



COVID-19 Update

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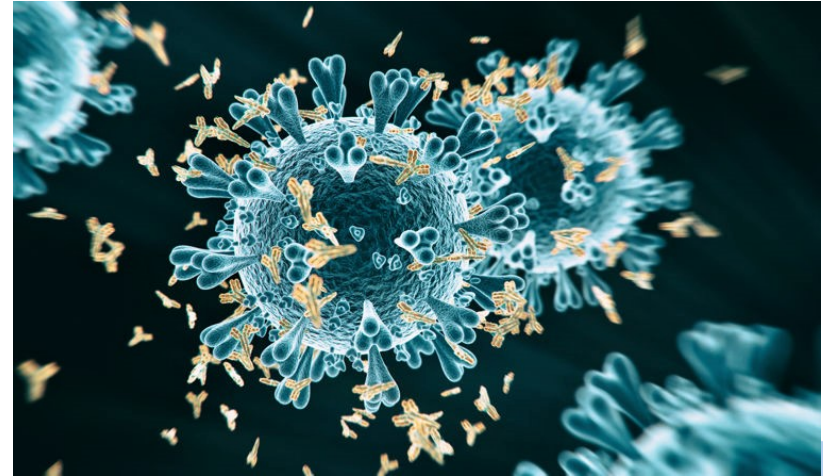
A Presidential Treatment

- REGN-COV2 – Monoclonal antibodies
- Dexamethasone
- Remdesivir
- Zinc
- Vitamin D
- Famotidine
- Melatonin
- Aspirin



REGN-COV2 – Monoclonal antibodies

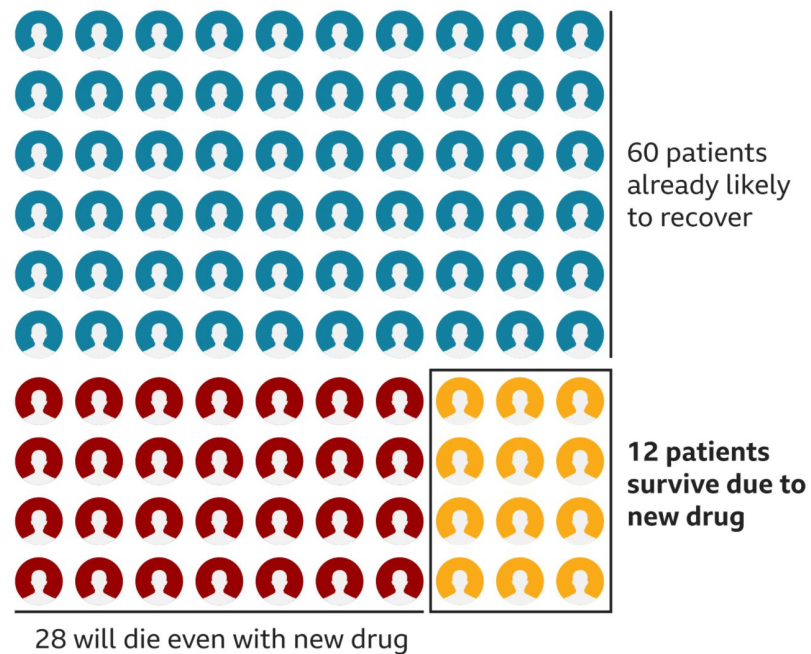
- Combination of two monoclonal antibodies (REGN10933 and REGN10987) designed specifically to block infectivity of SARS-CoV-2
- Studies still in progress and not available outside of these studies
- Take antibody-producing B-cells from individuals who have already been infected – cloned 2 of the antibody sequences from individual B cells
- Gives a significant head start to a persons own immune response



