„Praktické informace“ o infekčních nemocech

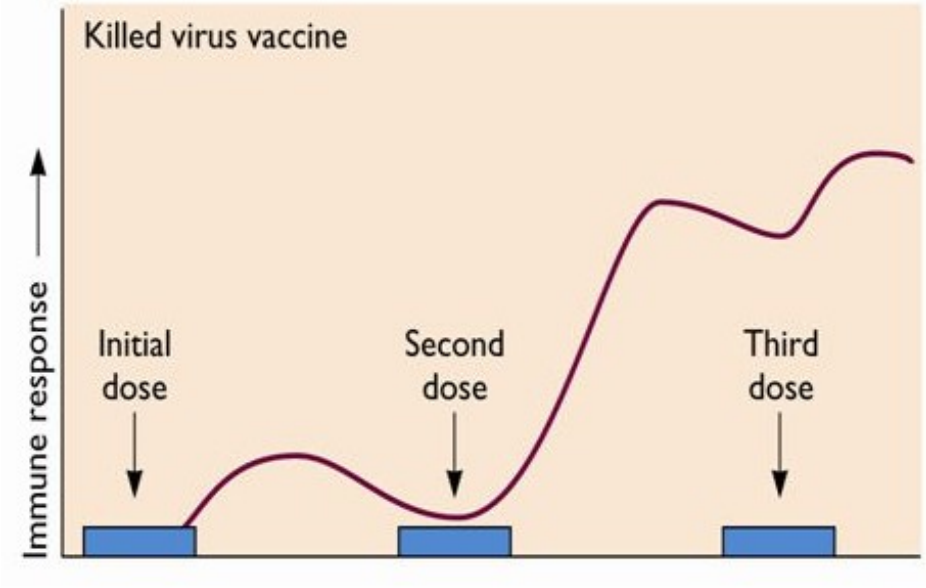
MUDr. Matúš Mihalčin
Klinika infekčních chorob FN Brno

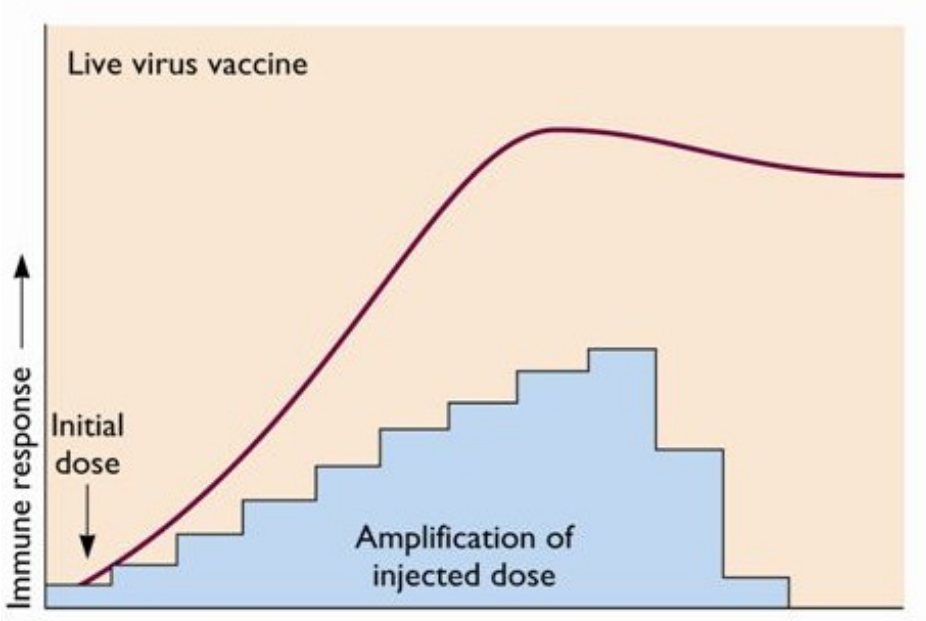
1. očkování

2. antibiotická rezistence

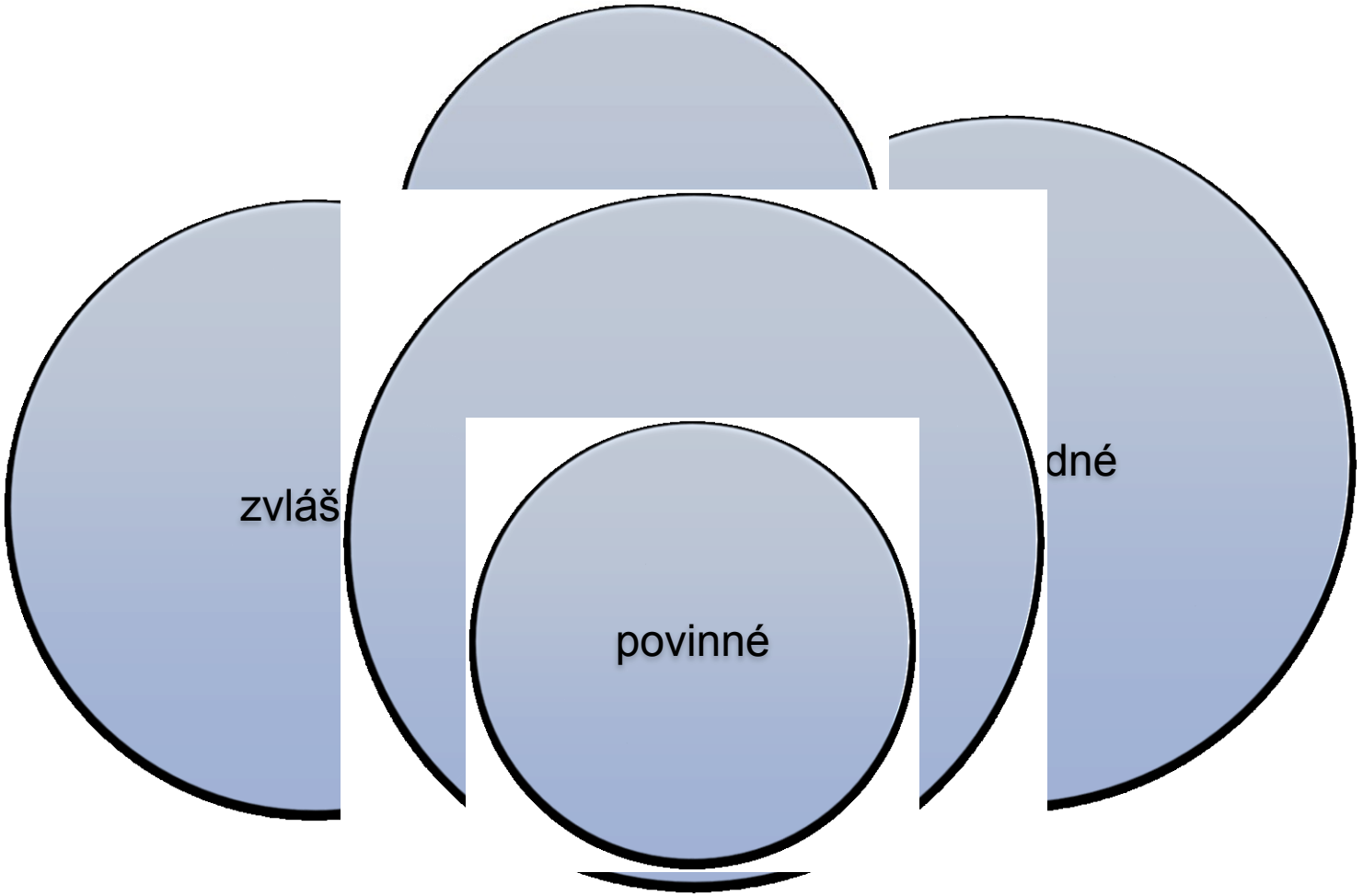
3. cestování a infekce

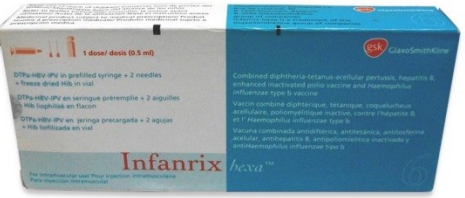
Očkování


Killed virus vaccine
Immune response
Initial dose
Second dose
Third dose


Live virus vaccine
Immune response
Initial dose
Amplification of injected dose

Typy očkování v ČR (podle úhrady ZP)





