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TODOS DIFERENTES, TODOS IGUAIS VACINAÇÃO NUM MUNDO GLOBAL

Luís Varandas

Hospital Dona Estefânia

Nova Medical School | Faculdade de Ciências Médicas

Instituto de Higiene e Medicina Tropical

Conflito de interesses

- Honorários como consultor e participação em simpósios patrocinados pela indústria farmacêutica
- Apoios para participação em reuniões científicas
- As afirmações expressas pelo Palestrante no âmbito da sua participação no Congresso Nacional de Pediatria ou de qualquer eventual sinopse do mesmo, são da sua inteira responsabilidade.

17º CONGRESSO
NACIONAL DE
PEDIATRIA
2-4 NOVEMBRO 2016
CENTRO DE CONGRESSOS
ALFÂNDEGA DO PORTO



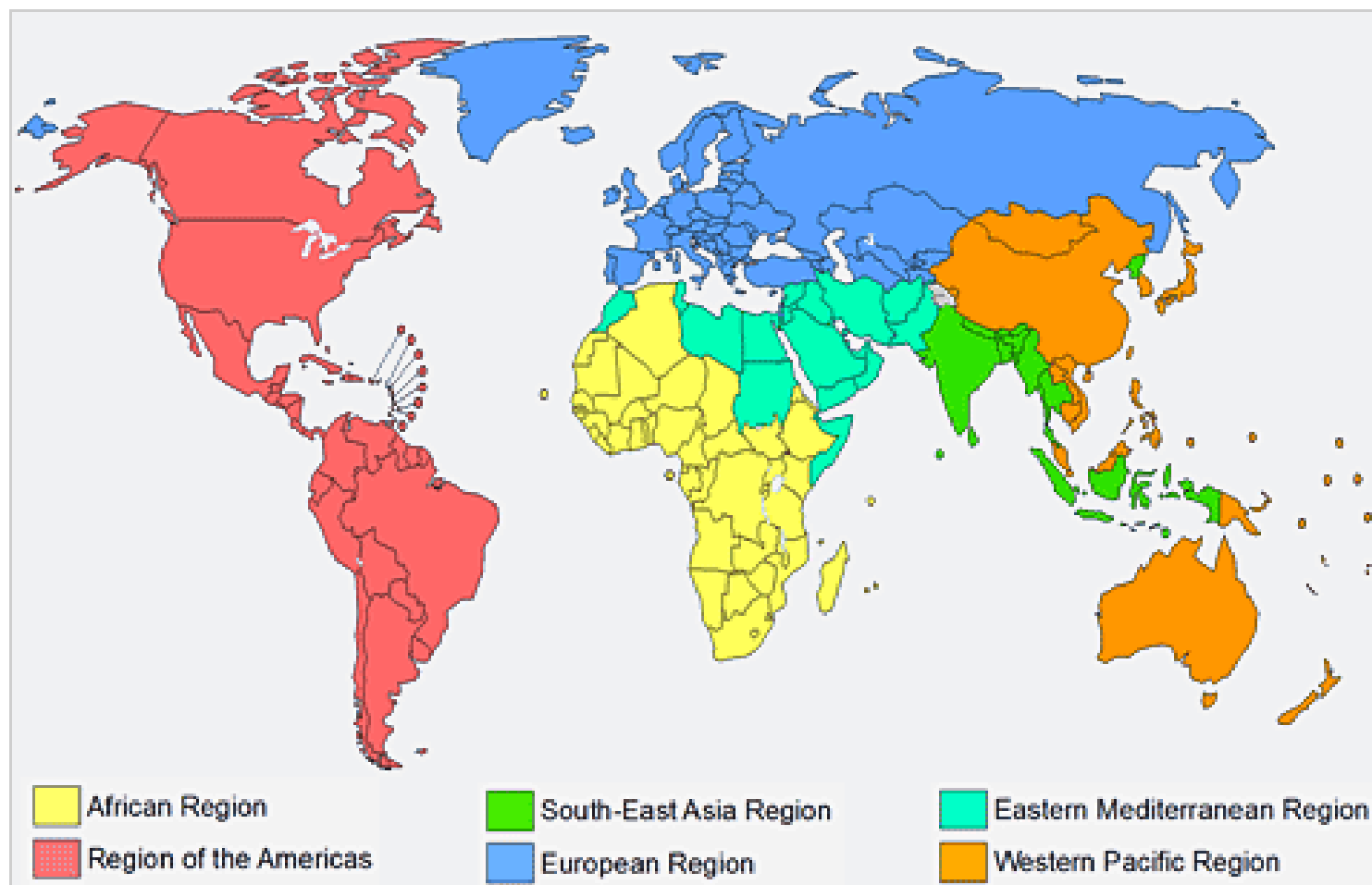
HOME CONGRESSO - PROGRAMA - INSCRIÇÕES - RESUMOS - PRÉMIOS - EXPOSIÇÃO TÉCNICA - ALOJAMENTO -

PEDIATRIA
2000-2030
DOS DESAFIOS DO MILÉNIO
À SUSTENTABILIDADE



Formação com patrocínio científico
da Ordem dos Médicos

Regiões da Organização Mundial da Saúde



- Europa – 53 países
- América – 35 países
- Mediterrâneo – 21 países
- África – 47 países
- Sudeste Asiático – 11 países
- Pacífico Ocidental – 27 países



PNV 2017 – ESQUEMA RECOMENDADO

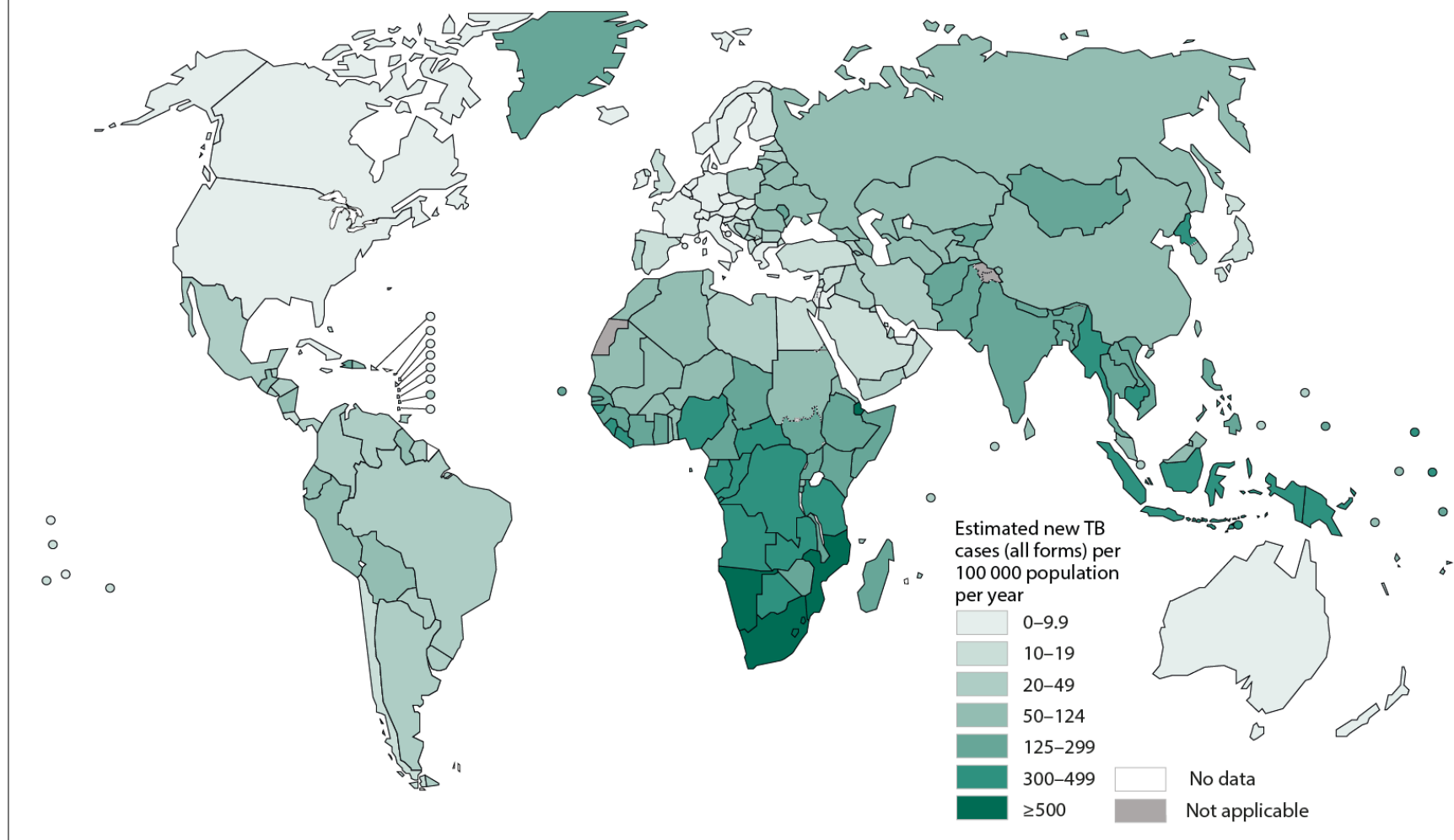
	Nasc	2 meses	4 meses	6 meses	12 meses	18 meses	5 anos	10 anos	25 anos	45 anos	65 anos	10/10 anos
Hebatite B	VHB 1	VHB 2		VHB 3								
Infeções por Haemophilus influenzae b		Hib 1	Hib 2	Hib 3		Hib 4						
Difteria, tétano, tosse convulsa*		DTPa 1	DTPa 2	DTPa 3		DTPa 4	DTPa 5	Td 1	Td 2	Td 3	Td 4	Td 5 ...
Poliomielite		VIP 1	VIP 2	VIP 3		VIP 4	VIP 5					
Infeções por Streptococcus pneumoniae		Pn13 1	Pn13 2		Pn13 3							
Infeções por Neisseria meningitidis C					MenC 1							
Sarampo, Parotidite epidémica, Rubéola					VASPR 1		VASPR 2					
Infeções por vírus do Papiloma humano **								HPV 1,2				

* As grávidas serão vacinadas contra a tosse convulsa, o tétano e a difteria (Tdpa) em cada gravidez

** Aplicável apenas a raparigas, com o esquema 0, 6 meses

BCG

Estimated TB incidence rates, 2014



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Data Source: *Global Tuberculosis Report 2015*. WHO, 2015.

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Quadro I - Crianças de idade inferior a 6 anos, elegíveis para vacinação com BCG – Grupos de risco^(a)

Crianças sem registo de BCG/ sem cicatriz vacinal e:	Situações abrangidas:
Provenientes de países com elevada incidência de tuberculose	- Ver anexo I - Estadia de, pelo menos, 3 meses
Que terminaram o processo de rastreio de contactos e/ou esquema de profilaxia	- A avaliar pelas Unidades de Saúde Pública em articulação com os Coordenadores Regionais do Programa Nacional para a Tuberculose (PNT) e Centros de Diagnóstico Pneumológico (CDP)
Cujos pais, outros coabitantes ou conviventes apresentem	- Infecção VIH/SIDA, após exclusão de infecção VIH na criança, se mãe VIH+ - Dependência de álcool ou de drogas - Naturalidade de país com elevada incidência de TB (ver anexo II)^(b) - Antecedentes de tuberculose
Pertencentes a comunidades com risco elevado de tuberculose	- A avaliar pelas Unidades de Saúde Pública em articulação com os Coordenadores Regionais do Programa Nacional para a Tuberculose e CDP
Viajantes para países com elevada incidência de tuberculose ^(b)	- Ver anexo I - Estadia de, pelo menos, 3 meses - Pode ser ponderada a vacinação para estadias mais curtas, se for considerado um elevado risco de infeção

(a) A partir dos 12 meses de idade há indicação para realização de prova tuberculínica ou de IGRA antes da vacinação com BCG.

Se houver antecedentes de contacto com caso de tuberculose ativa (possível ou confirmada), ou outras circunstâncias que levem a suspeitar que a criança teve ou tem uma probabilidade elevada de ter contraído infeção, deve ser submetida a rastreio em articulação com o PNT. Após teste tuberculínico/IGRA negativo a BCG pode ser administrada nos 3 meses seguintes.

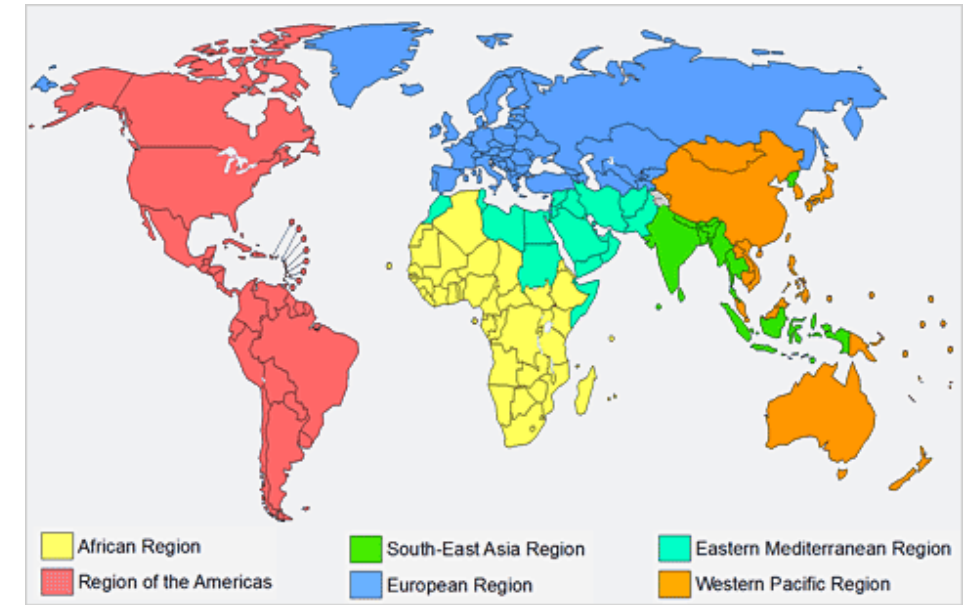
(b) Dependendo de uma avaliação do risco, caso a caso.

- **Esquema**

- Viva atenuada
- Dose única ao nascer

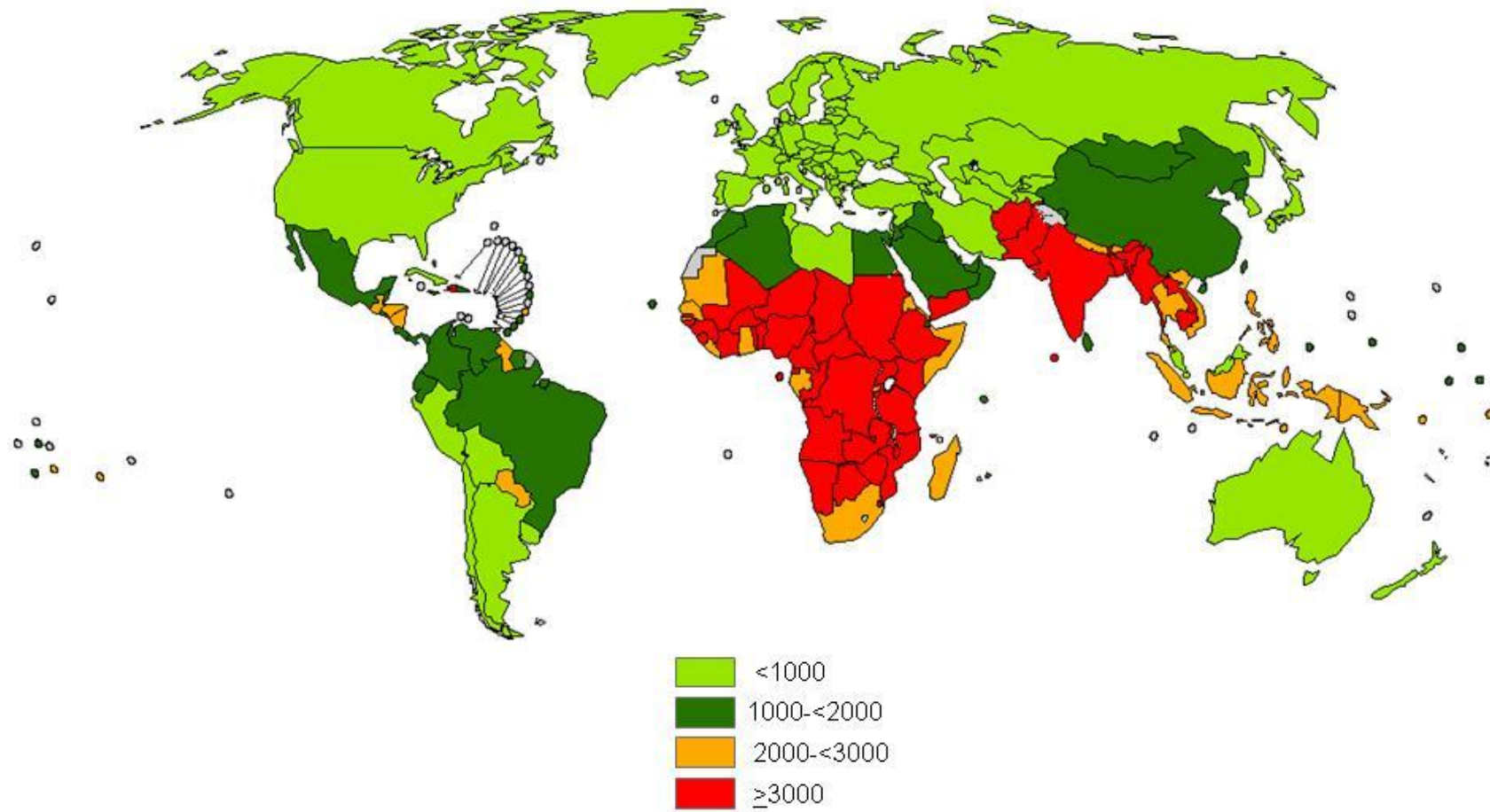
BCG

- 28 países na Europa + 14 países com vacinação grupos de risco
- 19 países da Mediterrâneo + 1 grupos de risco
- 47 países de África
- 28 países das Américas + 1 grupos de risco
- 11 países do Sudeste-Asiático
- 24 países do Pacífico-Occidental + 1 grupos de risco

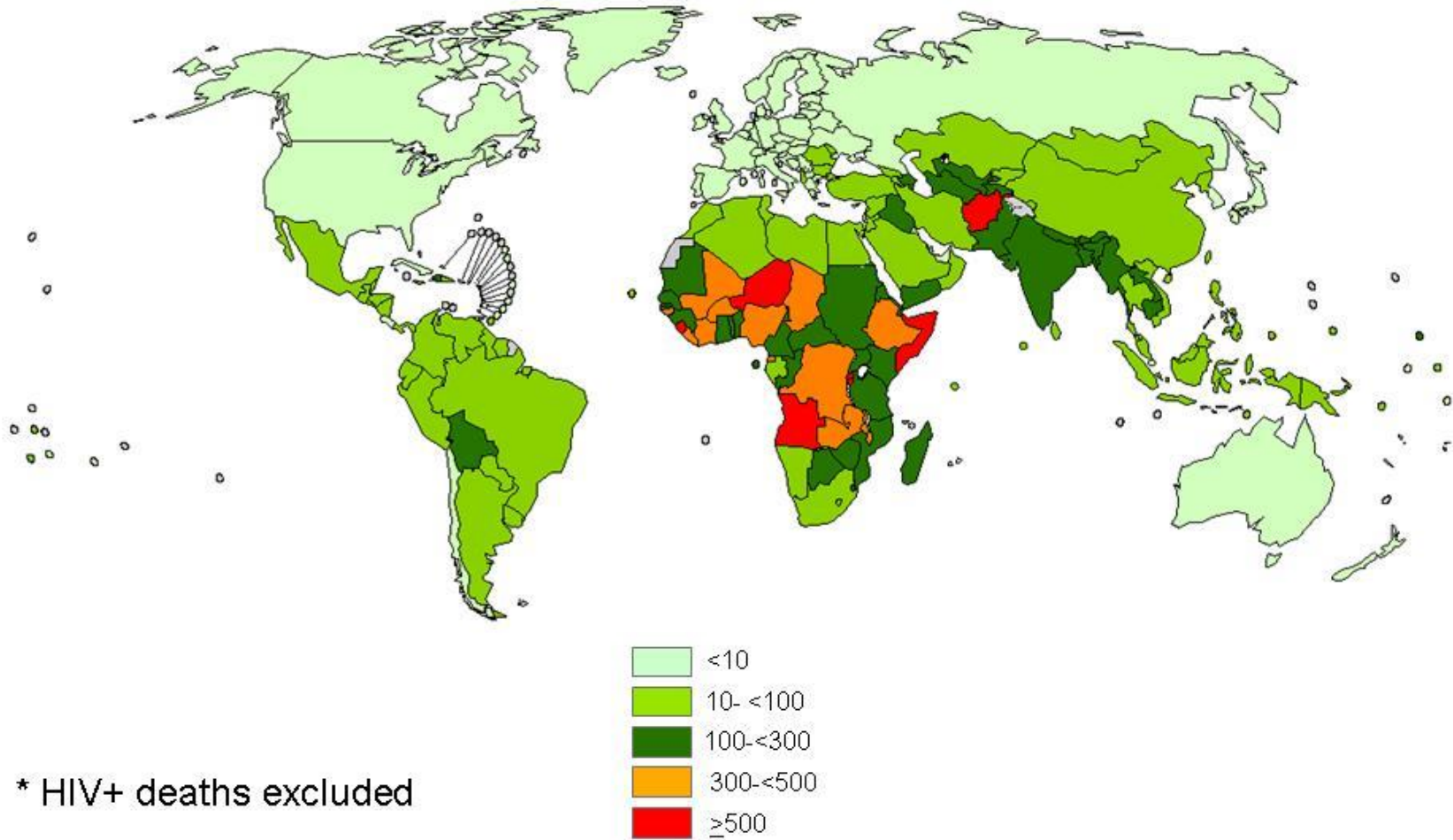


VACINA CONTRA PNEUMOCOCO

SP incidence rate (per 100000 children under age 5)



