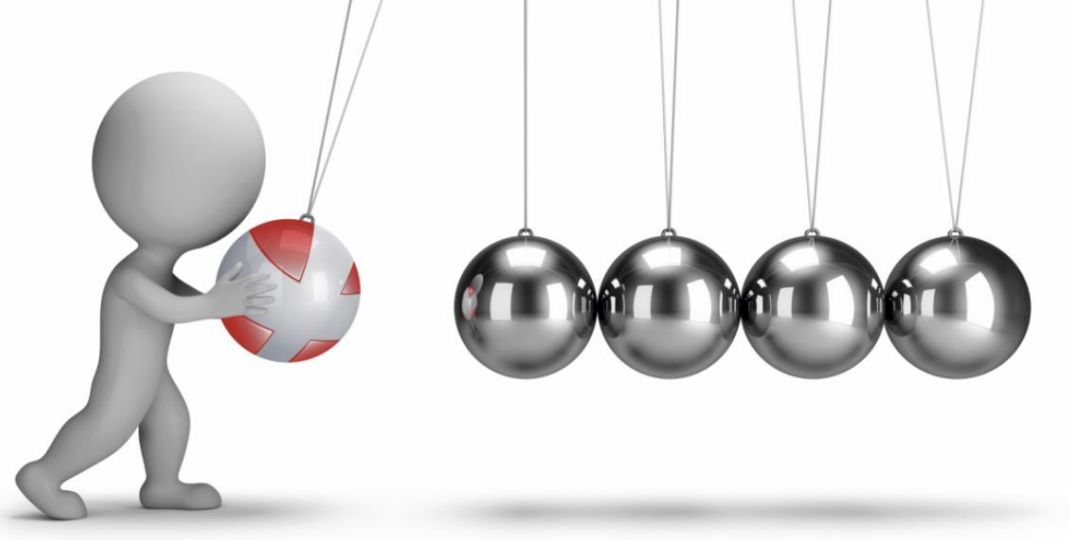




Keynote

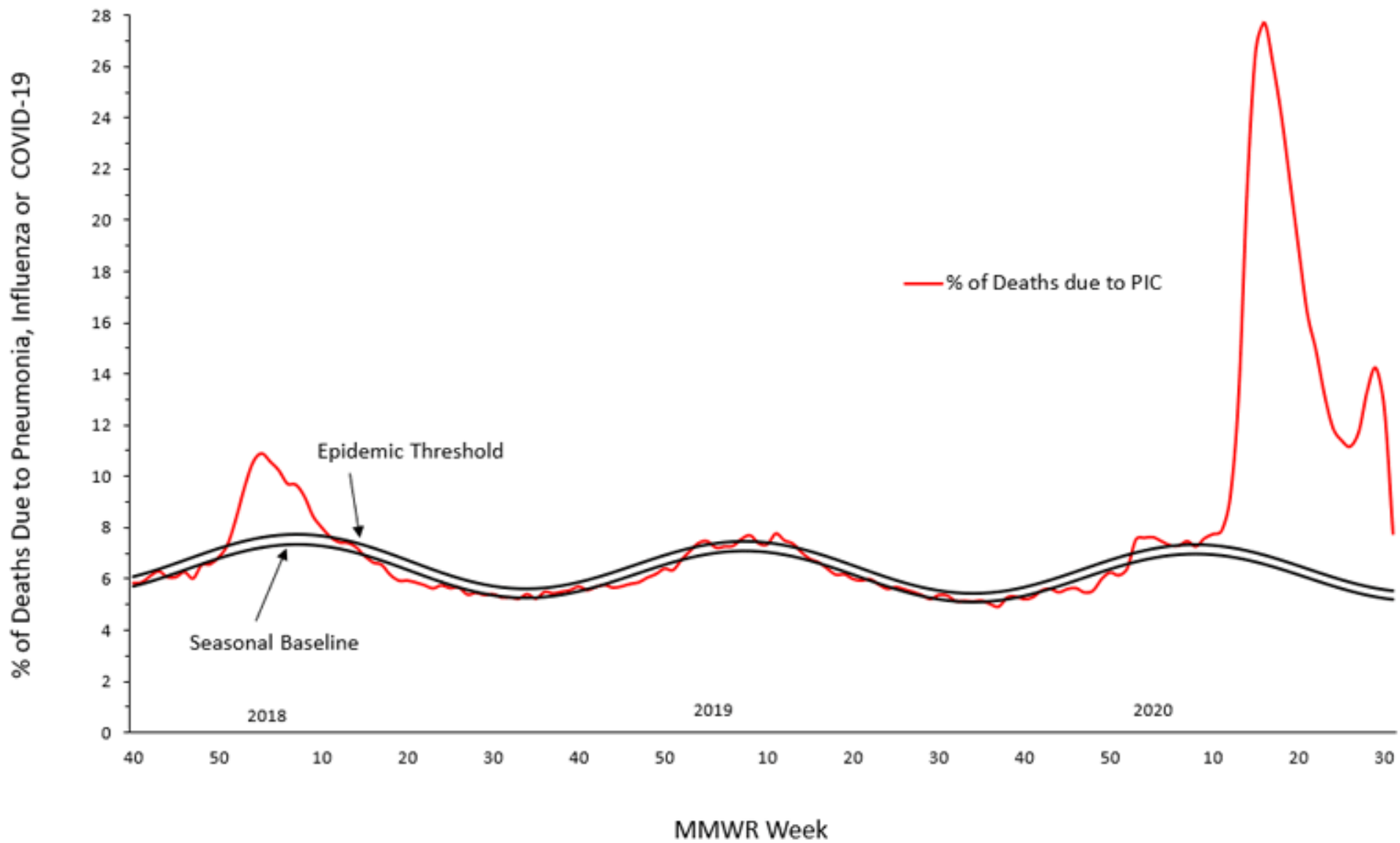
Die Sicht des Infektiologen (aus SG)

Pietro Vernazza, Kantonsspital St. Gallen

Ausgangslage

- Die Pandemie hat uns überwältigt - alle wollen das Beste
- Angst ist ein schlechter Ratgeber
- Daten ändern sich – Interpretationen auch

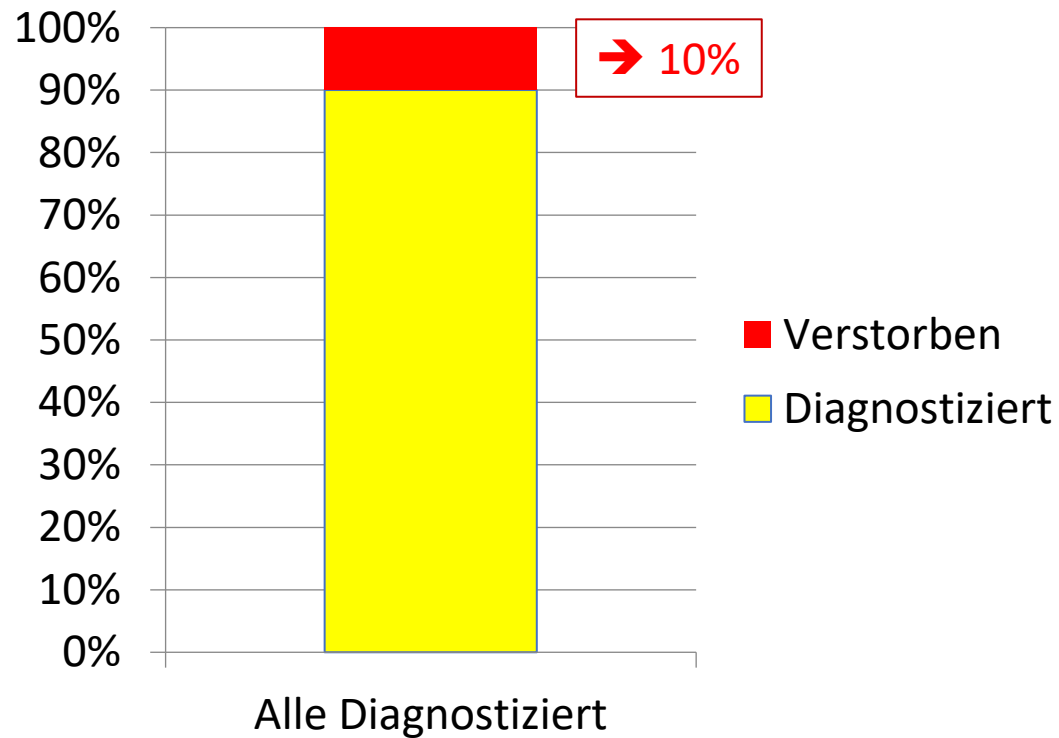
NCHS Mortality Reporting System:
Pneumonia, Influenza and COVID-19 Mortality
Data through the week ending August 1, 2020, as of August 6, 2020



