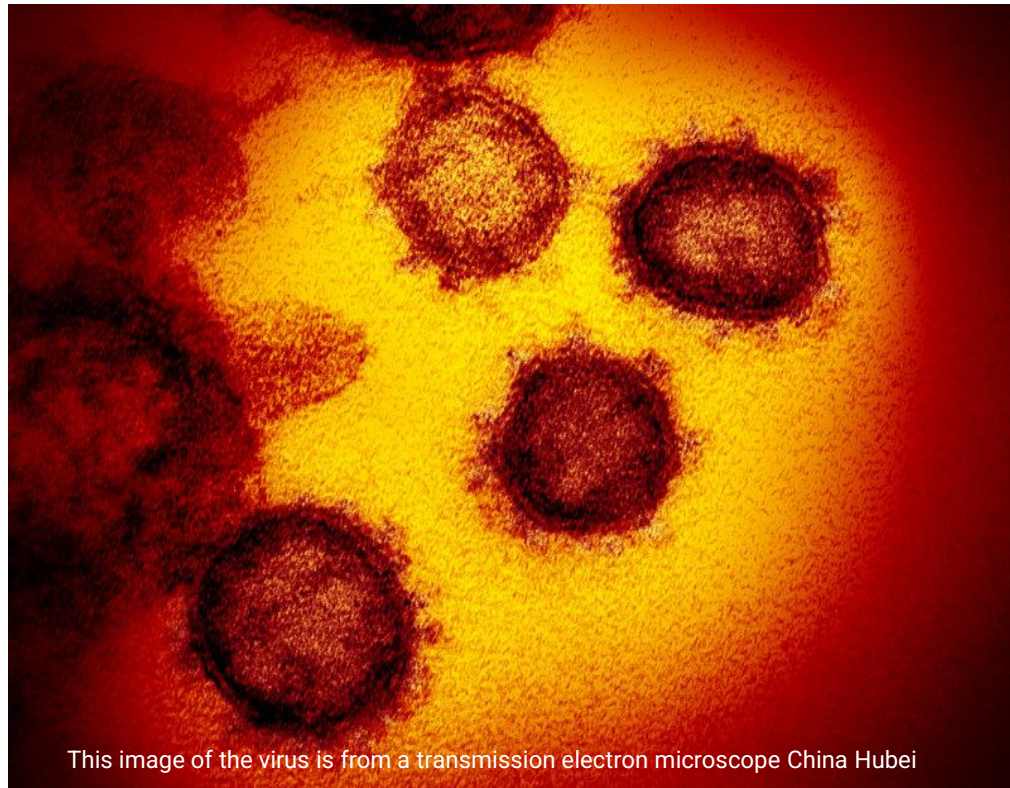
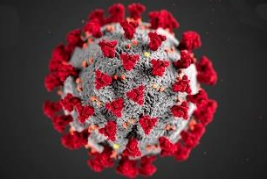
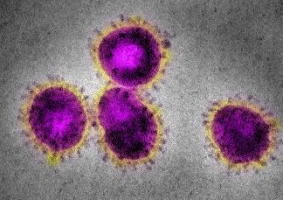


# Covid-19 a průběh pandemie v České republice

*doc. RNDr. Ladislav Pecen, CSc.*

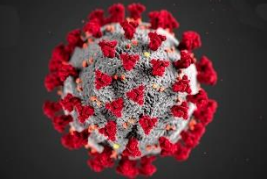
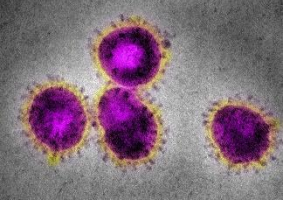






## Proč je těžké měřit dopad COVID-19 pandemie?

- Odhadovat a porovnat zátěž nemocí COVID-19 mezi různými zeměmi je obtížné.
- Odhady výskytu jsou závislé na strategii a dostupnosti testů (počet osob testovaných za den, testované podskupiny populací a použitý typ testů, atd.).
- Úmrtnost na COVID-19 se značně liší v důsledku rozdílů ve věkovém rozložení infikovaných pacientů a různé metodologii - např. zahrnutí/ vyloučení hospitalizovaných osob.
- Některé země uvádějí pouze úmrtí, u nichž je prokázáno, že nastala v přímém důsledku COVID-19, zatímco jiné zahrnují všechna úmrtí, kdy pacient zemřel pozitivní na COVID-19, některé i suspektní úmrtí na COVID-19 (např. Belgie, pokud v zařízení pro staré osoby je výskyt COVID-19 a někdo zemře aniž by se stihl test, je suspektní a započten do COVID-19 mortalit).



## Proč je těžké měřit dopad COVID-19 pandemie?

- Jedním z ukazatelů, který by mohl být průkazný při posuzování dopadu současné pandemie COVID-19 na úmrtnost, je srovnání celkového počtu úmrtí (úmrtnost ze všech příčin) během této pandemie s úmrtím ve stejné zemi v posledních několika letech.
- Pokud se přepočítá absolutní počet úmrtí, jak je zvykem, na 100 tisíc obyvatel země v daném roce, pak by mělo být možné i srovnání mezi zeměmi.
- Použití celkové úmrtnosti bez ohledu na příčinu úmrtí (úmrtnost ze všech příčin) a její následné porovnání se stejným obdobím v předchozích letech ve stejné zemi zajistí, že takové porovnání je objektivní a nevychýlené.

Absolutní počty zemřelých za týden

weekly\_deaths

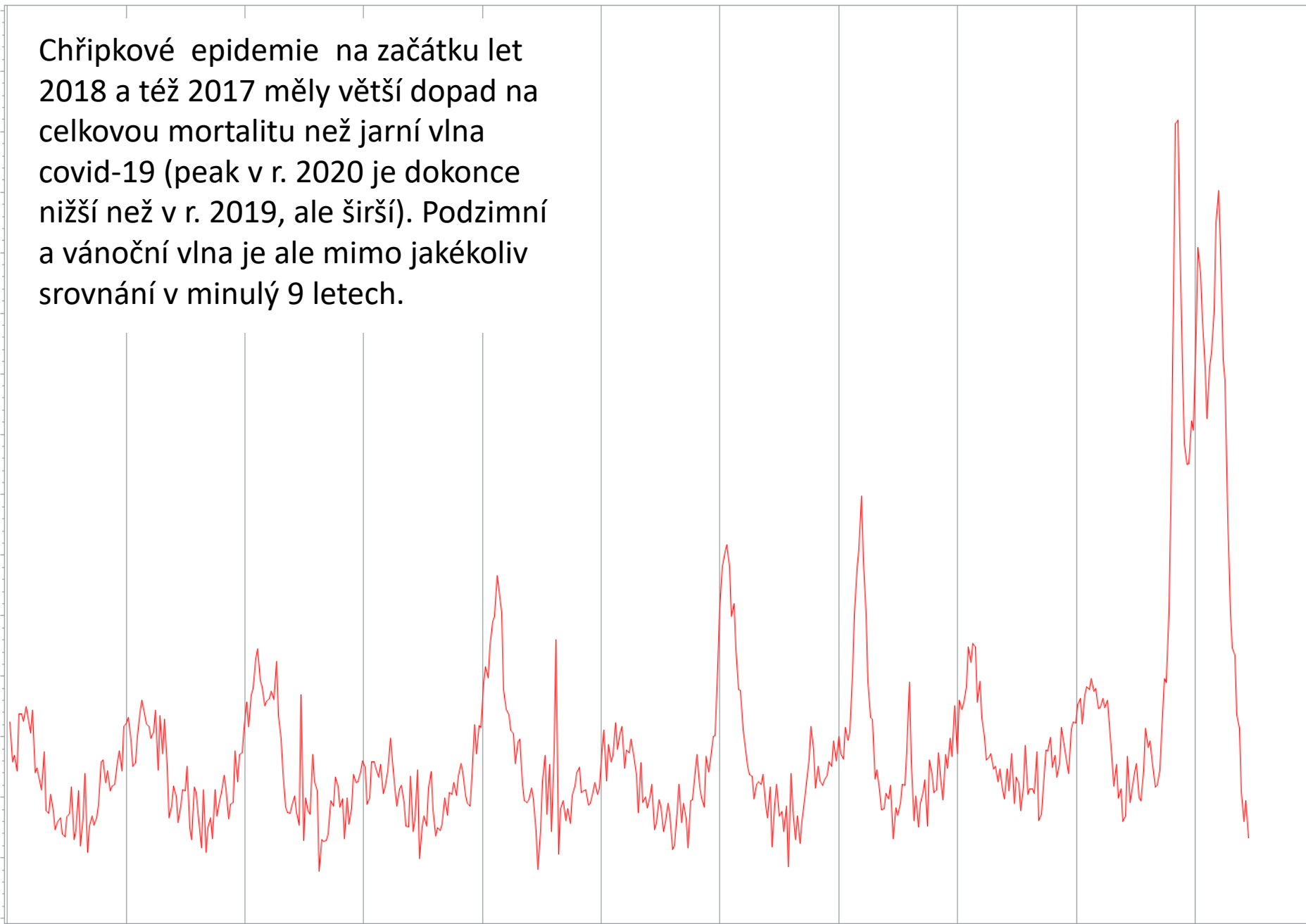
4600  
4400  
4200  
4000  
3800  
3600  
3400  
3200  
3000  
2800  
2600  
2400  
2200  
2000  
1800  
1600

Chřipkové epidemie na začátku let 2018 a též 2017 měly větší dopad na celkovou mortalitu než jarní vlna covid-19 (peak v r. 2020 je dokonce nižší než v r. 2019, ale širší). Podzimní a vánoční vlna je ale mimo jakékoli srovnání v minulý 9 letech.

Data do  
13.06.2021

01/01/2011 01/01/2012 01/01/2013 01/01/2014 01/01/2015 01/01/2016 01/01/2017 01/01/2018 01/01/2019 01/01/2020 01/01/2021 01/01/2022

date



Absolutní počty zemřelých za týden

weekly\_deaths

4600  
4400  
4200  
4000  
3800  
3600  
3400  
3200  
3000  
2800  
2600  
2400  
2200  
2000  
1800  
1600

Česká republika – detail od roku 2017.  
Týdenní mortality stouply z cca 1800-2200  
na 4235 (45.týden roku 2020, tj. od 2.  
do 11.11.2020 bylo více než polovina  
Zemřelých spojena s pandemií covid-19)

01/01/2017

01/01/2018

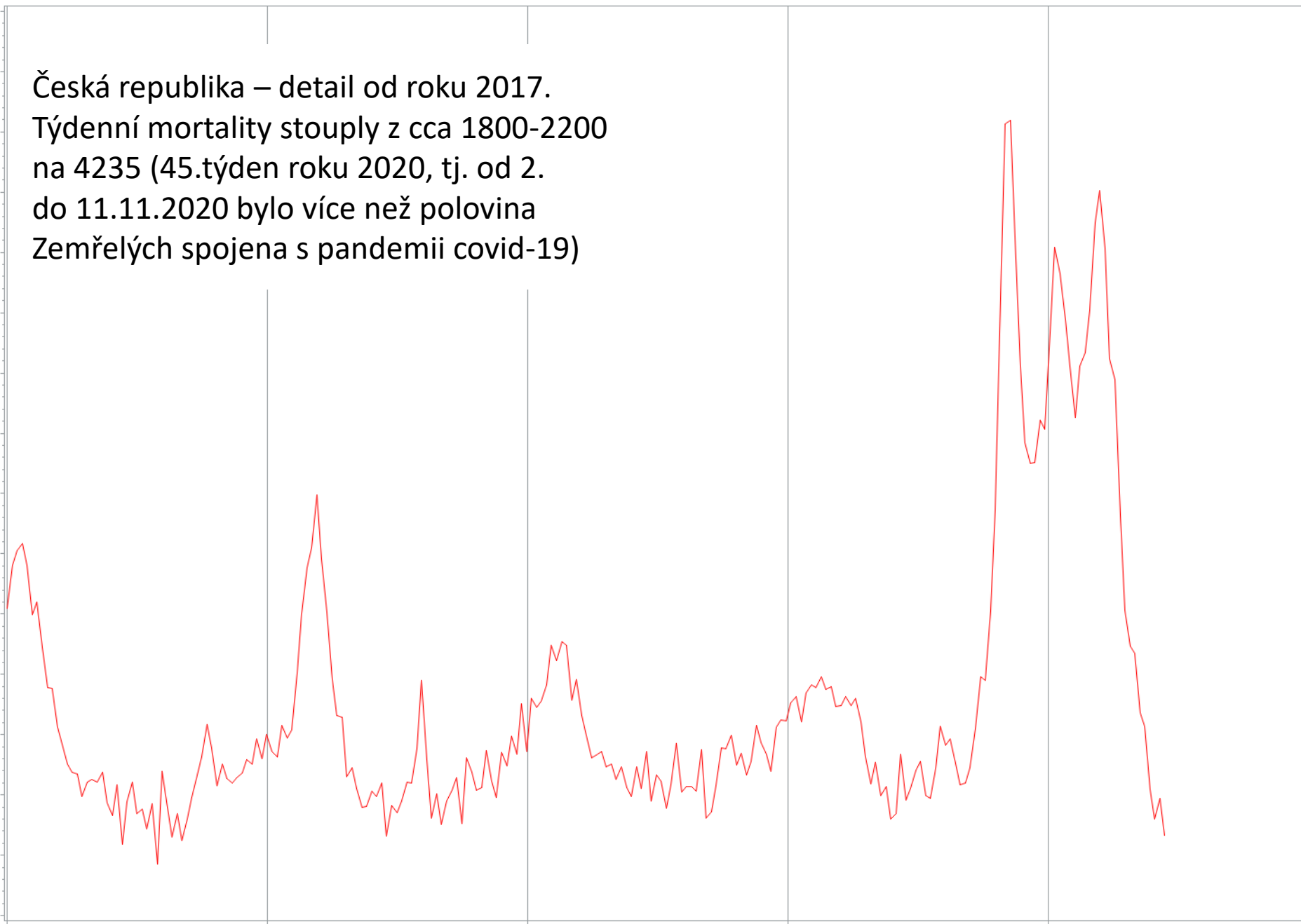
01/01/2019

01/01/2020

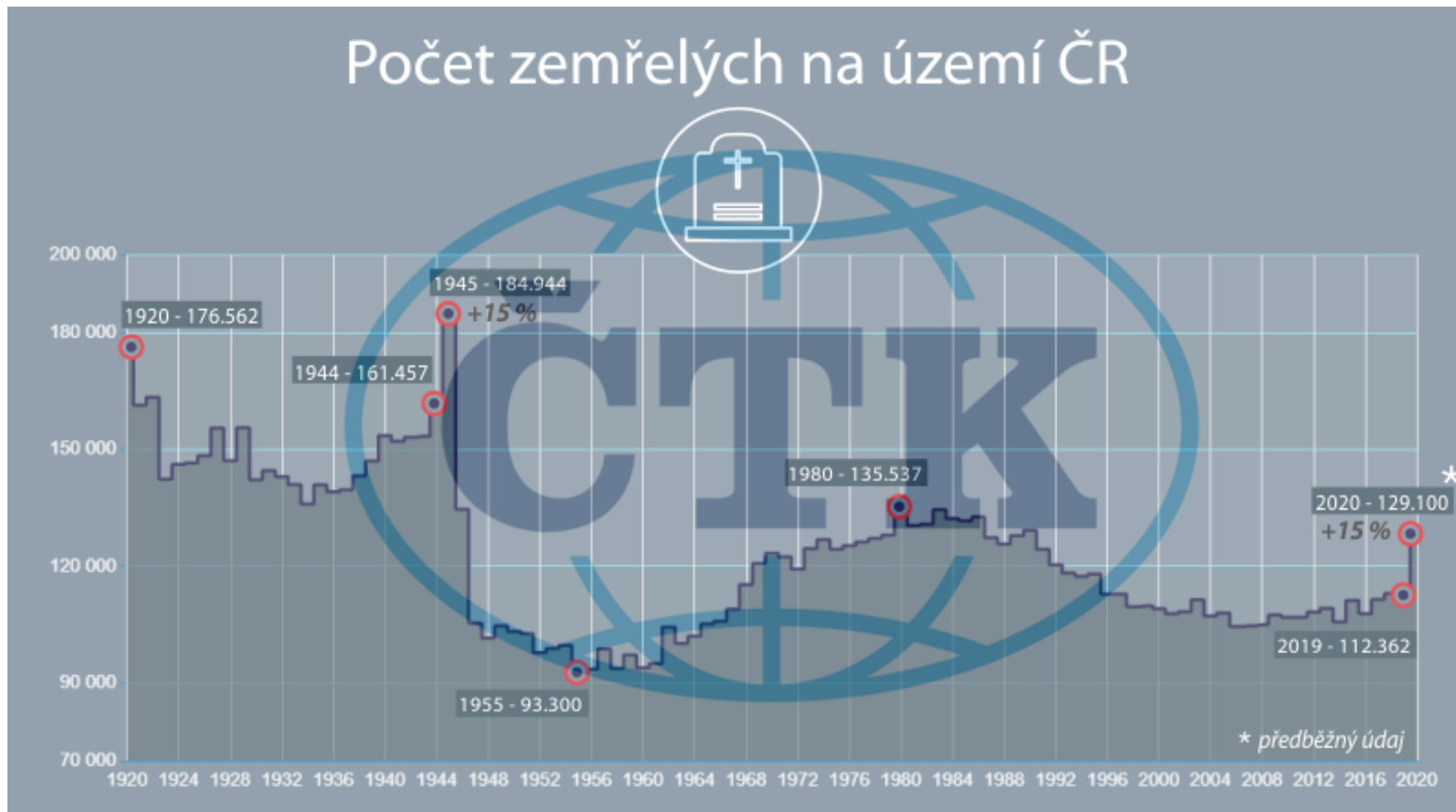
01/01/2021

01/01/2022

date

Data do  
13.06.2021

# Česká Republika



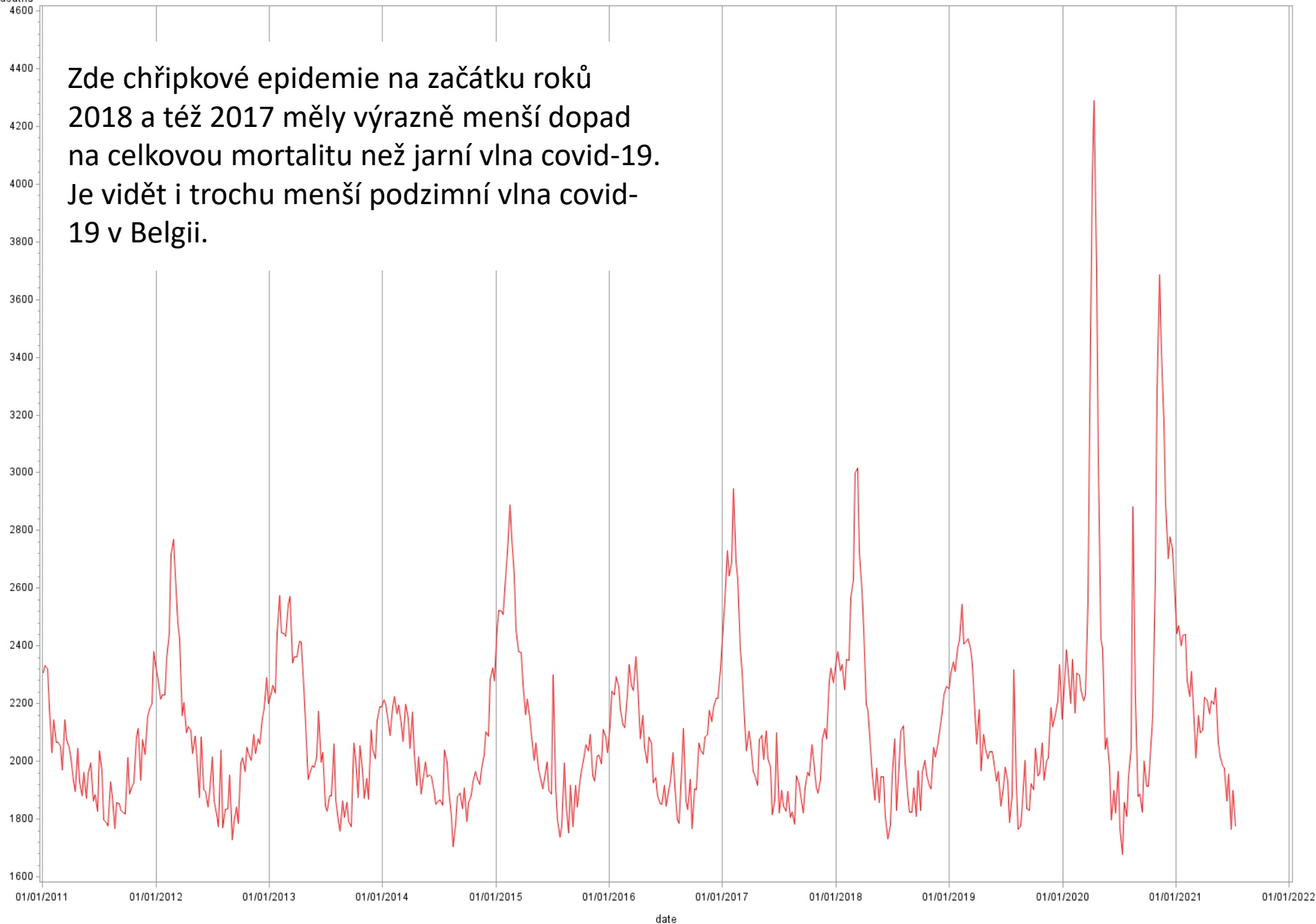
zdroj: ČSÚ

ČTK

Loni v Česku zemřelo o 17 000 lidí víc než v roce 2019, jde zhruba o patnáctiprocentní nárůst. Podle Českého statistického úřadu je tak výrazná meziroční změna v historii po roce 1950 zcela výjimečná. Podle stoleté časové řady, kterou má ČTK k dispozici, Česko pamatuje podobně vysoký procentní nárůst jen v roce 1945, kdy končila druhá světová válka. Podle předběžných údajů loni zemřelo 129 100 lidí (oficiální počet je 129 289)

Absolutní počty zemřelých za týden

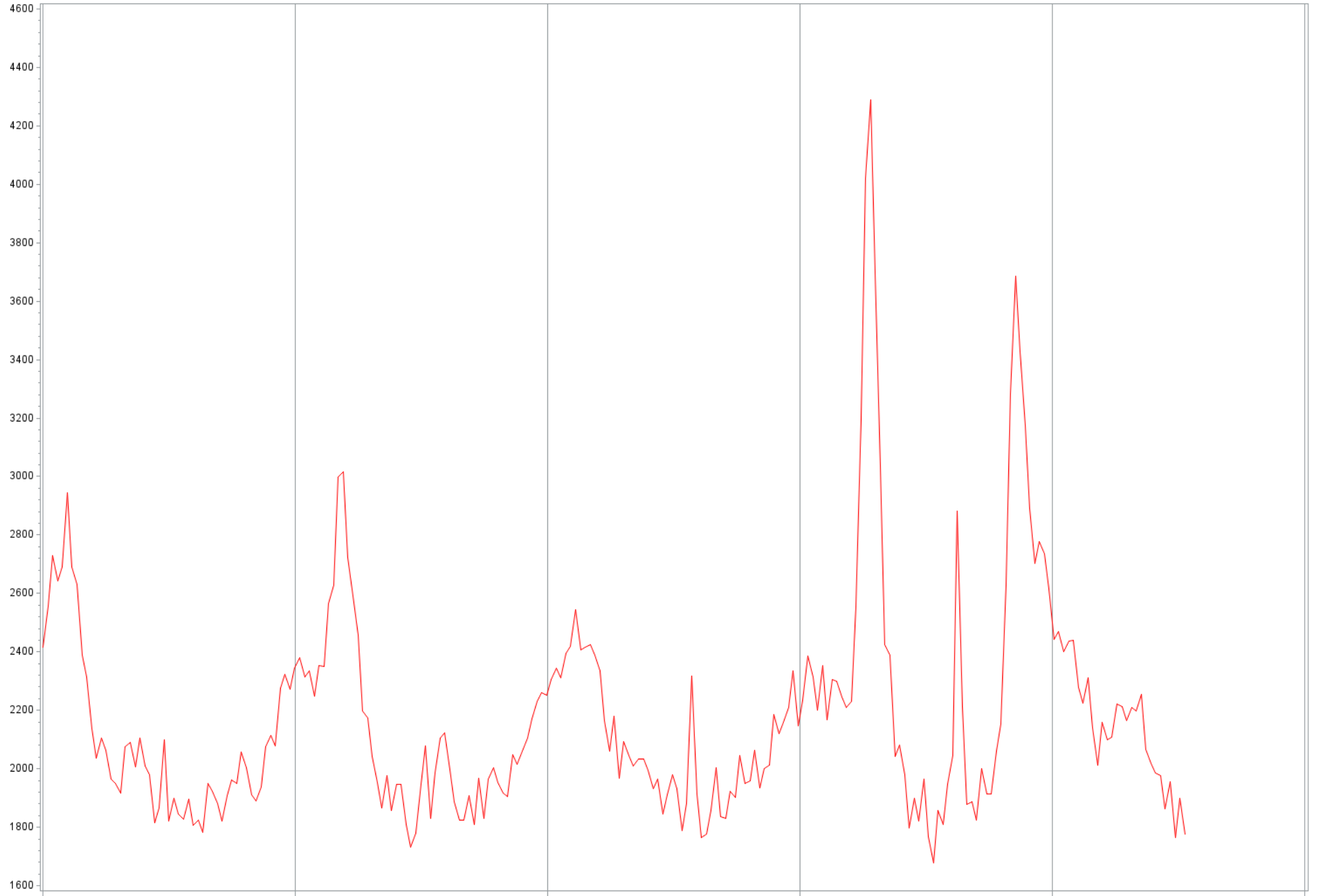
weekly\_deaths



Zde chřipkové epidemie na začátku roků 2018 a též 2017 měly výrazně menší dopad na celkovou mortalitu než jarní vlna covid-19. Je vidět i trochu menší podzimní vlna covid-19 v Belgii.