SP death* rate
(per 100000 children under age 5)



* HIV+ deaths excluded

Região OMS	Mortes por DIP
AFR	247.000
AMR	13.000
EMR	68.000
EUR	7.000
SEAR	107.000
WPR	33.000
TOTAL	476.000

http://www.who.int/immunization/monitoring_surveillance/burden/estimates/en/; 29.10.2016

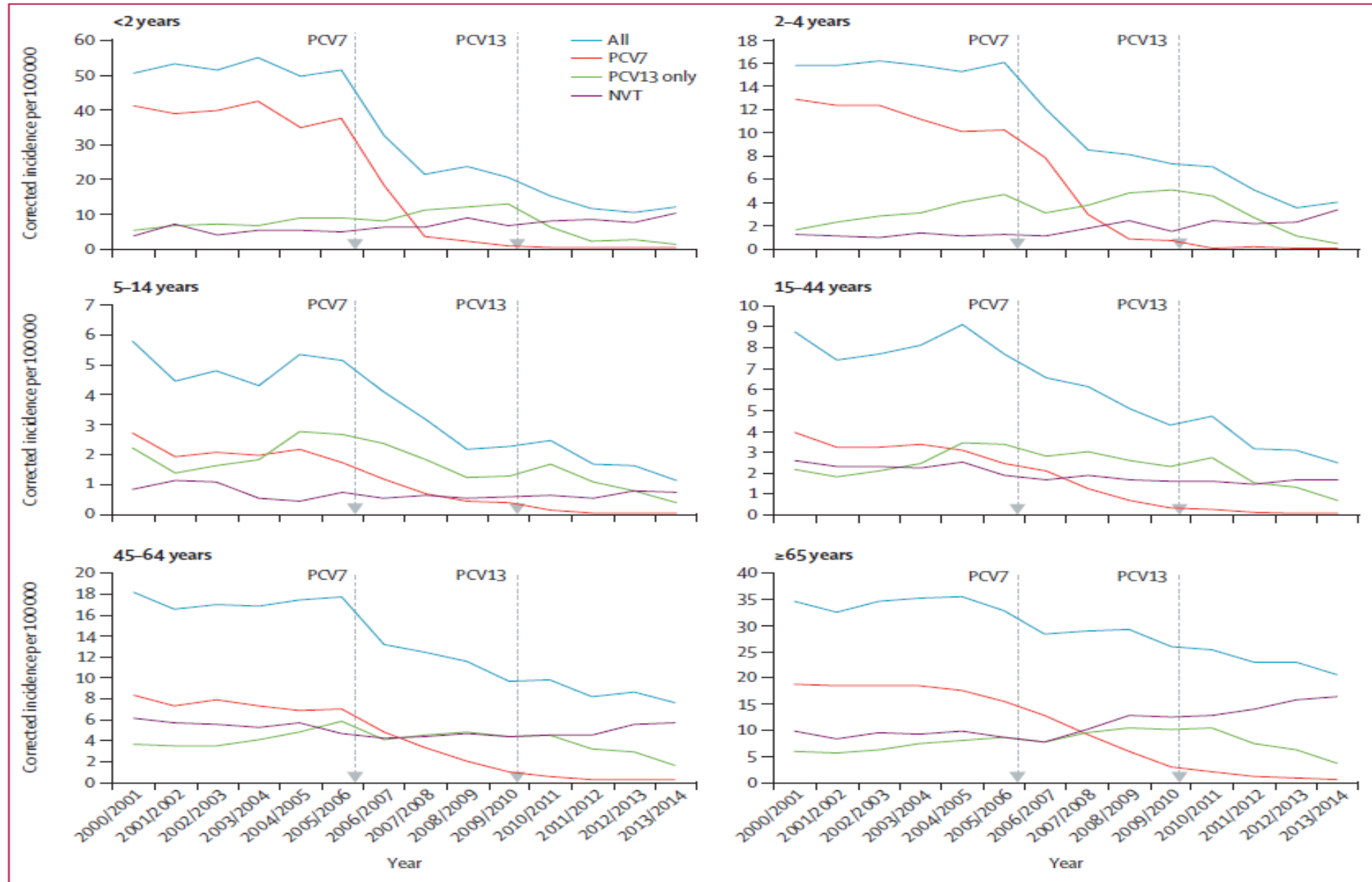
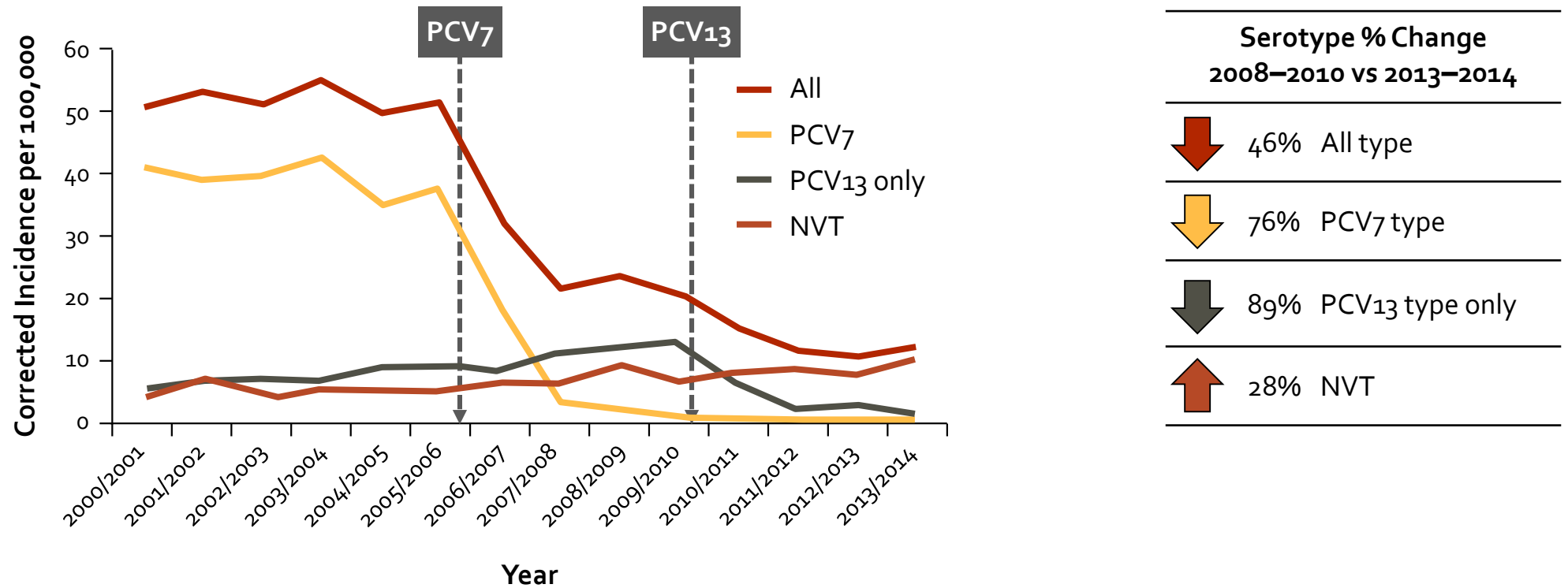


Figure 1: Corrected* invasive pneumococcal disease incidence from epidemiological year 2000/01 to 2013/14, by serotype grouping and age
 PCV7=seven-valent pneumococcal conjugate vaccine. PCV13=13-valent pneumococcal conjugate vaccine. NVT=non-vaccine type. *Corrected for proportion of samples serotyped, missing age, and for the trend in total invasive pneumococcal disease up to 2009/10 (after which no trend correction was applied).

United Kingdom: Incidence of IPD in Children <2 Years

IPD incidence* in children <2 years of age,
from epidemiological year 2000–2001 to 2013–2014, United Kingdom



*Corrected for proportion of samples serotyped, missing age, denominator compared with 2009–2010, and trend in total IPD up to 2009–2010 (after which no trend correction was applied). NVT=nonvaccine serotypes; PCV13 only=serotypes in the PCV13 vaccine but not in the PCV7 vaccine.
Waight PA, et al. *Lancet Infect Dis.* 2015;15(5):535–543.

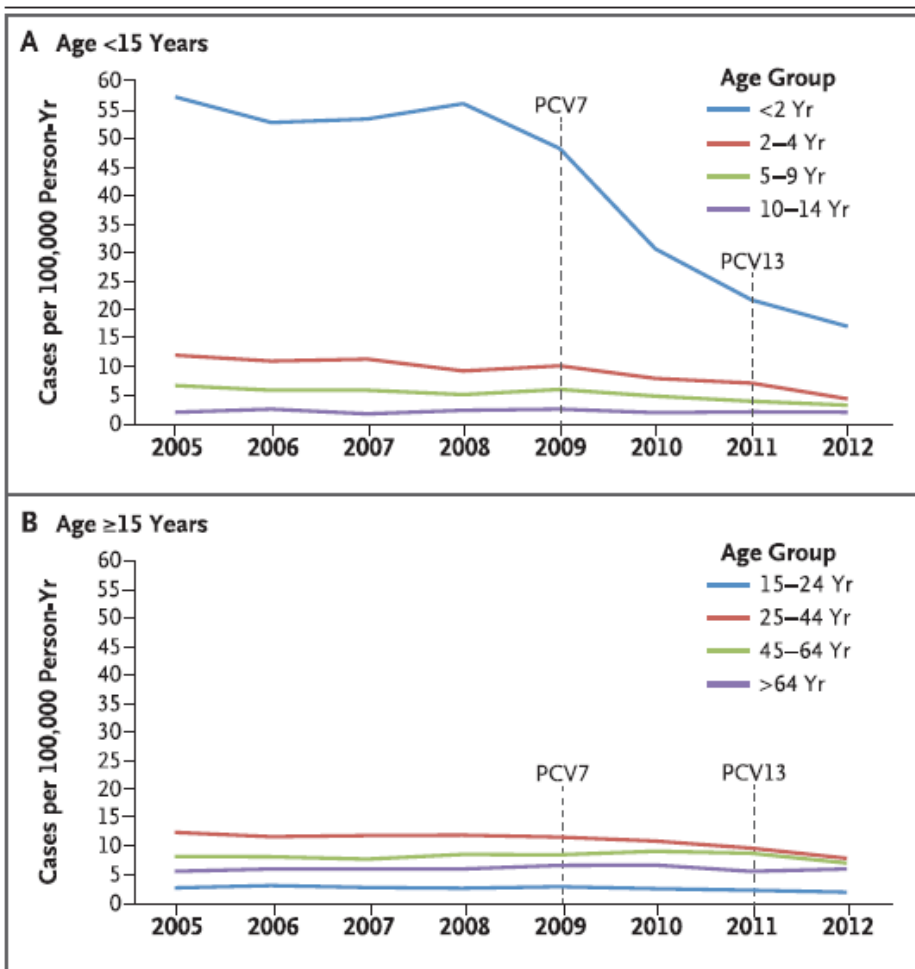


Figure 1. Incidence of Invasive Pneumococcal Disease in South Africa from 2005 through 2012, According to Age Group.

The period from 2005 through 2008 constitutes the pre-PCV period. The 7-valent pneumococcal conjugate vaccine (PCV7) was introduced in 2009, and the 13-valent pneumococcal conjugate vaccine (PCV13) in 2011. Of 35,192 cases of invasive pneumococcal disease, 1648 (5%) were excluded because the age was not known.

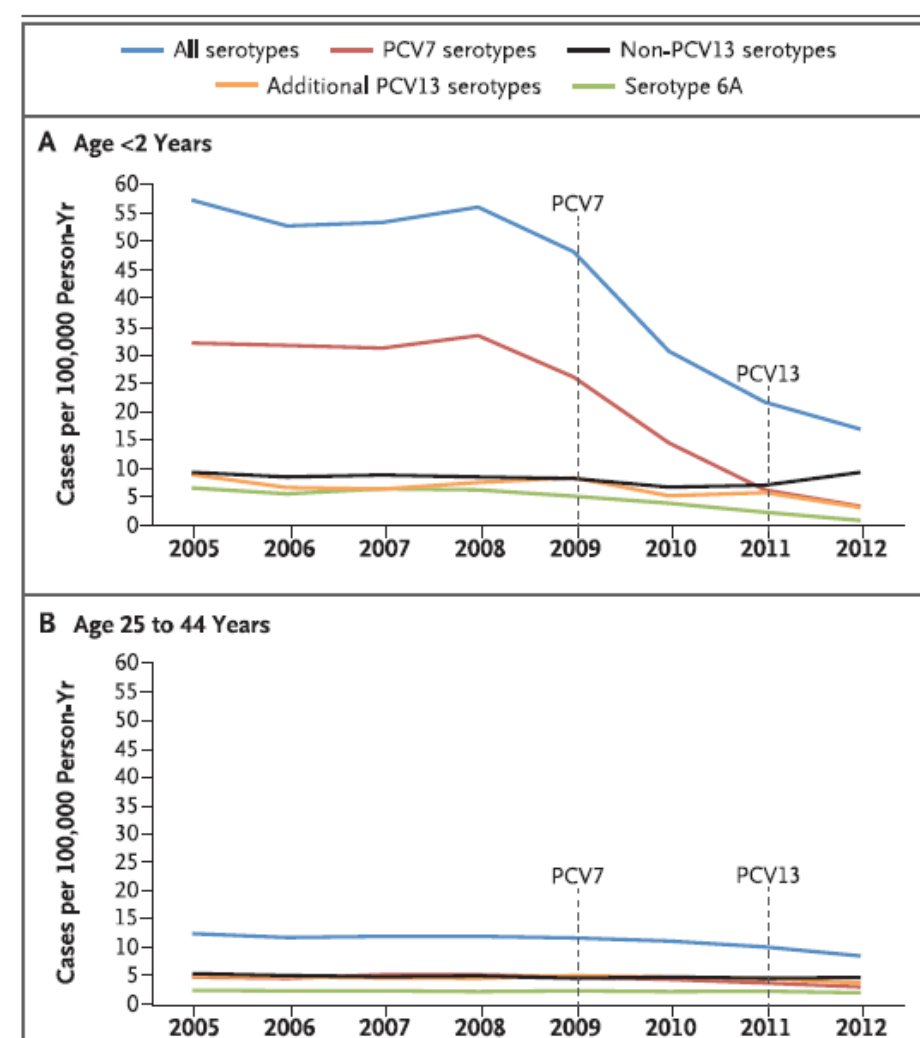


Figure 2. Changes in the Incidence of Invasive Pneumococcal Disease, According to Age and Serotype.

PCV7 was introduced in 2009, and PCV13 in 2011. Additional PCV13 serotypes are PCV13 serotypes not included in PCV7.

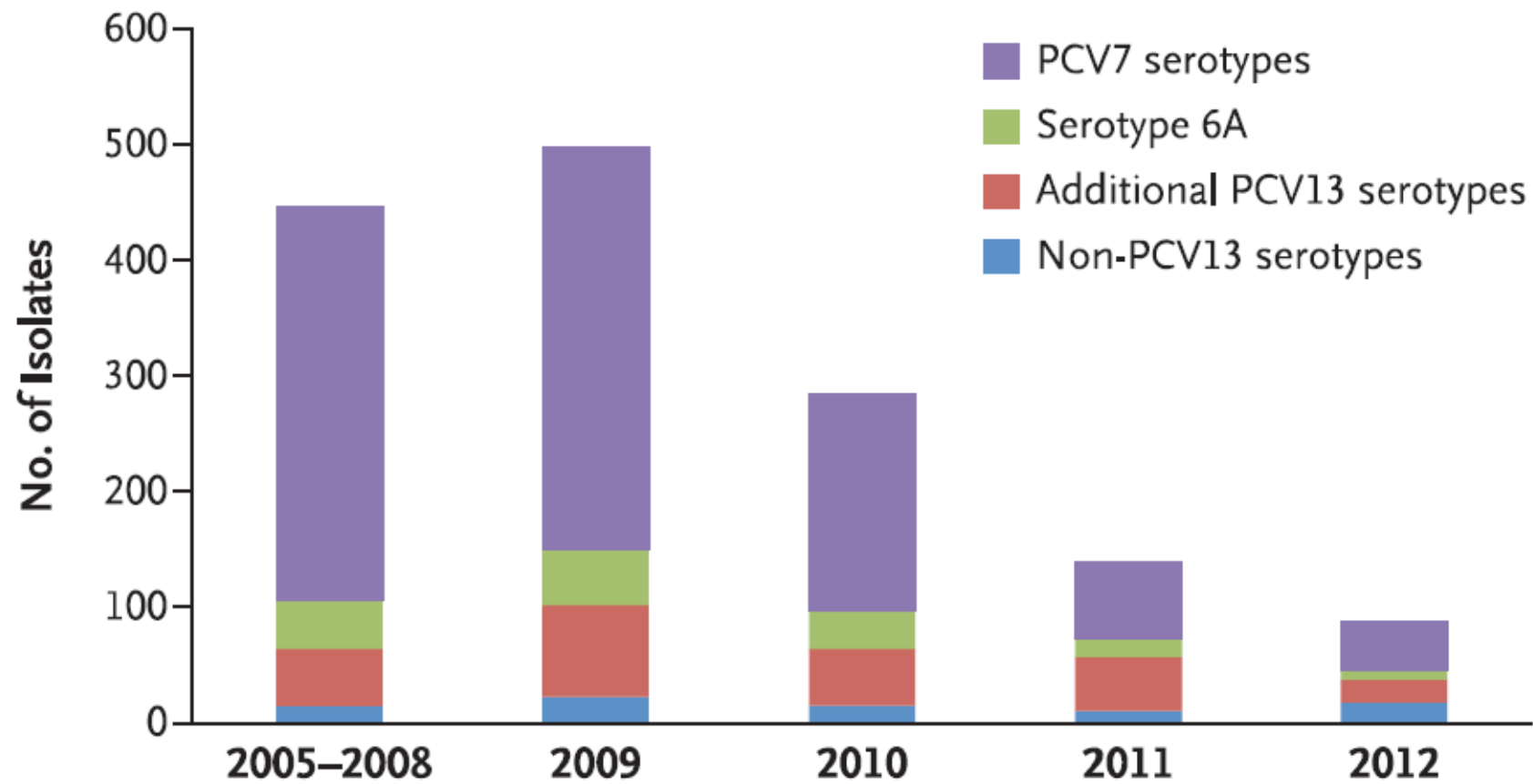


Figure 4. Number of Penicillin-Nonsusceptible Isolates Causing Invasive Pneumococcal Disease among Children Younger than 2 Years of Age, According to Serotype.