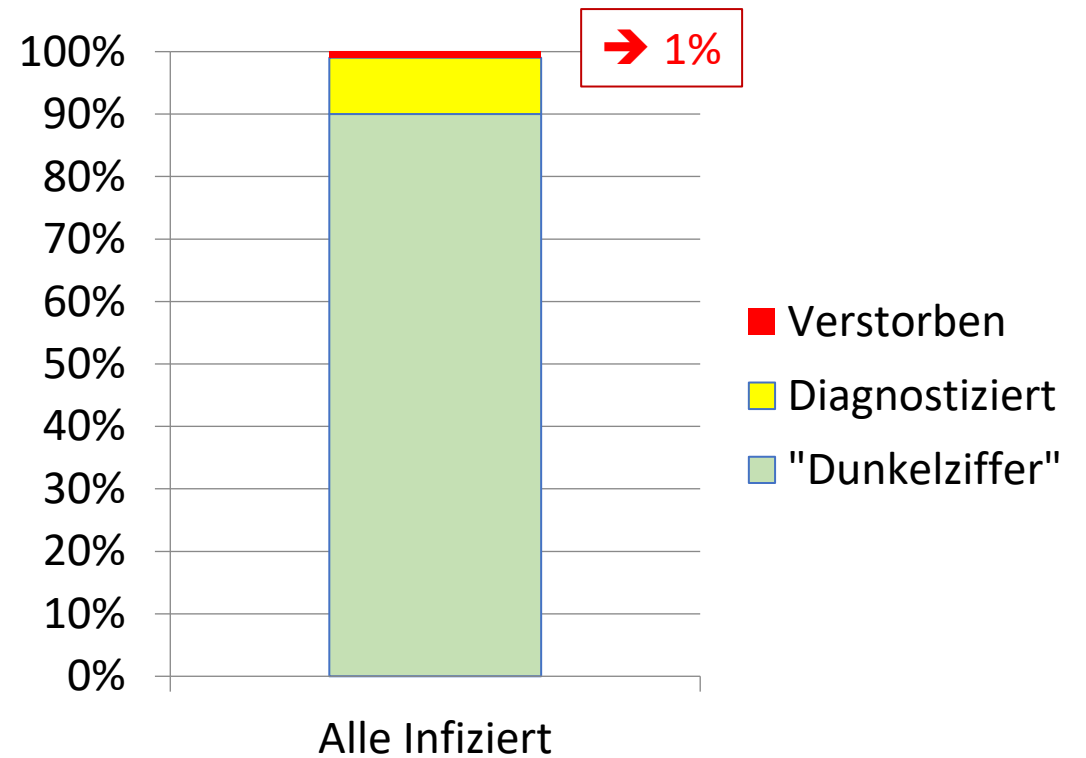
Covid-19 Sterblichkeit:

CFR vs. IFR – Die «Dunkelziffer»

Case fatality rate



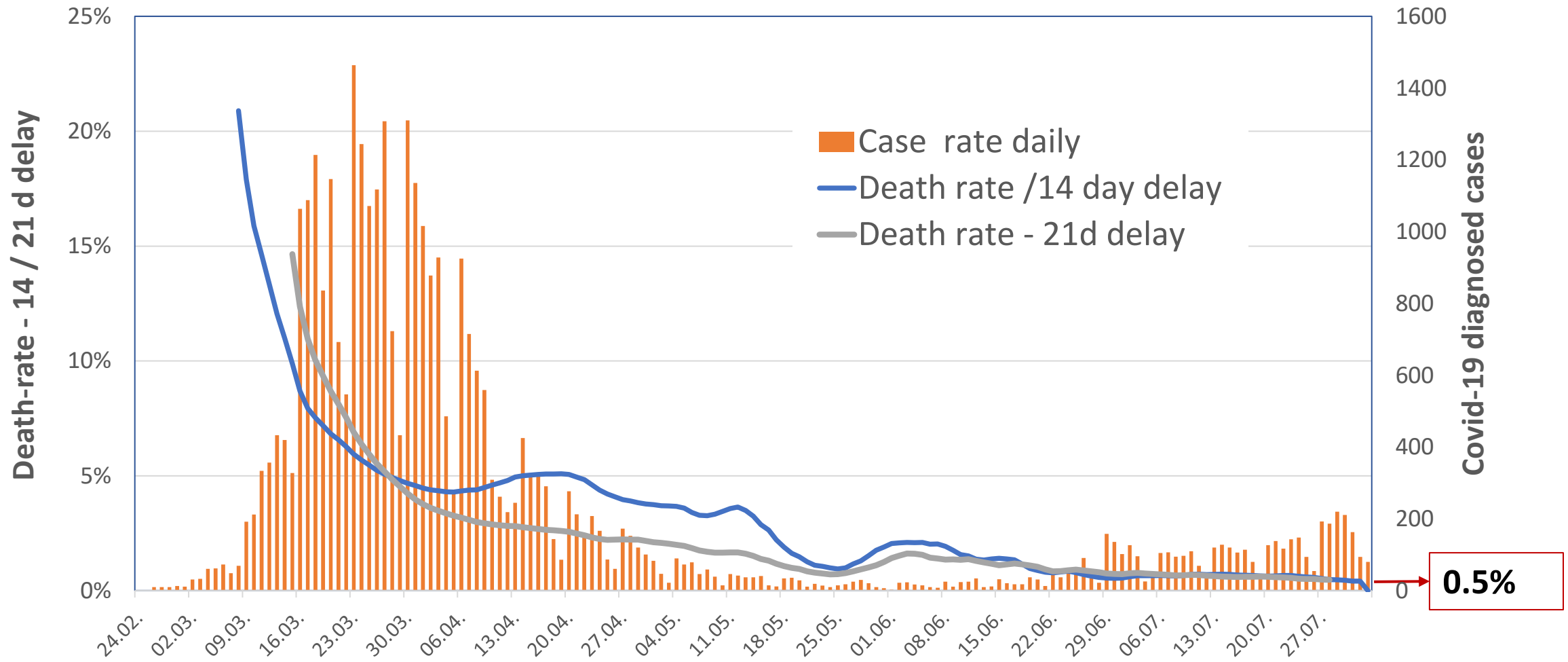
Infection fatality rate



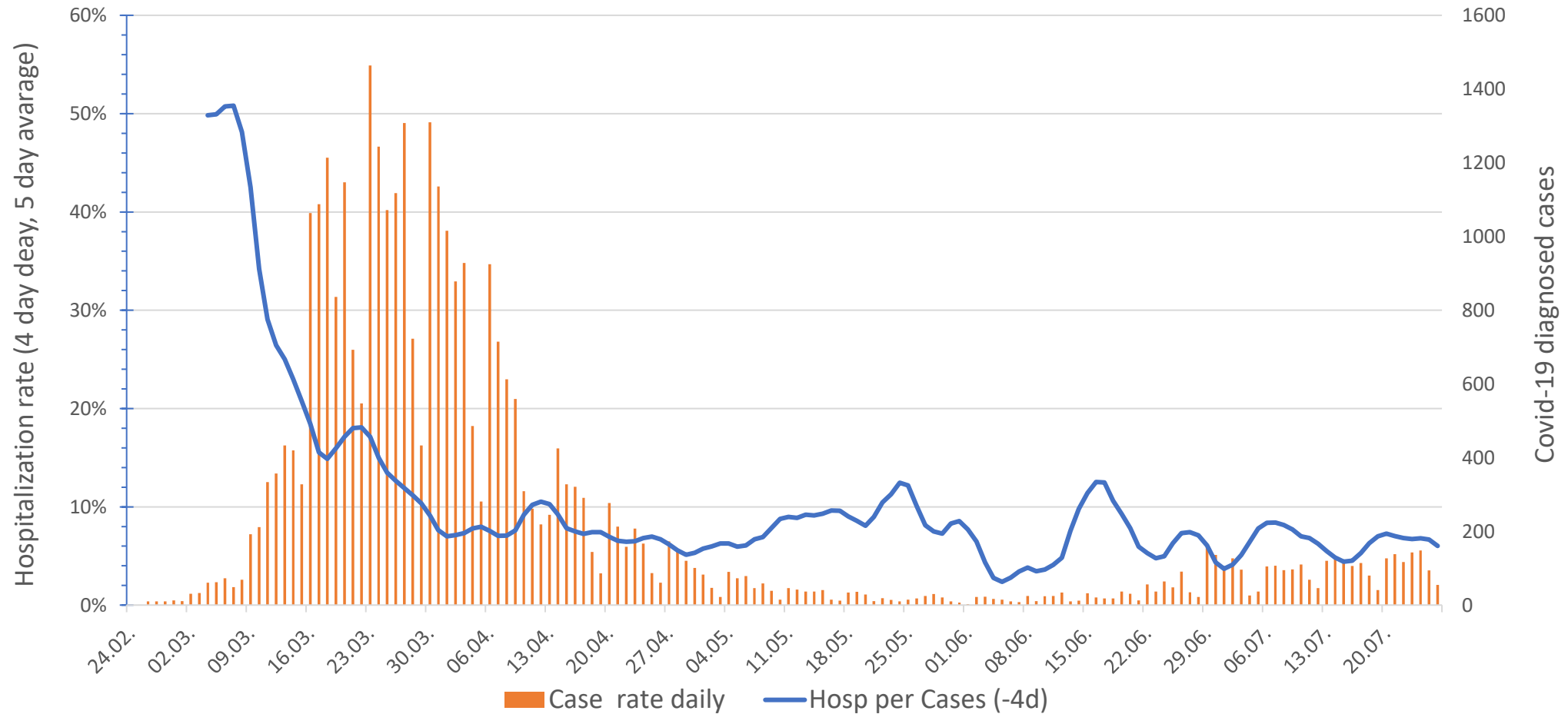
Infection fatality rate – CDC report 22.5.20

The CDC has also cautioned that the numbers are likely to change as new data arrives. But, if you consider how we have gone from 3.4 % to 2.0 % to now 0.26 %, it seems more likely that the number might get even lower as we get more data.

