Global Health Cast 37
May 16, 2023

Every Week

12.00 noon - CET

Dr. Melvin Sanicas
🐦 @Vaccinologist

Prof. Dr. Joe Schmitt
🐦 @Prof_Schmitt

What we talk about today

➢ **COVID-19 global health emergency is OVER**

➢ **COVID-19 epidemiology**

➢ **Obstructive sleep apnea and Long COVID**

➢ **MPOX is no longer a PHEIC**

➢ **Vaccines: License – Recommendation – Use**

➢ **"Most Infectious Diseases" - ZIKA**

BREAKING

COVID-19 global health emergency is over

World Health Organization

The end of the COVID0-19 global health emergency is a moment for reflection. The painful lessons we have learned, the investments we have made, and the capacity we have built must be transformed into meaningful and lasting change.

GLOBAL HEALTH PRESS

id-ea.org

Figure 1. COVID-19 cases reported by WHO Region, and global deaths by 28-day intervals, as of 7 May 2023**
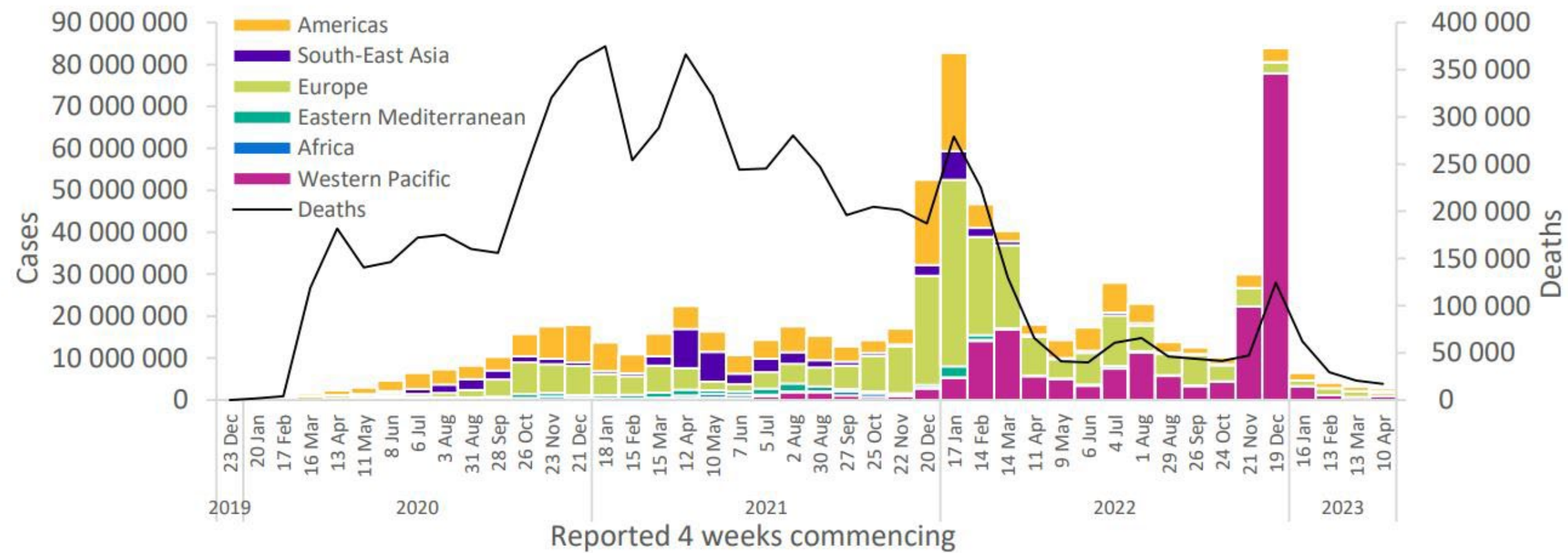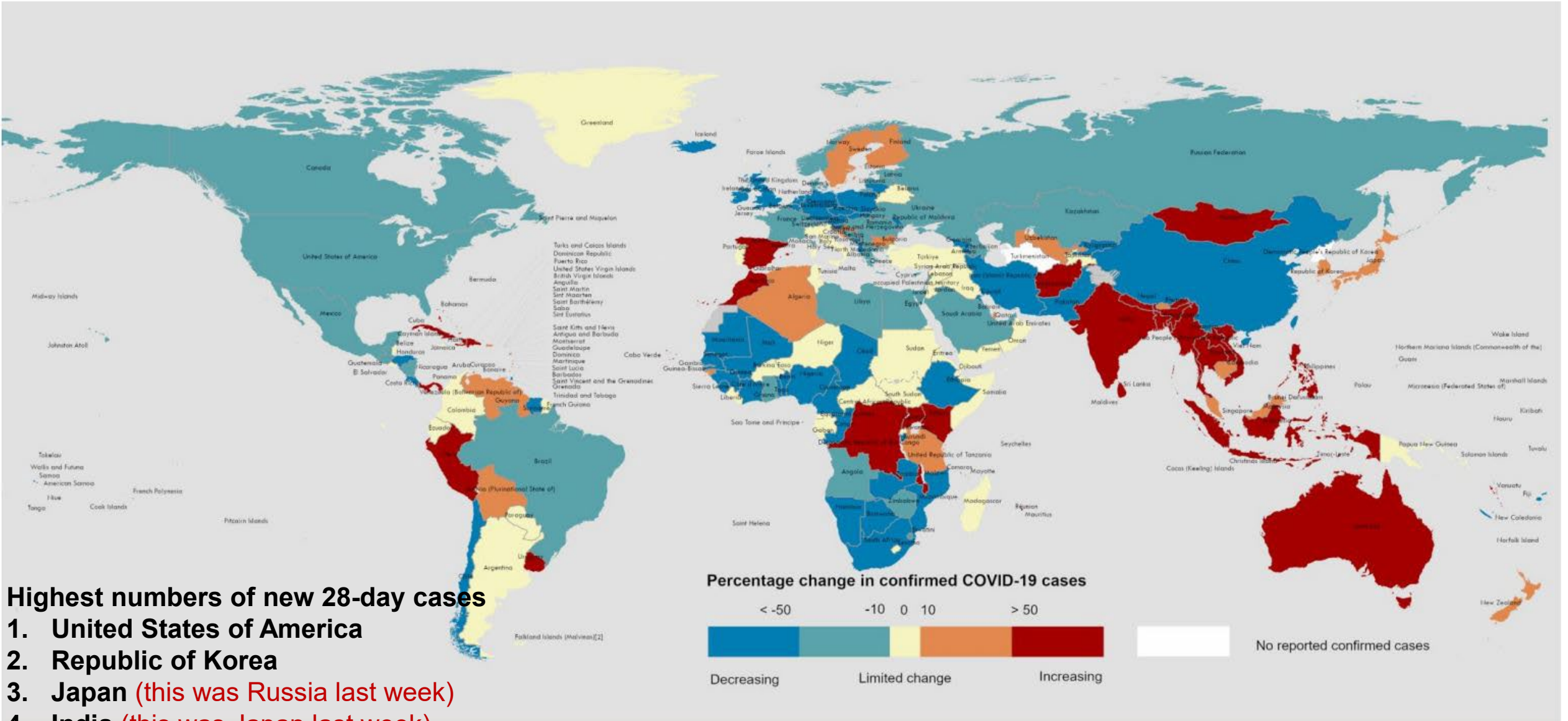
Figure 2. Percentage change in confirmed COVID-19 cases over the last 28 days relative to the previous 28 days, as of 7 May 2023**

