

# Epidemie jedna za druhou a souvislosti s očkováním

XVIII. Hradecké vakcinologické dny, 5.-7.10.2023,  
Kongresové centrum Aldis, Hradec Králové



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# Příčiny nárůstu epidemií

- protiepidemická opatření
  - potlačení epidemií během jejich zavedení - imunologický dluh - rebound
- pokles proočkovanosti v některých částech světa
- globální klimatické změny
- interakce člověka s přírodou - kontakt člověka s divokými zvířaty
- globální cestování
- urbanizace (nedostatečná hygiena, přelidnění, nefunkční zdravotnické systémy)

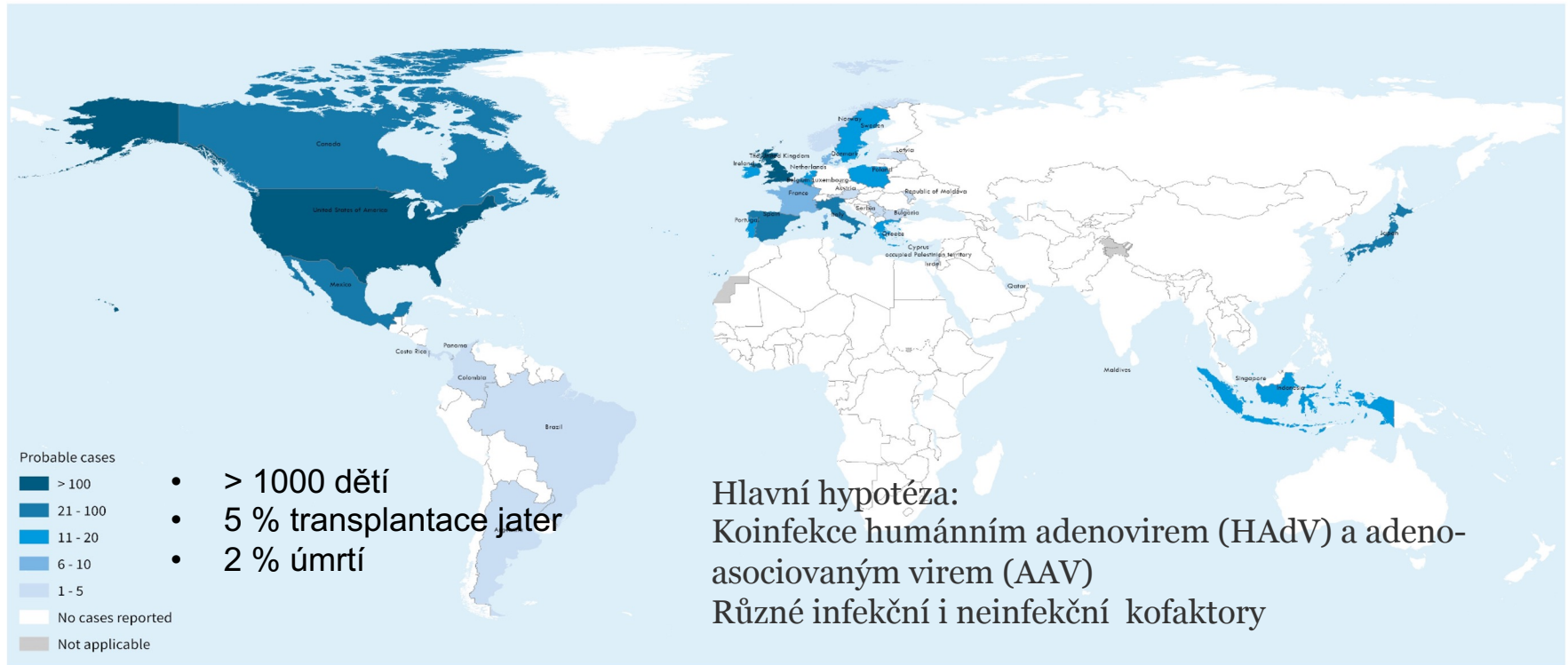


# Neobvyklé epidemie v roce 2022

- Dětská hepatitida
- Mpox
- Polio
- Záškrt
- StrepA
- Tripledemie
  - covid-19
  - chřipka
  - RSV



