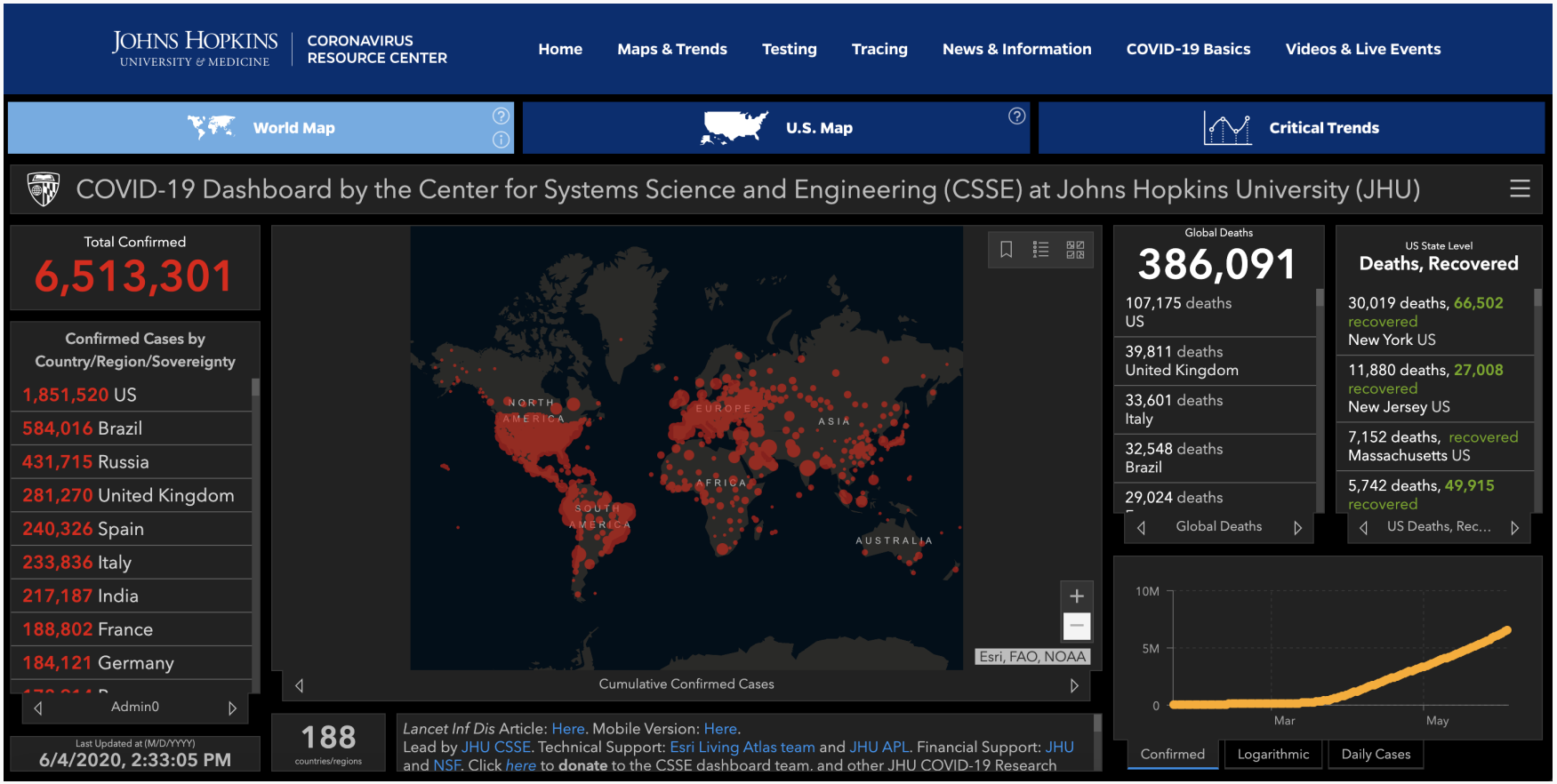
HKU Med LKS Faculty of Medicine School of Public Health 香港大學公共衞生學院

How are countries responding to COVID-19 and how can we learn from this experience?

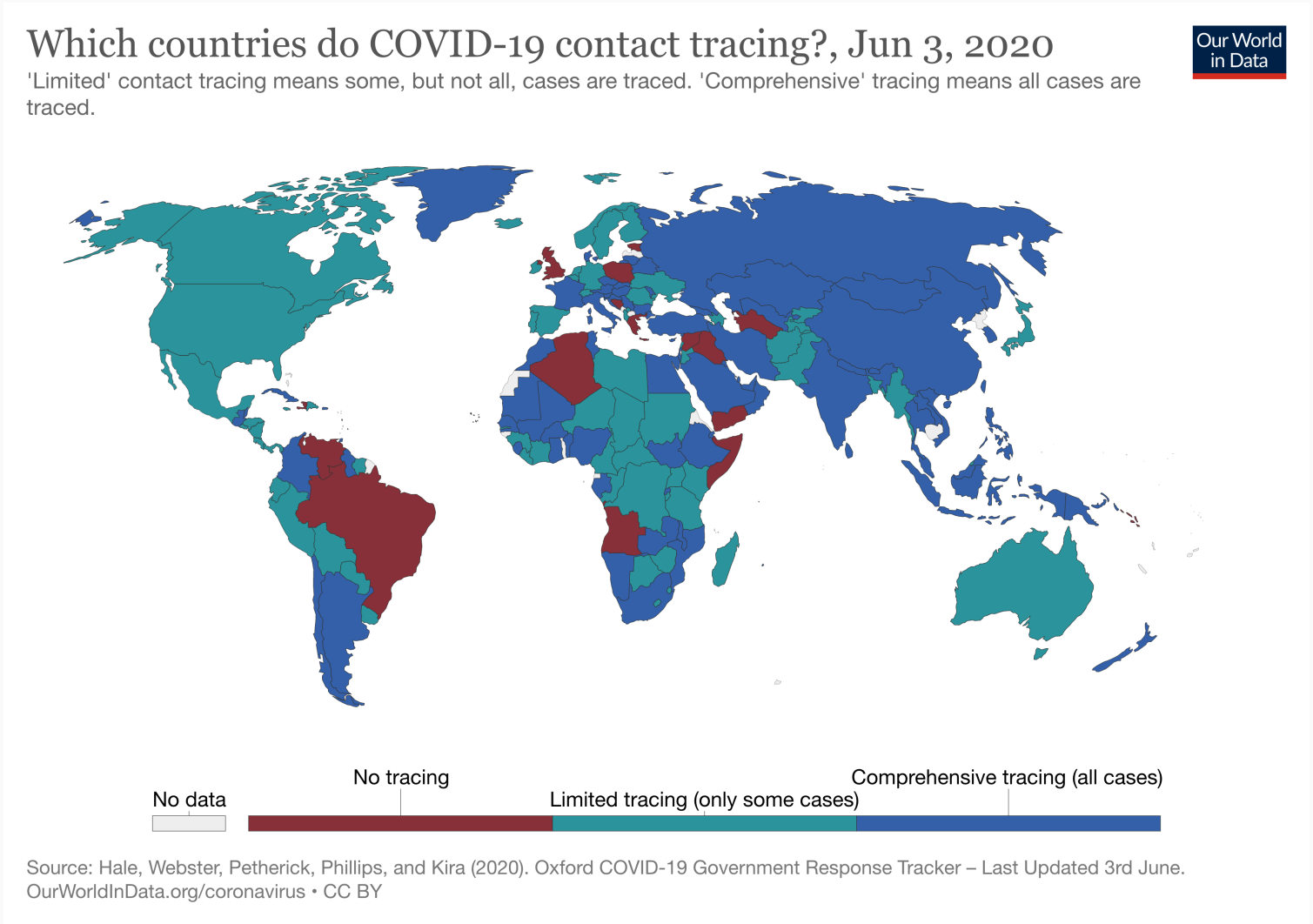
Karen A. Grépin
Associate Professor
School of Public Health
University of Hong Kong

