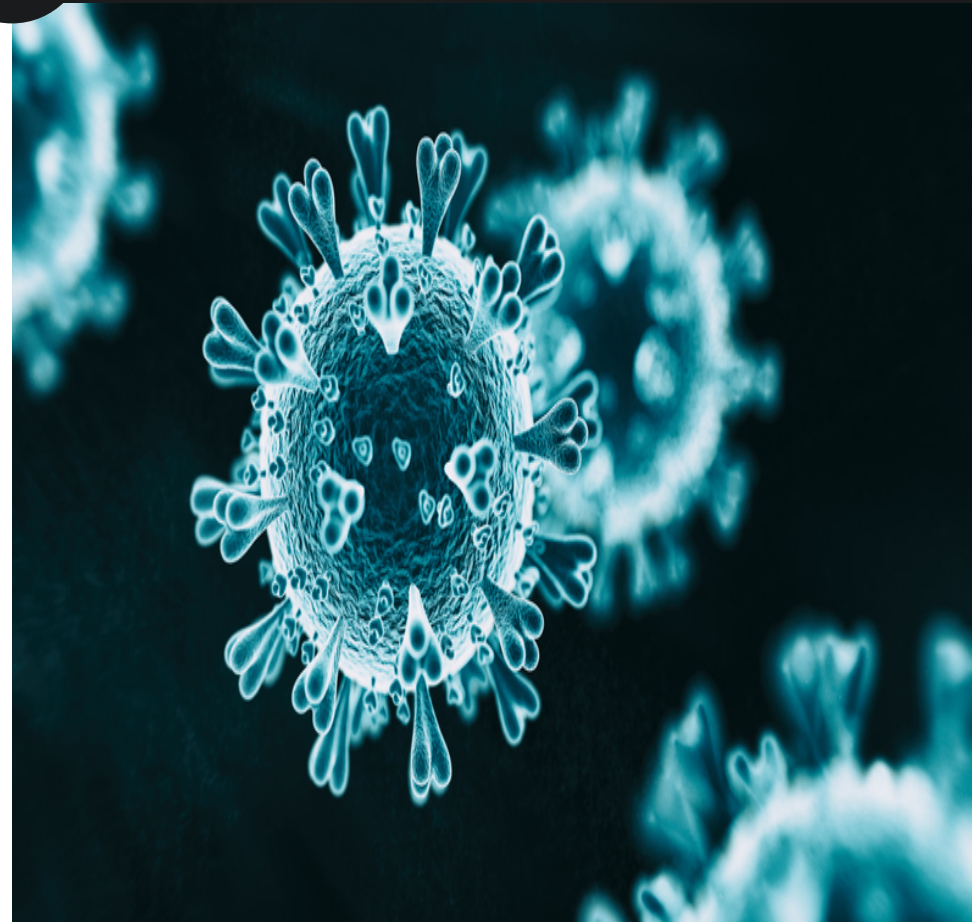




COVID-19: APRIL 17 UPDATE

April 17, 2020



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OUTLINE

- Overall Observations
- C19 Case and Death Count Update, by Country
- U.S. Case and Death Growth, Rural v Urban
- Latest IHME (Washington University) Projections for United States
- Types of National Policy Response: What Works and What Doesn't
- Eating Out versus Eating In... What Were We Thinking?

OVERALL OBSERVATIONS

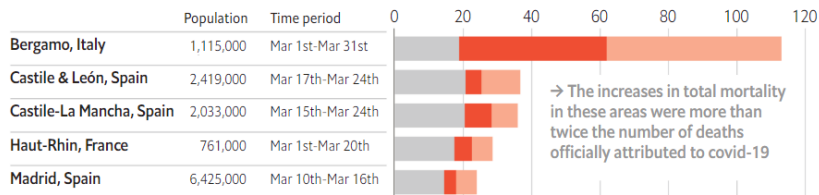
- Bad news on U.S. case & death trends:
 - U.S. daily new cases back at 30K... and have been stuck around there for 14 days.
 - U.S. daily death were below—and are now above—the U. Wash “peak” of 2,300.
- White House plan to reopen economy “in phases” in early May... is a terrible mistake.
 - At current rates of new cases, we would be guaranteeing a deadly second wave.
 - In fact, we should do the opposite: Tighten & nationalize lockdown; reduce new cases to levels low enough to initiate proven “smart suppression” strategy.
- C19 pandemic exposing deficiencies of U.S. public health infrastructure—now down to 2.5% of all U.S. health-care spending (lowest share in the world).
- More evidence on true death toll... roughly 2-3X official national numbers:
 - Thus, 35K US deaths equivalent to > 80K, exceeding any flu on record (since 1976).
- New IMF “Lockdown Recession” projections... much worse than “Great Recession.”

TRUE DEATHS > 2X REPORTED DEATHS

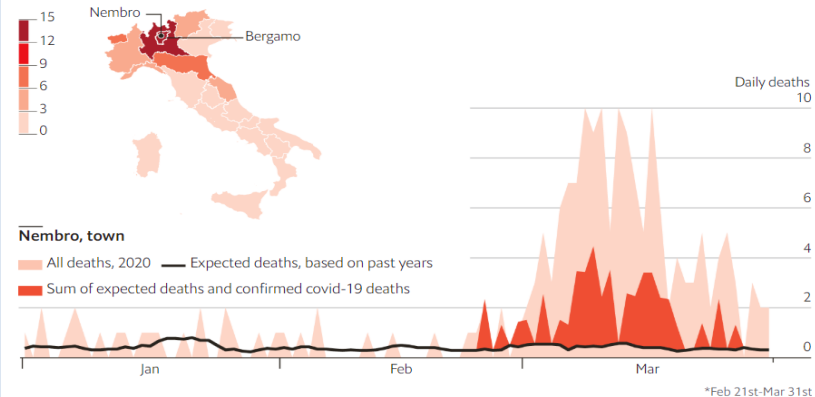
5

Deaths per 100,000 people per week, selected regions

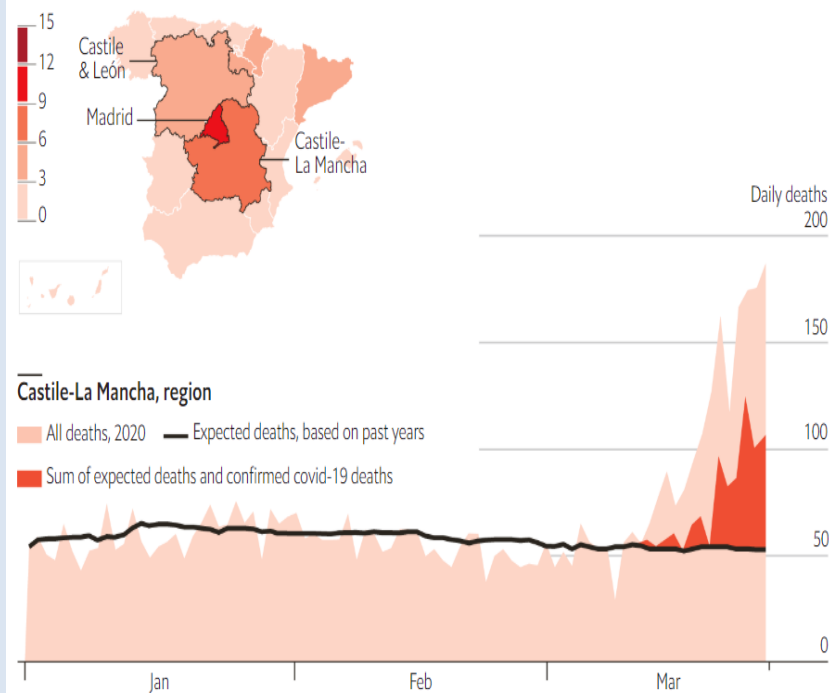
Region's normal death rate **Confirmed covid-19 deaths** **Excess deaths not attributed to covid-19**



Italy, confirmed covid-19 deaths per 100,000 people per week*



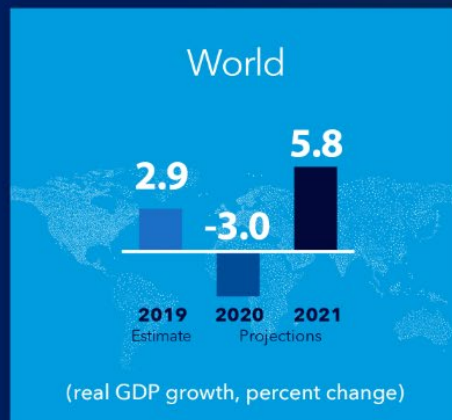
Spain, confirmed covid-19 deaths per 100,000 people per week*



IMF PROJECTIONS: DOWN EVERYWHERE

6

Latest World Economic Outlook growth projections (percent change)



UNITED STATES



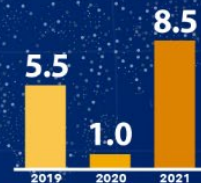
EURO AREA



MIDDLE EAST AND CENTRAL ASIA



EMERGING AND DEVELOPING ASIA



LATIN AMERICA AND THE CARIBBEAN



SUB-SAHARAN AFRICA



Source: IMF, *World Economic Outlook*, April 2020.

