Recent Diseases/Virus Outbreaks

Recent Public Health Events

Roberta Andraghetti, WHO/PAHO/CHA/IR

Seventh ICAO Collaborative Arrangement for the Prevention and Management of Public Health Events in Civil Aviation (CAPSCA) Americas Meeting

Mexico City, Mexico, 6-9 September 2016
1. Public Health Events in the context of the IHR
2. Arboviral diseases
   - Dengue
   - Chikungunya
   - Zika
   - Yellow Fever
3. Polio
4. Influenza
5. Cholera
Substantiated Public Health Events of Potential International Concern by Hazard Americas, 1 Jan 2001-27 July 2016 (n=774; 24% substantiated events globally)
IHR operational framework

Detect
Assess
Report
Respond

Accessibility at all times
Primary channel for WHO-NFP event-related communications
Disseminate information within WHO
"Activate" the WHO assessment and response system

Accessibility at all times
Communication with WHO
Dissemination of information nationally
Consolidating input nationally

Determine Public Health Emergency of International Concern (PHEIC)
Make temporary and standing recommendations

Art. 4
Art. 5, 13, 19, 20, Annex 1

Art. 6-12
Annex 2

WHO Director-General

WHO IHR Contact Points
Regions

National IHR Focal Points (NFP)

National surveillance and response systems
Incl. Designated Points of Entry

Ministries and sectors concerned

Other competent organizations (e.g. IAEA, OIE)

Notification
Consultation
Report
Verification

Emergency Committee
Review Committee
Expert Roster
WHO Global Alert and Response System

States Parties

Informal/Unofficial information

Initial screening

Verification

Event's Risk assessment

Formal reports

Disseminate information

Escalate - PHEIC
Temporary recommendations

Assist Respond
Substantiated Public Health Events of Potential International Concern
Secure Event Information Site
15 June 2007-27 July 2016 (n=472; 43% in the Americas)

Event Information Site Globally
135 States Parties with at least one posting, incl. 37 countries and territories in the Americas

Top 5 aetiologies
117 Influenza (zoonotic)
48 Zika Virus related
32 Coronavirus
21 Cholera
18 Ebola Virus Disease
IHR Emergency Committees (EC)
Public Health Emergencies of International Concern (PHEIC)

- 2009 H1N1 pandemic (2009-2010) → PHEIC
- MERS-CoV (2013-?) → no PHEIC to date
- Polio (2014-?) → PHEIC
- Ebola (2014-2016) → PHEIC
- Zika (2016-?) → PHEIC
- Yellow Fever 2016-? → no PHEIC to date

PHEIC = Temporary Recommendations
Americas - Population density of Aedes aegypti and Aedes albopictus distribution
Dynamic of arbovirosis by month
Americas, 2013-2016*

Data as of EW 23, 2016
Source: Surveillance reports to PAHO/WHO from countries/territories in the America
Dynamic of arbovirosis by EW
Colombia, 2009-2016*

* Data as of EW 14, 2016
Source: Data provided by Colombia Ministry of Health to PAHO/WHO
Dengue virus serotype distribution
Americas, 1995-2015

Source: PAHO/WHO Dengue Regional Programme
## Dengue cases, Americas, 2015

<table>
<thead>
<tr>
<th>Region</th>
<th>Dengue</th>
<th>Severe Dengue</th>
<th>Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America</td>
<td>748</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Central America and Mexico</td>
<td>400,974</td>
<td>6,965</td>
<td>80</td>
</tr>
<tr>
<td>Andean Region</td>
<td>194,859</td>
<td>1,626</td>
<td>130</td>
</tr>
<tr>
<td>Southern Cone</td>
<td>1,703,670</td>
<td>1,528</td>
<td>868</td>
</tr>
<tr>
<td>Latin Caribbean</td>
<td>20,378</td>
<td>103</td>
<td>103</td>
</tr>
<tr>
<td>Non Latin Caribbean</td>
<td>6,200</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,326,829</strong></td>
<td><strong>10,276</strong></td>
<td><strong>1,181</strong></td>
</tr>
</tbody>
</table>