Data do  
11.07.2021

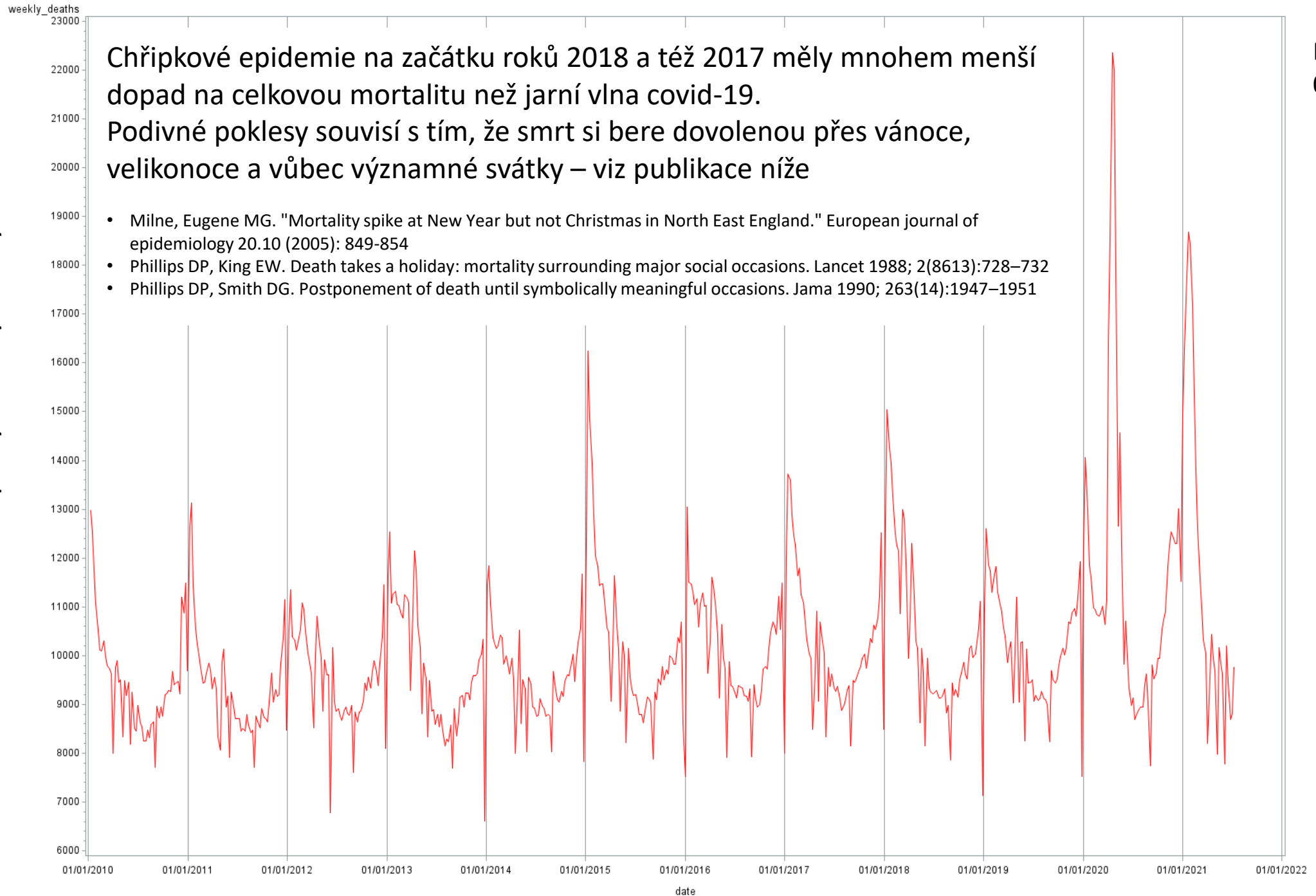
weekly\_deaths



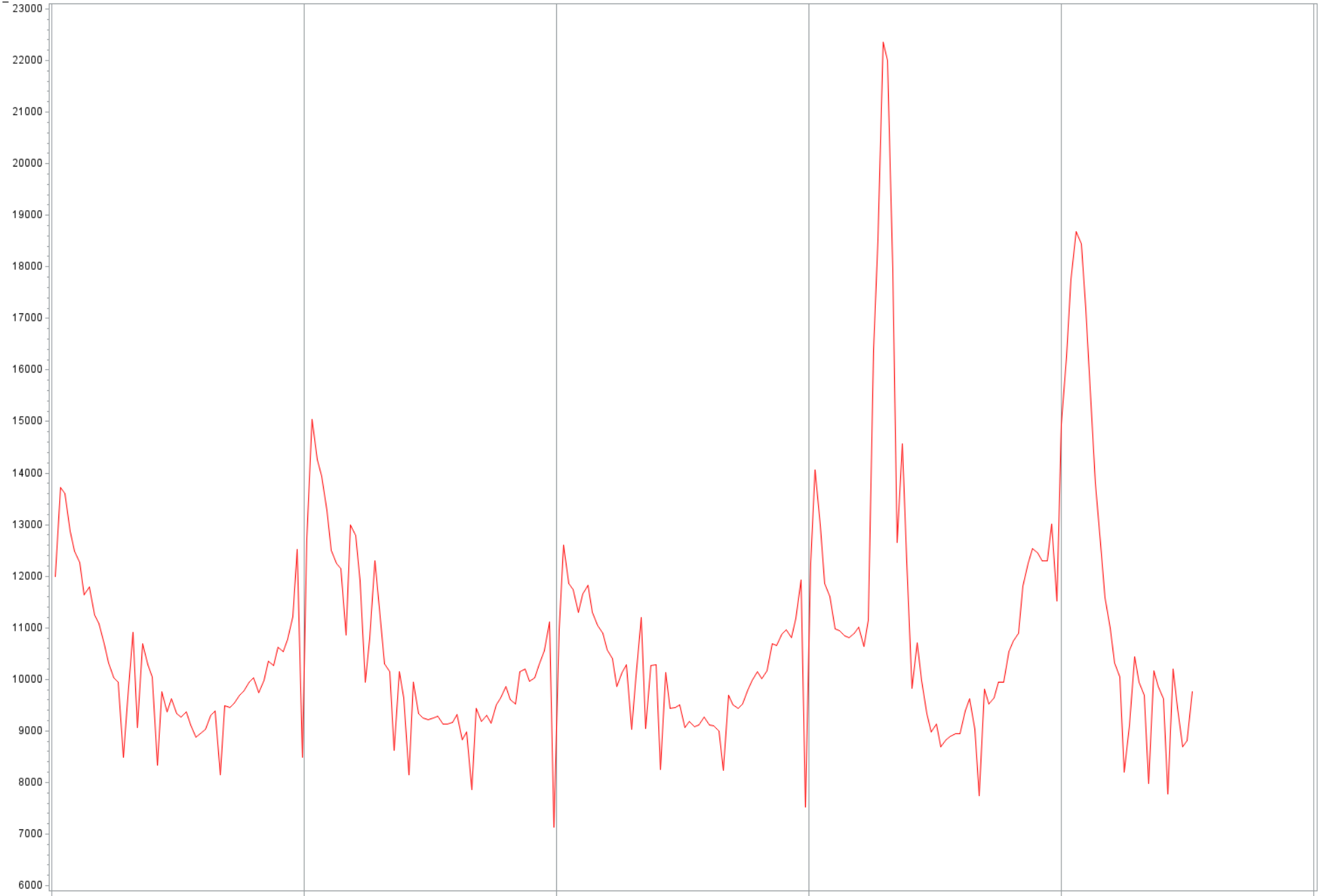
Data do  
11.07.2021



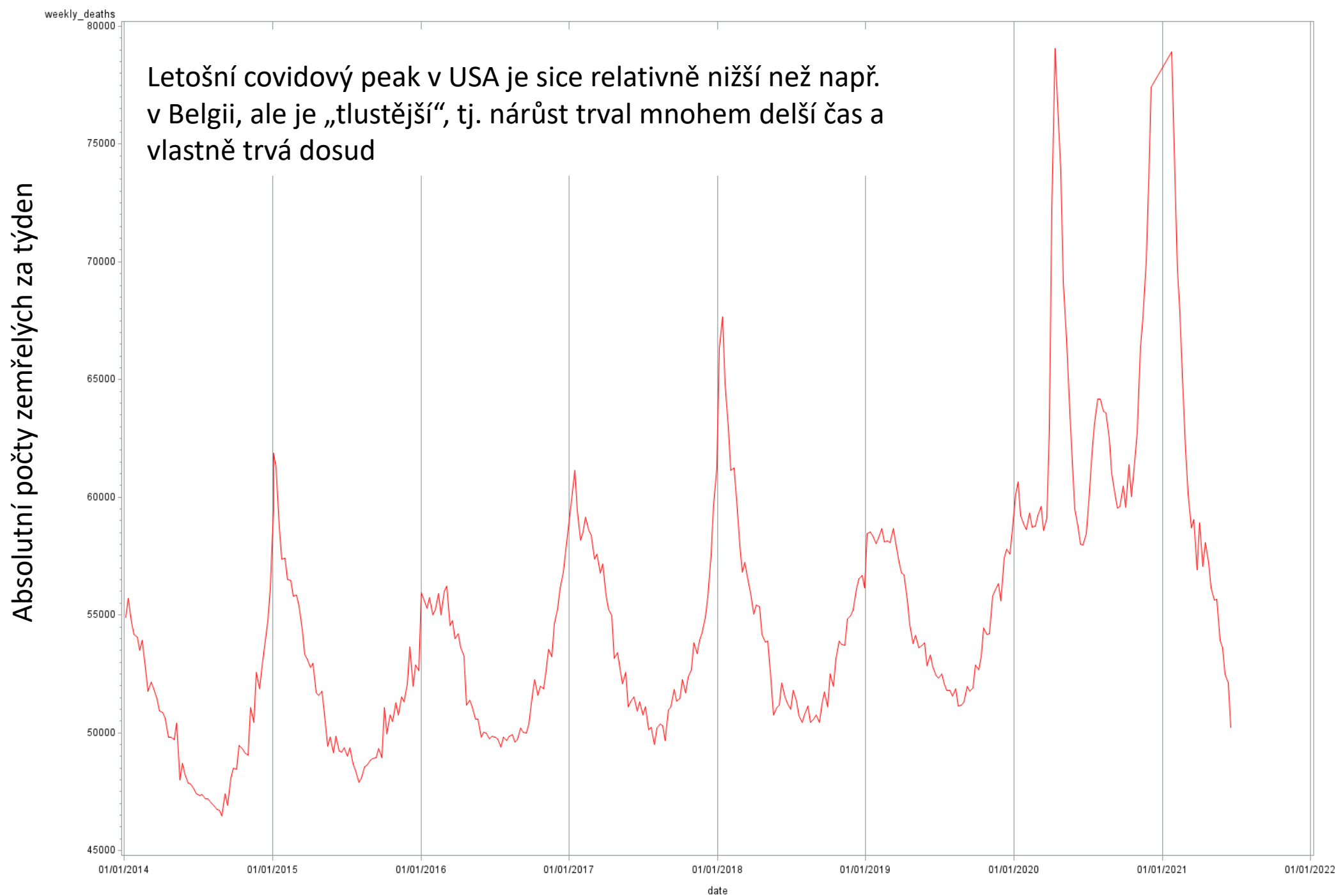
Absolutní počty zemřelých za týden



weekly\_deaths

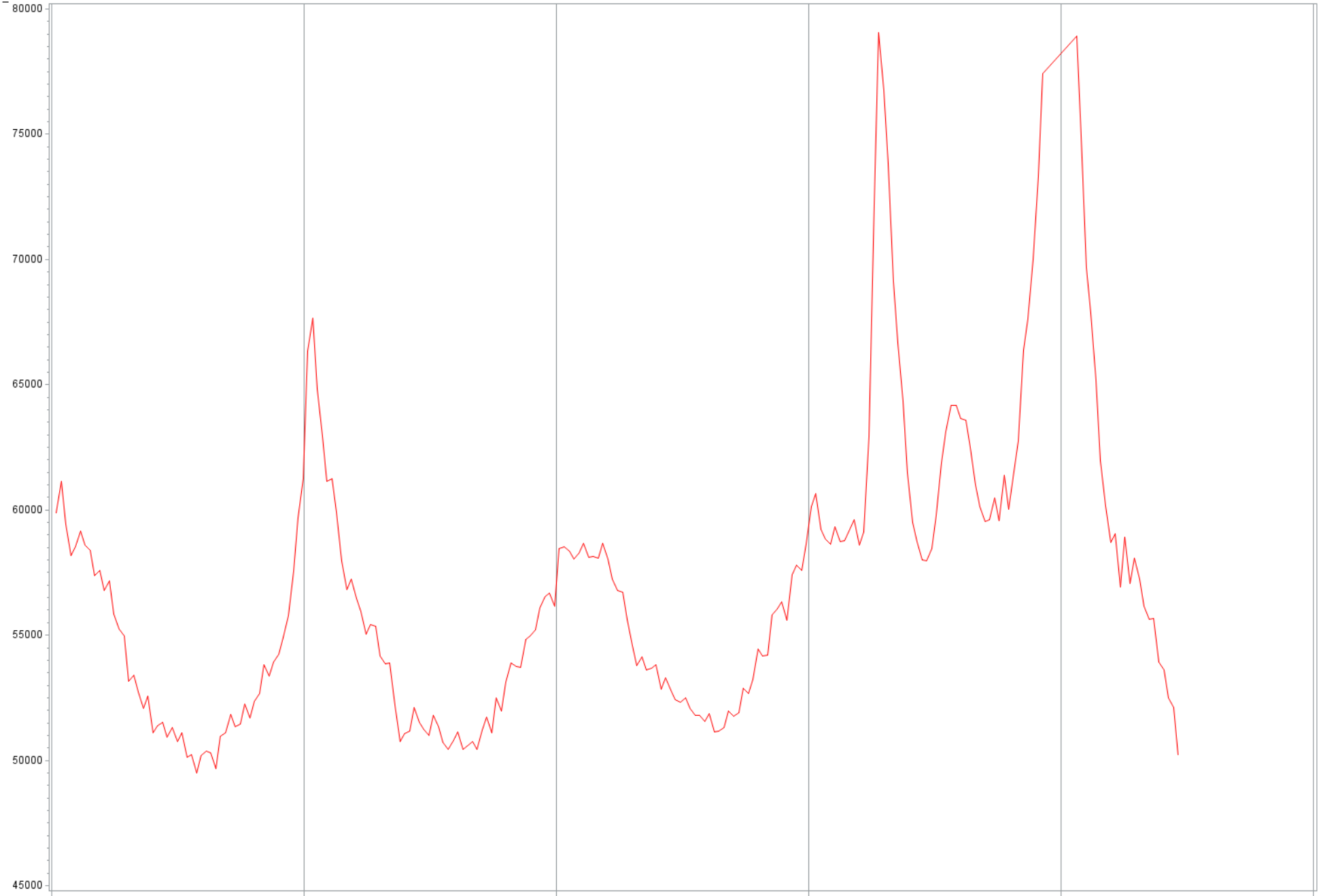


Data do  
09.07.2021



Data do  
27.06.2021

weekly\_deaths

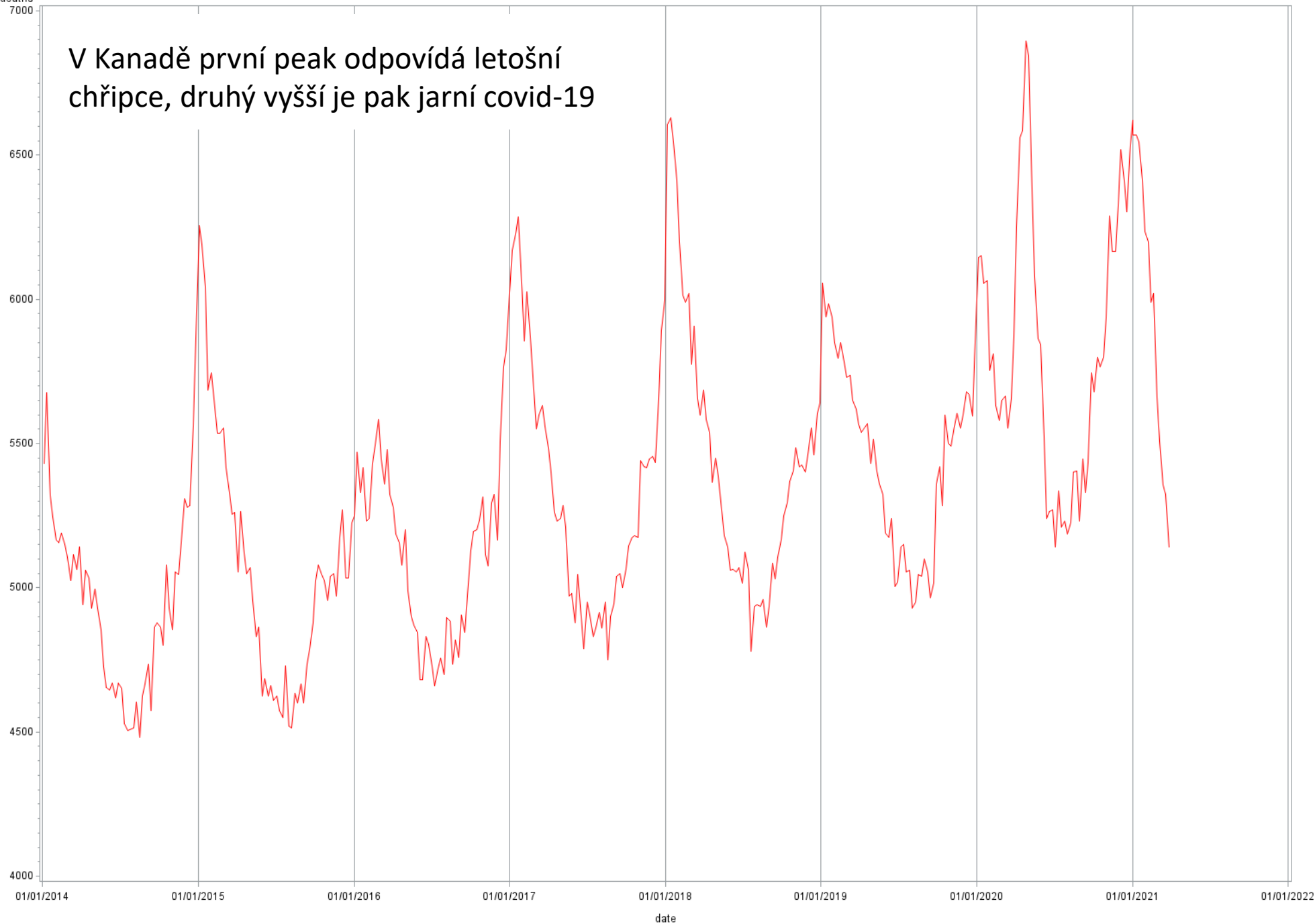


Data do  
27.06.2021

weekly\_deaths

7000

Absolutní počty zemřelých za týden

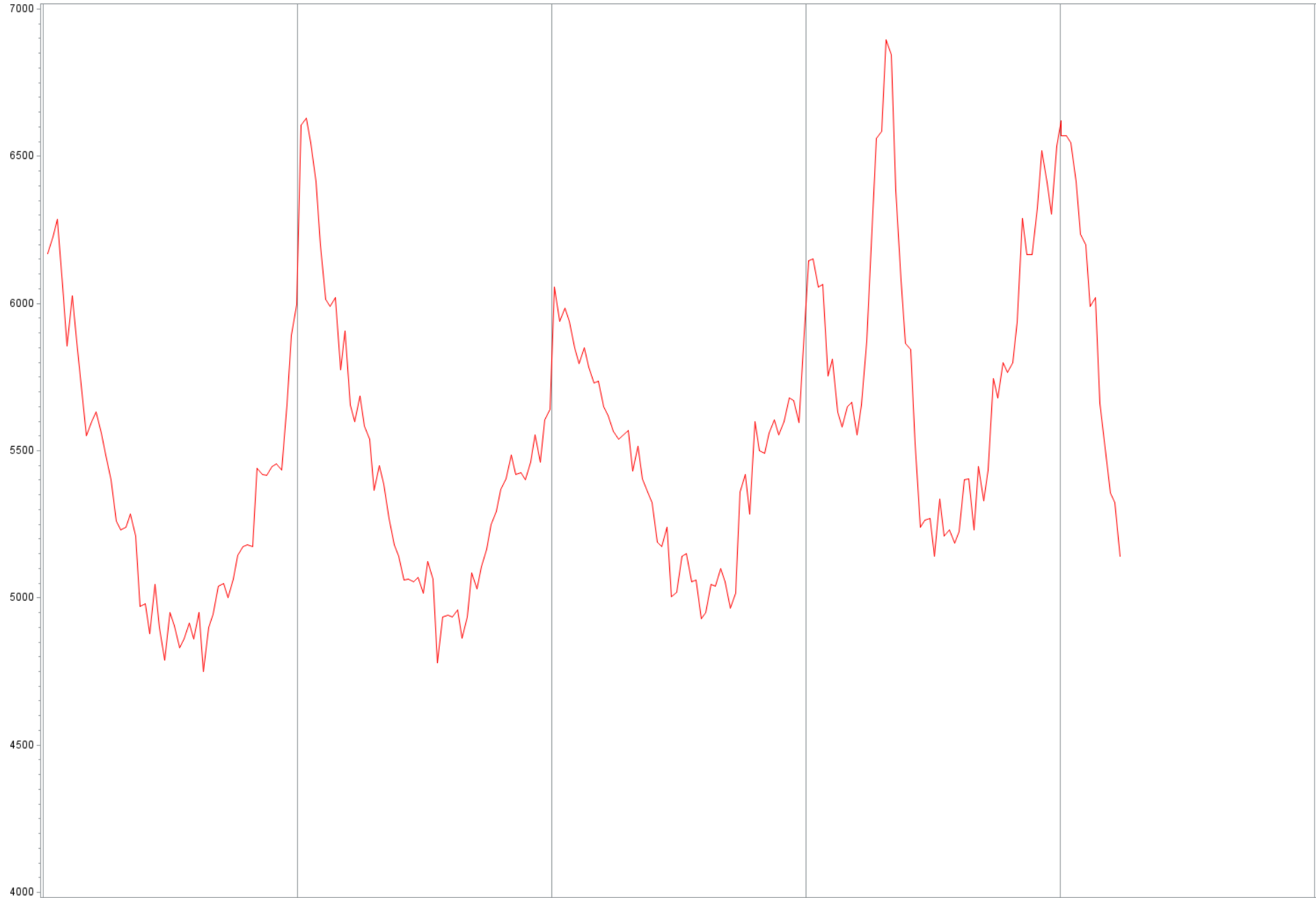


V Kanadě první peak odpovídá letošní chřipce, druhý vyšší je pak jarní covid-19

Data do  
27.03.2021

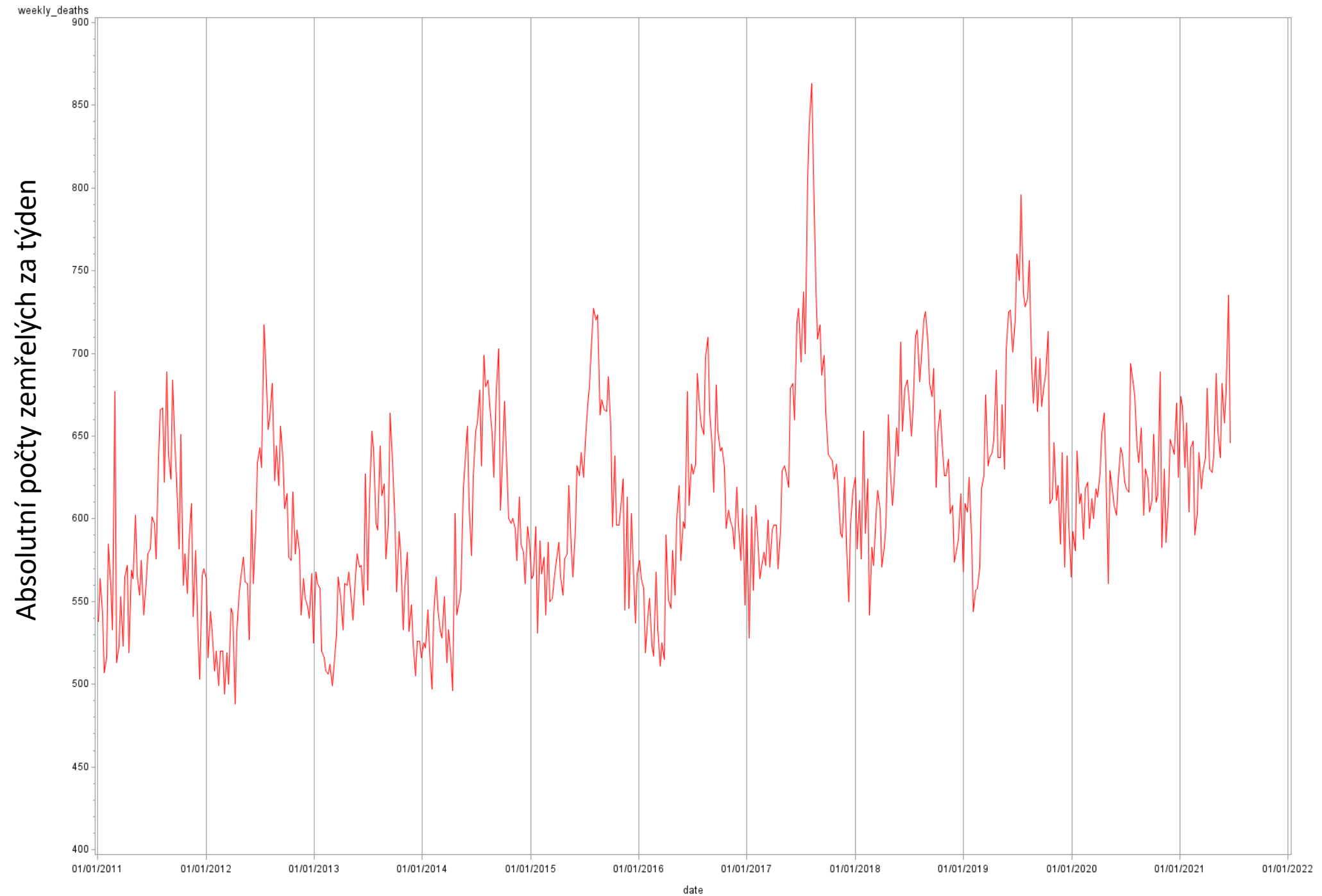


weekly\_deaths

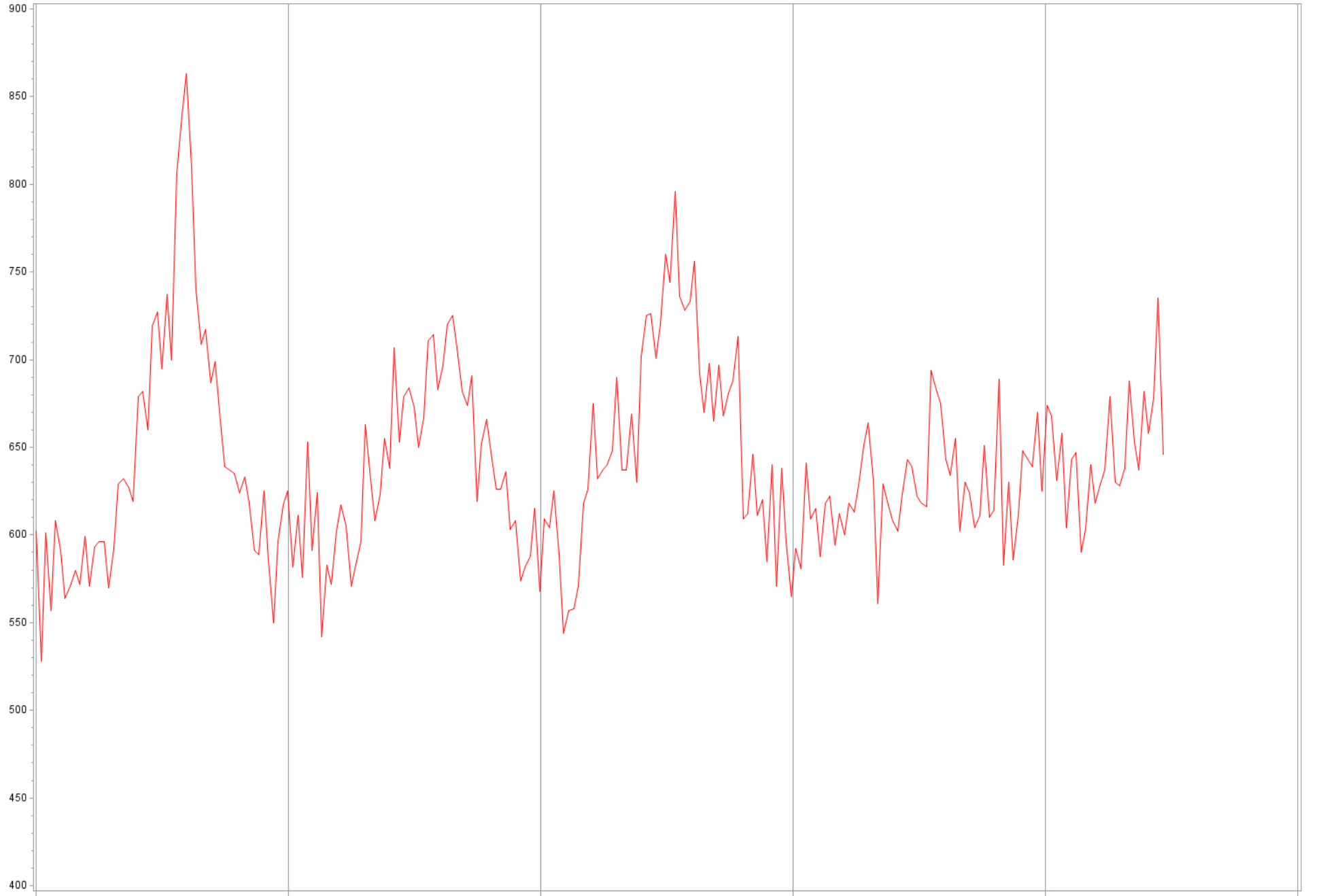


Data do  
27.03.2021

Data do  
20.06.2021



weekly\_deaths