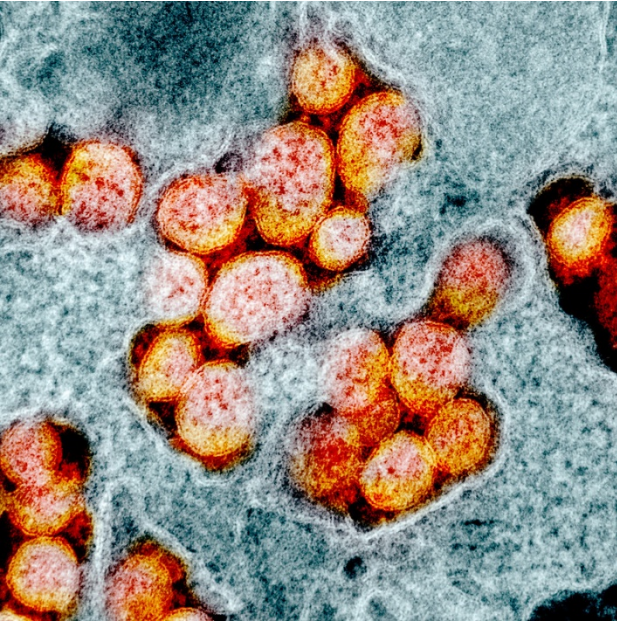
Dexamethazone

- An anti-inflammatory drug
- Works by dampening down the body's immune system
- Coronavirus infection triggers inflammation as the body tries to fight it off.
- But sometimes the immune system goes into overdrive and it's this reaction that can prove fatal
- Should only be given to people who are seriously ill

For every 100 patients on a ventilator for 28 days



Remdesivir



- Works by attacking an enzyme that the virus needs in order to replicate inside our cells
- Previously tested for Ebola
- The FDA [EUA](#) on Aug. 28, allowing it to be used on all hospitalized patients
- Remdesivir cut the duration of symptoms from 15 days down to 11 in clinical trial at hospitals around the world



Zinc

- There is very limited information about the safety and effectiveness of using zinc for treating patients with COVID-19¹
- Trials with zinc and treatment of colds – mixed results
- Trials on zinc and COVID ongoing

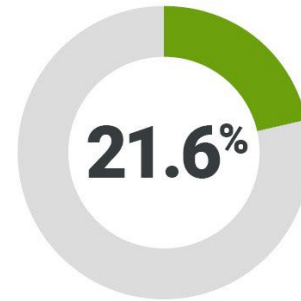
1. <https://pubmed.ncbi.nlm.nih.gov/32710890/>

Vitamin D

- There is evidence that vitamin D may enhance immune functions in human cells and reduce the spread of some viruses in the laboratory setting
- Only limited evidence that it helps with COVID-19¹
- If Vit D deficient then needs to be treated – may increase risk

Predicted COVID-19 rates based on vitamin D levels

Those with deficient
vitamin D status



VS

Those with sufficient
vitamin D status



Famotidine

- Theoretical:
 - Famotidine may lessen the hyperimmune inflammatory response by blocking the effects of pathological histamine release from mast cells by binding to the histamine H2 receptor
- Patients taking famotidine were
 - 45% less likely to die in the hospital and less likely to have combined adverse outcomes leading to death
 - 48% less likely to need a ventilator



Melatonin



- Melatonin
 - Interacts with numerous cellular proteins such as signaling molecules, transporters, channels, and enzymes
 - Multiple biological impacts, including apoptosis induction and immunomodulation
 - Ability of restricting viral infections
 - May play a crucial role in the SARS-CoV-2 virus in bats –
 - Melatonin production level in humans is significantly lower than in bats, particularly in the elderly
 - May help macrophages work