Highest numbers of new 28-day cases
1. United States of America
2. Republic of Korea
3. Japan (this was Russia last week)
4. India (this was Japan last week)
5. France

Percentage change in confirmed COVID-19 cases

< -50   -10 0 10   > 50

Decreasing   Limited change   Increasing

No reported confirmed cases

GLOBAL HEALTH PRESS

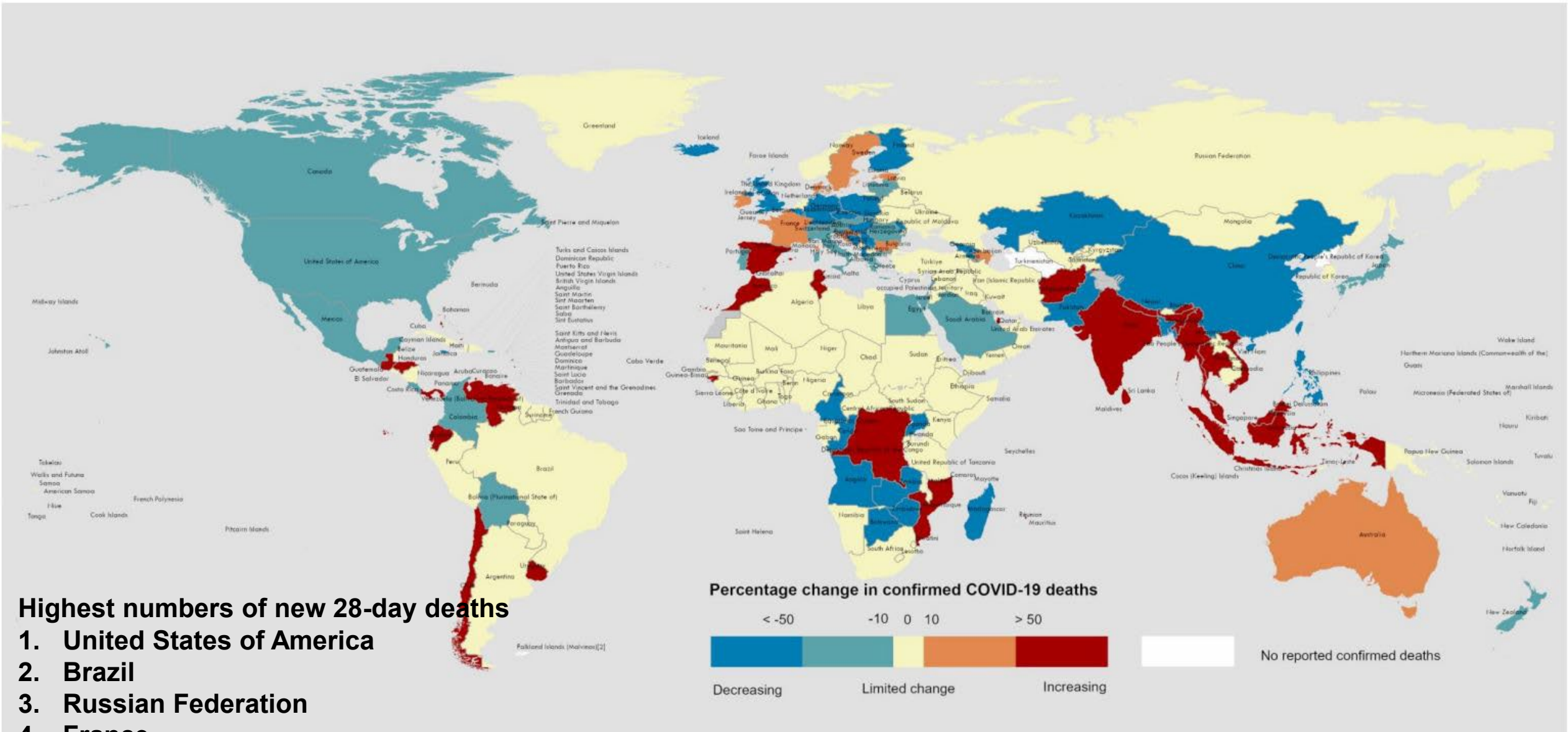Figure 3. Percentage change in confirmed COVID-19 deaths over the last 28 days relative to the previous 28 days, as of 7 May 2023**