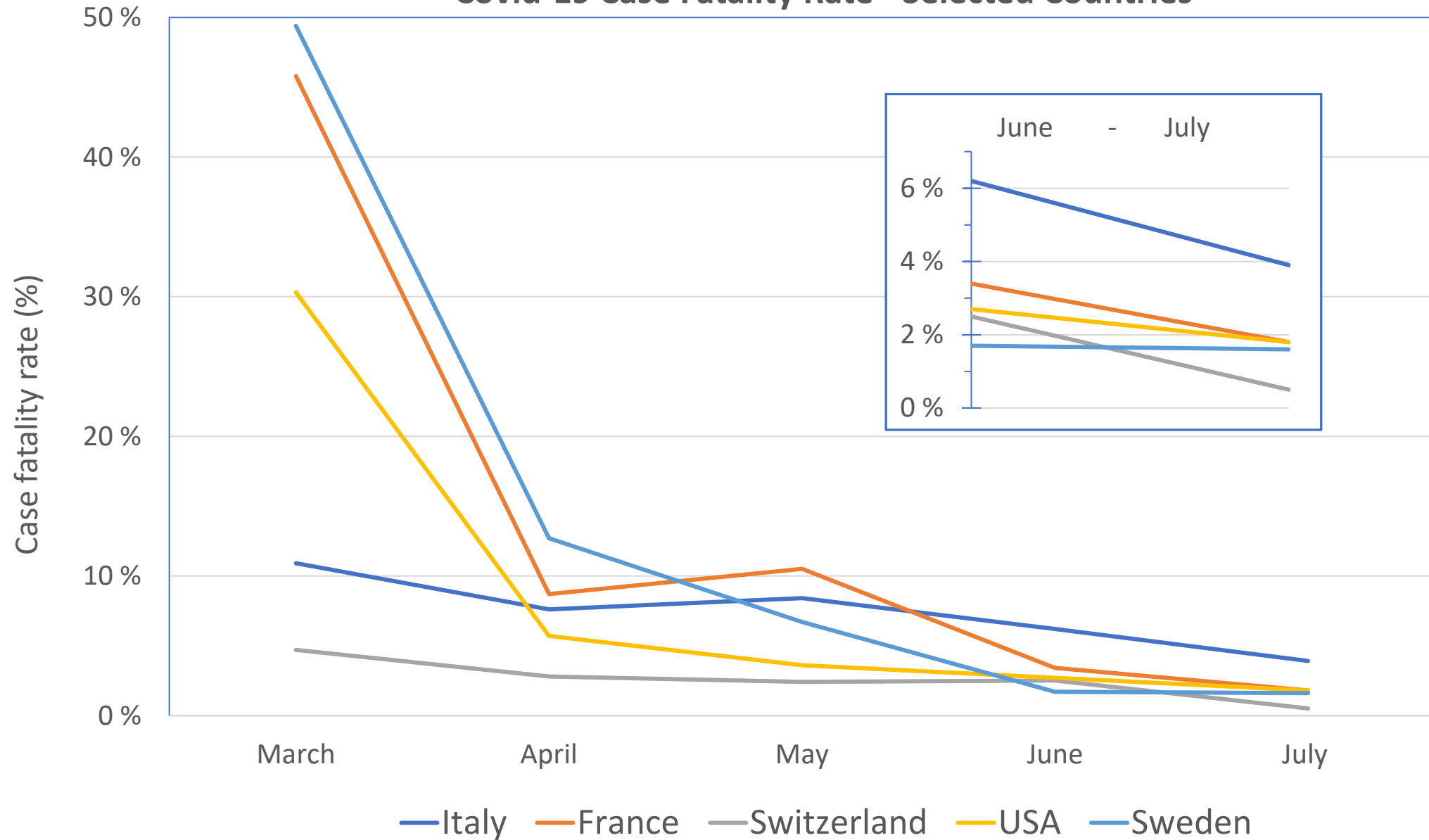
Covid-Letalität (CFR) CH über die Zeit



Hospitalisationsrate CH



Covid-19 Case Fatality Rate - Selected Countries

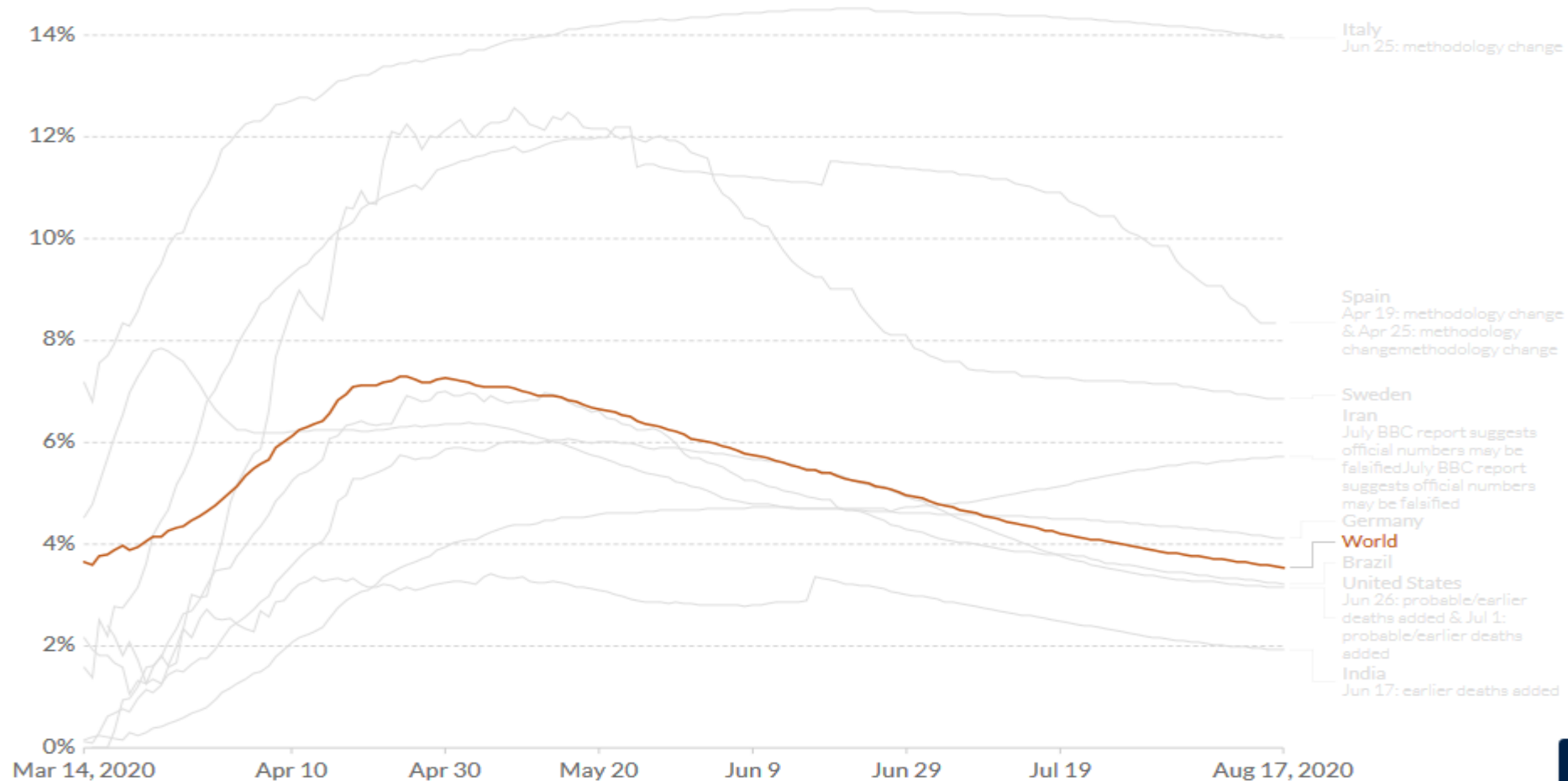


CFR: Globaler Abfall der Letalitätssrate

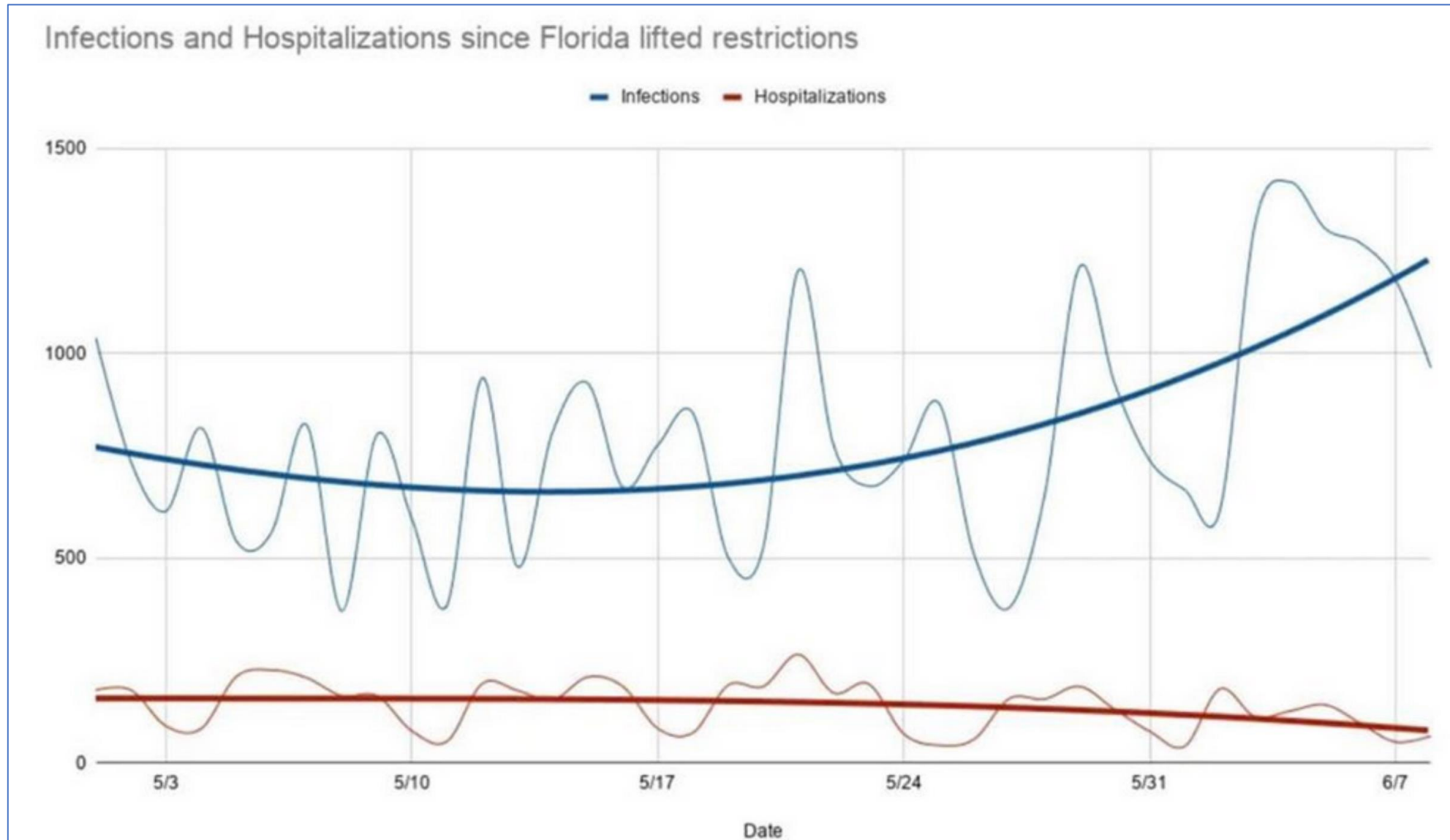
Case fatality rate of the ongoing COVID-19 pandemic