Aspirin

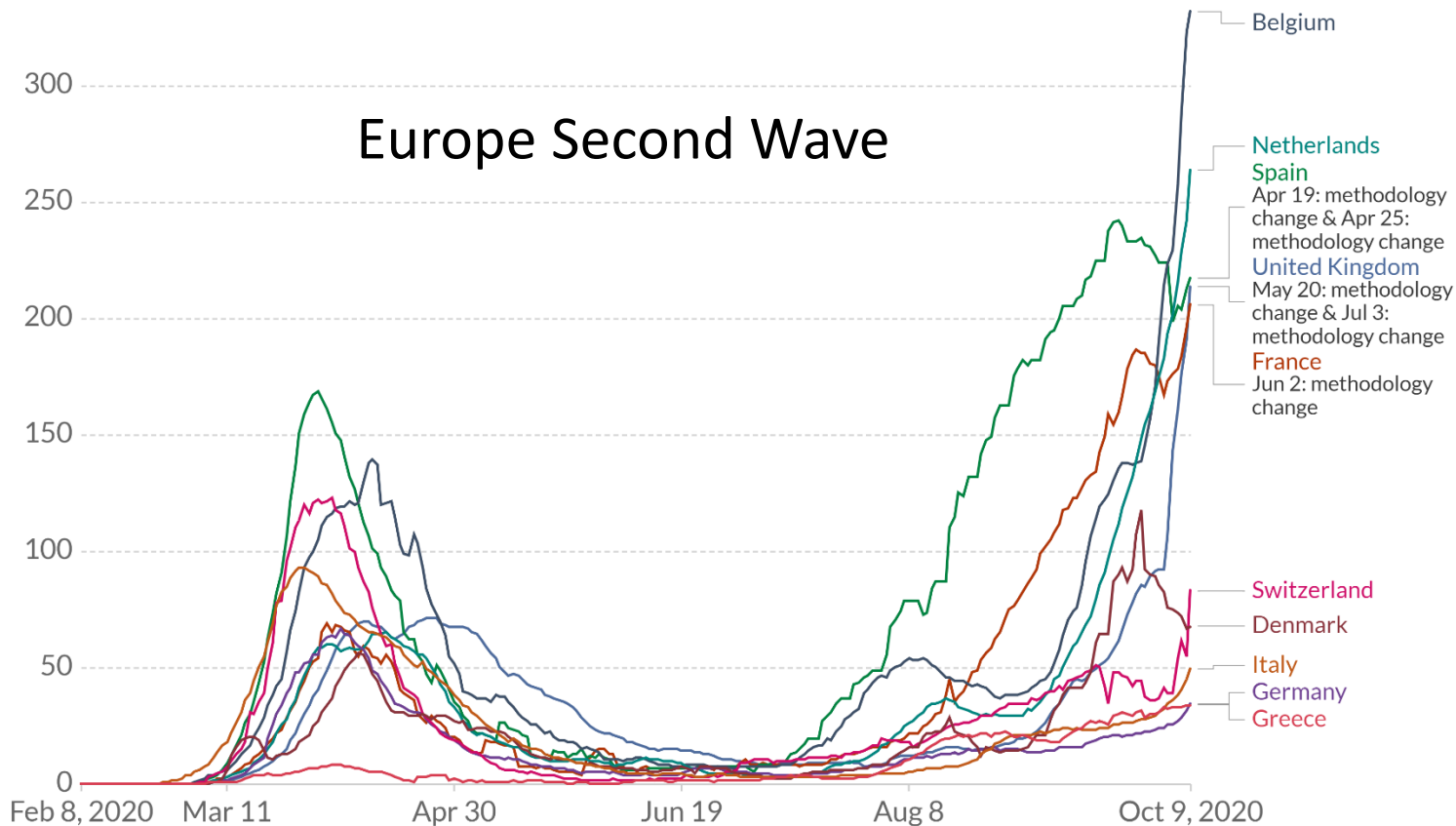
- Aspirin has the triple effects of inhibiting virus replication, anticoagulant and anti-inflammatory
- Hypothesis is:
 - The early use of aspirin in covid-19 patients is expected to reduce the incidence of severe and critical patients, shorten the length of hospital duration and reduce the incidence of cardiovascular complications
 - Studies in progress

Weekly Dive into the Data



Daily new confirmed COVID-19 cases per million people

Shown is the rolling 7-day average. The number of confirmed cases is lower than the number of actual cases; the main reason for that is limited testing.