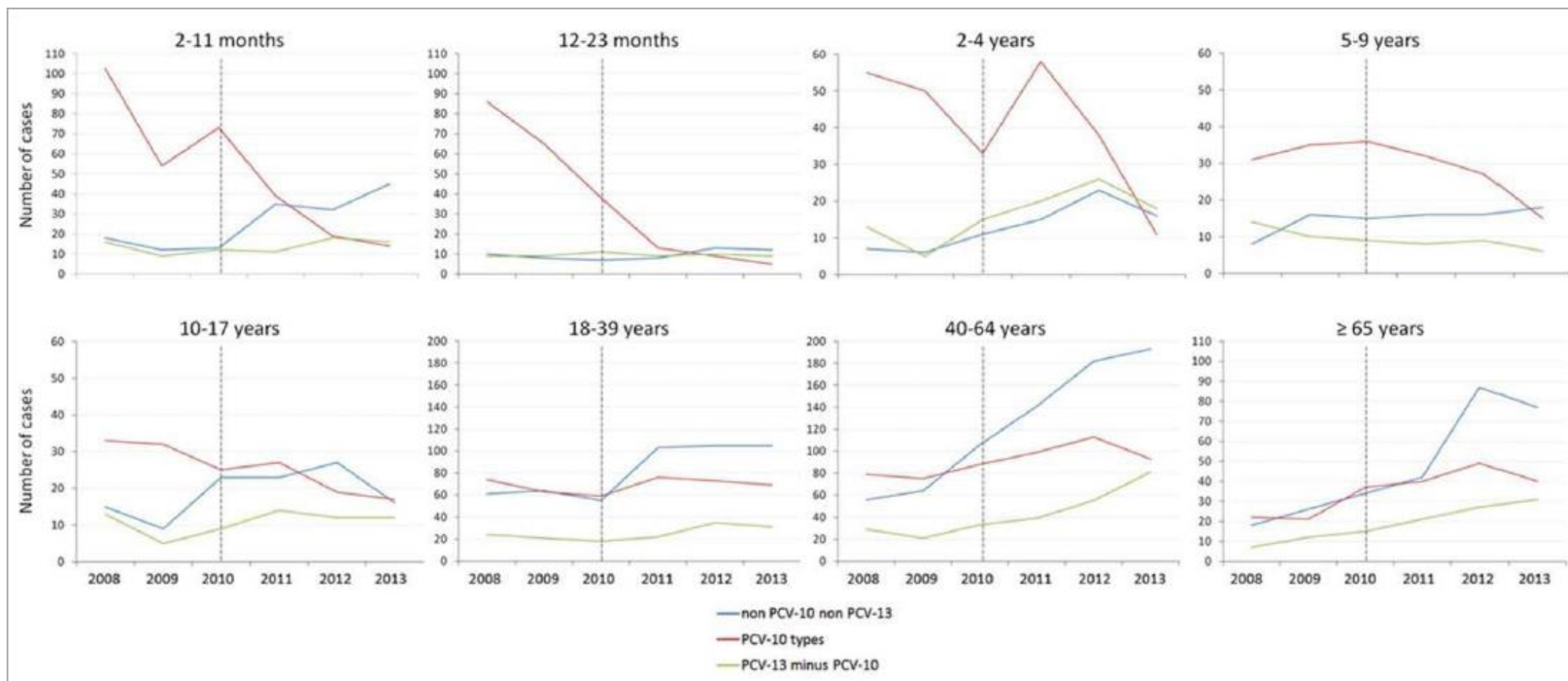
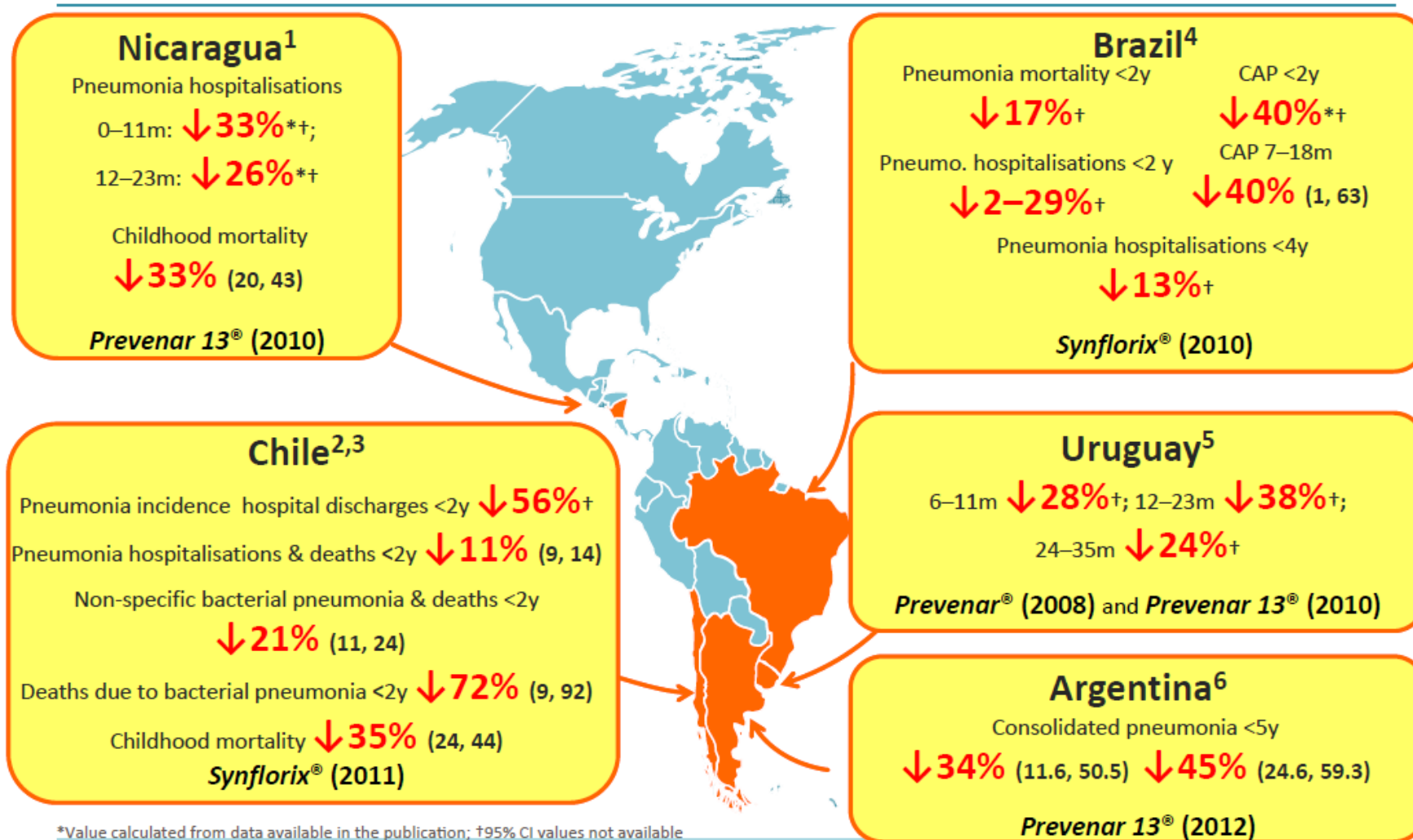


Figure 1. Number of invasive pneumococcal disease by year according to vaccine serotypes and age group. Brazil, 2008 to 2013.

PCV impact on child pneumonia and mortality in Latin America

Study differences preclude direct comparison



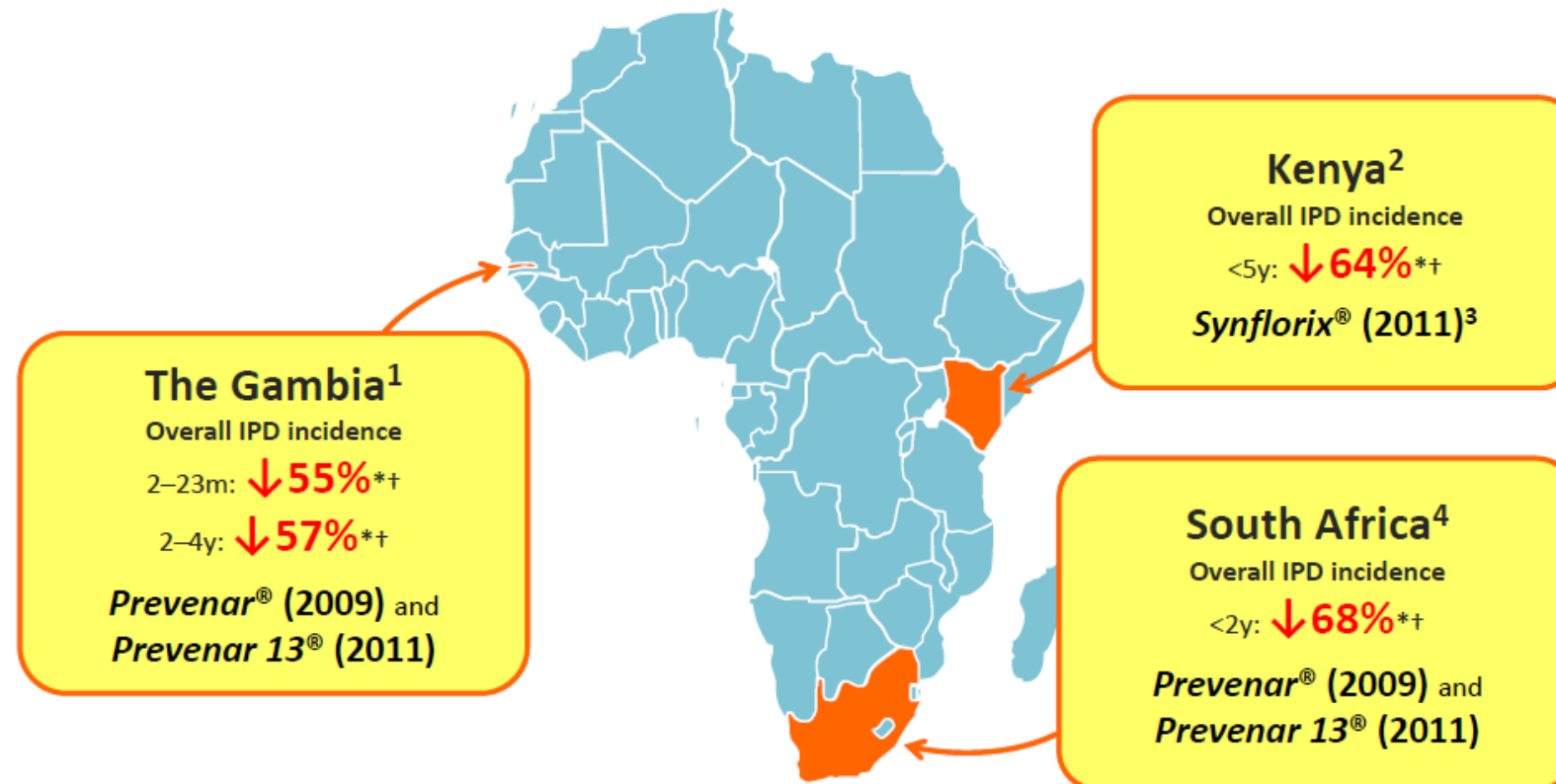
CAP, community-acquired pneumonia; PCV, pneumococcal conjugate vaccine; 95% CI values are indicated in parentheses

1. Becker-Dreps S, et al. *Pediatr Infect Dis J* 2014; 33: 637–42; 2. Fernandez JP, et al. *Rev Chil Pediatr* 2015; 86: 168–72; 3. Diaz J, et al. *PLoS One* 2016; 11: e0153141;

4. Moreira M, et al. *Vaccine* 2016; 34: 2766–78; 5. Hortal M, et al. *PLoS One* 2014; 9: e98567; 6. Gentile A, et al. *Arch Argent Pediatr* 2015; 113: 502–9

Overall impact of PCVs on IPD in Africa

Study differences preclude direct comparison



*Value calculated from data available in the publication, therefore 95% CI values not available

IPD, invasive pneumococcal disease; PCV, pneumococcal conjugate vaccine

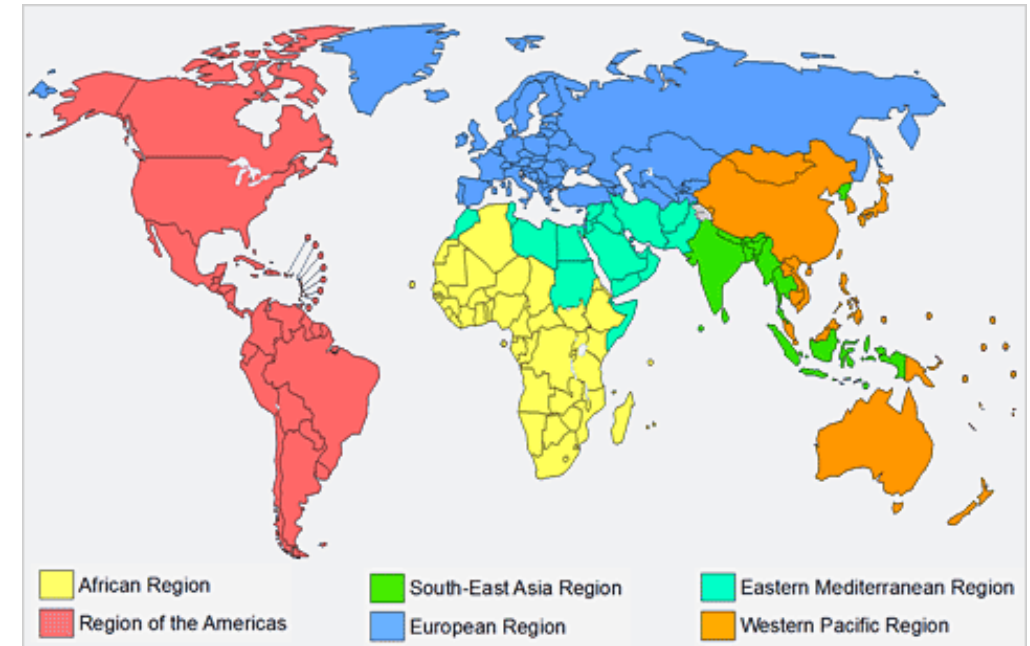
1. Mackenzie GA, et al. *Lancet Infect Dis* 2016; 16: 703–11; 2. KEMRI | Wellcome Trust. Pneumococcal Conjugate Vaccine Impact Study (PCVIS). <http://kemri-wellcome.org/programme/pcvis-2/> [accessed June 2016]; 3. WHO. Immunization: Closing the gap on pneumonia in Kenya. 2015. <http://www.who.int/features/2015/kenya-closing-pneumonia-gap/en/> [accessed June 2016]; 4. von Gottberg A, et al. *N Engl J Med* 2014; 371: 1889–99

- **Esquema vacinal**

- Polissacárida conjugada
- Dependente da idade de início
- 3+0; 2+1; 3+1
- 2+0; 1+0

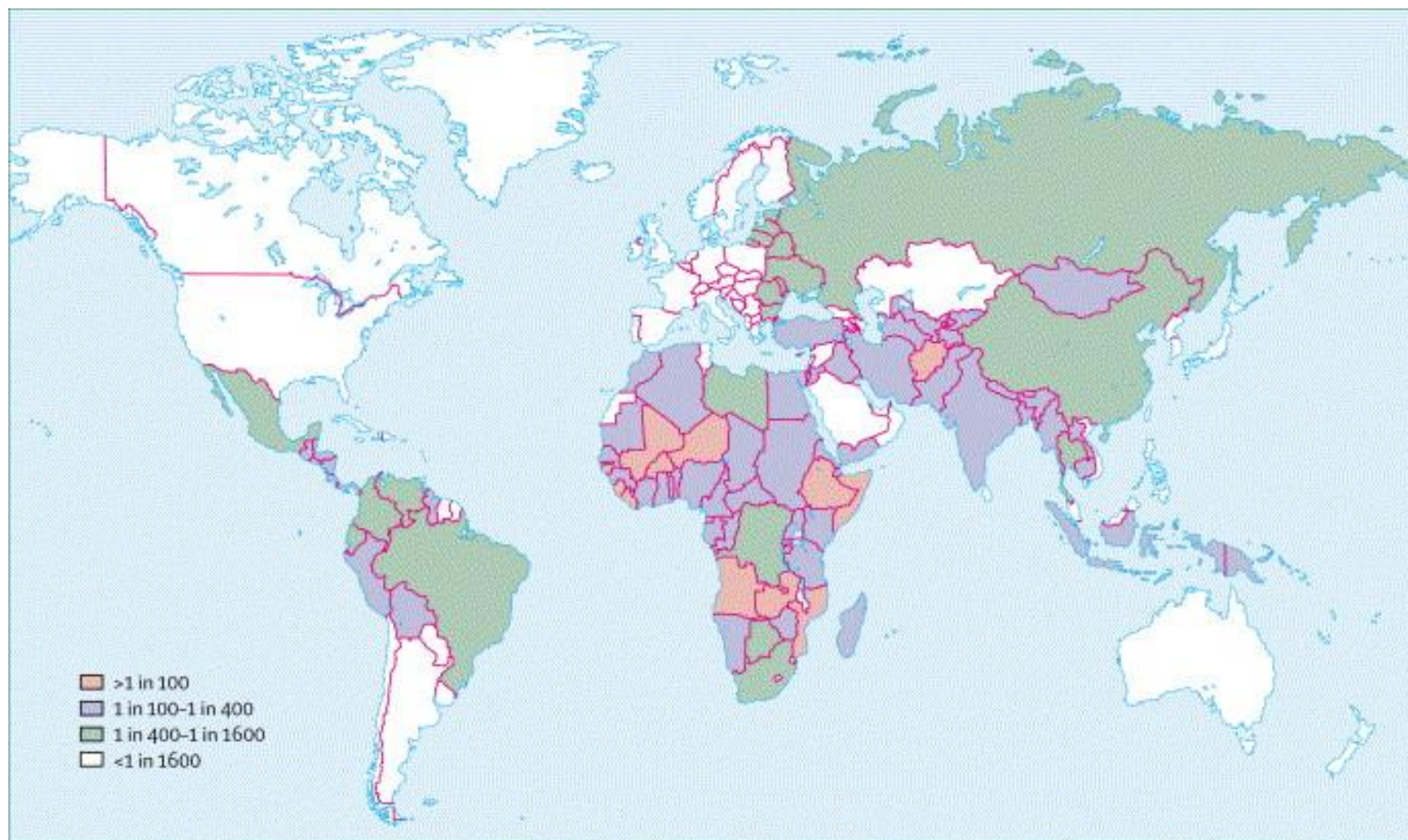
Vacina pneumocócica

- 37 países da Europa + 4 países com vacinação grupos de risco
- 38 países África + 1 em 2017
- 24 países das Américas + 2 grupos de risco
- 14 países Mediterrâneo + 1 grupos de risco
- 2 países do Sudeste-Asiático
- 15 países do Pacífico Ocidental