The Case Fatality Rate (CFR) is the ratio between confirmed deaths and confirmed cases. During an outbreak of a pandemic the CFR is a poor measure of the mortality risk of the disease. We explain this in detail at OurWorldInData.org/Coronavirus

Our World
in Data

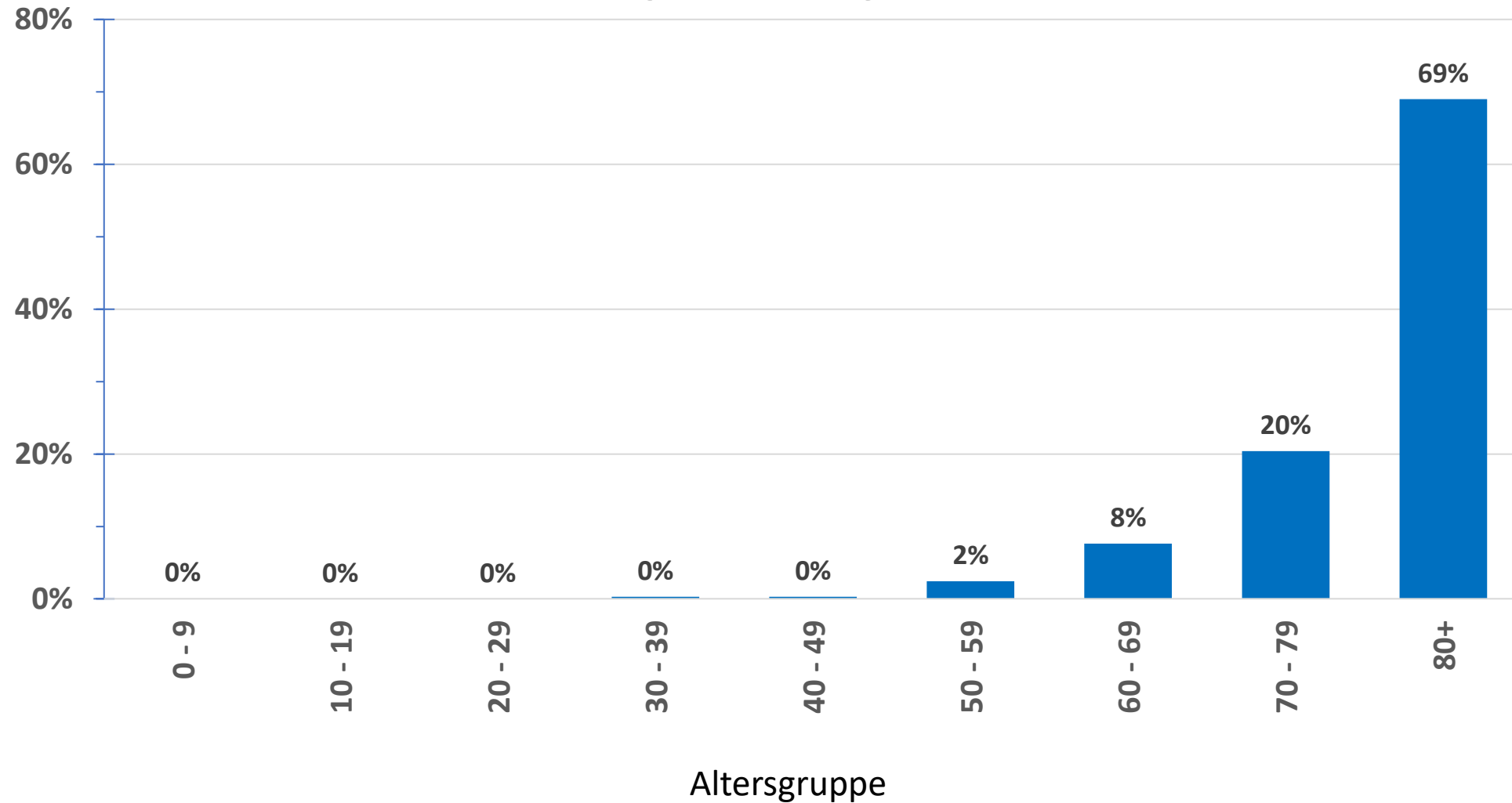


Wird Sars-CoV-2 tendenziell milder?