Note: Order of bars for each group indicates (left to right): 2019, 2020 projections, and 2021 projections.

PER IMF, 2X AS BAD FOR DEV WORLD AS GFC

7

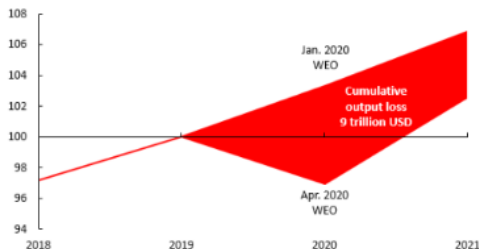
IMF PROJECTION ASSUMPTIONS

- Pandemic disruptions assumed concentrated in Q2 of all countries except China where it is concentrated in Q1. Pandemic assumed to fade in 2H over 2020.
- Countries experiencing severe epidemics assumed to lost 8% of working days in 2020; all other countries lose 5%.
- Financial conditions assumed to remain tight in 1H of 2020; assumed to ease over 2H of 2020.

Output losses

The cumulative output loss over 2020 and 2021 from the pandemic crisis could be around 9 trillion dollars.

(global real GDP level, index)

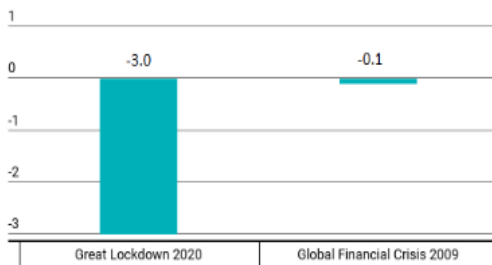


Sources: IMF, World Economic Outlook; and IMF staff calculations.

The Great Lockdown

The world economy will experience the worst recession since the Great Depression.

(real GDP growth, year-on-year percent change)

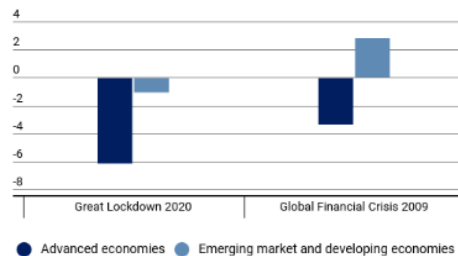


Source: IMF, World Economic Outlook.

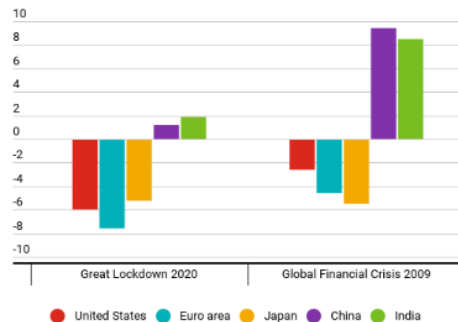
Global crisis

Both advanced economies and emerging market and developing economies are in recession. Major economies have also been significantly downgraded.

(real GDP growth, year-on-year percent change)



(real GDP growth, year-on-year percent change)

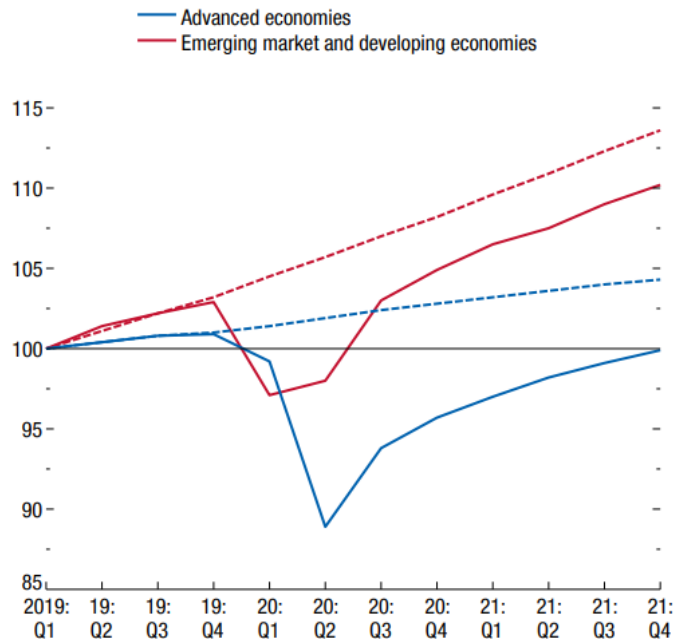


Source: IMF, World Economic Outlook.

... AND IT COULD EASILY GET EVEN WORSE

Figure 1.6. Quarterly World GDP

(2019:Q1 = 100; dashed lines indicate estimates from January 2020 World Economic Outlook Update)

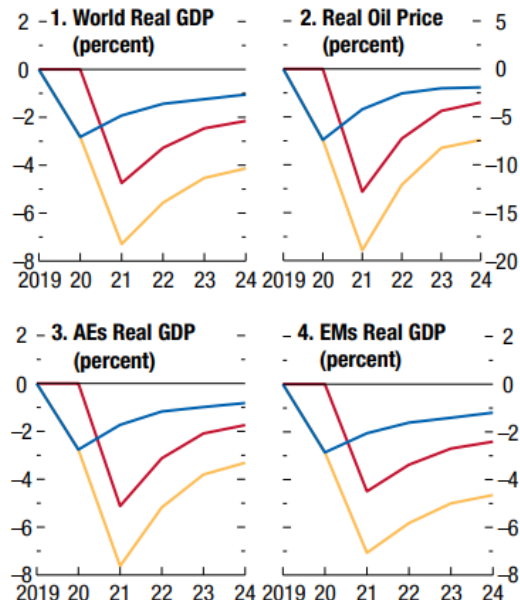


Source: IMF staff estimates.

Scenario Figure 1. Alternative Evolutions in the Fight against COVID-19

(Deviation from baseline)

