

# Welcome to Immunize Colorado's Webinar Series:

## *An Update on Global COVID-19 Vaccine Distribution & Lessons Learned from Guatemala*

- All attendees will automatically be muted with their video's off for the duration of the webinar.
- If you experience any technical difficulties, please post your comments in the chat box.
- If you have any questions for our presenters, please post your questions in the Q&A box.
- Please do not forget to give us your feedback in the post webinar survey!





# Immunize Colorado's Webinar Series: *An Update on Global COVID-19 Vaccine Distribution & Lessons Learned from Guatemala*

Edwin Asturias, MD | Professor of Pediatrics, University of Colorado School of Medicine, and Jules Amer Chair in Community Pediatrics at Children's Hospital Colorado; Director for Latin America, Center for Global Health, and Professor of Epidemiology at the Colorado School of Public Health

*June 28th, 2021*

# Partnering to KEEP COLORADO COMMUNITIES HEALTHY

## OUR MISSION

Founded in 1991, Immunize Colorado (formerly the Colorado Children's Immunization Coalition) is a statewide 501(c)3 nonprofit that serves to protect Colorado families, schools and communities from vaccine-preventable diseases.

# What We Do



**Coalition Building:** Strengthen and expand Colorado's immunization initiatives and data through partnerships and collaboration



**Public Policy:** Advocate for policies that aim to better protect Colorado children and communities



**Free and Low-Cost Vaccines:** Partner to provide free and low-cost vaccines to families in need



**Community Outreach and Awareness:** Communicate vaccine information with healthcare providers, parents, the media and organizations



**Provider Education:** Educate health care professionals on crucial and timely vaccine-related topics



**Data Translation and Action:** Spearhead partnerships to advance the understanding and utilization of local, state and national immunization data

# Together We Protect – Colorado's COVID-19 Vaccine Equity Fund

- **Together We Protect – Colorado's COVID-19 Vaccine Equity Fund** supports community-centered and trusted Colorado-based organizations to provide culturally relevant outreach, education, and support to children, youth and/or caregivers to ensure that those who face systemic barriers have access to the COVID-19 vaccine.
- Grants ranging from \$5,000 to \$50,000 will be awarded to applicants from across Colorado.
- **Please share this opportunity with organizations that might be interested in applying. Grant Deadline:**  
**Tuesday, June 29, by 5pm**
- Learn more about this opportunity, including funding criteria and how to apply.
  - Link in chat!



# Now Hiring! Colorado Immunity Corps Positions

- Immunize Colorado's AmeriCorps VISTA program, the Colorado Immunity Corps is now recruiting for its 2021/22 member positions!
- Members who participate in the CO-mmunity Corps will develop and implement local activities that promote education and access to immunizations, including COVID-19 vaccines.
- Through this national service program, members will gain valuable experience in public health and aid in capacity building efforts to promote vaccine and health equity.
- Learn more on our website!

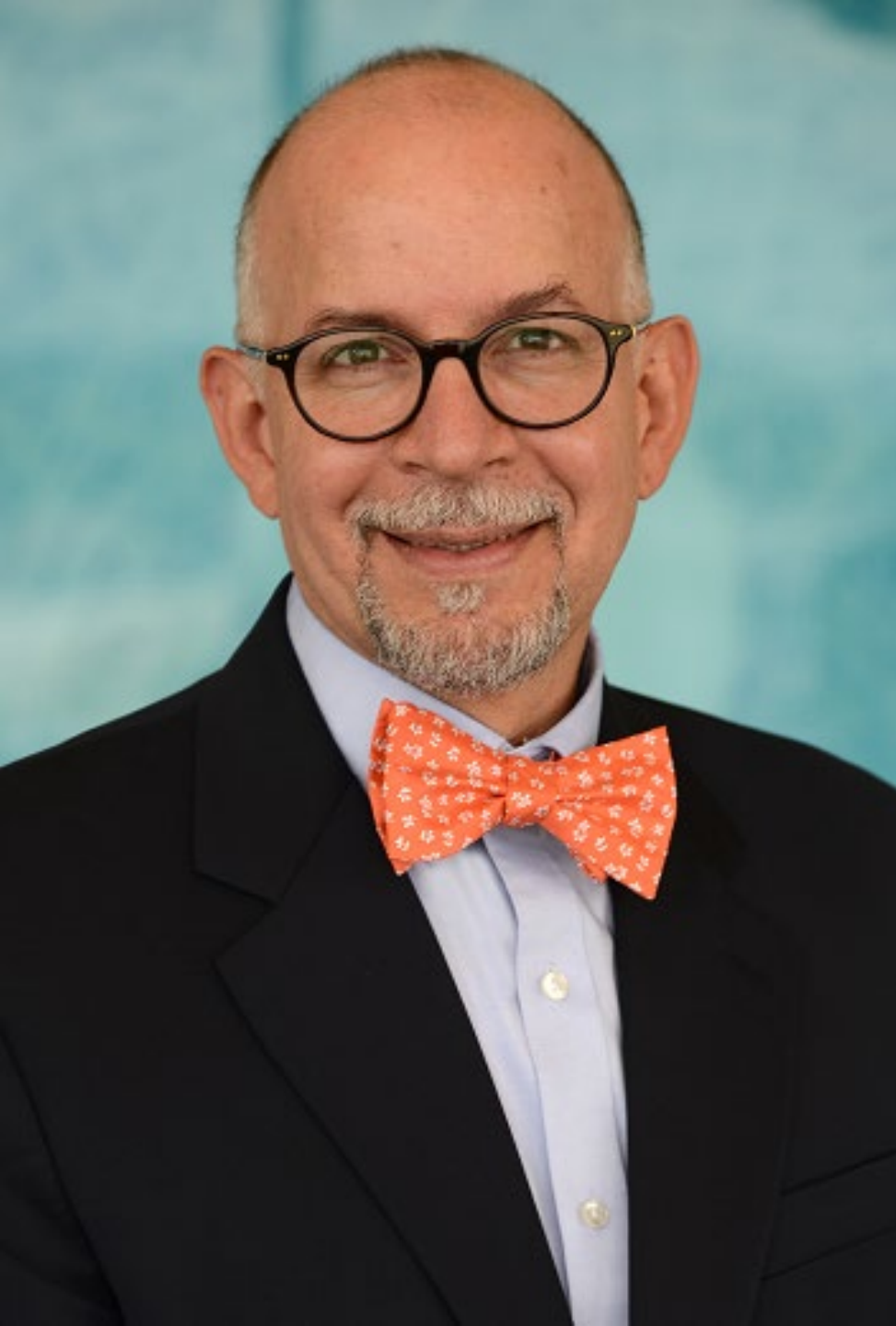


# Upcoming Event! Immunize Colorado webinar

- Immunize Colorado Education Series: Back-to-School Immunizations and SB-163 Implementation for the 2021/2022 school year: Strategies for Keeping Kids Vaccinated and Navigating Non-medical Exemptions
- Speakers -
  - Cassie Littler, MD, Stacy Parra, MD, from the Colorado American Academy of Pediatrics and Maddie Grimm and Tavio Pirocchi from the Colorado Department of Public Health and Environment
- Registration link in chat!







# Edwin J. Asturias, MD

---

- Professor of Pediatrics at the University of Colorado School of Medicine and a Professor of Epidemiology at the Colorado School of Public Health
- Graduated as an MD from the San Carlos University in Guatemala, he was boarded in pediatrics at University of Colorado Health Sciences Center and Pediatric Infectious Diseases at the Johns Hopkins School of Medicine
- Founded and has served on the Guatemalan National Committee for Immunization Practices , the Poliovirus Contention Commission, and advisory groups for the World Health Organization