Highest numbers of new 28-day deaths
1. **United States of America**
2. **Brazil**
3. **Russian Federation**
4. **France**
5. **India** (this was the Islamic Republic of Iran last week)

GLOBAL HEALTH PRESS

Table 2. Weekly prevalence of SARS-CoV-2 VOIs and VUMs, week 12 to week 16 of 2023

Lineage	Countries	Sequences	2023-12	2023-13	2023-14	2023-15	2023-16
XBB.1.5* (VOI)	109	203 469	52.38	51.66	50.46	48.98	47.54
XBB.1.16* (VOI)	46	7153	4.01	4.98	6.64	7.73	8.58
BA.2.75*	121	109 754	3.70	3.39	3.46	3.15	1.51
CH.1.1*	91	44 419	4.88	4.92	3.89	3.92	3.57
BQ.1*	147	406 465	5.83	4.28	3.72	2.74	1.75
XBB*	124	61 726	4.92	5.59	5.94	7.14	8.20
XBB.1.9.1*	78	19 946	8.03	9.82	10.40	12.34	12.40
XBB.1.9.2*	53	4877	1.94	2.68	2.72	3.03	3.82
Unassigned	103	149 082	4.25	2.49	2.53	1.79	2.75
Other[+]	207	6 704 771	4.39	5.67	6.25	6.76	8.47

* Includes descendant lineages, except those individually specified elsewhere in the table. For example, XBB* does not include XBB.1.5, XBB.1.9.1, XBB.1.9.2 and XBB.1.16.

[+] Others are other circulating lineages excluding the VOI, VUMs, BA.1*, BA.2*, BA.3*, BA.4*, BA.5*.

GLOBAL HEALTH PRESS
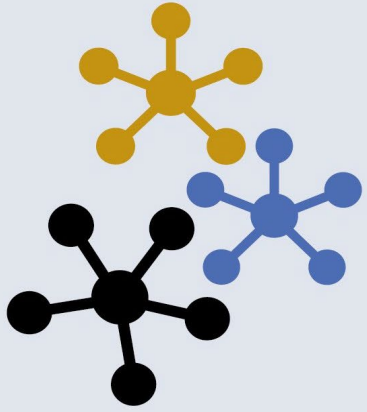
Three 'real world' data research networks within the RECOVER initiative (PCORnet, PEDSnet, N3C) participated in this analysis

No OSA **OSA**

Definitions were harmonized across networks, with the exception of PASC, and adjusted for demographic and clinical factors

COVID+
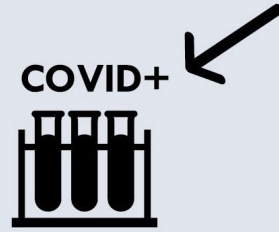
Networks examined the risk of probable PASC in SARS-CoV-2 positive patients with and without pre-pandemic OSA diagnoses
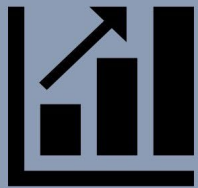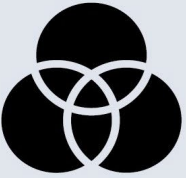
PASC

OSA was associated with increased risk of PASC among adult patients after adjusting for other comorbidities and COVID severity

After adjustment, associations among children were not significant
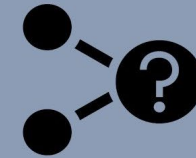
The association diminished among all networks after adjustment, suggesting confounding from associations between obesity, or other comorbidities, and PASC