Dengue disease burden, Americas, 1991-2016*

* Data as of EW 13, 2016
Source: PAHO/WHO Dengue Regional Programme
Preparedness and Response for Chikungunya Virus
Introduction in the Americas
Spread of Chikungunya virus, 2004-2013

1952-1953: First documented outbreaks; Tanzania; virus isolation
1956: South Africa
1999-2000: Democratic Republic of Congo

Chikungunya: Epidemiology and clinical presentation

- Attack rates: 38%–63%
- Asymptomatic infections: 3%-28%
- Mother-to-child transmission
- Phases: acute, post-acute, chronic
- Typical presentation: fever and artralgia followed, 5 days later, by widespread itchy rash
- Atypical or severe presentation: 0.3%
- Case fatality rate: 0.01%
- At risk groups: newborns, elderly, individuals with chronic diseases
Autochthonous transmission of chikungunya virus disease

- 2013-2014: 1,118,578 cases (incl. 194 deaths)
- 2015: 693,489 cases (incl. 74 deaths)
- 2016: ~215,000 cases (incl. 50 deaths)
Why a Chikungunya virus outbreak of this magnitude in the Americas?

- No immunity among the population late 2013
- Very high indices of *Aedes aegypti* in most of the countries and territories of the region
- Important movements of population within and between sub-regions
- Perfect match between the CHIKV and *Aedes aegypti* strains of the region (Vega-Rua and al., *J Virol.* 2014:88:e00370-14)
Spread of Zika virus

- First isolated from a sentinel rhesus monkey in the Zika forest of Uganda in 1947
- Prior to 2007, only sporadic human disease cases reported from Africa and southeast Asia
- In 2007, first outbreak reported on Yap Island, Federated States of Micronesia
- In 2013–2014, >30,000 suspected cases reported from French Polynesia
- First introduction of ZIKV in the Region of the Americas was identified in Easter Island, Chile in February 2014
- However, molecular analysis suggesting that Zika virus was present in Brazil as early 2013
Globally: 72 countries/territories reported evidence of mosquito-borne Zika virus transmission since 2007, 55 with a first reported outbreak from 2015 onwards.

Quelle: NZZ, PAHO, LANCASTER UNIVERSITY, WHO Grafik: Ringier Infographics
Zika virus disease in the Americas

- As of 23 August 2016: 45 countries/territory reporting locally acquired cases
- Between October to December 2015: 10 new countries/territories reported autochthonous cases
- Between January to August 2016: 35 new countries/territories reported autochthonous cases
- 5 Countries in the Americas reported cases of sexually transmitted Zika virus infection: Argentina, Chile, Canada, Peru and the US
Zika virus disease: Case definition

Suspected case of Zika virus disease

Patient with rash* with **at least two or more** of the following signs or symptoms:

- fever, usually <38.5 C
- conjunctivitis (non-purulent/hyperemic)
- arthralgia
- myalgia
- peri-articular edema

* usually maculopapular and pruritic
Zika virus disease trends: South America

Suspected cases of Zika virus disease. Brazil and Colombia; EW 32, 2015-EW 19, 2016
Zika virus disease trends: Central America

Suspected cases of Zika virus disease. El Salvador and Honduras; EW 41, 2015-EW 26, 2016

El Salvador

Honduras
Zika virus disease trends: Caribbean

Suspected cases of Zika virus disease. Dominican Republic and Jamaica. EW 34, 2015-EW 27, 2016
Zika virus disease trends: Incidence and attack rate

- Infection rate: 73% (95%CI 68-77) \(^1\)
- Symptomatic: 18% (95%CI 10-27) \(^1\)
- Estimated attack rate: 66% (sero survey) \(^2\)
- Cases observed in all age groups

Zika virus diseases: Guillain-Barré syndrome (GBS) and other neurological complications