School of Medicine

UNIVERSITY OF COLORADO  
ANSCHUTZ MEDICAL CAMPUS



Keeping Colorado Communities Healthy

# An Update on Global COVID-19 Vaccine Distribution & Lessons Learned from Guatemala

**Edwin J. Asturias, MD**

Professor of Pediatrics and Epidemiology

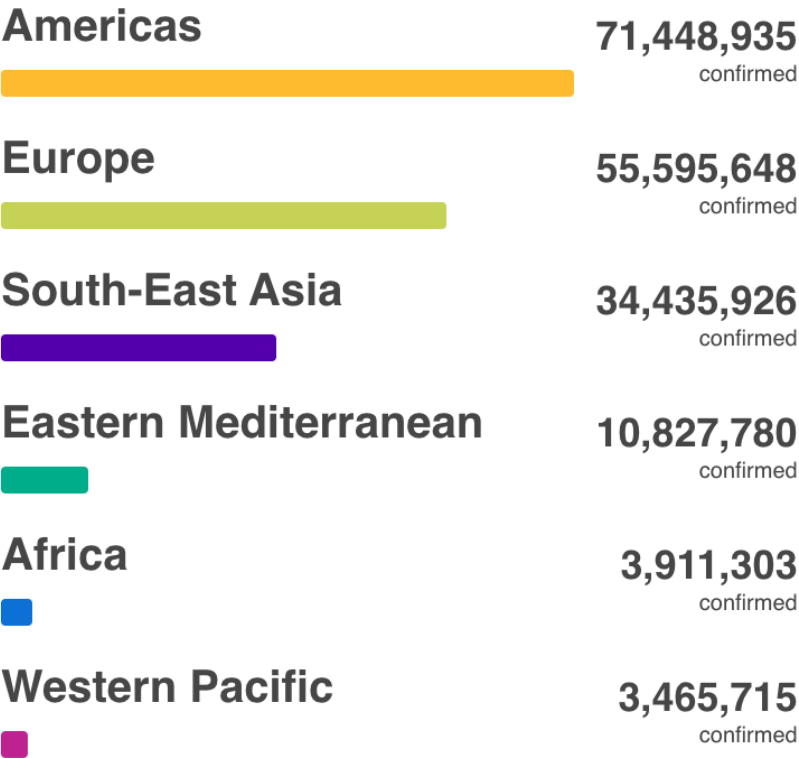
UC School of Medicine and Colorado School of Public  
Health

# Educational Objectives

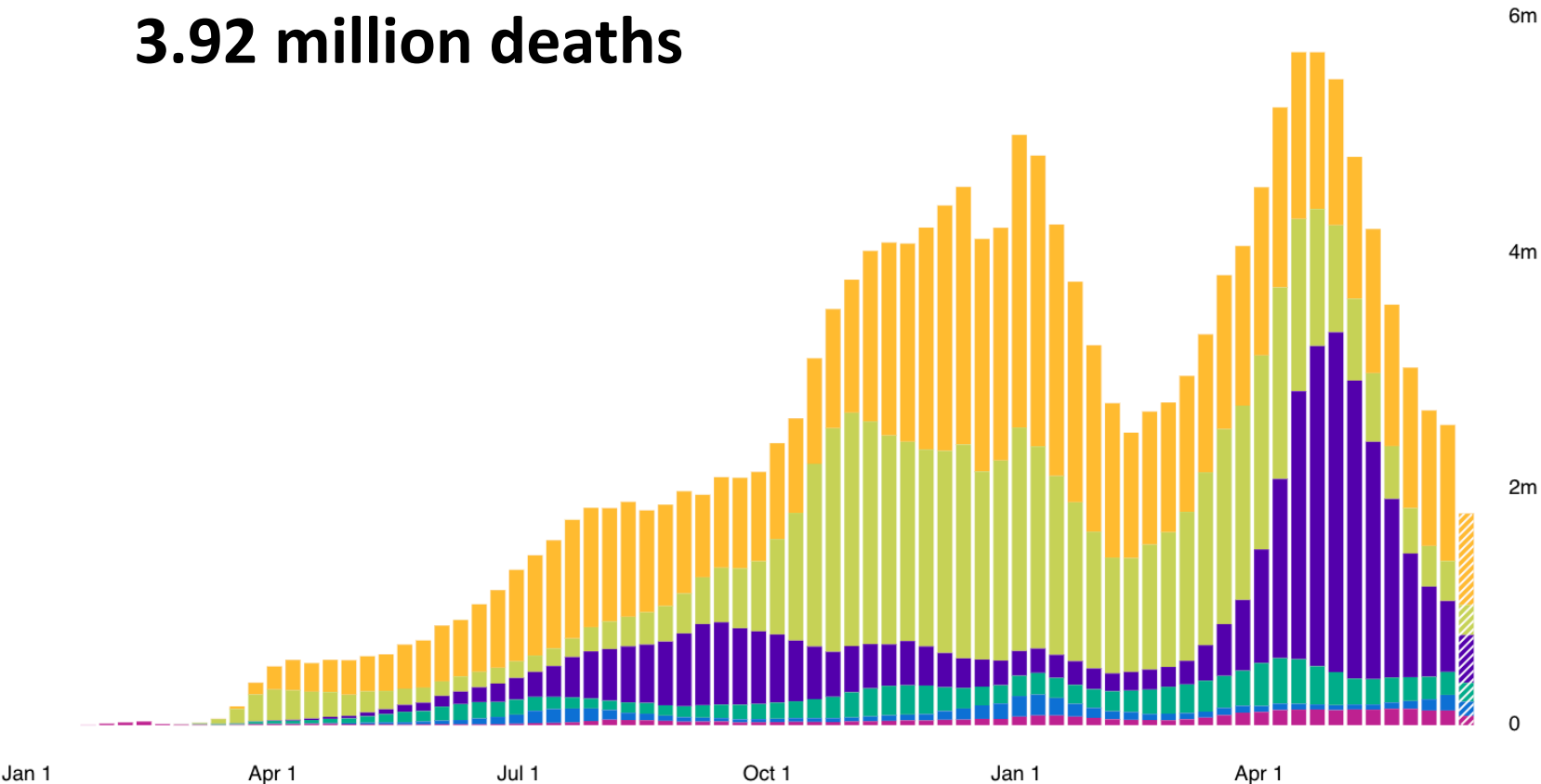
- An update on the current state of COVID-19 infections in Central America, specifically in Guatemala
- An overview of mitigating COVID-19 in Central American countries and continued strategies
- Vaccine rollout trends in other middle- and low-income nations globally, and the current status of vaccine rollout and distribution

# Global COVID-19 situation as of June 2021 (WHO)

**181 million cases**  
**3.92 million deaths**

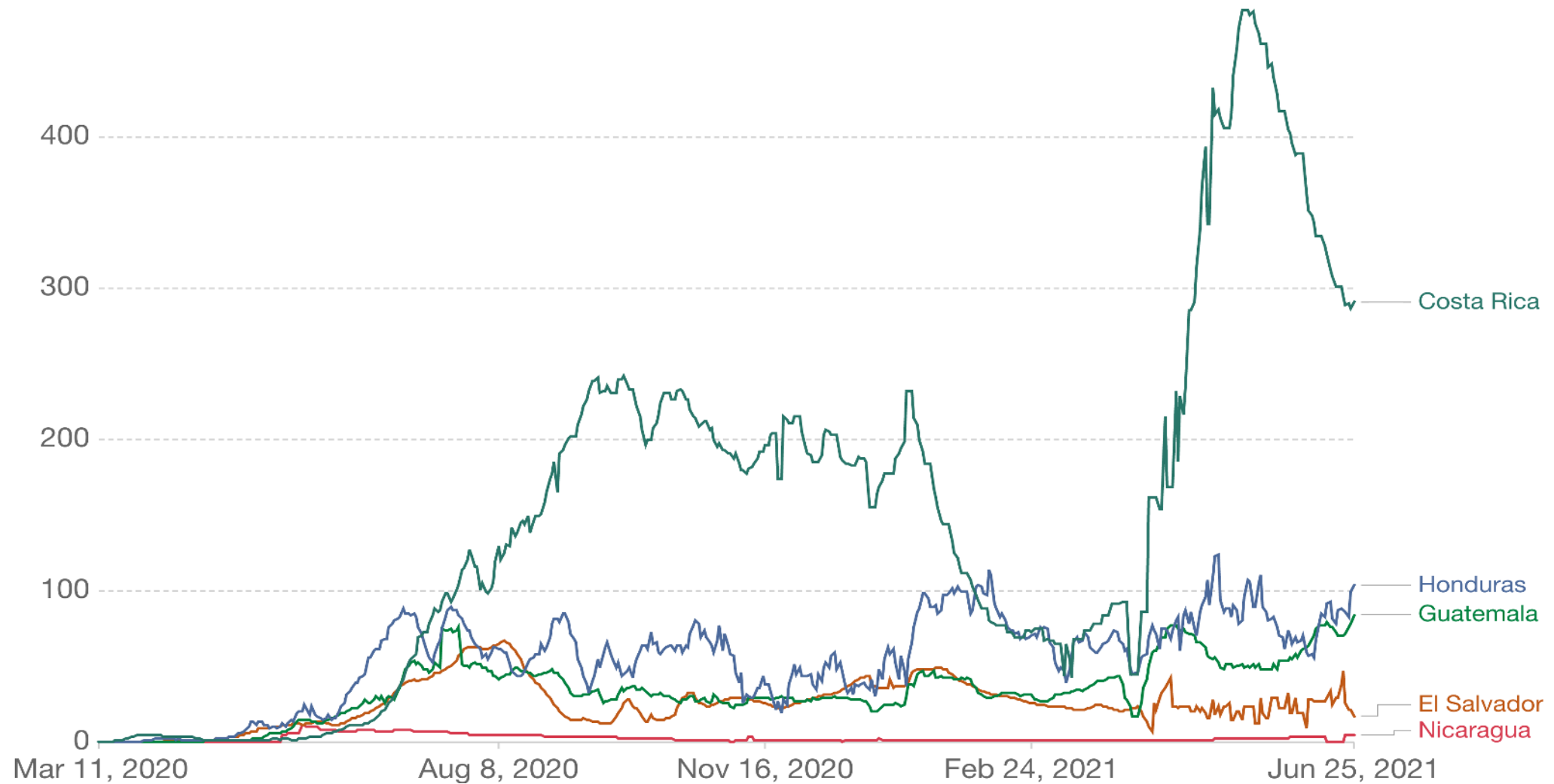


Source: World Health Organization  
Data may be incomplete for the current day or week.