June 5, 2020

Current state of the global pandemic

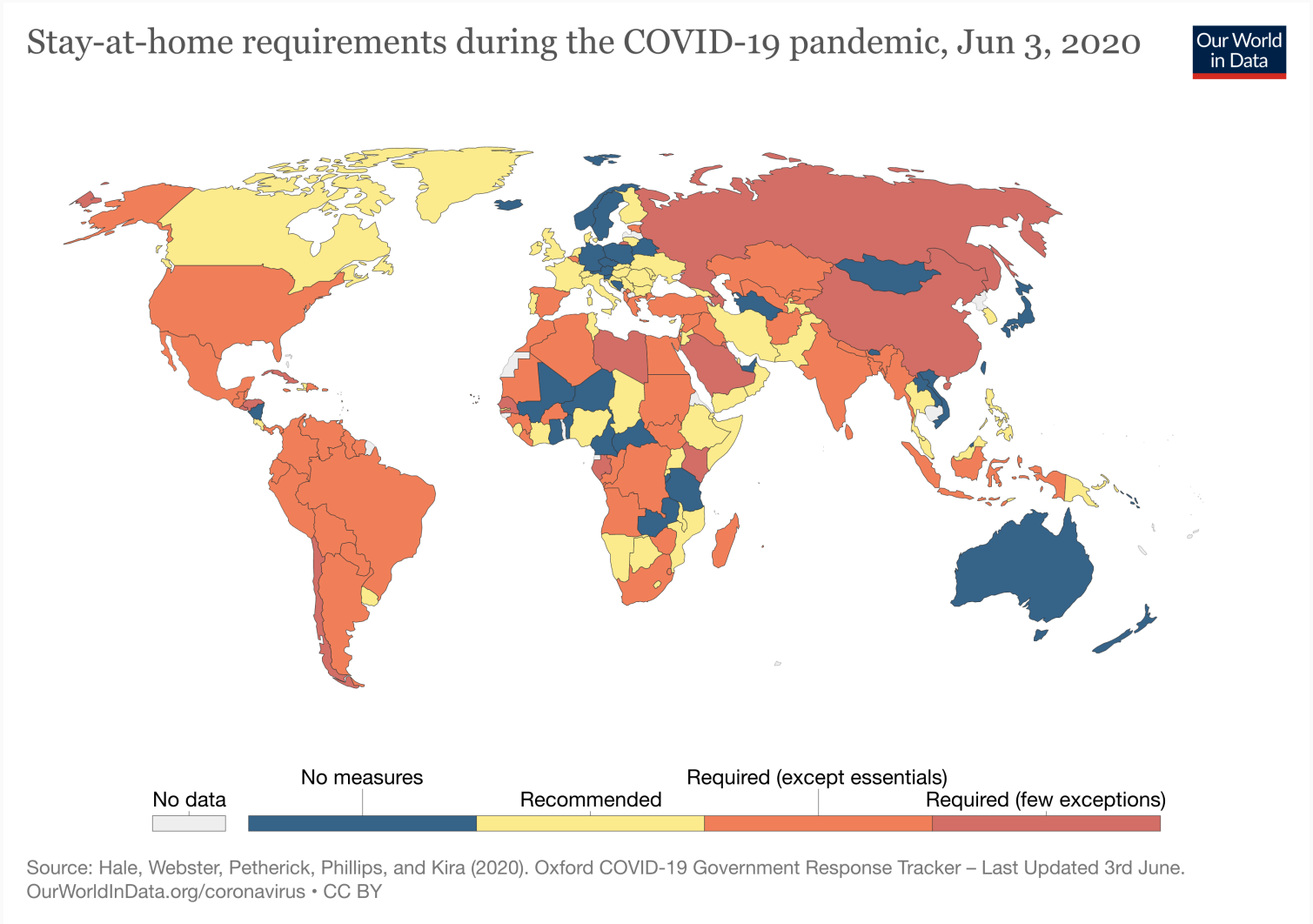


Variation in policy responses: contract tracing



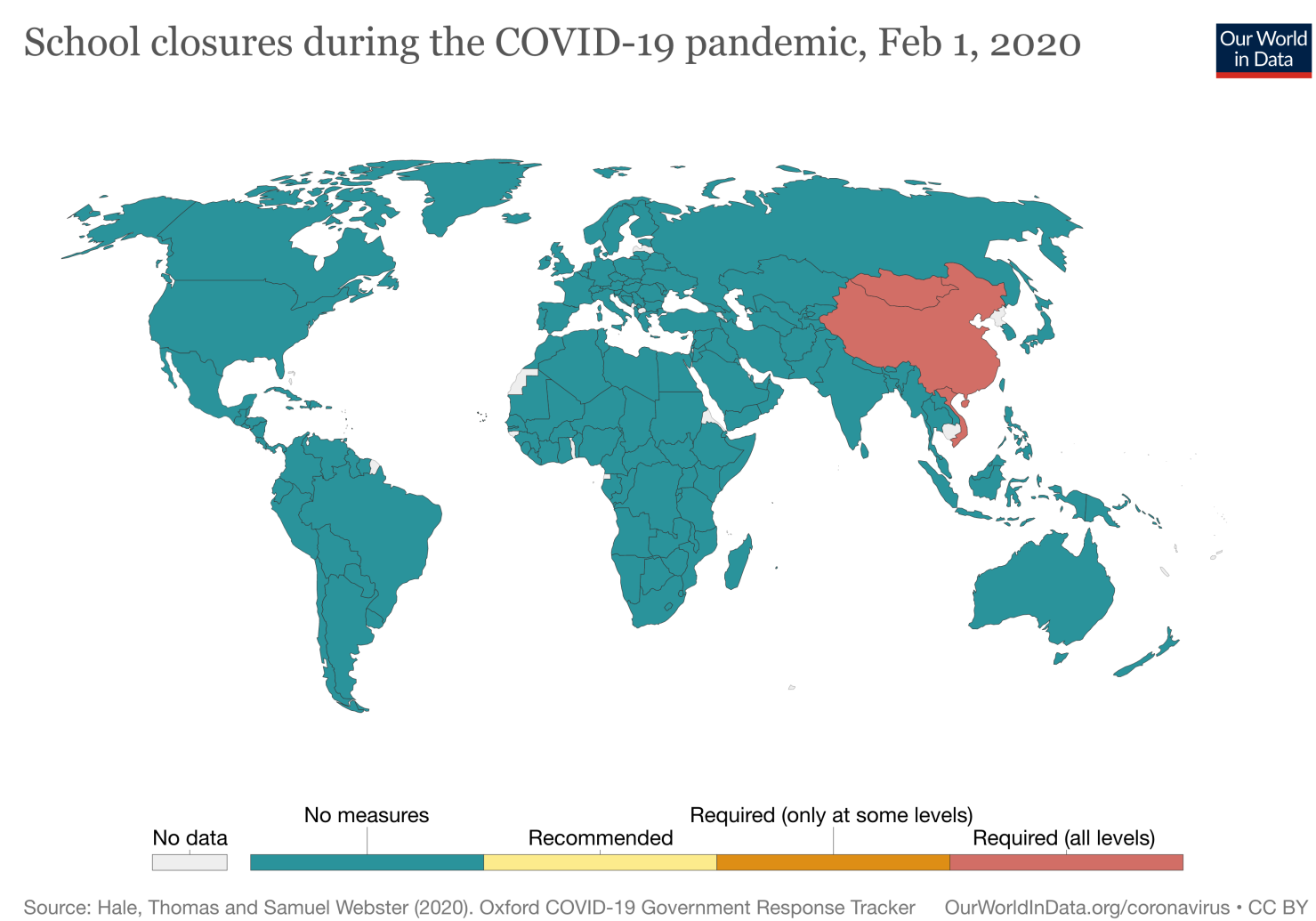
Source: Our World in Data

Variation in policy responses: stay-at-home directives



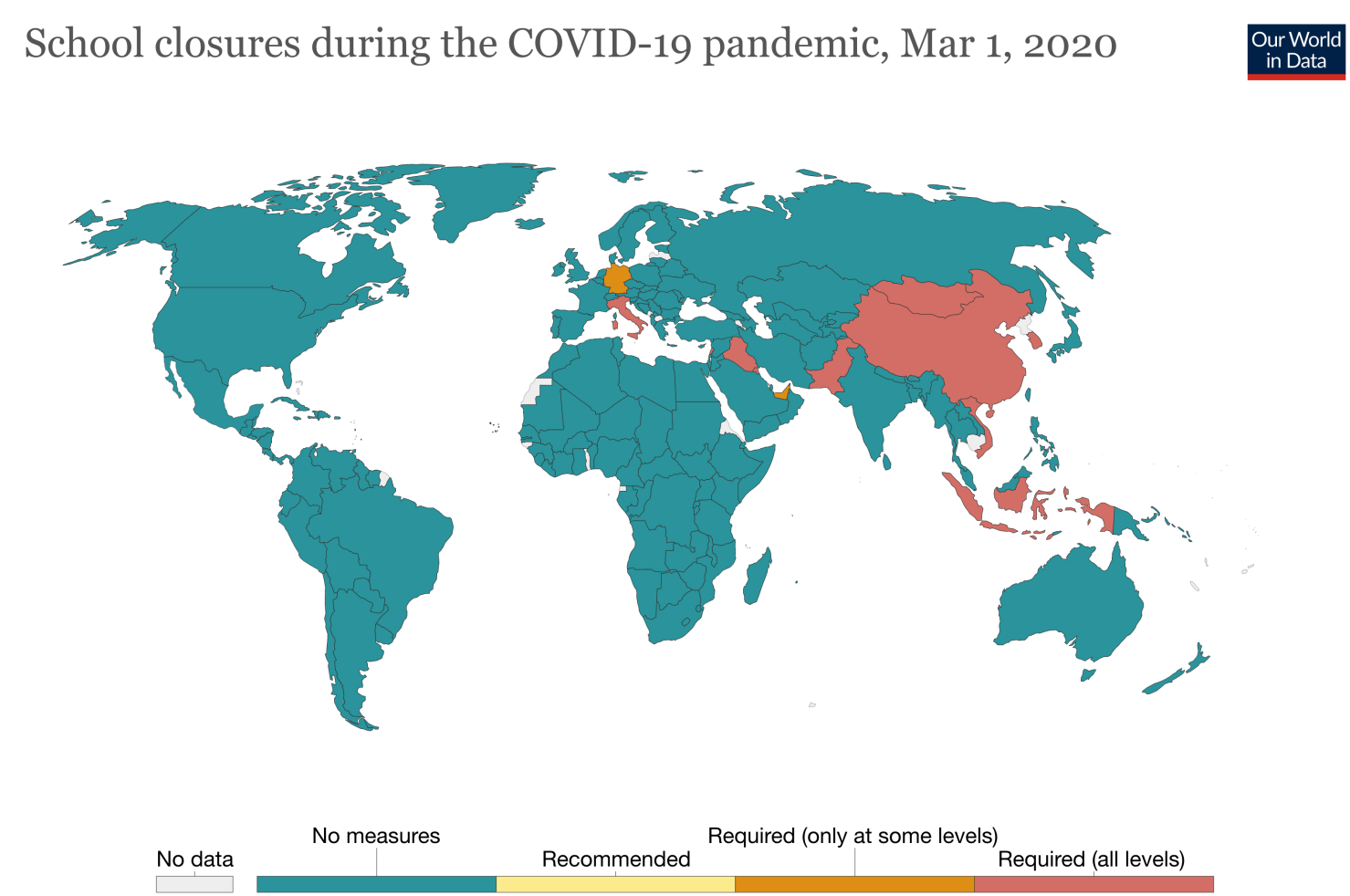
Source: Our World in Data

Rapid uptake of policies: school closures



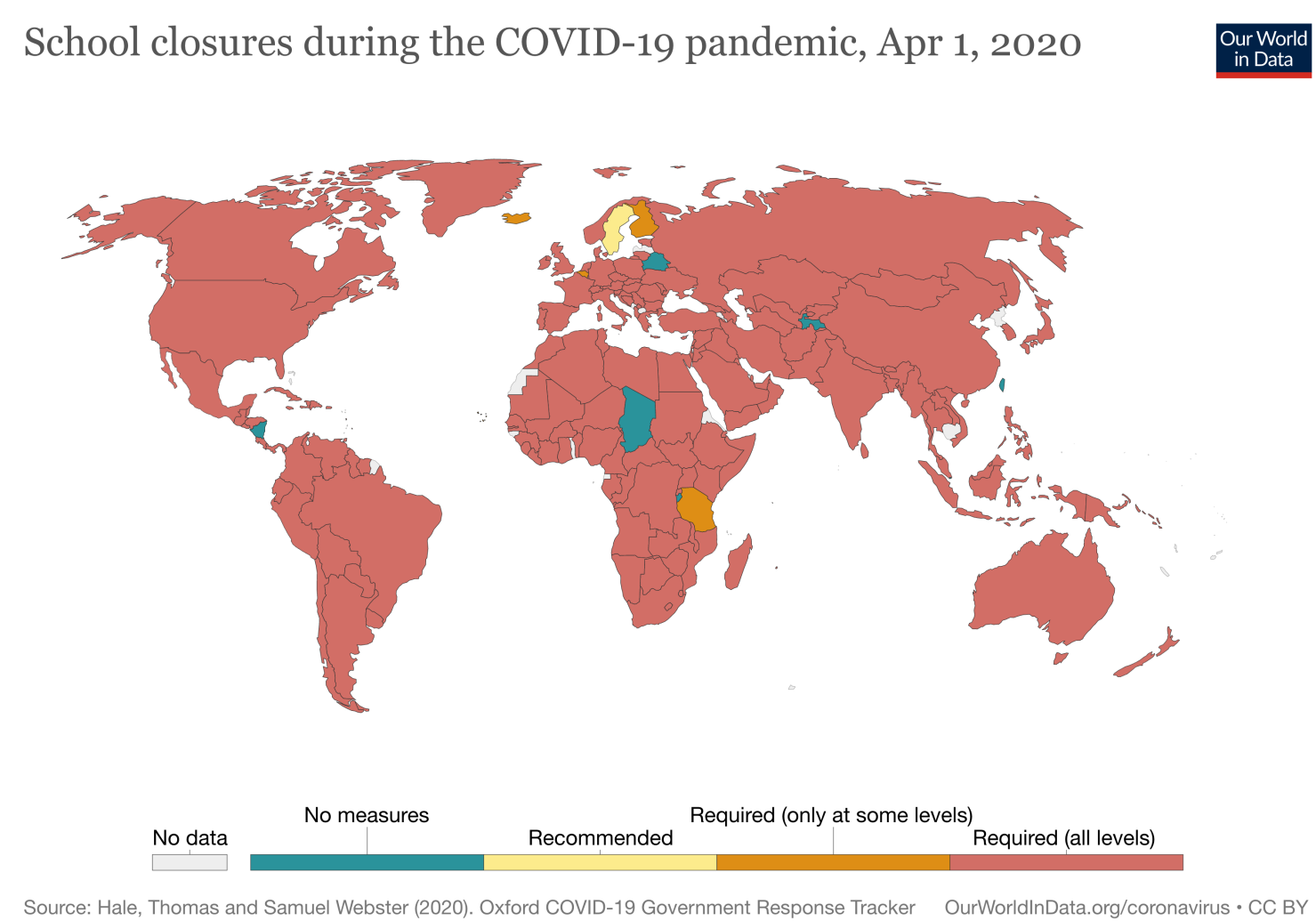
Source: Our World in Data

Rapid uptake of policies: school closures



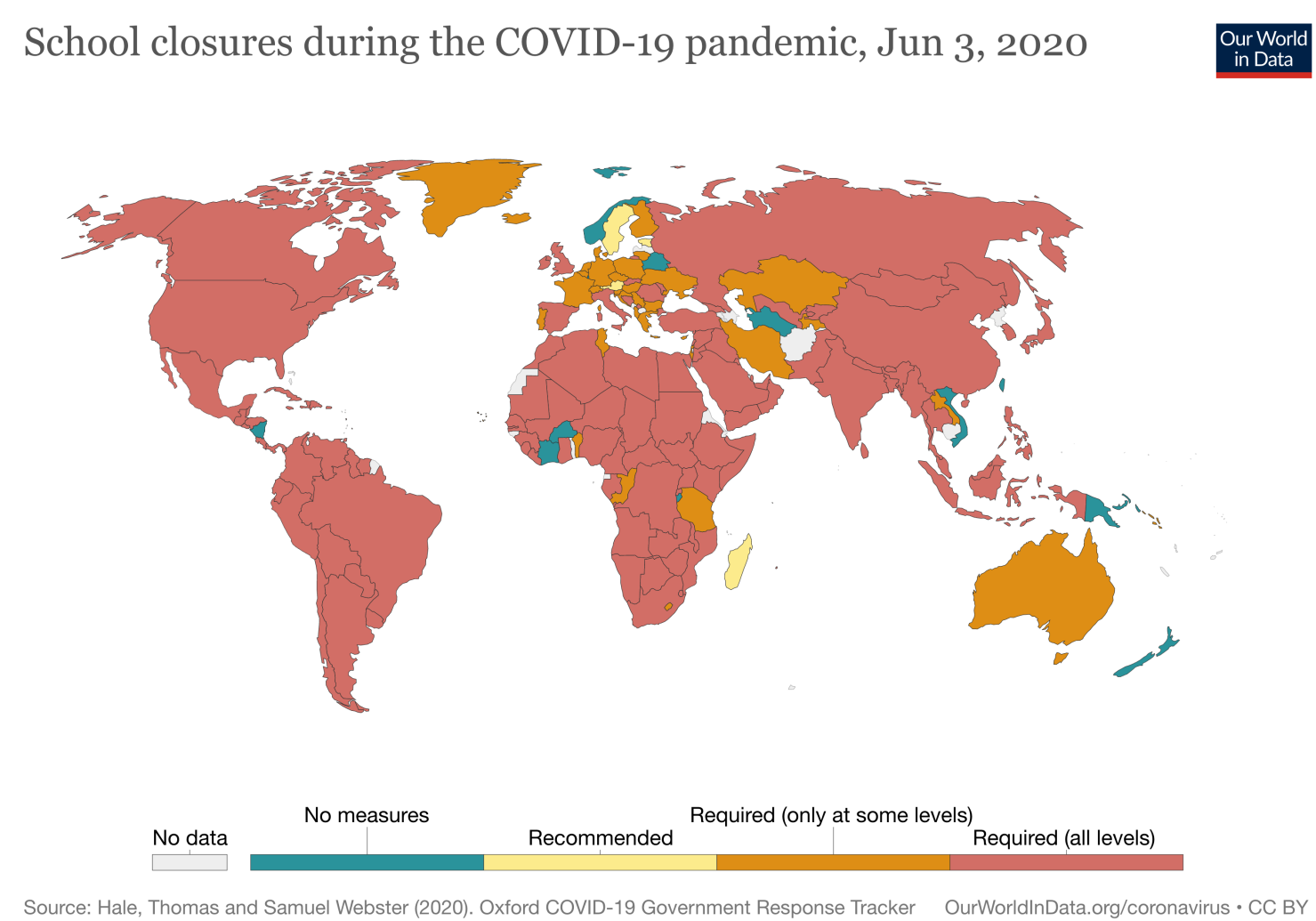