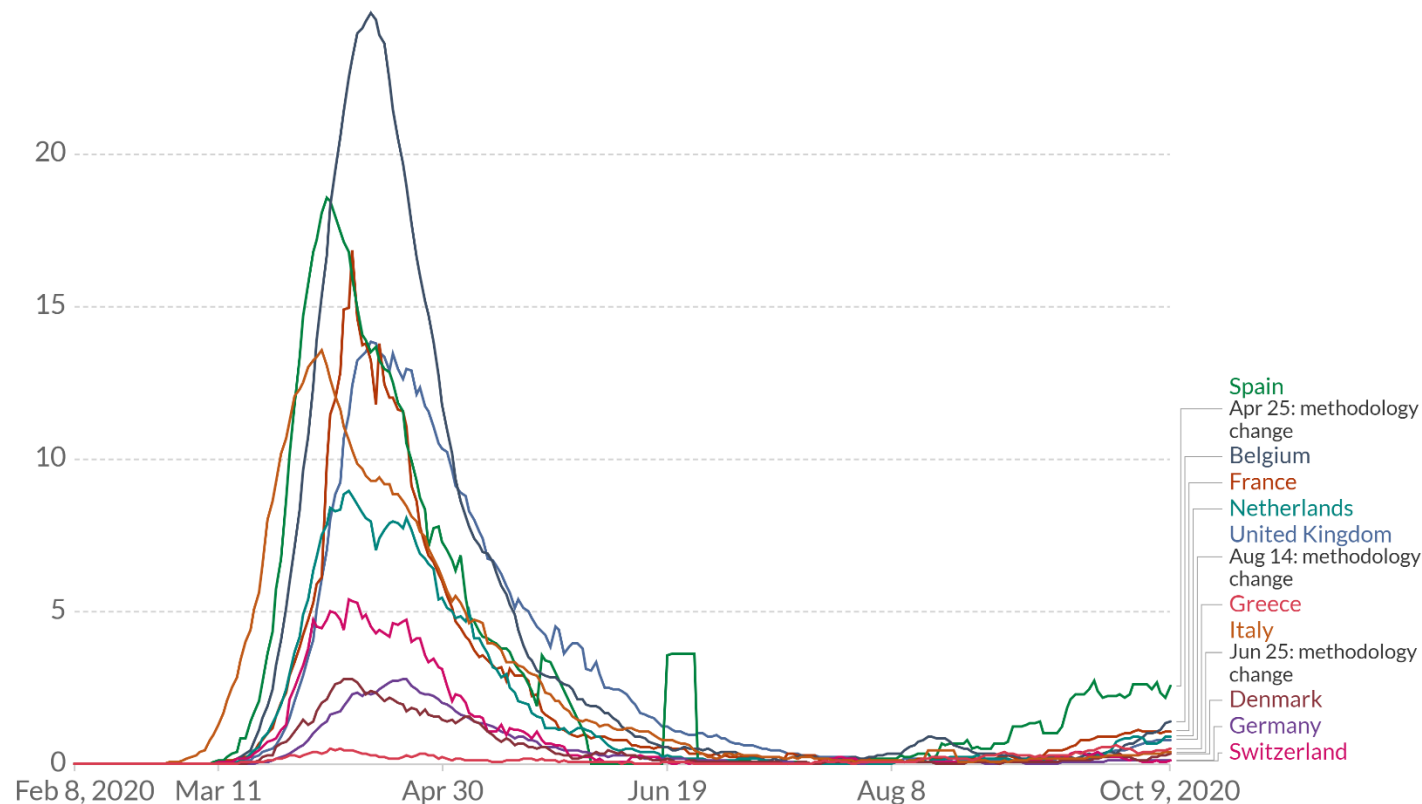


Source: European CDC – Situation Update Worldwide – Last updated 11 October, 10:04 (London time)