Data do  
20.06.2021

Data do  
19.06.2021

Absolutní počty zemřelých za týden

weekly\_deaths

4200  
4000  
3800  
3600  
3400  
3200  
3000  
2800  
2600  
2400  
2200  
2000  
1800  
1600

Chřipkové epidemie na začátku roků 2018 a též 2017 měly vyšší peak dopadu na celkovou mortalitu než jarní vlna covid-19, ale podzimní vlna nemá srovnání.

01/01/2015

01/01/2016

01/01/2017

01/01/2018

01/01/2019

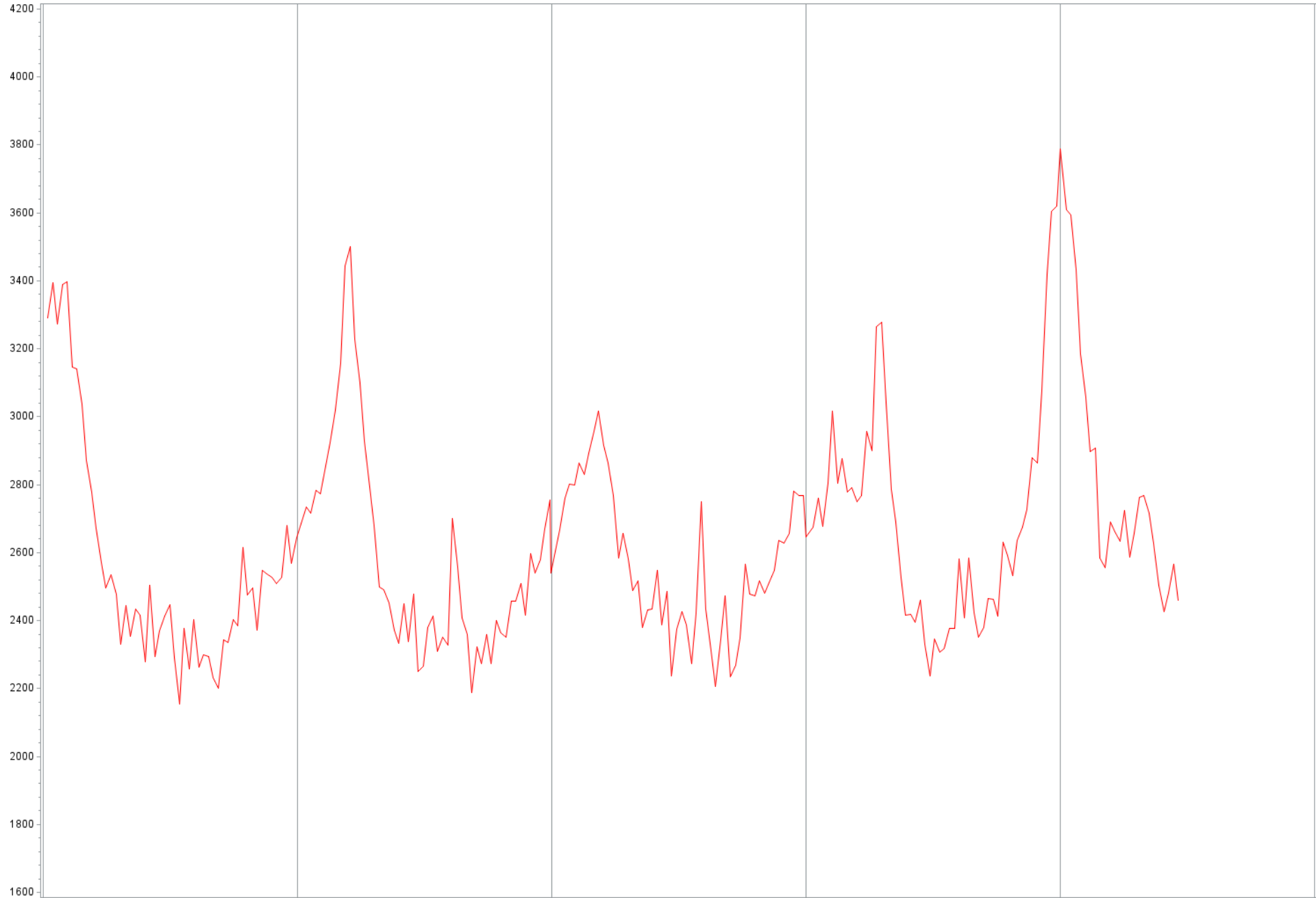
01/01/2020

01/01/2021

01/01/2022

date

weekly\_deaths



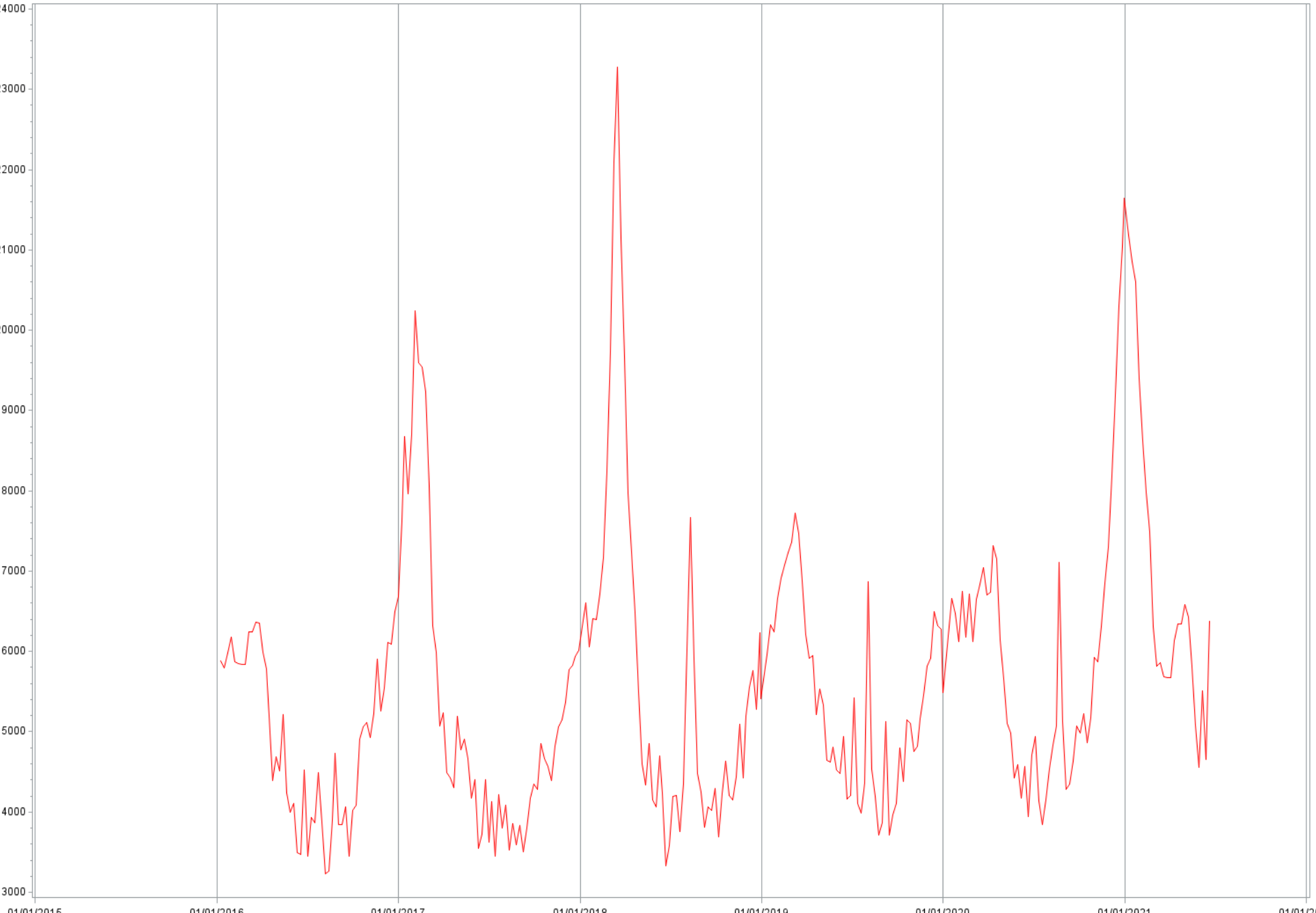
Data do  
19.06.2021



Data do  
19.06.2021

Absolutní počty zemřelých za týden

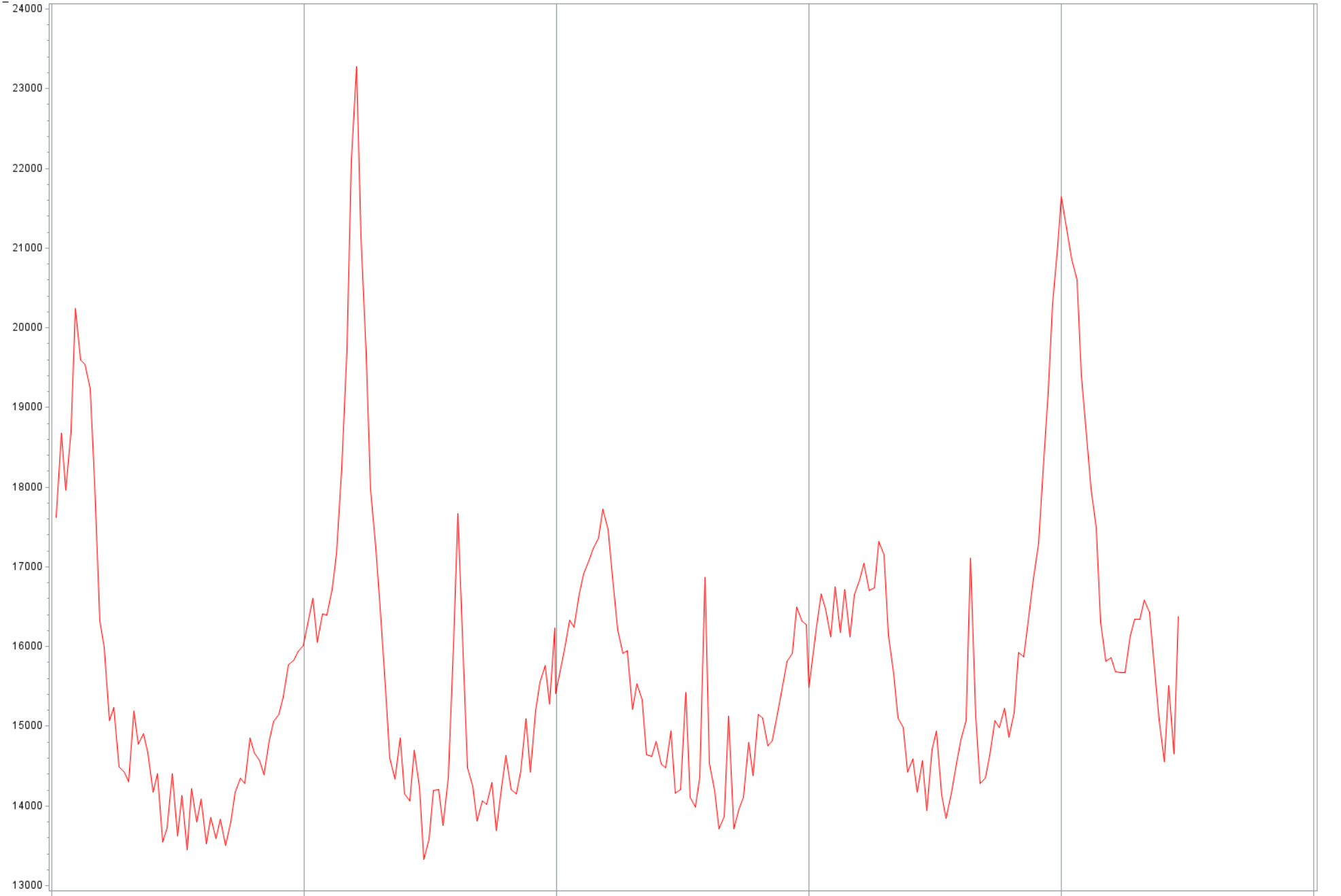
weekly\_deaths  
24000  
23000  
22000  
21000  
20000  
19000  
18000  
17000  
16000  
15000  
14000  
13000



