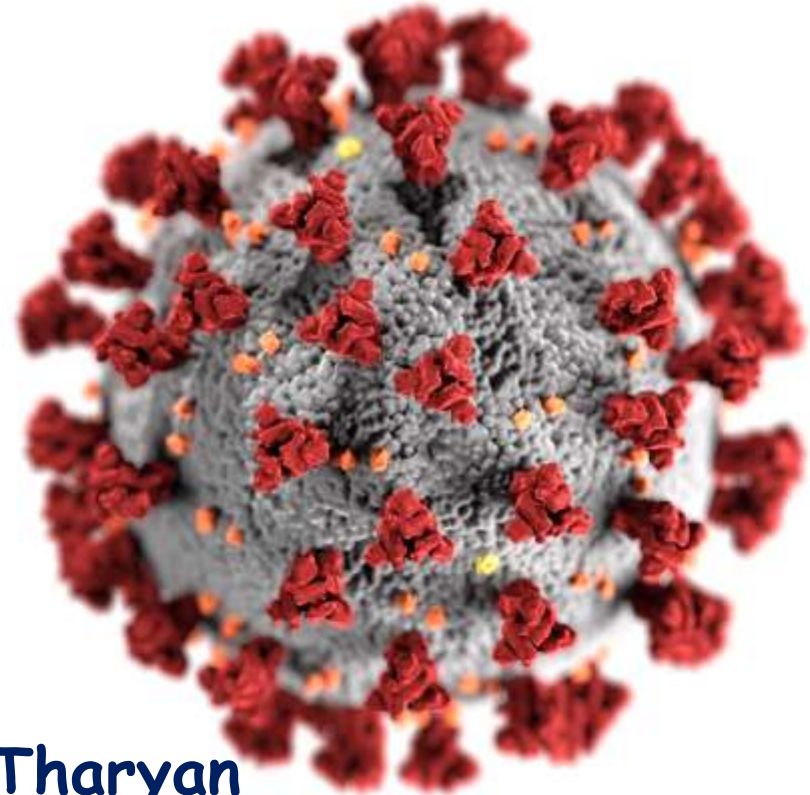




The Swedish Conundrum: Part III

Is the Swedish
Strategy working?

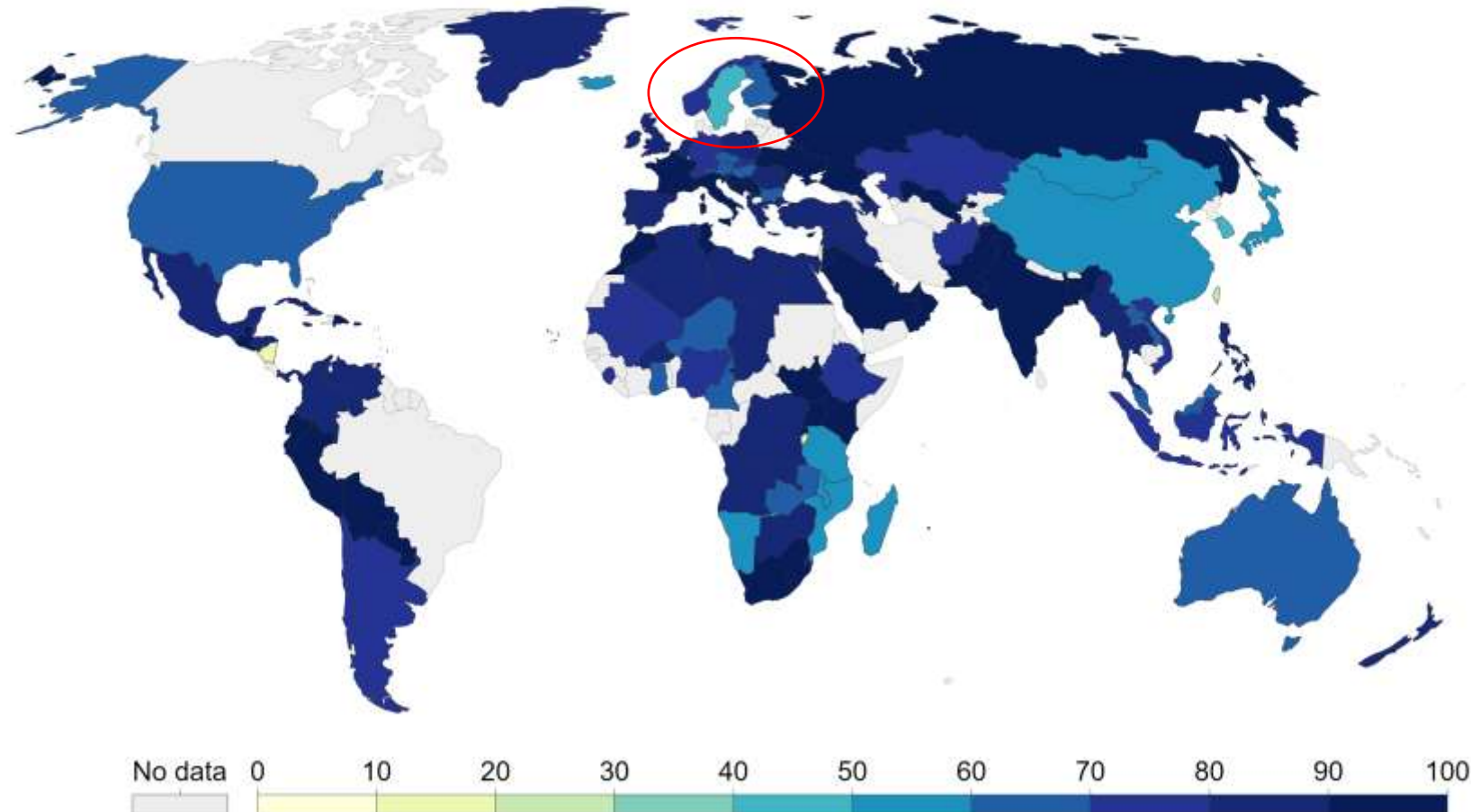


Prathap Tharyan

COVID-19: Government Response Stringency Index, May 8, 2020

The Government Response Stringency Index is a composite measure based on nine response indicators including school closures, workplace closures, and travel bans, rescaled to a value from 0 to 100 (100 = strictest response).

This index simply records the number and strictness of government policies, and should not be interpreted as 'scoring' the appropriateness or effectiveness of a country's response.



Source: Hale, Webster, Petherick, Phillips, and Kira (2020). Oxford COVID-19 Government Response Tracker – Last Updated 8th May.
OurWorldInData.org/coronavirus • CC BY



Government Stringency Index Indicators

1. School closures;
2. Workplace closures;
3. Cancellation of public events;
4. Restrictions on public gatherings;
5. Closures of public transport;
6. Stay-at-home requirements;
7. Public information campaigns;
8. Restrictions on internal movements;
9. International travel controls

IS IT WORKING?

Measurable indicators

- Public opinion
- Compliance with policy
- Infection and mortality
- Healthcare capacity
- Herd immunity
- Economic effects

Basis of the policy:

- **Save lives** by protecting the elderly
- **Reducing spread** of infection
- Not overwhelm **health care capacity**
- Mitigate the effects on **business and jobs**
- Build on the strengths of **mutual trust**
- Be **sustainable** by not being too restrictive
- Build up **herd immunity** as a consequence
- Be able to **withstand a second wave /waves**

IS IT WORKING?

Indicators

- Public opinion



Anders Tegnell is a cult hero in Sweden

According to surveys (late March and early April):

- Three out of 4 Swedes **(71-76%) trusted the Public Health Agency**
- A majority **(85%) trusted the Swedish health-care system.**
- More than half **(53%) trusted Anders Tegnell**, a higher share than for any of the current leaders of the Swedish political parties.
- In early May, **trust in Anders Tegnell had risen to 89%**

IS IT WORKING?

Indicators

- Public opinion

Dissenting voices:

- Many **international news outlets** have carried criticism
- On 25 March: More than **2,000 Swedish university researchers** published a joint letter **questioning the Public Health Agency's position**,
 - Poor communication due to decentralized approach
 - Should restrict large gatherings
 - Shut down schools, restaurants, night-clubs
 - Close borders
 - Lost an opportunity to test and trace early
- On 14 April, **Swedish newspapers** carried a critical article **signed by 22 academics**, saying that the strategy of the Swedish public health agency **would lead to "chaos in the healthcare system"**.

IS IT WORKING?

- Compliance with policy

- Swedes have **mostly complied** with the recommendations
- Roughly **half the Swedish workforce is working from home**
- **Public transport** usage had **dropped 50% in April**
- In Stockholm, the streets are increasingly emptier: **30% drop in cars, 70% less pedestrians**
- **Travel from the Stockholm region** to popular holiday destinations and ski resorts, **and between other regions**, had **fallen > 80%-90%** (mobile network data)
- But there are many who are unsure if there should not be clearer directives and more restrictions