# Akutní hepatitida neznámé etiologie dětí



The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO 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: WHO Health Emergencies Programme  
Map Date: 12 July 2022



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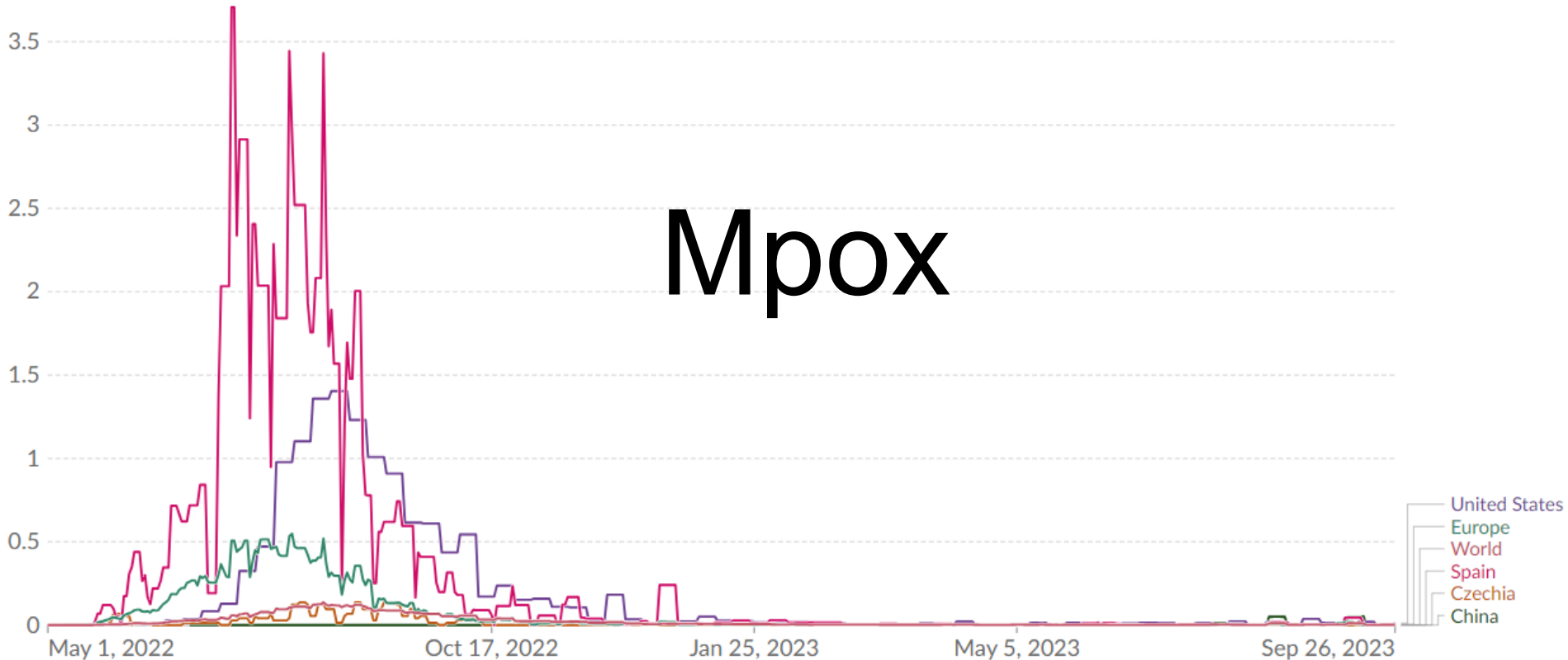
# Mpox: Daily confirmed cases per million people