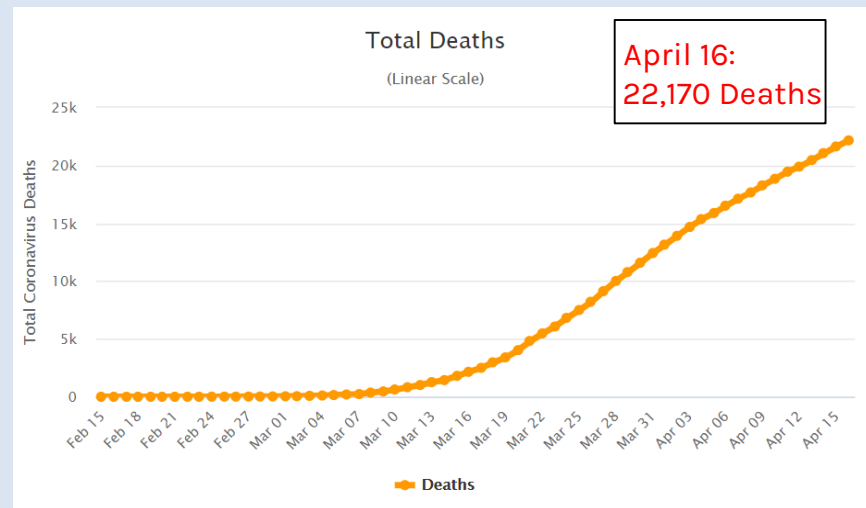
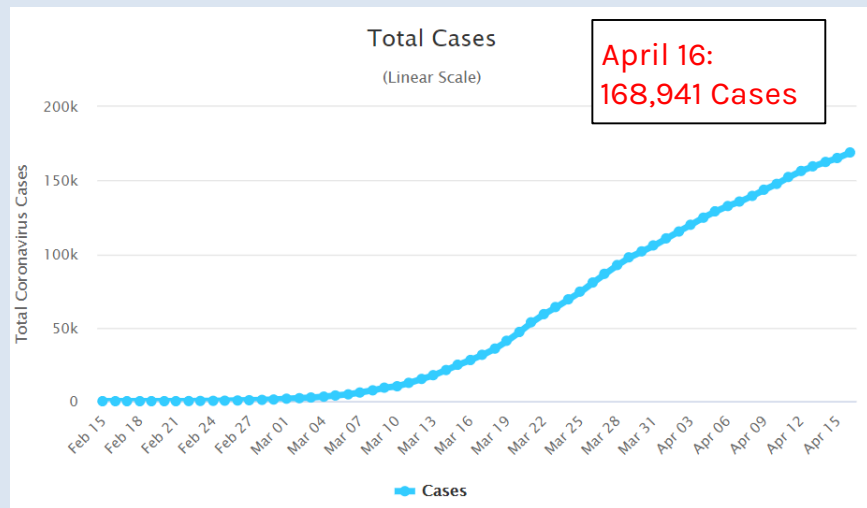
- Longer outbreak in 2020
- New outbreak in 2021
- Longer outbreak in 2020 plus new outbreak in 2021



THE SITUATION IN... ITALY

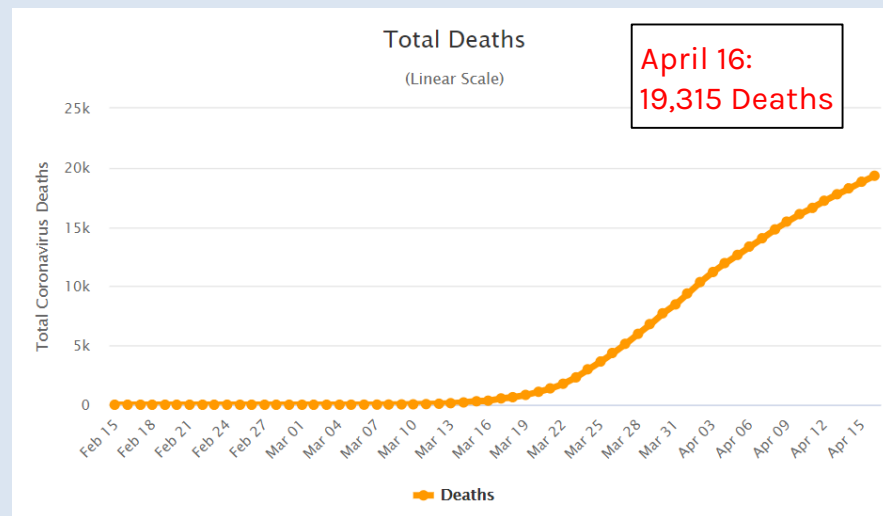
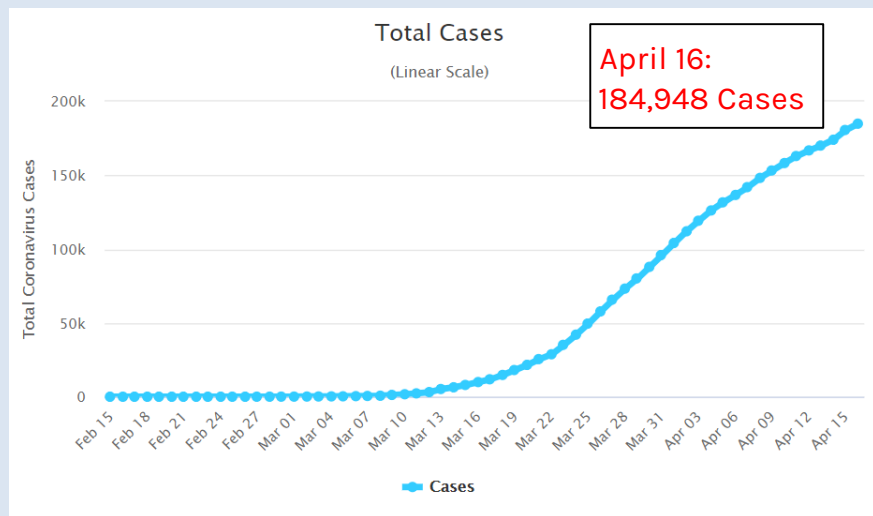
9

COVID-19 Cases and Deaths in Italy Updated April 17, 2020



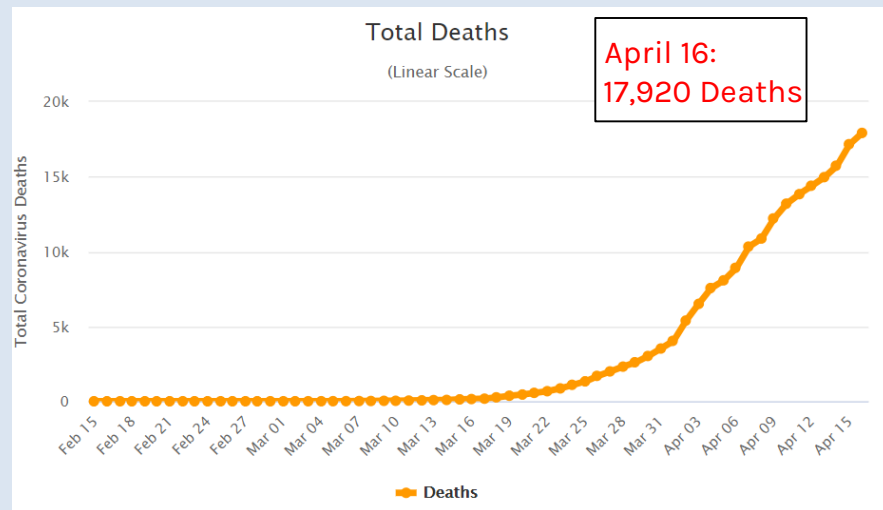
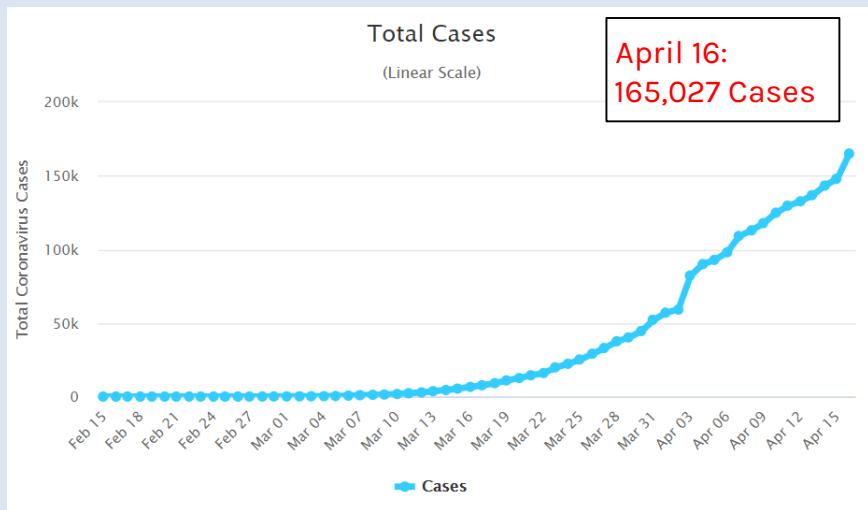
THE SITUATION IN... SPAIN