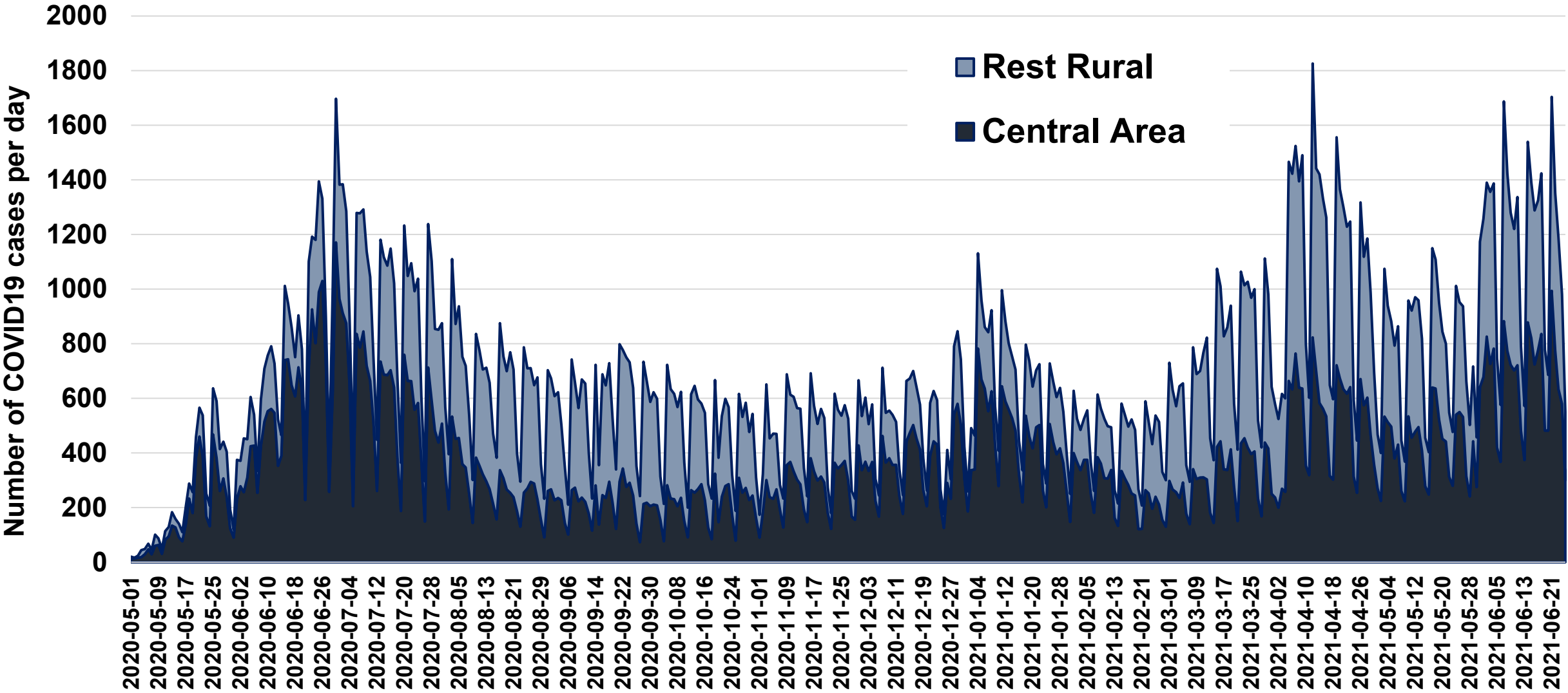
# Daily new confirmed COVID-19 cases per million people

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.



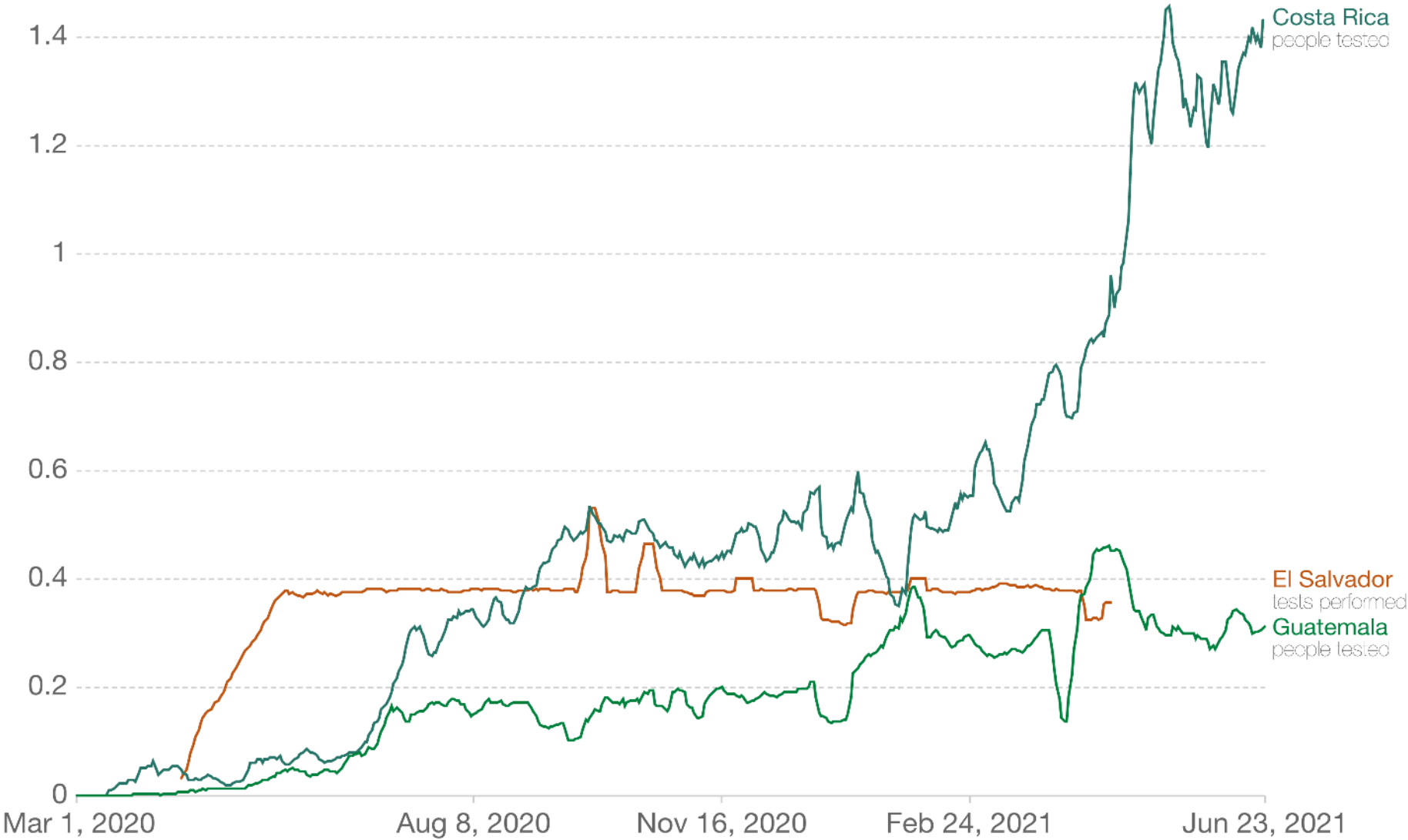
# Trend in confirmed cases of COVID-19 in Guatemala by Geographic Location