Očkování v ČR

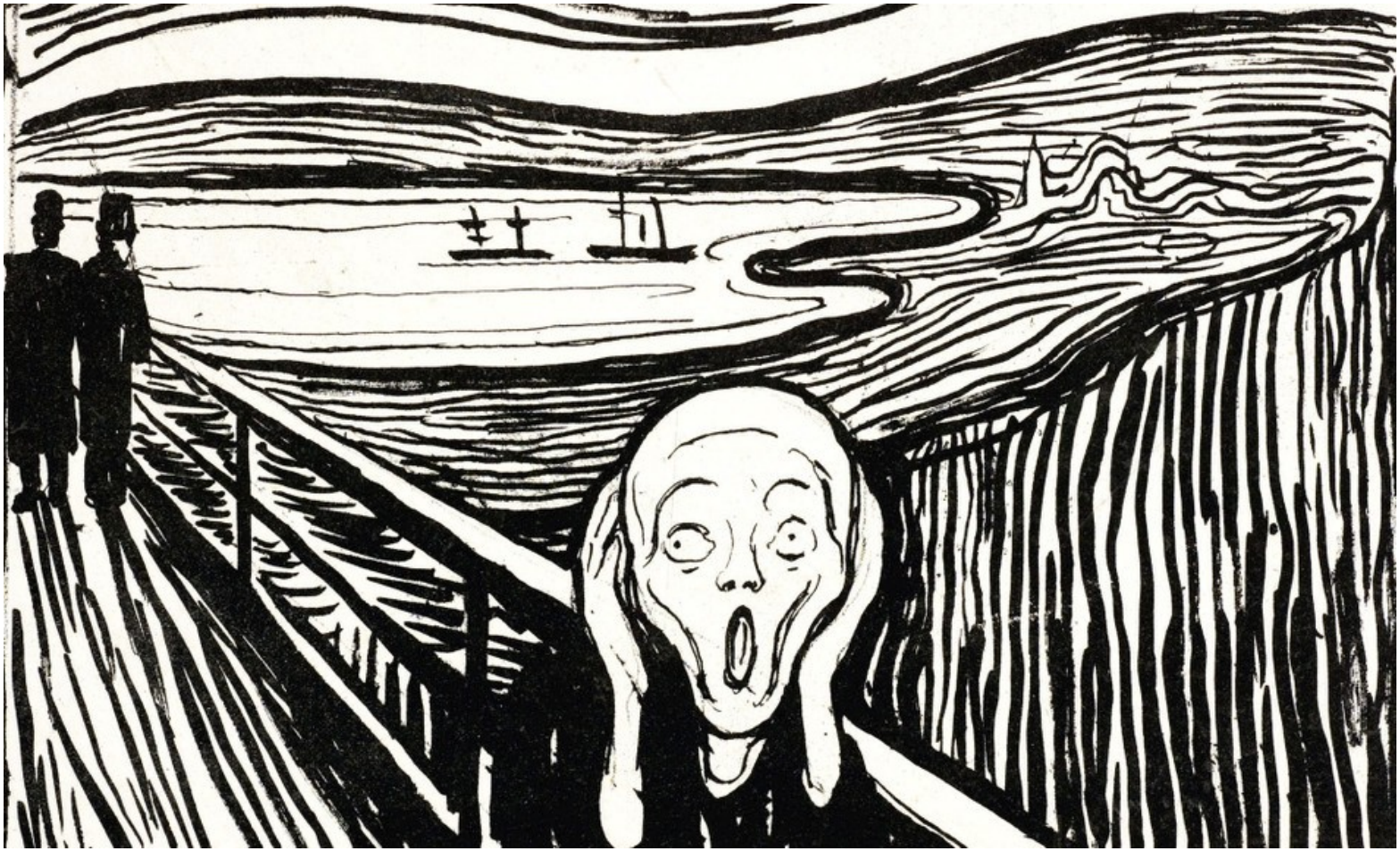
platné od 1.1.2018

- Od dovršeného 2. měsíce věku:
  „hexavakcína“ (1. rok 3 dávky)
  = záškrt, tetanus, černý kašel, dětská obrna, hepatitida B, onemocnění vyvolaná Haemophilus influenzae typu b -
  + pneumokoky (13 sérotypů)

- 13.–18. měsíc věku: „MMR vakcína“
  = spalničky, zarděnky, příušnice
  (2. dávka v 5.-6. roce)

- Individuálně: rotaviry, neštovice,
  papilomaviry, TBC, HAV, chřipka, …

Rizika očkování a kontroverze



Edvard Munch, Výkřik

Viz. prezentace očkování a COVID-19

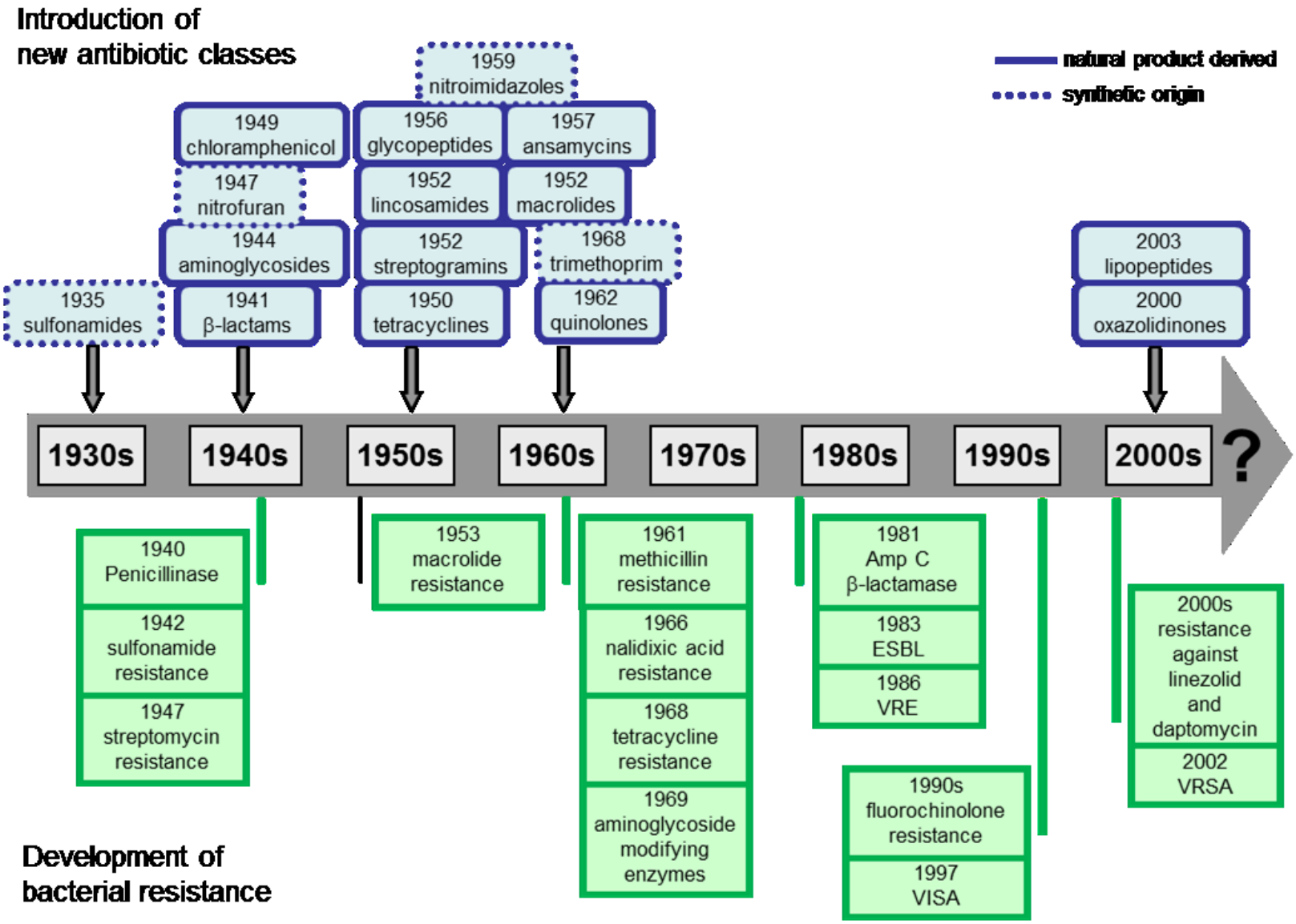
www.rosalio.cz

- „Již z pouhého pohledu na jednoduchou statistiku je však jasné, že situace je vážnější, než tvrdí. Ze stránek Státního ústavu pro kontrolu léčiv zjistíme, že za rok 2016 bylo vyhodnoceno jako závažné reakce na očkování MMR vakcínou celkem 127 případů.“

- Ročně je v ČR podáno přibližně 200 000 dávek vakcíny Priorix
- Roční statistika NÚ vypovídá pouze o tom, jaké NÚ byly daný rok SÚKL nahlášeny, jednotlivá hlášení obsahují pouze podezření na NÚ, nikoliv prokázanou kauzální souvislost.
- Nejčastěji hlášenou reakcí byla zvýšená teplota a horečka, která byla nahlášena v počtu 87 reakcí.
- Druhou nejčastěji hlášenou reakcí byla vyrážka nahlášená v počtu 48 reakcí.
- Infekce dýchacích cest a plic byly nahlášeny v počtu 29 případů.
- Reakce jako neklid, podrážděnost, mrzutost, abnormální či sebepoškozující chování byly nahlášeny v počtu 23 reakcí.
- Pláč a plačtivost byly nahlášeny v počtu 22 reakcí.

ATB rezistence

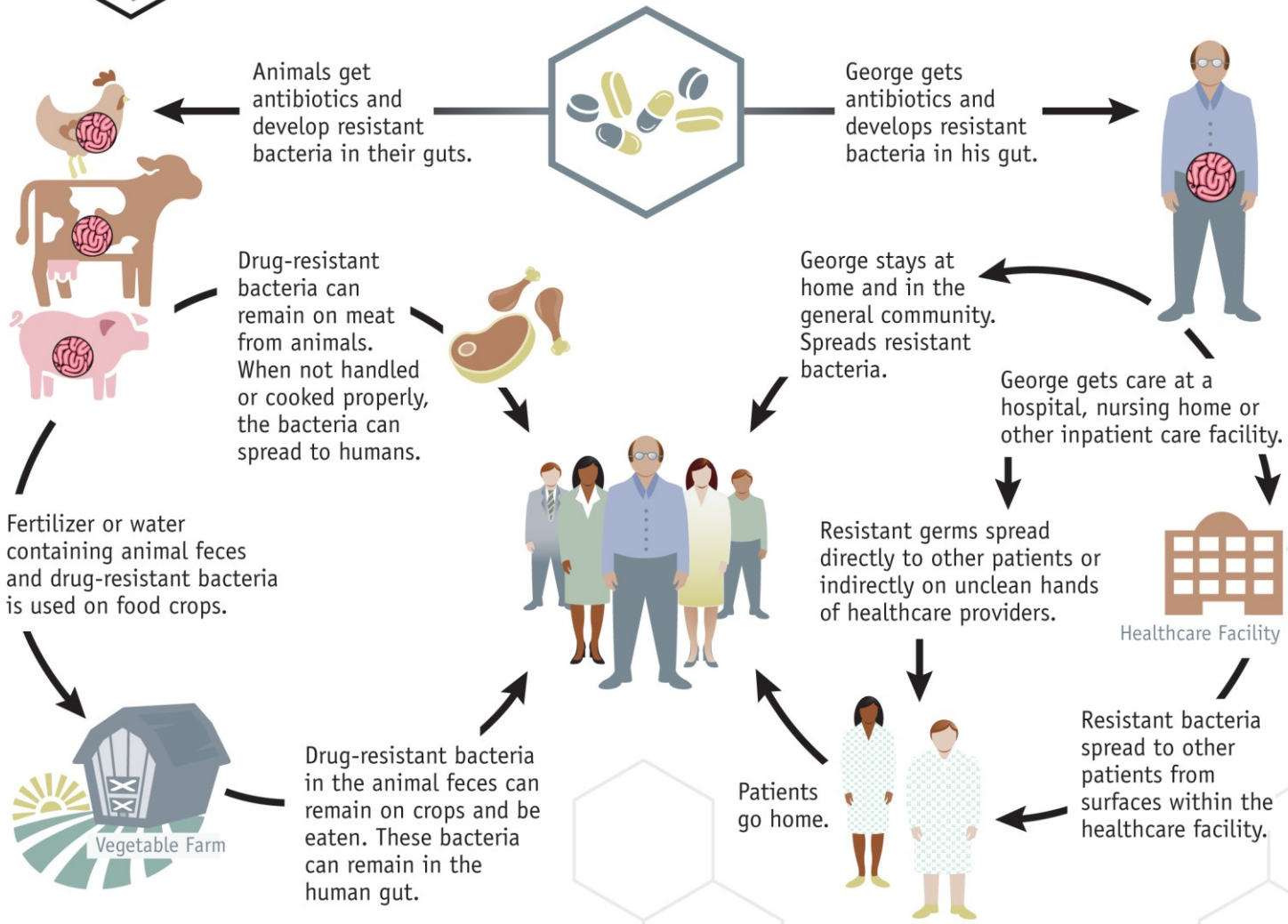
ATB rezistence



ATB rezistence

~~Peniciliny~~	(různé, ale hlavně MRSA)
~~Cefalosporiny~~ !!	(ESBL enterobaktérie)
~~Karbapenemy~~ !!!!!	(MBL a KPC enterobaktérií)
~~Flourochinolony~~	(Pseudomonas aeruginosa)
~~Aminoglykosidy~~	(Pseudomonas aeruginosa)
~~Glykopeptidy~~	(VRE, VRSA)

Examples of How Antibiotic Resistance Spreads



Simply using antibiotics creates resistance. These drugs should only be used to treat infections.