COVID-19 Cases and Deaths in Spain Updated April 17, 2020



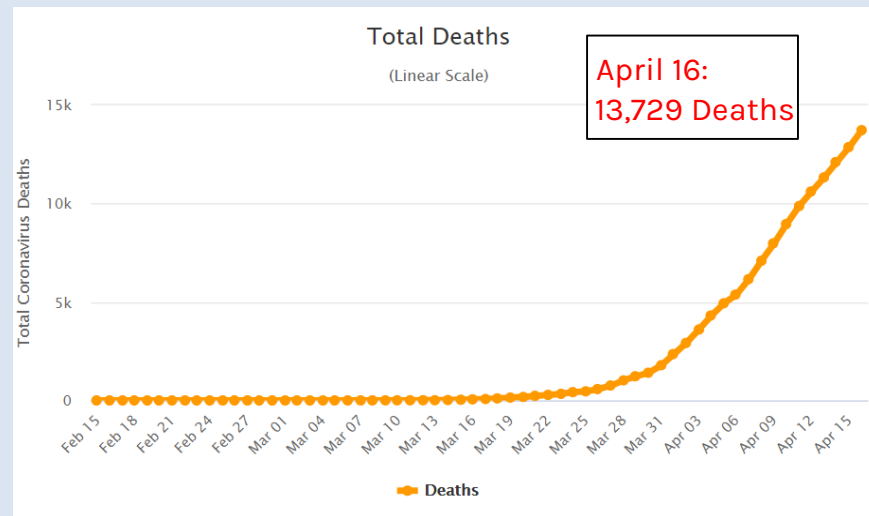
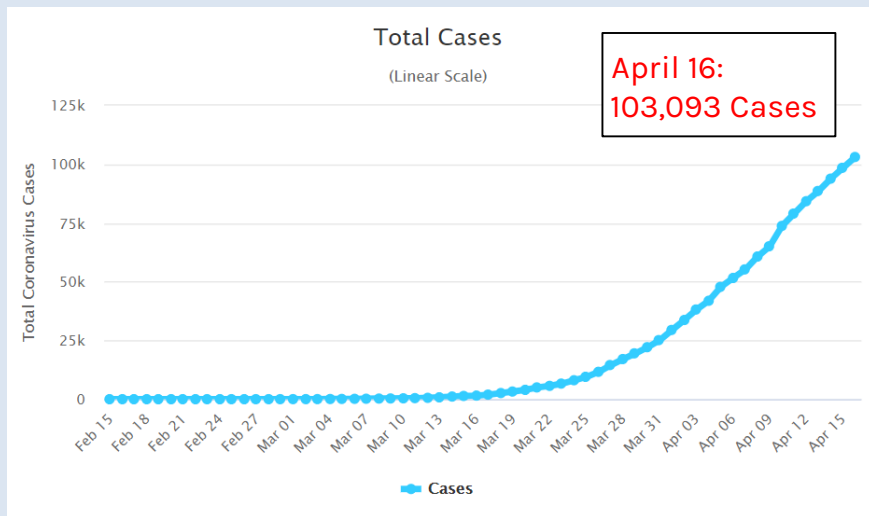
THE SITUATION IN... FRANCE

COVID-19 Cases and Deaths in France Updated April 17, 2020



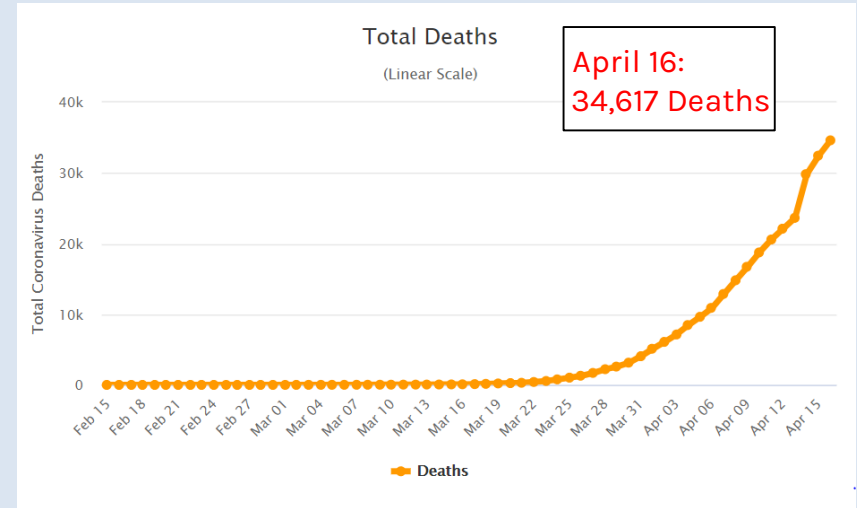
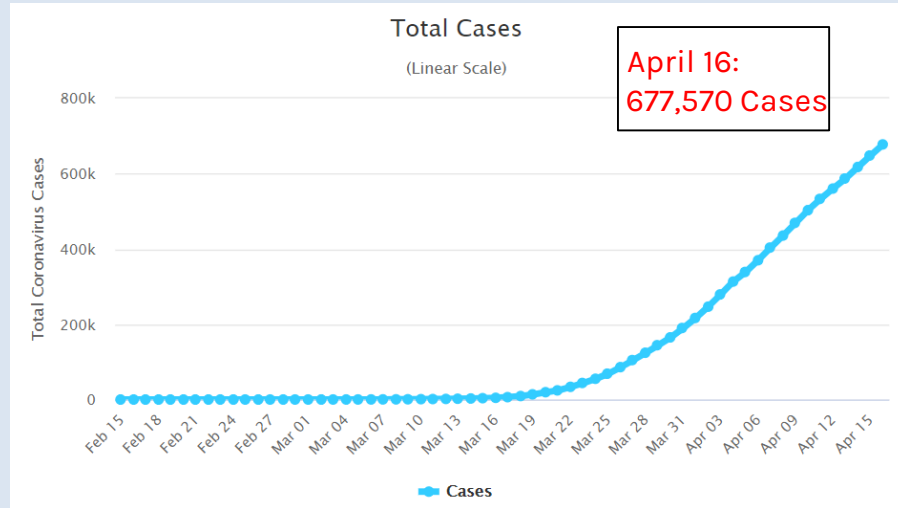
THE SITUATION IN... UK