May 2020 thru June 2021



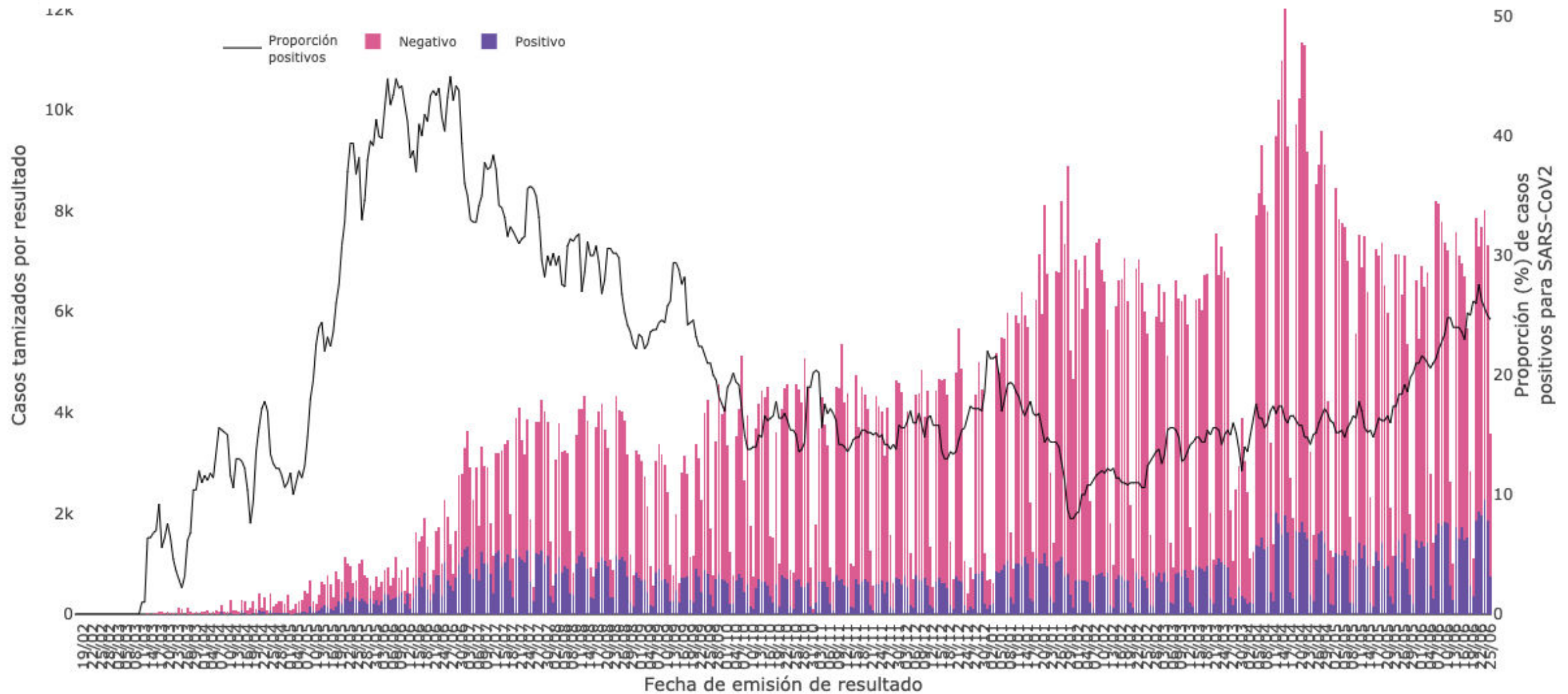
SOURCE: Datos SIGSA, : <https://tablerocovid.mspas.gob.gt/>