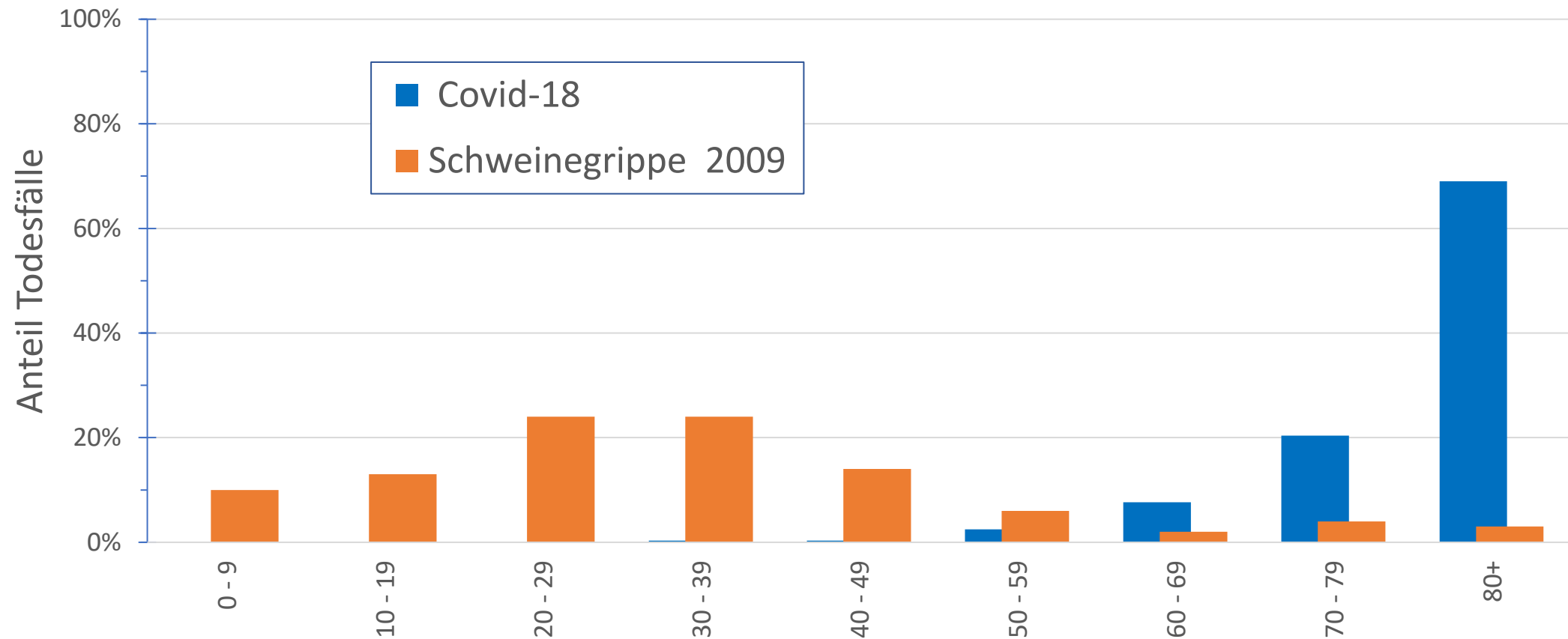


Courtesy slide, H  l  ne Banoun, Paris

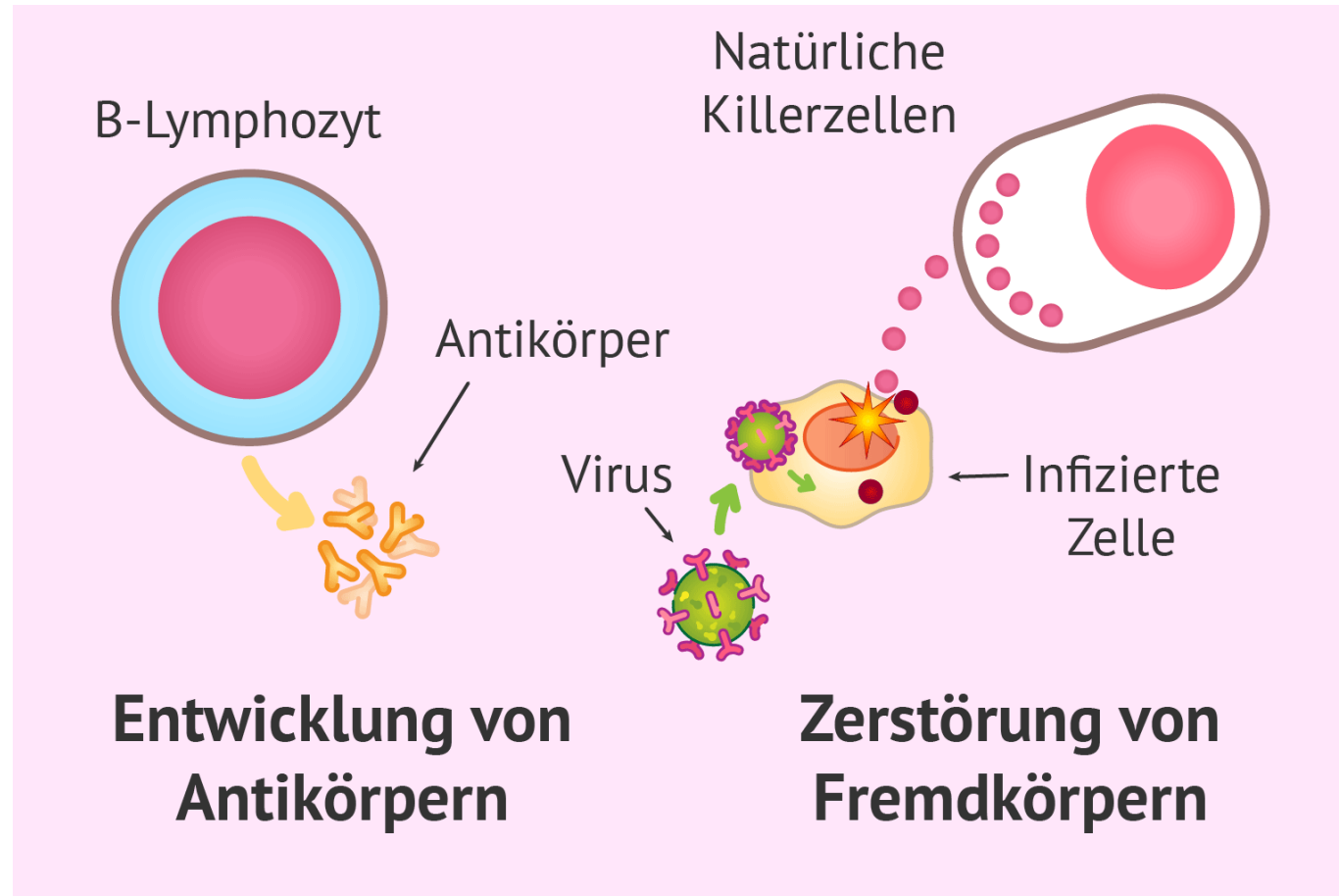
Altersverteilung Covid-19 Todesfälle CH (n=1716)



Ist Covid-19 eine «Jahrhundertpandemie» ?

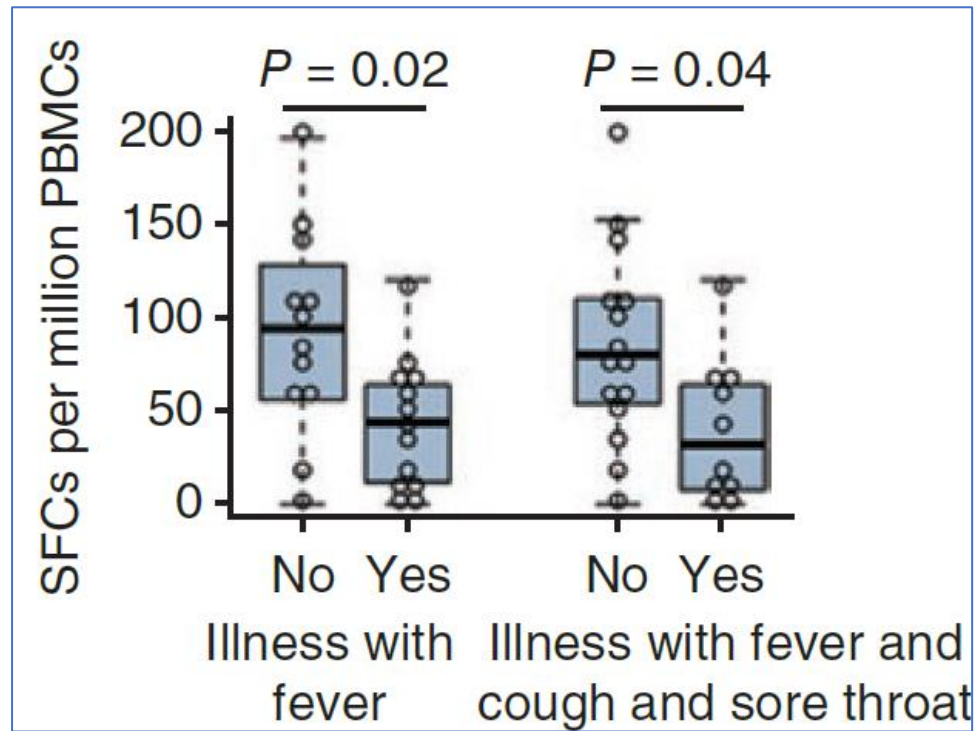


Immunsystem: Antikörper und Killer-Zellen



Cellular immune correlates of protection against symptomatic pandemic influenza

Saranya Sridhar¹, Shaima Begom¹, Alison Bermingham², Katja Hoschler², Walt Adamson³, William Carman⁴, Thomas Bean⁵, Wendy Barclay⁶, Jonathan J Deeks⁷ & Ajit Lalvani¹



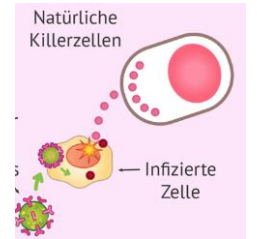
Cite as: J. Mateus *et al.*, *Science*
10.1126/science.abd3871 (2020).

Selective and cross-reactive SARS-CoV-2 T cell epitopes in unexposed humans

Jose Mateus¹, Alba Grifoni¹, Alison Tarke¹, John Sidney¹, Sydney I. Ramirez^{1,3}, Jennifer M. Dan^{1,3}, Zoe C. Burger³, Stephen A. Rawlings³, Davey M. Smith³, Elizabeth Phillips², Simon Mallal², Marshall Lammers¹, Paul Rubiro¹, Lorenzo Quiambao¹, Aaron Sutherland¹, Esther Dawen Yu¹, Ricardo da Silva Antunes¹, Jason Greenbaum¹, April Frazier¹, Alena J. Markmann⁴, Lakshmanane Premkumar⁵, Aravinda de Silva⁵, Bjoern Peters^{1,3}, Shane Crotty^{1,3}, Alessandro Sette^{1,3*†}, Daniela Weiskopf^{1*†}

- 20-50% kreuz-reagierende Abwehrzellen (Le Bert, Nature 2020)
- Vorbestehende Gedächtniszellen gegen «normale» humane Coronaviren
- Zelluläre Kreuzimmunität schützend?

Mehr (zelluläre) Immunität als vermutet?



Intrafamilial Exposure to SARS-CoV-2 Induces Cellular Immune Response without Seroconversion

Floriane Gallais,^{1,2} Aurélie Velay,^{1,2} Marie-Josée Wendling,¹ Charlotte Nazon,^{1,2} Marialuisa Partisani,

³ Jean Sibilia,^{4,2} Sophie Candon,⁵ and Samira Fafi-Kremer^{1,2}

- 8 Wohnpartner von infizierten Personen
 - Covid-Virusnachweis negative bei allen
 - Keine Antikörper Sars-CoV-2
 - Einige hatten Symptome Infektionskrankheit
- 6 von 8 Kontakte: Zelluläre Immunantwort gegen Sars-CoV-2

Florida

Testing Data in the U.S.