COVID-19 Cases and Deaths in UK Updated April 17, 2020



THE SITUATION IN... USA

COVID-19 Cases and Deaths in USA Updated April 17, 2020

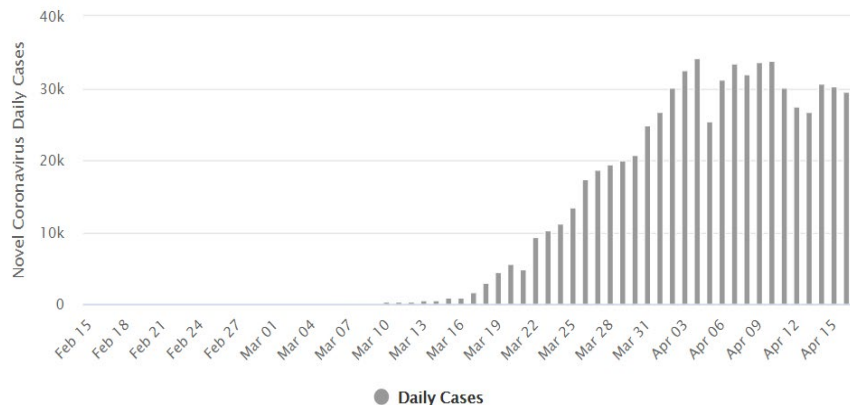


THE SITUATION IN... USA

COVID-19 Daily Cases and Deaths in USA Updated April 17, 2020

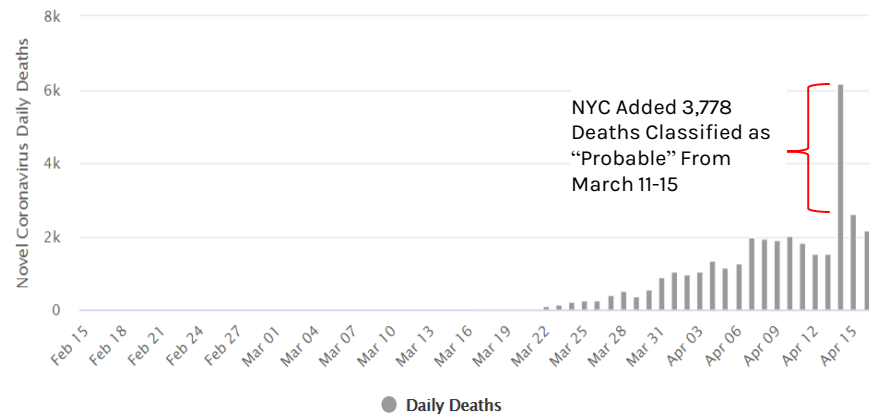
Daily New Cases

Cases per Day
Data as of 0:00 GMT+0



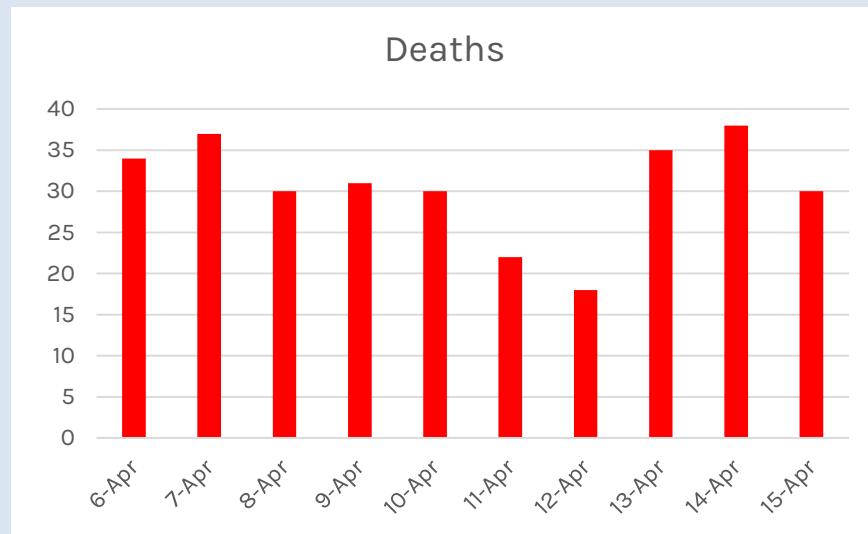
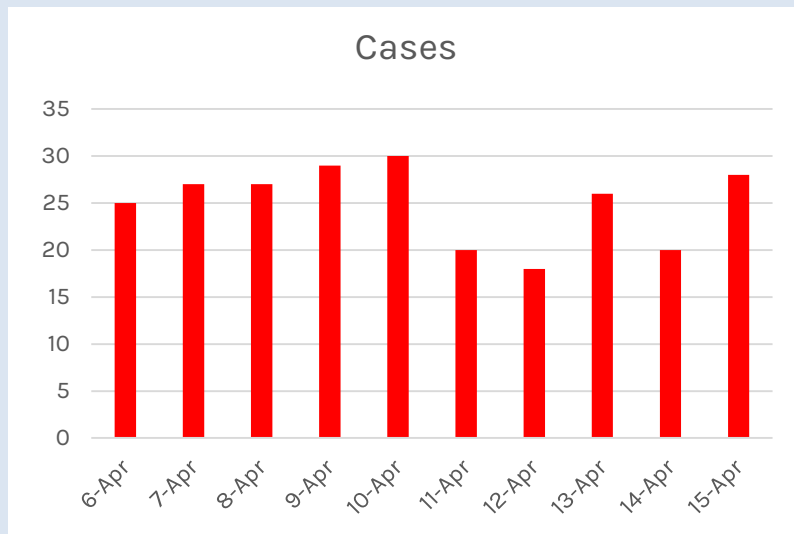
Daily Deaths

Deaths per Day
Data as of 0:00 GMT+0



STATE DIFFUSION INDEX IN CASES & DEATHS

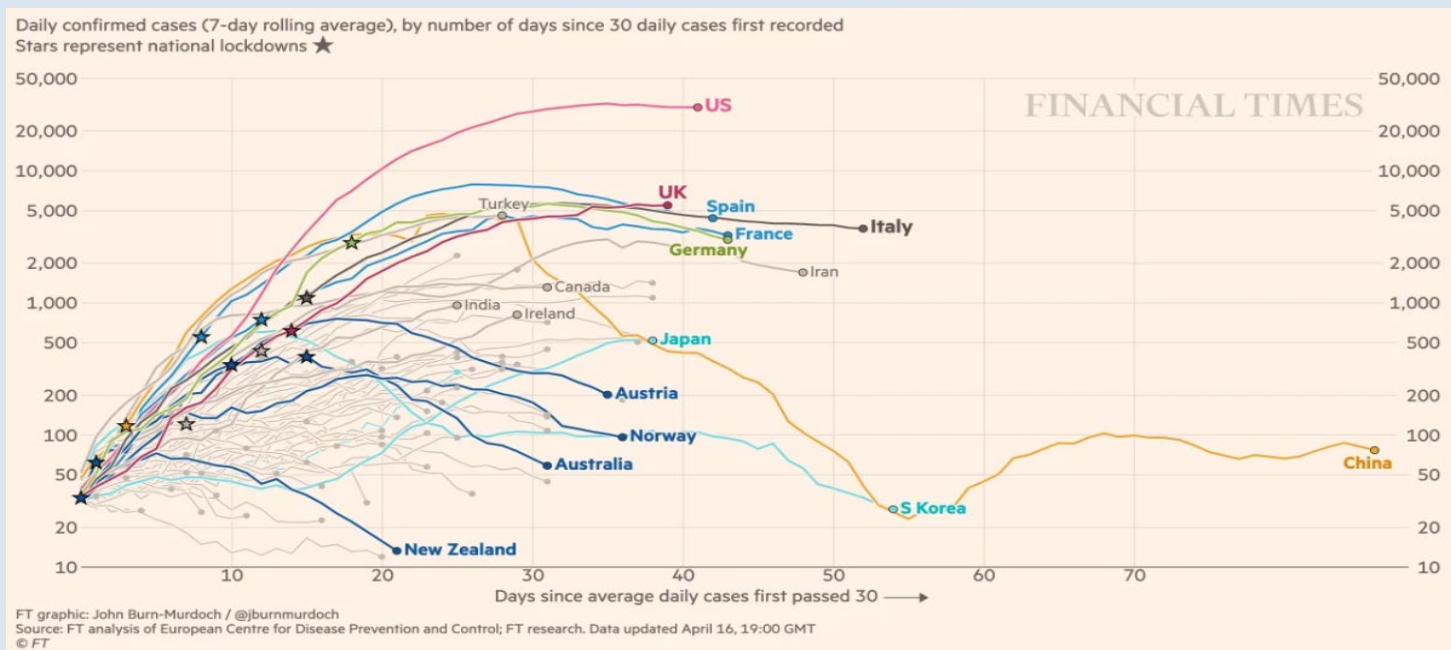
Number of US States Whose Case and Death Count Was Larger or Equal Than Previous Day.