7-day rolling average

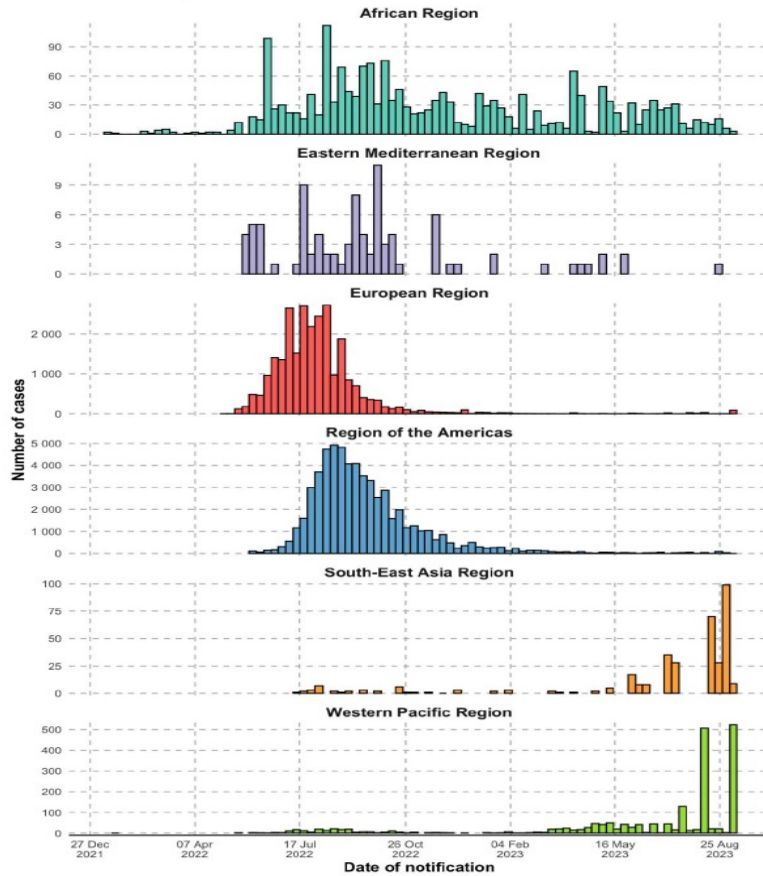
LINEAR

LOG

All together ▾



data as of 10 Sep 2023 17:00 CET



Source: WHO

## Adjusted vaccine effectiveness (VE) of JYNNEOS vaccine against mpox by study and number of doses

### Full (2 Doses) Vaccination

Multijurisdictional



VE (95% CI)

86% (74%-92%)

New York State



89% (44%-98%)

Epic Cosmos



66% (47%-78%)

### Partial (1 Dose) Vaccination

Multijurisdictional



75% (61%-84%)

New York State



68% (25%-87%)