Adults with pre-existing OSA had **increased odds** of developing PASC and may benefit from increased monitoring after SARS-CoV-2 infection

id-ea.org

BREAKING

Mpox is no longer a Public Health Emergency of International Concern
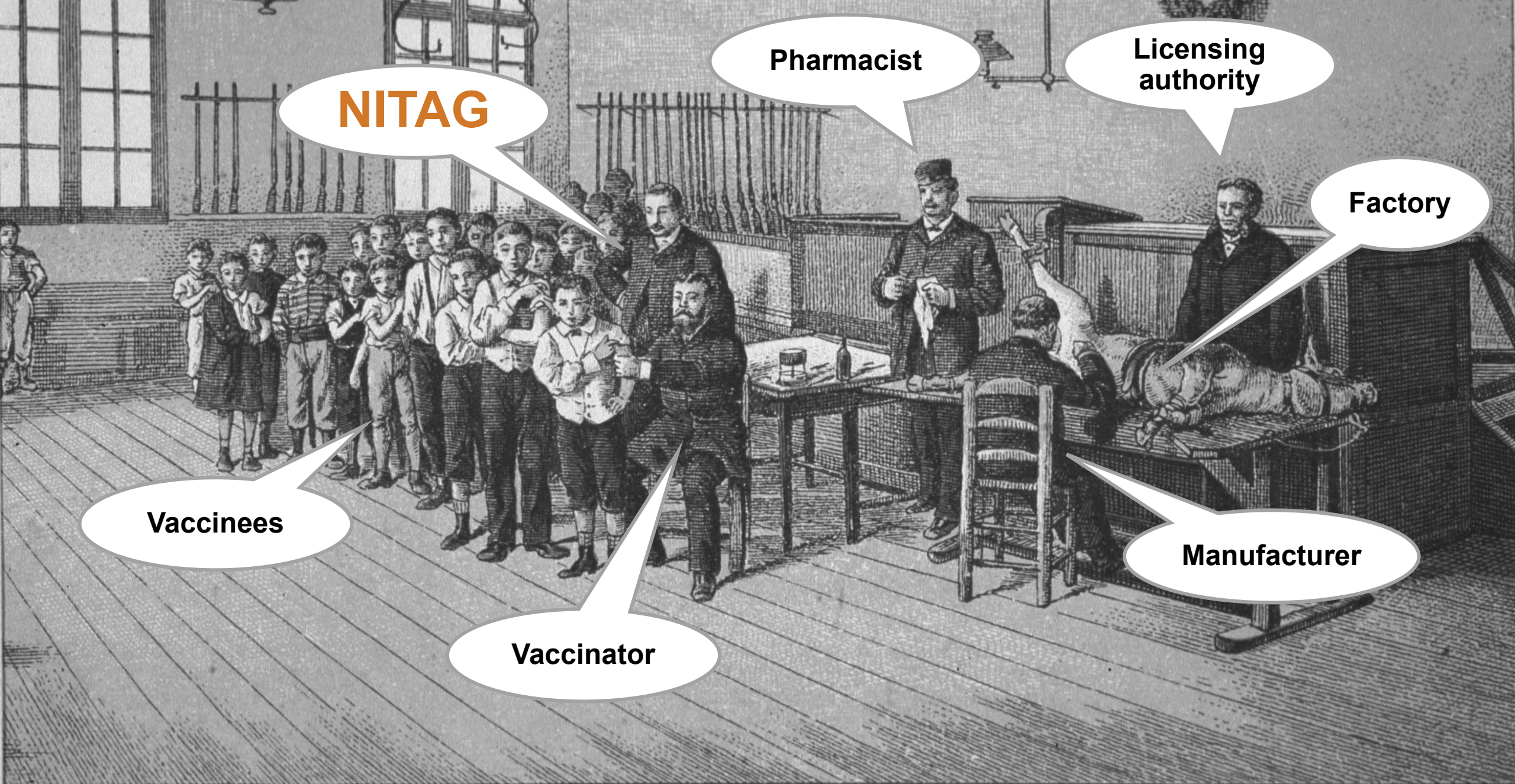
World Health Organization

The Emergency Committee on MPOX met for the fifth time and advised Dr Tedros that the multi-country outbreak is no longer a Public Health Emergency of International Concern (PHEIC).

11 May 2023 Statement

The Emergency Committee acknowledged the progress made in the global response to the multi-country outbreak of mpox and the further decline in the number of reported cases since the last meeting. The Committee noted a significant decline in the number of reported cases compared to the previous reporting period and no changes in the severity and clinical manifestation of the disease.

The Committee acknowledged remaining uncertainties about the disease, regarding modes of transmission in some countries, poor quality of some reported data, and continued lack of effective countermeasures in the African countries, where mpox occurs regularly. The Committee considered, however, that these are long-term challenges that would be better addressed through sustained efforts in a transition towards a long-term strategy to manage the public health risks posed by mpox, rather than the emergency measures inherent to a public health emergency of international concern (PHEIC).