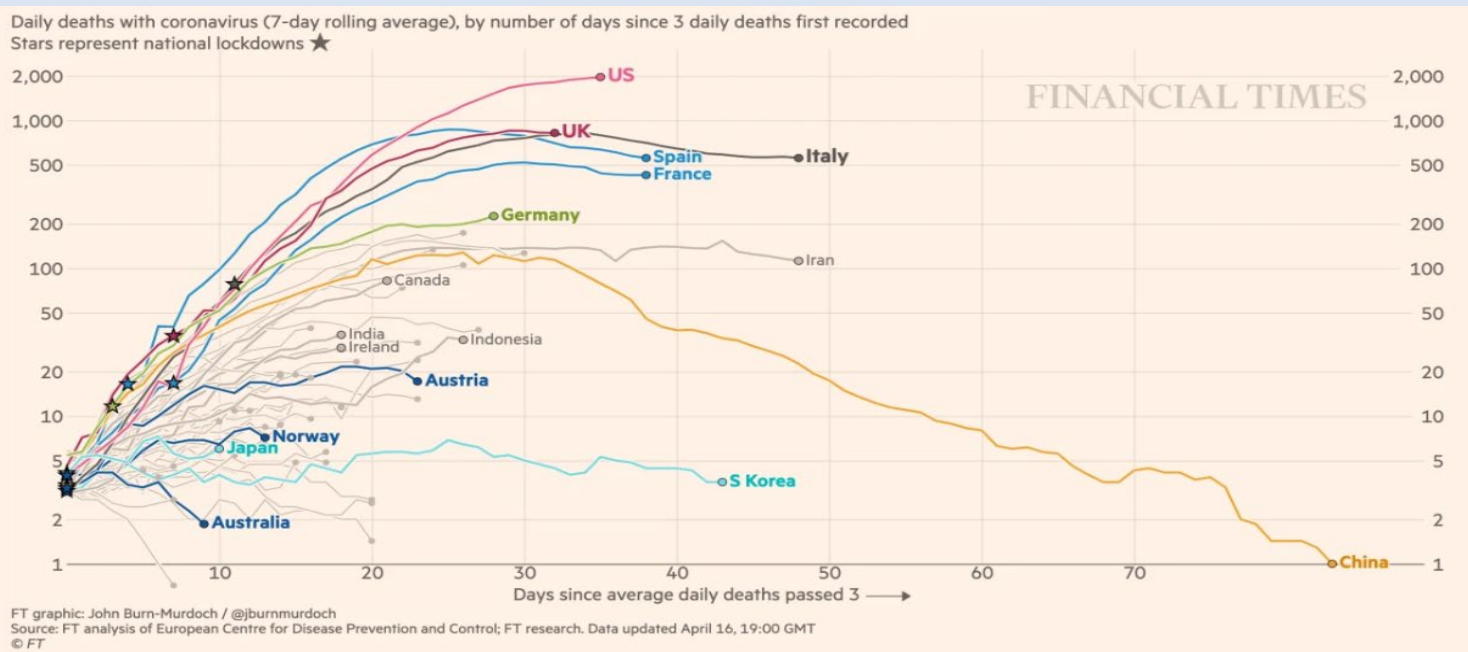
US ABOVE THE REST

16

Daily COVID-19 Cases, Seven Day Rolling Average. Updated April 17, 2020.

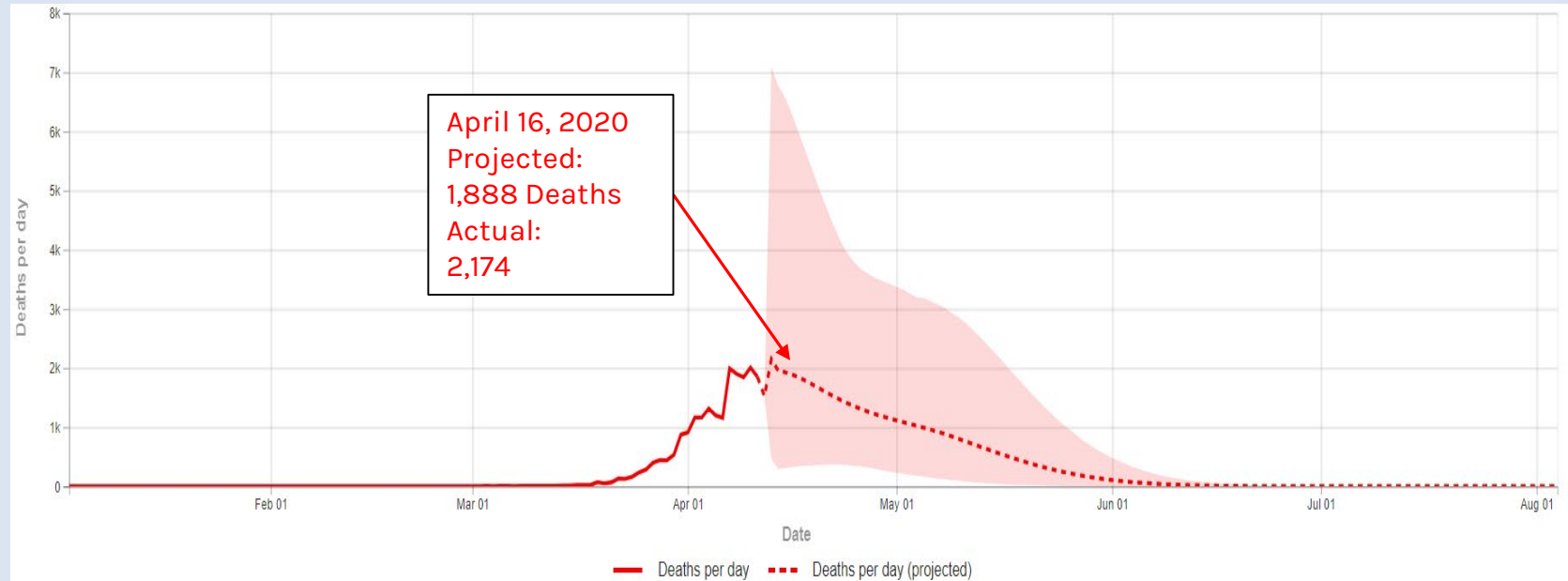


Daily COVID-19 Deaths, Seven Day Rolling Average. Updated April 17, 2020.



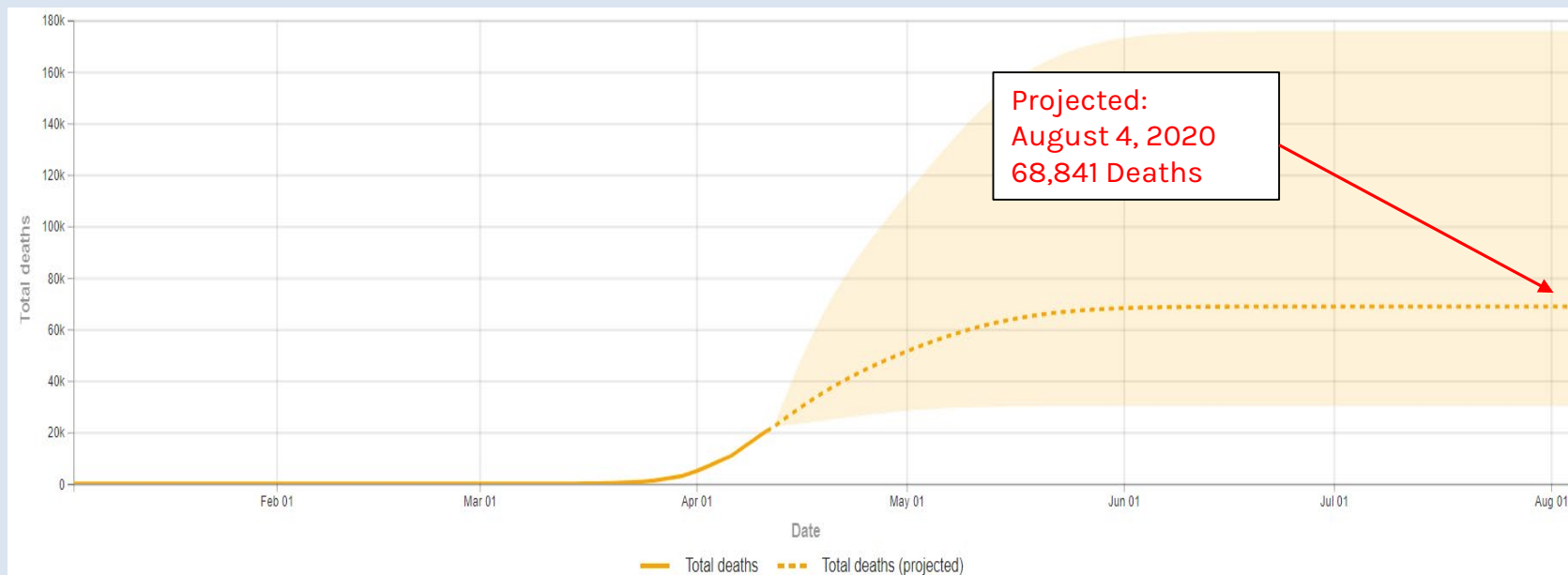
THE PEAK IS OVER?

Projection of Daily COVID-19 Deaths, Last Update April 13, 2020.