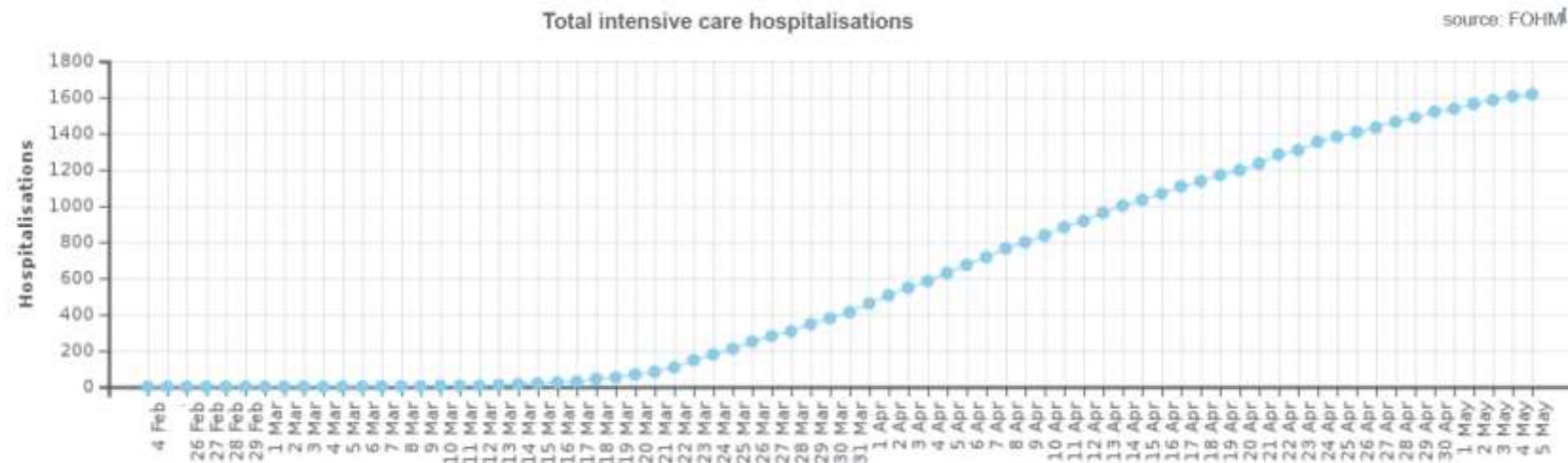
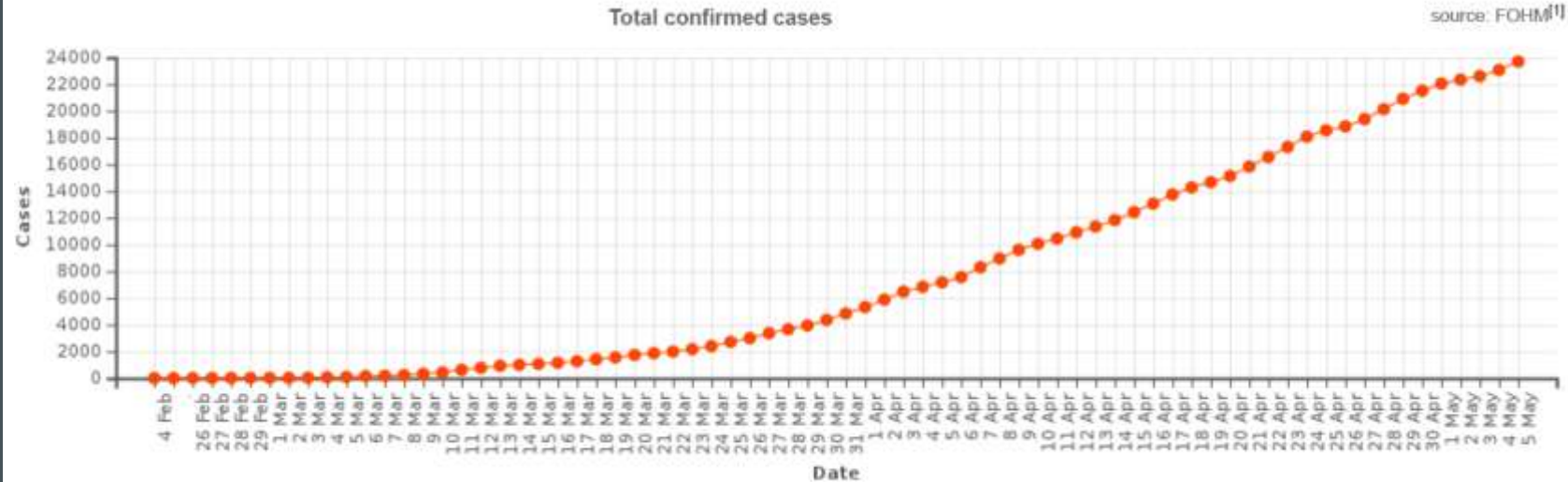


An empty restaurant in a normally busy part of Gothenburg
(Nora Lorek; National Geographic)

IS IT WORKING?

INFECTIONS & DEATHS

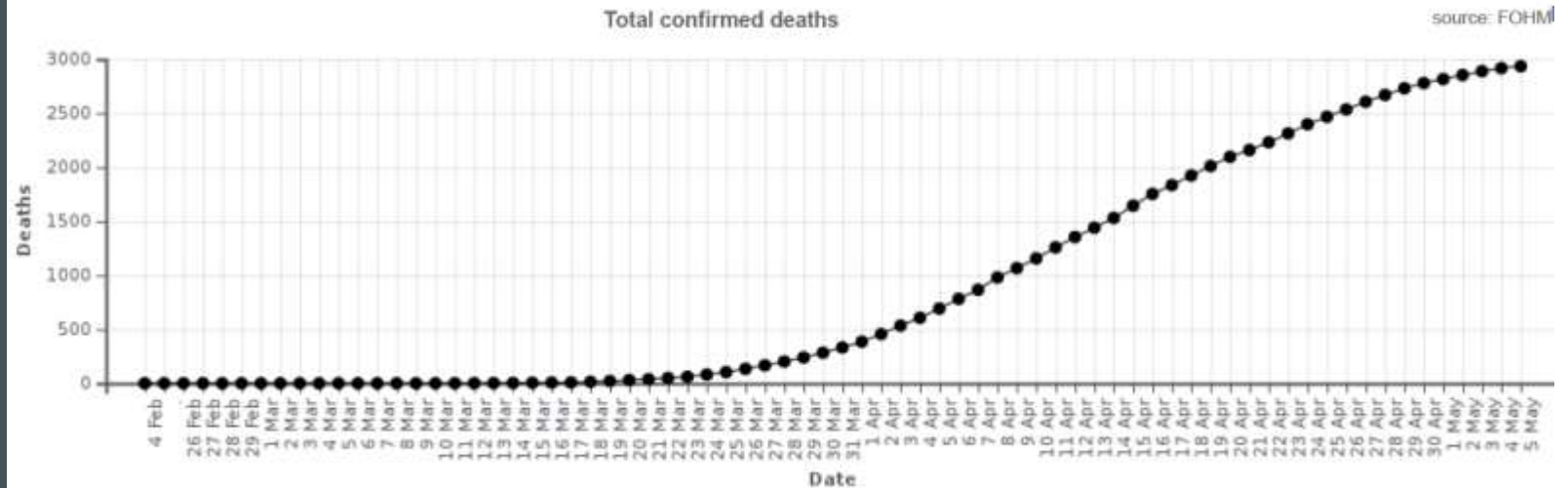
- The number of cases and hospitalizations have risen considerably since end of March 2020



IS IT WORKING?

INFECTIONS & DEATHS

- The number of deaths have risen considerably since end of March 2020

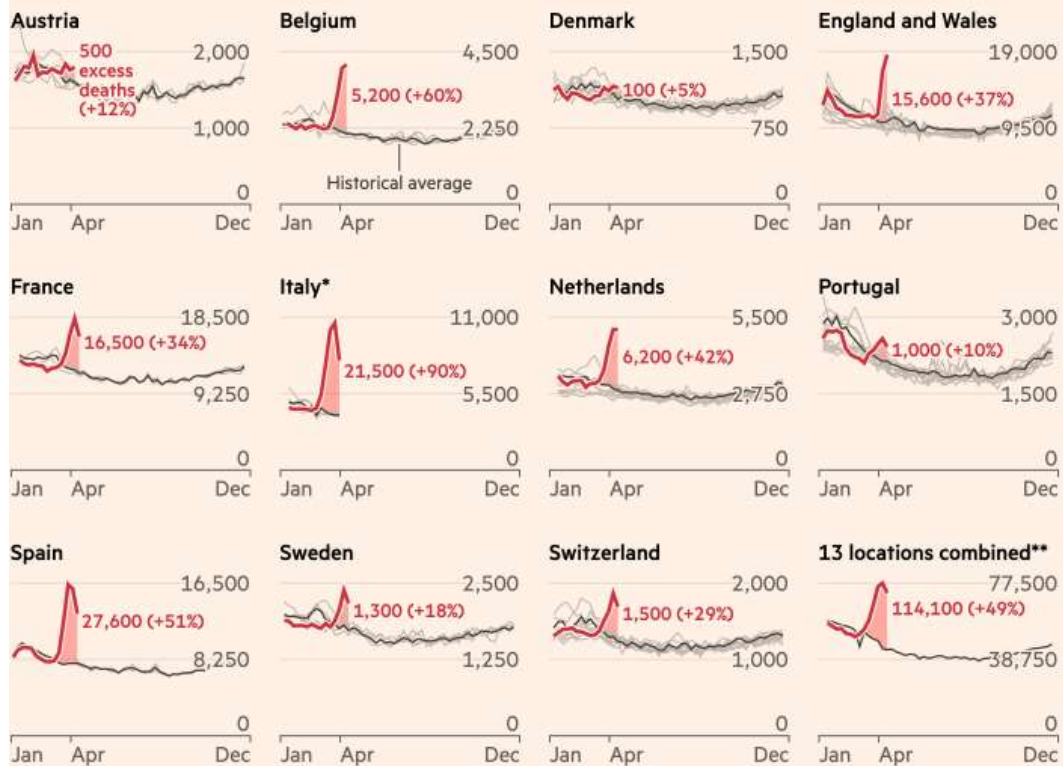


- Most of the deaths have occurred in Stockholm: among the elderly in care homes, and among Somali and other immigrants
- The increasing deaths has been a matter of great concern to the Public Health Agency, the Government and to many Swedes
- On May 6, the EU reported that only 5 countries had not shown signs of a decline in case and deaths- Sweden was one of them

EXCESS DEATHS COMPARED TO PREVIOUS YEARS

Death rates have climbed far above historical averages in many countries that have faced Covid-19 outbreaks

Number of deaths per week from all causes, 2020 vs recent years:



Source: FT analysis of mortality data. Data updated April 26

*Italian figures are for a subset of the country where data is available

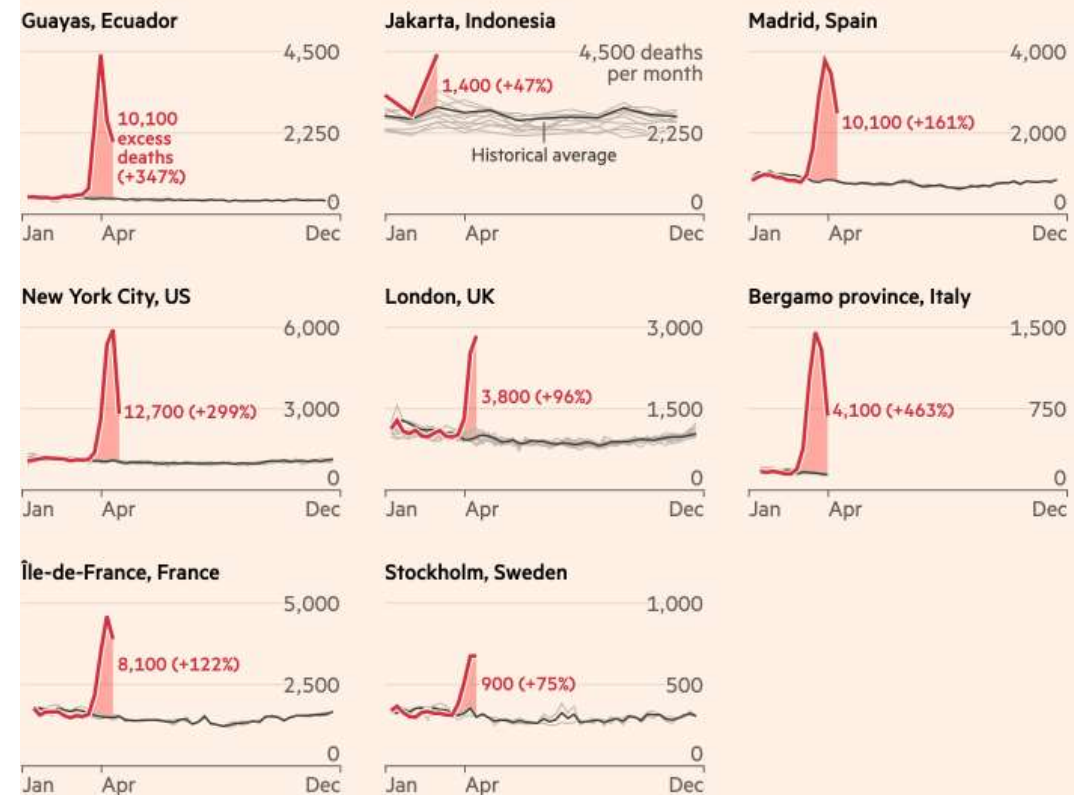
**Combined locations figure is only for weeks where all locations have reported mortality statistics

FT graphic: John Burn-Murdoch / @jburnmurdoch

© FT

Mortality rates have soared in urban areas worldwide, with overall excess deaths often much higher than reported Covid-19 counts

Number of deaths per week from all causes, 2020 vs recent years:



FT graphic: John Burn-Murdoch / @jburnmurdoch

Sources: FT analysis of national mortality data. Figures for Jakarta refer to burials. Data updated April 26

© FT

DIFFICULTIES IN COMPARING DEATH STATISTICS ACROSS COUNTRIES

- **Definitions of who is a case differs**
 - SARS-CoV-2 cases may be asymptomatic, pre-symptomatic or mildly symptomatic, or seriously symptomatic with the disease (COVID-19)
 - Some countries report infections, others report COVID-19; others do not differentiate between infection and disease
- **Testing strategies differ**
 - Some test only those with specific symptoms (and these change) and with a travel history to certain countries; others also test those with influenzas-like symptoms, fever etc; others test contacts to; also test random samples
 - Some countries only test those who can be clinically helped and do not test those who are critically ill and cant be saved or who are brought dead
- **Accuracy of test kits also differ**
 - This will affect the sensitivity and specificity of test results and determine whether all who test positive actually have COVID-19 and all who test negative do not actually have the infection
- **Reporting of deaths also differs**
 - Some countries only report COVID deaths in hospitals; others also report COVID deaths outside hospitals
 - Some report COVID deaths only if they have a positive test; others also report COVID deaths if symptoms suggest COVID

Cases and Deaths: Scandinavian Countries

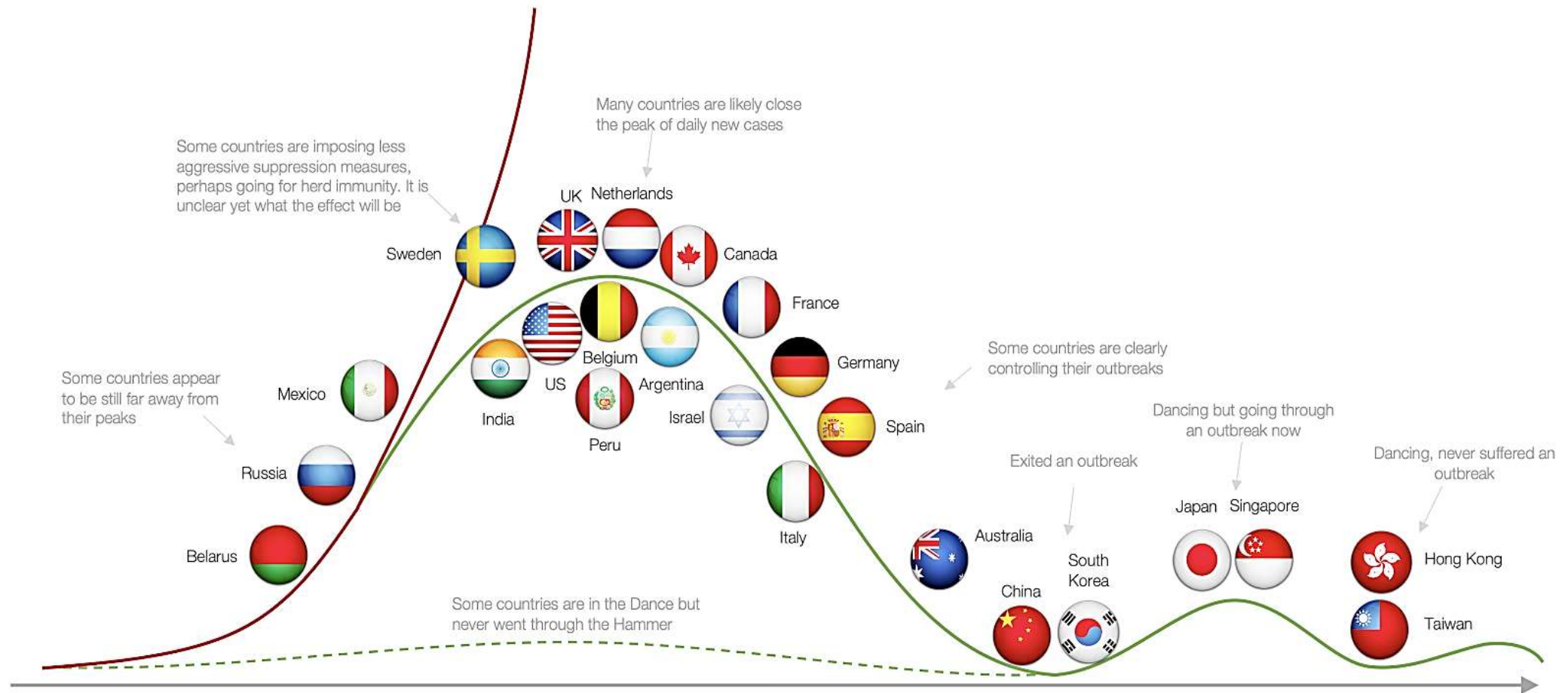
Source: <https://www.worldometers.info/coronavirus/#countries>

7 May 2020

Country	Population (Millions)	Total Cases	Total Deaths	Case Fatality	Cases (Per 1 M)	Deaths (Per 1 M)	Total tests	Tests (Per 1 M)
Sweden	10,099,265	24,623	3,040	12.3%	2,438	301	148,500	14,704
Norway	5,421,241	7,996	216	2.7%	1,475	40	191,946	35,406
Denmark	5,792,202	10,083	506	5.0%	1,741	87	284,480	49,114
Finland	5,540,720	5,673	255	4.5%	1,024	46	112,100	20,232
Iceland	341,243	1799	10	0.69%	5272	29	51,663	151,397

APPROXIMATION OF COUNTRIES TRAJECTORIES

Tomas Pueyo: Coronavirus: Learning How to Dance-Part 1



Notes: Countries fit approximately to the curve based on daily new cases and NPI data. This is not perfect. All flags can't fit in here, so I had to pick countries. I selected the countries that were most relevant to this analysis due to their best practices, number of cases, or phase in the epidemic. I added some other countries based on interest manifested to me over the last few weeks.

Source: Tomas Pueyo Analysis, based on:

- Case evolution per country from Johns Hopkins data via Github: https://github.com/CSSEGISandData/COVID-19/blob/master/csse_covid_19_data/csse_covid_19_time_series/time_series_covid19_confirmed_global.csv
- Databases of Non-Pharmaceutical Interventions from Johns Hopkins via epidemicforecasting.com, and ACAPS via <https://data.humdata.org/dataset/acaps-covid19-government-measures-dataset>

Country flag icons from Vathanx via <https://www.iconfinder.com/iconsets/world-flag-icons>. Link below