Epic Cosmos



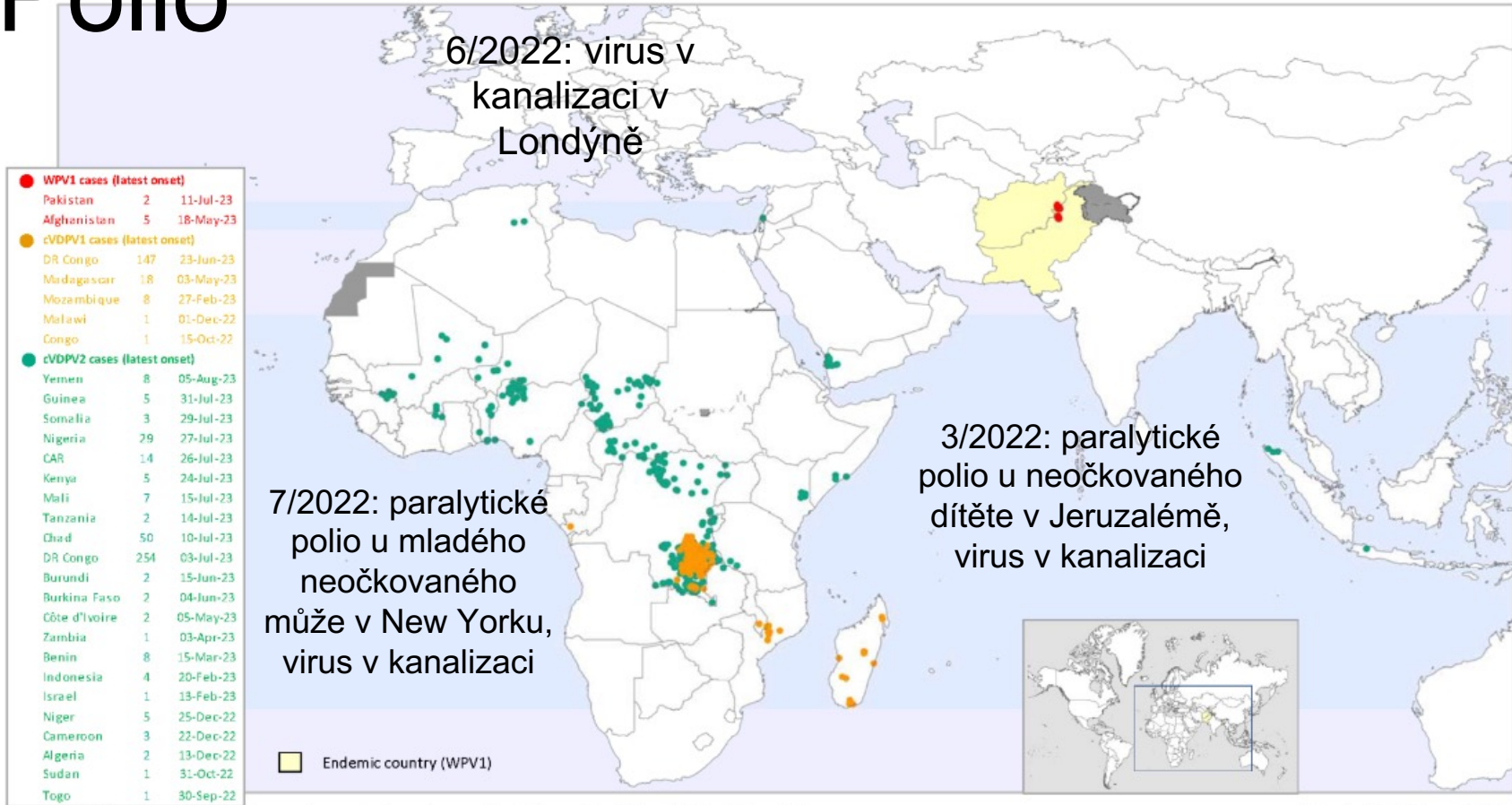
36% (22%-47%)



Vaccine Effectiveness (%)

# Polio

Global WPV1 & cVDPV Cases<sup>1</sup>, Previous 12 Months<sup>2</sup>



<sup>1</sup>Excludes viruses detected from environmental surveillance; <sup>2</sup>Onset of paralysis: 20 Sep. 2022 to 19 Sep. 2023

Data in WHO HQ as of 19 Sep. 2023

<https://polioeradication.org/polio-today/>

<https://www.theguardian.com/australia-news/commentisfree/2022/aug/22/polio-is-spreading-in-the-us-uk-and-israel-should-australia-be-worried>

# UNICEF Nigeria Raises Alarm Over Unprecedented Diphtheria Outbreak, Urges Urgent Vaccination

27 September 2023

## Diphtheria



© UNICEF/UNI439445/Adeokun Adesegun

**Abuja, Nigeria** – In the midst of the most severe diphtheria outbreak in recent global history, UNICEF Nigeria is sounding the alarm about the urgent need for widespread vaccination. The outbreak has so far resulted in over 11,500 suspected cases, more than 7,000 confirmed cases, and claimed the lives of 453 people, mostly children.