A GROWING CRISIS WORLDWIDE

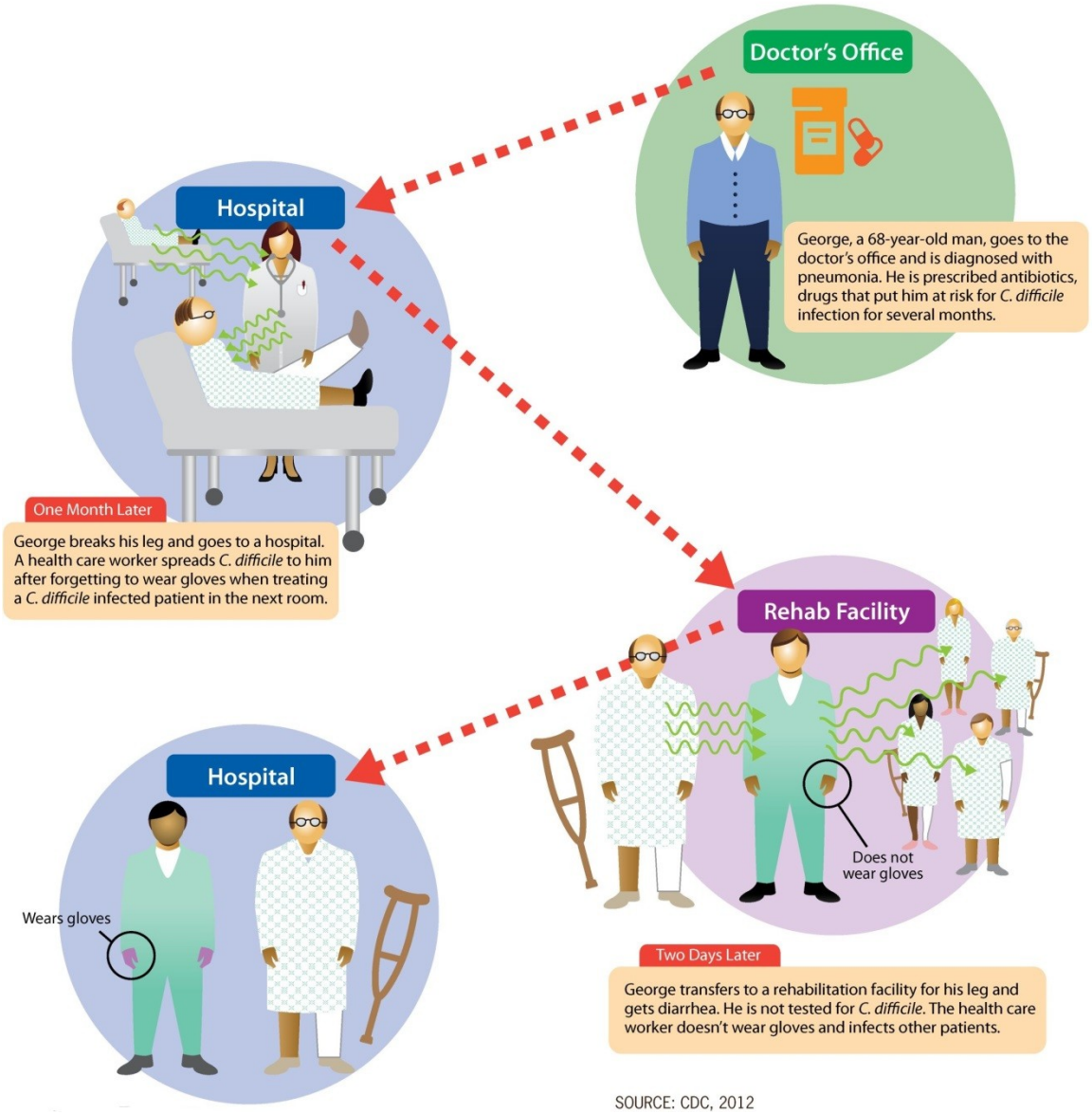
In the EUROPEAN UNION, antibiotic resistance causes 25,000 deaths per year and 2.5m extra hospital days[1]

In INDIA, over 58,000 babies died in one year as a result of infection with resistant bacteria usually passed on from their mothers[2]

In THAILAND, antibiotic resistance causes 38,000+ deaths per year and 3.2m hospital days[3]

In the UNITED STATES, antibiotic resistance causes 23,000+ deaths per year and >2.0m illnesses[4]

Klostridiová kolitida

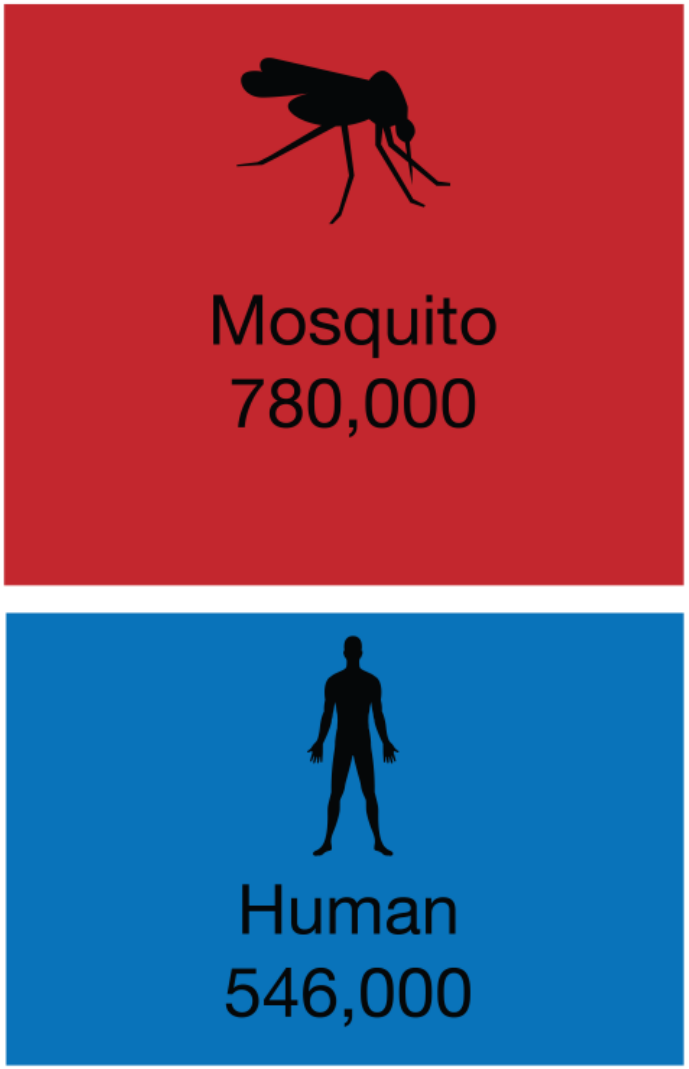


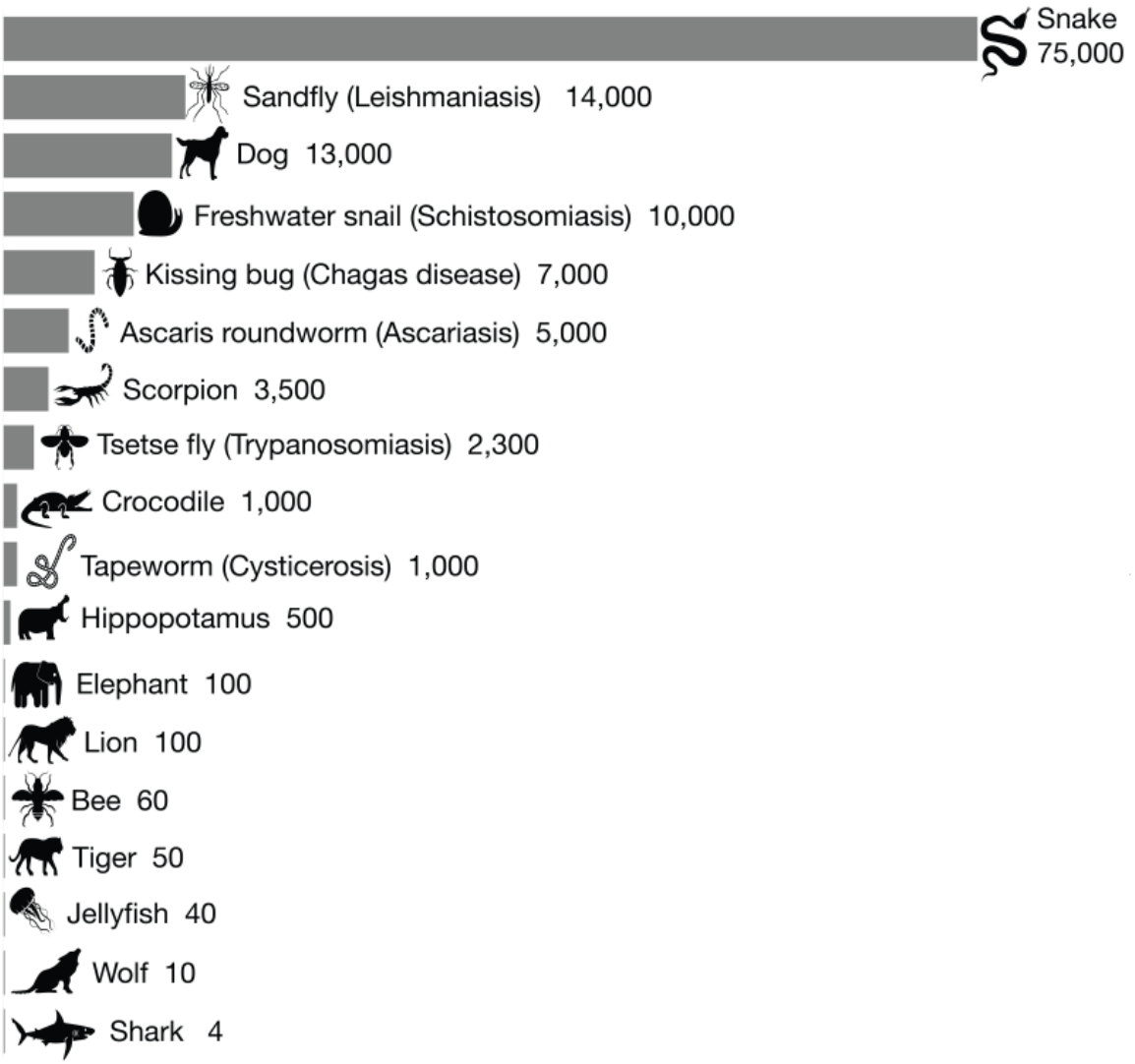
Kdy nasadit antibiotika?