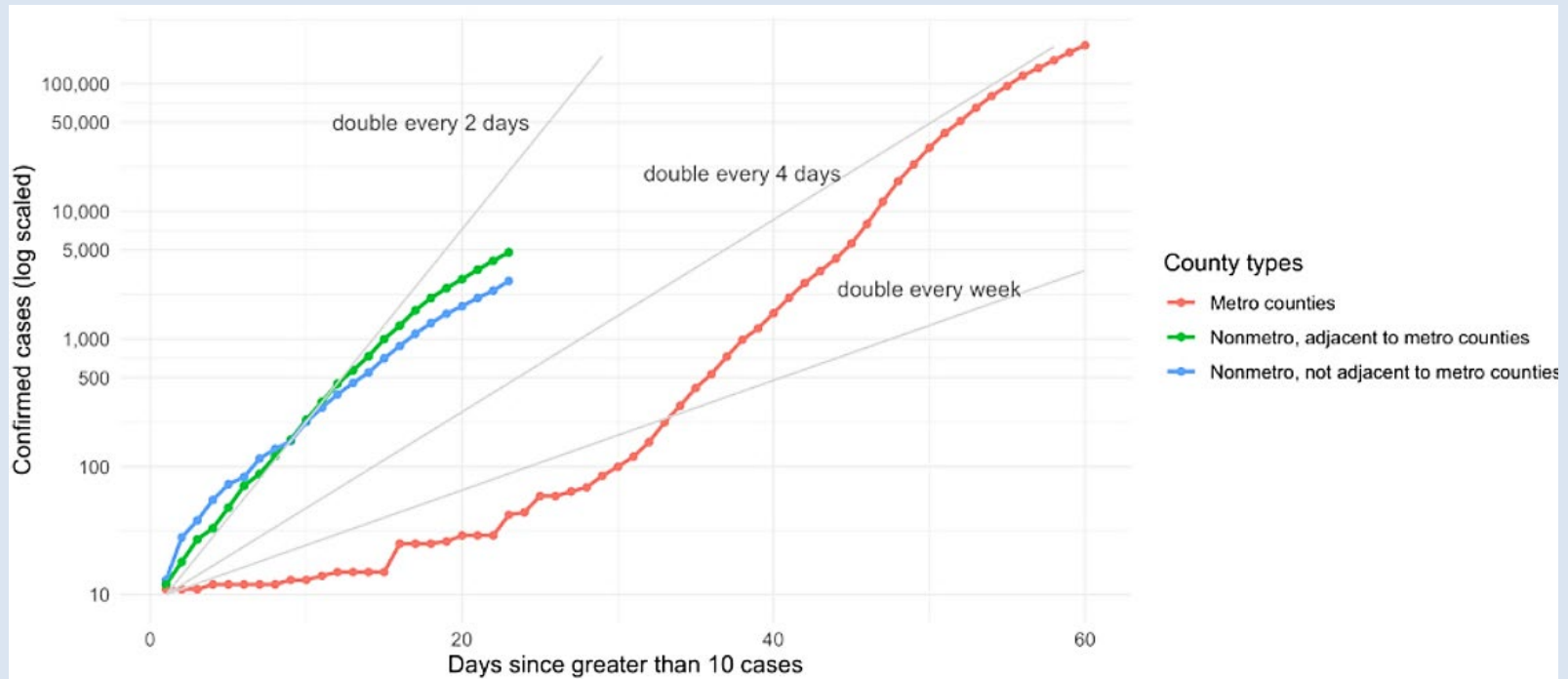
THE PEAK IS OVER?

Projection of Total COVID-19 Deaths, Last Update April 13, 2020.



RURAL CASES GROWING FAST

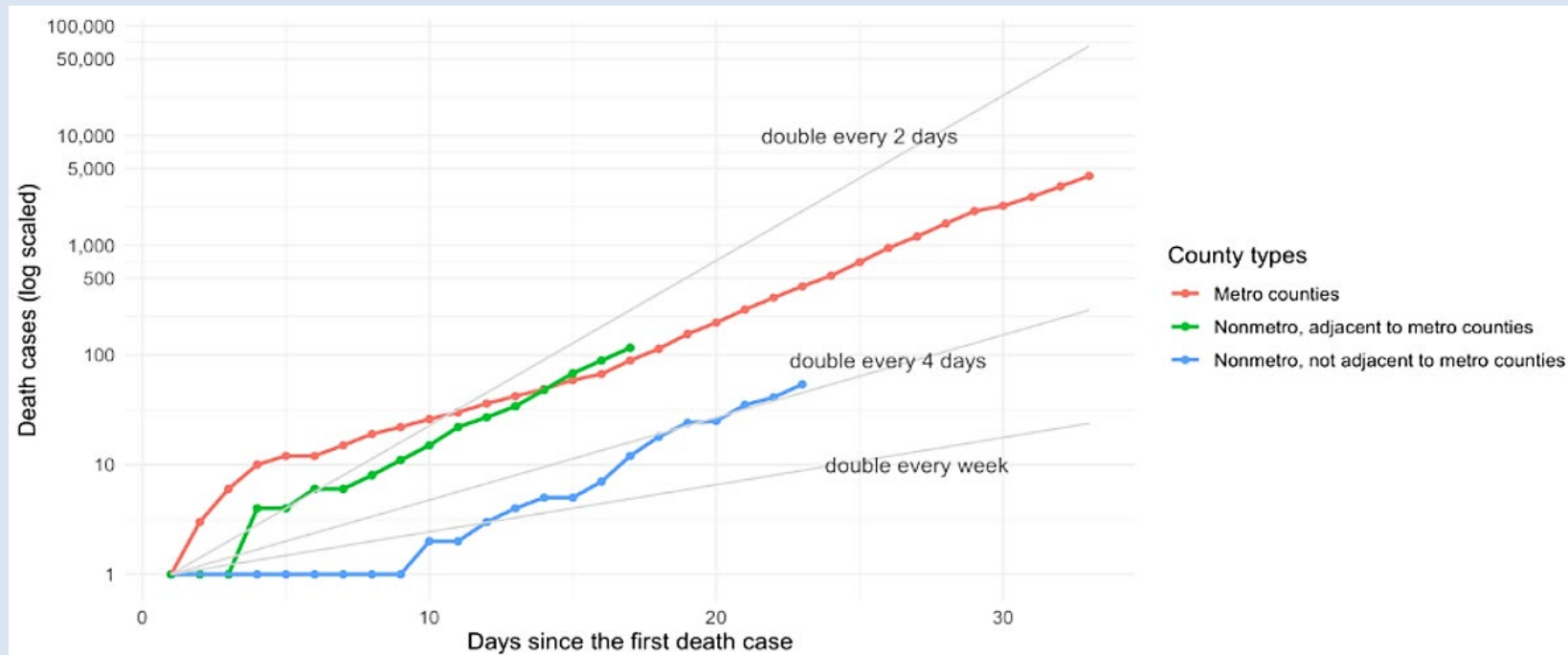
Confirmed COVID-19 Cases in US Since Case Number Exceeded 10,
By Metro and Nonmetro Counties



RURAL CASES GROWING FAST

21

Deaths in US Since First Confirmed Death, By Metro and Nonmetro Counties

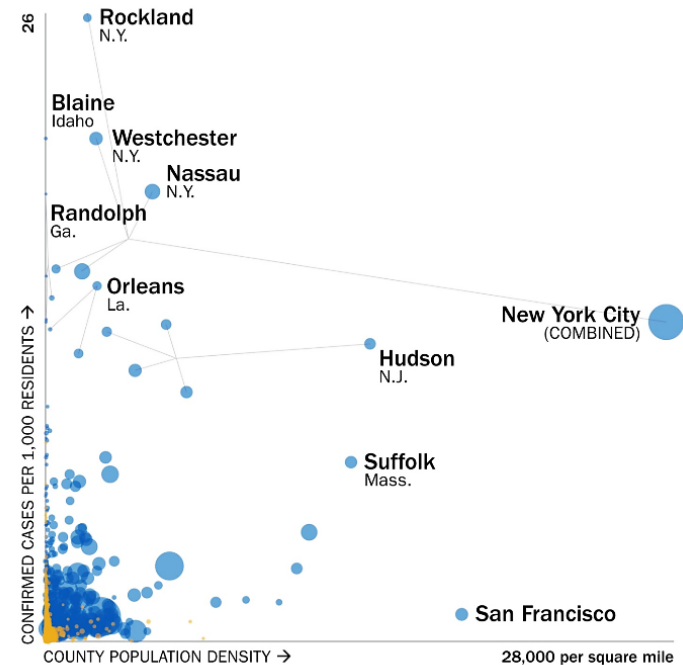


RURAL CASES GROWING FAST

How density compares to per-capita coronavirus cases

Circles are scaled to county population.