GLOBAL HEALTH PRESS

id-ea.org

SÉANCE DE REVACCINATION DANS UNE ÉCOLE COMMUNALE DE BORDEAUX

How to Protect by Vaccination

Medical Need

License

Data Required
- Pre-Clinical research
- Clinical studies: Efficacy, safety, reactogenicity; **GMP**

Recommendation

- **Benefits & Risks of Vaccination: Comprehensive National Plan**

Payment

- Health economics

Best Practice

- Science data as above

Patient Preference

- All above; cultural & individual believes, values

Real Vaccine Use

- All of the above

Population Based / Individual Protection

Double-blind-randomized trials:
Limitations due to bias and lack of relevance

VEy in d-b-r: Ac...   Significant results may be useless

Investigator Compliance Category†	Mild and Ty... (95... DTaP
High	40 (3–65)
Intermediate	78 (65–86)
Low	75 (53–87)

It is a general belief th...
most reliable data are...
blind format has been...
double-blind trials wit...
efficacy of the same l...
vaccine varied by 12%...
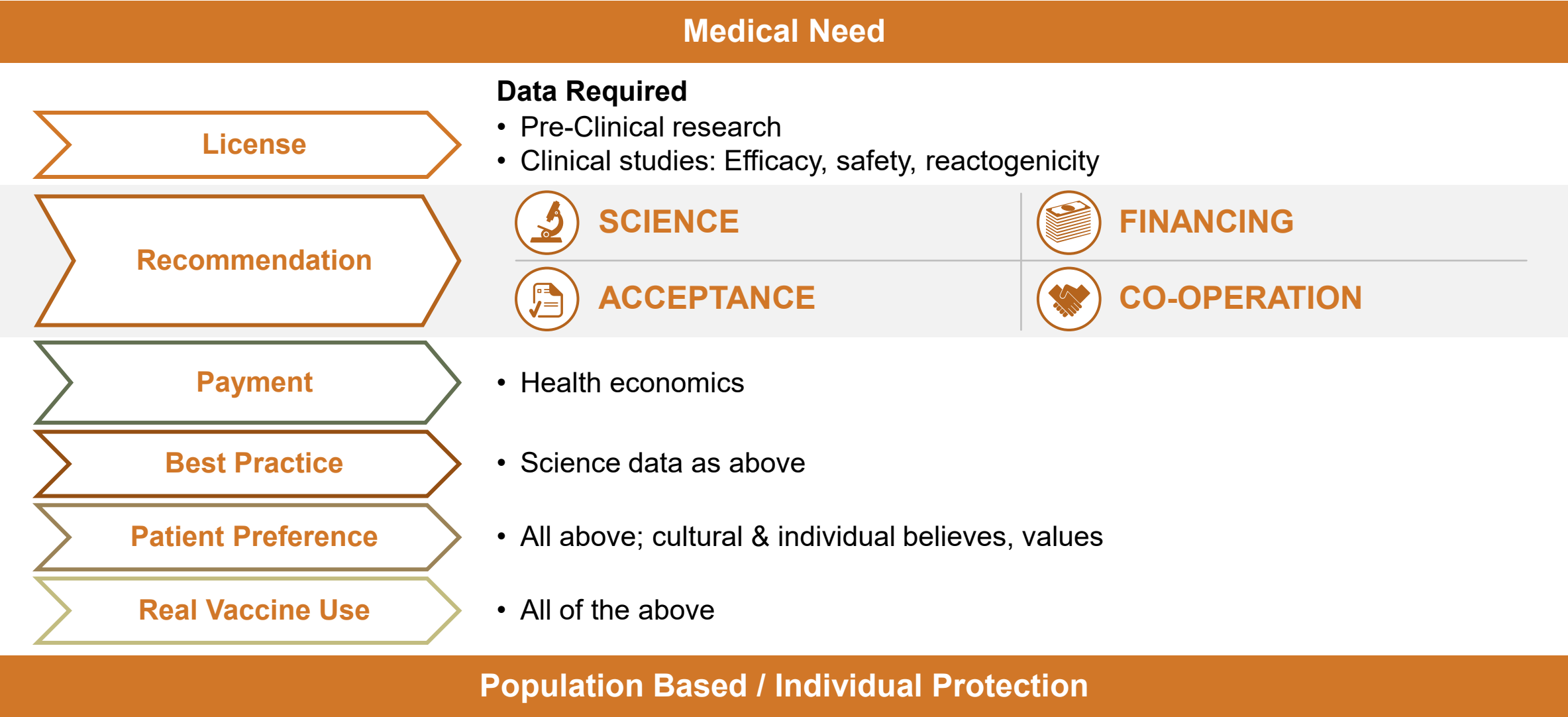

What is Montezuma's Revenge? Symptoms, Treatment

Study year, drug group	Dosage	No. of participants who became ill/ total in group (%)	Percent protection
1977			
BSS	60 mL qid for 3 w (4.2 g/d)	14/62 (23)	62
Placebo	60 mL qid for 3 w	40/66 (61, $P < .0001$)	
1985			
BSS	2 tablets qid for 3 w (2.1 g/d)	7/51 (14, $P < .001$)	65
BSS	1 tablet qid for 3 w (1.05 g/d)	15/63 (24, NS)	40
Placebo	2 tablets qid for 3 w	23/58 (40)	

NOTE. Percent protection = ([percentage of placebo group that became ill] − [percentage of active drug group that became ill]) ÷ (percentage of placebo group that became ill). NS = not significant.