Source: Our World in Data

Rapid uptake of policies: school closures



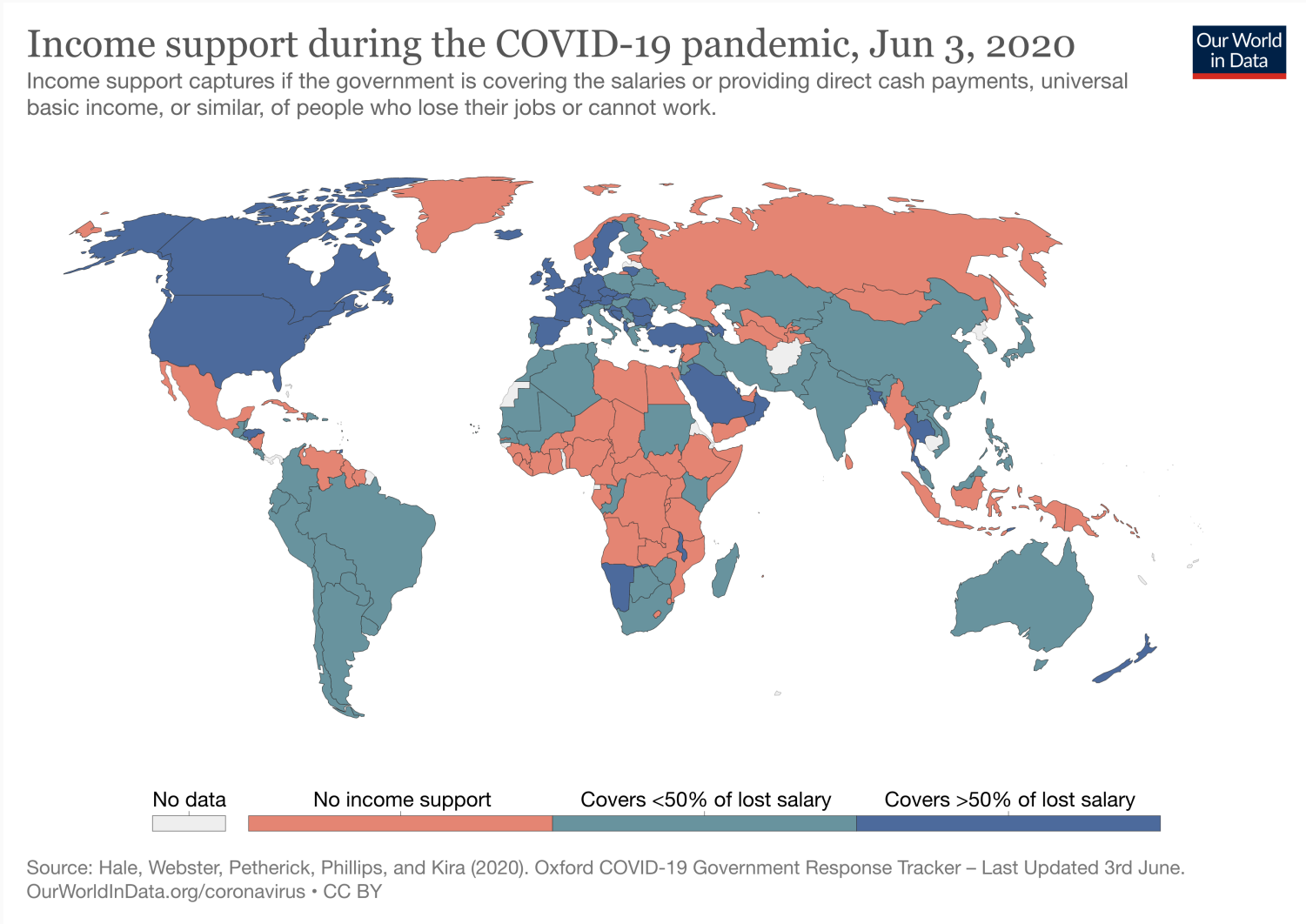
Source: Our World in Data

Rapid uptake of policies: school closures



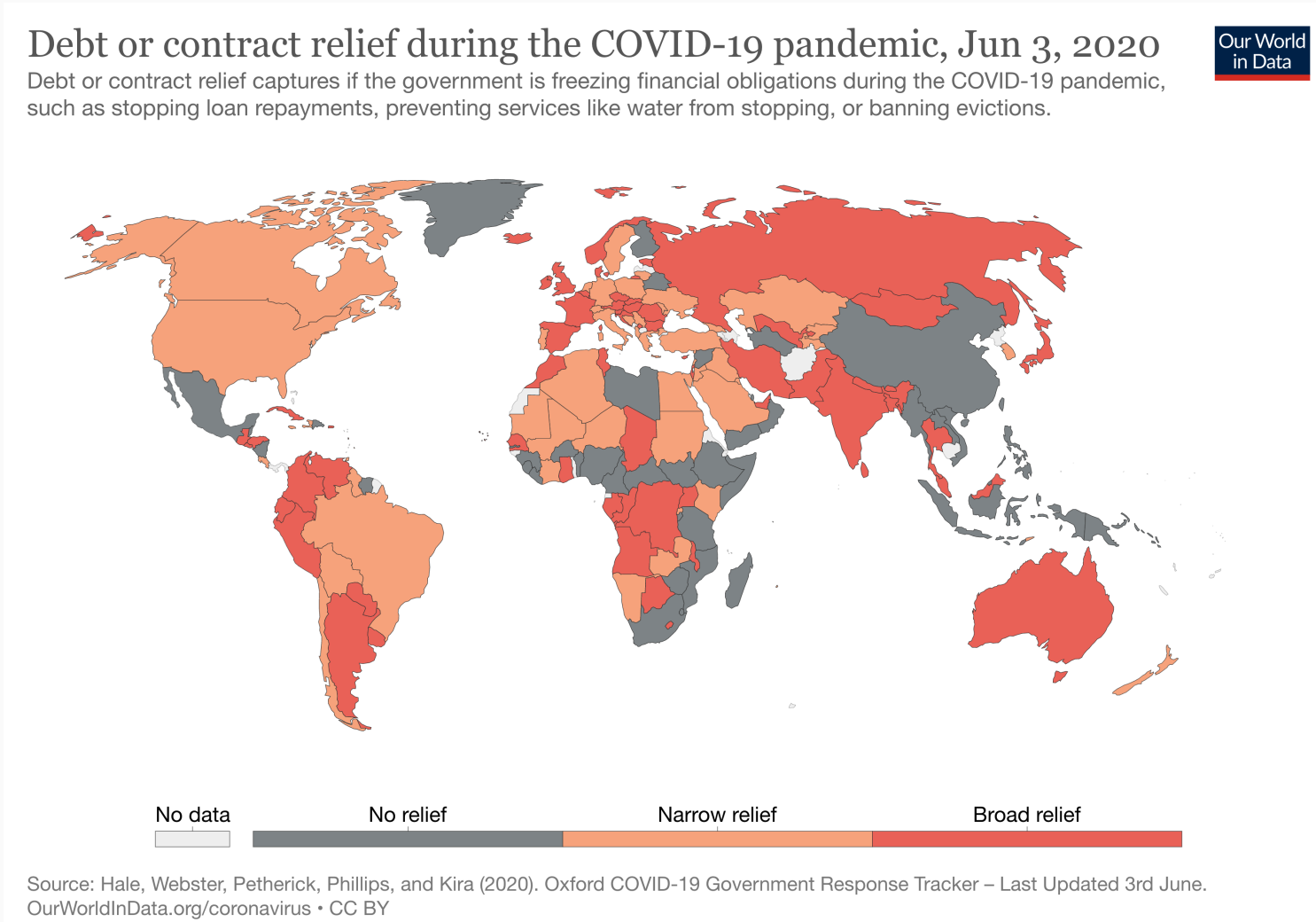
Source: Our World in Data

Range of policies adopted: income support



Source: Our World in Data

Range of policies adopted: debt relief



Source: Our World in Data

Motivating questions

Given the range and variation (types and timing) of policy responses observed, we should be asking:

1. How have lessons from previous outbreaks informed our response to COVID-19?
2. Are some countries doing better than others or not? If so, why are some countries doing better than others?
3. How can we as public health researchers help to inform future outbreaks?

Today's Talk

1. Lessons from previous outbreaks

2. Policy response to COVID-19

3. Priority questions for public health researchers

Previous outbreaks

Today's Talk

1. Lessons from previous outbreaks
2. Policy response to COVID-19
3. Priority questions for public health researchers

Lessons from previous outbreaks

Studies of government response to previous outbreaks have generally shown:

1. Population health impact can be much greater than the outbreak itself due to effect on health systems.
2. Response measures can lead to many important unintended consequences with important distributional consequences.
3. Global cooperation amongst countries is critical to improve response and recovery efforts.

Lessons from previous outbreaks: population health

- In West Africa, health systems were significantly were undermined: health workers left posts and non-essential services cancelled.
- Utilization decreased by 18%, including vaccinations, maternal and child health, HIV/AIDS and TB services (Wilhelm & Helleringer, 2018; Takahashi et al. 2015; Delamou 2017; Parpia et al 2016).
- Unsurprisingly, rates of maternal mortality, malaria, measles, HIV and TB mortality all increased (Parpia et al 2016; Jones et al 2016).
- Not just a low-income country problem: similar disruptions had been documented in both Taiwan and Canada during SARS (Chang et al 2004; Boutis et al 2004).