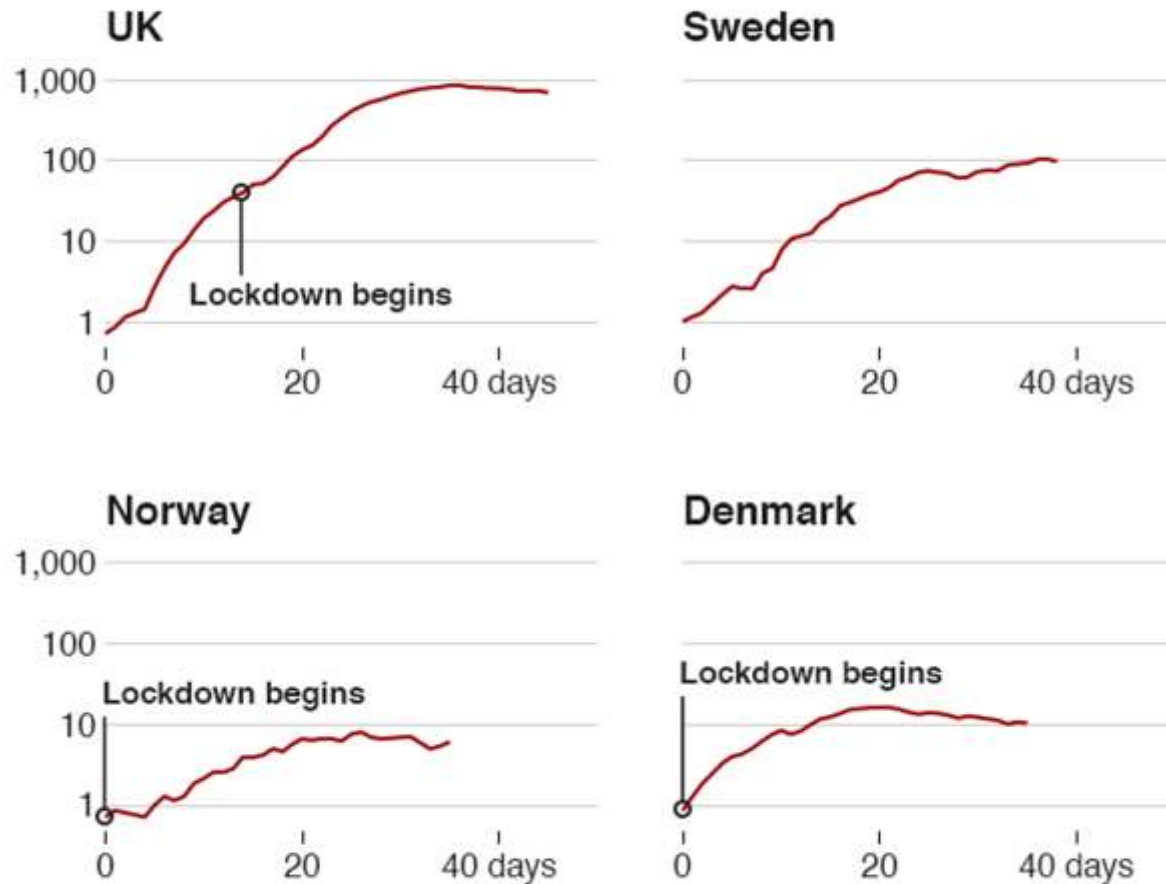
IS IT WORKING?

DEATHS

- UK started lockdown much later than Norway and Sweden
- UK and Sweden have not seen a drop in deaths

Coronavirus deaths in selected countries

Weekly rolling average of fatalities since fifth death



Log scale.

Note: Denmark and Norway introduced lockdowns before reaching five deaths

Source: ECDC, updated 24 April

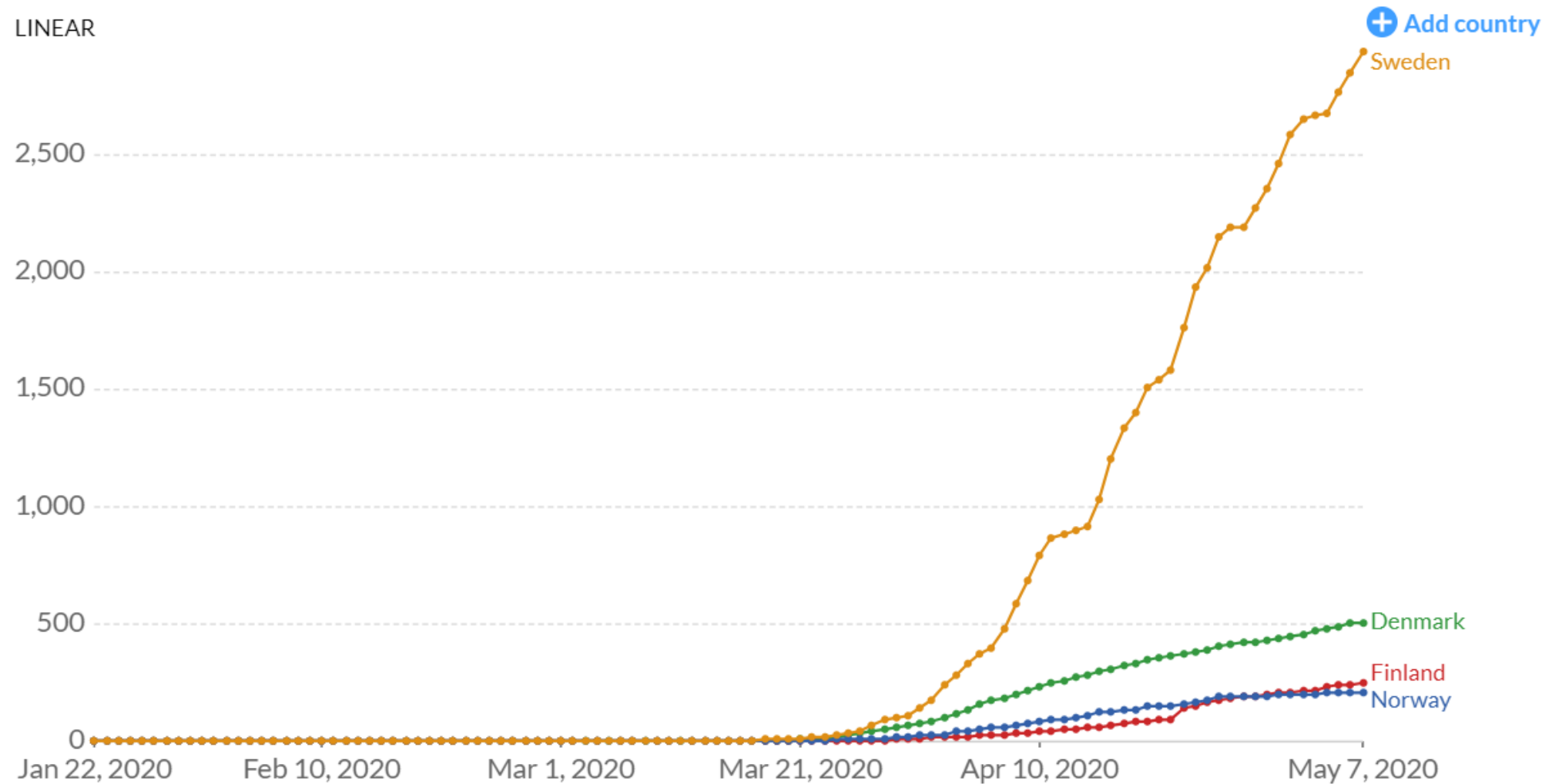
BBC

Total confirmed COVID-19 deaths

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.

Our World
in Data

LINEAR



Source: European CDC - Situation Update Worldwide - Last updated 7th May, 11:15 (London time)

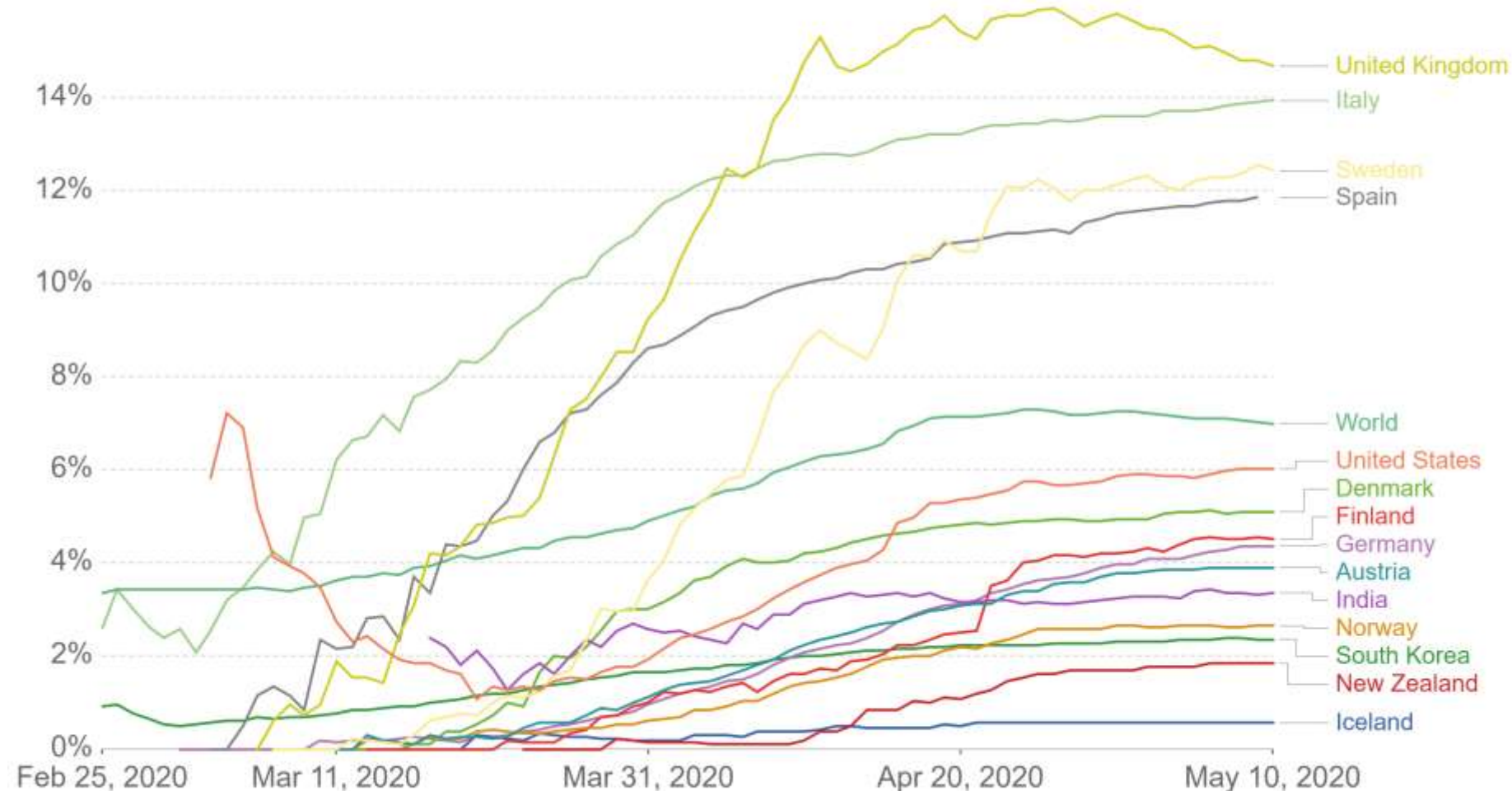
OurWorldInData.org/coronavirus • CC BY

Case fatality rate of the ongoing COVID-19 pandemic

Our World
in Data

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



Source: European CDC – Situation Update Worldwide – Last updated 10th May, 11:00 (London time)