Cestování a infekce

Deadliest animals: global deaths by animal, 2016

Our World in Data





Based on data by IHME, WHO, Shark Attack File, CrocBITE, GatesNotes, National Geographic, UN FAO, WWF. Logo source: Noun Project.
Global estimates for some animals have a significant error margin, but expected to be representative of relative magnitude.
The data visualization is available at OurWorldinData.org. There you find research and more visualizations on this topic.

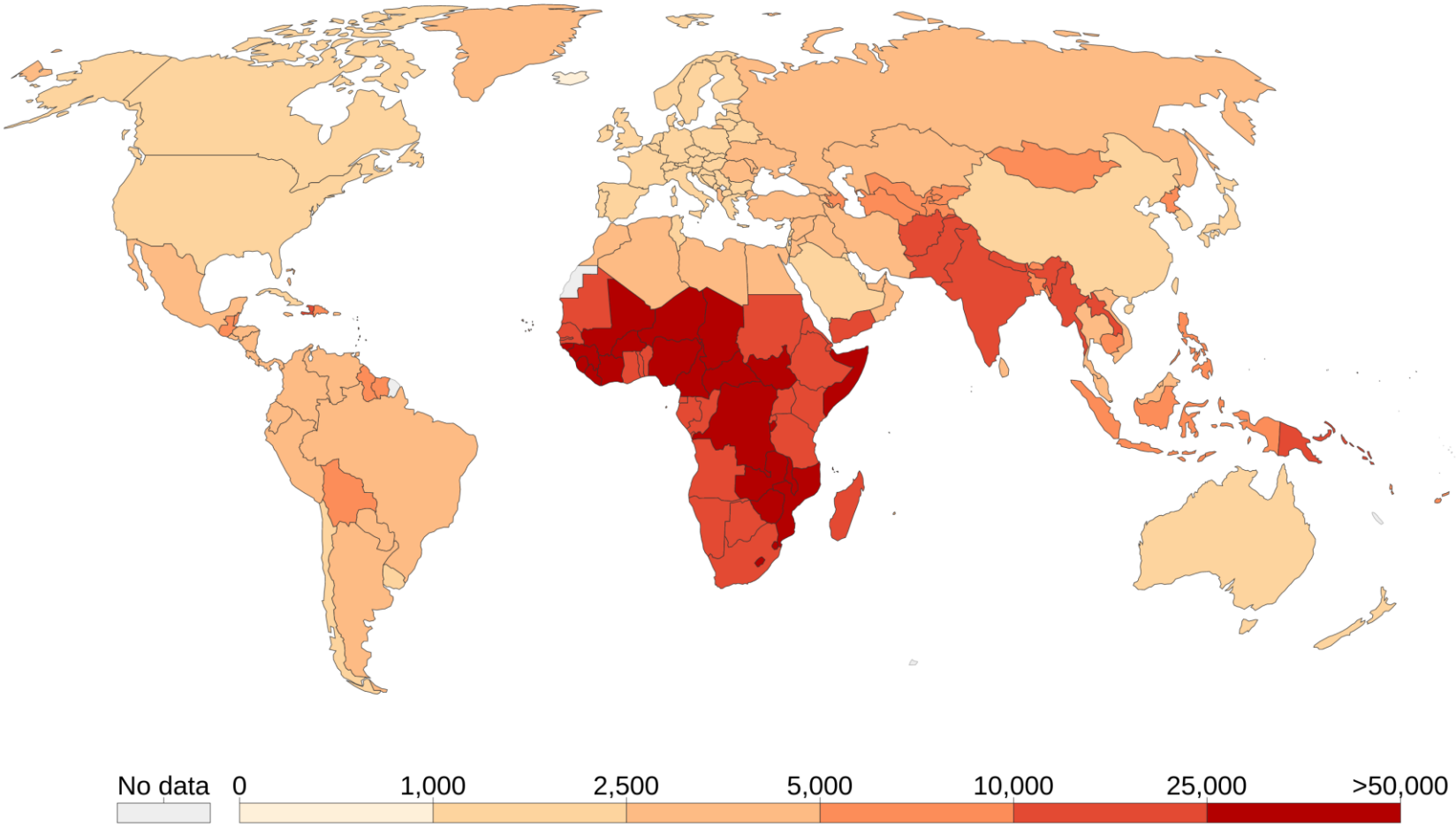
Infekce importované do ČR

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
VIR.HEPATITIS A	1648	1104	862	264	284	348	673	724	930	772
VIR.HEPATITIS E	65	99	72	163	258	218	299	412	339	344
SHIGELOZA	229	178	450	164	266	257	92	88	70	168
DENGUE	11	15	17	13	29	81	35	40	123	57
GIARDIASIS	79	47	51	45	49	46	42	33	45	28
MALARIE	22	11	13	28	27	27	31	29	38	27
ASCARIASIS	48	43	27	36	33	20	28	16	15	21
HH S RENALNIM SYNDROMEM	2	6	8	9	8	12	3	7	10	17
TAENIASIS	7	3	4	9	6	30	18	6	5	6
CRYPTOSPORIDIOSIS	0	0	1	0	4	2	1	2	2	5
TYPHUS ABDOMINALIS	4	3	4	3	2	0	3	1	0	4
AMOEBIASIS NS	11	5	18	6	17	11	16	9	21	4
JINE RICKETTSIOZY (mimo ehrlichiozu)	0	1	0	0	0	0	0	3	3	3
ENCEPHAL.VIR. KOMARI	1	0	1	0	1	0	0	1	0	2
LEISHMANIOZA	2	1	2	1	4	2	0	1	3	2
PARATYFUS A	1	1	1	2	4	2	2	1	2	1
PARATYFUS B	1	0	0	2	0	1	1	1	0	1
BRUCELOZA	1	0	1	0	0	0	0	0	1	1
ECHINOKOKOSIS	2	1	5	0	0	2	6	3	4	1
Q HORECKA	0	0	0	1	1	0	0	1	2	0
AKANTAMEBOZA	0	0	0	0	1	0	0	1	0	0
SCHISTOSOMOZA	2	1	4	0	7	0	1	10	1	0

zdroj: EPIDAT / ISIN (novější data nelze získat)

DALY rates from communicable, neonatal, maternal & nutritional diseases, 2017

Our World in Data



Source: IHME, Global Burden of Disease

Latest Disease Outbreak News

22 February 2020

Dengue fever – Chile

21 February 2020

Yellow fever – Uganda

20 February 2020

Ebola virus disease – Democratic Republic of the Congo

20 February 2020

Lassa Fever – Nigeria

12 January 2020

Novel Coronavirus – China

10 January 2020

Measles – occupied Palestinian territory

8 January 2020

Middle East respiratory syndrome coronavirus (MERS-CoV) – The United Arab Emirates

5 January 2020

Pneumonia of unknown cause – China

2 January 2020

Ebola virus disease – Democratic Republic of the Congo

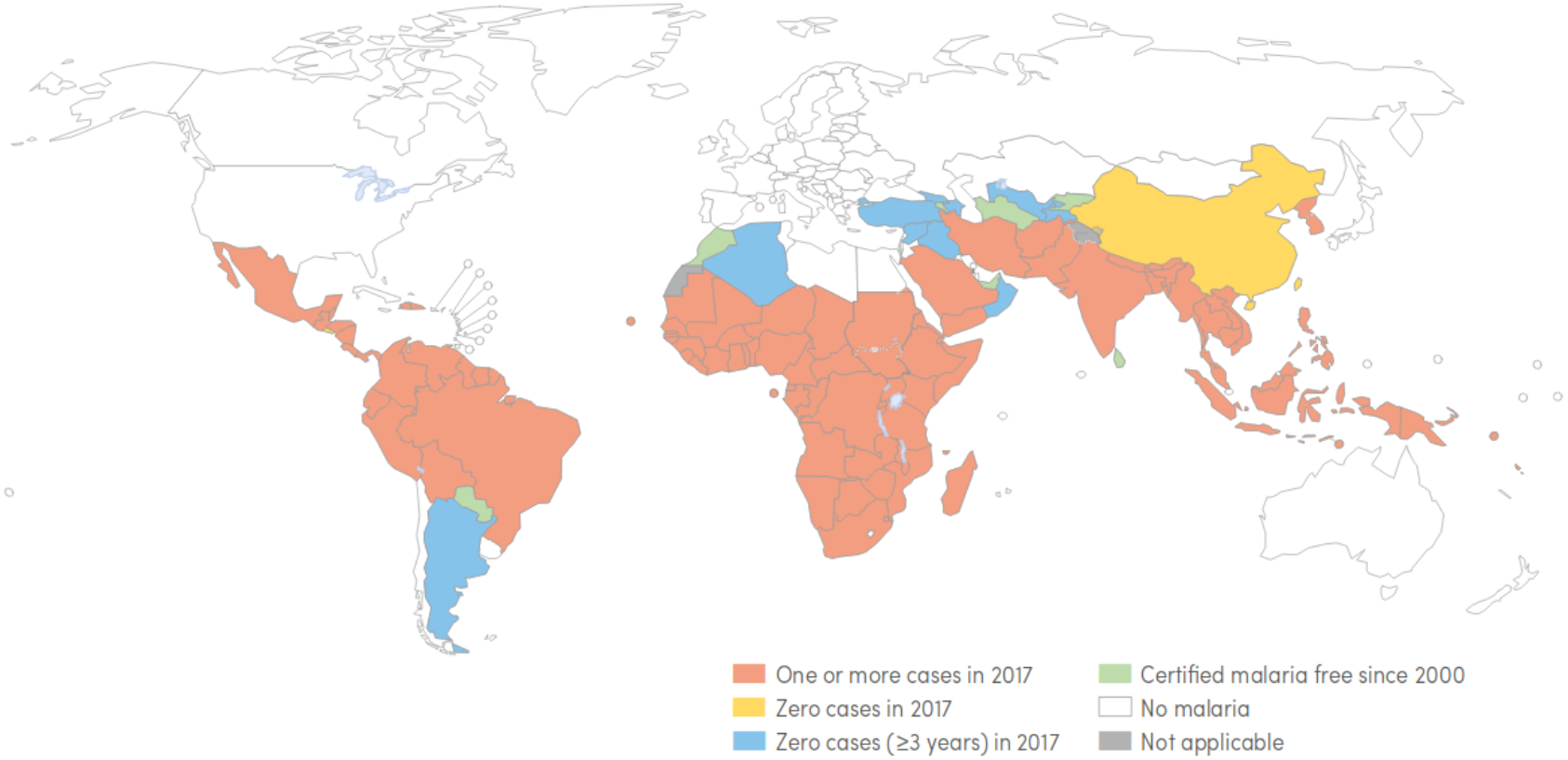
Cesta přenosu

- zvířetem (vč. hmyzu)
- jídlem / vodou (GEA, HAV, cholera, tyfus, …)
- vzduchem
- přímým kontaktem (vč. NKN)
- krví a pohlavním stykem (HBV, syfilis, HIV, …)