Updated August 12, 2020

Languages * Print



TOTAL TESTS REPORTED

70,212,154

POSITIVE TESTS REPORTED

6,256,214

% OF POSITIVE TESTS

9%

New Confirmed Cases

New Deaths

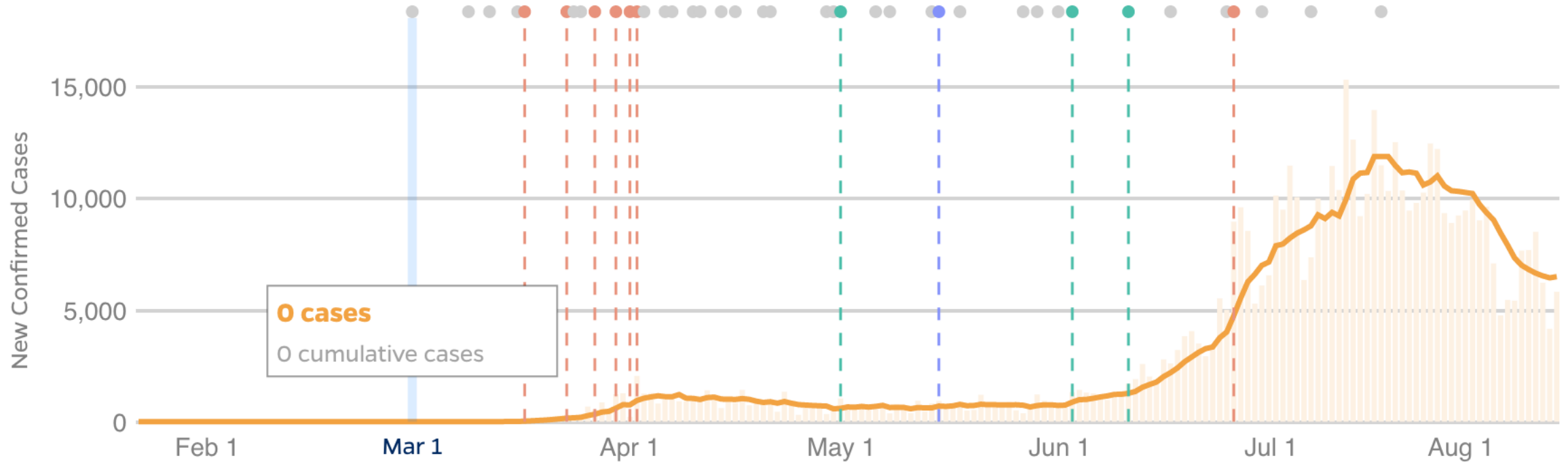
RECENT OPENING AND CLOSING POLICY DECISIONS

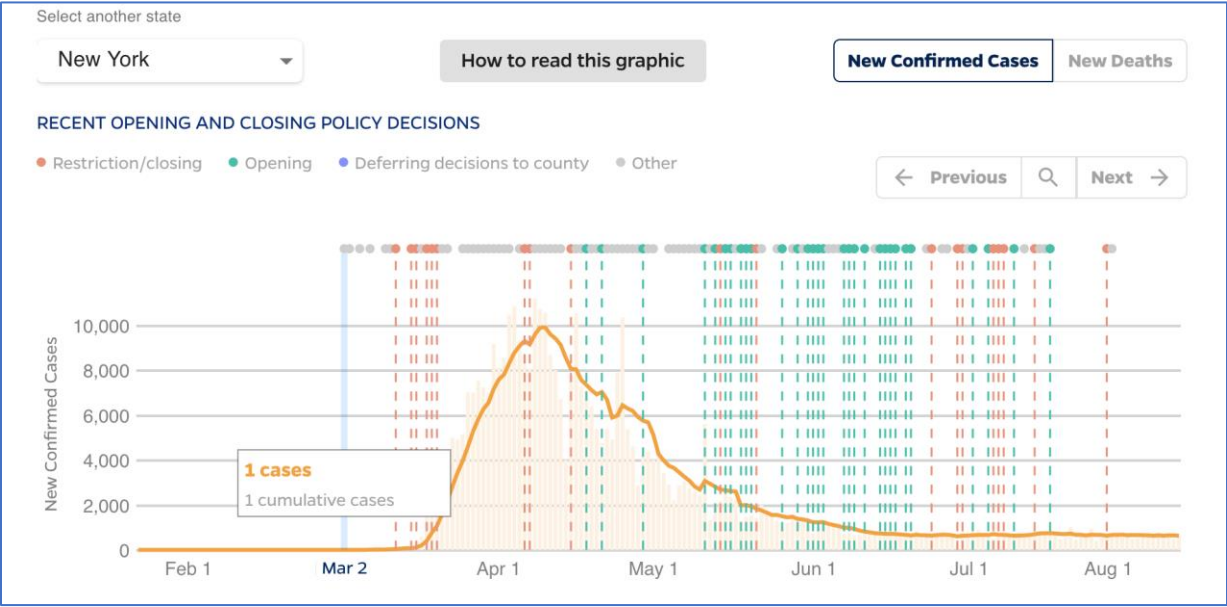
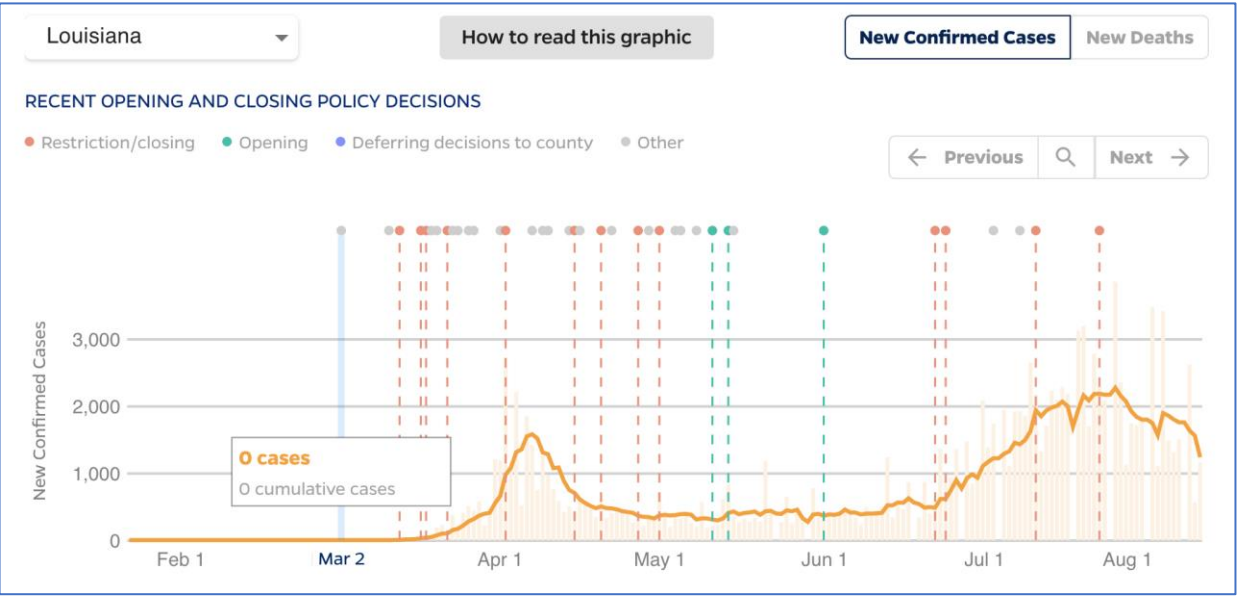
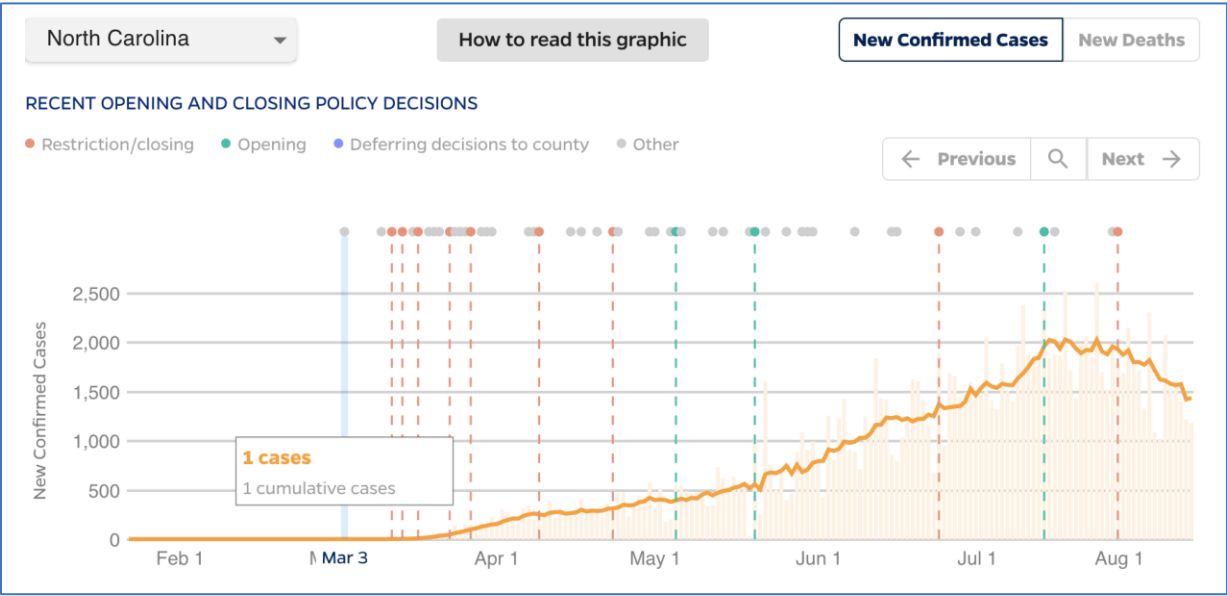
● Restriction/closing ● Opening ● Deferring decisions to county ● Other