# Daily new COVID-19 tests per 1,000 people



# Number of diagnostic tests (n=1,570,120) by date of result in Guatemala

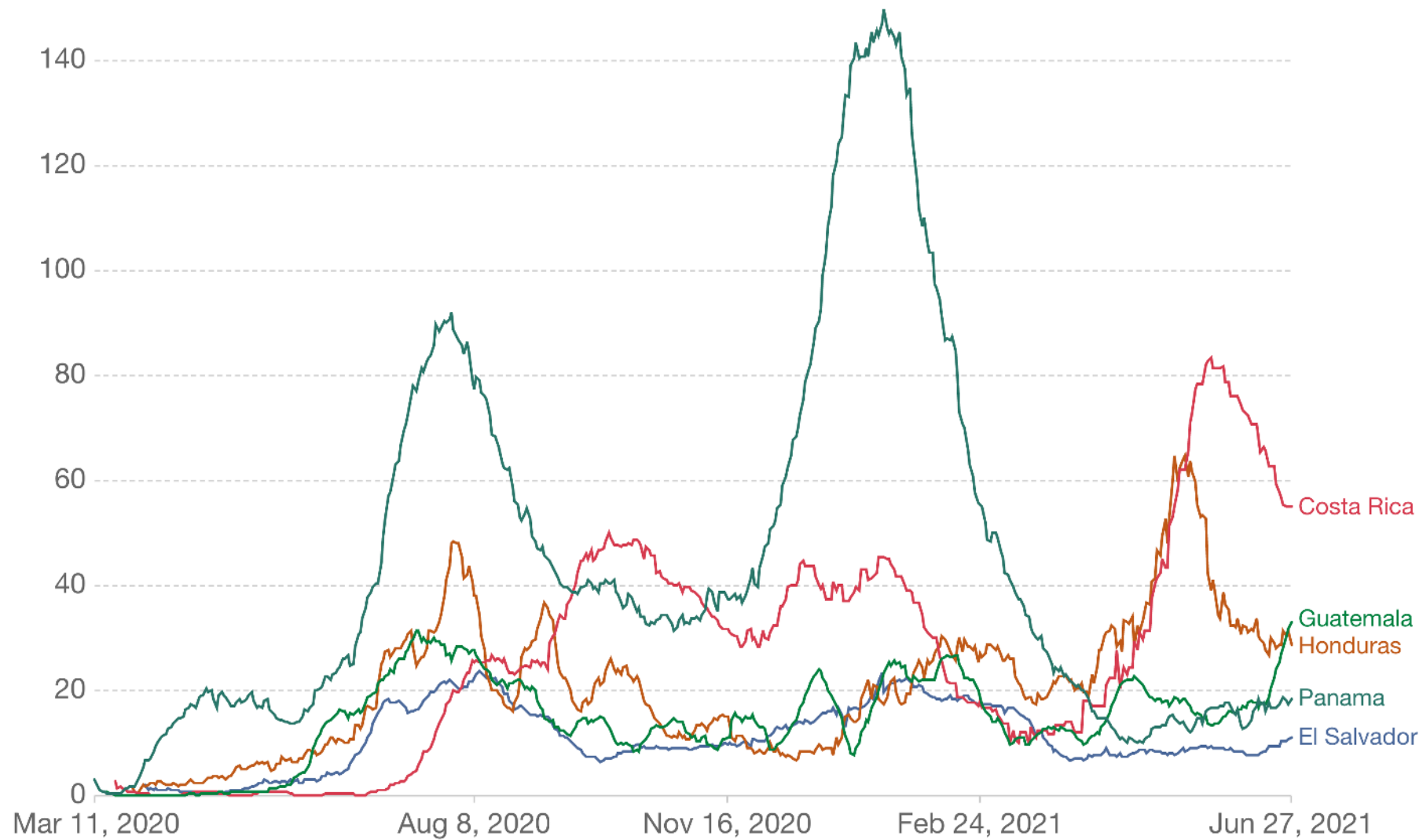
## February 2020 thru June 2021



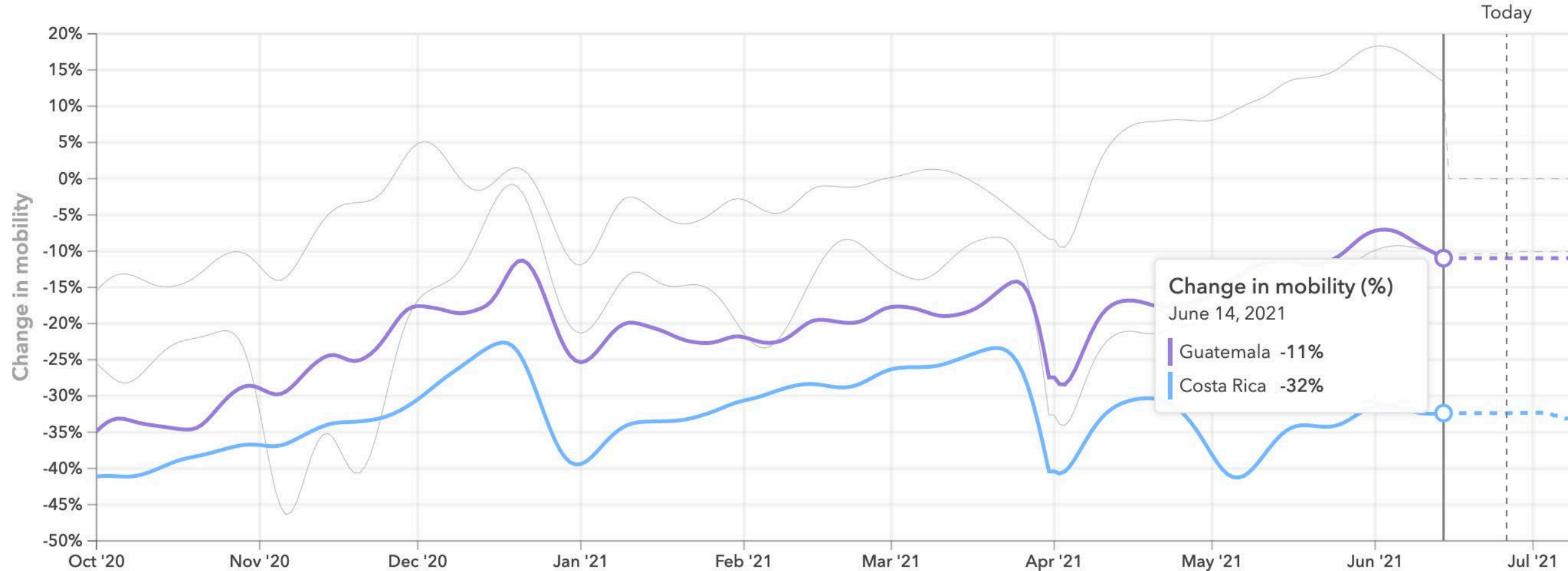


# Biweekly confirmed COVID-19 deaths per million people

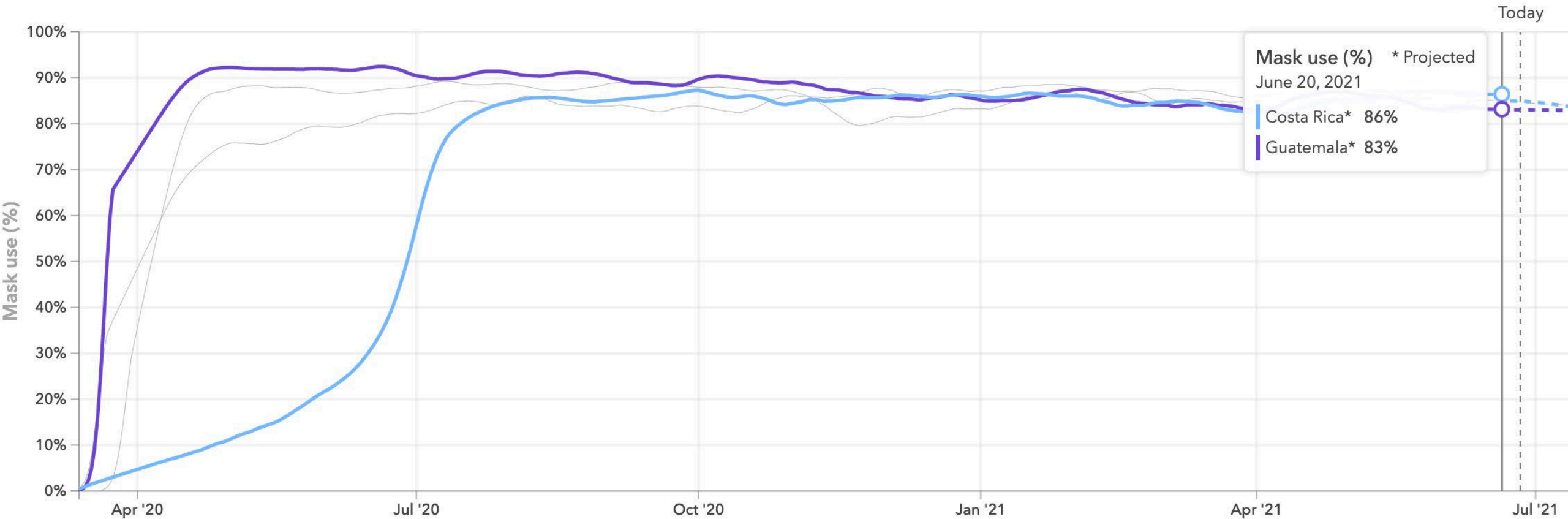
Biweekly confirmed deaths refer to the cumulative number of confirmed deaths over the previous week.



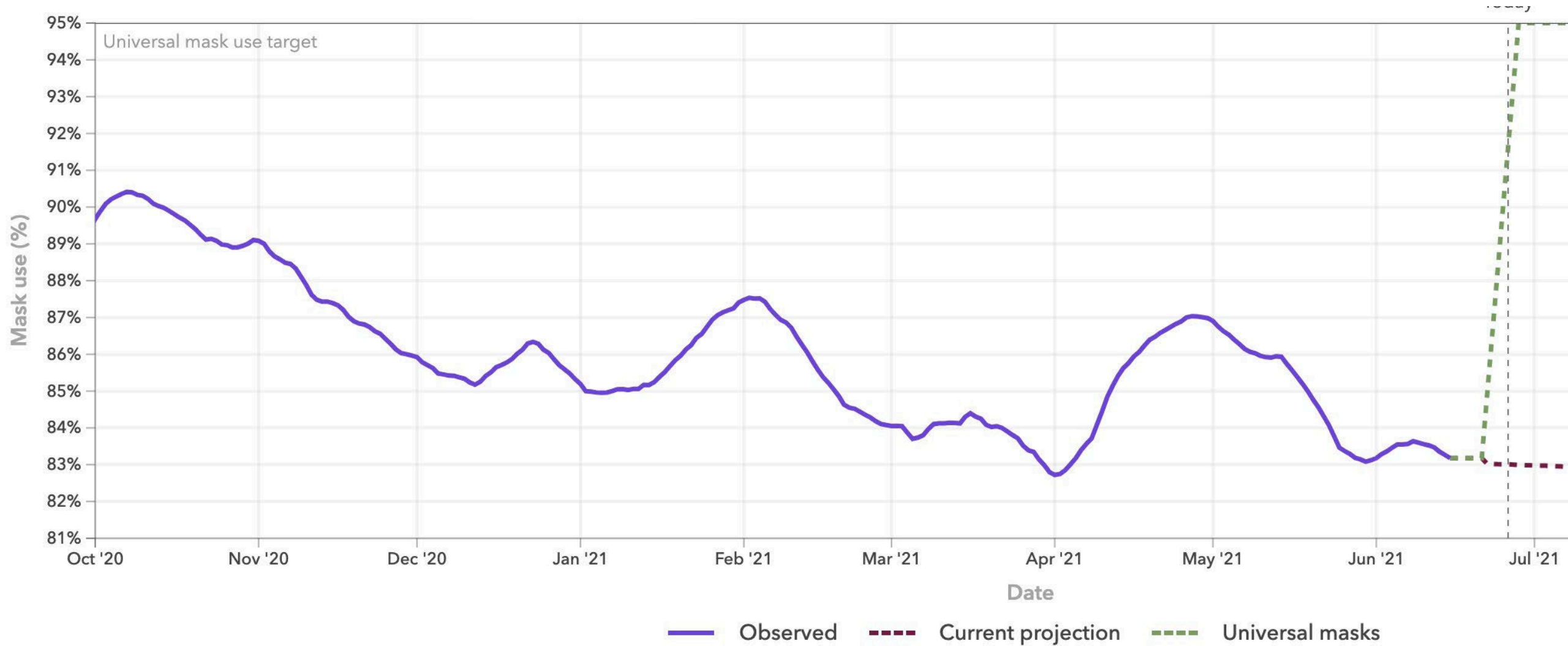
# Trends in mobility in 4 countries in Central America – from the minus 45-60% at lockdowns in April 2020 thru June 2021