- Neurological manifestations can occur during the acute or convalescent phase of Zika virus infection
- To date, GBS has been described as the most frequent neurological complication (typical, clinical form or in one of its variants Miller Fisher syndrome)

<table>
<thead>
<tr>
<th>Increase in GBS with Zika virus lab confirmation in at least one case of GBS</th>
<th>Zika virus laboratory confirmation in at least one case of GBS</th>
<th>Increase in GBS with no Zika virus lab confirmation in any of the cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>Costa Rica</td>
<td>Paraguay</td>
</tr>
<tr>
<td>Colombia</td>
<td>Grenada</td>
<td>Saint Vincent and the Grenadines</td>
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<tr>
<td>Dominican Republic</td>
<td>Guatemala</td>
<td></td>
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<tr>
<td>El Salvador</td>
<td>Guadalupe</td>
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<tr>
<td>French Guiana</td>
<td>Haiti</td>
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<tr>
<td>Honduras</td>
<td>Panama</td>
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<td>Jamaica</td>
<td>Puerto Rico</td>
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<td>Martinique</td>
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<tr>
<td>Suriname</td>
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<tr>
<td>Venezuela</td>
<td></td>
<td>Americas, as of 25 August 2016</td>
</tr>
</tbody>
</table>

Globally: 18 countries/territories reported an increased incidence of GBS and/or laboratory confirmation of a Zika virus infection
Cases of Zika virus disease and Zika-virus-associated GBS by EW Colombia, Dominican Republic, El Salvador, Honduras and Suriname
EW 32, 2015-EW 31, 2016

![Graph showing cases of Zika virus disease and Zika-virus-associated GBS by EW Colombia, Dominican Republic, El Salvador, Honduras and Suriname.](graph.png)
Microorganisms associated with congenital infections

**Virus**
- Rubella
- CMV
- Herpes Simplex
- VZV
- HIV
- Parvovirus
- Hepatitis B
- Zika virus

**Bacteria**
- Treponema pallidum
- Mycobacterium tuberculosis

**Protozoa**
- Toxoplasma gondii
- Plasmodium
First reports in Brazil in 2015:
Unusual increase of newborns with microcephaly

Photo credit: Image provided by mother of newborn (Rio de Janeiro, Brazil), with authorization for dissemination exclusively among public health workers.
Reported cases of arboviruses and microcephaly by EW Pernambuco State, Brazil, EW-1, 2015-EW-21, 2016

Diagram showing the number of cases of Zika virus, Chikungunya (CHIKV), Dengue (DEN), Microcephaly (notified), and Microcephaly (confirmed) over epidemiological weeks from 2015 to 2016.
Geographical distribution of reported and confirmed microcephaly cases
Brazil, 2015-2016 (as of EW 22)
Countries and territories in the Americas reporting congenital syndrome associated with Zika virus infection

Globally: 20 countries/territories reported microcephaly and other CNS malformations potentially associated with Zika virus infection

<table>
<thead>
<tr>
<th>Countries/territories reporting ZCS</th>
<th>Number of confirmed cases (As of 25 August 2016)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>1,845</td>
</tr>
<tr>
<td>Canada</td>
<td>1</td>
</tr>
<tr>
<td>Colombia</td>
<td>29</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>1</td>
</tr>
<tr>
<td>Dominican Republic</td>
<td>3</td>
</tr>
<tr>
<td>El Salvador</td>
<td>4</td>
</tr>
<tr>
<td>French Guiana</td>
<td>3</td>
</tr>
<tr>
<td>Haiti</td>
<td>1</td>
</tr>
<tr>
<td>Honduras</td>
<td>1</td>
</tr>
<tr>
<td>Martinique</td>
<td>10</td>
</tr>
<tr>
<td>Panama</td>
<td>5</td>
</tr>
<tr>
<td>Paraguay</td>
<td>2</td>
</tr>
<tr>
<td>Puerto Rico</td>
<td>1</td>
</tr>
<tr>
<td>Suriname</td>
<td>1</td>
</tr>
<tr>
<td>United States</td>
<td>21</td>
</tr>
</tbody>
</table>
Zika virus disease monitoring in pregnant women