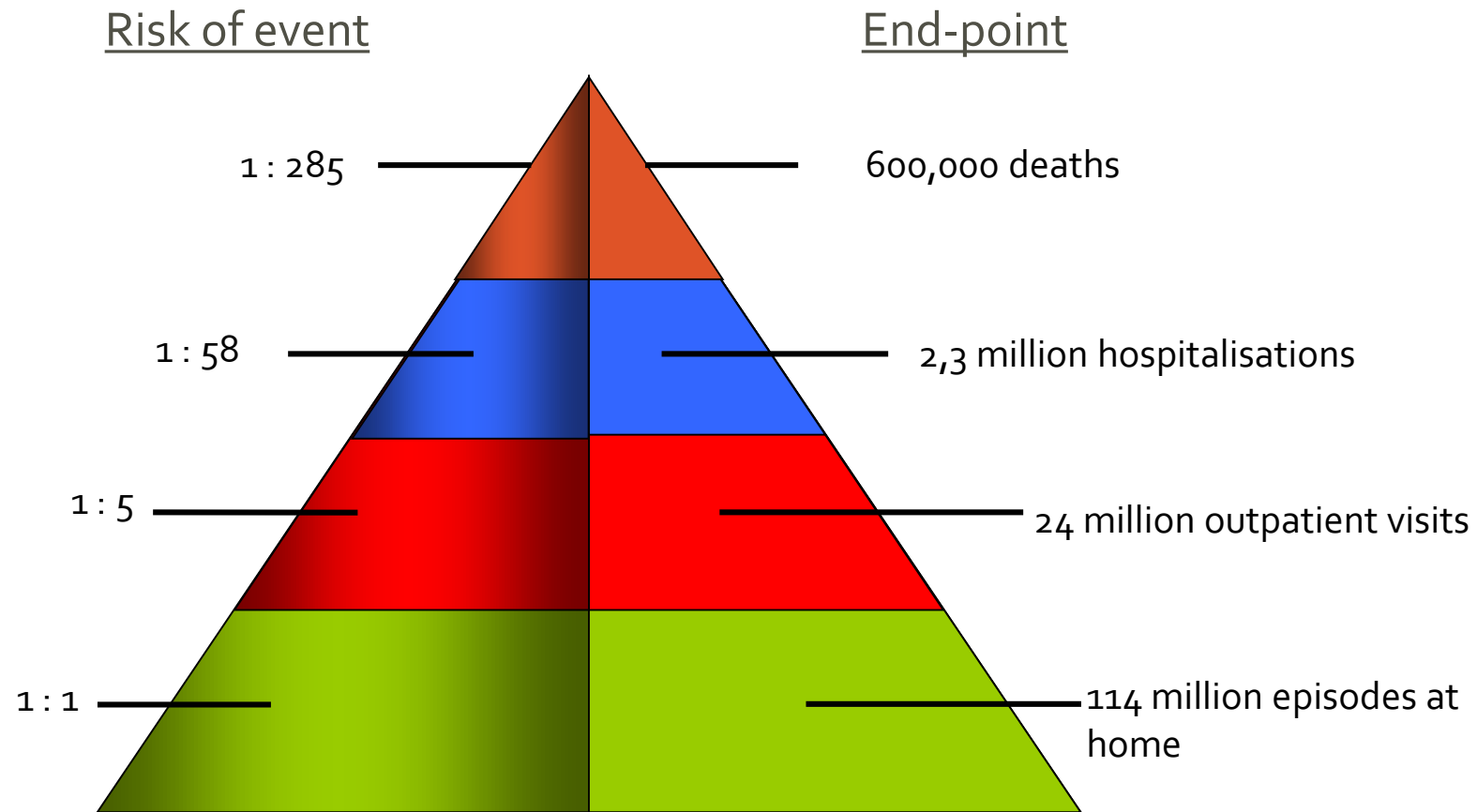


VACINA CONTRA ROTAVÍRUS

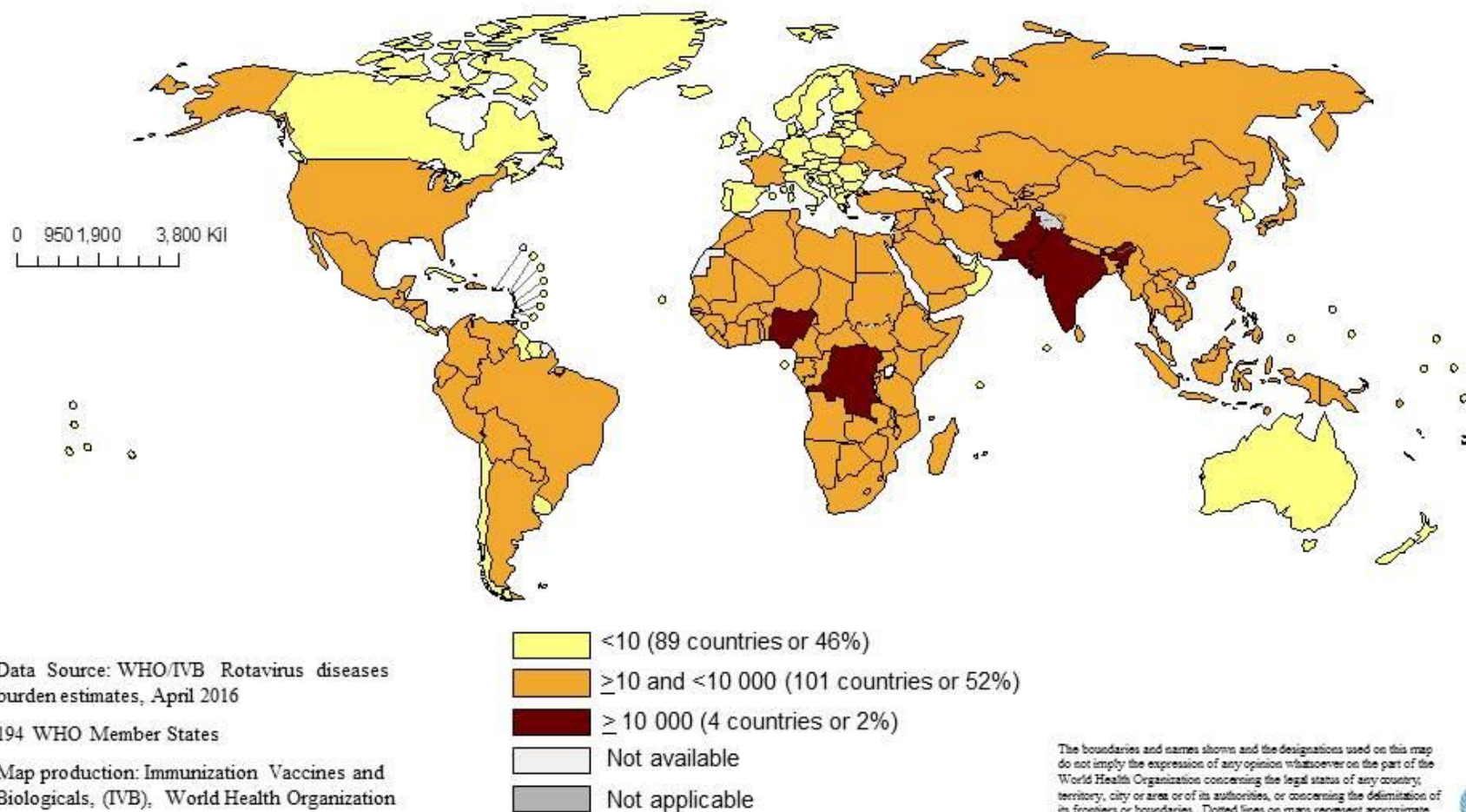
Estimativa da mortalidade por GEA-RV



Estimated global incidence of rotavirus gastroenteritis



215 000 global child rotavirus deaths, 2013



Data Source: WHO/IVB Rotavirus diseases
burden estimates, April 2016

194 WHO Member States

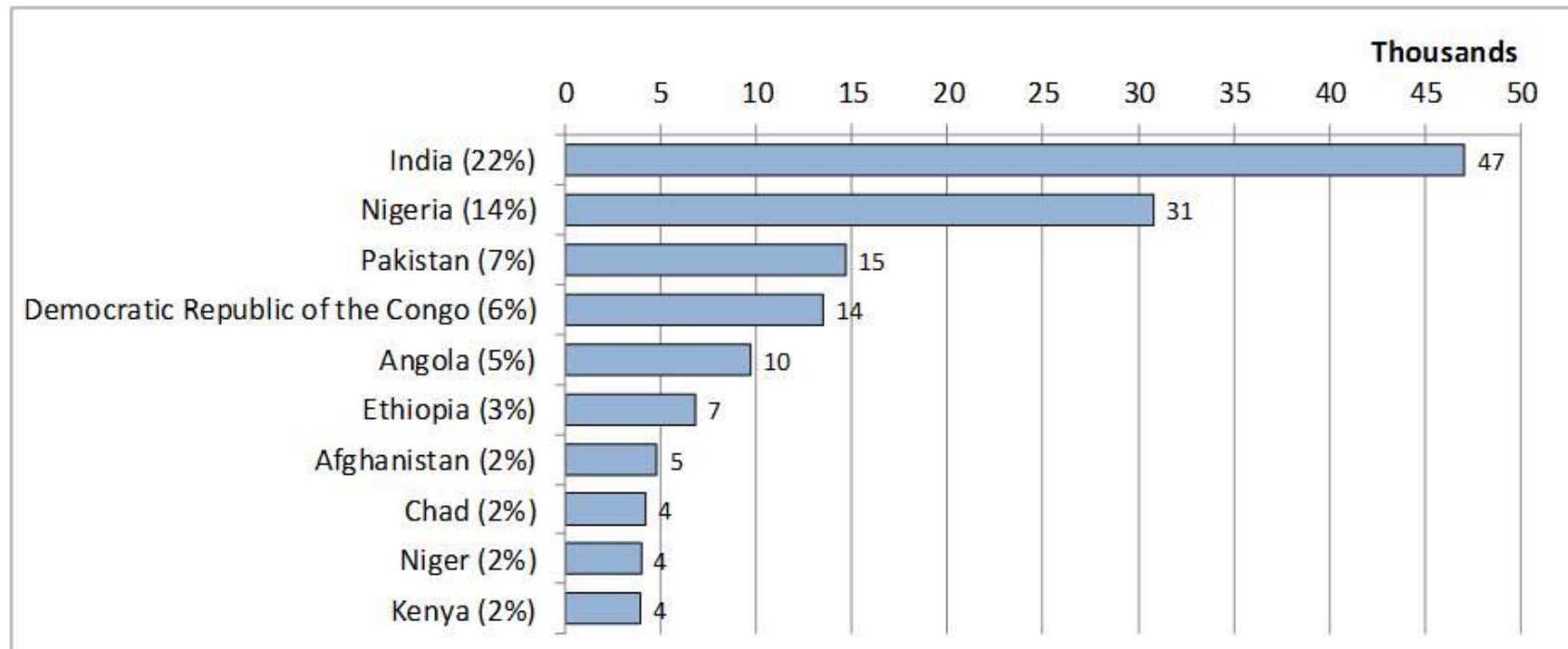
Map production: Immunization Vaccines and
Biologicals, (IVB), World Health Organization

Date of slide: 15 April 2016

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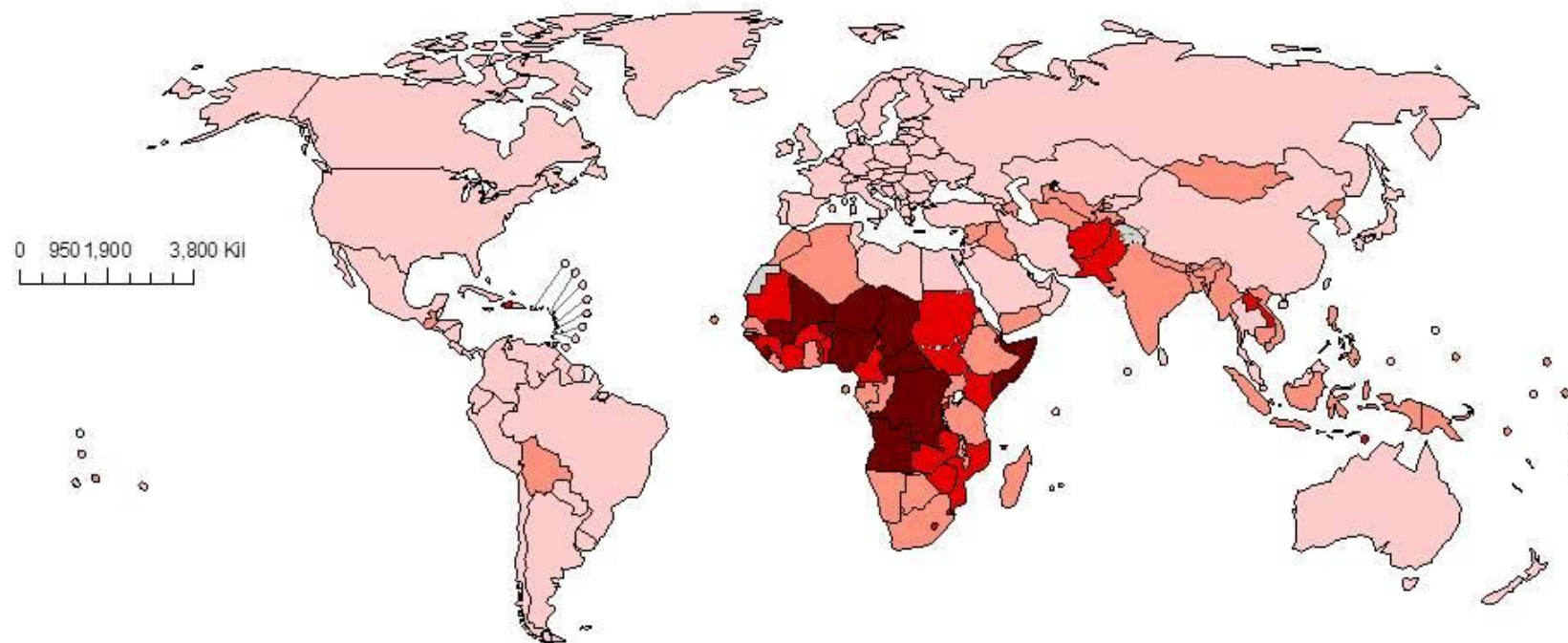


Ten countries with highest number (and percent global total)
of child rotavirus deaths, 2013
global total = 215 000



Source: Estimated rotavirus deaths, WHO IVB as of April 2016

Rotavirus mortality rate in children younger than 5 years, 2013



Data Source: WHO/IVB Rotavirus diseases burden estimates, April 2016, and United Nations, Population Division. The World Population Prospects - the 2012 revision". New York, 2013.

Map production: Immunization Vaccines and Biologicals, (IVB), World Health Organization

Date of slide: 15 April 2016

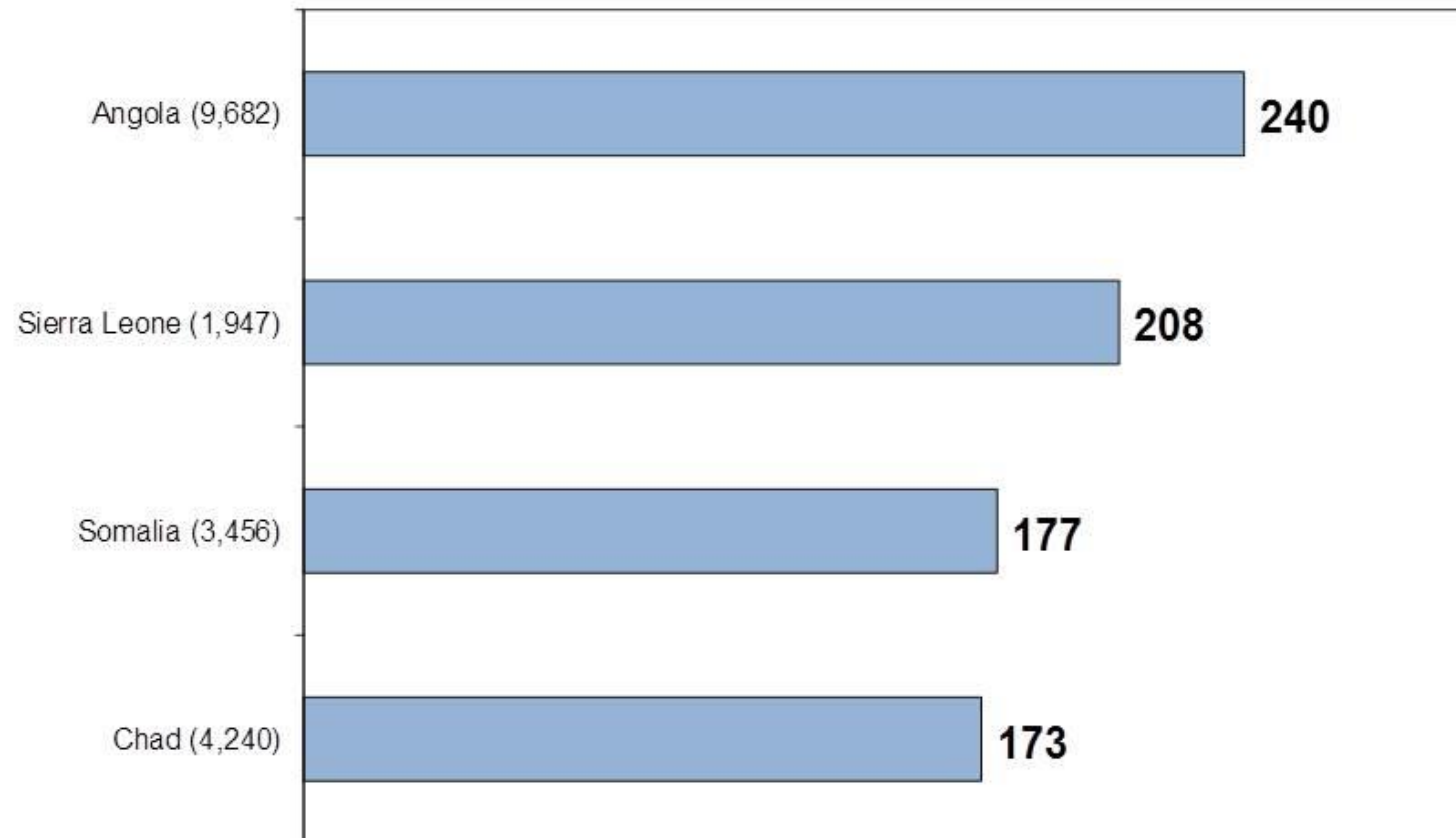


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Rotavirus deaths under 5 years of age per 100 000 population under five (and number of estimated deaths) by country in 2013:

4 countries have cause specific mortality rates greater than 150 per 100 000



Source: Estimated rotavirus deaths, WHO IVB as of April 2016 and United Nations, Population Division. The World Population Prospects - the 2012 revision". New York, 2013.



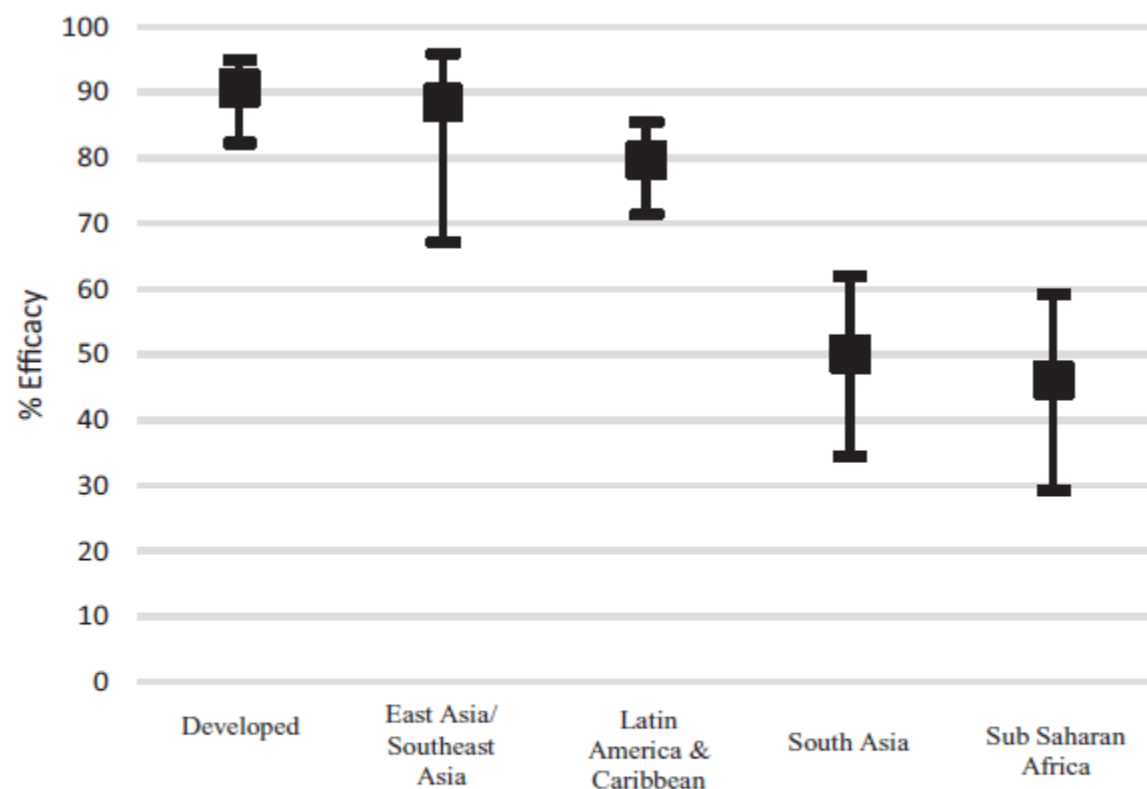


FIGURE 2. Efficacy of rotavirus vaccination on severe rotavirus diarrhea by MDG region. Box represents percent efficacy; whiskers represent upper and lower bounds for the 95% confidence interval.