(DuPont, Ericsson et al. 1990)(Cherry, Heininger et al. 1998)

How to Protect by Vaccination

Medical Need

License

Data Required
- Pre-Clinical research
- Clinical studies: Efficacy, safety, reactogenicity

Recommendation

🔬 **SCIENCE**   💵 **FINANCING**

📋 **ACCEPTANCE**   🤝 **CO-OPERATION**

Payment
- Health economics

Best Practice
- Science data as above

Patient Preference
- All above; cultural & individual believes, values

Real Vaccine Use
- All of the above

Population Based / Individual Protection

The most infectious diseases the WHO has identified to date:

- ✓ **Nipah virus Check out GHC 33**
- ✓ **Crimean-Congo hemorrhagic fever Check out GHC 34**
- ✓ **Lassa fever Check out GHC 35**
- ✓ **Rift Valley fever Check out GHC 36**
- ▪ Zika
- ▪ Ebola and Marburg
- ▪ Middle East respiratory syndrome (MERS)
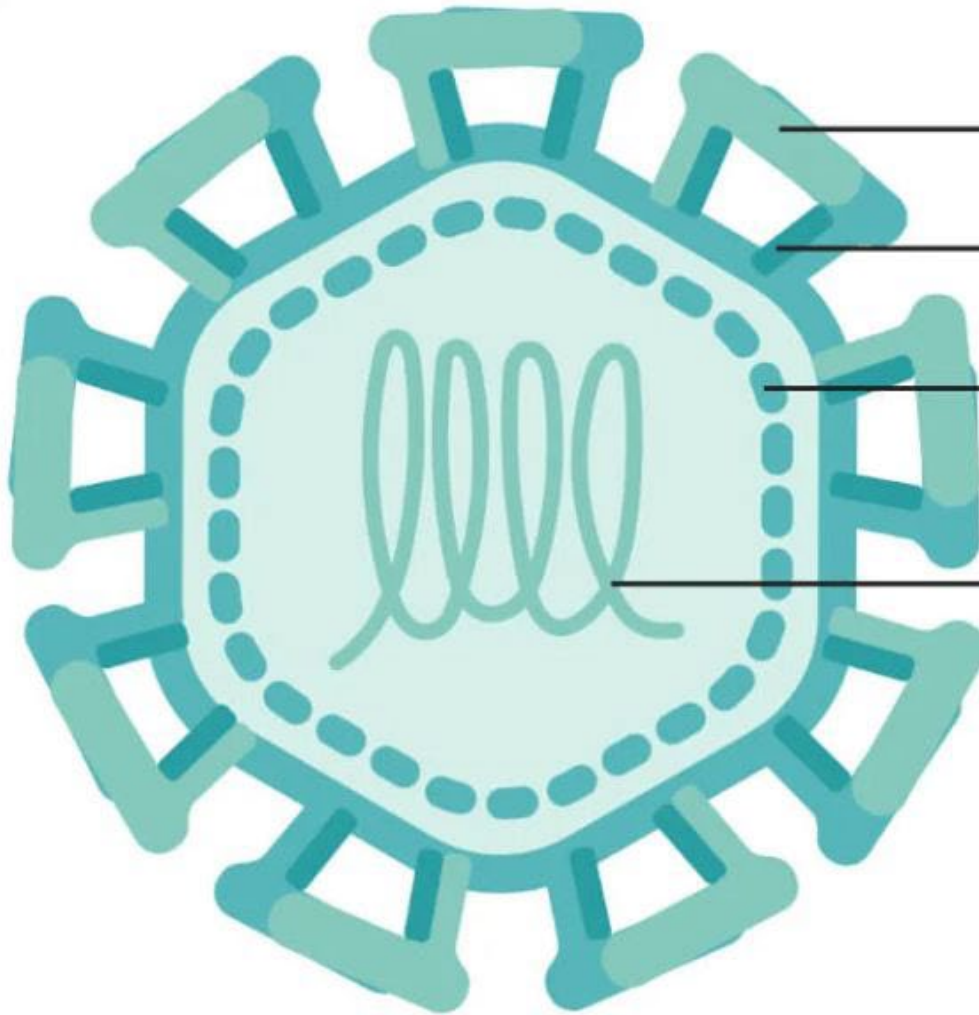- ▪ Severe acute respiratory syndrome (SARS)

Disease X (any unknown pathogen that could cause a future outbreak)

GLOBAL
HEALTH
PRESS

The most infectious diseases the WHO has identified to date:

- ✓ **Nipah**
- ✓ **Crimea**
- ✓ **Lassa**
- ▪ **Rift Va**
- ▪ <mark>**Zika**</mark>
- ▪ **Ebola**
- ▪ **Middle**
- ▪ **Severe**

Disease X

E Dimer

M Protein

Capsid Protein

Genomic RNA

Zika Virus (ZIKV)