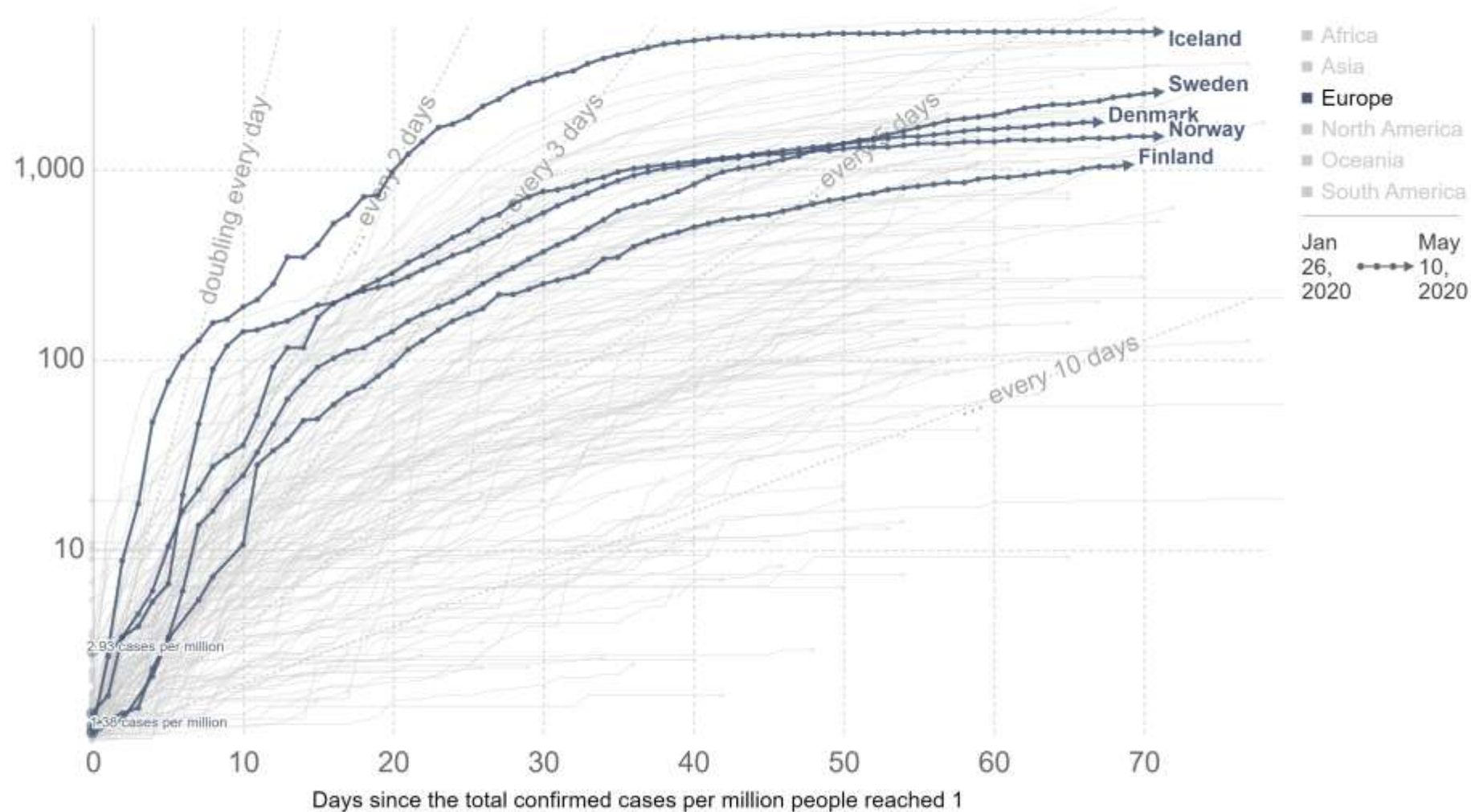
Note: Only countries with more than 100 confirmed cases are included.

OurWorldInData.org/coronavirus • CC BY

Total confirmed COVID-19 cases per million: how rapidly are they increasing?

Our World
in Data

The number of confirmed cases of COVID-19 is lower than the number of total cases. The main reason for this is limited testing.



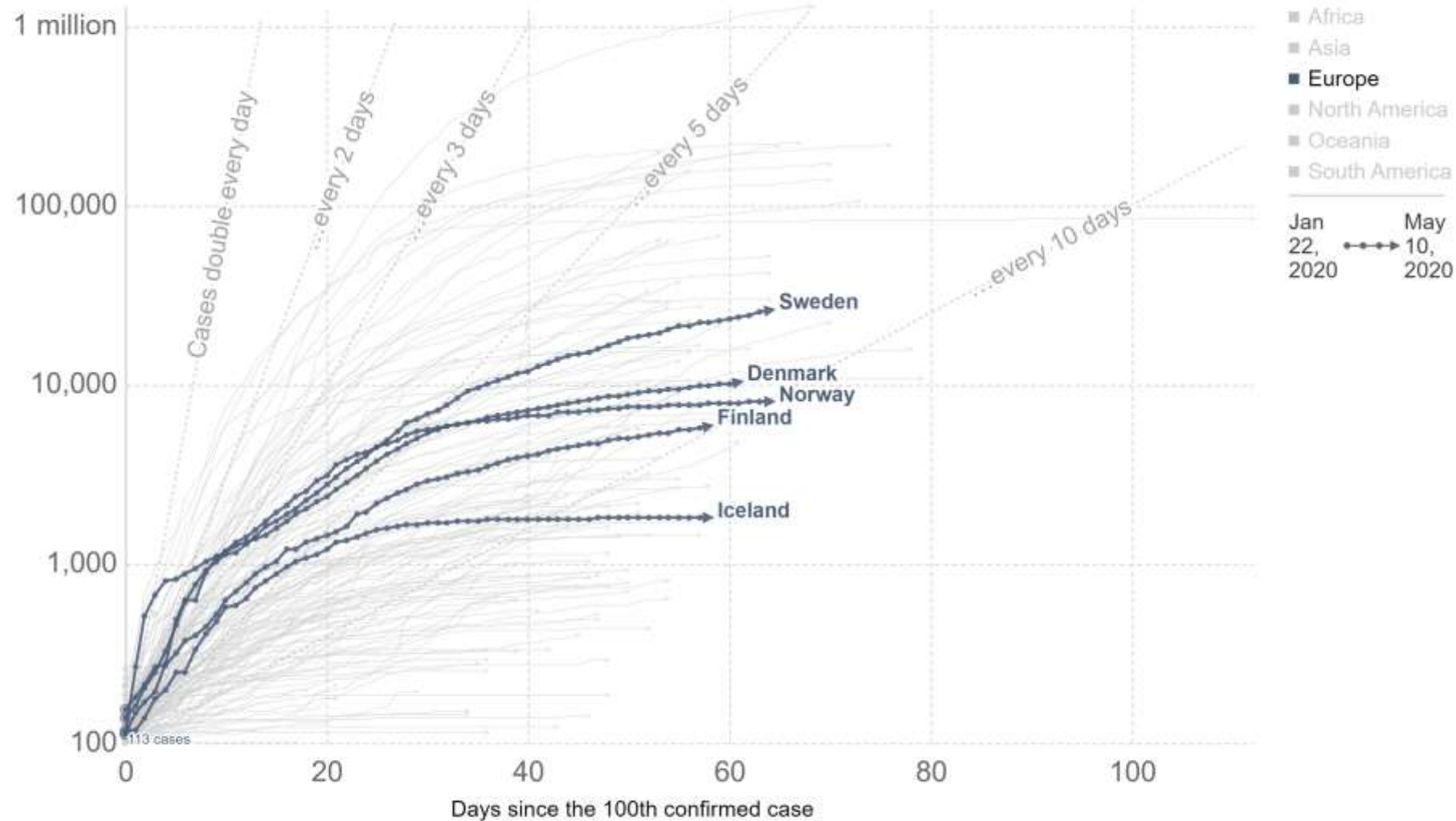
Source: European CDC – Situation Update Worldwide – Last updated 10th May, 11:00 (London time)

OurWorldInData.org/coronavirus • CC BY

Total confirmed COVID-19 cases: how rapidly are they increasing?

The number of confirmed COVID-19 cases is lower than the number of total cases. The main reason for this is limited testing.