Infekce přenášené zvířetem

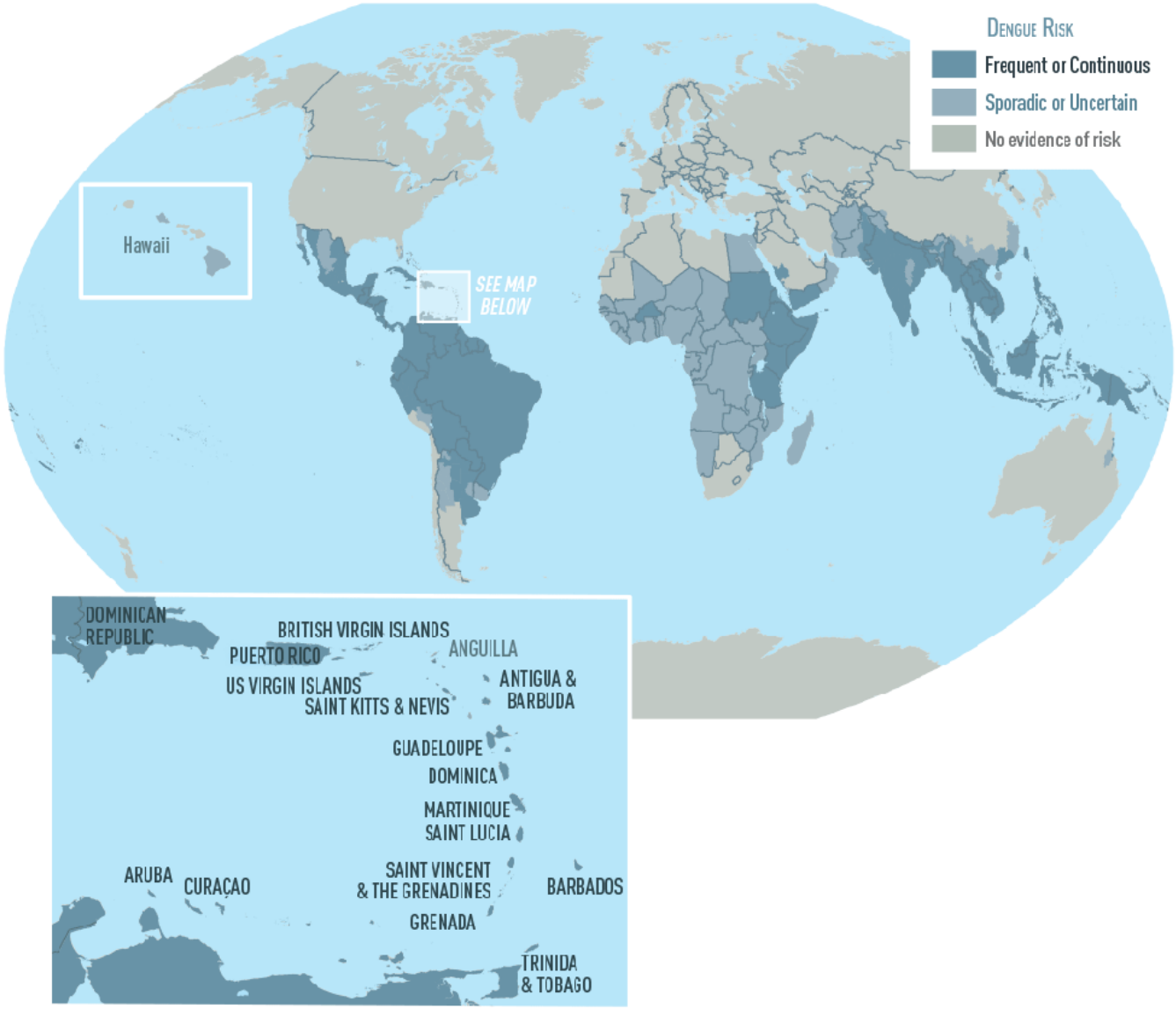
Malária

Countries with indigenous cases in 2000 and their status by 2017 Countries with zero indigenous cases over at least the past 3 consecutive years are considered to be malaria free. All countries in the WHO European Region reported zero indigenous cases in 2016 and again in 2017. In 2017, both China and El Salvador reported zero indigenous cases. *Source: WHO database.*

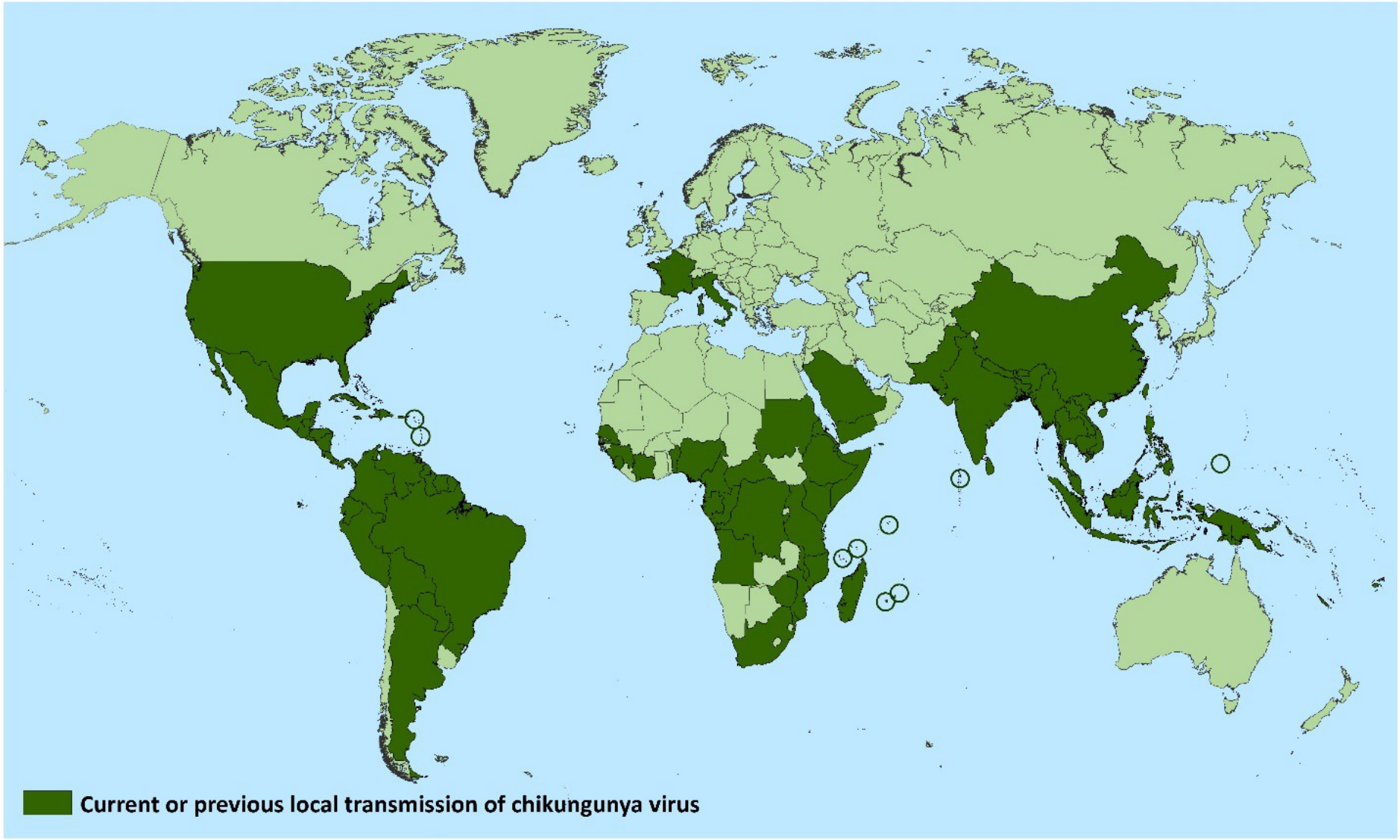


WHO: World Health Organization.

