles/mosquito-control/en/>
- Monitoring and managing insecticide resistance <http://www.who.int/csr/resources/publications/zika/insecticide-resistance/en/>
- Blood safety <http://www.who.int/csr/resources/publications/zika/safe-blood/en/index.html>
- Risk communication <http://www.who.int/csr/resources/publications/zika/risk-communication/en/>
- Pregnancy management <http://www.who.int/csr/resources/publications/zika/pregnancy-management/en/>
- Dispelling rumours around Zika and microcephaly <http://www.who.int/emergencies/zika-virus/articles/rumours/en/>