Our World
in Data



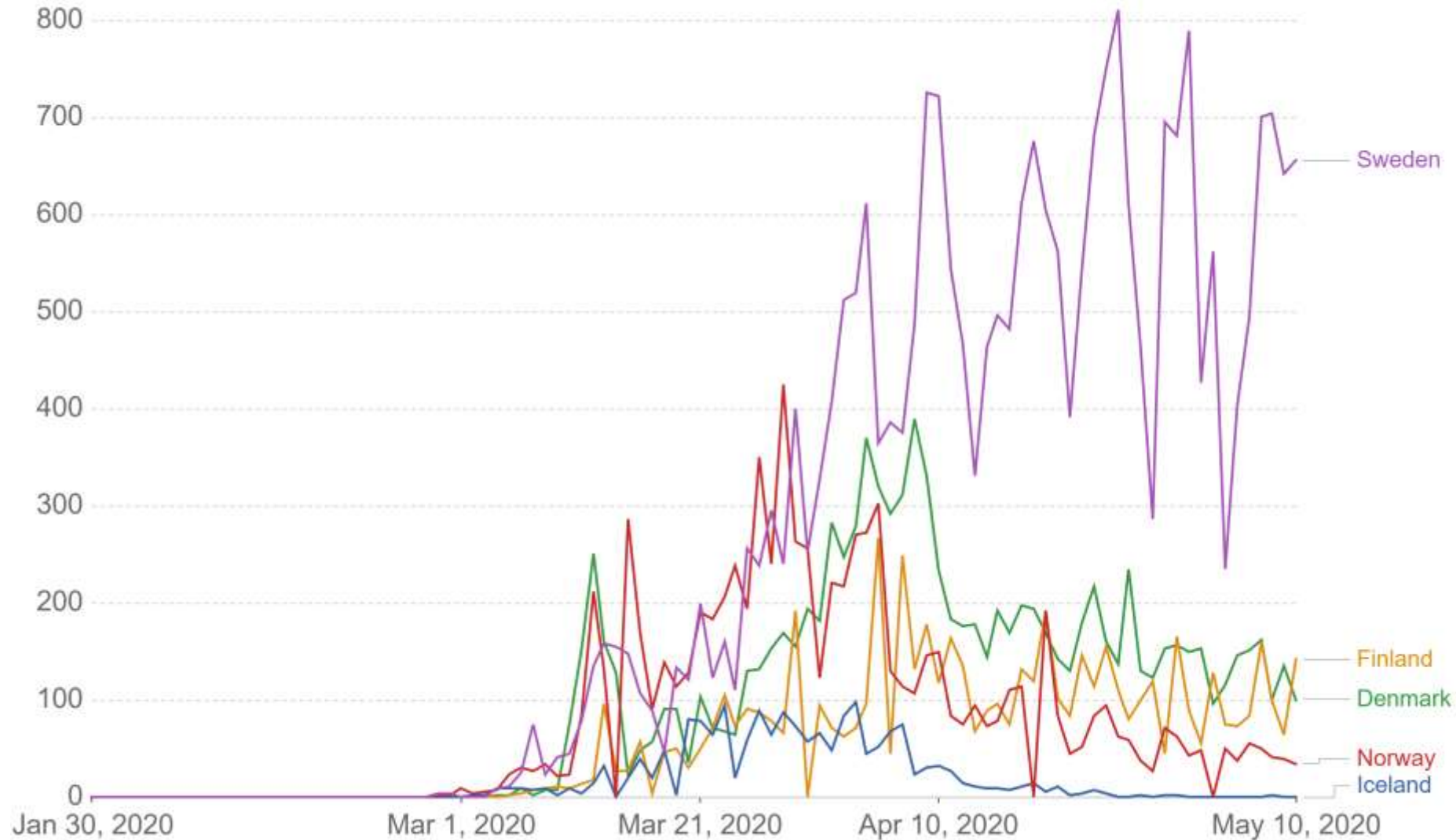
Source: European CDC – Situation Update Worldwide – Last updated 10th May, 11:00 (London time)

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Daily confirmed COVID-19 cases

The number of confirmed cases is lower than the number of total cases. The main reason for this is limited testing.

Our World
in Data

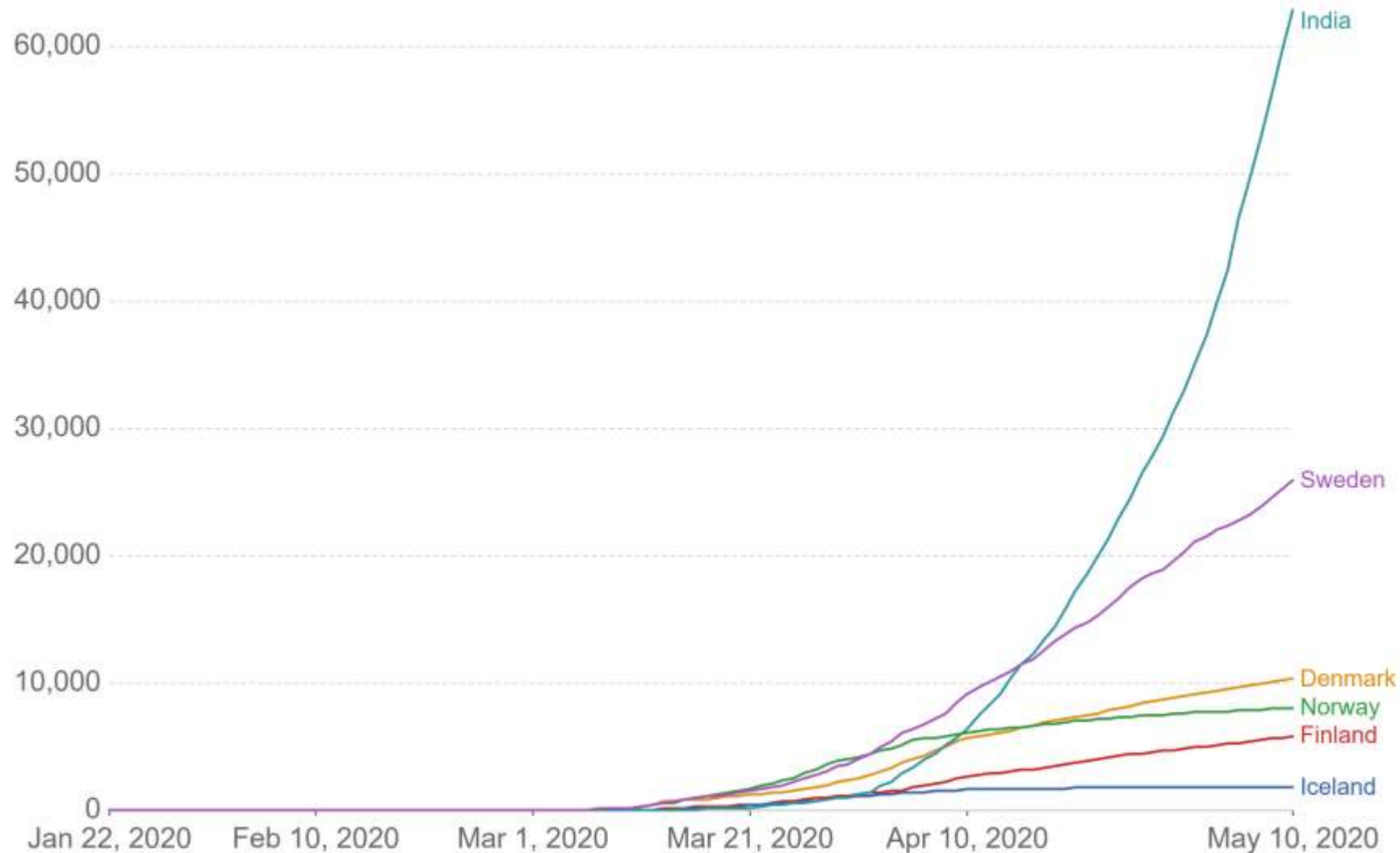


Source: European CDC – Situation Update Worldwide – Last updated 10th May, 11:00 (London time)

OurWorldInData.org/coronavirus • CC BY

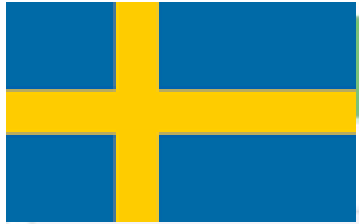
Total confirmed COVID-19 cases

The number of confirmed cases is lower than the number of total cases. The main reason for this is limited testing.



Source: European CDC – Situation Update Worldwide – Last updated 10th May, 11:00 (London time) OurWorldInData.org/coronavirus • CC BY

PROJECTIONS



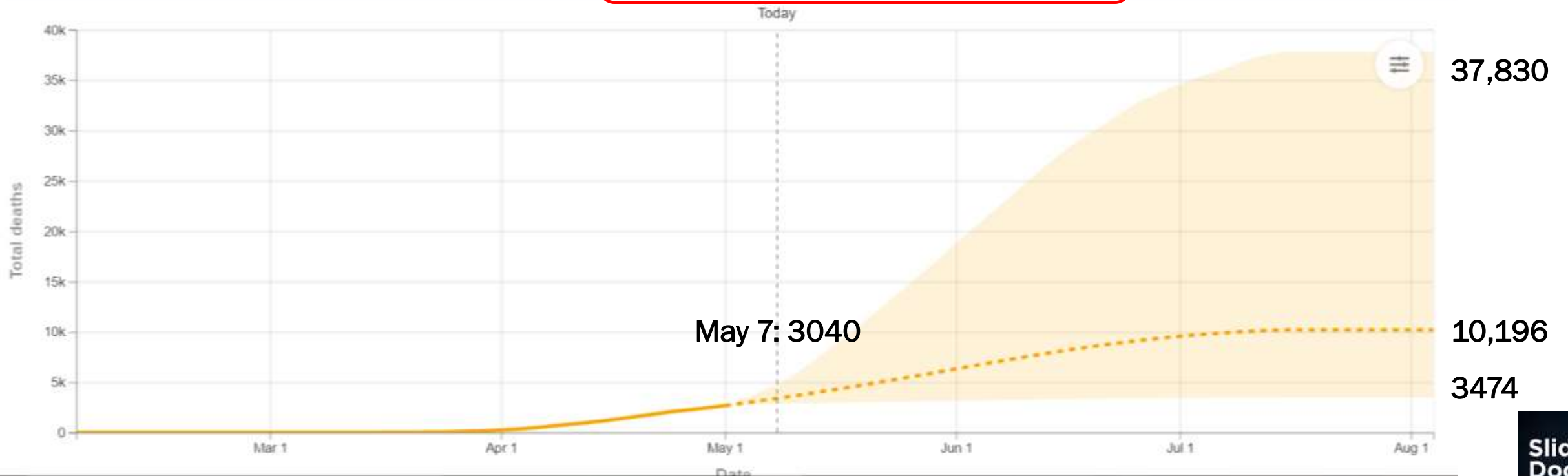
Sweden



Total deaths

10,196 COVID-19 deaths
projected by August 4, 2020

(3474 to 37,830)





Norway

Total deaths

284 COVID-19 deaths
projected by August 4, 2020



Denmark

Total deaths

806 COVID-19 deaths
projected by August 4, 2020



Finland

Total deaths

299 COVID-19 deaths
projected by August 4, 2020



Iceland

Total deaths

33 COVID-19 deaths
projected by August 4, 2020



INCREASED DEATHS IN SWEDEN COMPARED TO OTHER NORDIC COUNTRIES

- Most of the deaths in Sweden are in Stockholm and the spread of cases and mortality is not uniform across Sweden.
- More than half the deaths have occurred in nursing homes in Stockholm; around 70,000 people live in nursing homes.
- Staff in these homes were initially not required to wear masks or gloves. This has now changed.
- Some staff came to work even when sick since Sweden initially did not pay for first day of sick leave; now Sweden pays for all days of sick leave
- Many deaths also occurred among immigrants who lived in over-crowded tenements, and were not specially targeted with information and support to understand Sweden's approach
- But, Sweden believes that other countries will eventually have similar mortality figures as they start opening up and their non-immune population get infected over the next year.