Dengue

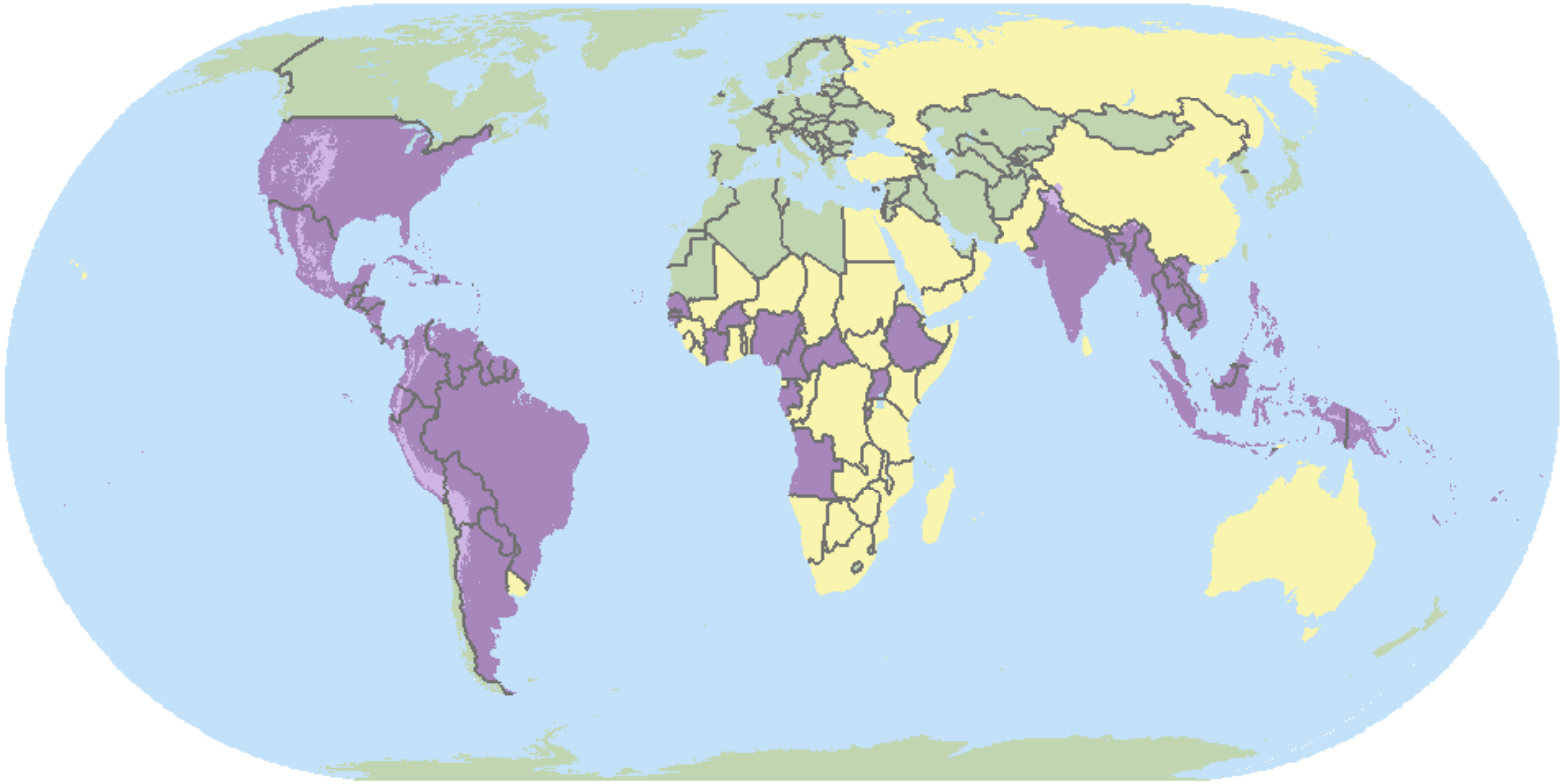

Dengue Risk
Frequent or Continuous
Sporadic or Uncertain
No evidence of risk
Hawaii
SEE MAP BELOW
DOMINICAN REPUBLIC
BRITISH VIRGIN ISLANDS
PUERTO RICO
ANGUILLA
US VIRGIN ISLANDS
ANTIGUA & BARBUDA
SAINT KITTS & NEVIS
GUADELOUPE
DOMINICA
MARTINIQUE
SAINT LUCIA
ARUBA
CURAÇAO
SAINT VINCENT & THE GRENADINES
BARBADOS
GRENADA
TRINIDA & TOBAGO

Chikungunya



Zika

World Map of Areas with Risk of Zika



Map Legend

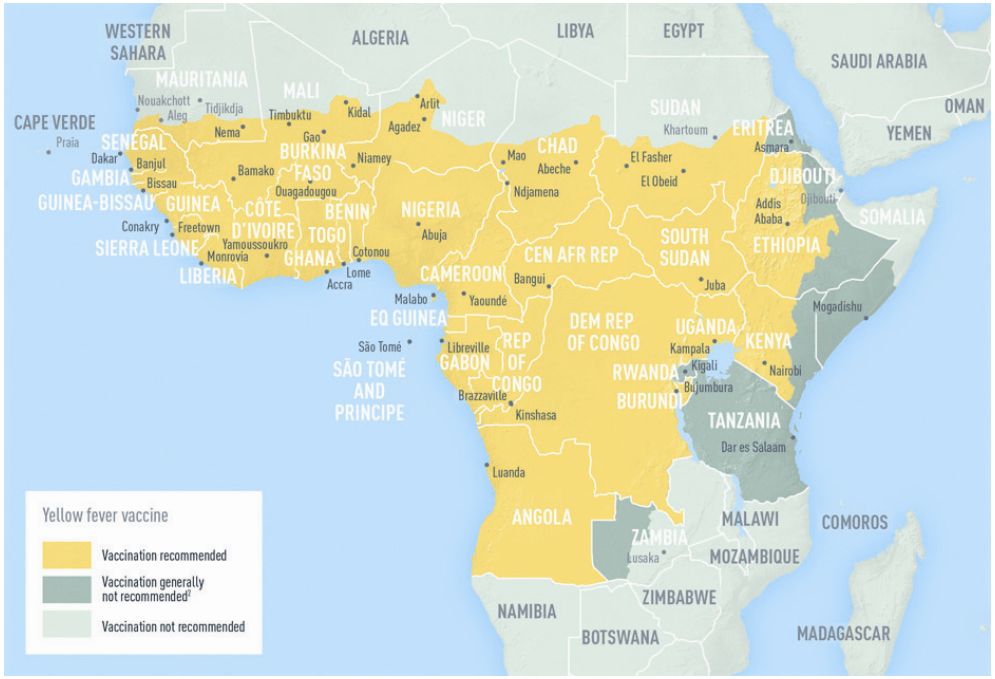
- Country or territory with current Zika outbreak[1]
- Country or territory that has ever reported Zika cases[2] (past or current)
- Areas with low likelihood of Zika infection because of high elevation (above 6,500 feet/2,000 meters)
- Country or territory with mosquito[3] but no reported Zika cases[2]
- Country or territory with no mosquitoes that spread Zika

[1] No areas are currently reporting Zika outbreaks

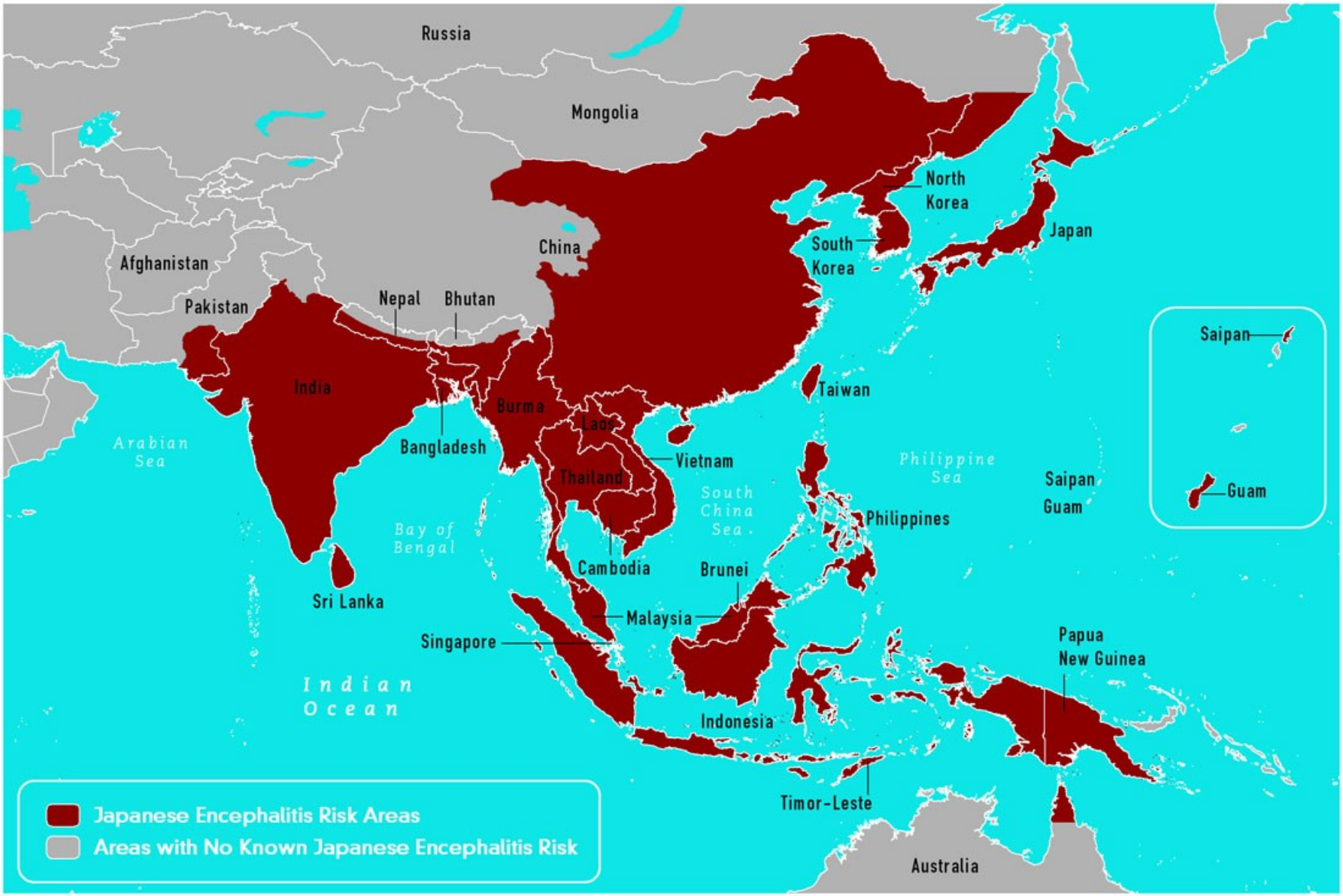
[2] Locally acquired, mosquito-borne Zika cases