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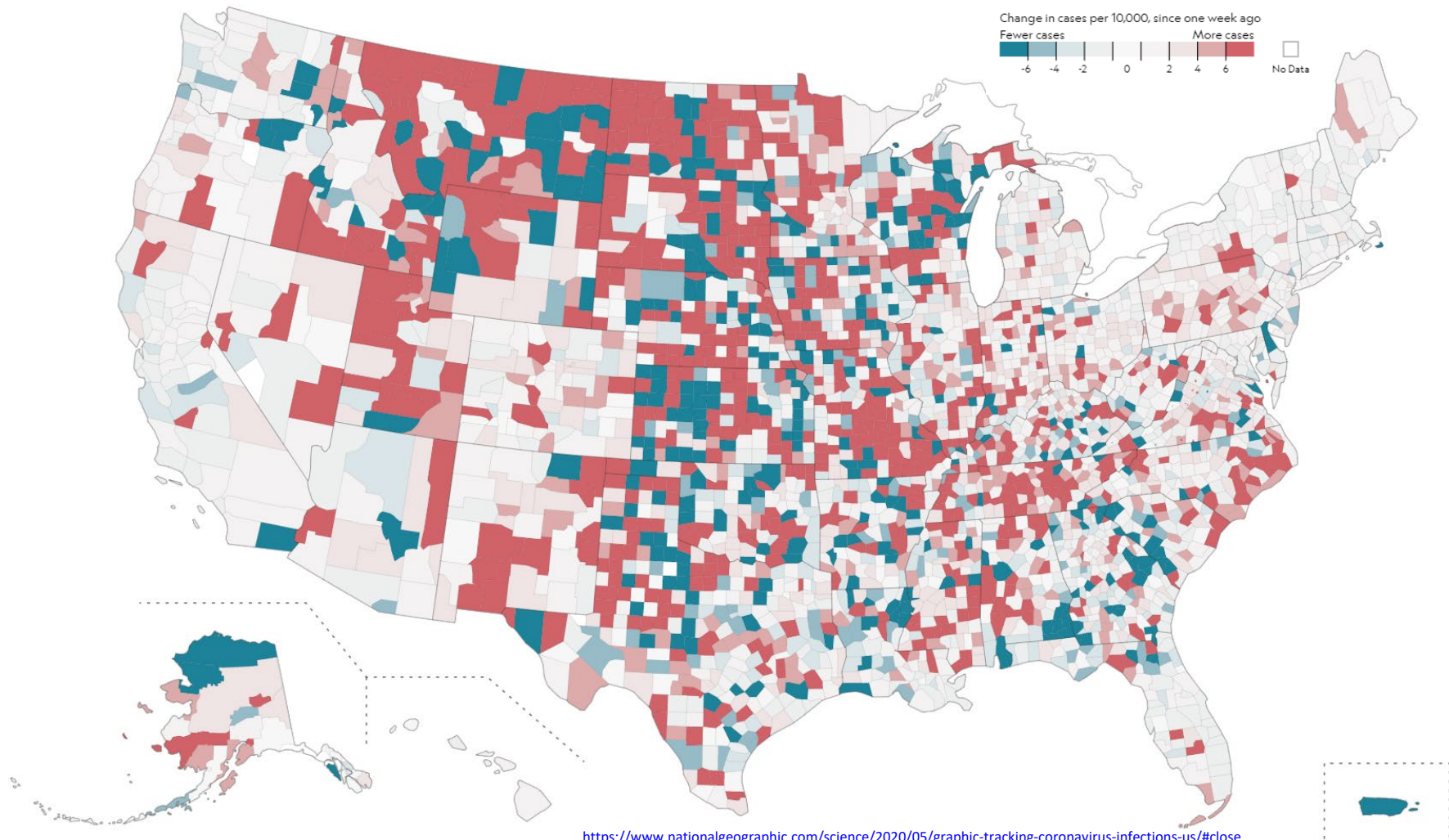
Daily new confirmed COVID-19 deaths per million people

Shown is the rolling 7-day average. 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.