Most cases are children aged between 4 to 15 years who have not received even a single dose of the vital vaccine, laying bare the urgency of the vaccination situation in Nigeria.

### Nigérie

- 11 500 suspektních případů
- 7 000 potvrzených případů
- 453 úmrtí
- Většina úmrtí neočkované děti ve věku 4-15 let

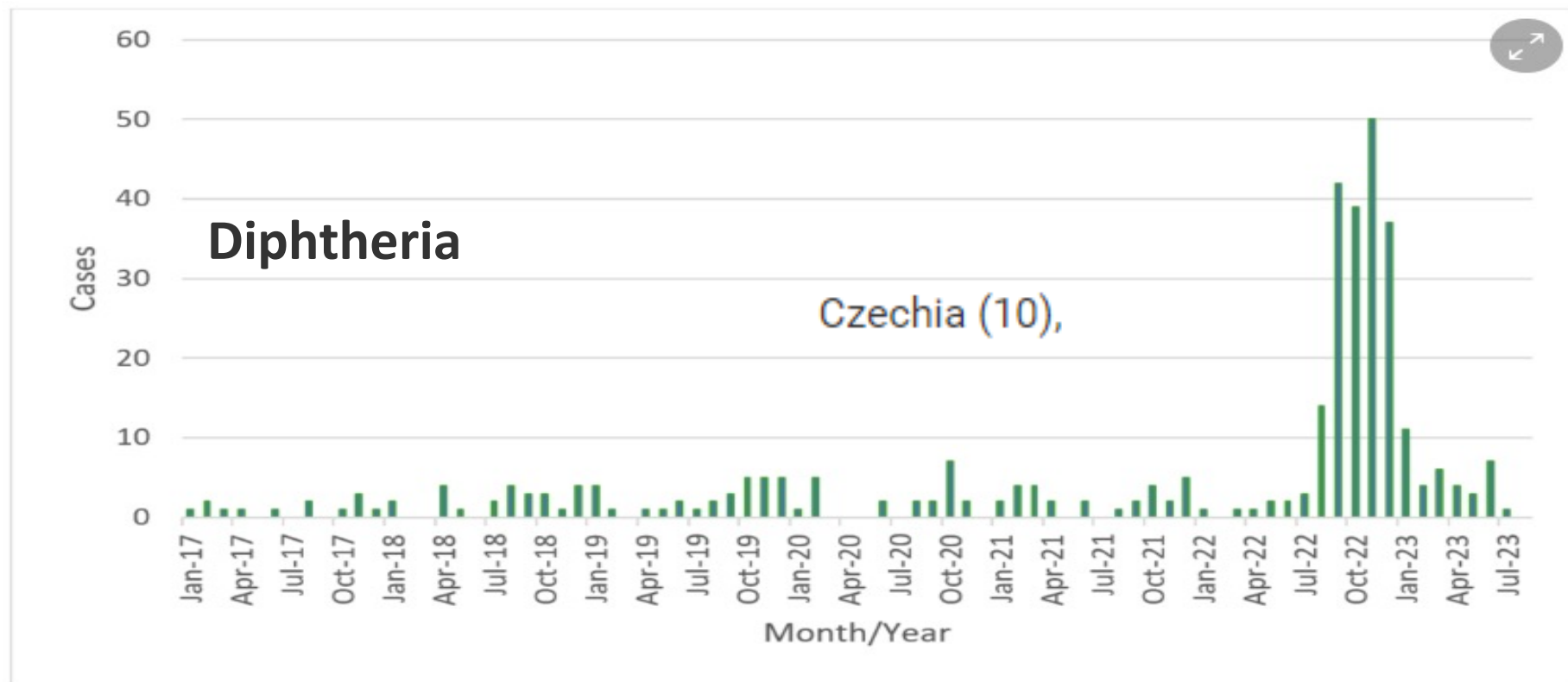
[https://www.unicef.org/nigeria/press-releases/unicef-nigeria-raises-alarm-over-unprecedented-diphtheria-outbreak-urges-urgent?utm\\_source=Global+Health+NOW+Main+List&utm\\_campaign=d2c4de91a0-EMAIL\\_CAMPAIGN\\_2023\\_09\\_28&utm\\_medium=email&utm\\_term=0\\_8d0d062dbd-d2c4de91a0-2985305](https://www.unicef.org/nigeria/press-releases/unicef-nigeria-raises-alarm-over-unprecedented-diphtheria-outbreak-urges-urgent?utm_source=Global+Health+NOW+Main+List&utm_campaign=d2c4de91a0-EMAIL_CAMPAIGN_2023_09_28&utm_medium=email&utm_term=0_8d0d062dbd-d2c4de91a0-2985305)