Americas

<table>
<thead>
<tr>
<th>Countries and territories</th>
<th>Monitoring Zika virus disease in pregnant women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barbados</td>
<td>Dominican Republic</td>
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<tr>
<td></td>
<td>Honduras</td>
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<td></td>
<td>Puerto Rico</td>
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<tr>
<td>Brazil</td>
<td>Ecuador</td>
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<tr>
<td></td>
<td>Martinique</td>
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<td></td>
<td>Saint Martin</td>
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<tr>
<td>Bolivia</td>
<td>El Salvador</td>
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<td></td>
<td>Mexico</td>
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<td></td>
<td>Venezuela</td>
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<tr>
<td>Colombia</td>
<td>French Guiana</td>
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<td>Nicaragua</td>
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<td>Costa Rica</td>
<td>Guadeloupe</td>
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<td>Panama</td>
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<td>Dominica</td>
<td>Guatemala</td>
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<td></td>
<td>Paraguay</td>
</tr>
</tbody>
</table>
PAHO/WHO Strategy to respond to Zika virus

DETECT
Early detection of the virus, its sequelae and monitoring the evolution of the epidemic

PREVENT
Risk reduction by reducing vector density and opportunities for transmission

RESPOND
Response management, including preparation of health facilities, recommendations for clinical management, risk communication, resource mobilization and logistics

Promote research and generation of evidence
PAHO has carried out activities in 27 Countries in LAC

PAHO has mobilized 95 Experts
Working in 17 Technical areas
IHR Emergency Committee on Zika virus and observed increase in neurological disorders and neonatal malformations

1 February 2016
• There should be no restrictions on travel or trade with countries, areas and/or territories with Zika virus transmission
• Travellers to areas with Zika virus transmission should be provided with up to date advice...
• Standard WHO recommendations regarding disinsection of aircraft and airports should be implemented

8 March 2016
• There should be no general restrictions on travel or trade with countries, areas and/or territories with Zika virus transmission
• Pregnant women should be advised not travel to areas of ongoing Zika virus outbreaks; pregnant women whose sexual partners live in or travel to areas with Zika virus outbreaks should ensure safe sexual practices or abstain from sex for the duration of their pregnancy
• Travellers to areas with Zika virus outbreaks should be provided with up to date advice...
• WHO should regularly update its guidance on travel with evolving information on the nature and duration of risks associated with Zika virus infection
• Standard WHO recommendations regarding vector control at airports should be implemented in keeping with the IHR (2005). Countries should consider the disinsection of aircraft
As a precautionary measure, standard WHO recommendations regarding **disinsection of aircraft and airports** can be implemented in order to attempt to control the vector (Aedes spp. mosquito) that spreads the Zika virus.

It should be noted that **the decision to implement WHO disinsection recommendations is dependent on individual country risk assessment for vector control**. Specifications for aircraft disinsection products have been established by the WHO Pesticide Evaluation Scheme (WHOPES), including: d-Phenothrin technical grade; 1R-trans-phenothrin technical grade; Permethrin technical grade.
Recommendations for Member States

Undertake a risk assessment relating to the probability of the importation of mosquito vectors, the presence of mosquito vectors and the probability of infected persons entering the country and use this to inform their disinsection policies

Ensure that airports (and other points of entry) are free of sources of infection, including mosquito vectors and reservoirs. This may require a perimeter exceeding 400 metres (IHR Art. 22b, Annex 5.4)

Member States/airlines/airports professionals should improve consistency of disinsection practices

Take measures to strengthen awareness of the importance of vector control measures and instructions and training by national/ aviation/ competent authorities/ airlines/ airport authorities for crews/ airport professionals/other contractors to assure correct procedures

Ensure dissemination of accurate information on the WHO recommended products (and relevant national regulations); and the safety of disinsection methods and products

Facilitate and reduce barriers to the process of regulatory approval of novel methods and products which can be used for disinsection, making use of WHO recommendations when possible
Recommendations for WHO Secretariat

Consider including pre-embarkation disinsection as an additional WHO recommended method.