01/01/2015 01/01/2016 01/01/2017 01/01/2018 01/01/2019 01/01/2020 01/01/2021 01/01/2022

date

weekly\_deaths

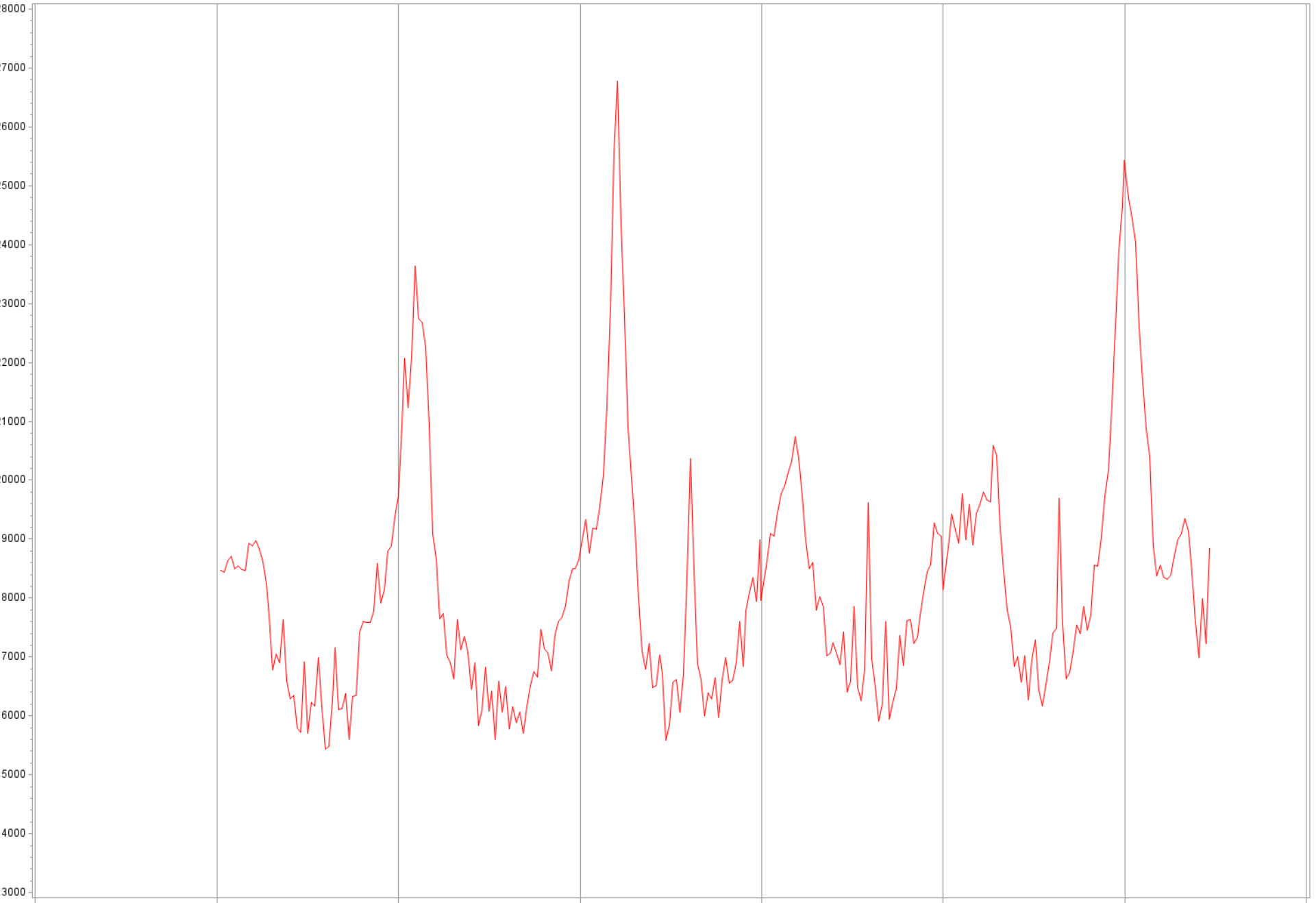


Data do  
19.06.2021

Data do  
19.06.2021

Absolutní počty zemřelých za týden

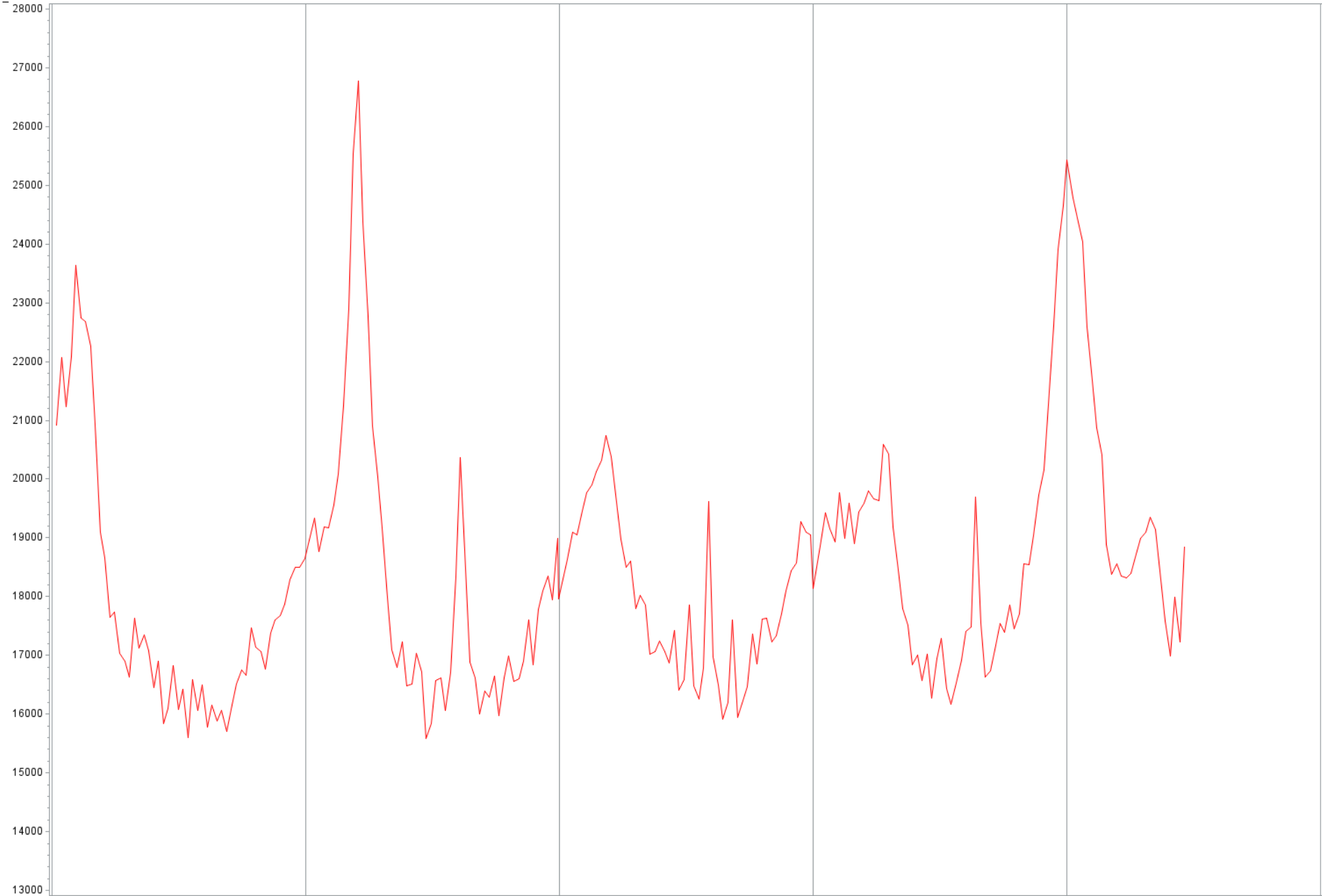
weekly\_deaths  
28000  
27000  
26000  
25000  
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22000  
21000  
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16000  
15000  
14000  
13000



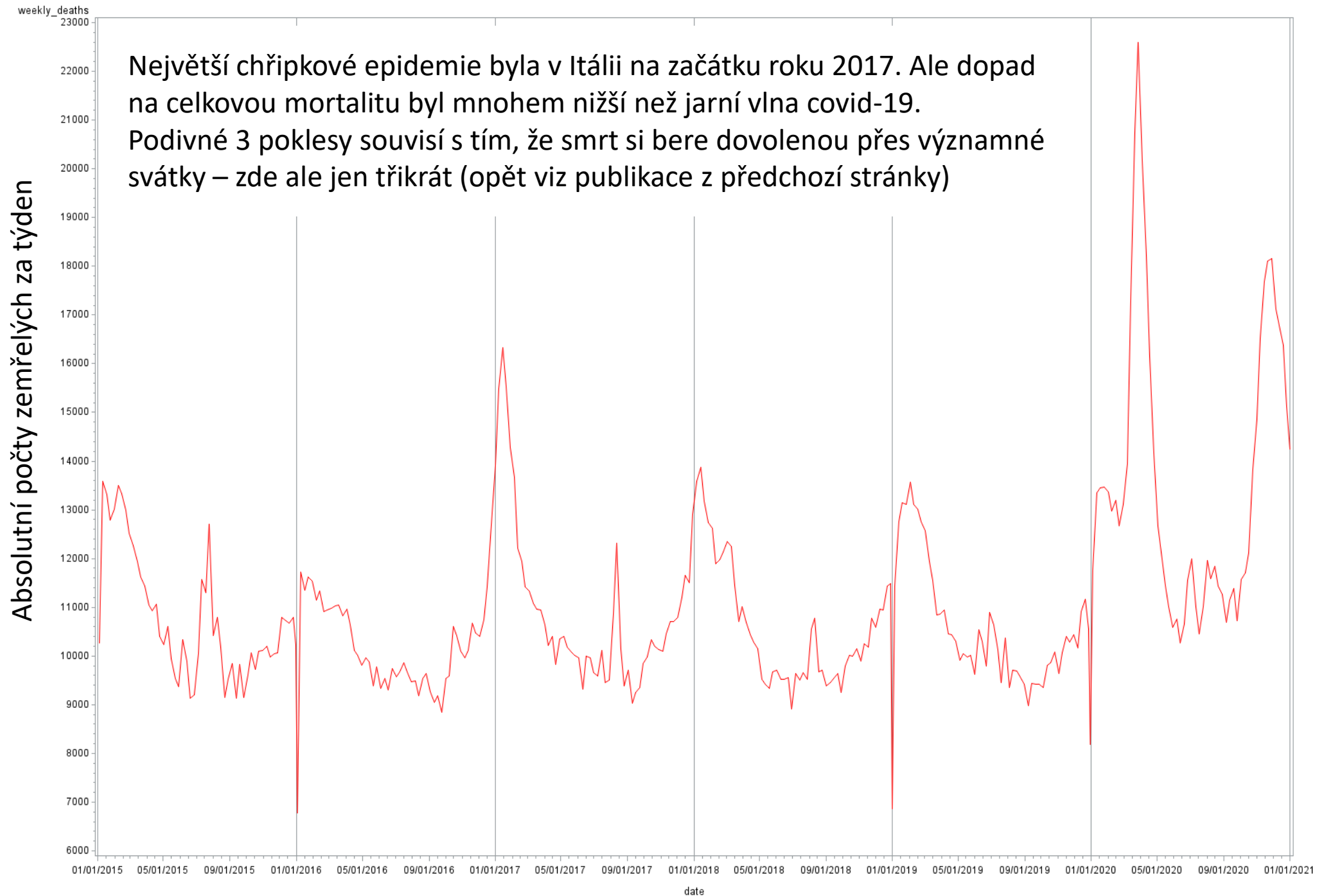
01/01/2015 01/01/2016 01/01/2017 01/01/2018 01/01/2019 01/01/2020 01/01/2021 01/01/2022

date

weekly\_deaths



Data do  
19.06.2021

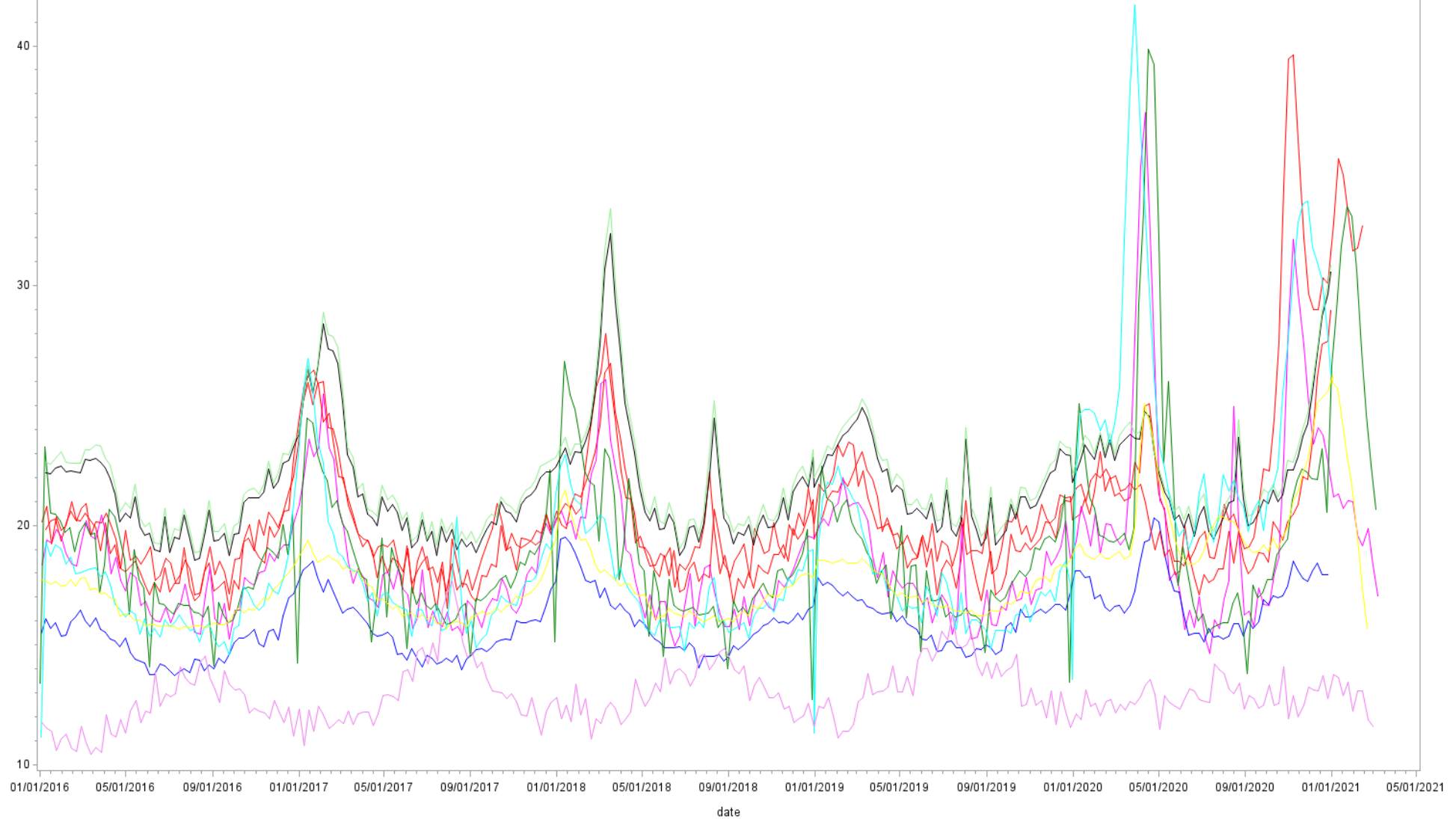


Data do  
31.12.2020



week\_death\_rate

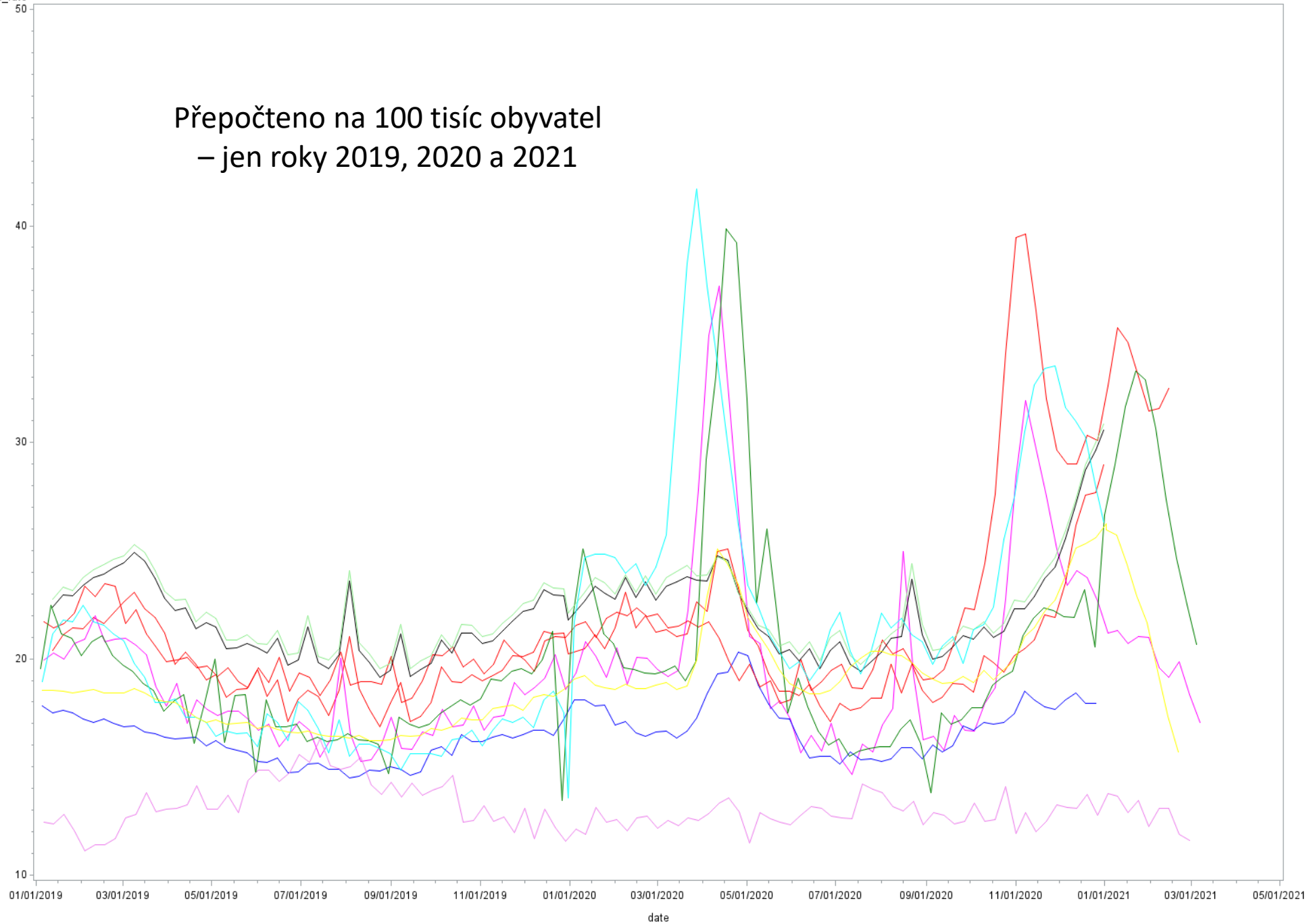
Toto jsou veškerá Evropská data + USA + Kanada co mám – zde zobrazena od roku 2016, přepočtené týdenní počty zemřelých na 100 tisíc obyvatel – tam je vidět, že to, co nastalo v Anglii+Walesu, Belgii, Itálii a USA nenastalo nikde v posledních 12 letech



country — Bavaria — Belgium — Canada — Czech — England&Wales — Germany — Germany without Bavaria — Italy — New Zealand — USA

week\_death\_rate

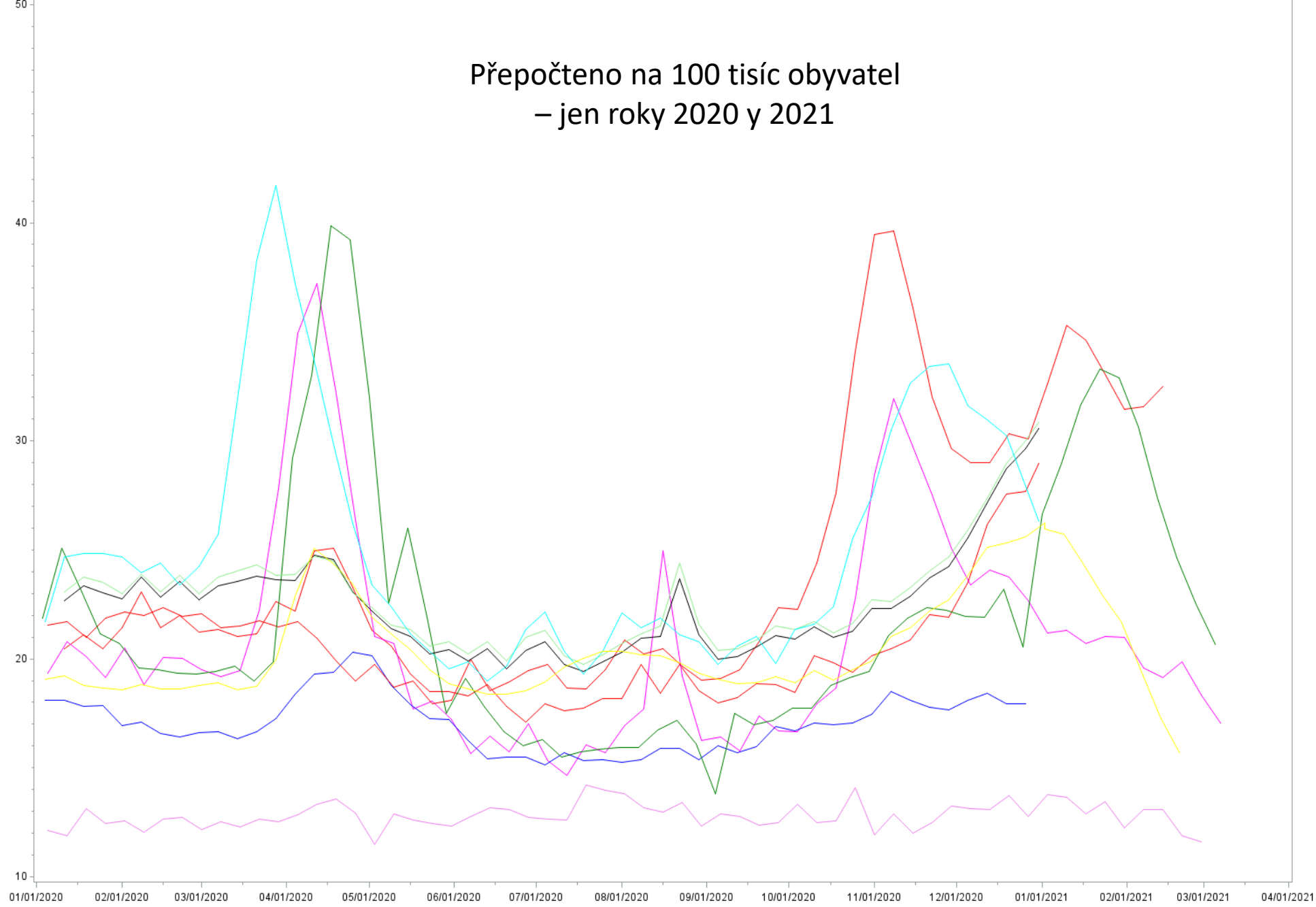
Přepočteno na 100 tisíc obyvatel  
– jen roky 2019, 2020 a 2021



country — Bavaria — Belgium — Canada — Czech — England & Wales — Germany — Germany without Bavaria — Italy — New Zealand — USA

week\_death\_rate

# Přepočteno na 100 tisíc obyvatel – jen roky 2020 y 2021



country — Bavaria — Belgium — Canada — Czech — England&Wales — Germany — Germany without Bavaria — Italy — New Zealand — USA