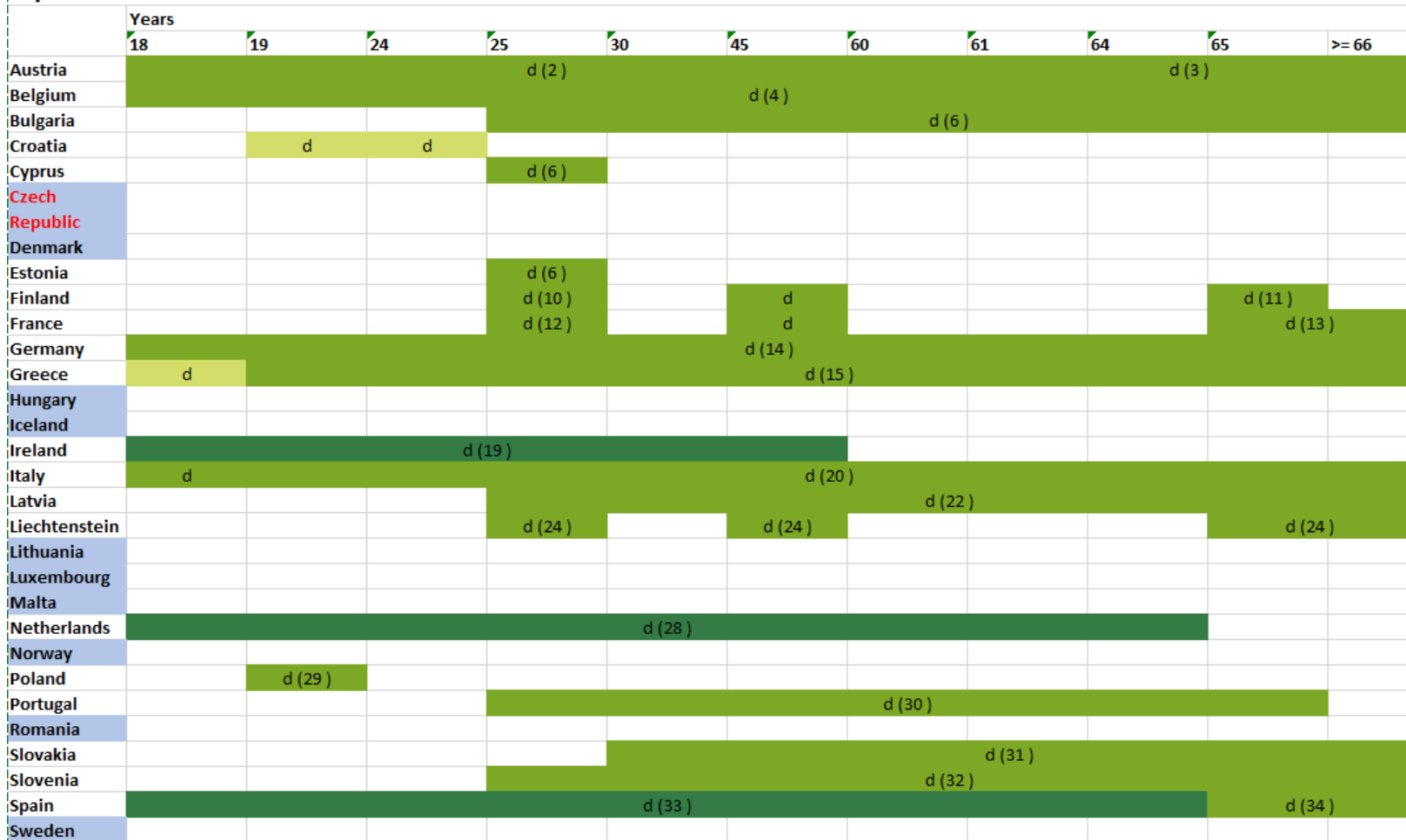
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**Figure 1. Number of *C. diphtheriae* cases reported to ECDC via TESSy, and month/year, 1 January 2017-11 August 2023**