IS IT WORKING?

HEALTH CARE CAPACITY

- Not overwhelming capacity to deal with infections was a goal of the policy



Sweden increased capacity of beds and critical care facilities three-fold

To date, Sweden's health care capacity has not been overwhelmed

IS IT WORKING?

HERD IMMUNITY

- Achieving herd immunity was a hoped-for secondary outcome

Swedish authorities estimate from antibody testing that 20-30% of the people of Stockholm have already developed herd immunity and most of Stockholm would have developed herd immunity by the end of May

Critics say that this needs to be more stringently evaluated since testing has not been adequate enough to be sure of this

There are many concerns about the accuracy of antibody test kits

There many uncertainties about how long immunity lasts and whether it will be robust or if it will be strain-specific

IS IT WORKING?

ECONOMIC EFFECTS

The Swedish Government has made many investments to prevent financial hardship and protect jobs

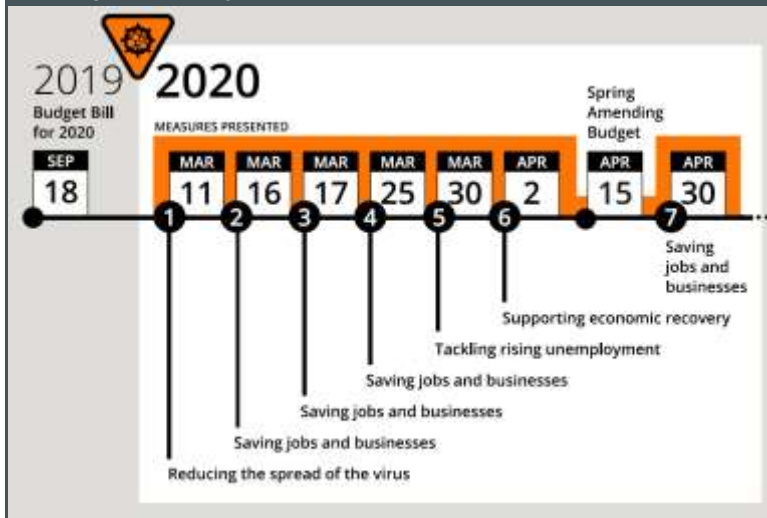
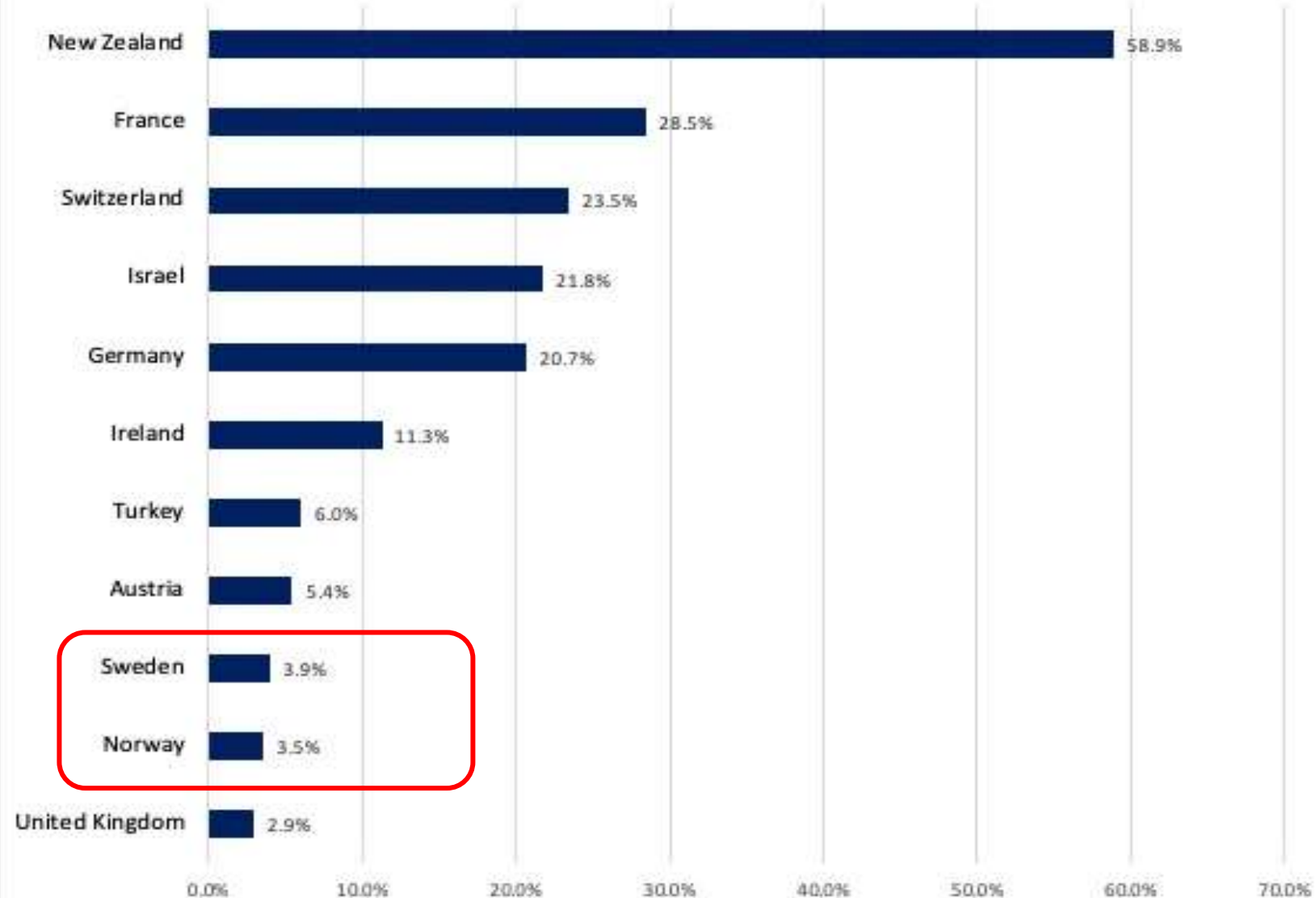


Figure 2. Short-term or business-support program beneficiaries as share of labor force in selected countries



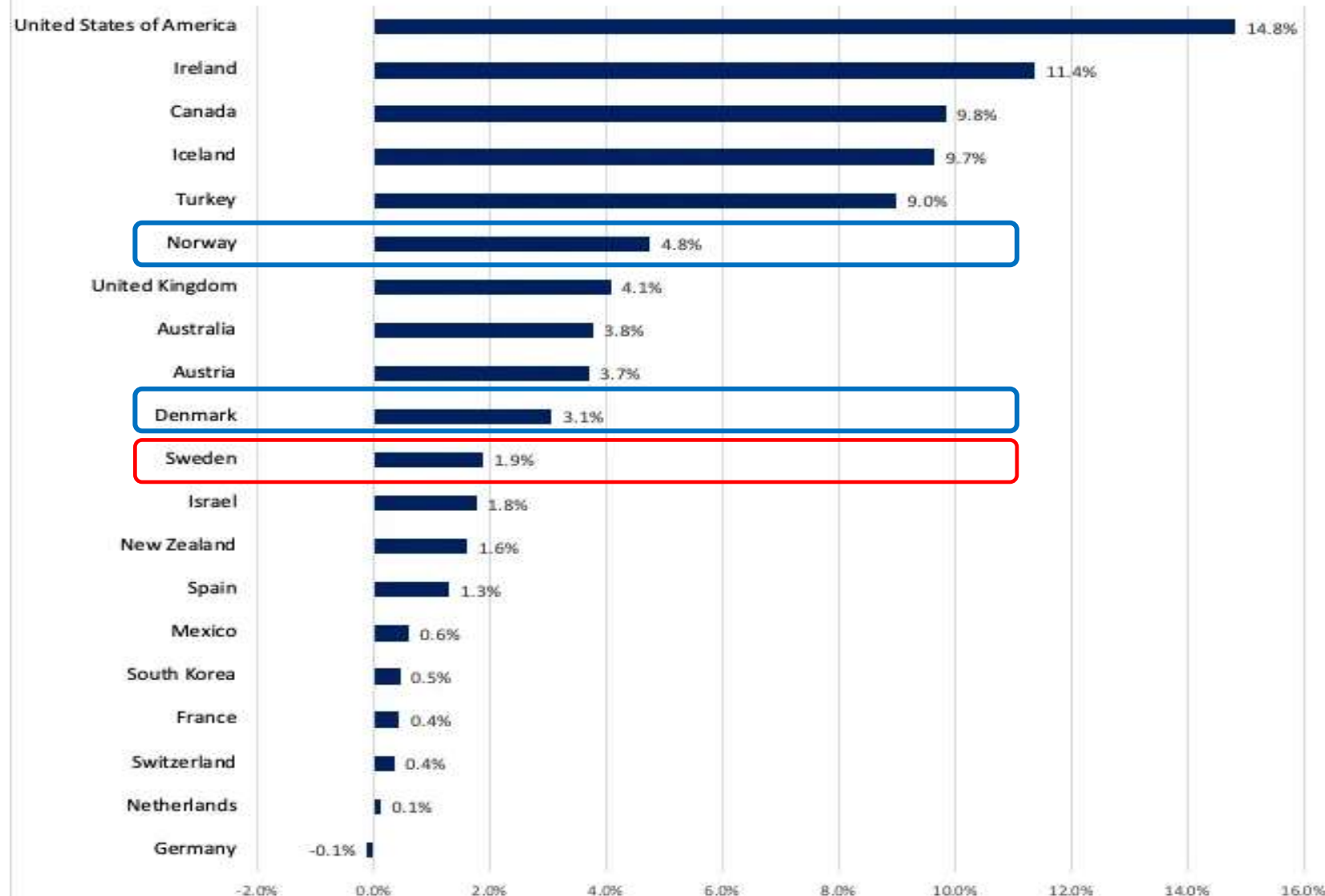
Source: Gallup and Brookings analysis of country data from March to April 23, 2020.