## Jarní vlna definovaná od 14.února do 15.května 2020

- 2-hý sloupec: predikují lineárním počet zemřelých na rok 2020 z celé časové řady ročního počtu zemřelých. Spočítám kolik bylo v minulých letech v průměru (lépe) mediánu procent zemřelých mezi 14.2 a 15.5. a dle toho spočtu predikovaný počet zemřelých mezi 14.2.2020 a 15.5.2020. To porovná se skutečně pozorovaným počtem úmrtí mezi 14.2.2020 a 15.5.2020 (ten je v čitateli, predikovaný ve jmenovateli)
- 3-tí sloupec: podobné, ale beru v každém roce jen zemřelé mezi 14.2 a 15.5. a z nich spočtu predikovaný počet na tento rok
- 4-tý sloupec: porovnání s průměrem počtu zemřelých mezi 14.2 a 15.5. za všechny minulé roky
- 5-tý sloupec: predikovaná hodnota na rok 2020 ARIMA modelem (klouzavé průměry a autoregresní model ročním oscilací)

| country                  | Nárůst dle lineární regrese počet zemřelých za celý rok a aplikován median %, který zemře v dané zemi mezi 14.2 a 15.5 a predikované hodnotě pro 2020 | Nárůst dle lineární regrese počet zemřelých v dané zemi mezi 14.2 a 15.5 a predikované hodnotě pro 2020 | Nárůst oproti průměru všech minulých let v dané zemi mezi 14.2 a 15.5 | Roční procentuální nárůst počtu zemřelých stárnutím populace | Průměrný věk populace v dané zemi (2018) |
|--------------------------|---|---|---|--|--|
| Germany without Bavaria  | -3,67%  | -4,00%  | 0,10%   | 1,04%  | 47.7                                     |
| Germany                  | -2,68%  | -3,75%  | 0,92%   | 1,06%  | 47.1                                     |
| Czech Republic           | -2,10%  | -1,73%  | 0,98%   | 0,55%  | 42.1                                     |
| New Zealand              | -0,68%  | -1,40%  | 7,20%   | 1,38%  | 37.9                                     |
| Bavaria                  | 3,38%   | 0,39%   | 5,87%   | 1,14%  | 43.7                                     |
| Canada                   | 4,76%   | 3,88%   | 9,78%   | 1,90%  | 42.2                                     |
| <b>USA</b>               | 17,32%  | 16,36%  | 19,72%  | 1,62%  | 38.1                                     |
| <b>Belgium</b>           | 26,21%  | 23,25%  | 26,99%  | 0,46%  | 41.4                                     |
| <b>Italy</b>             | 37,71%  | 37,86%  | 38,11%  | 0,94%  | 45.5                                     |
| <b>England&amp;Wales</b> | 38,26%  | 35,84%  | 39,22%  | 1,22%  | 40.5                                     |

Webové zdroje věnující se covid-19 jako např.

European Centre for Disease Prevention and Control (ECDC), COVID-19 Situation dashboard: <https://qap.ecdc.europa.eu/public/extensions/COVID-19/COVID-19.html>

(všechny od sebe přebírají data a tak všechny zdroje říkají totéž či výtah téhož)

Zde Belgie vypadá jako země na jaře 2020 nejvíce postižena covid-19, ale dle předchozího byla Anglie+Wales a Itálie s horším dopadem na celkovou mortalitu.

| country        | No of deaths | No of deaths per 100 000 | infected total | infected per 100 000 | Case-Fatality Ratio |
|----------------|--------------|--------------------------|----------------|----------------------|---------------------|
| Czech Republic | 320          | 3.0                      | 9273           | 87.1                 | 3.45%               |
| Germany        | 8511         | 10.3                     | 181815         | 219.0                | 4.68%               |
| Canada         | 7295         | 19.5                     | 90936          | 243.1                | 8.02%               |
| Italy          | 33415        | 55.4                     | 233019         | 386.1                | 14.34%              |
| United Kingdom | 37445        | 56.2                     | 255515         | 383.4                | 14.65%              |
| Belgium        | 9392         | 82.0                     | 59028          | 515.3                | 15.91%              |

**Stav 01.06.2020**

- Celý rok 2020

| country                 | Nárůst oproti predikované hodnotě pro rok 2020 dle lineární regrese počtů zemřelých za celý | Nárůst oproti roku 2019 | Nárůst oproti roku 2019 adjustovaný na stárnutí populace | Nárůst oproti průměru 5 minulých let 2015 -2019 | Nárůst oproti průměru 5 minulých let 2015 -2019 adjustovaný na stárnutí populace | Roční procentuální nárůst počtu zemřelých stárnutím populace | Průměrný počet dětí na jednu ženu | Průměrný věk populace v dané zemi (2018) |
|-------------------------|---|-------------------------|--|---|--|--|-----------------------------------|--|
| New Zealand             | -0,09%  | -0,79%                  | -2,14%   | 3,61%   | 0,13%  | 1,38%  | 1.96                              | 37.9                                     |
| Germany without Bavaria | 2,20%   | 4,65%                   | 3,58%  | 5,17%   | 2,48%  | 1,04%  | 1.47                              | 47.7                                     |
| Germany                 | 2,60%   | 4,90%                   | 3,80%  | 5,68%   | 2,94%  | 1,06%  | 1.48                              | 47.1                                     |
| Canada                  | 3,67%   | 4,47%                   | 2,52%  | 9,31%   | 4,27%  | 1,90%  | 1.56                              | 42.2                                     |
| Bavaria                 | 4,33%   | 6,37%                   | 5,17%  | 7,30%   | 4,30%  | 1,14%  | 1.55                              | 43.7                                     |
| England&Wales           | 11,79%  | 15,69%                  | 14,29%   | 15,42%  | 11,97%   | 1,22%  | 1.87                              | 40.5                                     |
| USA                     | 14,71%  | 17,66%                  | 15,78%   | 20,27%  | 15,53%   | 1,62%  | 1.90                              | 38.1                                     |
| Italy                   | 14,92%  | 16,29%                  | 15,21%   | 18,16%  | 15,43%   | 0,94%  | 1.51                              | 45.5                                     |
| Belgium                 | 15,05%  | 17,17%                  | 16,64%   | 16,35%  | 15,03%   | 0,46%  | 1.80                              | 41.4                                     |
| Czech Republic          | 16,67%  | 17,00%                  | 16,36%   | 18,30%  | 16,69%   | 0,55%  | 1.59                              | 42.1                                     |

### Global Cases

# 47,370,241

#### Cases by Country/Region/Sovereignty

|           |                |
|-----------|----------------|
| 9,309,298 | US             |
| 8,267,623 | India          |
| 5,554,206 | Brazil         |
| 1,661,096 | Russia         |
| 1,460,745 | France         |
| 1,307,922 | Colombia       |
| 1,240,697 | Spain          |
| 1,183,131 | Argentina      |
| 1,057,021 | United Kingdom |
| 933,155   | Mexico         |
| 902,503   | Peru           |
| 759,829   | Italy          |
| 727,595   | South Africa   |
| 637,712   | Iran           |
| 569,598   | Germany        |
| 514,202   | Chile          |
| 482,296   | Iraq           |
| 447,355   | Belgium        |
| 423,683   | Ukraine        |
| 418,375   | Indonesia      |
| 414,844   | Poland         |
| 412,647   | Bangladesh     |
| 387,161   | Philippines    |
| 382,406   | Netherlands    |
| 379,775   | Turkey         |
| 350,896   | Czechia        |
| 348,510   | Saudi Arabia   |

Admin0 Admin1 Admin2

Last Updated at (M/D/YYYY)

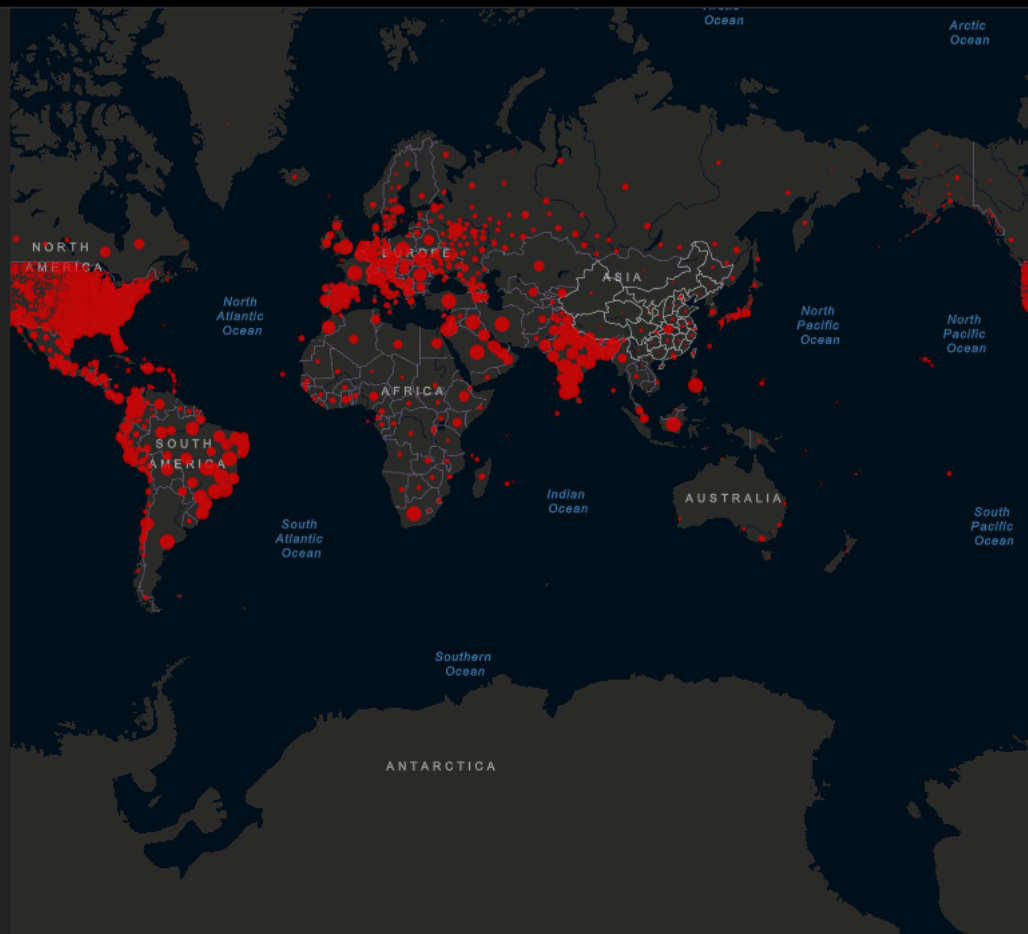
## 11/3/2020, 6:24 PM

# 190

countries/regions

Lancet Inf Dis Article: [Here](#). Mobile Version: [Here](#). Data sources: [Full list](#). Downloadable database: [GitHub](#), [Feature Layer](#).  
 Lead by JHU CSSE. Technical Support: [Epi Living Atlas](#) team and JHU APL. Financial Support: [JHU](#), [NSF](#), [Bloomberg Philanthropies](#) and [Stavros Niarchos Foundation](#). Resource support: [Slack](#), [Github](#) and [AWS](#). Click [here](#) to **donate** to the CSSE dashboard team, and other JHU COVID-19 Research Efforts. [FAQ](#). Read more in this [blog](#). [Contact Us](#).

Cases and Death counts include confirmed and probable (where reported).  
 Recovered cases are estimates based on local media reports, and state and local reporting when available, and therefore may be substantially lower than the true number. US state-level recovered cases are from [COVID Tracking Project](#).  
 Active cases = total cases - total recovered - total deaths.



Cumulative Cases Active Cases Incidence Rate Case-Fatality Ratio Testing Rate

Esri, FAO, NOAA

### Global Deaths

# 1,209,172

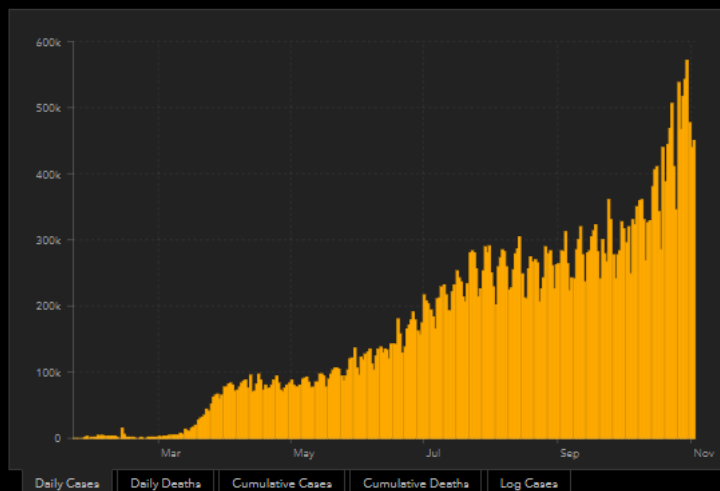
|         |        |                |
|---------|--------|----------------|
| 231,754 | deaths | US             |
| 160,253 | deaths | Brazil         |
| 123,097 | deaths | India          |
| 92,100  | deaths | Mexico         |
| 46,943  | deaths | United Kingdom |
| 39,412  | deaths | Italy          |
| 37,485  | deaths | France         |
| 36,257  | deaths | Spain          |
| 36,160  | deaths | Iran           |
| 34,476  | deaths | Peru           |
| 31,670  | deaths | Colombia       |
| 31,623  | deaths |                |

Global Deaths Global Recovered

### US State Level Deaths, Recovered

|        |                 |           |                  |
|--------|-----------------|-----------|------------------|
| 33,539 | deaths, 79,831  | recovered | New York US      |
| 18,536 | deaths, 787,685 | recovered | Texas US         |
| 17,702 | deaths,         | recovered | California US    |
| 16,834 | deaths,         | recovered | Florida US       |
| 16,371 | deaths, 37,342  | recovered | New Jersey US    |
| 10,093 | deaths,         | recovered | Illinois US      |
| 10,023 | deaths, 127,054 | recovered | Massachusetts US |
| 8,841  | deaths, 161,116 | recovered | Pennsylvania US  |
| 7,999  | deaths,         | recovered | Georgia US       |
| 7,716  | deaths, 121,093 | recovered | Michigan US      |
| 5,982  | deaths, 41,589  | recovered | Arizona US       |
| 5,934  | deaths, 168,634 | recovered |                  |

US Deaths, Recovered US Test Results



Daily Cases Daily Deaths Cumulative Cases Cumulative Deaths Log Cases



# COVID-19 Dashboard by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (JHU)

## Global Cases

# 59 192 123

Cases by Country/Region/Sovereignty

|            |                |
|------------|----------------|
| 12 420 872 | US             |
| 9 177 840  | India          |
| 6 087 608  | Brazil         |
| 2 195 940  | France         |
| 2 096 749  | Russia         |
| 1 582 616  | Spain          |
| 1 531 267  | United Kingdom |
| 1 431 795  | Italy          |
| 1 374 631  | Argentina      |
| 1 254 979  | Colombia       |
| 1 049 358  | Mexico         |
| 949 670    | Peru           |
| 946 822    | Germany        |
| 876 333    | Poland         |
| 866 821    | Iran           |
| 769 759    | South Africa   |
| 665 729    | Ukraine        |
| 559 902    | Belgium        |
| 542 080    | Chile          |
| 537 457    | Iraq           |
| 502 110    | Indonesia      |
| 497 501    | Netherlands    |
| 496 638    | Czechia        |
| 453 535    | Turkey         |

Last Updated at (M/D/YYYY)  
**11/24/2020 8:27 dopoledne**



Cumulative Cases | Active Cases | Incidence Rate | Case-Fatality Ratio | Testing Rate

# 191

countries/regions

*Lancet Inf Dis* Article: [Here](#). Mobile Version: [Here](#). Data sources: [Full list](#). Downloadable database: [GitHub](#), [Feature Layer](#).  
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**Cases** and **Death** counts include confirmed and probable (where reported). **Recovered cases** are estimates based on local media reports, and state and local reporting when available, and therefore may be substantially lower than the true number. US state level recovered cases are from [COVID Tracking Dashboard](#).

## Global Deaths

# 1 396 673

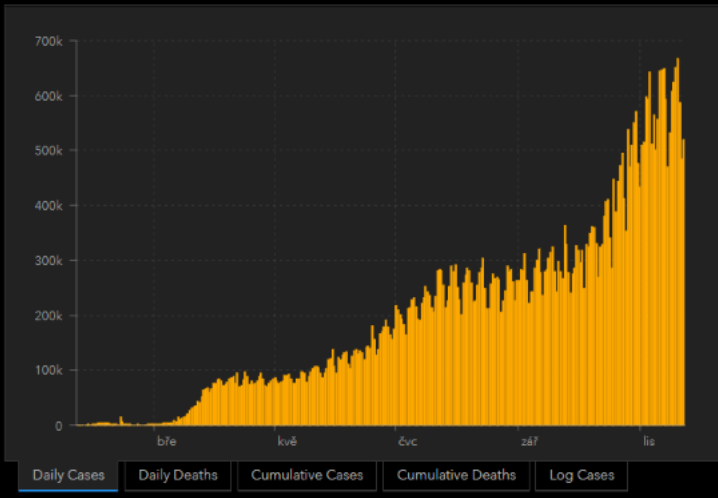
|                |                |
|----------------|----------------|
| 257 701 deaths | US             |
| 169 485 deaths | Brazil         |
| 134 218 deaths | India          |
| 101 926 deaths | Mexico         |
| 55 327 deaths  | United Kingdom |
| 50 453 deaths  | Italy          |
| 49 312 deaths  | France         |
| 45 255 deaths  | Iran           |
| 43 131 deaths  | Spain          |
| 37 122 deaths  | Argentina      |
| 36 192 deaths  |                |

Global Deaths | Global Recovered

## US State Level Deaths, Recovered

|   |                  |
|---|------------------|
| 34 339 deaths, <b>83 307 recovered</b>  | New York US      |
| 21 049 deaths, <b>917 739 recovered</b> | Texas US         |
| 18 783 deaths, <b>recovered</b>         | California US    |
| 18 085 deaths, <b>recovered</b>         | Florida US       |
| 16 772 deaths, <b>41 550 recovered</b>  | New Jersey US    |
| 12 111 deaths, <b>recovered</b>         | Illinois US      |
| 10 531 deaths, <b>145 682 recovered</b> | Massachusetts US |
| 9 846 deaths, <b>198 072 recovered</b>  | Pennsylvania US  |
| 9 215 deaths, <b>recovered</b>          | Georgia US       |
| 8 940 deaths, <b>152 267 recovered</b>  | Michigan US      |
| 6 464 deaths, <b>48 807 recovered</b>   |                  |

US Deaths, Recovered | US Test Results





### Global Cases

# 65,287,599

Cases by Country/Region/Sovereignty

|            |                |
|------------|----------------|
| 14,147,241 | US             |
| 9,571,559  | India          |
| 6,487,084  | Brazil         |
| 2,382,012  | Russia         |
| 2,310,271  | France         |
| 1,678,419  | United Kingdom |
| 1,675,902  | Spain          |
| 1,664,829  | Italy          |
| 1,447,732  | Argentina      |
| 1,343,322  | Colombia       |
| 1,144,643  | Mexico         |
| 1,139,702  | Germany        |
| 1,028,610  | Poland         |
| 1,003,494  | Iran           |
| 967,075    | Peru           |
| 808,828    | Ukraine        |
| 800,872    | South Africa   |
| 733,261    | Turkey         |
| 584,857    | Belgium        |
| 558,767    | Iraq           |
| 557,877    | Indonesia      |
| 555,406    | Chile          |
| 546,982    | Netherlands    |
| 537,663    | Czechia        |
| 492,211    | Romania        |

Last Updated at (M/D/YYYY)  
**12/4/2020, 10:26 AM**



Cumulative Cases | Active Cases | Incidence Rate | Case-Fatality Ratio | Testing Rate

# 191

countries/regions

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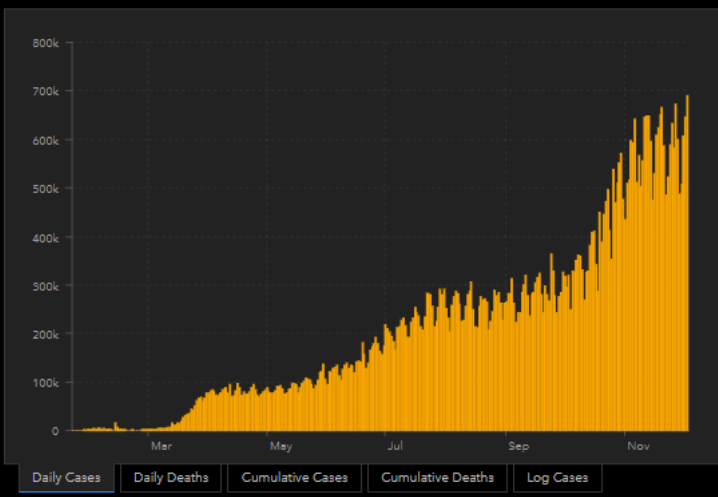
### Global Deaths

# 1,507,580

|                |                |
|----------------|----------------|
| 276,383 deaths | US             |
| 175,270 deaths | Brazil         |
| 139,188 deaths | India          |
| 108,173 deaths | Mexico         |
| 60,210 deaths  | United Kingdom |
| 58,038 deaths  | Italy          |
| 54,231 deaths  | France         |
| 49,348 deaths  | Iran           |
| 46,038 deaths  | Spain          |
| 41,730 deaths  | Russia         |
| 39,305 deaths  | Argentina      |