## Diphtheria: Recommended vaccinations



# StrepA

Tabulka 1 – Izoláty *S. pyogenes*, 2017 až leden 2023 – data NRL pro streptokokové nákazy

rok	celkem doručených izolátů <i>S. pyogenes</i>	invazivní materiál (krev, mozkomíšní mok)	invazivní-děti do 5 let věku	invazivní-děti 5-18 let věku	emm1	emm12	emm49	úmrtí celkem
2017	59	31	1	2	12	4	2	5
2018	84	54	2	4	9	5	0	7
2019	78	58	0	1	12	1	0	6
2020	77	57	1	2	4	4	0	3
2021	46	43	0	0	1	0	1	2
2022	105	89	4	8	25	7	18	20
Leden 2023	29	23	2	2	13	3	5	5

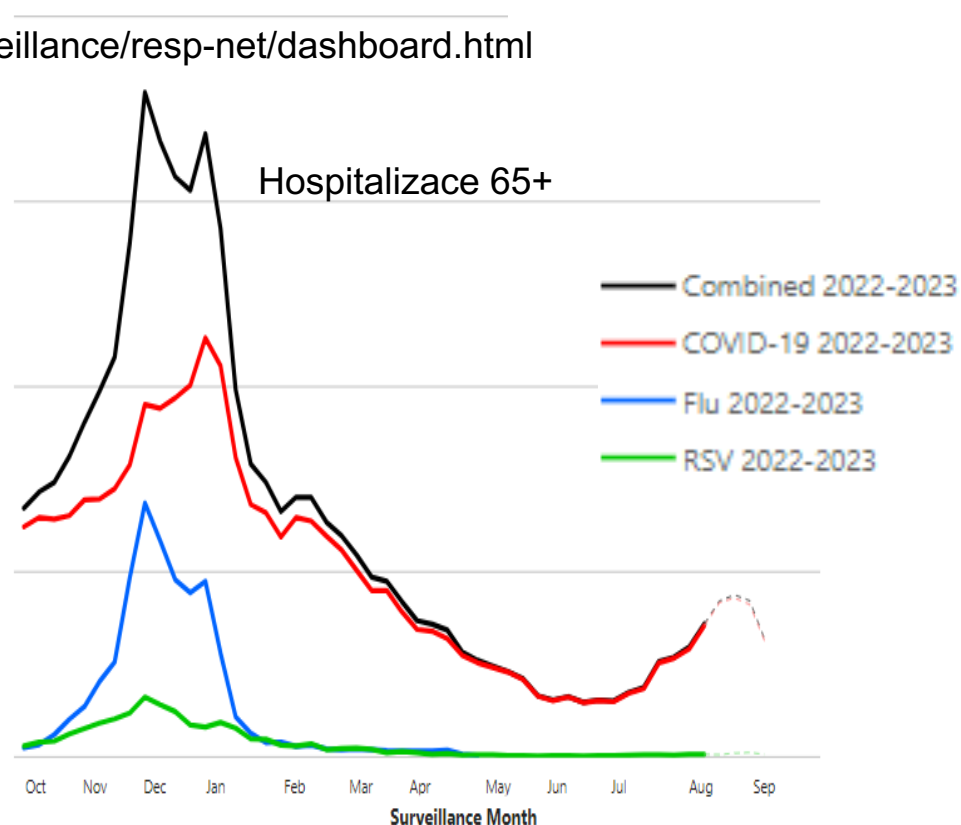
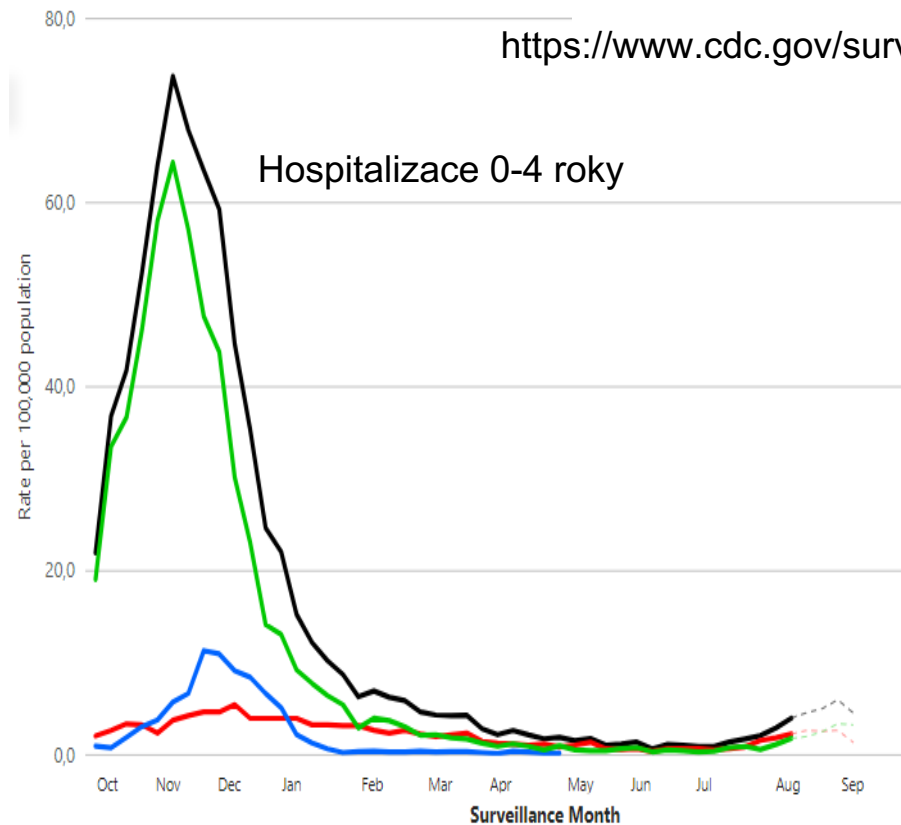
Nelson Textbook of Pediatrics: **Varicella is a well-described risk factor for serious invasive infections caused by group A streptococcus, which can have a fatal outcome.**

# Tripledemie

Weekly Rates of Respiratory Virus-Associated Hospitalizations by Age: 0-4 years

Weekly Rates of Respiratory Virus-Associated Hospitalizations by Age: ≥65 years

<https://www.cdc.gov/surveillance/resp-net/dashboard.html>



# Take home message

**BE PREPARED**

- na návrat spalniček
- na návrat Mpox
- na polio v kanálu
- na respirační epidemie včetně pandemie
- a další epidemické hrozby



Děkuji za pozornost