GLOBAL HEALTH PRESS
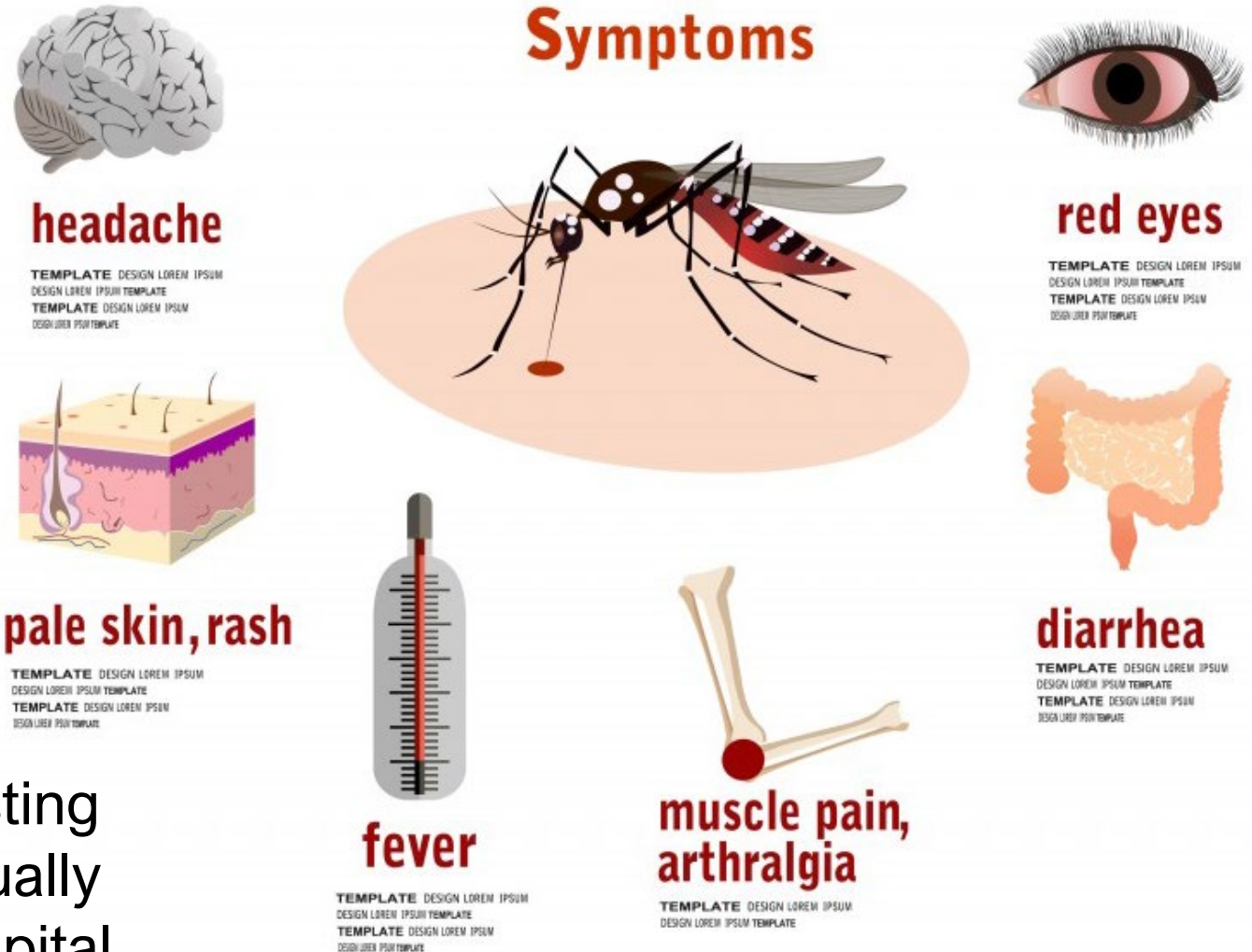
id-ea.org
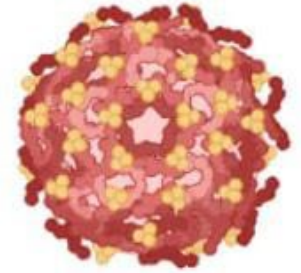
Zika Transmission Routes
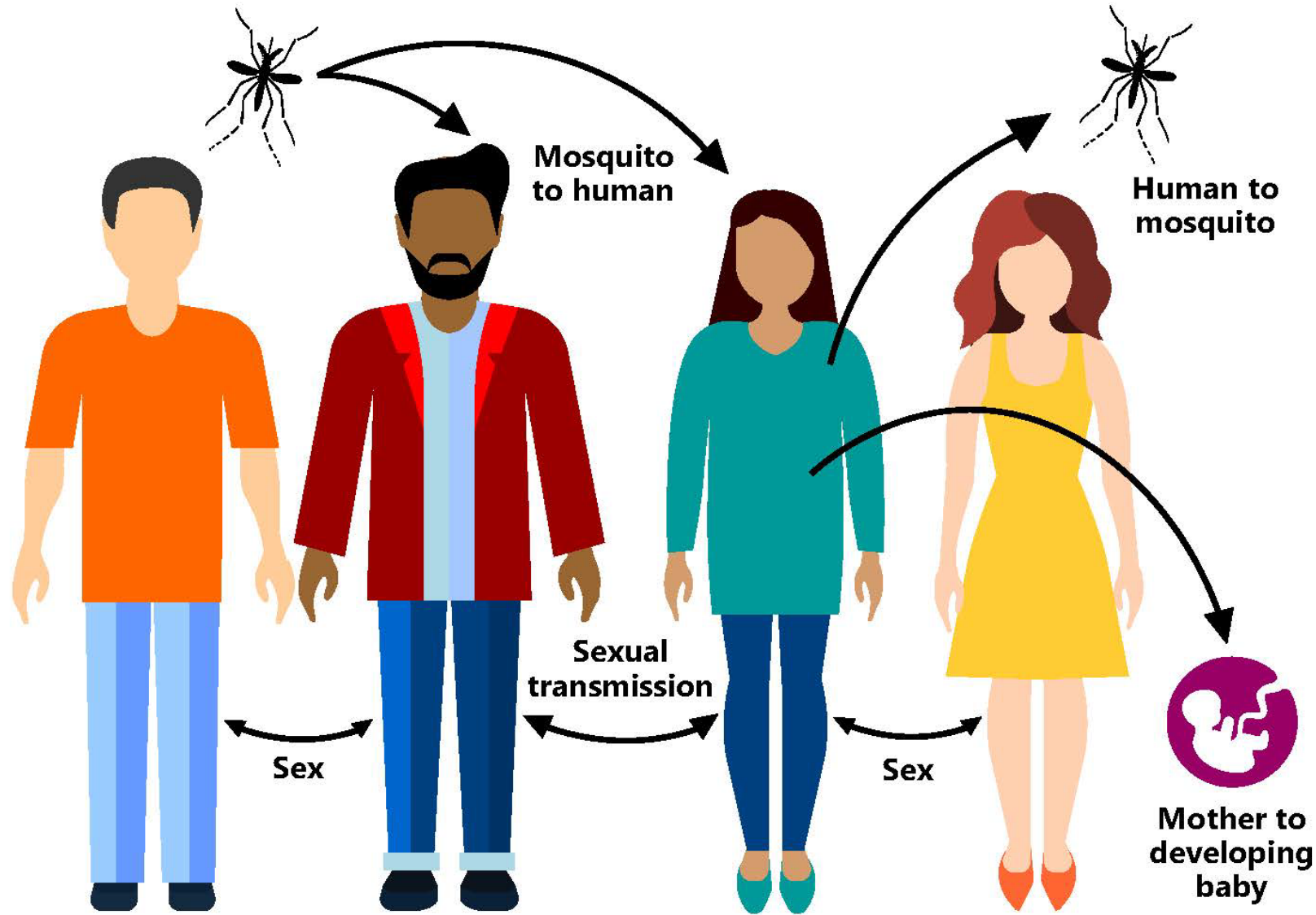
Many people infected with Zika virus will not have symptoms or will only have mild symptoms.