Lessons from previous outbreaks: gendered effects

- Globally, over 70% of all health workers and over 80% of nurses are female (WHO, 2019).
- In West Africa, a year after the first case most men who had lost their jobs (63%) had found new ones, while only 17% of women had done the same (Bandiera et al 2018).
- In Niger, girls were less likely to return to school than boys after an outbreak of measles and in Sierra Leone, the outbreak of Ebola led to increased teenaged pregnancies which led to higher rates of dropout among girls (Bandiera et al 2018; Archibong & Annan 2017).
- Increases in gender based violence have been observed in many previous outbreaks.

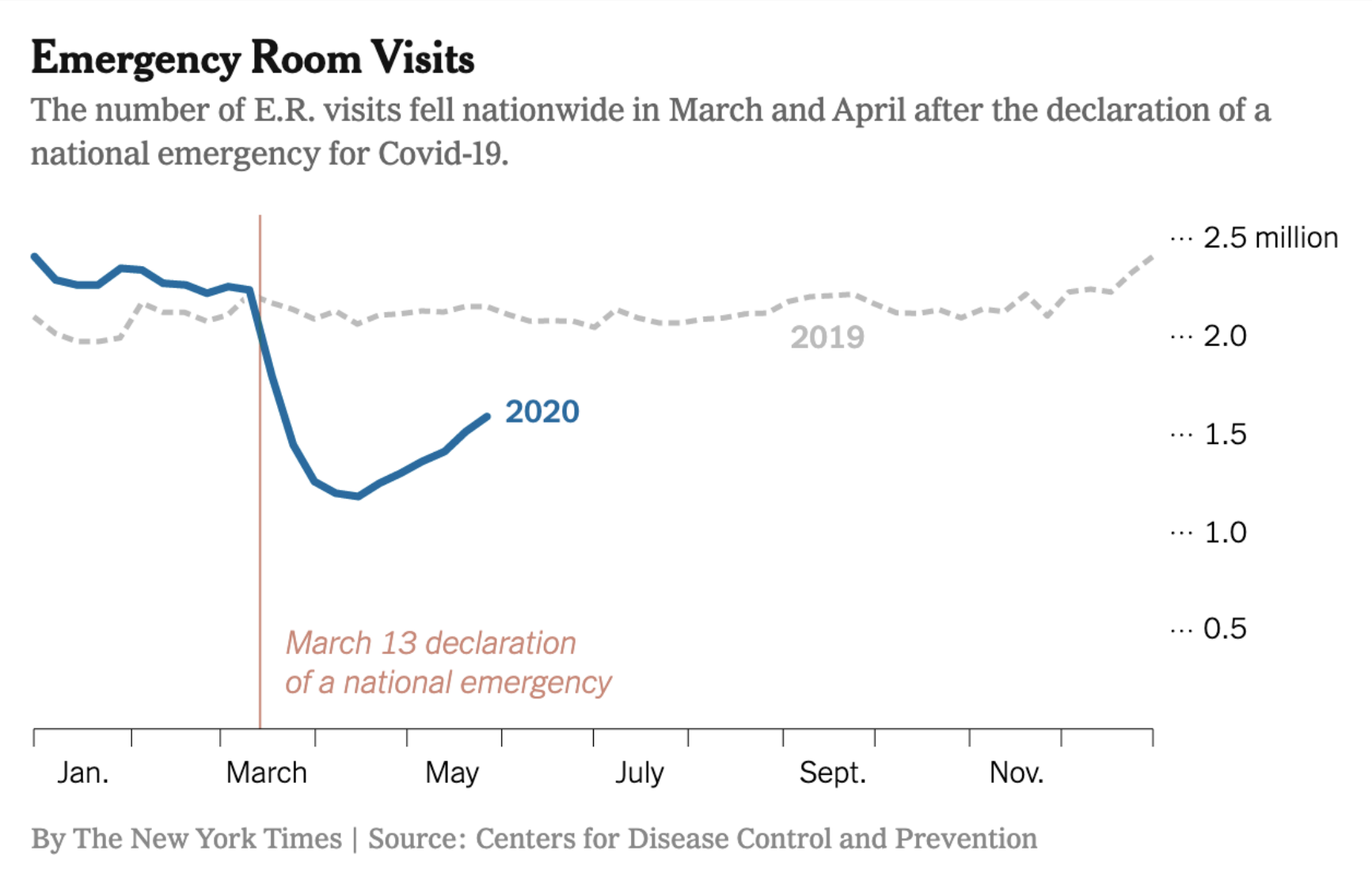
Lessons from previous outbreaks: global coordination is critical

- The International Health Regulations were designed to "prevent, protect against, control and provide a public health response to the international spread of disease in ways that are commensurate with and restricted to public health risks, and which avoid unnecessary interference with international traffic and trade."
- IHR also provides framework to coordinate other aspects of outbreak response.
- Upwards of 25% of member states imposed such measures during H1N1 and Ebola in West Africa (Worsonop 2017), however, no restrictions have been imposed during recent outbreaks of Ebola in the DRC.
- Pre-COVID-19, general consensus was the trade and travel restrictions "don't work" but can be disruptive to outbreak response.

Lessons from past outbreaks not well integrated into current response

- Evidence is accumulating that routine health services have been greatly disrupted by COVID-19.
- Abortions were cancelled in Italy while in the in the US some states (e.g. Texas, Ohio, etc) have deemed them non-essential services.
- There have been dramatic increases in reported domestic violence: Malaysia and France, for example, reported 50% and 32% more calls to domestic abuse helplines respectively compared to last year.
- All WHO member states have adopted some form of cross-border measure (eg, travel restrictions, border closure, etc.), which have been identified as a barrier to the response in places like Africa (Devi 2020).

Massive decline in the use of health services globally



Source: NYTimes.com (June 4, 2020)

COVID-19

Today's Talk

1. Lessons from previous outbreaks
2. Policy response to COVID-19
3. Priority questions for public health researchers

Sweden's controversial COVID-19 strategy

"If we were to encounter the same illness with the same knowledge that we have today, I think our response would land somewhere in between what Sweden did and what the rest of the world has done." -Anders Tegnell.