Provide guidelines for the risk assessment of pathogen importation by Member States and make a global map available classifying areas on the basis of presence of mosquito vector species and pathogens.

Develop a framework for assessment and recommendation of new vector-control approaches, applicable to both chemical and non-chemical methods.

Publish its recommendations on disinsection practices in a clear format similar to those in Australia/New Zealand.

Recommendations for future research

Assess the mechanisms and impact of mosquito vector resistance to pyrethroids.

Clarify/establish the pathways by which the international spread of mosquito vector-borne pathogens is occurring and the extent to which air travel contributes to the international spread.

Clarify/establish the pathways by which the international spread of mosquito vectors is occurring and the extent to which air travel contributes to the international spread.

Explore the use of risk-modelling approaches to map mosquito vector presence and inform mosquito vector control programmes.

Explore new chemical and non-chemical methods for disinsection, such as air blowers and net curtains, including also strategies combining multiple approaches.
Vector control register on the ICAO public website (http://www.icao.int/crr/Pages/Airport-Vector-Control-Register.aspx)

EVD NOTAMs

Subject: State support for the Collaborative Arrangement for the Prevention and Management of Public Health Events as Civil Aviation (CAPSCA) programme

Action Required: a) nomination by States and international organizations of medical focal point for CAPSCA; and b) completion of CAPSCA survey

Sir/Madam,

1. The Second High-level Safety Conference 2015 (HILSC 2015) was held at ICAO Headquarters from 2 to 5 February 2015. During the conference, matters related to public health were addressed as an emerging safety issue. The conference approved fifty-seven recommendations to be acted upon by all members which can be found in the Material Declaration on Planning for Aviation Safety Improvement published in the Second High-level Safety Conference 2015 Report (Doc 10046).

2. The recommendations adopted by the HILSC 2015 related to public health were: a) ICAO should sustain the CAPSCA programme to assist States to prepare for and respond rapidly to any new public health event; b) States should engage in supporting the CAPSCA programme and contribute to it financially and/or in kind; and c) States should, where feasible, utilize expertise in the medical department of their regulatory authority, in addition to other public health experts, to improve public health event management and response in the aviation sector.

3. ICAO was directed to report on progress related to these issues to the 39th Session of the Assembly. ICAO addressed sustaining the CAPSCA programme by fostering a closer working relationship with the World Health Organization (WHO), and establishing a CAPSCA training group with the objectives of building capacity and sharing resources. Another new initiative that was introduced by ICAO to assist States with responding to the recent Zika virus outbreak was the implementation of a vector control register on the ICAO public website (http://www.icao.int/crr/Pages/Airport-Vector-Control-Register.aspx).

Subject: NOTAMs related to Ebola Virus Disease (EVD)

Action Required: Review updated outbreak information and modify NOTAMs accordingly

Sir/Madam,

1. I wish to refer to the ninth meeting of the World Health Organization (WHO) Emergency Committee that was convened by the WHO Director General on 29 March 2016. On recommendations of this meeting, the Public Health Emergency of International Concern (PHEIC) related to Ebola in West Africa was lifted on the same date.

2. Due to the potential risk of Ebola transmission during the active period of the Ebola virus disease (EVD) outbreak in West Africa, several States have issued NOTAMs restricting operations to and from Ebola-affected countries.

3. On 1 June 2016, WHO declared an end to Ebola virus transmission in Guinea and on 9 June 2016, WHO reported the end of the most recent Ebola virus disease outbreak in Liberia.

4. The number of NOTAMs with restrictions related to flights and passengers arriving from Ebola-affected territories has decreased from twenty-six in November 2014 to seven remaining on 19 June 2016. However, some of these NOTAMs currently have restrictions in place that are not in accordance with the most recent outbreak information provided by the WHO.