### US State Level Deaths, Recovered

|                                    |                  |
|------------------------------------|------------------|
| 34,775 deaths, 86,201 recovered    | New York US      |
| 22,573 deaths, 1,003,141 recovered | Texas US         |
| 19,594 deaths, recovered           | California US    |
| 18,874 deaths, recovered           | Florida US       |
| 17,209 deaths, 44,777 recovered    | New Jersey US    |
| 13,624 deaths, recovered           | Illinois US      |
| 10,874 deaths, 169,809 recovered   | Massachusetts US |
| 10,871 deaths, 228,233 recovered   | Pennsylvania US  |
| 10,035 deaths, 165,269 recovered   | Michigan US      |
| 9,648 deaths, recovered            | Georgia US       |
| 6,821 deaths, 54,342 recovered     | Arizona US       |



Daily Cases | Daily Deaths | Cumulative Cases | Cumulative Deaths | Log Cases

# COVID-19 Dashboard by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (JHU)

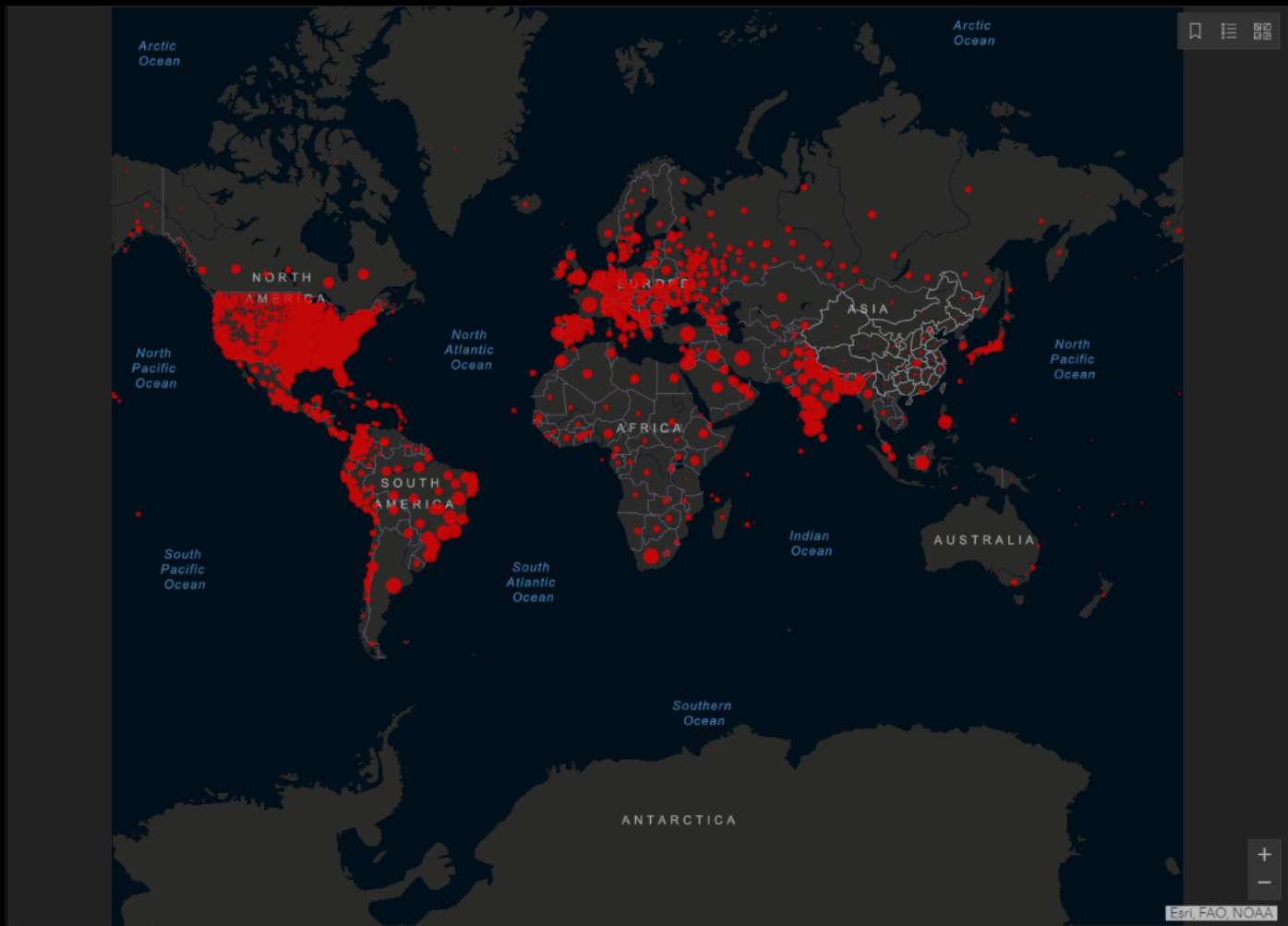
## Global Cases

# 99 573 155

Cases by Country/Region/Sovereignty

|            |                |
|------------|----------------|
| 25 235 095 | US             |
| 10 667 736 | India          |
| 8 844 577  | Brazil         |
| 3 698 246  | Russia         |
| 3 680 101  | United Kingdom |
| 3 116 295  | France         |
| 2 593 382  | Spain          |
| 2 475 372  | Italy          |
| 2 435 247  | Turkey         |
| 2 154 473  | Germany        |
| 2 015 485  | Colombia       |
| 1 867 223  | Argentina      |
| 1 763 219  | Mexico         |
| 1 478 119  | Poland         |
| 1 417 537  | South Africa   |
| 1 379 286  | Iran           |
| 1 234 772  | Ukraine        |
| 1 093 938  | Peru           |
| 999 256    | Indonesia      |
| 966 189    | Netherlands    |
| 940 004    | Czechia        |
| 755 432    | Canada         |
| 712 561    | Romania        |

Last Updated at (M/D/YYYY)  
**1/25/2021 10:22 odp.**



Cumulative Cases Active Cases Incidence Rate Case-Fatality Ratio Testing Rate

**192** countries/regions

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 Recovered cases are estimates based on local media reports, and state and local reporting when available, and therefore may be substantially lower than the

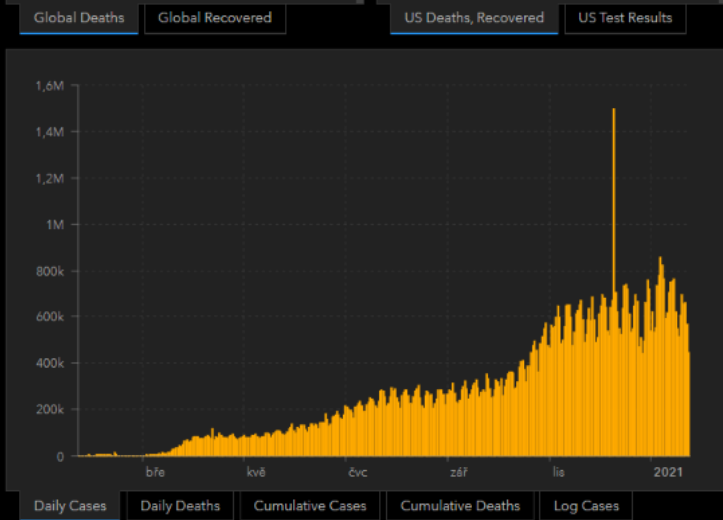
## Global Deaths

# 2 136 248

|                |                |
|----------------|----------------|
| 420 439 deaths | US             |
| 217 037 deaths | Brazil         |
| 153 470 deaths | India          |
| 149 614 deaths | Mexico         |
| 98 723 deaths  | United Kingdom |
| 85 881 deaths  | Italy          |
| 73 635 deaths  | France         |
| 68 841 deaths  | Russia         |
| 57 481 deaths  | Iran           |
| 56 208 deaths  | Spain          |

## US State Level Deaths, Recovered

|   |                  |
|---|------------------|
| 42 535 deaths, <b>121 923 recovered</b>   | New York US      |
| 37 297 deaths, <b>recovered</b>           | California US    |
| 34 935 deaths, <b>1 809 067 recovered</b> | Texas US         |
| 25 446 deaths, <b>recovered</b>           | Florida US       |
| 20 972 deaths, <b>65 274 recovered</b>    | New Jersey US    |
| 20 744 deaths, <b>recovered</b>           | Illinois US      |
| 20 593 deaths, <b>631 966 recovered</b>   | Pennsylvania US  |
| 15 219 deaths, <b>463 106 recovered</b>   | Michigan US      |
| 14 133 deaths, <b>354 388 recovered</b>   | Massachusetts US |
| 13 303 deaths, <b>recovered</b>           | Georgia US       |



## Global Cases

# 104 886 168

Cases by Country/Region/Sovereignty

|            |                |
|------------|----------------|
| 26 679 539 | US             |
| 10 802 591 | India          |
| 9 396 293  | Brazil         |
| 3 903 706  | United Kingdom |
| 3 874 830  | Russia         |
| 3 310 071  | France         |
| 2 913 425  | Spain          |
| 2 597 446  | Italy          |
| 2 508 988  | Turkey         |
| 2 265 536  | Germany        |
| 2 135 412  | Colombia       |
| 1 961 635  | Argentina      |
| 1 899 820  | Mexico         |
| 1 533 511  | Poland         |
| 1 466 767  | South Africa   |
| 1 445 326  | Iran           |
| 1 280 257  | Ukraine        |
| 1 158 337  | Peru           |
| 1 123 105  | Indonesia      |
| 1 021 477  | Czechia        |
| 1 007 268  | Netherlands    |
| 798 394    | Canada         |
| 748 858    | Portugal       |
| 740 237    | Chile          |
| 738 152    | Romania        |
| 718 847    | Belgium        |

Last Updated at (M/D/YYYY)  
**2/5/2021 8:23 dop.**



Cumulative Cases | Active Cases | Incidence Rate | Case-Fatality Ratio | Testing Rate

# 192

countries/regions

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Cases and Death counts include confirmed and probable (where reported).  
 Recovered cases are estimates based on local media reports, and state and local reporting when available, and therefore may be substantially lower than the true number. US state-level recovered cases are from [COVID Tracking Project](#).  
 Active cases = total cases - total recovered - total deaths.

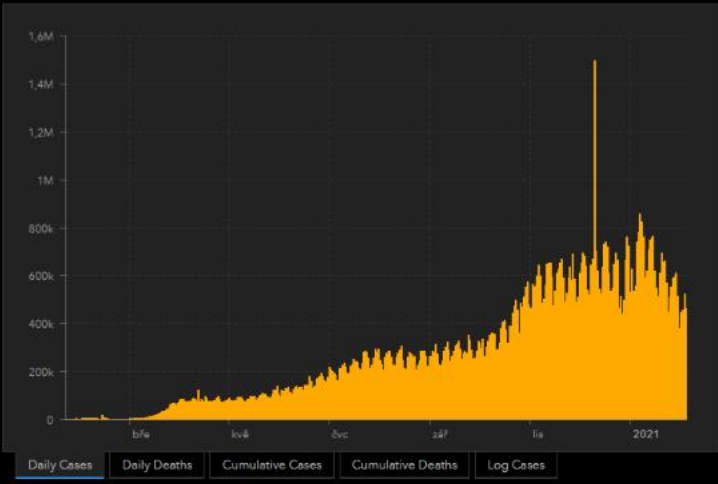
## Global Deaths

# 2 285 354

|         |        |                |
|---------|--------|----------------|
| 455 869 | deaths | US             |
| 228 795 | deaths | Brazil         |
| 162 922 | deaths | Mexico         |
| 154 823 | deaths | India          |
| 110 462 | deaths | United Kingdom |
| 90 241  | deaths | Italy          |
| 77 741  | deaths | France         |
| 74 520  | deaths | Russia         |
| 60 802  | deaths | Spain          |
| 60 634  | deaths | Germany        |
| 58 256  | deaths | Iran           |
| 55 131  | deaths |                |

## US State Level Deaths, Recovered

|        |                   |           |                  |
|--------|-------------------|-----------|------------------|
| 44 298 | deaths, 130 302   | recovered | New York US      |
| 43 120 | deaths, recovered |           | California US    |
| 38 453 | deaths, 2 037 888 | recovered | Texas US         |
| 27 247 | deaths, recovered |           | Florida US       |
| 22 048 | deaths, 719 868   | recovered | Pennsylvania US  |
| 21 793 | deaths, 68 764    | recovered | New Jersey US    |
| 21 497 | deaths, recovered |           | Illinois US      |
| 15 725 | deaths, 481 801   | recovered | Michigan US      |
| 14 784 | deaths, 425 717   | recovered | Massachusetts US |
| 14 756 | deaths, recovered |           | Georgia US       |
| 13 752 | deaths, 106 058   | recovered | Arizona US       |
| 11 597 | deaths, 412 819   | recovered |                  |





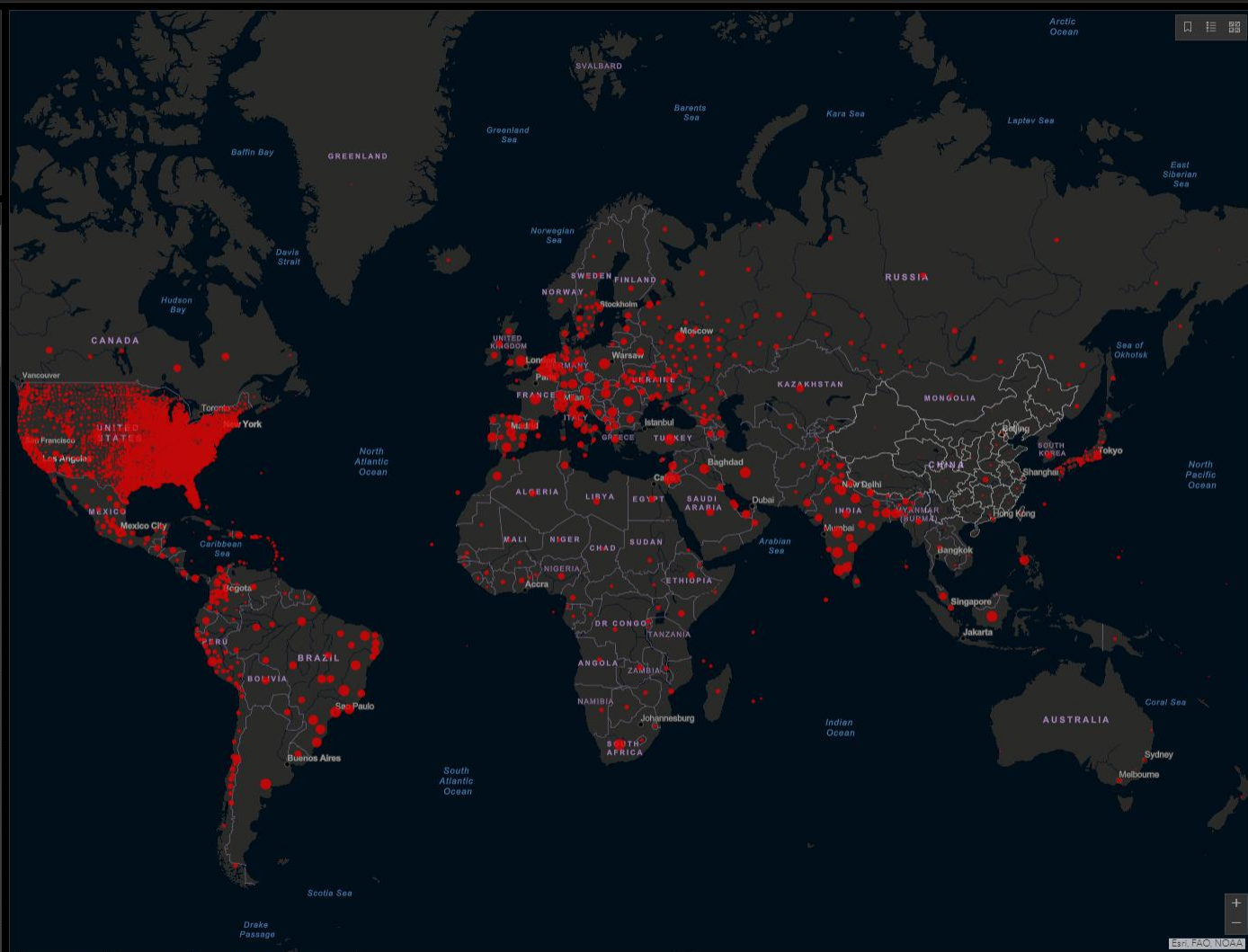
COVID-19 Dashboard by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (JHU)

# Global Cases

## 131 370 252

Cases by Country/Region/Sovereignty

|            |                |
|------------|----------------|
| 30 706 129 | US             |
| 12 984 956 | Brazil         |
| 12 589 067 | India          |
| 4 883 178  | France         |
| 4 538 101  | Russia         |
| 4 373 798  | United Kingdom |
| 3 668 264  | Italy          |
| 3 487 050  | Turkey         |
| 3 300 965  | Spain          |
| 2 897 541  | Germany        |
| 2 448 463  | Poland         |
| 2 446 219  | Colombia       |
| 2 393 492  | Argentina      |
| 2 250 458  | Mexico         |
| 1 932 074  | Iran           |
| 1 807 327  | Ukraine        |
| 1 582 367  | Peru           |
| 1 553 820  | Czechia        |
| 1 551 964  | South Africa   |
| 1 534 255  | Indonesia      |
| 1 324 021  | Netherlands    |
| 1 026 785  | Chile          |
| 1 008 808  | Canada         |
| 974 375    | Romania        |
| 900 994    | Belgium        |
| 873 568    | Iraq           |
| 834 444    | Israel         |
| 823 335    | Portugal       |
| 813 191    | Sweden         |
| 803 398    | Philippines    |
| 692 231    | Pakistan       |
| 689 853    | Hungary        |
| 637 364    | Bangladesh     |
| 632 907    | Jordan         |
| 617 669    | Serbia         |



Cumulative Cases | Incidence Rate | Case-Fatality Ratio | Testing Rate

**192** countries/regions

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Cases and Death counts include confirmed and probable (where reported).  
 Recovered cases are estimates based on local media reports, and state and local reporting when available, and therefore may be substantially lower than the true number.  
 Incidence Rate = cases per 100,000 persons.  
 Case-Fatality Ratio (%) = Number recorded deaths / Number cases.  
 US Testing Rate: = total test results per 100,000 persons. The "total test results" are equal to "Total test results (Positive + Negative)."  
 Print level: Admin? | level (Country) - US only: Admin? | level (Province/State) - Admin? | level (Countries/Regions/Sovereignities). All points (except for Australia and Italy) shown on the map are based on geographic centroids, and

# Global Deaths

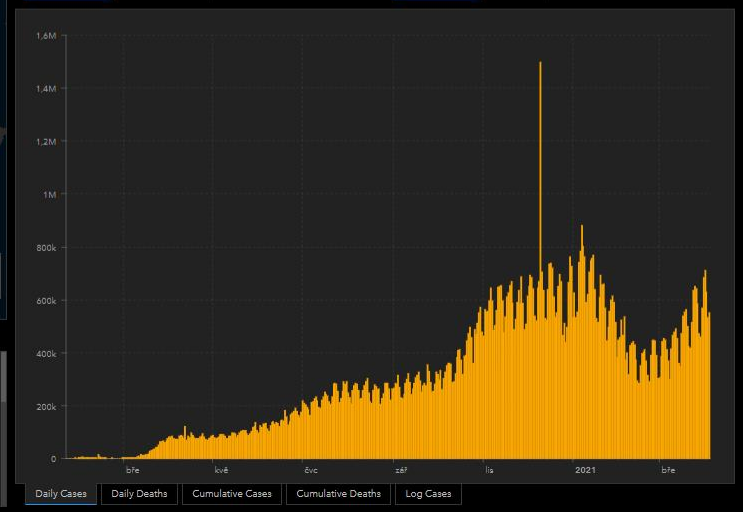
## 2 854 154

|         |        |                |
|---------|--------|----------------|
| 555 001 | deaths | US             |
| 331 433 | deaths | Brazil         |
| 204 147 | deaths | Mexico         |
| 165 101 | deaths | India          |
| 127 078 | deaths | United Kingdom |
| 111 030 | deaths | Italy          |
| 99 049  | deaths | Russia         |
| 96 808  | deaths | France         |
| 77 060  | deaths | Germany        |
| 75 698  | deaths | Spain          |
| 64 094  | deaths | Colombia       |
| 63 160  | deaths | Iran           |
| 56 199  | deaths | Argentina      |
| 55 005  | deaths | Poland         |
| 52 987  | deaths | Cosmos IR      |

# Total Test Results in US

## 398 256 783

|            |       |                   |
|------------|-------|-------------------|
| 55 087 131 | tests | California US     |
| 45 910 071 | tests | New York US       |
| 21 634 606 | tests | Texas US          |
| 21 105 399 | tests | Florida US        |
| 20 626 612 | tests | Illinois US       |
| 19 138 478 | tests | Massachusetts US  |
| 12 349 910 | tests | New Jersey US     |
| 11 844 487 | tests | Pennsylvania US   |
| 11 644 233 | tests | Michigan US       |
| 11 102 887 | tests | Ohio US           |
| 10 546 065 | tests | North Carolina US |
| 9 029 487  | tests | Indiana US        |
| 8 903 400  | tests | Maryland US       |
| 8 642 762  | tests | Arizona US        |
| 7 871 348  | tests | Cosmos IR         |



Last Updated at (M/D/YYYY)  
**2. 11. 2021 5:22**

Total Cases  
**247 129 785**

Total Deaths  
**5 005 638**

Total Vaccine Doses Administered  
**7 083 377 262**

[Cases](#) | [Deaths by Country/Region/Sovereignty](#)

|   |
|---|
| <b>US</b><br>28-Day: 2 266 815   43 467<br>Totals: 46 091 928   747 033           |
| <b>United Kingdom</b><br>28-Day: 1 162 632   3 717<br>Totals: 9 140 441   141 098 |
| <b>Russia</b><br>28-Day: 903 134   28 015<br>Totals: 8 417 305   235 318          |
| <b>Turkey</b><br>28-Day: 794 721   5 950<br>Totals: 8 061 636   70 828            |
| <b>Ukraine</b><br>28-Day: 491 233   11 559<br>Totals: 3 073 125   72 402          |
| <b>India</b><br>28-Day: 451 112   9 440<br>Totals: 34 285 614   458 437           |
| <b>Romania</b><br>28-Day: 382 204   10 207<br>Totals: 1 655 024   48 073          |
| <b>Germany</b><br>28-Day: 347 464   1 937<br>Totals: 4 619 273   95 838           |
| <b>Brazil</b><br>28-Day: 342 734   9 876<br>Totals: 21 814 690   607 922          |
| <b>Iran</b><br>28-Day: 300 510   5 194<br>Totals: 5 934 495   126 456             |
| <b>Thailand</b><br>28-Day: 274 592   2 191<br>Totals: 1 920 189   19 260          |
| <b>Malaysia</b><br>28-Day: 194 077   2 229<br>Totals: 2 476 268   28 975          |
| <b>Philippines</b><br>28-Day: 193 877   4 404<br>Totals: 2 790 375   43 276       |
| <b>Serbia</b><br>28-Day: 181 743   1 575<br>Totals: 1 148 645   10 018            |
| <b>France</b><br>28-Day: 148 313   1 030<br>Totals: 7 270 410   118 632           |
| <b>Mexico</b><br>28-Day: 128 231   9 773<br>Totals: 3 807 211   288 365           |
| <b>Netherlands</b><br>28-Day: 125 359   252<br>Totals: 2 179 710   18 862         |
| <b>Poland</b><br>28-Day: 114 381   1 304<br>Totals: 3 030 151   77 012            |