[3] *Aedes aegypti*

Žlutá zimnice

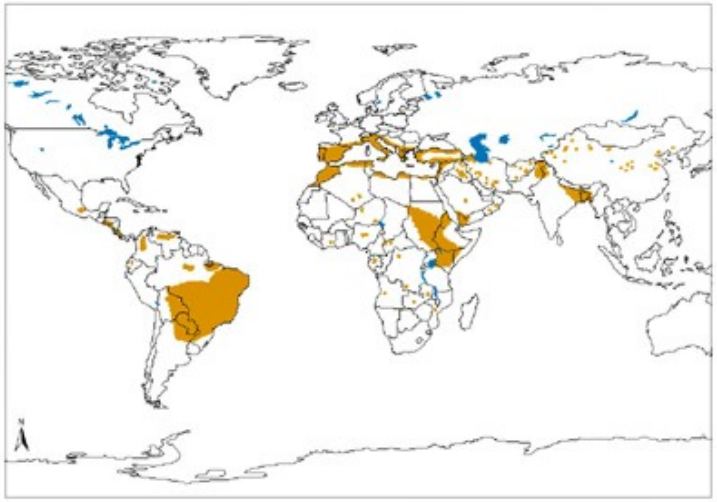


Japonská encefalitida

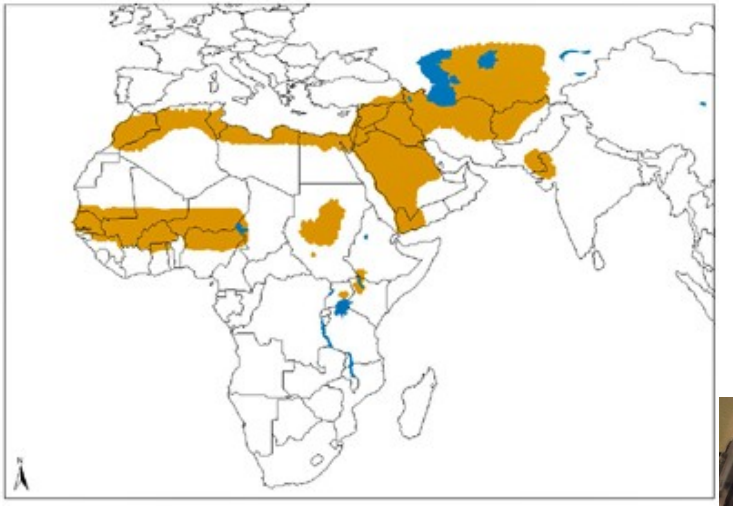


Leishmanióza

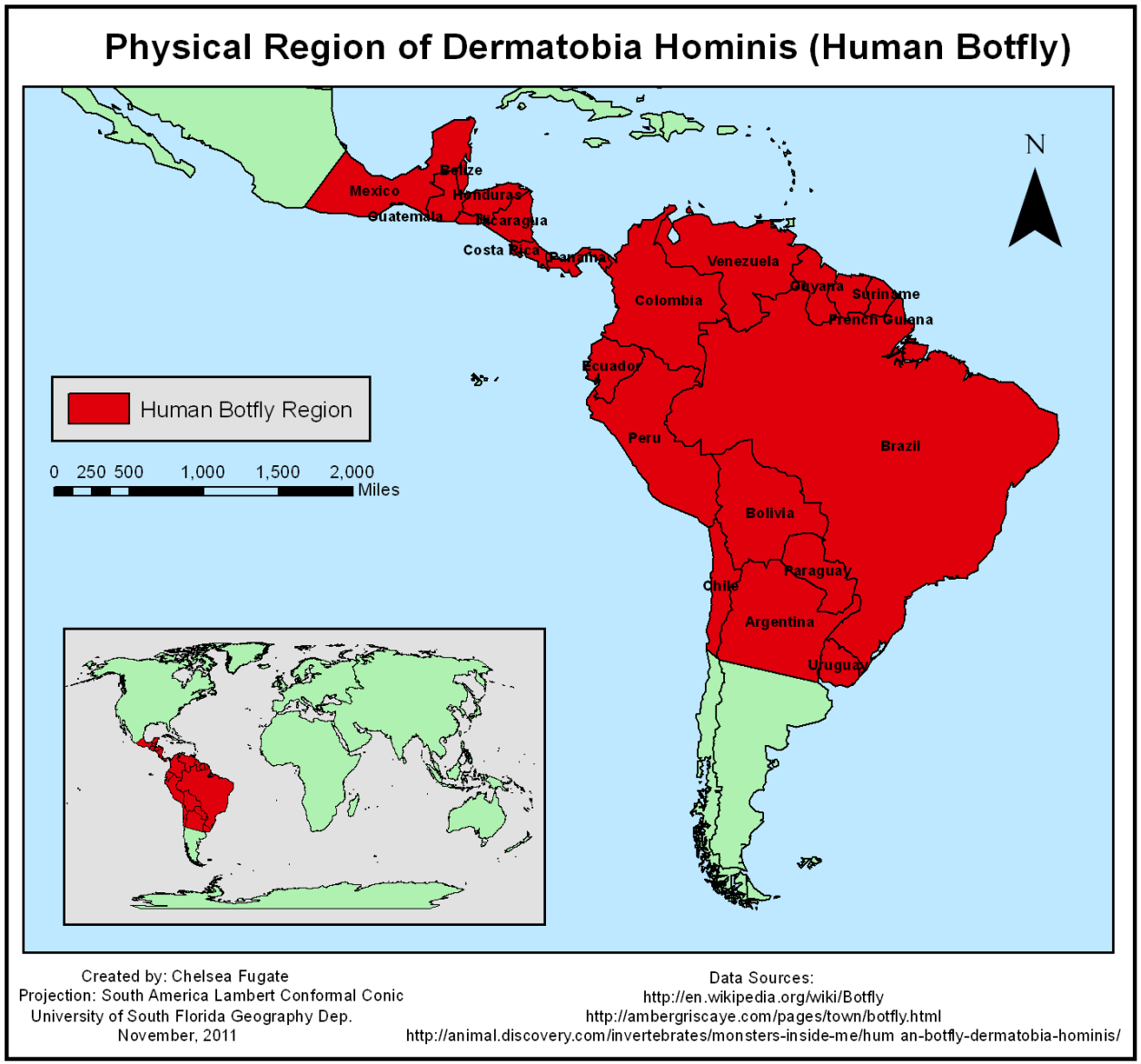
viscerální forma



kožní forma



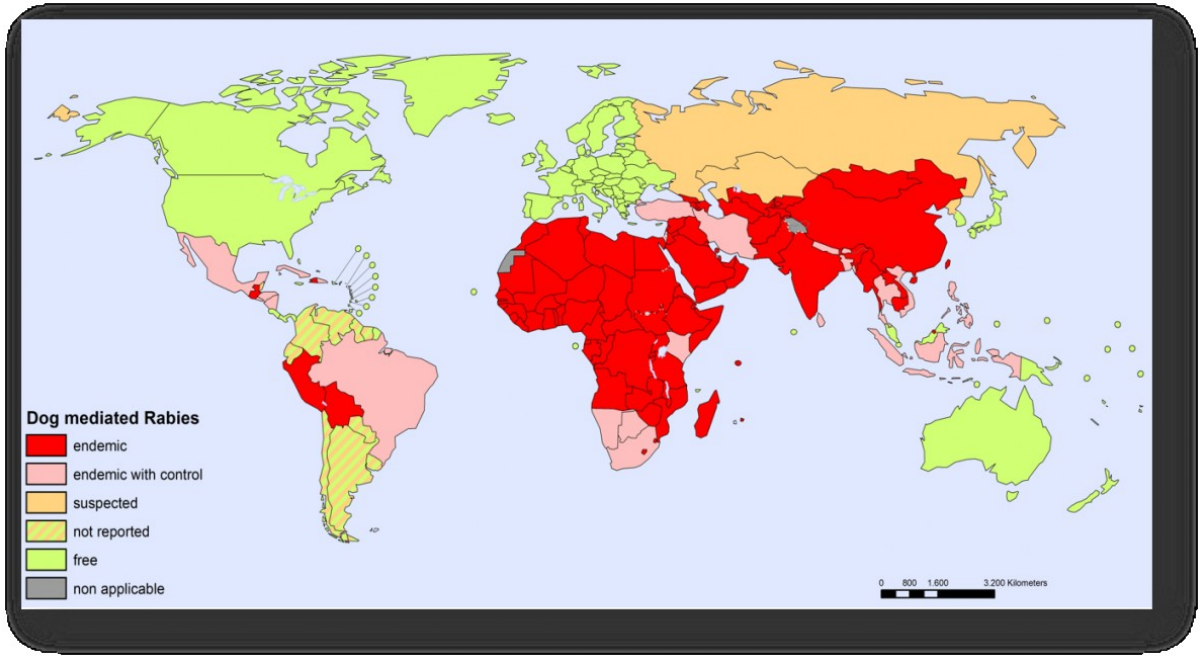
Myiáza

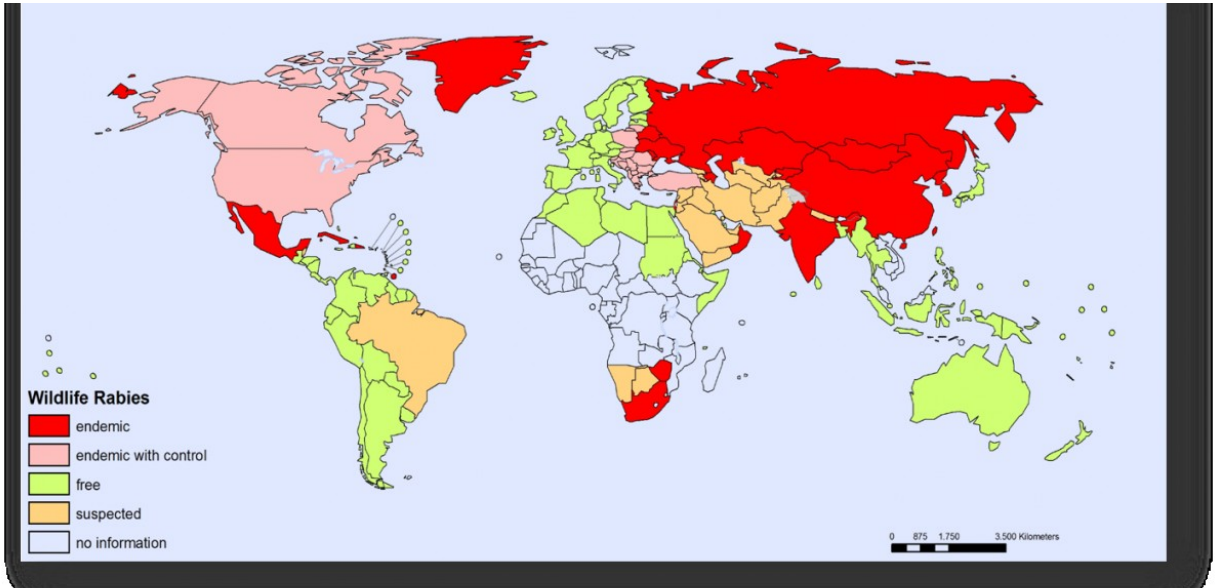

Physical Region of Dermatobia Hominis (Human Botfly)
N
Belize
Mexico
Honduras
Guatemala
Nicaragua
Costa Rica
Panama
Venezuela
Guyana
Suriname
French Guiana
Colombia
Ecuador
Peru
Brazil
Bolivia
Paraguay
Chile
Argentina
Uruguay
Human Botfly Region
0 250 500 1,000 1,500 2,000
Miles
Created by: Chelsea Fugate
Projection: South America Lambert Conformal Conic
University of South Florida Geography Dep.
November, 2011
Data Sources:
http://en.wikipedia.org/wiki/Botfly
http://ambergriscaye.com/pages/town/botfly.html
http://animal.discovery.com/invertebrates/monsters-inside-me/hum an-botfly-dermatobia-hominis/