The most common symptoms are
• Fever
• Rash
• Headache
• Joint pain
• Conjunctivitis (red eyes)
• Muscle pain

Zika is usually mild with symptoms lasting for several days to a week. People usually don't get sick enough to go to the hospital. For this reason, many people might not realize they have been infected.

Symptoms

headache
TEMPLATE DESIGN LOREM IPSUM
DESIGN LOREM IPSUM TEMPLATE
TEMPLATE DESIGN LOREM IPSUM
DESIGN LOREM IPSUM TEMPLATE

pale skin, rash
TEMPLATE DESIGN LOREM IPSUM
DESIGN LOREM IPSUM TEMPLATE
TEMPLATE DESIGN LOREM IPSUM
DESIGN LOREM IPSUM TEMPLATE

fever
TEMPLATE DESIGN LOREM IPSUM
DESIGN LOREM IPSUM TEMPLATE
TEMPLATE DESIGN LOREM IPSUM
DESIGN LOREM IPSUM TEMPLATE

muscle pain, arthralgia
TEMPLATE DESIGN LOREM IPSUM
DESIGN LOREM IPSUM TEMPLATE
TEMPLATE DESIGN LOREM IPSUM
DESIGN LOREM IPSUM TEMPLATE

red eyes
TEMPLATE DESIGN LOREM IPSUM
DESIGN LOREM IPSUM TEMPLATE
TEMPLATE DESIGN LOREM IPSUM
DESIGN LOREM IPSUM TEMPLATE

diarrhea
TEMPLATE DESIGN LOREM IPSUM
DESIGN LOREM IPSUM TEMPLATE
TEMPLATE DESIGN LOREM IPSUM
DESIGN LOREM IPSUM TEMPLATE

GLOBAL HEALTH PRESS

id-ea.org

Range of Microcephaly Severity

Baby with Typical Head Size

Baby with Microcephaly

Baby with Severe Microcephaly

Typical head size

Typical head size

What we talked about today

➢ **COVID-19 global health emergency is OVER**

➢ **COVID-19 epidemiology**

➢ **Obstructive sleep apnea and Long COVID**

➢ **MPOX is no longer a PHEIC**

➢ **Vaccines: License – Recommendation – Use**

➢ **"Most Infectious Diseases" - ZIKA**

COVID-19 looks different country-to-country

From the beginning, the COVID-19 pandemic has looked dramatically different based on where you're living, the tools available to you, and the information being made publicly available.