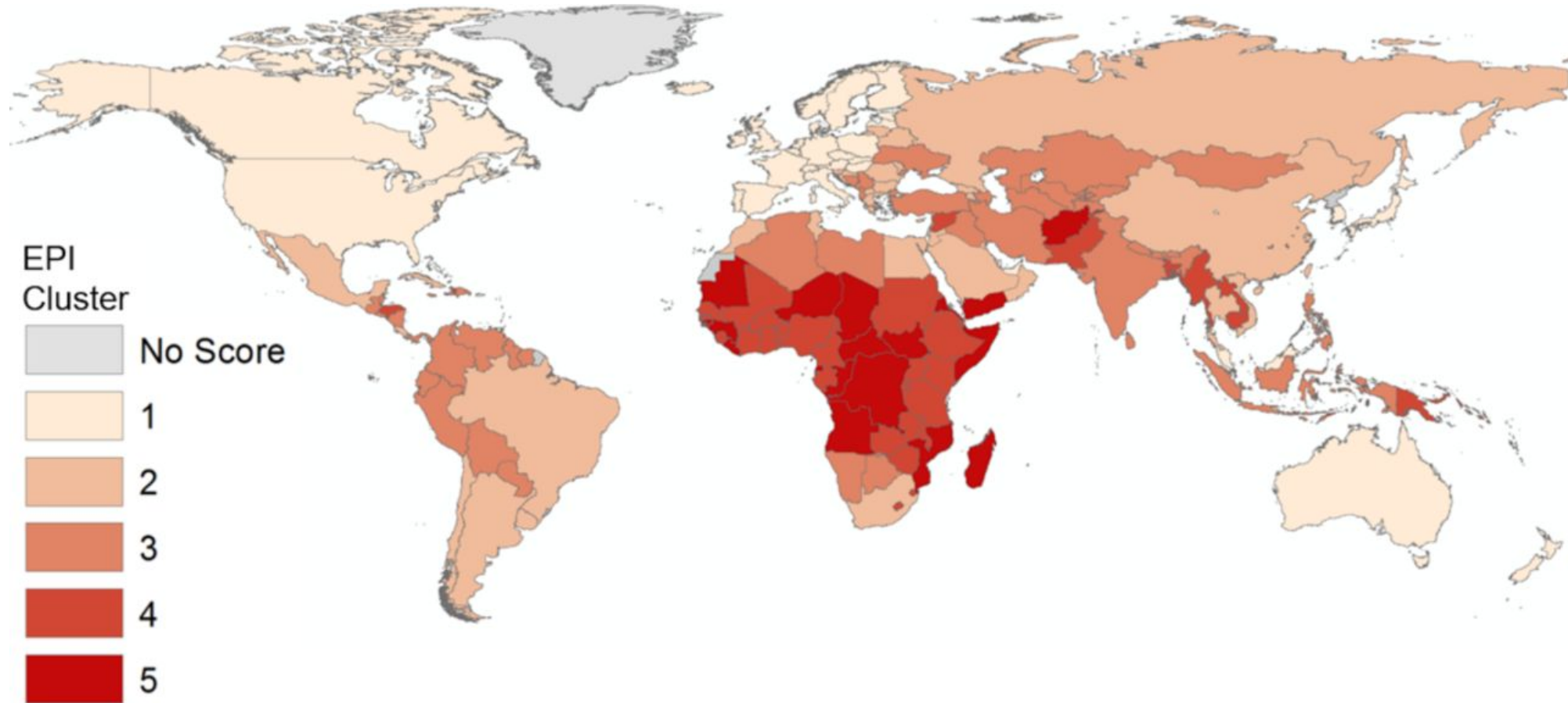
# Trends in mask use in 4 countries in Central America – from the minus 45-60% at lockdowns in April 2020 thru June 2021



# Trends in mask use in Guatemala – from the 92% peak during the 1<sup>st</sup> wave in July 2020 thru June 2021



# Global distribution of Epidemic Preparedness Index (EPI) scores by country



Countries binned by k-means clustering (1=most prepared, 5=least prepared).

Oppenheim B, et al. *BMJ Glob Health*. 2019;4(1):e001157.

doi: [10.1136/bmjgh-2018-001157](https://doi.org/10.1136/bmjgh-2018-001157).

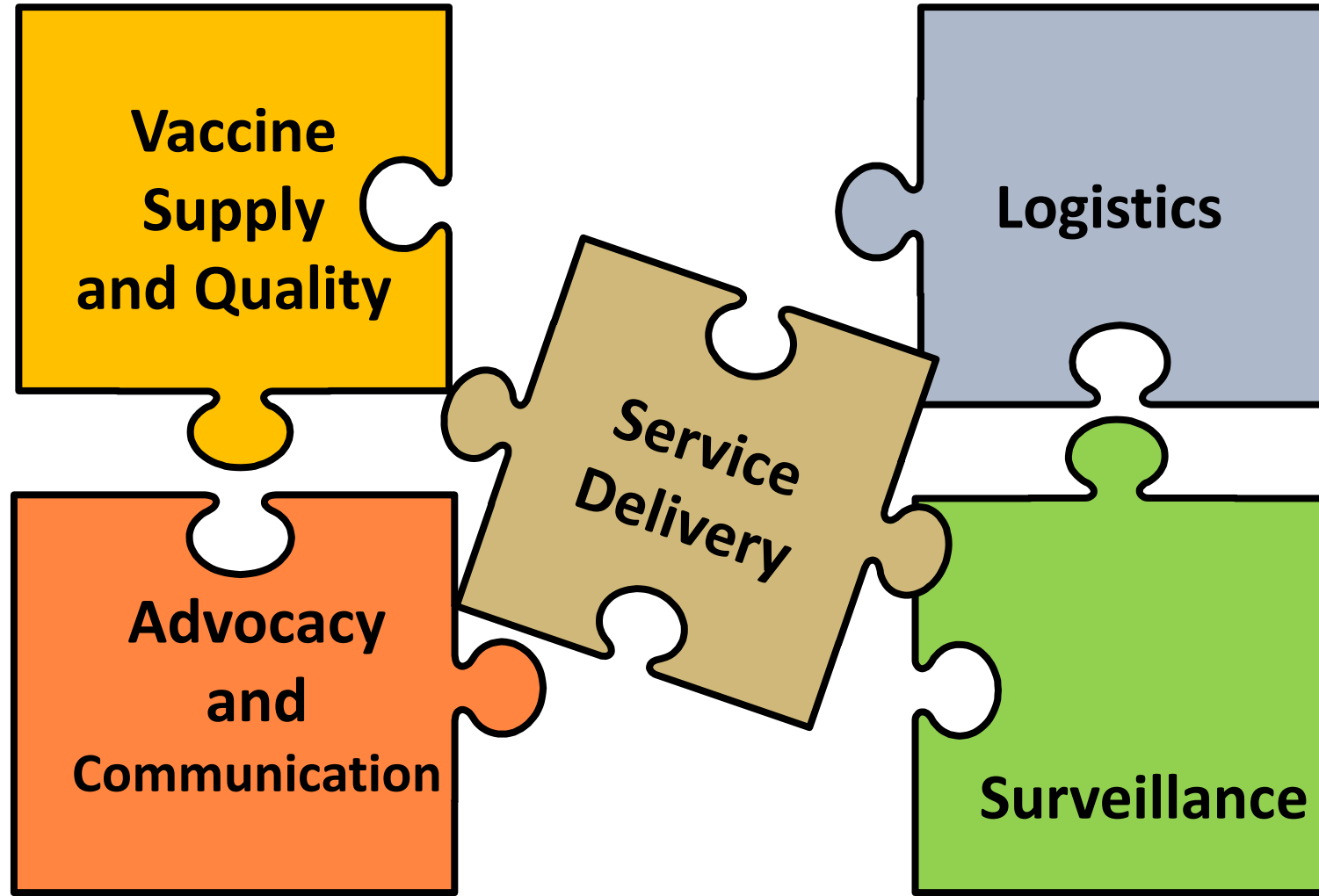


How effective is the COVID-19 vaccine  
contacted by the person?



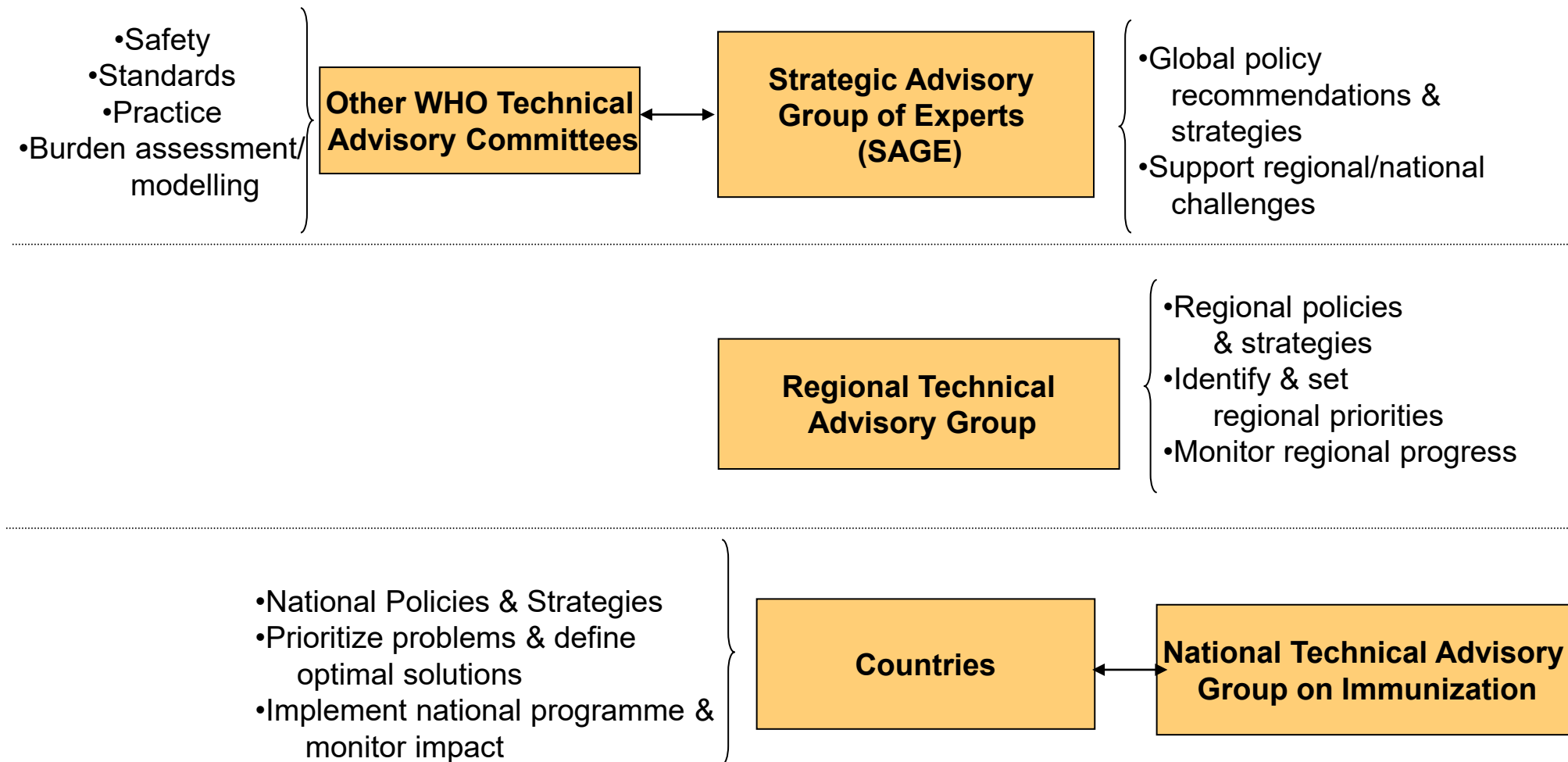
**A vaccine is only effective if injected properly and timely into the person**