28-Day Cases  
**23 511 054**

28-Day Deaths  
**394 229**

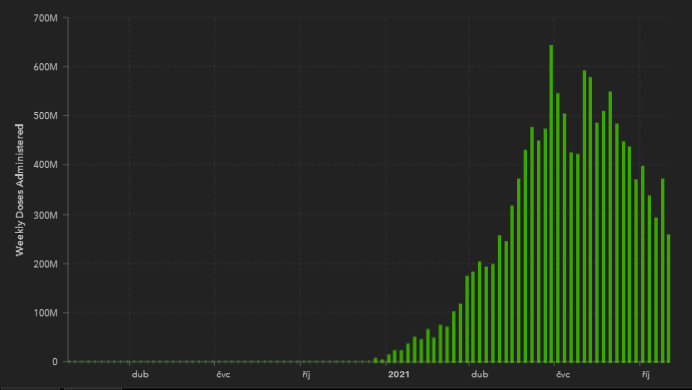
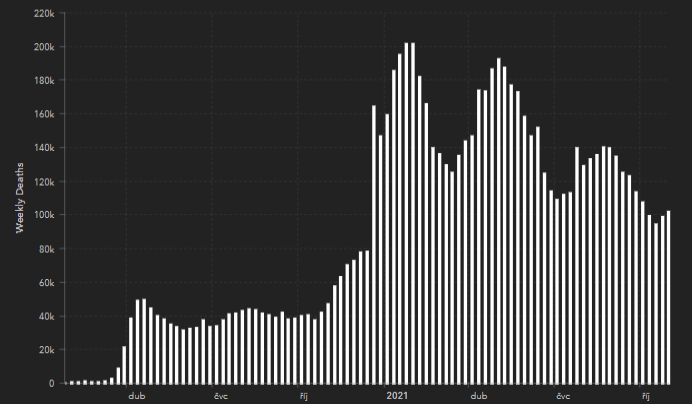
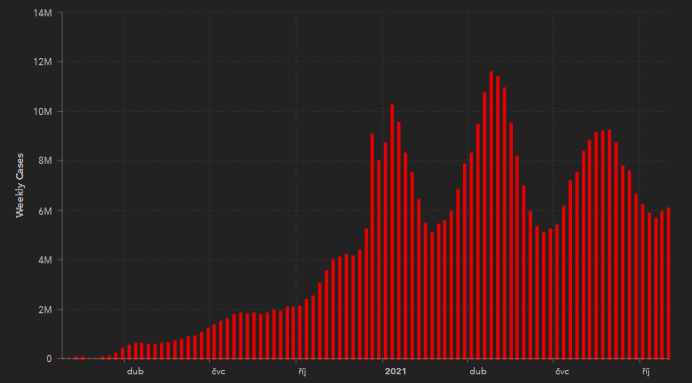
28-Day Vaccine Doses Administered  
**115 719 889 334**



Eri, FAO, NOAA

Powered by Eri

- 28-Day
- Totals
- Incidence
- Case-Fatality Ratio
- Global Vaccinations
- US Vaccinations
- Terms of Use



- Weekly
- 28-Day

- Admin0
- Admin1
- Admin2

- k **03 April 2021 13:20** je ČR v mortalitě per 100 000 people na 1.místě na světě.

| Obs | country2               | death_rate_covid | Deaths-cov |
|-----|------------------------|------------------|------------|
| 1   | Czechia                | 251.328          | 26867      |
| 2   | San Marino             | 248.631          | 84         |
| 3   | Hungary                | 220.102          | 21504      |
| 4   | Montenegro             | 208.360          | 1296       |
| 5   | Bosnia and Herzegovina | 203.705          | 6763       |
| 6   | Belgium                | 201.422          | 23083      |
| 7   | Slovenia               | 195.577          | 4068       |
| 8   | Bulgaria               | 191.971          | 13438      |
| 9   | UK                     | 190.635          | 127058     |
| 10  | North Macedonia        | 185.934          | 3860       |
| 11  | Italy                  | 182.783          | 110328     |
| 12  | Slovakia               | 182.265          | 9948       |
| 13  | US                     | 168.832          | 554105     |
| 14  | Portugal               | 164.086          | 16868      |
| 15  | Peru                   | 163.585          | 52331      |
| 16  | Mexico                 | 161.532          | 203854     |
| 17  | Spain                  | 160.931          | 75541      |
| 18  | Brazil                 | 156.662          | 328206     |
| 19  | Andorra                | 150.638          | 116        |
| 20  | Croatia                | 148.472          | 6025       |
| 21  | Panama                 | 146.555          | 6126       |
| 22  | Liechtenstein          | 144.520          | 56         |
| 23  | Poland                 | 144.159          | 54737      |
| 24  | France                 | 143.959          | 96438      |
| 25  | Moldova                | 142.358          | 5048       |
| 26  | Sweden                 | 131.945          | 13498      |
| 27  | Lithuania              | 128.873          | 3602       |
| 28  | Colombia               | 128.453          | 63777      |
| 29  | Argentina              | 125.923          | 56023      |
| 30  | Chile                  | 125.045          | 23421      |
| 31  | Romania                | 122.715          | 23819      |
| 32  | Luxembourg             | 122.150          | 750        |
| 33  | Switzerland            | 120.782          | 10351      |
| 34  | Armenia                | 120.573          | 3575       |
| 35  | Bolivia                | 108.414          | 12305      |
| 36  | Austria                | 106.479          | 9434       |
| 37  | Kosovo                 | 102.547          | 1892       |
| 38  | Georgia                | 101.984          | 3804       |
| 39  | Latvia                 | 100.156          | 1923       |
| 40  | Ecuador                | 99.005           | 16910      |
| 41  | Netherlands            | 96.834           | 16733      |
| 42  | Ireland                | 96.105           | 4713       |
| 43  | Germany                | 92.680           | 76943      |
| 44  | Lebanon                | 92.642           | 6346       |
| 45  | South Africa           | 91.634           | 52946      |
| 46  | Ukraine                | 85.110           | 35729      |
| 47  | Belize                 | 82.768           | 317        |
| 48  | Albania                | 78.953           | 2247       |
| 49  | Serbia                 | 77.135           | 5384       |
| 50  | Iran                   | 76.866           | 62876      |
| 51  | Tunisia                | 76.837           | 8890       |
| 52  | Greece                 | 76.791           | 8232       |
| 53  | Malta                  | 76.699           | 395        |
| 54  | Monaco                 | 72.385           | 28         |
| 55  | Jordan                 | 70.673           | 7039       |

| Obs | country2              | death_rate_covid | Deaths-cov |
|-----|-----------------------|------------------|------------|
| 56  | Israel                | 70.045           | 6220       |
| 57  | Estonia               | 70.000           | 931        |
| 58  | Russia                | 68.071           | 98363      |
| 59  | Paraguay              | 61.695           | 4294       |
| 60  | Canada                | 61.216           | 23011      |
| 61  | Mayotte               | 59.917           | 162        |
| 62  | CostaRica             | 59.152           | 2957       |
| 63  | Eswatini              | 58.596           | 668        |
| 64  | Bahamas               | 48.705           | 188        |
| 65  | Honduras              | 48.206           | 4622       |
| 66  | West Bank and Gaza    | 45.959           | 2661       |
| 67  | Denmark               | 41.767           | 2425       |
| 68  | Libya                 | 40.180           | 2684       |
| 69  | Guatemala             | 39.855           | 6875       |
| 70  | Turkey                | 38.893           | 31892      |
| 71  | Iraq                  | 37.445           | 14390      |
| 72  | Azerbaijan            | 36.242           | 3617       |
| 73  | Oman                  | 34.803           | 1681       |
| 74  | Bahrain               | 33.588           | 527        |
| 75  | SaintLucia            | 33.516           | 61         |
| 76  | French Guiana         | 32.645           | 96         |
| 77  | Kuwait                | 32.053           | 1327       |
| 78  | El Salvador           | 31.480           | 2021       |
| 79  | Cabo Verde            | 31.434           | 171        |
| 80  | Dominican Republic    | 31.364           | 3334       |
| 81  | Suriname              | 30.729           | 177        |
| 82  | Uruguay               | 30.174           | 1041       |
| 83  | Guyana                | 30.167           | 235        |
| 84  | Antigua and Barbuda   | 29.080           | 28         |
| 85  | Botswana              | 26.267           | 591        |
| 86  | Seychelles            | 24.803           | 24         |
| 87  | Morocco               | 24.521           | 8835       |
| 88  | Belarus               | 23.901           | 2267       |
| 89  | Kyrgyzstan            | 23.766           | 1502       |
| 90  | Cyprus                | 21.933           | 261        |
| 91  | Namibia               | 21.673           | 531        |
| 92  | Jamaica               | 20.646           | 607        |
| 93  | Saudi Arabia          | 19.834           | 6684       |
| 94  | Kazakhstan            | 17.702           | 3236       |
| 95  | Comoros               | 17.548           | 146        |
| 96  | Sao Tome and Principe | 16.114           | 34         |
| 97  | United Arab Emirates  | 15.597           | 1502       |
| 98  | Indonesia             | 15.406           | 41242      |
| 99  | Finland               | 15.326           | 846        |
| 100 | Lesotho               | 14.929           | 315        |
| 101 | Barbados              | 14.634           | 42         |
| 102 | Maldives              | 12.984           | 67         |
| 103 | Philippines           | 12.580           | 13423      |
| 104 | Norway                | 12.394           | 673        |
| 105 | Egypt                 | 12.278           | 12084      |
| 106 | India                 | 12.129           | 164110     |
| 107 | Nepal                 | 10.790           | 3031       |
| 108 | Qatar                 | 10.712           | 298        |
| 109 | Zimbabwe              | 10.554           | 1524       |
| 110 | Trinidad and Tobago   | 10.432           | 145        |

| Obs | country2                  | death_rate_covid | Deaths-cov |
|-----|---------------------------|------------------|------------|
| 111 | Mauritania                | 10.205           | 449        |
| 112 | Saint Vincent and Grenada | 9.091            | 10         |
| 113 | Iceland                   | 7.967            | 29         |
| 114 | Equatorial Guinea         | 7.863            | 103        |
| 115 | Syria                     | 7.617            | 1288       |
| 116 | Algeria                   | 7.338            | 3099       |
| 117 | Japan                     | 7.266            | 9191       |
| 118 | Gambia                    | 7.237            | 165        |
| 119 | Zambia                    | 7.003            | 1215       |
| 120 | Pakistan                  | 6.926            | 14697      |
| 121 | Afghanistan               | 6.712            | 2495       |
| 122 | Senegal                   | 6.662            | 1056       |
| 123 | Malawi                    | 6.169            | 1119       |
| 124 | Burma                     | 5.969            | 3206       |
| 125 | Bangladesh                | 5.672            | 9155       |
| 126 | Venezuela                 | 5.643            | 1629       |
| 127 | Gabon                     | 5.613            | 119        |
| 128 | Sudan                     | 4.935            | 2063       |
| 129 | Kenya                     | 4.254            | 2186       |
| 130 | Malaysia                  | 4.069            | 1283       |
| 131 | Cuba                      | 3.783            | 429        |
| 132 | Australia                 | 3.637            | 909        |
| 133 | Somalia                   | 3.578            | 537        |
| 134 | Guinea-Bissau             | 3.476            | 65         |
| 135 | Cameroon                  | 3.374            | 851        |
| 136 | Korea South               | 3.369            | 1740       |
| 137 | Yemen                     | 3.214            | 916        |
| 138 | Congo (Brazzaville)       | 3.077            | 135        |
| 139 | Nicaragua                 | 2.751            | 178        |
| 140 | Ethiopia                  | 2.669            | 2915       |
| 141 | Mozambique                | 2.637            | 778        |
| 142 | SriLanka                  | 2.635            | 571        |
| 143 | Rwanda                    | 2.520            | 310        |
| 144 | Ghana                     | 2.499            | 744        |
| 145 | Djibouti                  | 2.432            | 72         |
| 146 | Haiti                     | 2.266            | 252        |
| 147 | Mali                      | 2.044            | 390        |
| 148 | Uzbekistan                | 1.911            | 630        |
| 149 | Angola                    | 1.746            | 538        |
| 150 | Madagascar                | 1.691            | 444        |
| 151 | Liberia                   | 1.676            | 85         |
| 152 | Central African Republic  | 1.542            | 72         |
| 153 | Togo                      | 1.394            | 110        |
| 154 | Chad                      | 1.200            | 164        |
| 155 | Nigeria                   | 1.051            | 2058       |
| 156 | Sierra Leone              | 1.033            | 79         |
| 157 | Guinea                    | 1.031            | 128        |
| 158 | South Sudan               | 1.020            | 112        |
| 159 | Cote d Ivoire             | 0.997            | 250        |
| 160 | Tajikistan                | 0.989            | 90         |
| 161 | Mauritius                 | 0.949            | 12         |
| 162 | Grenada                   | 0.901            | 1          |
| 163 | Congo (Kinshasa)          | 0.886            | 745        |
| 164 | Benin                     | 0.809            | 93         |
| 165 | Uganda                    | 0.784            | 335        |

| Obs | country2              | death_rate_covid | Deaths-cov |
|-----|-----------------------|------------------|------------|
| 166 | Burkina Faso          | 0.759            | 150        |
| 167 | Brunei                | 0.699            | 3          |
| 168 | Papua New Guinea      | 0.697            | 60         |
| 169 | New Zealand           | 0.532            | 26         |
| 170 | Singapore             | 0.532            | 30         |
| 171 | China                 | 0.348            | 4841       |
| 172 | Mongolia              | 0.315            | 10         |
| 173 | Eritrea               | 0.228            | 10         |
| 174 | Fiji                  | 0.227            | 2          |
| 175 | Thailand              | 0.137            | 95         |
| 176 | Bhutan                | 0.133            | 1          |
| 177 | Cambodia              | 0.098            | 16         |
| 178 | Niger                 | 0.095            | 187        |
| 179 | Burundi               | 0.054            | 6          |
| 180 | Taiwan                | 0.042            | 10         |
| 181 | Tanzania              | 0.037            | 21         |
| 182 | Vietnam               | 0.037            | 35         |
| 183 | Dominica              | 0.000            | 0          |
| 184 | Holy See              | 0.000            | 0          |
| 185 | Laos                  | 0.000            | 0          |
| 186 | Marshall Islands      | 0.000            | 0          |
| 187 | Micronesia            | 0.000            | 0          |
| 188 | Saint Kitts and Nevis | 0.000            | 0          |
| 189 | Samoa                 | 0.000            | 0          |
| 190 | Solomon Islands       | 0.000            | 0          |
| 191 | Timor-Leste           | 0.000            | 0          |
| 192 | Vanuatu               | 0.000            | 0          |

- k 26 Sep 2021 je ČR v mortalitě per 100 000 people na 7.místě na světě.

| country                | deaths       | inhabitant      | death rate in % |
|------------------------|--------------|-----------------|-----------------|
| Peru                   | 199228       | 31990000        | 0.62278%        |
| North Macedonia        | 6594         | 2076000         | 0.31763%        |
| Bosnia and Herzegovina | 10422        | 3320000         | 0.31392%        |
| Hungary                | 30151        | 9770000         | 0.30861%        |
| Montenegro             | 1895         | 622000          | 0.30466%        |
| Bulgaria               | 20449        | 7000000         | 0.29213%        |
| <b>Czechia</b>         | <b>30453</b> | <b>10690000</b> | <b>0.28487%</b> |
| Brazil                 | 594200       | 209500000       | 0.28363%        |
| San Marino             | 90           | 33785           | 0.26639%        |
| Argentina              | 114849       | 44490000        | 0.25815%        |
| Colombia               | 126102       | 49650000        | 0.25398%        |
| Georgia                | 8817         | 3730000         | 0.23638%        |
| Paraguay               | 16142        | 6960000         | 0.23193%        |
| Slovakia               | 12596        | 5458000         | 0.23078%        |
| Belgium                | 25554        | 11460000        | 0.22298%        |
| Mexico                 | 275303       | 126200000       | 0.21815%        |
| Slovenia               | 4537         | 2080000         | 0.21813%        |
| Italy                  | 130697       | 60360000        | 0.21653%        |
| Tunisia                | 24732        | 11570000        | 0.21376%        |
| Croatia                | 8595         | 4058000         | 0.21180%        |
| US                     | 687959       | 328200000       | 0.20962%        |
| UK                     | 136528       | 66650000        | 0.20484%        |
| Chile                  | 37440        | 18730000        | 0.19989%        |
| Poland                 | 75572        | 37970000        | 0.19903%        |
| Ecuador                | 32720        | 17080000        | 0.19157%        |
| Moldova                | 6695         | 3546000         | 0.18880%        |
| Romania                | 36341        | 19410000        | 0.18723%        |
| Spain                  | 86229        | 46940000        | 0.18370%        |
| <b>Armenia</b>         | <b>5251</b>  | <b>2958000</b>  | <b>0.17752%</b> |
| Lithuania              | 4913         | 2795000         | 0.17578%        |
| Uruguay                | 6052         | 3450000         | 0.17542%        |
| France                 | 117171       | 66990000        | 0.17491%        |
| Portugal               | 17954        | 10280000        | 0.17465%        |
| Panama                 | 7201         | 4180000         | 0.17227%        |

|               |        |           |          |
|---------------|--------|-----------|----------|
| Andorra       | 130    | 77006     | 0.16882% |
| Bolivia       | 18698  | 11350000  | 0.16474% |
| Kosovo        | 2936   | 1845000   | 0.15913% |
| Liechtenstein | 60     | 38749     | 0.15484% |
| South Africa  | 87052  | 57780000  | 0.15066% |
| Suriname      | 845    | 576000    | 0.14670% |
| Iran          | 119360 | 81800000  | 0.14592% |
| Sweden        | 14821  | 10230000  | 0.14488% |
| Namibia       | 3492   | 2450000   | 0.14253% |
| Ukraine       | 59281  | 41980000  | 0.14121% |
| Latvia        | 2684   | 1920000   | 0.13979% |
| Russia        | 200245 | 144500000 | 0.13858% |
| Greece        | 14679  | 10720000  | 0.13693% |
| Luxembourg    | 835    | 614000    | 0.13599% |
| Bahamas       | 522    | 386000    | 0.13523% |
| Switzerland   | 11043  | 8570000   | 0.12886% |

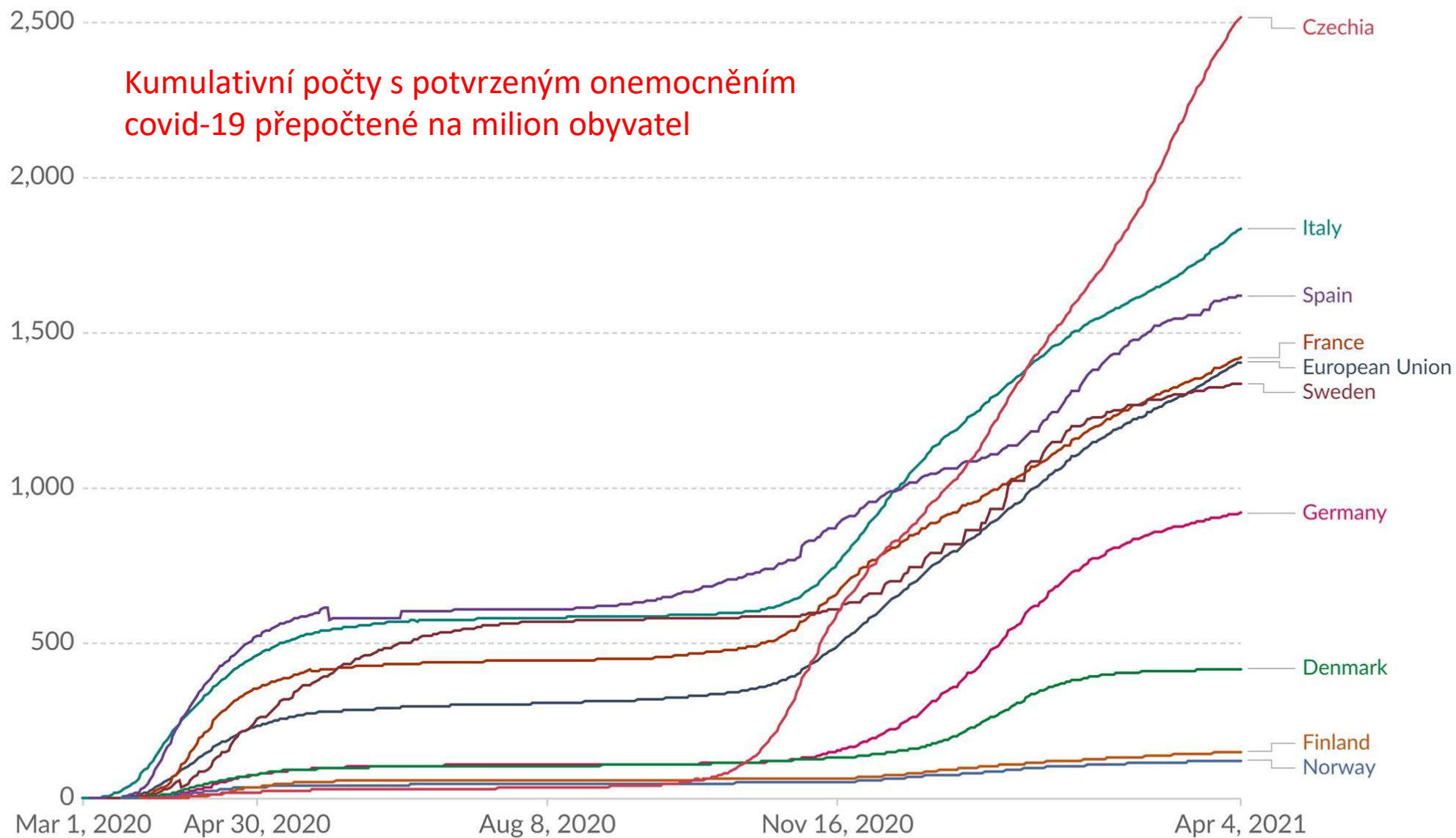
... (best below)

|                    |           |                |                 |
|--------------------|-----------|----------------|-----------------|
| <b>Singapore</b>   | <b>78</b> | <b>5640000</b> | <b>0.00138%</b> |
| Tajikistan         | 125       | 9100000        | 0.00137%        |
| Nigeria            | 2673      | 195900000      | 0.00136%        |
| Benin              | 154       | 11490000       | 0.00134%        |
| Eritrea            | 42        | 3210000        | 0.00131%        |
| Congo (Kinshasa)   | 1083      | 84070000       | 0.00129%        |
| Chad               | 174       | 13670000       | 0.00127%        |
| South Sudan        | 128       | 10980000       | 0.00117%        |
| Burkina Faso       | 180       | 19750000       | 0.00091%        |
| <b>New Zealand</b> | <b>27</b> | <b>4886000</b> | <b>0.00055%</b> |
| Bhutan             | 3         | 754000         | 0.00040%        |
| China              | 4849      | 1393000000     | 0.00035%        |
| Burundi            | 38        | 11180000       | 0.00034%        |
| ...                |           |                |                 |
| Micronesia         | 0         | 113815         | 0.00000%        |
| Samoa              | 0         | 197097         | 0.00000%        |
| Solomon Islands    | 0         | 653000         | 0.00000%        |