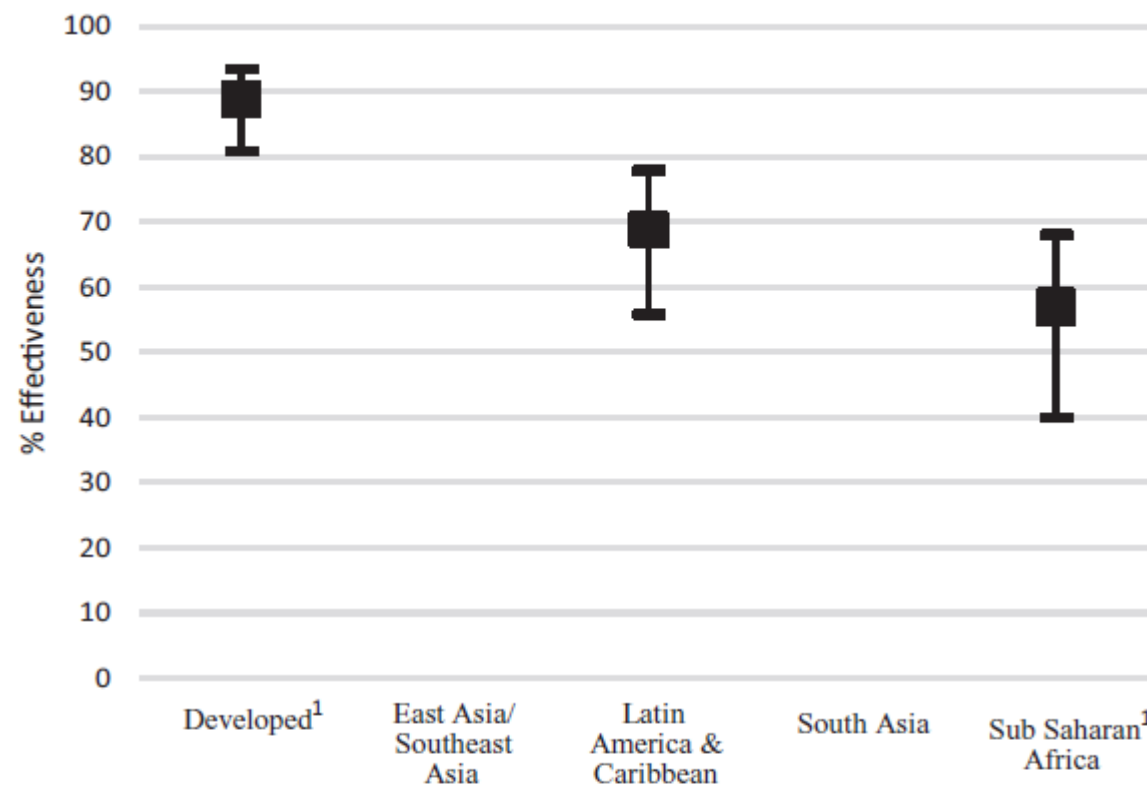


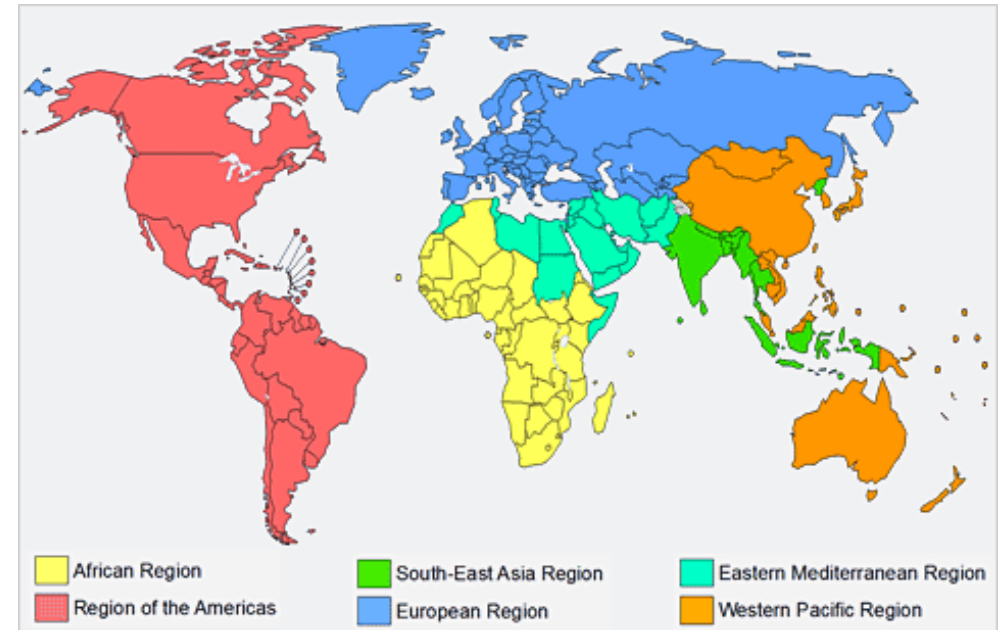
FIGURE 3. Effectiveness of rotavirus vaccination on severe rotavirus diarrhea by MDG region. Due to a dearth of studies reporting the effectiveness of rotavirus vaccination on severe rotavirus diarrhea, the effectiveness on rotavirus hospitalizations was used as a proxy for the Developed and Sub Saharan Africa regions; no comparable estimates were available for the East/Southeastern Asia and South Asia regions. Box represents percent effectiveness; whiskers represent upper and lower bounds for the 95% confidence interval.

- **Esquema**

- Viva atenuada; viva recombinante
- 2 doses Rotarix®/ 3 doses Rotateq®
- 6 sem – 6 meses
- *Não recomendado > 24 meses*

Vacina rotavírus

- 17 países da Europa
- 31 países de África + 3 em 2017 + 1 em 2018
- 19 países das Américas
- 11 países do Mediterrâneo
- 1 país do Sudeste-Asiático (Tailândia)
- 8 países do Pacífico Ocidental



VACINA CONTRA MENINGOCOCO

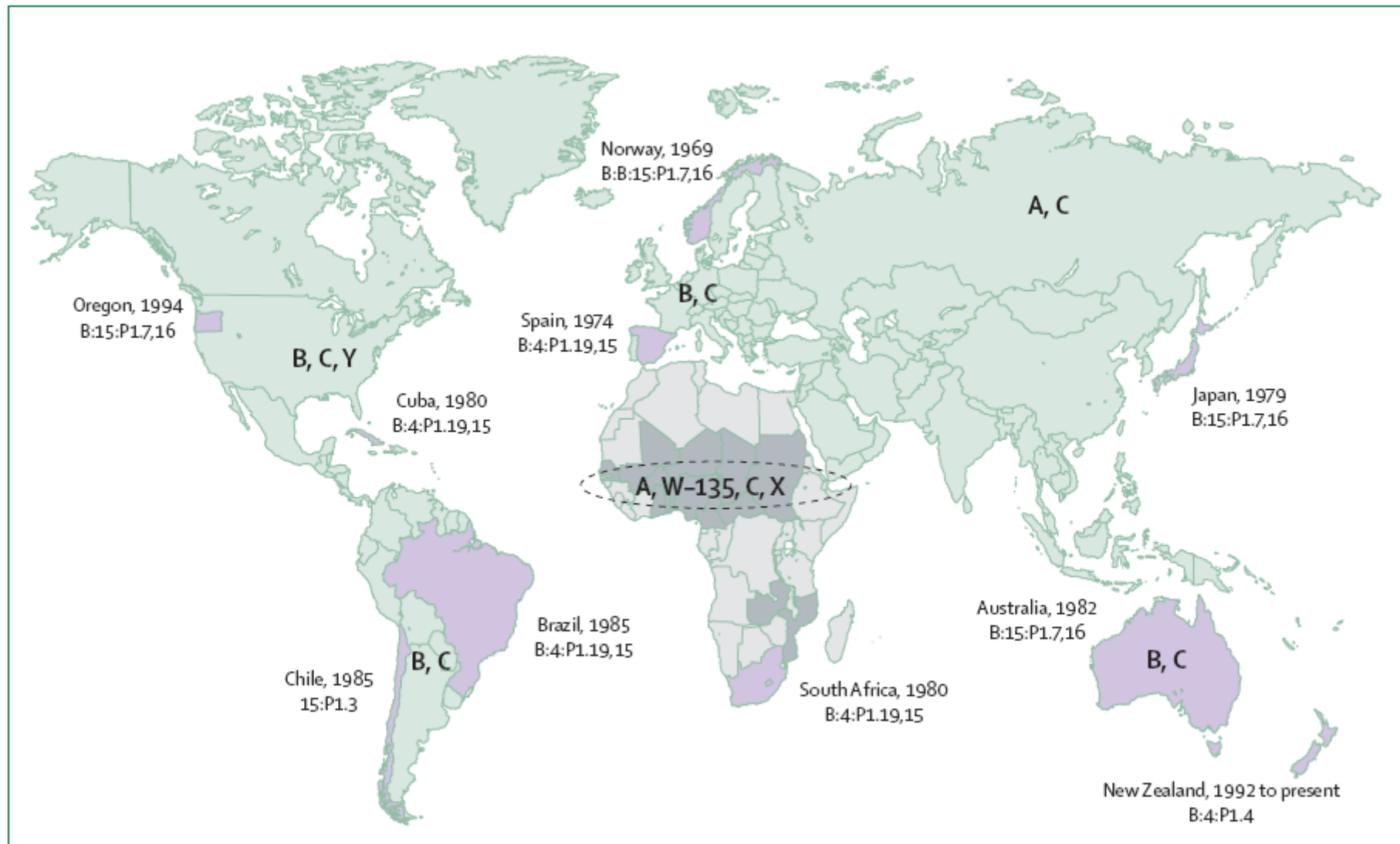


Figure 1: Worldwide distribution of major meningococcal serogroups and of serogroup B outbreaks by serotype (shaded in purple)

The meningitis belt (dotted line) of sub-Saharan Africa and other areas of substantial meningococcal disease in Africa are shown. Modified from reference 8, with permission from the author and publisher.

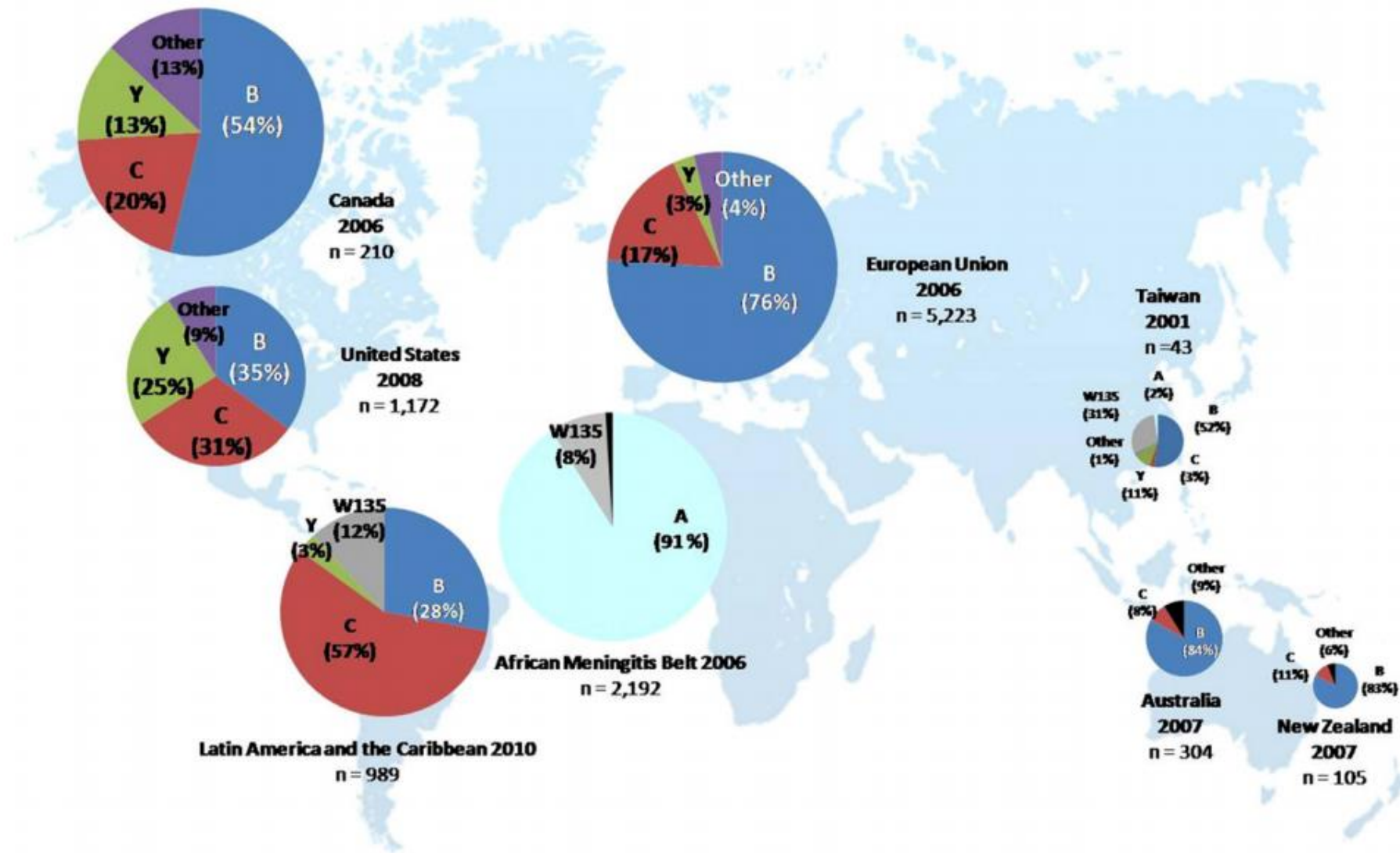
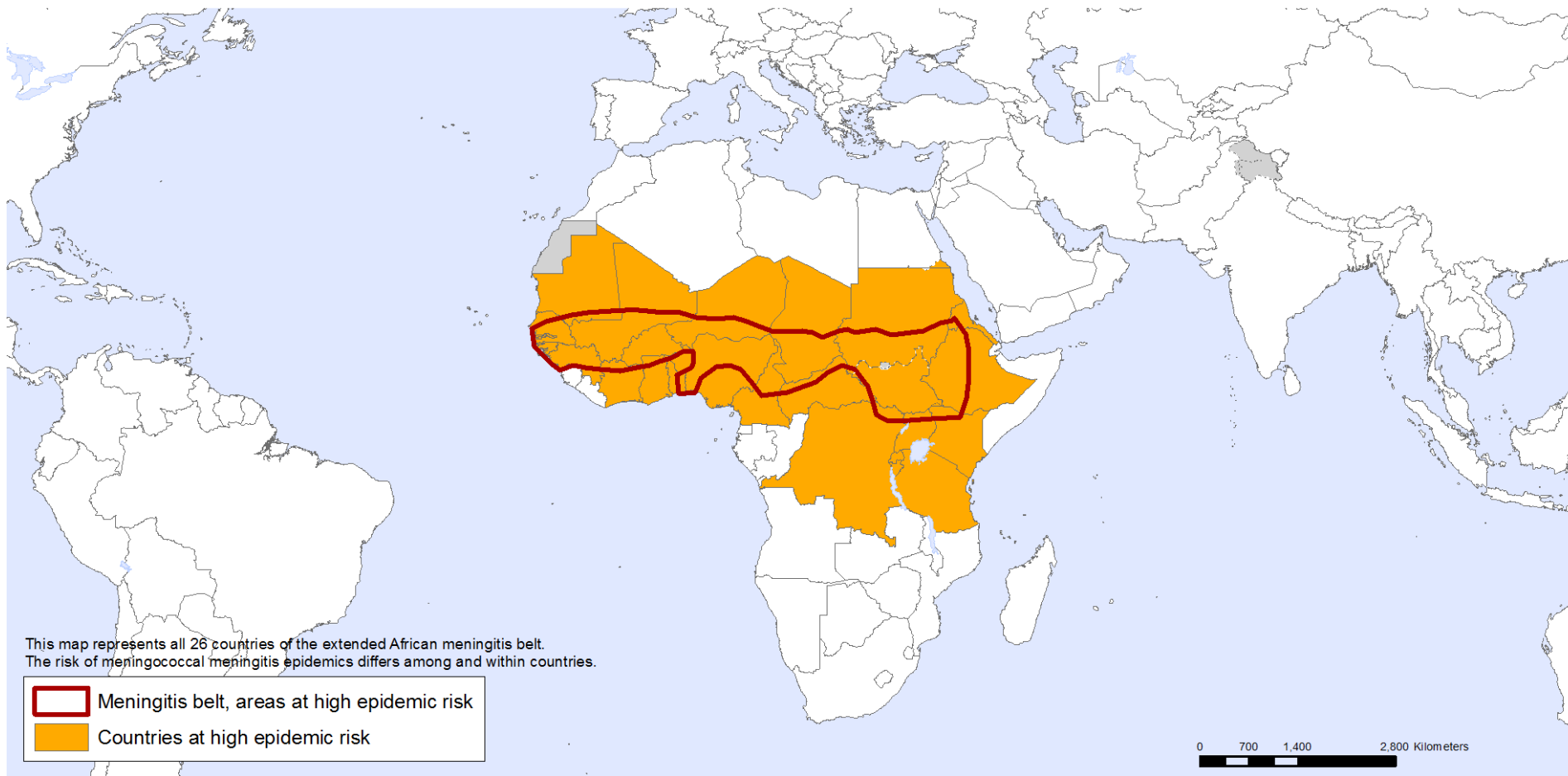


Fig. 1. Proportion of meningococcal disease by serogroup by geographic region.

Meningococcal meningitis, countries or areas at high risk, 2014



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Data Source: World Health Organization
Map Production: International Travel and Health
World Health Organization



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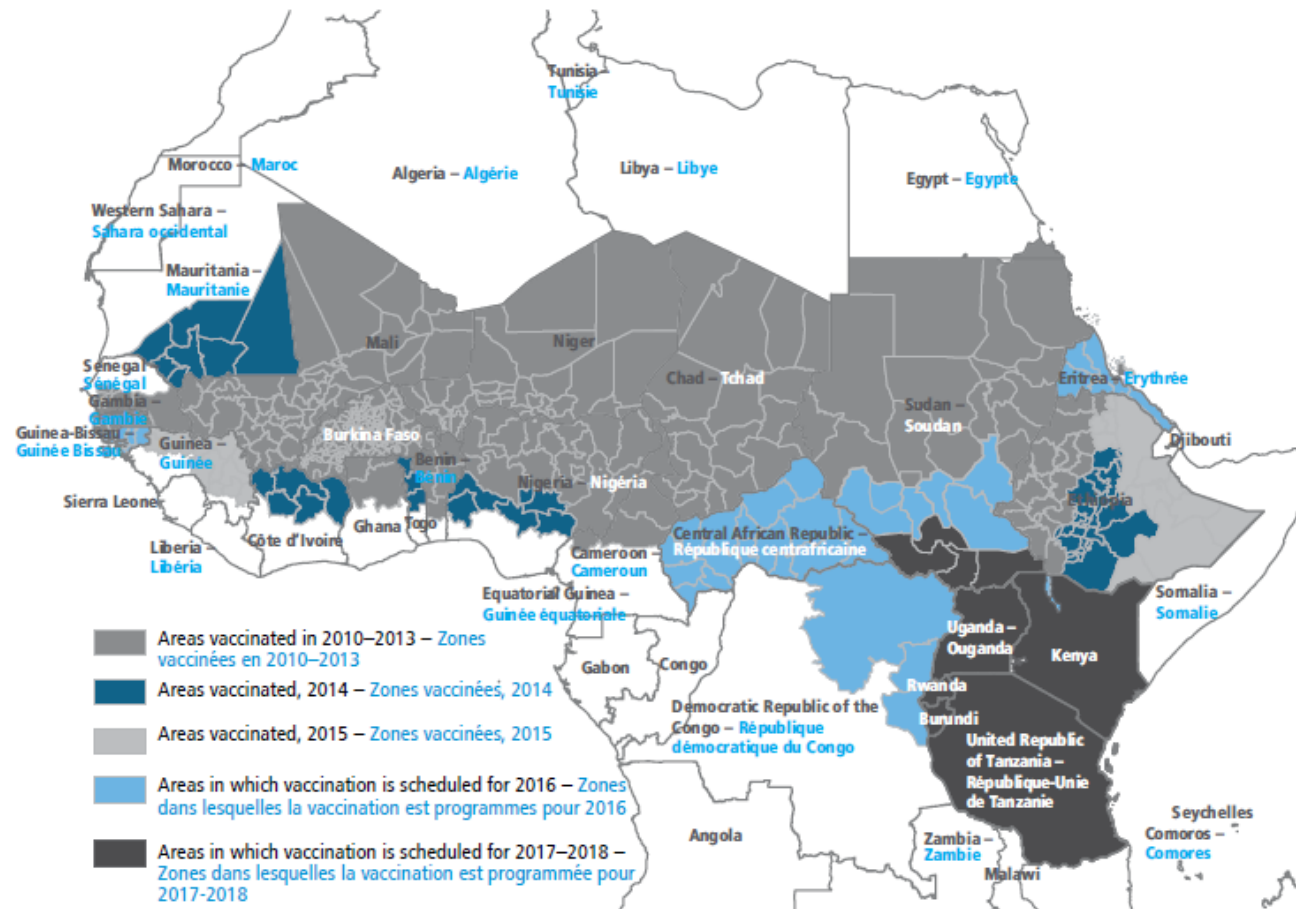
MenAfriVac™