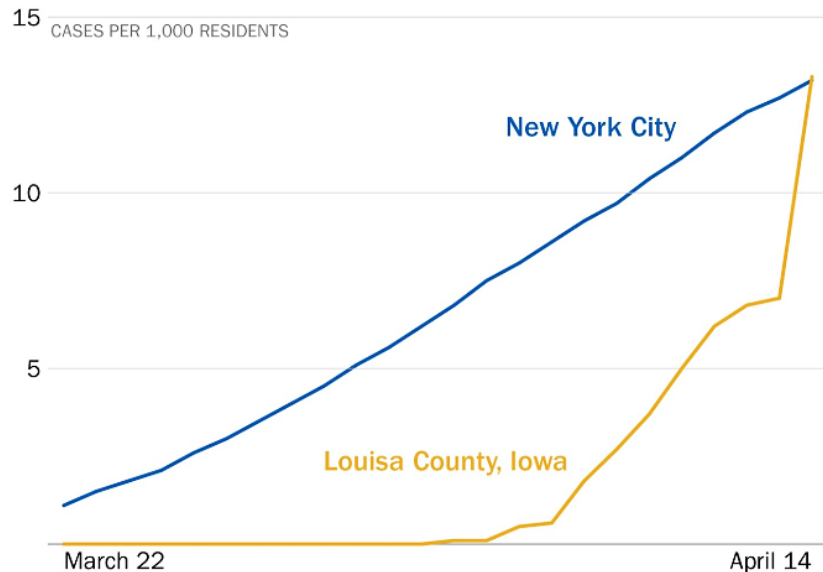
● 50 or more cases ● Under 50 cases



Source: Johns Hopkins University

THE WASHINGTON POST

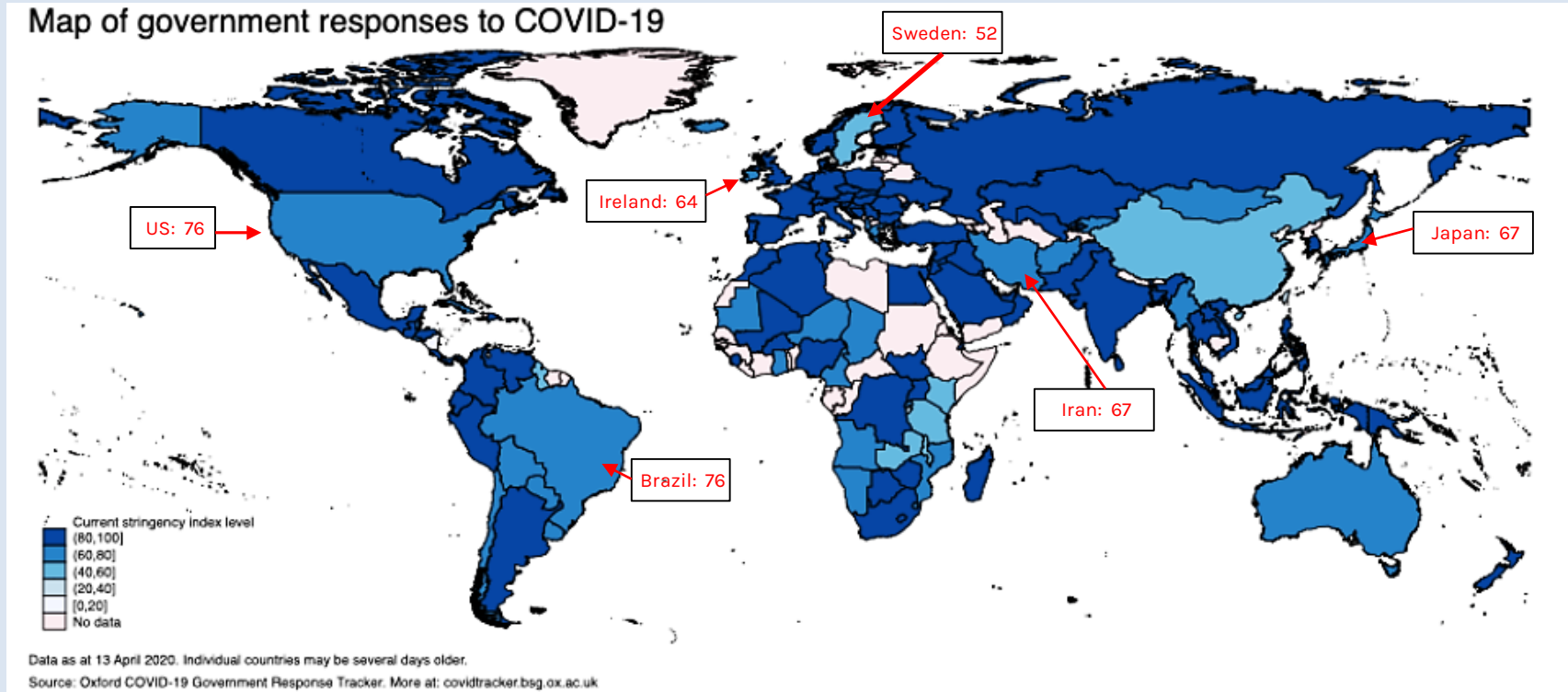
Even in rural areas, case totals can surge



Source: Johns Hopkins University

THE WASHINGTON POST


POLICY STRINGENCY AROUND THE WORLD



COMPARING POLICY RESPONSES & OUTCOMES

No Initial Outbreak, Smart Suppression	Initial Outbreak, Smart Suppression	Initial Outbreak, Ratcheting Up Decisively as Situation Worsens	Lucky Early On, Limited Suppression but Situation Now Worsening	Growing Cases, Ultimate Response Unclear
<ul style="list-style-type: none"> Taiwan <p>w/ 2nd wave</p> <ul style="list-style-type: none"> Singapore Hong Kong 	<ul style="list-style-type: none"> South Korea China? 	<ul style="list-style-type: none"> Italy UK France Spain Germany 	<ul style="list-style-type: none"> Japan Sweden Netherlands Russia 	<ul style="list-style-type: none"> Iran Russia Mexico Brazil

United States?



U.S. MATCHES BRAZIL ON A GOOD DAY

Community Mobility As Measured By Google GPS,
Updated April 11, 2020

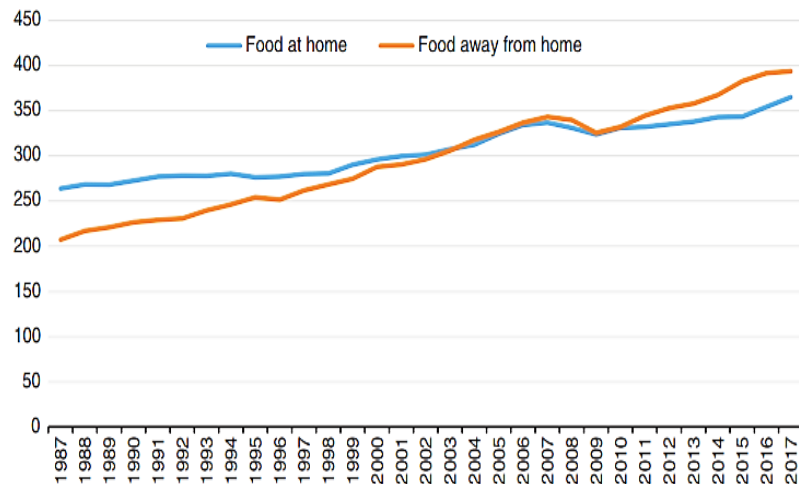
	United States	Brazil	Mexico	France	Italy
Retail & Recreation	-45%	-59%	-66%	-86%	-86%
Grocery	-7%	-5%	-26%	-39%	-42%
Parks	-16%	-59%	-54%	-74%	-83%
Transit	-49%	-52%	-63%	-79%	-78%
Workplaces	-38%	-36%	-49%	-55%	-62%
Residential	+14%	+16%	+20%	+23%	+26%

AMERICA (AT LAST?) LEARNS TO COOK

Figure 3.2

Constant-dollar food expenditures, 1987-2017 (1988 = 100)

Billion dollars



Source: USDA, Economic Research Service Food Expenditure Series.



The COVID-19 impact on restaurant sales