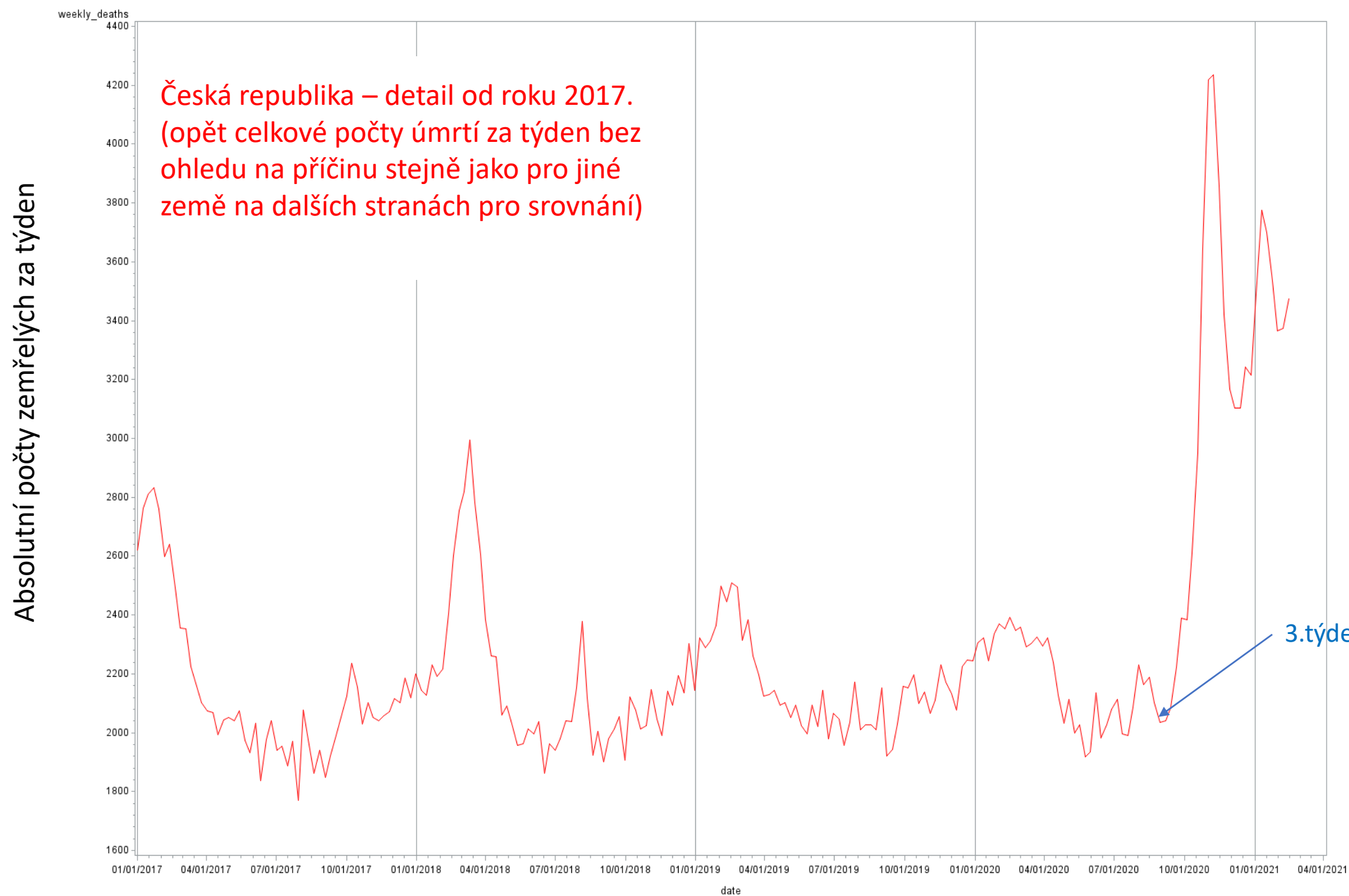


# Cumulative confirmed COVID-19 deaths per million people

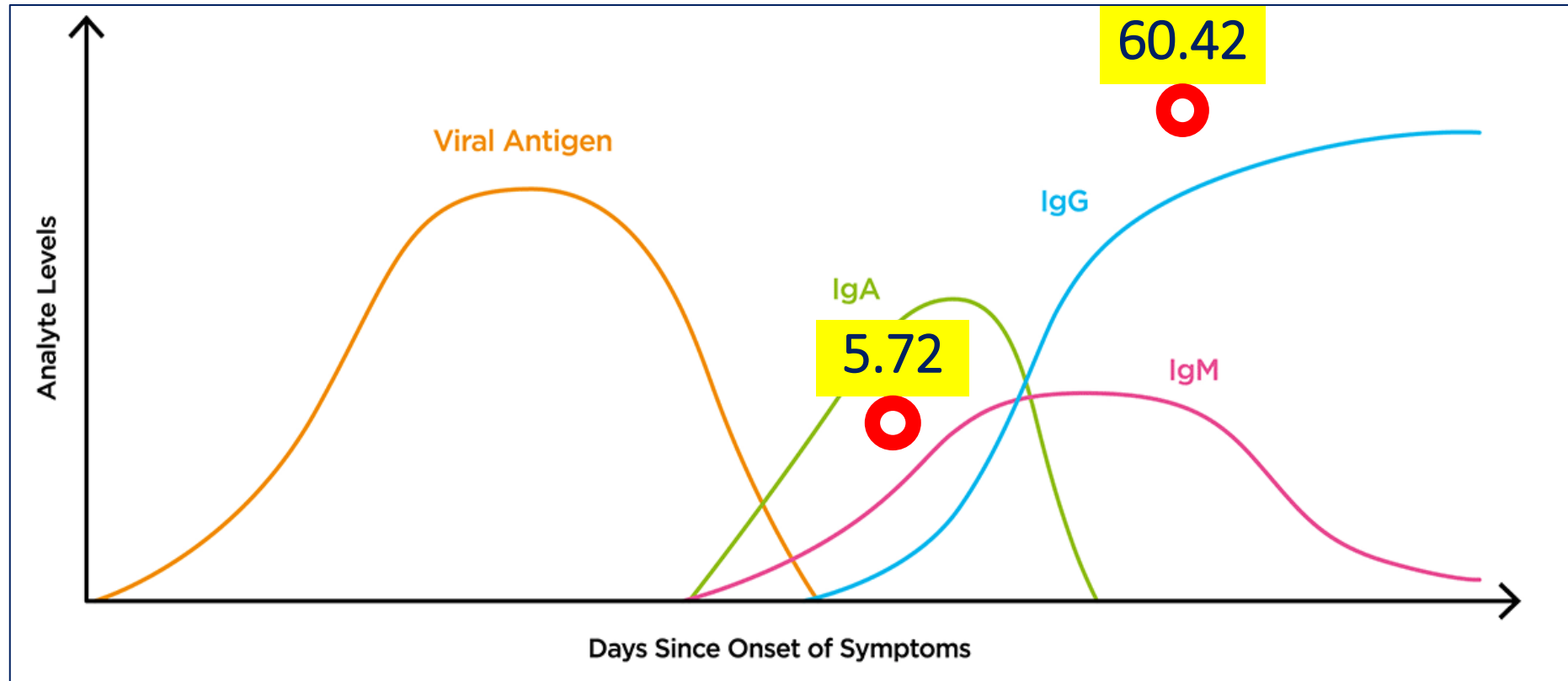
Limited testing and challenges in the attribution of the cause of death means that the number of confirmed deaths may not be an accurate count of the true number of deaths from COVID-19.







# Antibodies production dynamics

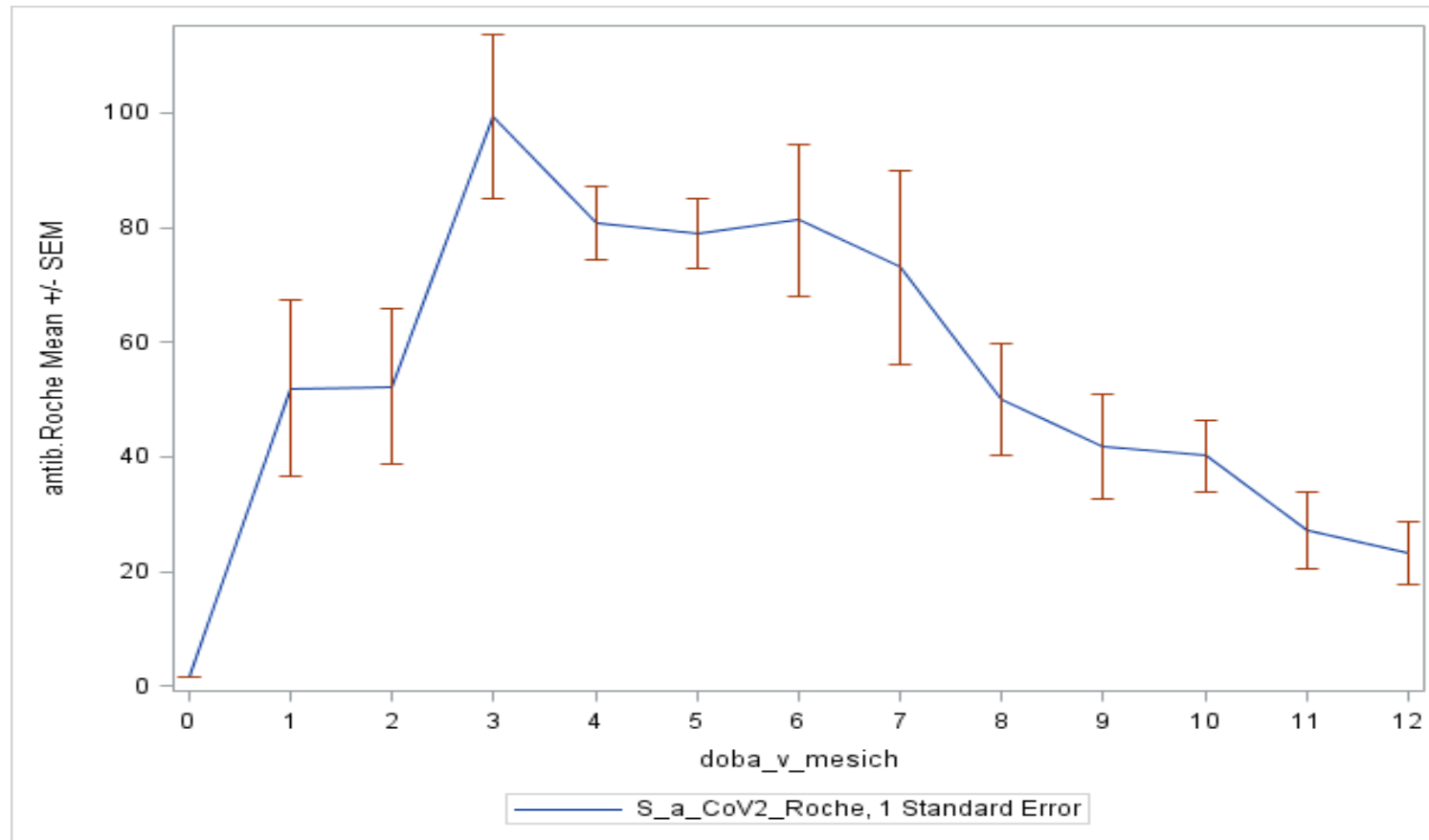


approx. 14 – 16 days

18th day

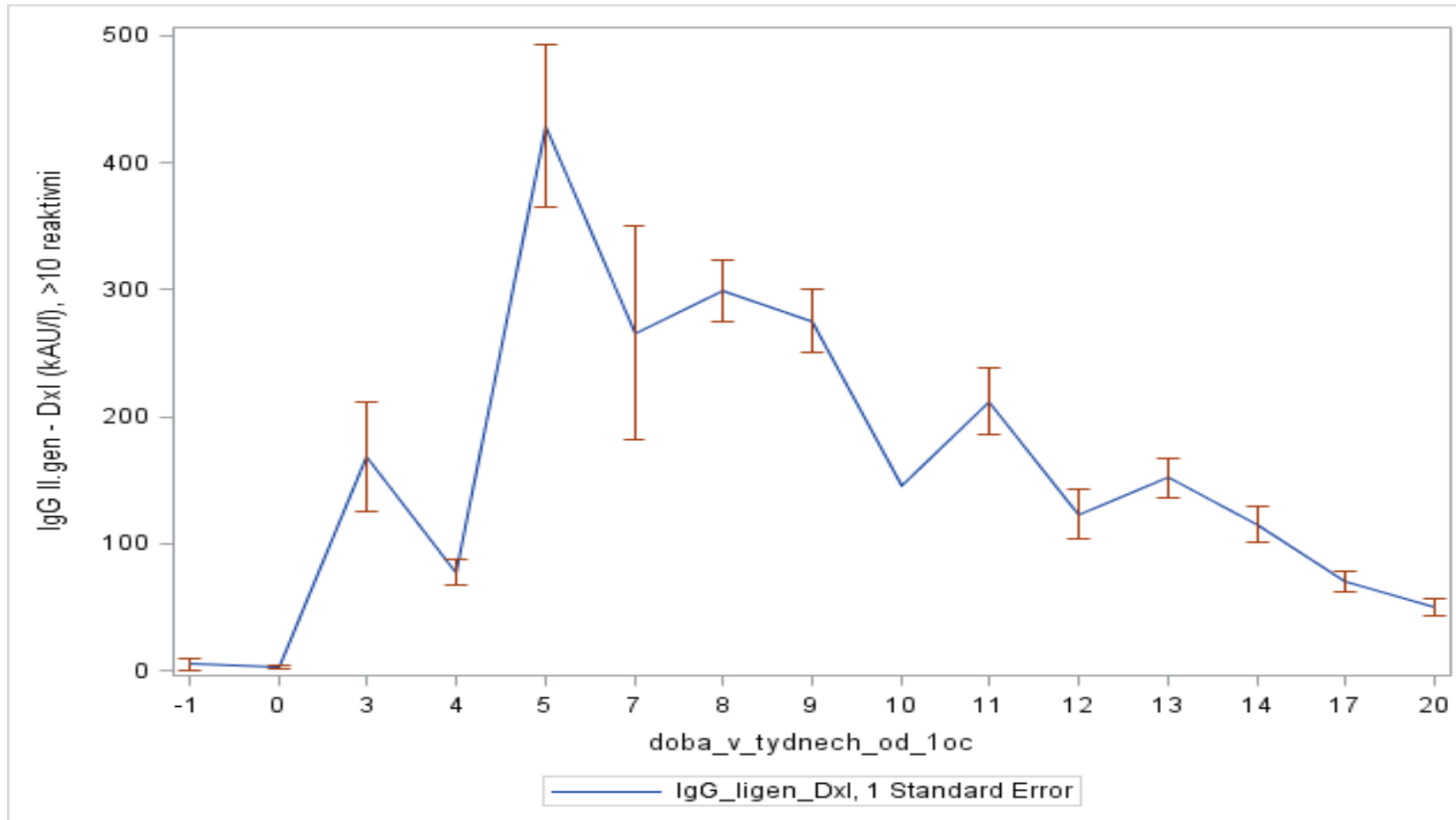
49th day

## IgG antibody levels after disease general population (110 people)

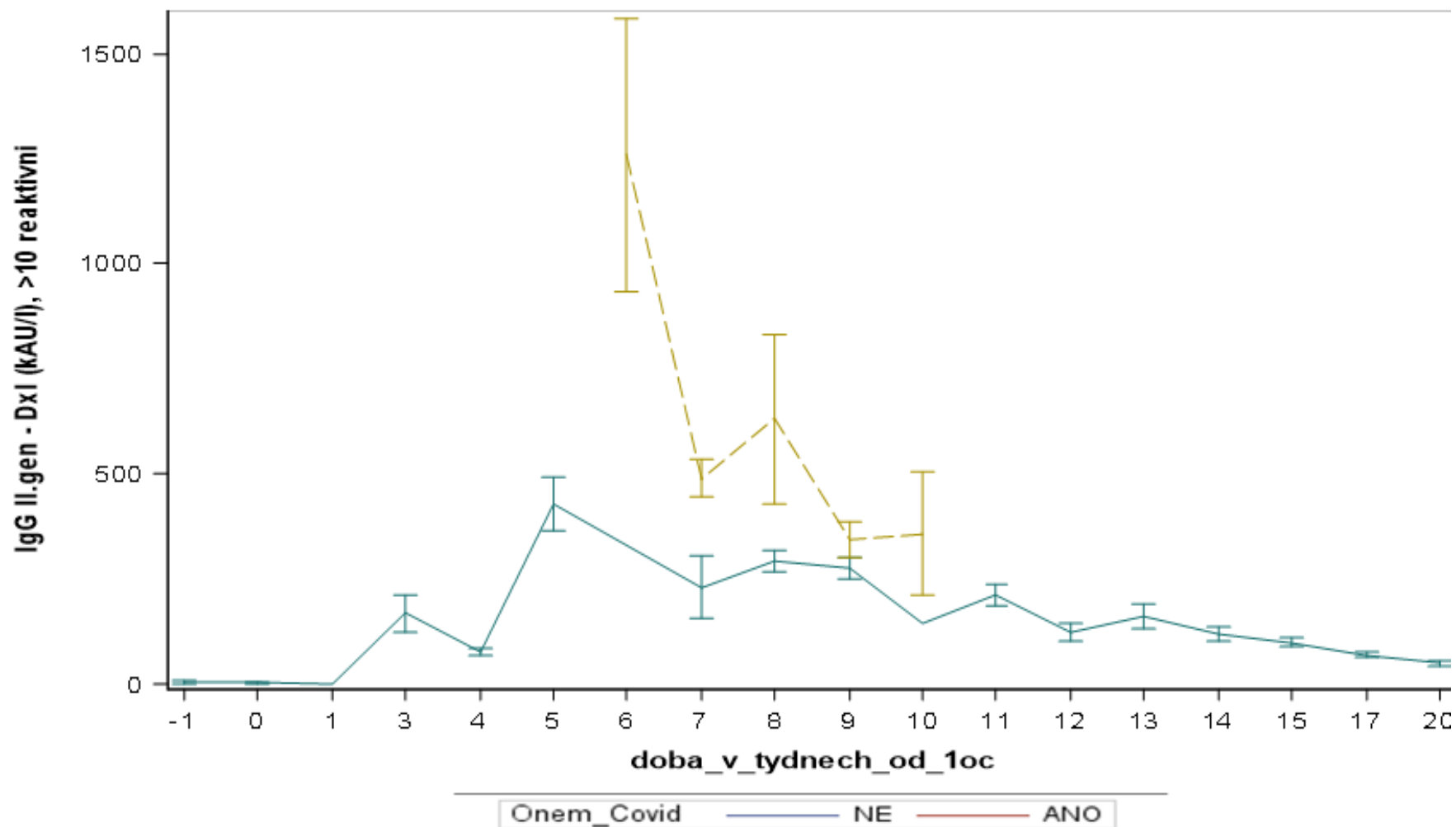


Time since first positive PCR test. 110 patients with proven covid-19 disease

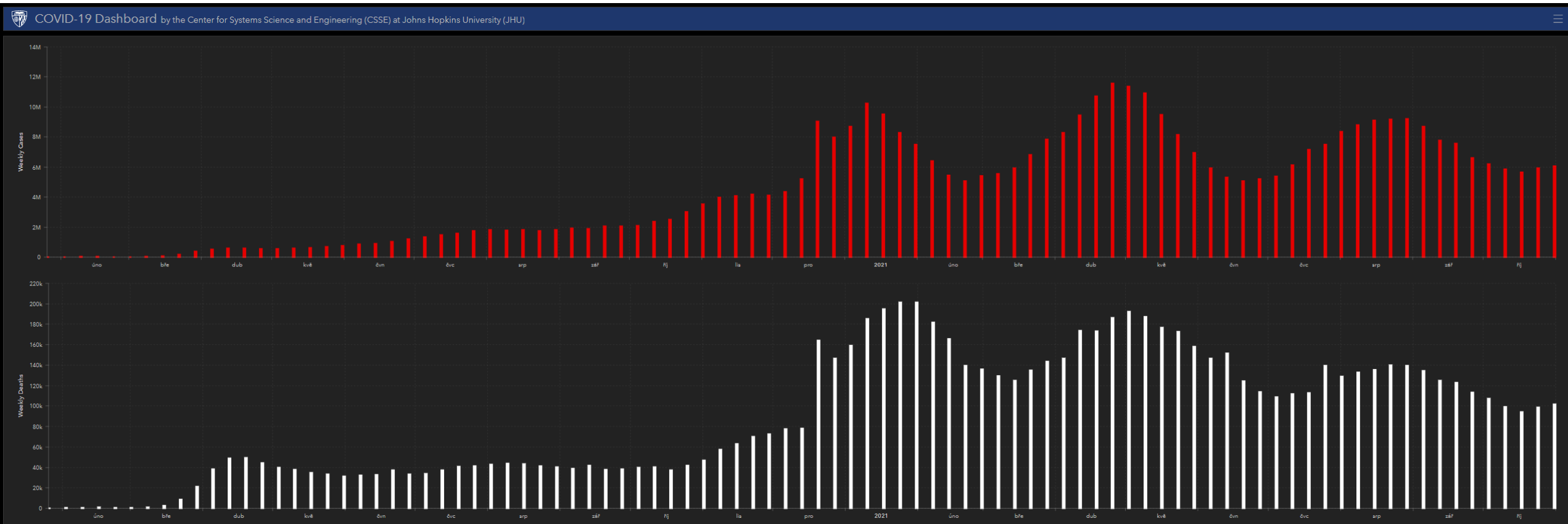
# IgG antibody levels by FN Pilsen staff ( n =158) after vaccination until week 20 (January to May 2021)



## IgG antibody levels in subjects who did not pass vs. experienced covid-19



# Je už čas na optimismus? Zatím to tak úplně nevypadá



Děkuji za pozornost