# Basic operational components of immunization programs





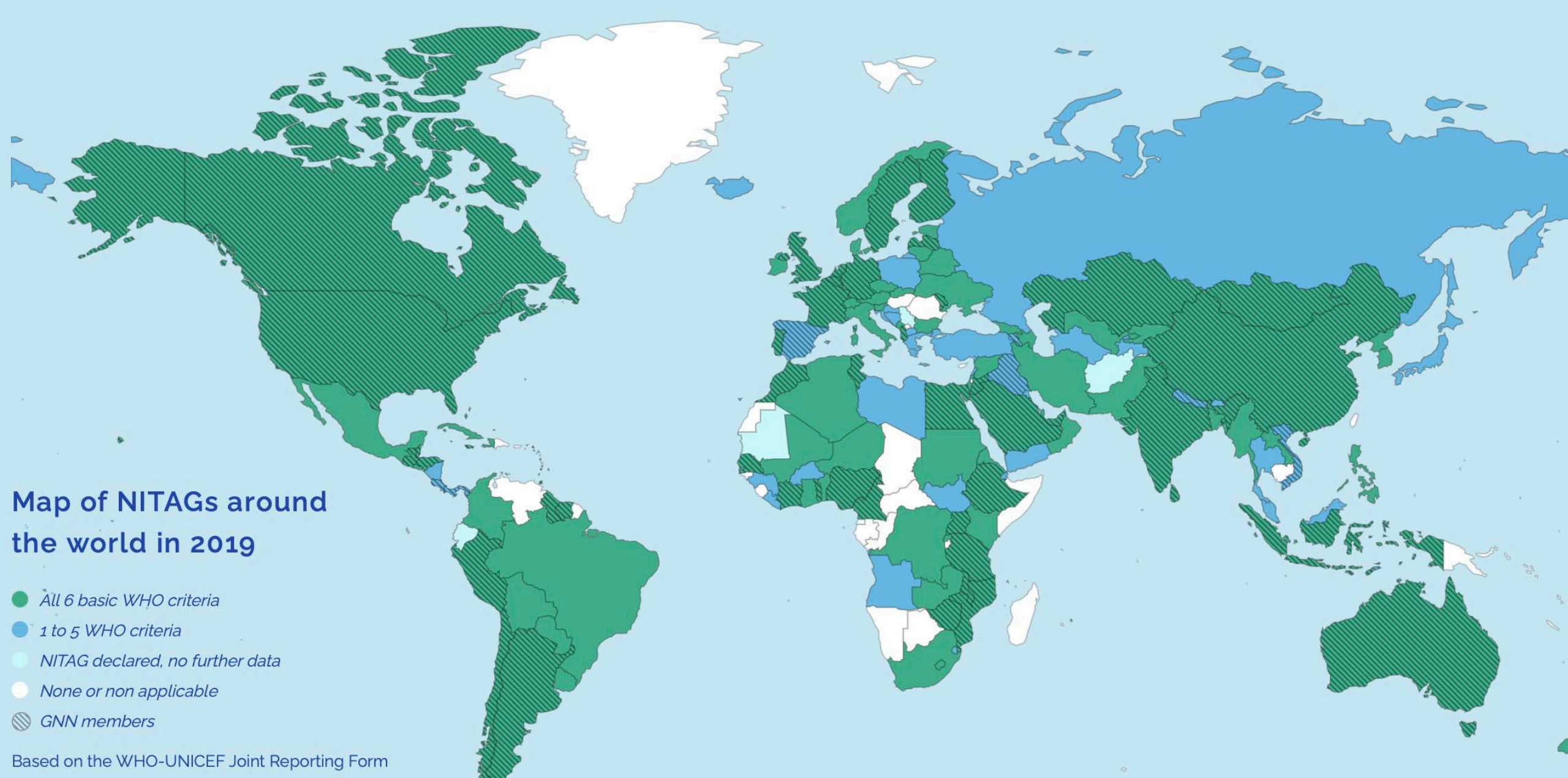
# Immunization Policy Advisory Framework at Global, Regional, and National Levels



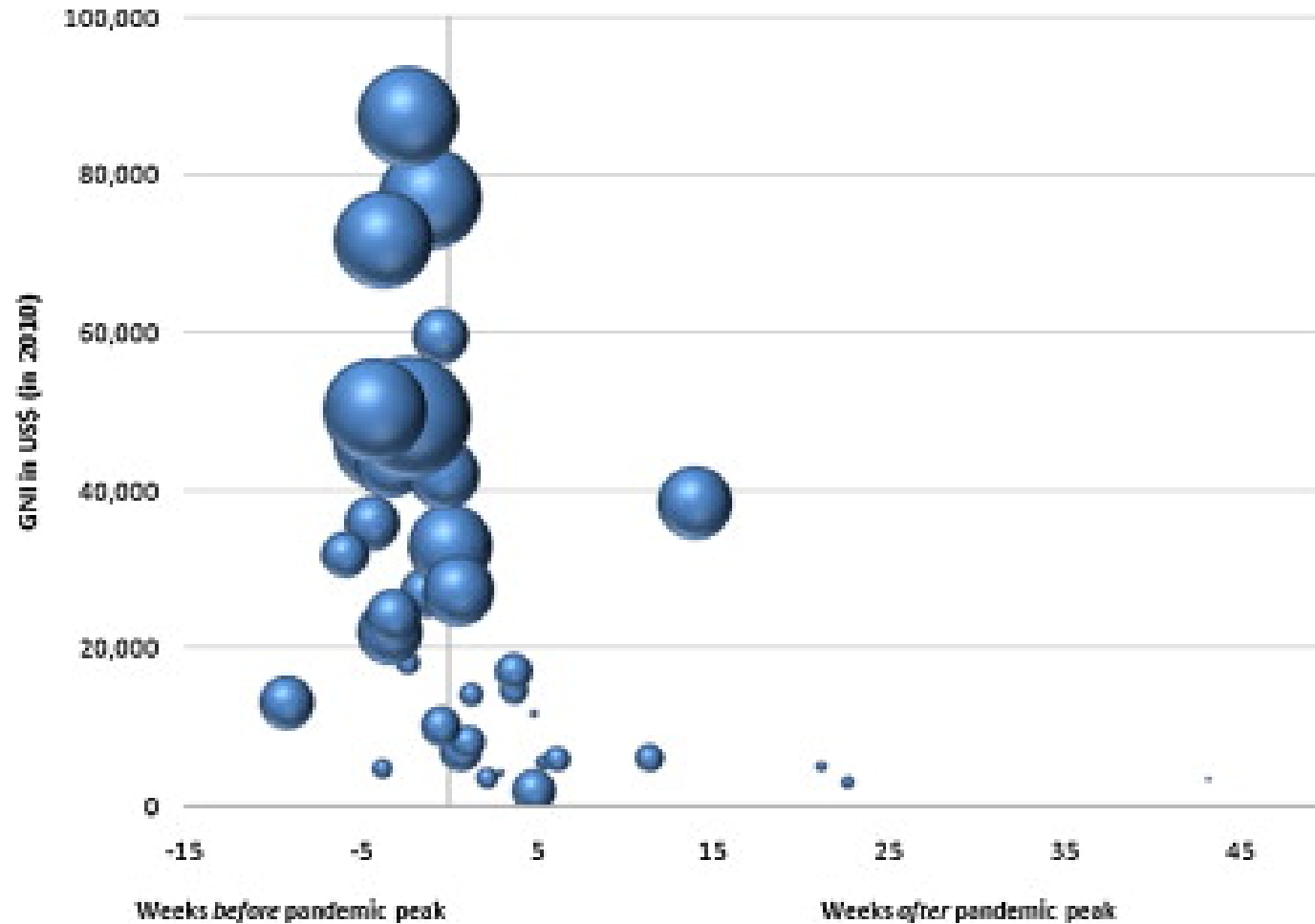
## Map of NITAGs around the world in 2019