Source: Bloomberg, June 3, 2020

Poll: How well are countries doing in the response to COVID-19?

- Pull out your phone or switch screens and go to: www.menti.com
- Enter the code 67 39 62 and answer 2 sets of questions

Which outcomes do we care about?

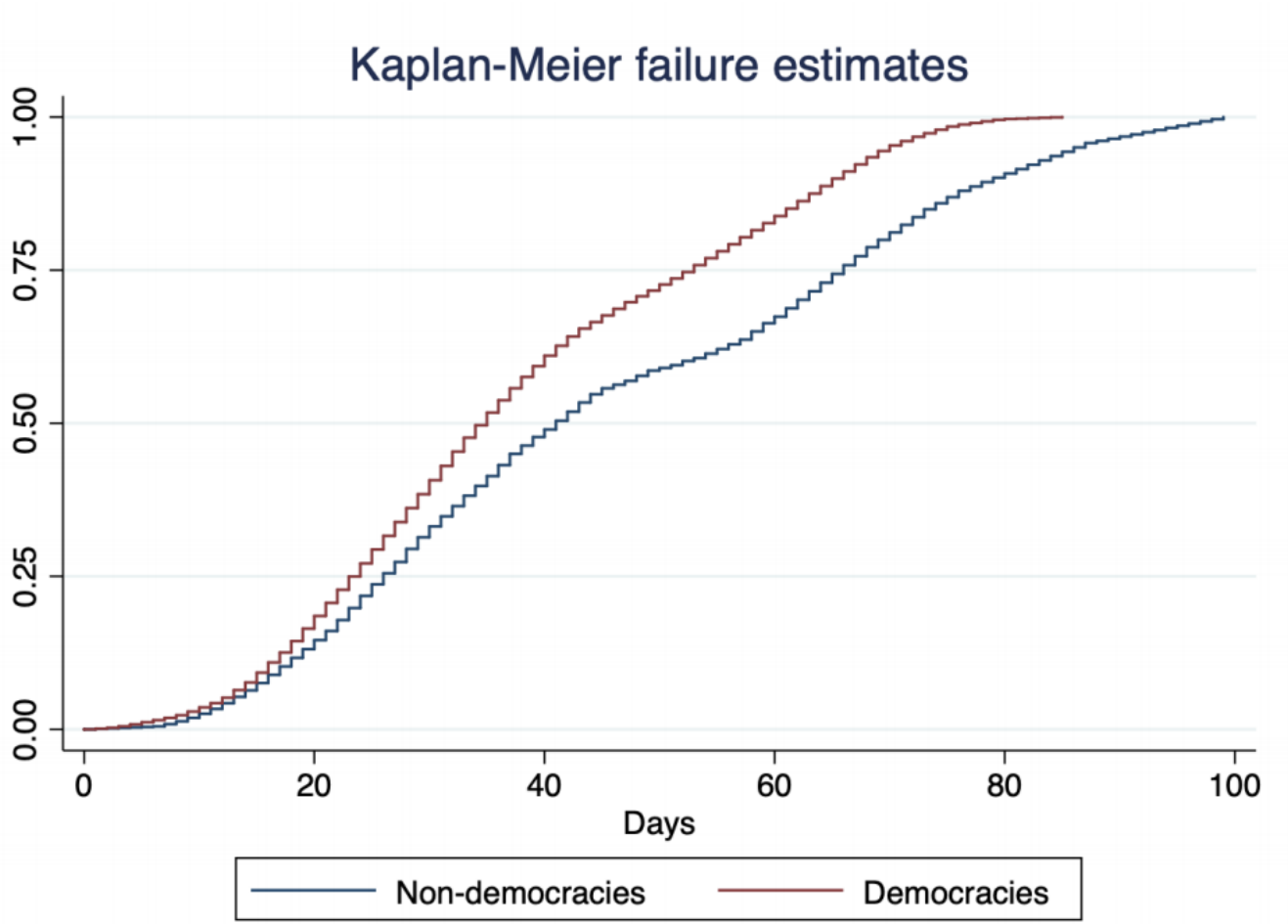
- Public health: how many people were infected and how many died? What time frame?
- Population health: what was total excess mortality over previous years?
- Economic: how were livelihoods and macro-economic outcomes affected?
- Social: how has it affected social capital?
- Distributional: has it disproportionately affected the most marginalized?
- Political: has COVID-19 reshaped our understanding of good government?

Why are some countries doing better than others?

- Preparedness: countries that invested heavily in public health vs. those that did not
- Health systems: nationalized vs. privatized
- Regime type: democratic vs. autocratic governments
- State capacity: strong vs. weak governments
- Public opinion: high vs. low support or trust in government
- Leadership: speed of response/relationship with scientific experts/denial

COVID-19 challenging views of government

Figure 2: Deaths since the first case of COVID-19



Source: Cepaluni, Dorsch, and Branyiczki, 2020

Can we evaluate which strategies are best?

- Countries have implemented a range of policies - sometimes all at the same time.
- Strategies implemented in one country can have an effect in another country.
- Behaviours likely changed even in the absence of government policies.
- Unclear over which timeframes these policies were likely to be effective.

Research priorities

Today's Talk

1. Lessons from previous outbreaks
2. Policy response to COVID-19
3. Priority questions for public health researchers

How are countries responding to COVID-19 and what can we learn?

- Governments have implemented a wide range and variable set of policies - but there is no consensus of which strategies are best.
- Response measures did not anticipate many of the important lessons from previous outbreaks - the "tyranny of the urgent" has won out.
- There is a lack of clear evidence and guidance on how to respond to a pandemic.
- We need to better understand why some countries responded better than other in order to prepare for the next pandemic.

What can we as public health researcher do?

Collect data to help understand and explain our own country's response to COVID-19:

- Broad: we need to collect data on a range of outcomes and explanatory variables.
- Longitudinal: the pandemic will continue to play out for months, if not years.
- Standardized: we need to be able to make comparisons across countries.
- Disaggregated: need to show how some groups are more affected than others.