**Meningococcal A
Conjugate Vaccine
(Lyophilized)**

MenAfriVac

Map 1 **Meningococcal A conjugate vaccine introduction in countries of the African meningitis belt, 2010–2018**

Carte 1 **Introduction du vaccin conjugué contre le méningocoque A dans les pays de la ceinture africaine de la méningite, 2010-2018**



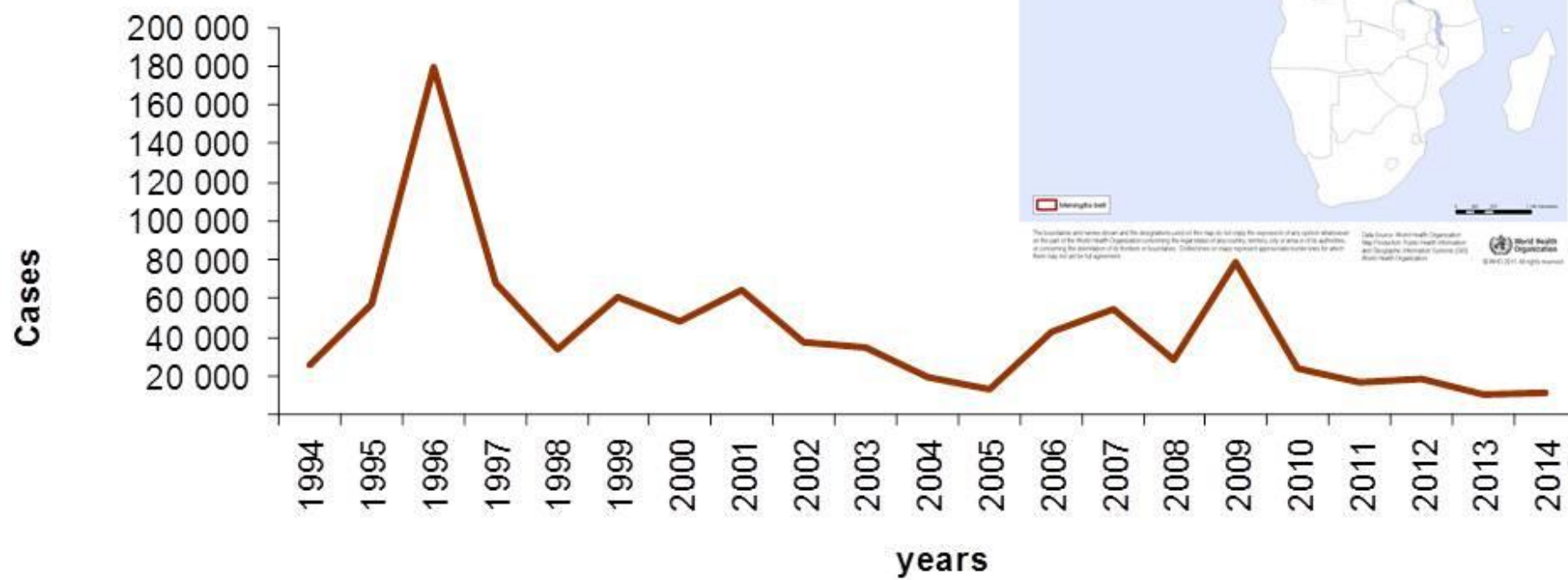
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Vacina meningocócica

- This brings the total number of persons vaccinated with MACV in the African meningitis belt to **235.6 million** in 16 countries (**Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Ethiopia, Gambia, Ghana, Guinea, Mali, Mauritania, Niger, Nigeria, Senegal, Sudan and Togo**).
- The remaining countries to be vaccinated between 2016 and 2017 include: **Burundi, Central African Republic, Democratic Republic of Congo, Eritrea, Guinea Bissau, Kenya, Rwanda, South Sudan, Uganda and United Republic of Tanzania**. From 2016, the MACV will be introduced into routine immunization programmes as a single dose at 9–18 months of age, concomitantly with other routinely administered vaccines.

Trends of epidemic meningitis cases In the African Belt countries, 1994–2014



Data source: WHO



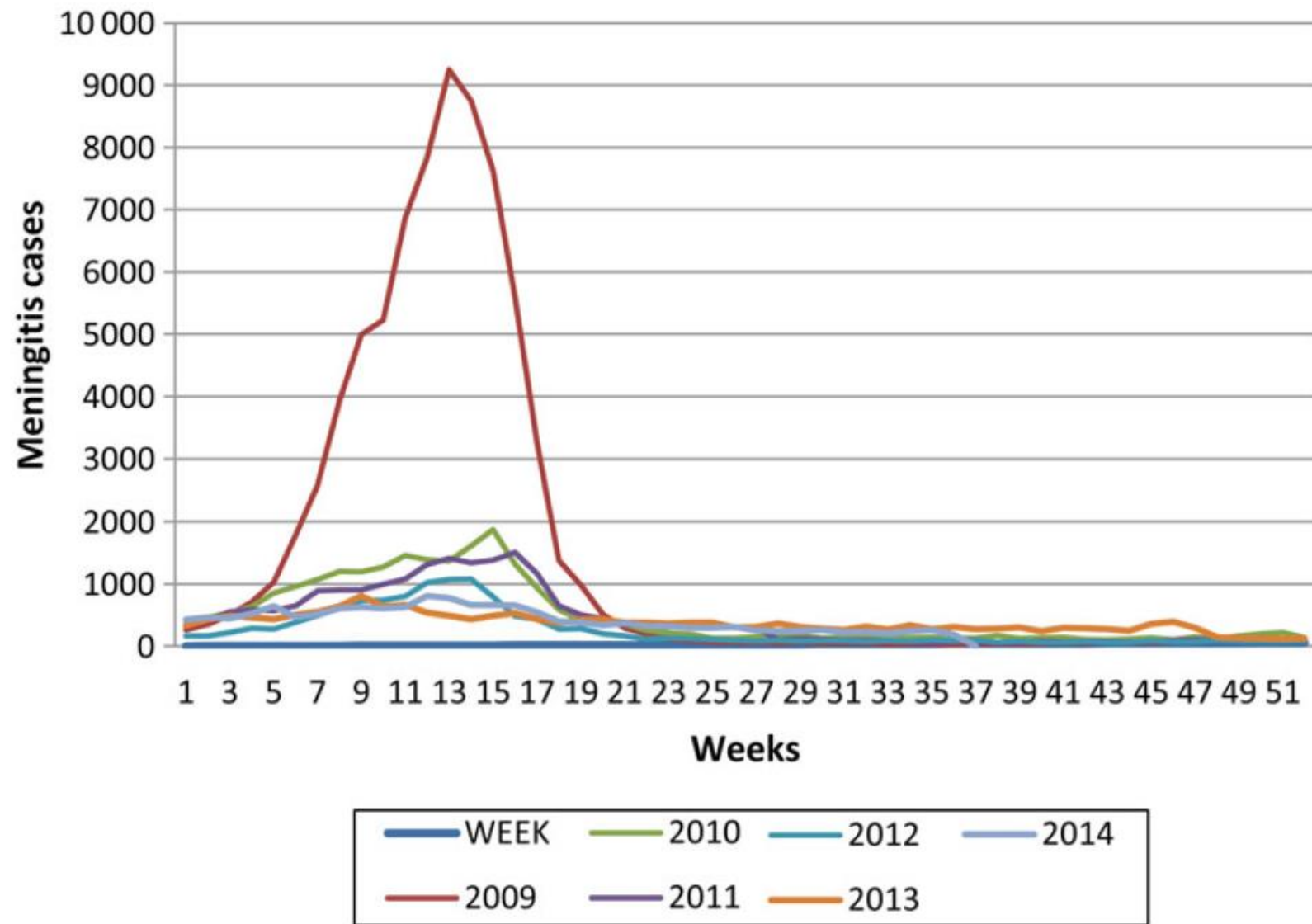
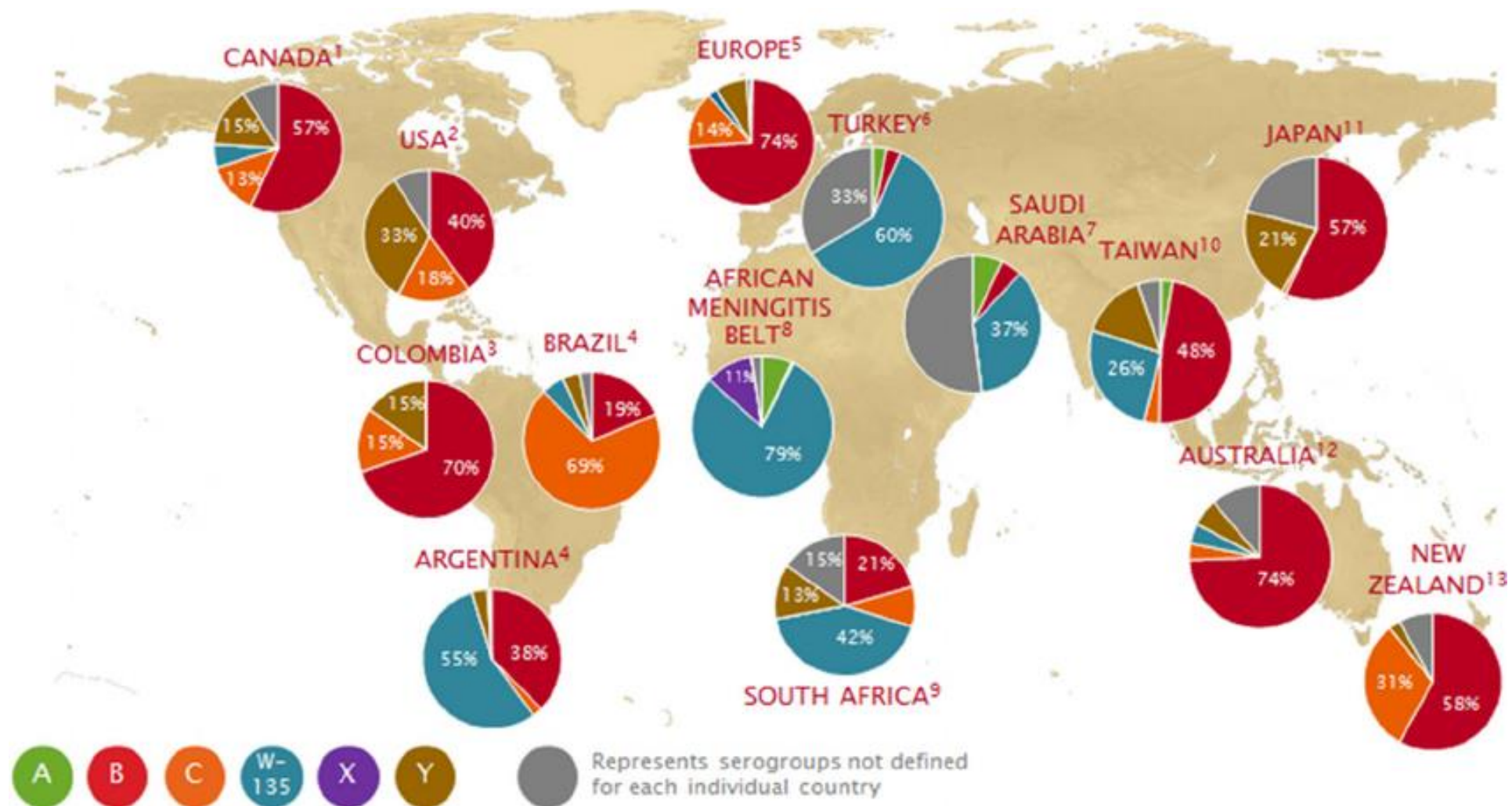


Figure 1. Incidence of meningitis in the African meningitis belt, 2009–2014. Source: www.meningvax.org.



Country – Pays	No. CSF samples – Nombre d'échantillons de LCR	No. CSF positive samples – Nombre d'échantillons de LCR positifs	<i>N. meningitidis</i> sero-group A – <i>N. meningitidis</i> séro-groupe A	<i>N. meningitidis</i> sero-group B – <i>N. meningitidis</i> séro-groupe B	<i>N. meningitidis</i> sero-group C – <i>N. meningitidis</i> séro-groupe C	<i>N. meningitidis</i> sero-group X – <i>N. meningitidis</i> séro-groupe X	<i>N. meningitidis</i> sero-group Y – <i>N. meningitidis</i> séro-groupe Y	<i>N. meningitidis</i> sero-group W – <i>N. meningitidis</i> séro-groupe W	Other <i>N. meningitidis</i> – Autres <i>N. meningitidis</i>	Streptococcus pneumoniae	<i>Haemophilus influenzae</i> type b	Other pathogens – Autres pathogènes
Benin – Bénin	19	2	0	0	0	0	0	1	0	1	0	0
Burkina Faso	1 268	595	3	0	5	4	0	216	3	352	11	1
Cameroon – Cameroun	62	14	0	0	0	0	0	6	0	8	0	0
Central African Republic – République centrafricaine	176	11	0	0	0	0	0	0	1	4	0	6
Chad – Tchad	47	10	0	0	0	0	0	1	5	0	1	3
Côte d'Ivoire	126	17	0	0	1	1	0	0	3	7	4	1
Democratic Republic of the Congo ^a – République démocratique du Congo ^a	161	31	0	0	0	0	0	0	0	6	1	24
Gambia – Gambie	17	1	0	0	0	0	0	1	0	0	0	0
Ghana	160	52	0	1	0	0	0	27	1	23	0	0
Guinée	93	80	74	0	0	0	0	0	0	5	1	0
Mali	195	47	0	0	7	14	0	1	2	19	3	1
Mauritania – Mauritanie	1	1	0	0	0	0	0	1	0	0	0	0
Niger	4 079	1456	0	0	1 087	1	0	196	65	101	5	1
Nigeria – Nigéria	32	20	0	0	20	0	0	0	0	0	0	0
Togo	152	27	0	0	0	0	0	8	7	12	0	0
Total	6 588	2 364	77	1	1 120	20	0	458	82	543	26	37

^a Data for epidemic season (weeks 1–26). – Données pour la saison épidémique (semaines 1-26).

Nm C 64%; Nm W 26%; Nm A 4%

Table 22.3 Recommendations for the use of quadrivalent meningococcal ACWY vaccines for travel

Age	ACWY schedule
Birth to less than one year*	• First dose of 0.5ml • Second dose of 0.5ml one month after the first dose.
From one year of age (including adults)	• Single dose of 0.5ml

* If an infant has already had two MenC vaccinations then two MenACWY conjugate vaccines should also be given.

2.3 Dosing Schedule

The dosing schedule for individuals initiating vaccination is as follows:

Infants 2 Months of Age

MENVEO is to be administered as a four-dose series at 2, 4, 6, and 12 months of age.

Children 7 Months through 23 Months of Age

MENVEO is to be administered as a two-dose series with the second dose administered in the second year of life and at least three months after the first dose.

Children 2 Years through 10 Years of Age

MENVEO is to be administered as a single dose. For children 2 years through 5 years of age at continued high risk of meningococcal disease, a second dose may be administered 2 months after the first dose.

Adolescents and Adults 11 Years through 55 Years of Age

MENVEO is to be administered as a single dose.

- **Esquema**

- Polissacáridas conjugadas
 - MenAfriVac® > 9-18 m
 - Menveo® > 2anos (>2 meses)
 - Menactra® > 9 m
 - Nimenrix® > 12 m

Vacina meningocócica

- **Serogrupo A**

- Burkina Faso, Gana (regiões), Guiné-Conacri, Nigéria, Senegal, Togo, República Centro Africana, China

- **Serogrupo B**

- Reino Unido

- **Serogrupo C**

- Brasil; Iraque (seletiva)

- **Serogrupos AC**

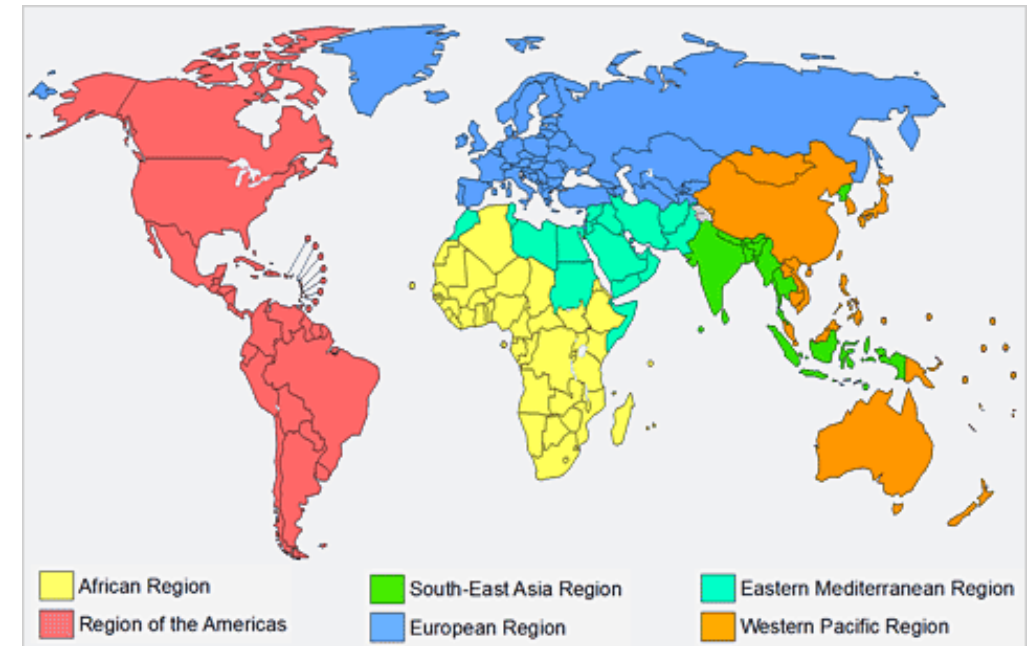
- Egito, China

- **Serogrupos ACWY**

- Níger

- **Serogrupos ACWY**

- Bahamas, Chile, Kuwait, Líbia, Arábia Saudita, Síria, Arménia



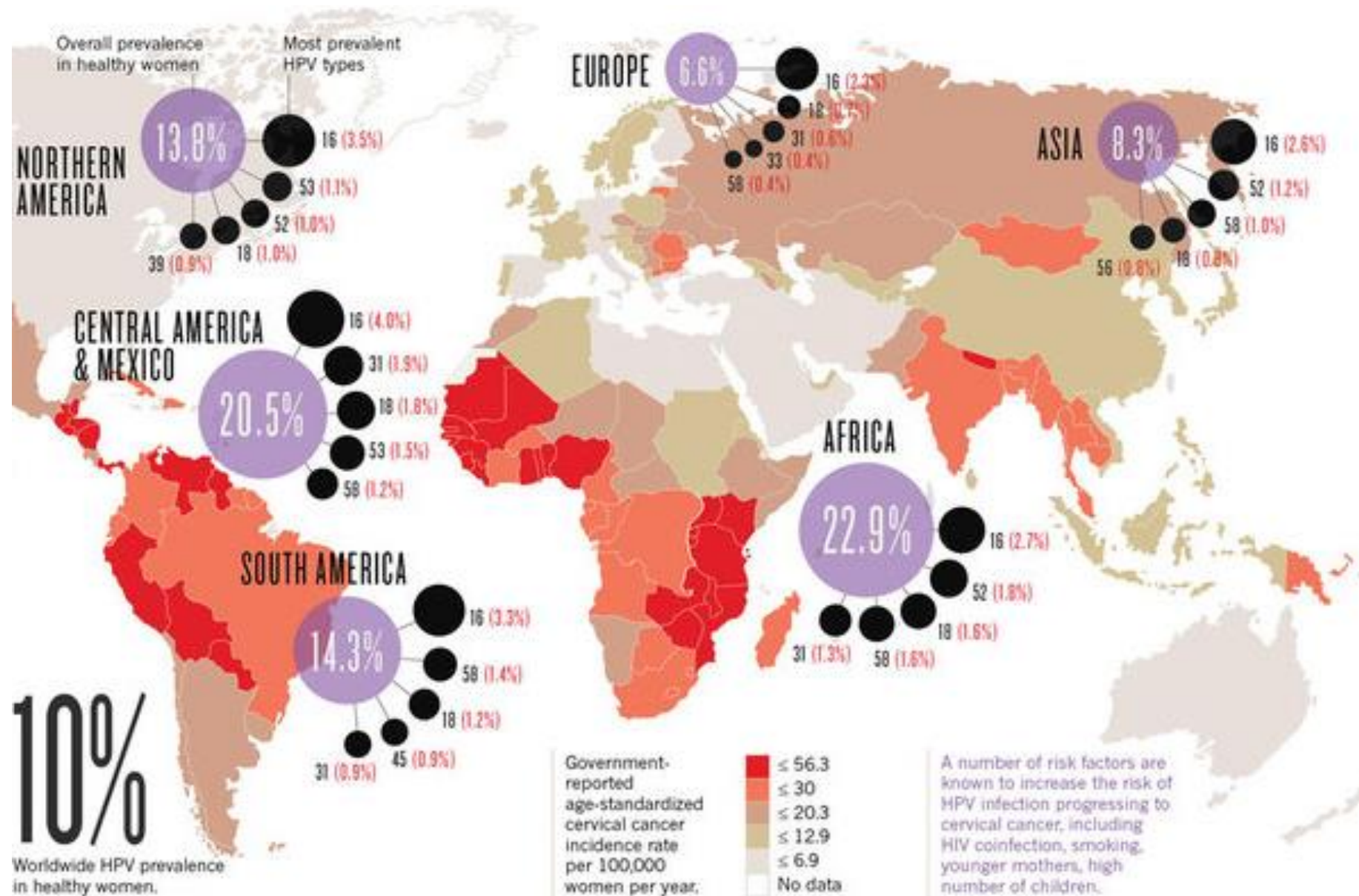
MenAfriVac™

Meningococcal A
Conjugate Vaccine
(Lyophilized)