← Previous



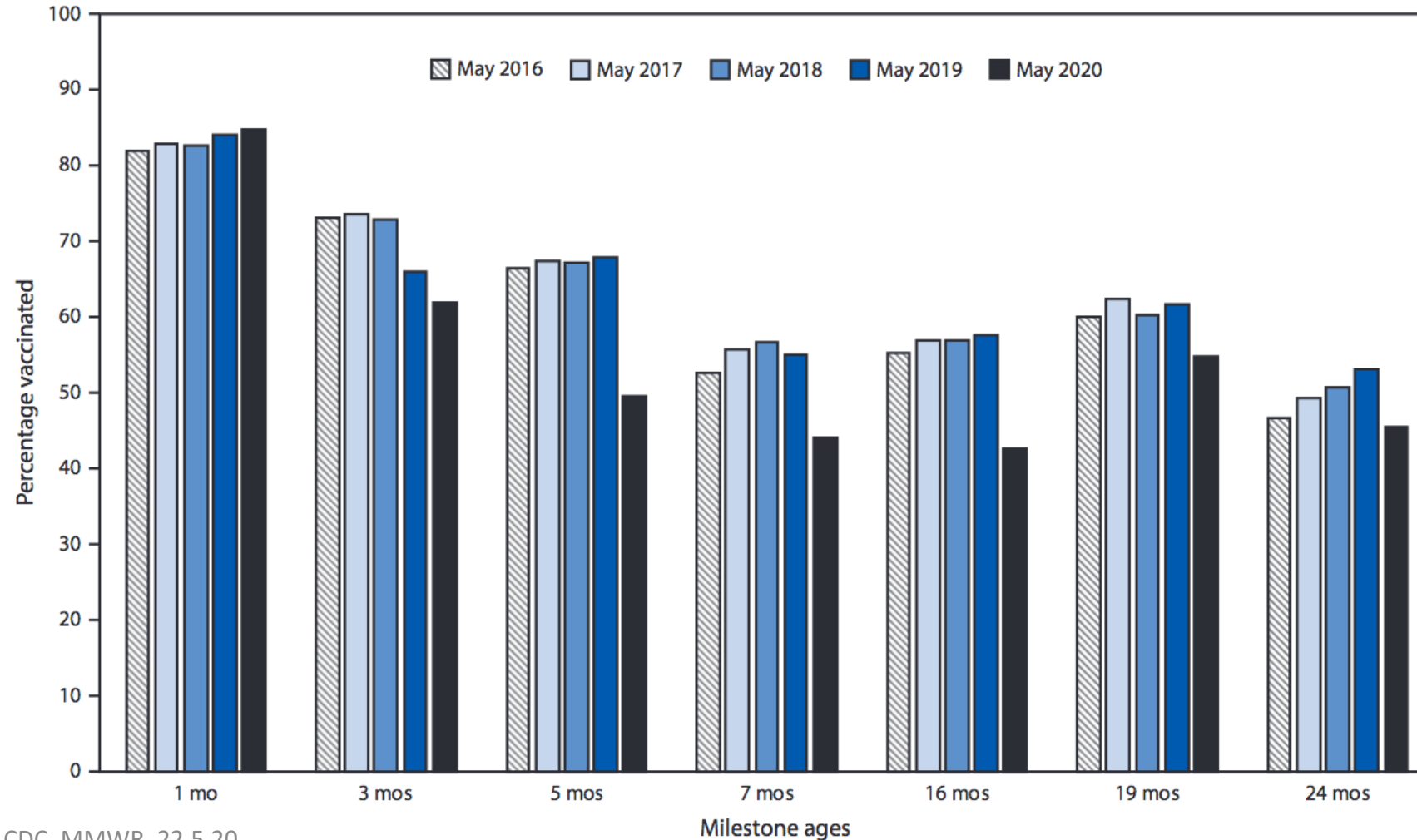
Next →





Beispiel Impfraten bei Kindern in Michiagan

Medizinische Versorgung gefährdet?



Neue pandemische Bedrohung

Präventionsstrategien

Einschliessen (containment)

- Jeden Fall entdecken
- Fälle im Umfeld suchen
- Kontakte beobachten (Quarantäne)

➔ Infektionskette bricht ab!

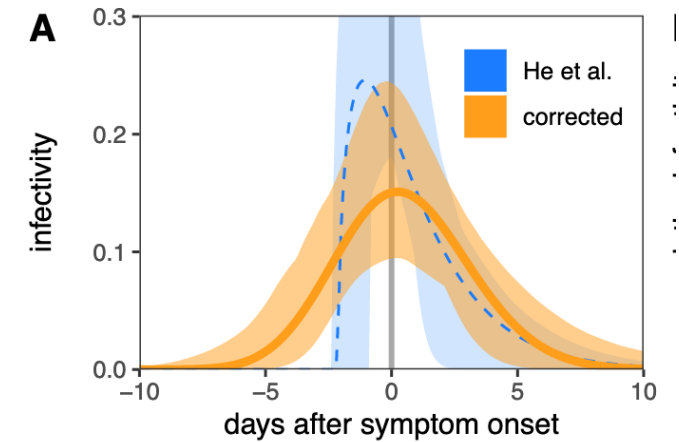
Erkrankungen reduzieren (mitigation)

- Übertragungen häufig
- Ausbreitung reduzieren
- Zeit gewinnen (Therapie)

➔ Ausbreitung langsamer!

Containment: Mögliche Probleme

- Infektiös vor Symptomatik (Ashcroft et al, SMW)
- Quarantäne: Effizienz noch nicht dokumentiert
- Strategie setzt wirksame Impfung voraus



Neue pandemische Bedrohung

Alternativen zur aktuellen Strategie

- Zelluläre Immunität und Kreuzimmunität wie «Schweinegrippe»?
- Strategien zum Schutz der besonders Gefährdeten
- Präventionsauslagen sollen berechnet werden
- Negative Konsequenzen Strategien einbeziehen

Wie gut schützen Lockdown Massnahmen

Einfluss auf Mortalität

Variable ¹	RR	SE	(95%CI)
Deaths per million⁷			
<u>Significant independent variables³</u>			
Obesity prevalence (%)	1.12	0.06	(1.06 to 1.19)
Smoking prevalence (%)	0.97	0.01	(0.94 to 0.99)
Nurses per million population	0.99	< 0.001	(0.99 to 1.0)
Income dispersion within the nation ⁴	0.88	0.03	(0.83 to 0.93)
Per capita GDP ⁵	1.03	0.02	(1.00 to 1.06)

Take home

- Infektionskrankheiten sind eine Realität
- Covid-19 Pandemie ist keine «Jahrhundertpandemie»
- Sterblichkeit von Covid-19 eher rückläufig
- Zelluläre (Kreuz-) Immunität möglicherweise relevant wie 2009

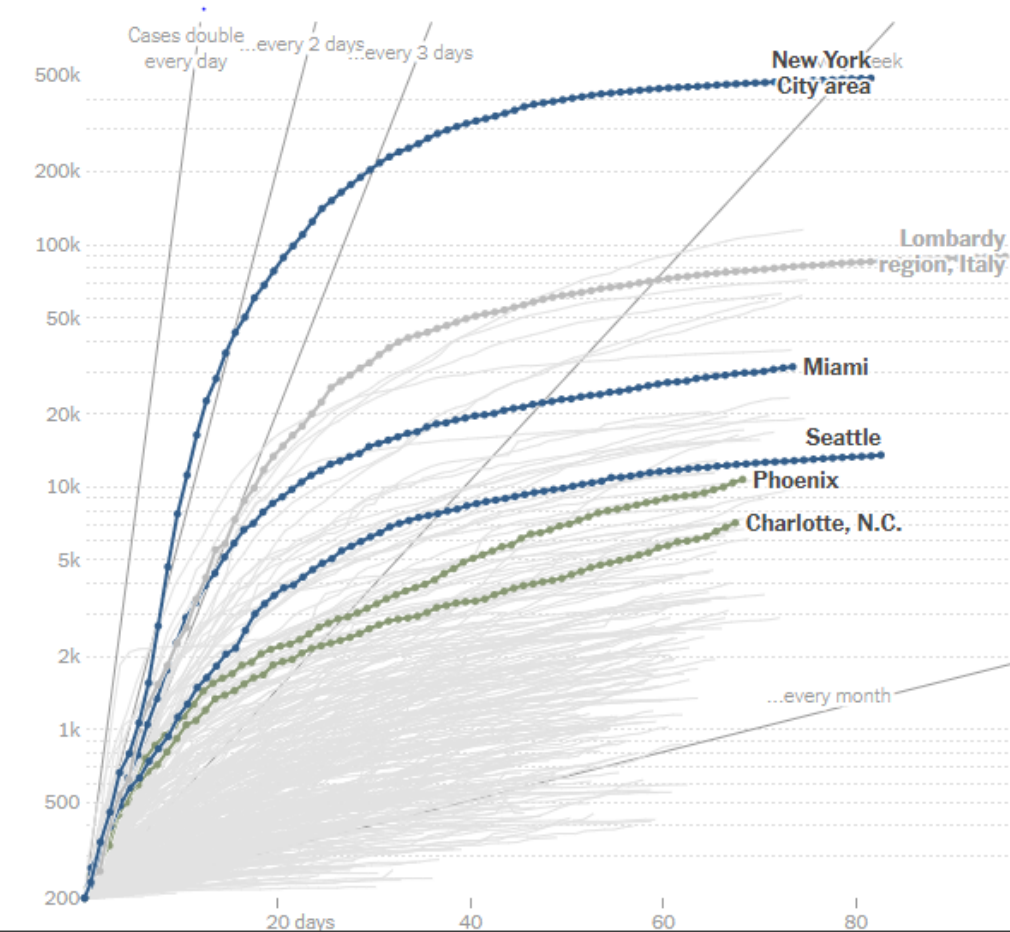
Backup slides

Covid-19: Exponentielles Wachstum ?

Confirmed cases by metro area

for places with at least 200 cases

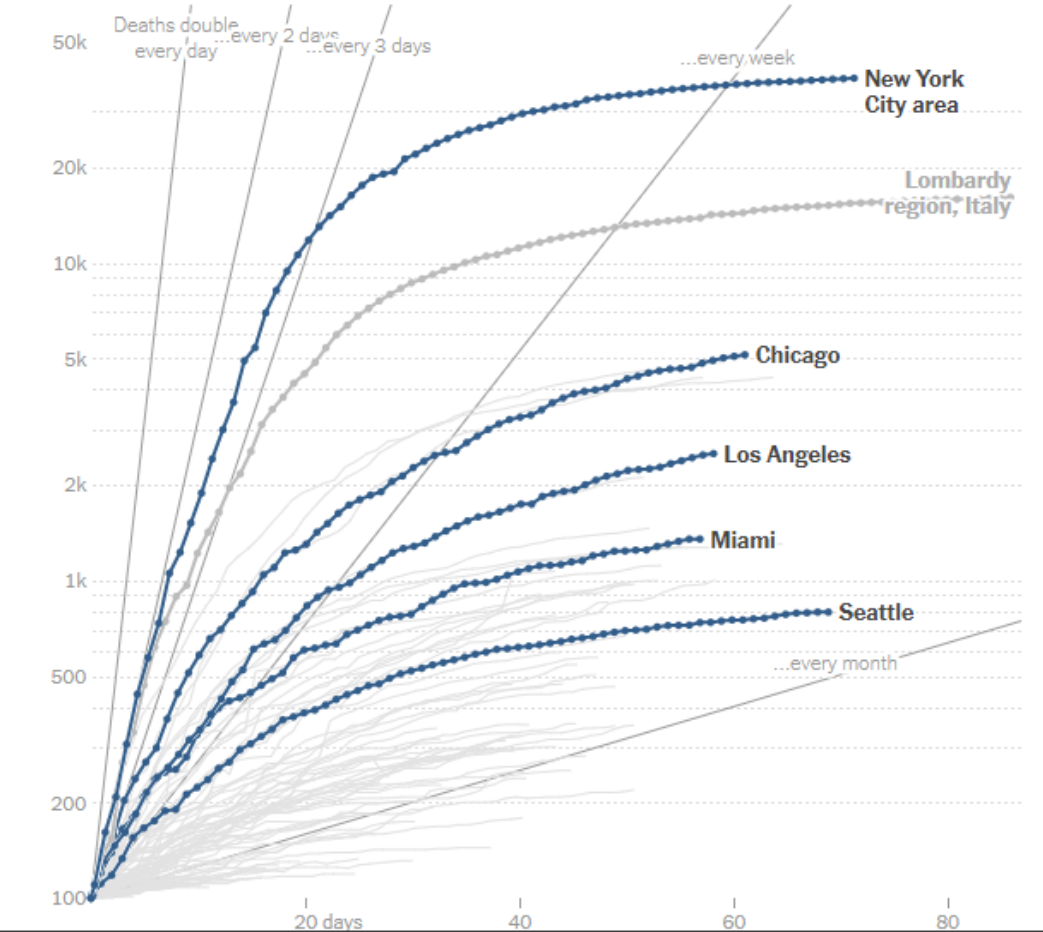
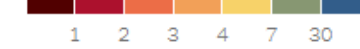
— Reported Partial (today)