00544928 © Piotr Naskrecki / Minden / naturepl.com

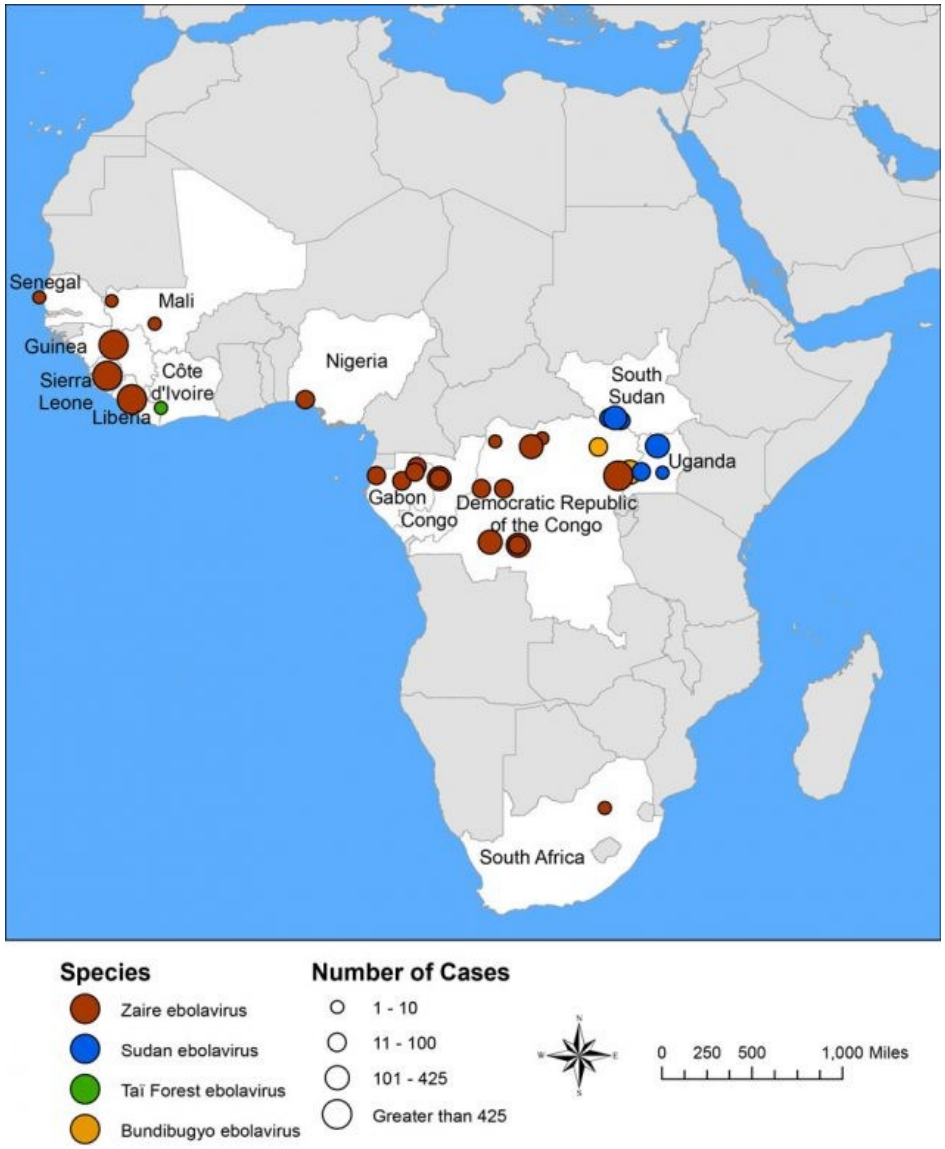
Myiáza

Vzteklina

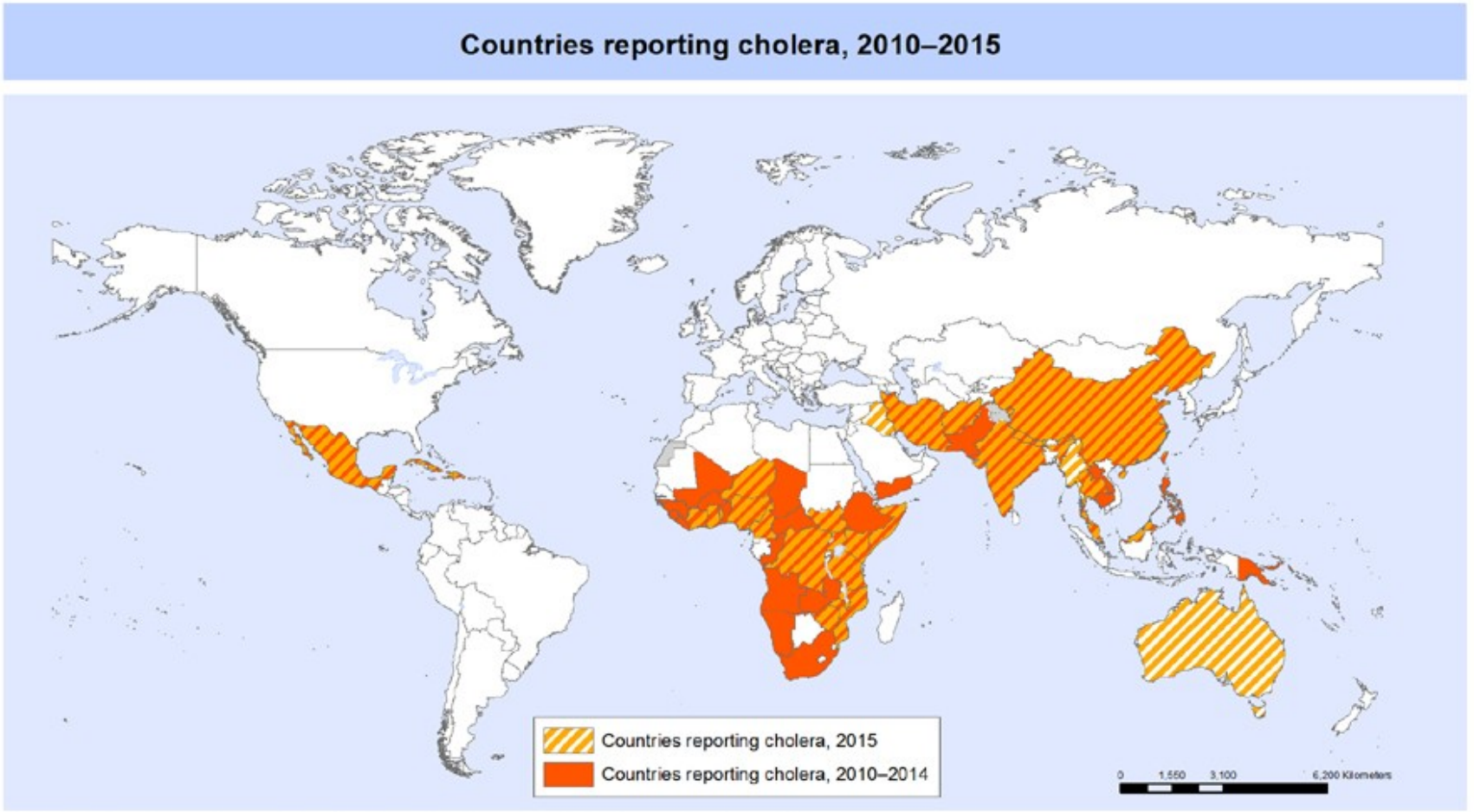

Dog mediated Rabies
endemic
endemic with control
suspected
not reported
free
non applicable
0 800 1,600 3,200 Kilometers


Wildlife Rabies
endemic
endemic with control
free
suspected
no information
0 875 1,750 3,500 Kilometers

Infekce přenášené přímým kontaktem – horečka ebola



Infekce přenášené jídlem / vodou - cholera



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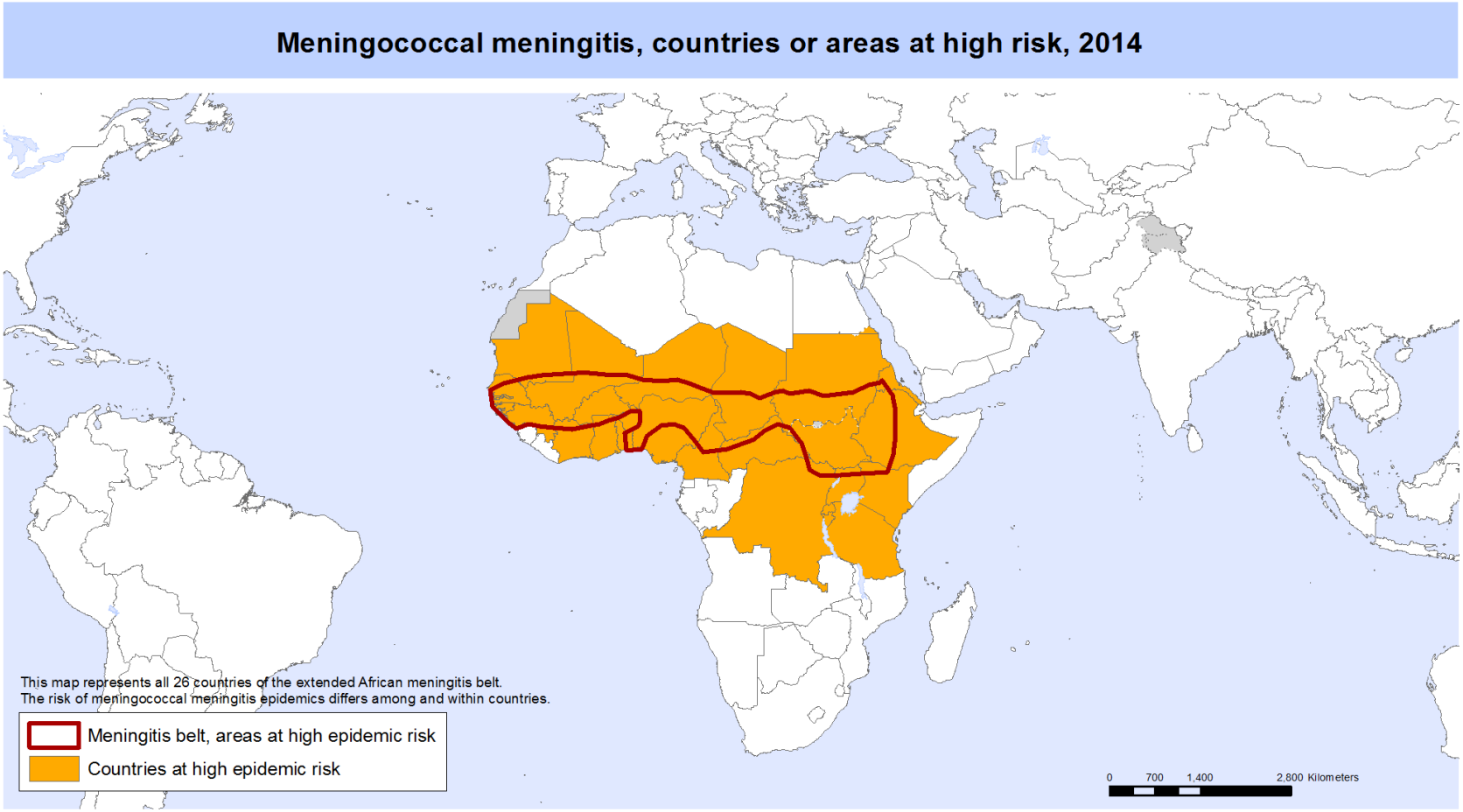
Data Source: World Health Organization
Map Production: Information Evidence and Research (IER)
World Health Organization

World Health Organization

Infekce přenášené vzduchem - meningokoky



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

World Health Organization

Infekce přenášené vzduchem - MERS-CoV