MenAfriVac



VACINA CONTRA HPV

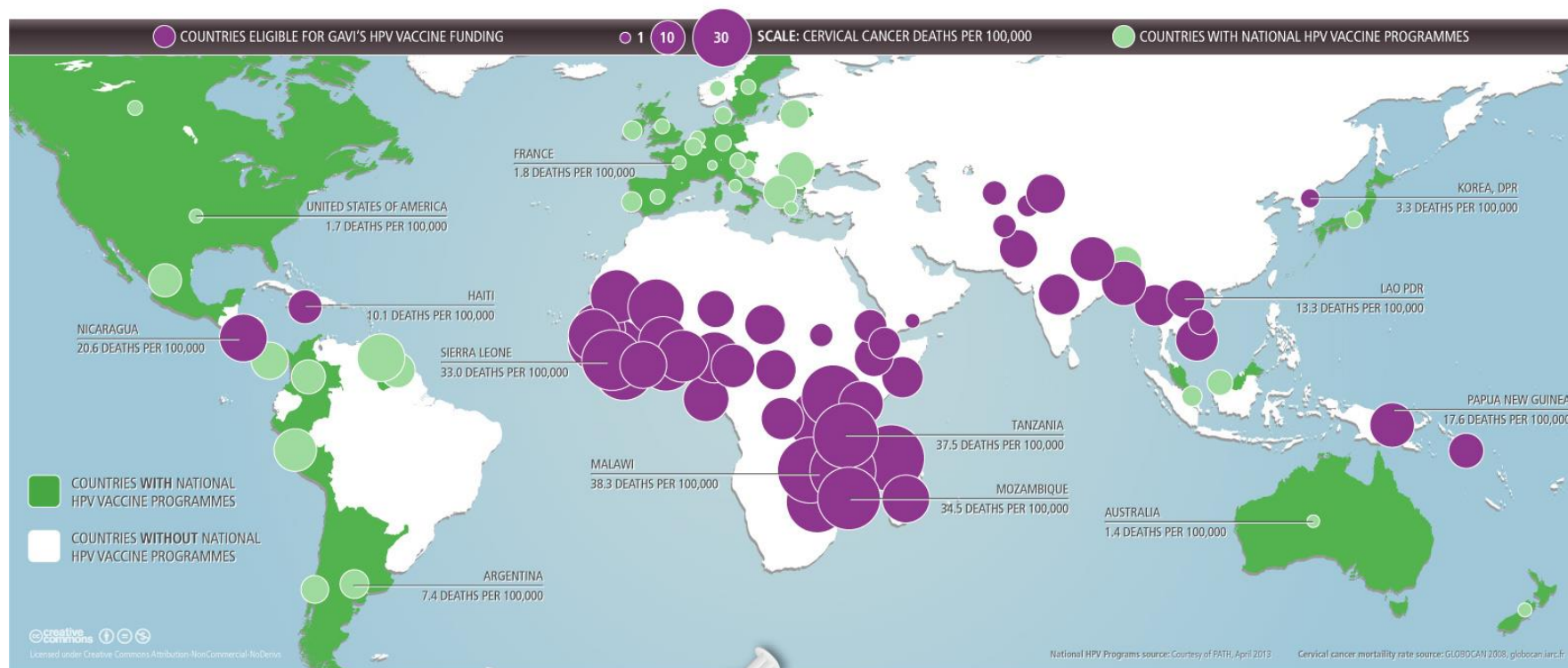




SAVING LIVES AND PROTECTING
HEALTH THROUGH IMMUNISATION
IN DEVELOPING COUNTRIES

GAVI ALLIANCE TACKLES CERVICAL CANCER

EVERY YEAR, 275,000 WOMEN DIE OF CERVICAL CANCER. OVER 85% OF THOSE DEATHS ARE IN DEVELOPING COUNTRIES



CHANGING THE BALANCE



GAVI's support for HPV vaccines will help redress the inequity, delivering vaccines to countries with the highest burden.

ABOUT HPV VACCINE



Safe and effective, human papillomavirus (HPV) vaccines protect against 70% of cervical cancer.

LOWERING THE PRICE



The new low price of US \$4.50 per dose marks a two-thirds reduction on the current lowest public sector price.

DRAMATIC ACCELERATION

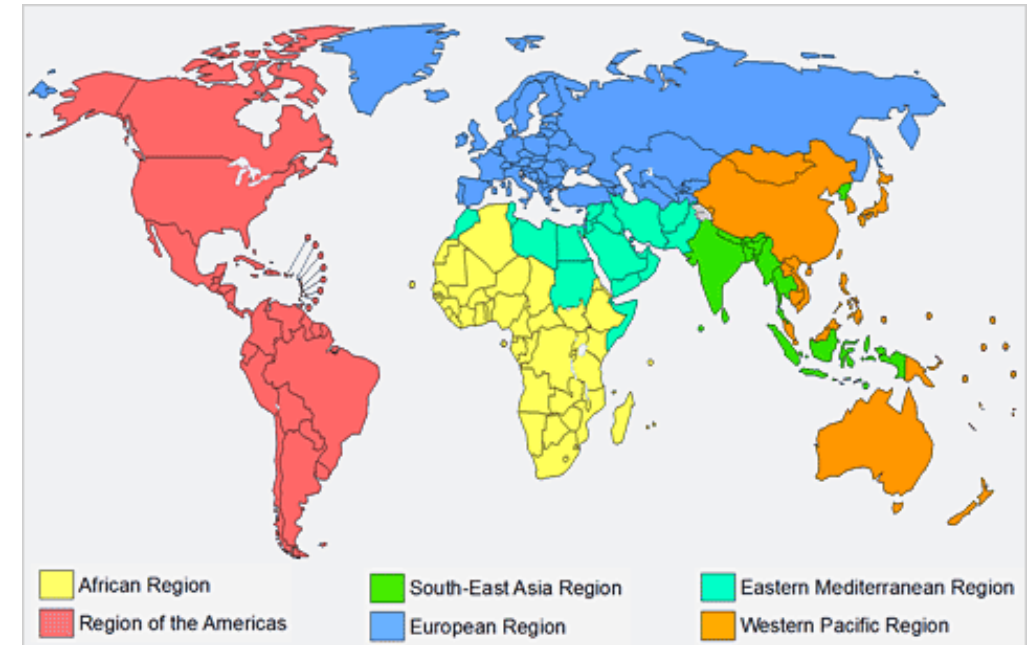
By 2020, over **30 million girls** in more than **40 countries** will be vaccinated against HPV

The first GAVI-supported HPV vaccines will be delivered in May 2013.

- **Esquema**
 - Partículas *vírus-like*; recombinante
 - 0 – 6 meses

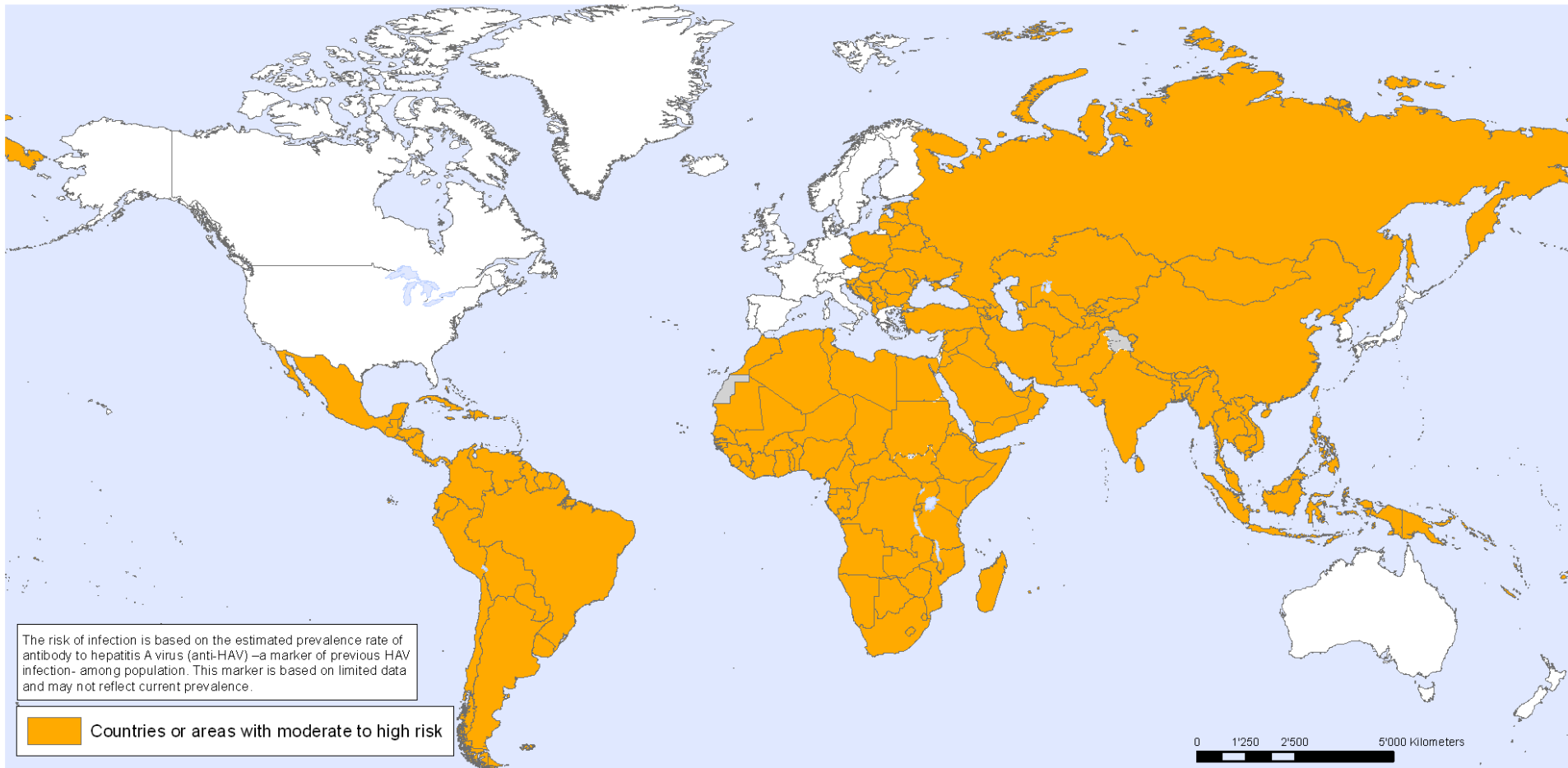
HPV

- 29 países na Europa
- 21 países em África (+ 3 em 2017/2018)
- 19 países das Américas (+1 2017; + 1 “grupos especiais”)
- 2 países do Mediterrâneo
- 2 países do Sudoeste-Asiático
- 14 países do Pacífico Ocidental



VACINA CONTRA HEPATITE A

Hepatitis A, countries or areas at risk



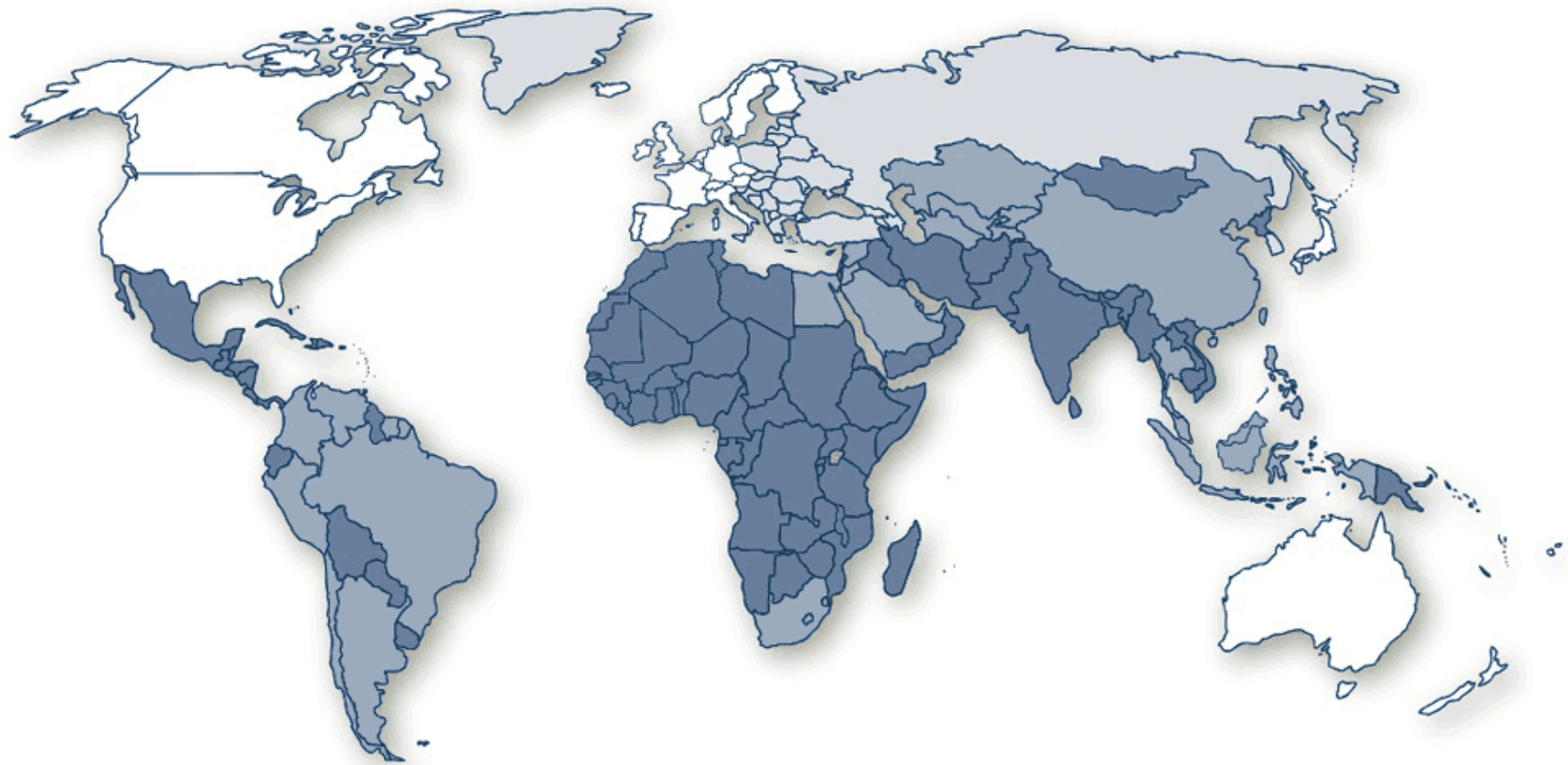
The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

Data Source: World Health Organization.
Jacobsen KH, Wiersma ST. Hepatitis A virus
seroprevalence by age and world region,
1990 and 2005. *Vaccine* 2010 Sep;28(41):6653-7
Map Production: Public Health Information
and Geographic Information Systems (GIS)
World Health Organization

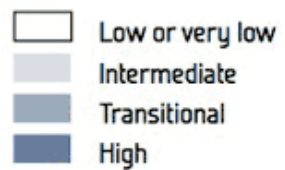


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Hepatitis A Antibody Prevalence



Anti-hepatitis A antibody prevalence



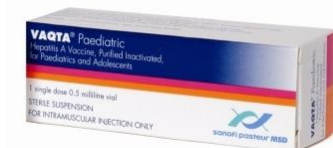
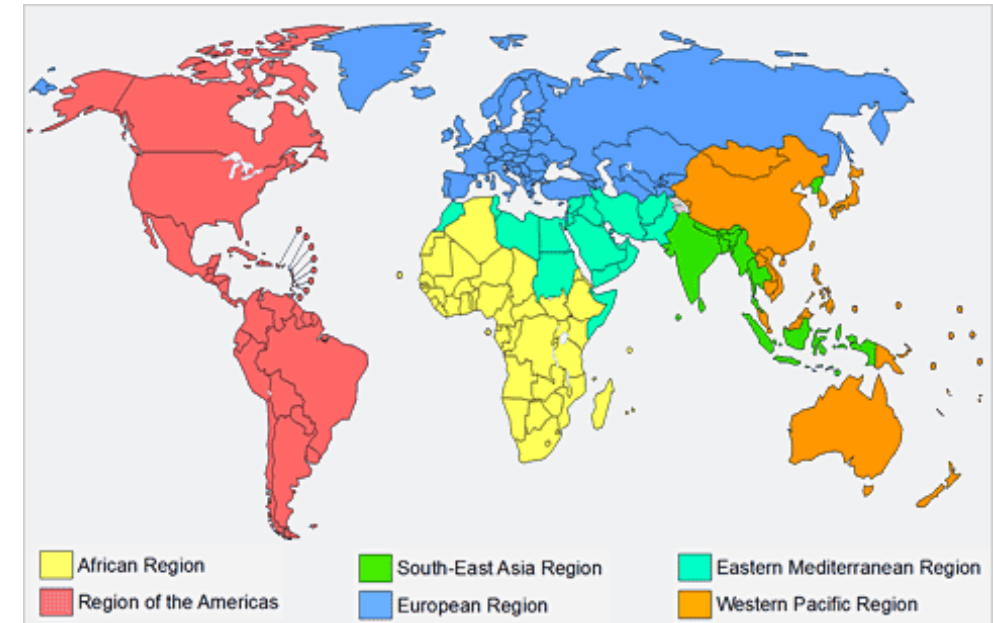
- **high** ($\geq 90\%$ by age 10 y);
- **intermediate** ($\geq 50\%$ by age 15 y, with $< 90\%$ by age 10 y);
- **low** ($\geq 50\%$ by age 30 y, with $< 50\%$ by age 15 y);
- **very low** ($< 50\%$ by age 30 y)

Acknowledgment: Adapted from: Expert Rev Vac 7:535, 2008.

- **Esquema**
 - Inactivada
 - > 1 ano de idade
 - 0 – 6 a 18 meses
 - Dose única?