5. According to the risk assessment information published in the most recent WHO Situation Report dated 10 June 2016 (http://www.who.int/ebola/situation-reports), only three countries in West Africa (Guinea, Liberia and Sierra Leone) still require sustained mitigation.
- 6 host cities with total population of 35 million
- 350,000 to 500,000 foreign tourists expected
- 11,000 thousand athletes from 206 countries
- In 2015, international air travellers to/from Brazil = 1.5% of total international air traffic; all countries/territories currently experiencing Zika virus transmission, including Brazil, = 27% of total international air traffic
- WHO published Health Advice for Travelers to the 2016 Summer Olympic and Paralympic Games
Third meeting of IHR Emergency Committee on Zika virus and observed increase in neurological disorders and neonatal malformations, 14 June 2016

...very low risk of further international spread of Zika virus as a result of the Olympic and Paralympic Games...

...Brazil should continue its work to intensify vector control measures in and around the cities and venues hosting Olympic and Paralympic Games events...ensure the availability of sufficient insect repellent and condoms for athletes and visitors

Countries with travellers to and from the Olympic and Paralympic Games should ensure that those travellers are fully informed...

**CDC identified**...that Chad, Djibouti, Eritrea, and Yemen have risk uniquely attributable to their travel related to the 2016 Olympic and Paralympic Games (Games), because these four countries do not have substantial non-Games travel to any countries with local Zika virus transmission *(MMWR / July 22, 2016 / Vol. 65 / No. 28)*

**Ministry of Health of Brazil, post Olympic Games**
- 99% decreased of Zika virus cases in Rio de Janeiro Municipality in 2016
- Peak in February 2016 with ~2,000 cases notified
- 14 cases notified during thierd week of July 2016
Ministry of Health of Brazil, post Olympic Games

- 99% decreased of Zika virus cases in Rio de Janeiro Municipality in 2016
- Peak in February 2016 with ~2,000 cases notified
- 14 cases notified during third week of July 2016

Fourth meeting of IHR Emergency Committee on Zika virus and observed increase in neurological disorders and neonatal malformations, 1 September 2016

The Committee also reaffirmed its previous advice that there should be no general restrictions on travel and trade with countries, areas and/or territories with Zika virus transmission, including the cities in Brazil that will be hosting the Paralympic Games.
Zika virus disease: knowledge Gaps to be addressed

Regional research agenda was developed by PAHO in March 2016:

• Define absolute risk of neurological malformation in fetus by gestational age
• Describe the clinical spectrum of the Zika congenital syndrome
• Understand the role of the different modes of transmission: sexual, vector
• Characterize the dynamics of arboviruses co-circulating in same sub-regions: DENV, CHIKV, ZIKV, YFV, others…and study the vector competency
• New serological tests to improve detection in context of high circulation of other flaviviruses
Some considerations regarding the regional context…

- Current incidence is difficult to gauge:
  - ZIKV infections are non specific and mild
  - Laboratory constraints including cross reactivity issues

- Critical epidemiological time for the Region: from 15 years of exclusive DENV surveillance to surveillance of multiple arboviruses (DENV + CHIKV + ZIKV + YFV + MAYV + OROV + SLV…. ) – Laboratory becomes critical

- Health services to be prepared for detection, differential diagnosis, clinical care, including of severe and complicated cases

- Change of paradigm in vector control approach: from door to door to protection of pregnant women and evaluation of new technologies (GMM, Wolbachia)
Integrated Vector Management

Key Elements

• Chemical and non-chemical tools
• Health promotion, social mobilization, legislation
• Intersectoral collaboration
• Evidence-based decision making
• Capacity building

First PHE-TAG meeting: Washington DC, US, 8-10 March 2016
Future of Zika virus in the Americas

- Population in the Americas living in areas < 2000 m above sea level and within the 10° Celsius isotherms (North & South) delimiting survival of Aedes aegypti during winter in Tropical/Temperate climates (work in progress)

- ...millions of Zika virus infections expected in the short and medium terms (DENV & CHIKV incidence as a proxy, speed of CHIKV spread also a proxy)