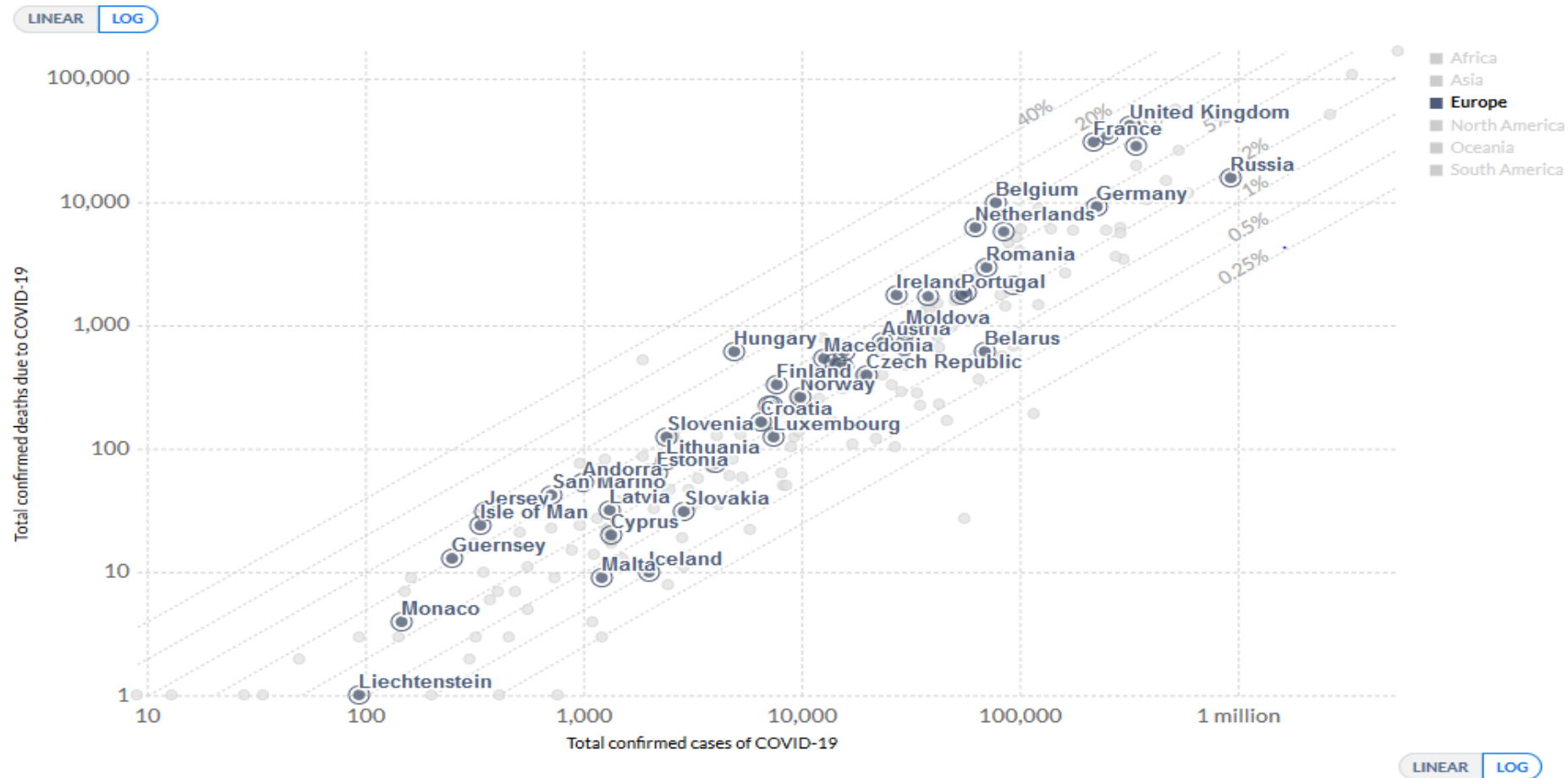
Deaths by metro area

for places with at least 100 deaths

Current doubling time, in days



Letalität in allen Ländern sehr ähnlich



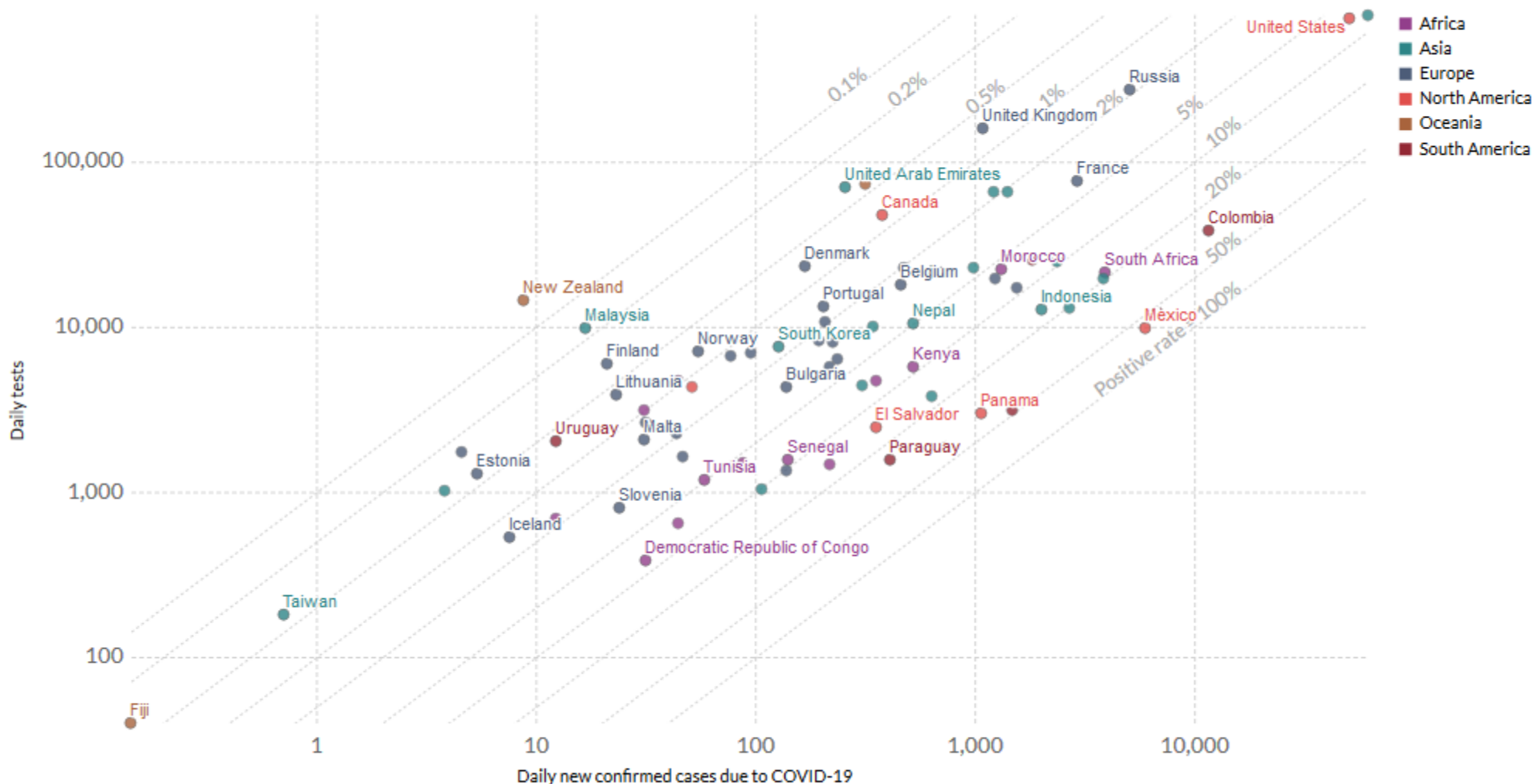
COVID-19: Daily tests vs. Daily new confirmed cases

The figures are shown as a rolling 7-day average.

Our World
in Data

LINEAR

LOG



LINEAR

LOG

Source: Official data collated by Our World in Data, European CDC – Situation Update Worldwide

Note: Comparisons of testing data across countries are affected by differences in the way the data are reported. Daily data is interpolated for countries not reporting testing data on a daily basis.

Details can be found at our [Testing Dataset](#) page

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