IS IT WORKING?

ECONOMIC EFFECTS

- Similar levels of economic disruption seen in Nordic countries that:
- have remained open- Sweden
- have tighter restrictions-Denmark and Norway.
- Recent survey estimates suggest twice as many workers have been laid off or seen reduced hours from COVID-19 as have filed unemployment insurance claims.
- Too early to say what these will look like later
- **Also need to balance economic outcomes with mortality**

Figure 1. Unemployment claims as share of labor force in selected countries



Source: Gallup and Brookings analysis of country data from March to April 23, 2020.

Share of workforce displaced by COVID-19, per capita deaths and tests in select OECD countries

(as of April 24, 2020)

Country	Unemployment claims (%)*	Business-support programme beneficiaries (%)*	Deaths /million population	Test per capita (%)
Sweden	1.9	3.9	198	0.9
Norway	4.8	3.5	34	2.8
Denmark	3.1	—	68	2.0
Iceland	9.7	-	28	12.7
Germany	-0.1	20.7	64	2.5
France	0.4	28.5	326	0.7
Switzerland	0.4	23.5	149	2.8
Spain	1.3	-	474	2.0
New Zealand	1.6	58.9	3	2.0
South Korea	0.5	-	5	1.1
Australia	3.8	-	3	1.9
Canada	9.8	-	58	1.7
UK	4.1	2.9	282	0.6
USA	14.8	-	153	1.4

* As share of labour force (<https://www.brookings.edu/research/>)

DOES IT NEED TO CHANGE?

- The approach was to tighten restrictions if things were getting out of control
- Doing things at the right time



JONATHAN NACKSTRAND/AFP via Getty Images

- **March 29:** number of people allowed at public gatherings reduced from 500 to 50. Businesses that did not respect social distancing measures could face fines or even closures.
- **March 30:** Visits to retirement homes banned (initially the decision was up to city councils).
- **April 1:** Flights coming from non-EU countries were also banned.
- **April 16:** MPs in Sweden gave the government extra (revocable) powers to: close businesses and schools - without having to go through parliament first (from April 18 to June 30)
- **April 26:** Sweden closed 5 bars and restaurants that were not following social distancing recommendations
- **April:** Review of nursing homes-masks, gloves now compulsory
- **April:** Increased antibody testing to assess for herd immunity

DOES IT NEED TO CHANGE?

- The approach was to tighten restrictions if things were getting out of control
 - Doing things at the right time
- *"I think the most important thing all the time is to try to do it as well as you can, with the knowledge we have and the tools you have in place. And to be humble all the time because you may have to change" (Dr. Anders Tegnell)*

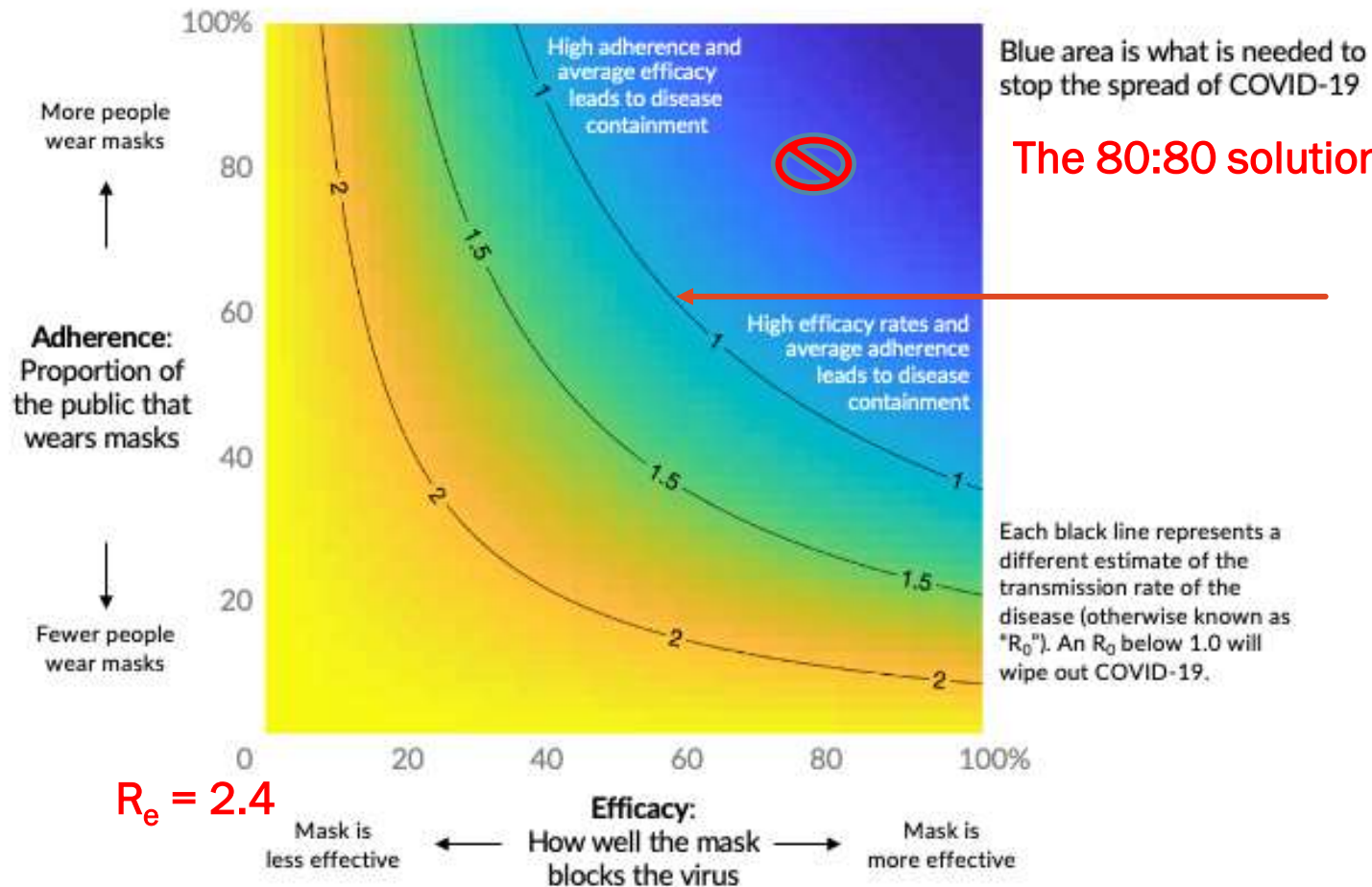
REFLECTIONS FROM THE PREVIOUS HEAD OF THE PHA SWEDEN

- “Measures to flatten the curve might have an effect, but a lockdown only pushes the severe cases into the future—it will not prevent them. Admittedly, countries have managed to slow down spread so as not to overburden health-care systems, and, yes, effective drugs that save lives might soon be developed, but this pandemic is swift, and those drugs have to be developed, tested, and marketed quickly. Much hope is put in vaccines, but they will take time, and with the unclear protective immunological response to infection, it is not certain that vaccines will be very effective”.
- “In summary, COVID-19 is a disease that is highly infectious and spreads rapidly through society. It is often quite symptomless and might pass unnoticed, but it also causes severe disease, and even death, in a proportion of the population, and our most important task is not to stop spread, which is all but futile, but to concentrate on giving the unfortunate victims optimal care”.
- Johan Giesecke johan.giesecke@ki.se
- Published Online May 5, 2020 [https://doi.org/10.1016/S0140-6736\(20\)31035-7](https://doi.org/10.1016/S0140-6736(20)31035-7)

MY REFLECTIONS

- Sweden is unique and has chosen a strategy that they feel is right for them.
 - They believe that in a year from now their mortality figures may be no different from countries that locked down and they hope that their economy may be in a better state
- India has its own set of unique strengths and vulnerabilities and has to find its own solutions.
 - If we could all learn to be responsible and there could be more government support for the vulnerable and mutual trust, that will help greatly
 - India needs to do better at testing and contact tracing too
 - And we all need to wear masks in public for the foreseeable future
- **Be safe and see you on the other side**

HOW EFFECTIVE IS WEARING MASKS IN PUBLIC?



The 60:60 solution
If ~/>60% of people wear masks in public and these masks are only 60% effective in blocking the virus; that's enough to stop the spread of this virus ($R_e < 1$)

Source: L Tian, et al., "Calibrated Intervention and Containment of the COVID-19 Pandemic" (2020), <https://arxiv.org/abs/2003.07353>, page 10 of the Supplementary Materials. Also see Howard et al. "Face Masks Against COVID-19: An Evidence Review," Preprints 2020, <https://www.preprints.org/manuscript/202004.0203/v1>.

LISTEN TO THE SWEDISH POINT OF VIEW

About Herd Immunity

Senior scientist Johan Giesecke reconfirms that Stockholm will ...

[www.youtube.com › watch](https://www.youtube.com/watch?v=...)

Why lockdowns are the wrong policy - Swedish expert Prof ...

[www.youtube.com › watch](https://www.youtube.com/watch?v=...)

Dr Anders Tegnel

<https://youtu.be/ypwoyVI5Dxk>

“LAGOM”: “JUST RIGHT;” “NOT TOO MUCH,” “NOT TOO LITTLE.”



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AP Photo/Andres Kudacki



news.bitcoin.com

Let's hope the “Lagom” approach works out well for Sweden