Hepatite A

- **Europa**
 - Arménia, Grécia, Turquia
- **Américas**
 - Argentina, Colômbia, Panamá, Paraguai, Uruguai; Brasil e México (grupos de risco)
- **Mediterrâneo**
 - Bahrain, Qatar, Arábia Saudita; Emirados Árabes Unidos (grupos de risco)
- **Pacífico Oeste**
 - China, Mongólia, Coreia do Sul



VACINA CONTRA FEBRE AMARELA

Yellow Fever Vaccination Recommendations in the Americas, 2013

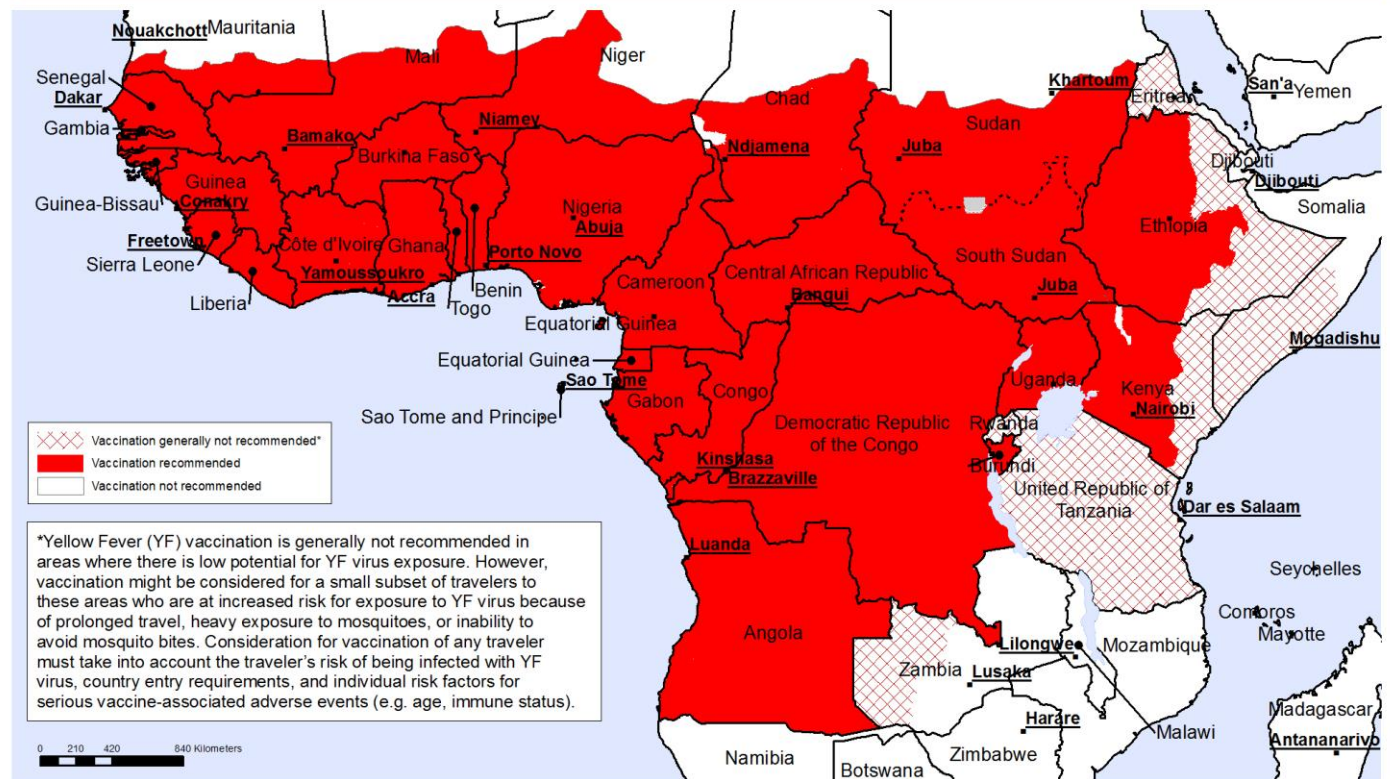


The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

Data Sources: World Health Organization
Yellow Fever Working Group



Yellow Fever Vaccination Recommendations in Africa, 2015



The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

Data Source: World Health Organization
Map Production: International Travel and Health
World Health Organization



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- **Esquema**

- Viva atenuada
- > 9 meses; dose única

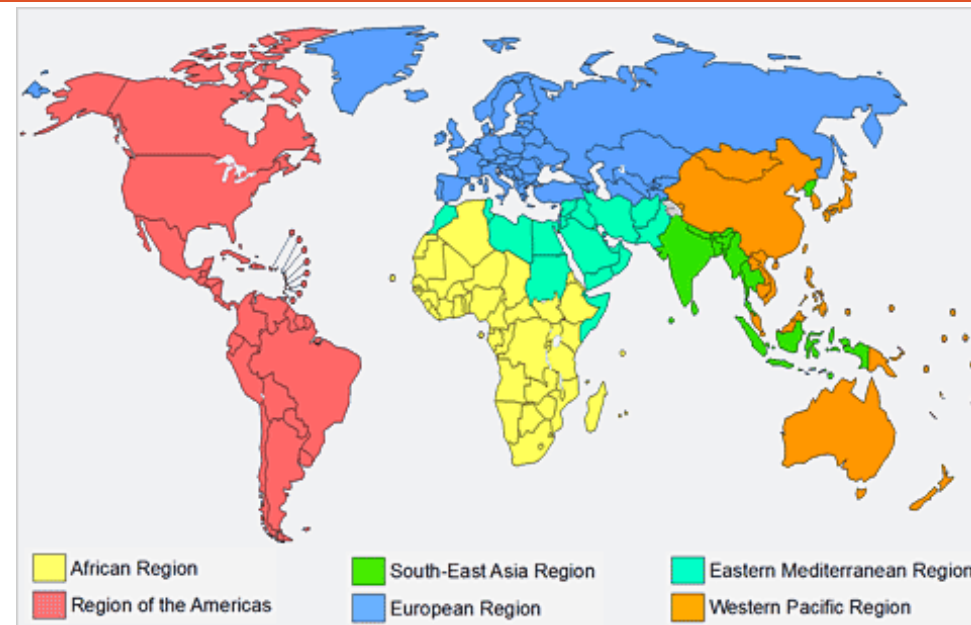
Febre amarela

- **23 países de África**

- Angola, Benim, Burkina Faso, Camarões, R. Centro Africana, Chade, Congo, Costa do Marfim, R.D. do Congo, Gabão, Gâmbia, Gana, Guiné-Conacri, Guiné-Bissau, Guiné Equatorial, Libéria, Mali, Níger, Nigéria, S. Tomé e Príncipe, Senegal, Serra Leoa, Togo

- **9 países da América**

- Bolívia, Colômbia, Guiana, Honduras, Paraguai, Perú, Suriname, Trinidad e Tobago, Venezuela



TODOS

- BCG
- HVB
- Polio
- DTP
- Hib
- VPN
- Rotavírus
- Sarampo
- Rubéola
- HPV

(updated: September 2016)

Table 1: Summary of WHO Position Papers - Recommendations for Routine Immunization						
Antigen		Children (see Table 2 for details)		Adolescents	Adults	Considerations (see footnotes for details)
Recommendations for all immunization programmes						
BCG ¹		1 dose				Exceptions HIV
Hepatitis B ²		3-4-doses (see footnote for schedule options)		3 doses (for high-risk groups if not previously immunized) (see footnote)		Birth dose Premature and low birth weight Co-administration and combination vaccine Definition high-risk
Polio ³		3-4 doses (at least one dose of IPV) with DTP				bOPV birth dose Type of vaccine Transmission and importation risk criteria
DTP ⁴		3 doses	Booster (DTP) 1-6 years of age	Booster (Td) (see footnote)	Booster (Td) in early adulthood	Delayed/interrupted schedule Combination vaccine Maternal immunization
Haemophilus influenzae type b ⁵	Option 1	3 doses, with DTP				Single dose if > 12 months of age Not recommended for children > 5 yrs old Delayed/interrupted schedule Co-administration and combination vaccine
	Option 2	2 or 3 doses, with booster at least 6 months after last dose				
Pneumococcal (Conjugate) ⁶	Option 1	3 doses, with DTP				Vaccine options Initiate before 6 months of age Co-administration HIV+ and preterm neonates booster
	Option 2	2 doses before 6 months of age, plus booster dose at 9-15 months of age				
Rotavirus ⁷		Rotarix: 2 doses with DTP RotaTeq: 3 doses with DTP				Vaccine options Not recommended if > 24 months old
Measles ⁸		2 doses				Combination vaccine; HIV early vaccination; Pregnancy
Rubella ⁹		1 dose (see footnote)		1 dose (adolescent girls and/or child bearing aged women if not previously vaccinated; see footnote)		Achieve and sustain 80% coverage Combination vaccine and Co-administration Pregnancy
HPV ¹⁰				2 doses (females)		Target 9-13 year old girls Pregnancy Older age groups ≥ 15 years 3 doses HIV and immunocompromised

Regiões

- Encefalite Japonesa
- Febre amarela
- Encefalite da carraça

Populações de risco

- Meningocócica
- Hepatite A

(updated: September 2016)

Table 1: Summary of WHO Position Papers - Recommendations for Routine Immunization				
Antigen	Children (see Table 2 for details)	Adolescents	Adults	Considerations (see footnotes for details)
Recommendations for certain regions				
Japanese Encephalitis ¹¹	Inactivated Vero cell-derived vaccine: generally 2 doses Live attenuated vaccine: 1 dose Live recombinant vaccine: 1 dose			Vaccine options and manufacturer's recommendations; Pregnancy; Immunocompromised
Yellow Fever ¹²	1 dose, with measles containing vaccine			
Tick-Borne Encephalitis ¹³	3 doses (> 1 yr FSME-Immun and Encepur; > 3 yrs TBE-Moscow and EnceVir) with at least 1 booster dose (every 3 years for TBE-Moscow and EnceVir)			Definition of high-risk Vaccine options; Timing of booster
Recommendations for some high-risk populations				
Typhoid ¹⁴	Vi polysaccharide vaccine: 1 dose; Ty21a live oral vaccine: 3-4 doses (see footnote). Booster dose 3-7 years after primary series			Definition of high-risk Vaccine options
Cholera ¹⁵	Dukoral (WC-rBS): 3 doses ≥ 2-5 yrs, booster every 6 months; 2 doses adults/children > 6 yrs, booster every 2nd year; Shanchol & mORCVAX: 2 doses ≥1 yrs, booster dose after 2 yrs			Minimum age Definition of high-risk
Meningococcal ¹⁶	MenA conjugate	1 dose 9-18 months (5µg)		2 doses if < 9 months with 8 week interval
	MenC conjugate	2 doses (2-11 months) with booster 1 year after 1 dose (≥12 months)		Definition of high-risk; Vaccine options
	Quadrivalent conjugate	2 doses (9-23 months) 1 dose (≥2 years)		
Hepatitis A ¹⁷	At least 1 dose ≥ 1 year of age			Level of endemicity; Vaccine options; Definition of high risk groups
Rabies ¹⁸	3 doses			Definition of high-risk; Booster
Dengue (CYD-TDV) ¹⁹	3 doses 9-45 years of age			Seroprevalence; Pregnancy & lactation
Recommendations for immunization programmes with certain characteristics				
Mumps ²⁰	2 doses, with measles containing vaccine			Coverage criteria > 80% Combination vaccine
Seasonal influenza (inactivated tri- and quadri-valent) ²¹	First vaccine use: 2 doses Revaccinate annually: 1 dose only (see footnote)	Priority for pregnant women 1 dose ≥ 9 years of age Revaccinate annually		Priority risk groups Lower dosage for children 6-35 months
Varicella ²²	1 - 2 doses	2 doses		Achieve & sustain ≥ 80% coverage Pregnancy Co-admin with other live vaccines

Tabla 1. Calendario de vacunación recomendado para las personas de 0 a 18 años de edad

Vacuna		Meses										Años				
		RN	2	3	4	5	6	12	15	18	23	2-3	4-6	9	10-12	13-17
BCG ¹		X														
Hepatitis B ² (HepB)		X	X				X									
Haemophilus influenzae tipo b ³ (Hib)			X		X		X		X							
Difteria, Tétanos y Pertussis acelular (DTPa) o Difteria, Tétanos y Pertussis de células enteras DTP ⁴			X		X		X		X				X			
Tétanos, Difteria y Pertussis acelular (dTpa) ⁵ Difteria, Tétanos Y Pertussis acelular en el adulto (dTpa)														X		
Difteria y Tétanos (dT) ⁶														X		
Polio Inactivada ⁷ (VPI)			X		X		X						X			
Neumocócica conjugada ⁸ (VPC)			X		X			X								
Sarampión-Rubéola- Parotiditis ⁹ (SRP)								X				X				
Varicela ¹⁰ (VAR)								X				X				
Influenza ¹¹							X									
Rotavirus ¹² (VR) VR-1 (2 dosis) y VR-5 (3 dosis*)			X		X		X*									
Hepatitis A ¹³ (HepA)								X								
Virus Papiloma Humano ¹⁴ (VPH2 y VPH4)														X		
Meningocócica ¹⁵	conjugada C		Indicadas en calendario, según epidemiología regional, así como en el control de brotes epidémicos y en las personas con factores de riesgo de infección.													
	conjugada ACWY															
	serogrupo B															
Fiebre amarilla ¹⁶ (FA)			Indicadas en calendario, según epidemiología regional, así como en el control de brotes epidémicos y en las personas con factores de riesgo de infección.													

Tabla 7. Recomendaciones de calendario de vacunación infantil para Iberoamérica

VACUNA		Meses						Años								
		RN	2	4	6	12	15	18	2-3	4-6	9	10	11	12	13- 14	> 14
BCG ¹		X														
Hepatitis B ² (HepB) (0-2-6m / 2-4-6 m)		X	X	X*	X											
Haemophilus influenzae tipo b ³ (Hib)			X	X	X		X									
Difteria, Tétanos y Pertussis acelular (DTPa) ⁴			X	X	X		X			X						
Tétanos, Difteria y Pertussis acelular (Tdpa) ⁵												X				
Polio Inactivada ⁶ (VPI)			X	X	X				X							
Neumocócica conjugada ⁷ (VNC). VNC13 y VNC10			X	X	X**	X										
Sarampión-Rubeola- Parotiditis ⁸ (SRP)						X			X							
Varicela ⁹ (VAR)						X			X							
Gripe (Influenza) ¹⁰ (VIT)					X											
Rotavirus ¹¹ (VR). VR1 (2 dosis) y VR5 (3 dosis)			X	X	X***											
Hepatitis A ¹² (HepA)						X			X							
Virus Papiloma Humano ¹³ (VPH2 y VPH4)											X					
Meningocócica	conjugada C ¹⁴		Indicadas en calendario, según epidemiología regional, así como en el control de brotes epidémicos y en las personas con factores de riesgo de infección													
	conjugada ACWY ¹⁵															
	serogrupo B ¹⁶															

Country	Antigens	Description	Schedules	Entire country	Comments
Africa					
Angola	BCG	Bacille Calmette-Guérin vaccine	birth;	Yes	<1 year
	DTwPHibHepB	Diphtheria and Tetanus and Pertussis and Haemophilus influenzae and Hepatitis B vaccine	2, 4, 6 months;	Yes	
	HPV	Human Papillomavirus vaccine		Yes	From 2018
	Measles	Measles vaccine	9, 15 months;	Yes	
	OPV	Oral polio vaccine	Birth; 2, 4, 6 months;	Yes	
	Pneumo_conj	Pneumococcal conjugate vaccine	2, 4, 6 months;	Yes	
	Rotavirus	Rotavirus vaccine	2, 4 months;	Yes	From April 2014
	Rubella	Rubella vaccine		Yes	From 2017
	TT	Tetanus toxoid vaccine	1st contact pregnancy; +1, +6 months; +1, +1 year;	Yes	CBAW
	Td	Tetanus and diphtheria toxoid for older children / adults vaccube	14 years; +1, +6 months; +1,+1 years;	Yes	
	VitaminA	Vitamin A supplementation	6, 9 months;	Yes	
	YF	Yellow fever vaccine	9 months;	Yes	

Unless otherwise specified, data provided by Member States through WHO-UNICEF Joint Reporting Form and WHO Regional offices.

Antigens

BCG

DTwPHibHepB

HPV

Measles

OPV

Pneumo_conj

Rotavirus

Rubella

TT

Td

VitaminA

YF



PNV 2017 –

Hebatite B

**Infeções por Haemophilus
influenzae b**

Difteria, tétano, tosse convulsa*

Poliomielite

**Infeções por Streptococcus
pneumoniae**

**Infeções por Neisseria
meningitidis C**

**Sarampo, Parotidite epidémica,
Rubéola**

**Infeções por vírus do Papiloma
humano ****



Serologic testing to verify the immune status of internationally adopted children against vaccine preventable diseases[☆]

Mary Allen Staat^{a,b,c,e,*}, Laura Patricia Stadler^f, Stephanie Donauer^{a,d,e}, Indi Trehan^g, Marilyn Rice^{a,b,c,e}, Shelia Salisbury^{a,d,e}

• Abstract

- Definitive immunization guidelines for internationally adopted children are lacking. We examined whether these children had serologic evidence of protection against vaccine-preventable diseases. For children with ≥ 3 vaccine doses, **overall protection was high** for **diphtheria** (85%), **tetanus** (95%), **polio** (93%), **hepatitis B** (77%), **and Hib** (67%). For children ≥ 12 months of age with ≥ 1 dose of **measles, mumps, or rubella vaccines**, 95%, 72%, and 94% were immune, respectively. **Children without immunization documentation had lower immunity**. Serologic testing was useful in verifying the immunization status in internationally adopted children with and without documentation of immunizations

• Conclusions

- In our study, the vast majority of internationally adopted children had serological evidence of protective antibodies to most vaccine antigens. Our country-specific data indicate that in children with immunization documentation, most had protective antibody levels. **Therefore neither re-immunization nor serologic testing is needed, the record can be accepted as valid and the immunization series should be completed as appropriate for the child's age.** Our study results provide additional data for evidence-based guidelines for immunization policy makers.

GUIDELINES FOR EVALUATING AND UPDATING IMMUNIZATIONS DURING THE DOMESTIC MEDICAL EXAMINATION FOR NEWLY ARRIVED REFUGEES

Summary

- Immunizations administered outside the United States can be accepted as valid if the schedule (minimum ages and intervals) was similar to that recommended in the United States.
- Written records are more likely to predict protection if the vaccines, dates of administration, intervals between doses, and the person's age at the time of vaccination are comparable to U.S. recommendations.

Quick Chart of Vaccine-Preventable Disease Terms in Multiple Languages

(Page 1 of 2)

Eastern European Languages								
English	Bosnian	Croatian	Polish	Romanian	Russian	Serbian	Slovak	Ukrainian
DTP	Detepe	Detepe		Di-Te-Per	АКДС	Detepe	DiTePe	
Diphtheria	difterija	difterije	przeciwno błonicy	difteriei	дифтерия	дифтерије	záškrt	дифтерії
<i>Haemophilus influenzae</i> type b	<i>Hemofilična influenza</i> tipa B	Haemophilus influenzae tipa b	Haemophilus influenzae typu b	Haemophilus influenzae tip b boala	гемофильной инфекции типа B	Хаеомphilус инфлуензае тип B болести	Haemophilus influenzae typ b ochorenia	гемофильної інфекції типу B захворювань
Hepatitis A	Žutica A, Hepatitis A	Žutica A, hepatitisa A	wirusowemu zapaleniu wątroby typu A	hepatita A	гепатит A	хепатитиса A	hepatitída A	гепатиту S
Hepatitis B	Žutica B, Hepatitis B	Žutica B, hepatitisa B	wirusowemu zapaleniu wątroby typu B	hepatita B	гепатит B	хепатитиса Б	hepatitída B	гепатиту B
Human papillomavirus	Ljudski papiloma virus	papilomavirusi čovjeka	wirus brodawczaka ludzkiego	papilomavirus uman	вирус папилломы человека	људски папилома вирус	ľudský papillomavírus	вірус папіломи людини
Influenza	gripa	gripe	grypa	gripa	грипп	грип	chripka	грипу
MMR	MMR					MMR		
Measles	rubeola	ospice	odra	pojarul	корь	Мале богиње	morbilli, osýpky	
Meningococcal conjugate		meningokoknog konjugirati	meningokokom sprzężenia	conjugate meningococice	менингококковая сопряженных	менингококне коњуговано	meningokokove j konjugovanou	менінгококова сполучених
Mumps	zauške	zaušnjaci	swinka	oreionul, oreion	свинка, ларотит	Заушке	parotitis	кір
Pertussis	veliki kašalj	kašalj hripavac	krztuścowi	tusei convulsive	коклюша	великог кашља	čierny kašeľ	кашлюку
Poliomyelitis	dječja paraliza	dječje paralize	polio	poliomiелita	полиомиелит	дечје парализе	detská obma	поліомієліту
Pneumococcal conjugate	upala płuća	pneumokoka konjugirano	skoniugowanej szczepionki pneumokokowej	pneumococic conjugat	пневмококковая конъюгированной	Пнеумоцоццал коњунговане	konjugovaná pneumokoková	пневмококковой конъюгированной
Rotavirus	Rotavirus	rotavirusa	rotavirusy	rotavirus	ротавірусной	рота-вируса	Ротавирус	ротавірусної

Ideias a reter

- As vacinas são fundamentais para prevenção e controlo de algumas das mais importantes doenças infecciosas em Pediatria
- Vacinas “universais” e vacinas “regionais”
- Mas... atenção à mobilidade das crianças e das doenças
- Os PNVs dos países de baixo e médio rendimento estão mais completos
- Vacina registada é vacina dada
- **Todos diferentes, todos iguais....**