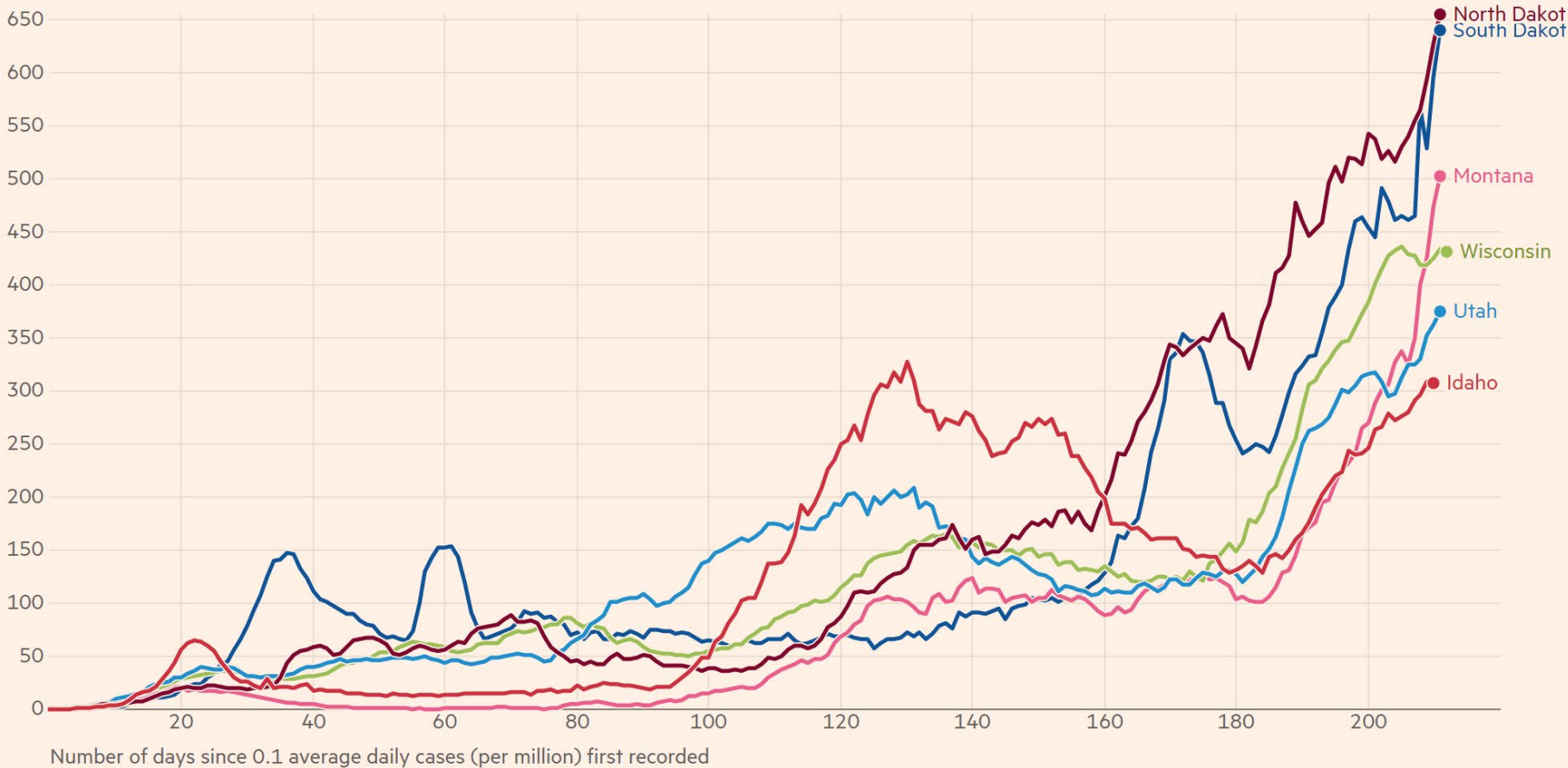
Source: European CDC – Situation Update Worldwide – Last updated 11 October, 10:04 (London time)