- Long term spread and consequences of Zika virus spread in LAC is uncertain (despite expected herd immunity...)
Suspected and confirmed yellow fever cases
Angola, 5 December 2015-11 August 2016

As of 30 Aug 2016, imported from Angola in:
- Kenya: 2 laboratory confirmed cases
- China: 11 laboratory confirmed cases
- Brazil: 1 laboratory confirmed
- DRC: 57 laboratory confirmed cases (15 additional importation since May 17)

3,984 suspected and confirmed cases, including 488 deaths (CFR 12%)
As of 18 Aug 2016, 2,357 suspected cases reported, including 16 deaths among laboratory confirmed cases.
YF historical review 1940’ to date

1942: Urban YF outbreak in western Brazil (Acre)
1948-54: Jungle YF epizootics / outbreak in Central America
1949: *Aedes aegypti* eradication campaign starts....
1950: Registration of YF cases begins (PASB)
1954: “Last” urban YF case in Trinidad
1960: PAHO official registration of YF confirmed cases
1970: *Aedes aegypti* eradication campaign has failed.....
1985: YF serological testing becomes widely available
1995: Jungle YF outbreak in Peru
2000 to date: individual data of each YF confirmed case available at municipal level
2008: Urban YF outbreak in Asuncion, Paraguay
YF Human cases 2015 & YF Epizootics 2015
YF Cases 2000-2015
Laboratory confirmed > 1,100

Peru 2016
As of 16 July 2016, 126 suspected cases notified
- 50 lab confirmed
- 28 classified as probable
- 17 deaths

8 Departments affected, most cases being in Junin Department
19 May 2016

…the current yellow fever situation is serious and of great concern and requires intensified control measures, but does not constitute a PHEIC at this time.

The Committee also emphasized the need to manage rapidly any new yellow fever importations, thoroughly evaluate ongoing response activities, and quickly expand yellow fever diagnostic and confirmatory capacity.

The Director-General urges Member States to enforce the yellow fever vaccination requirement for travellers to and from Angola and the Democratic Republic of the Congo in accordance with the IHR (2005)\(^3\)

31 August 2016

The Committee also emphasized the need to rapidly manage any new yellow fever cases, imported or locally acquired
International Certificate of Vaccination or Prophylaxis

- States Parties introducing requirements in a non evidence based manner (Art.43)
- Airlines applying requirements in a non informed manner
Yellow Fever, old and still active challenge!

- We know about human laboratory confirmed YF severe cases only.
- In endemic countries most of YF epizootics are not studied or detected.
- YF vaccine is available, however immunization coverage can be sub-optimal in some areas.
- The risk of urbanization is still present as *Aedes aegypti* is everywhere

Strengthening health security by implementing the Regulations (2005)

IHR Emergency Committee concerning ongoing events and context involving transmission and international spread of poliovirus

Emergency committee members and advisers

See the full list of Members of, and Advisers to, the International Health Regulations (2005) Emergency Committee concerning ongoing events and context involving transmission and international spread of poliovirus

Biographies of the members of, and advisers to, the IHR Emergency Committee concerning ongoing events and context involving transmission and international spread of poliovirus

WHO statements on Poliovirus

Statement on the 10th IHR Emergency Committee regarding the international spread of poliovirus
22 August 2016

Statement on the 9th IHR Emergency Committee meeting regarding the international spread of poliovirus
20 May 2016

Statement on the 8th IHR Emergency Committee meeting regarding the international spread of poliovirus
4 March 2016

http://www.who.int/ihr/ihr_ec_2014/en/

Burundi | Cholera

2016-09-06 | Event update 2016-09-02
An alert of a suspected outbreak of cholera in Kabezi health district, Bujumbura rural province, was notified to the World Health Organisation country office on 28 July 2016 by the Burundian Ministry of Health. An outbreak was declared by the Minister of Health on 03 August 2016.

As of 02 September 2016, a total of 206 cholera cases including one death (CFR: 0.5%) have been notified from four health districts...
Thank you