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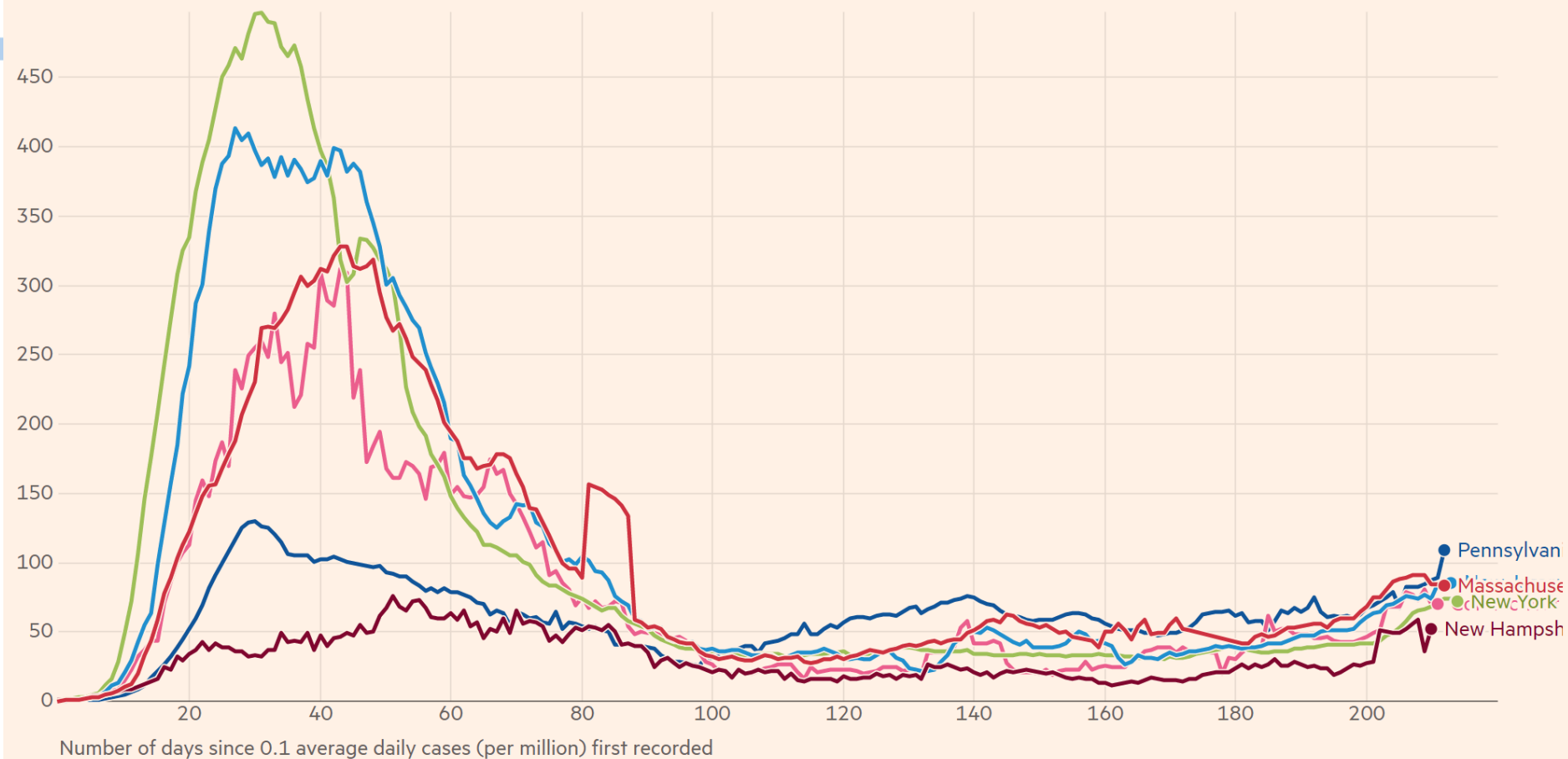
New confirmed cases of Covid-19 in South Dakota, Montana, Wisconsin, Utah, North Dakota and Idaho

Seven-day rolling average of new cases (per million), by number of days since 0.1 average daily cases (per million) first recorded



New confirmed cases of Covid-19 in Pennsylvania, Connecticut, New York, New Jersey, New Hampshire and Massachusetts

Seven-day rolling average of new cases (per million), by number of days since 0.1 average daily cases (per million) first recorded





*"I can't remember—do I work
at home or do I live at work?"*



Questions