- All 6 basic WHO criteria
- 1 to 5 WHO criteria
- NITAG declared, no further data
- None or non applicable
- GNN members

Based on the WHO-UNICEF Joint Reporting Form

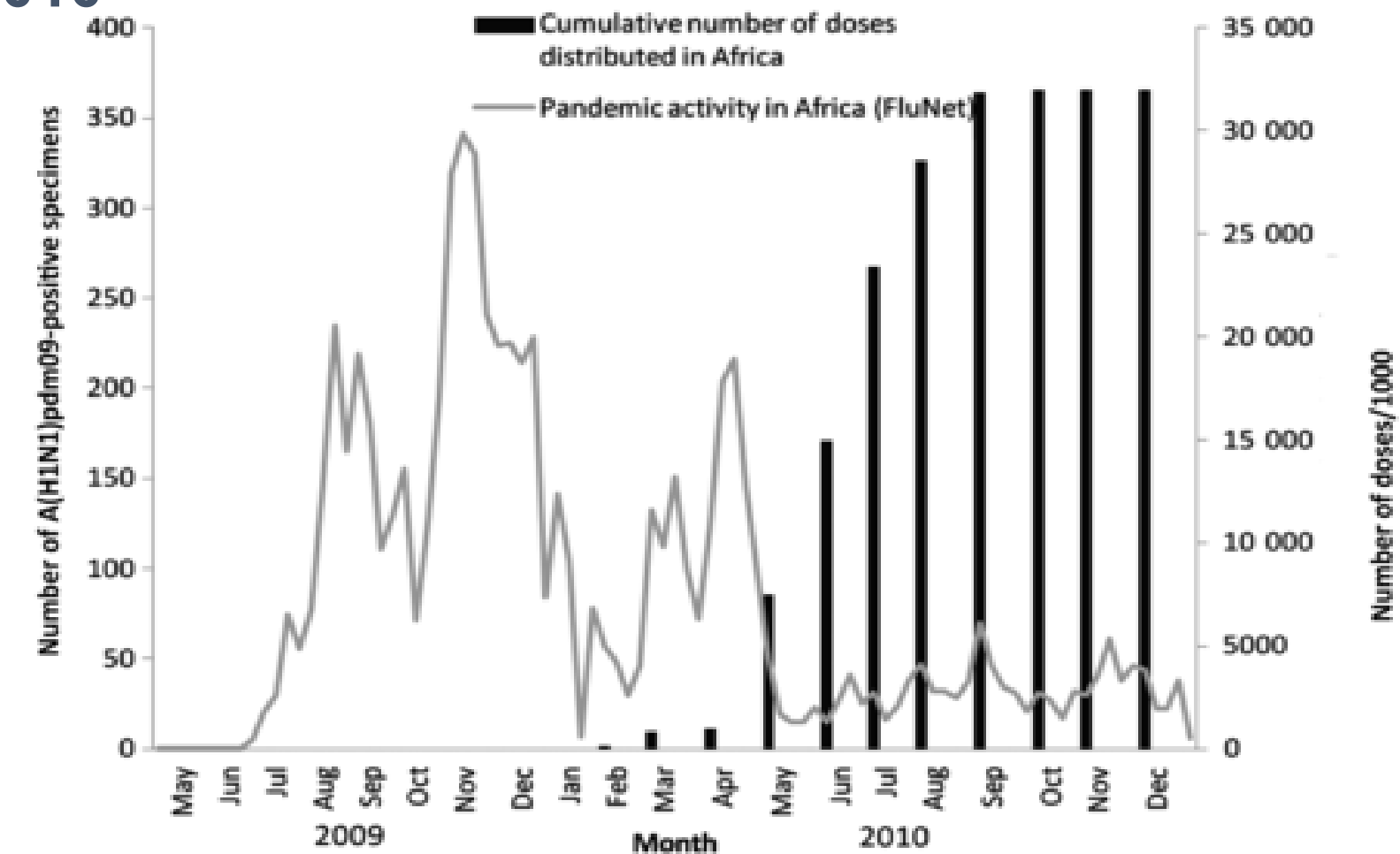


# Unequal access to vaccines in the WHO European Region during the A(H1N1) influenza pandemic in 2009

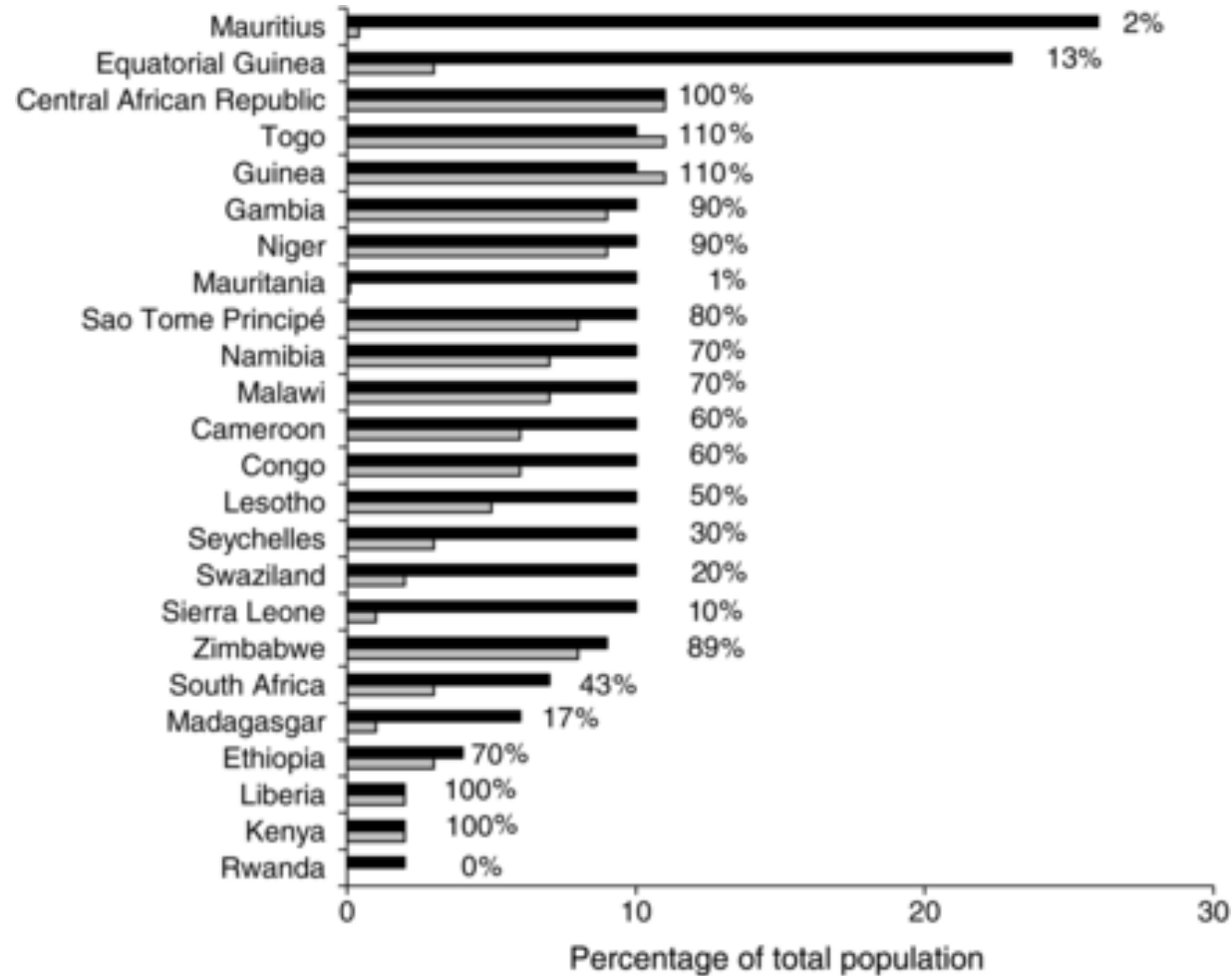


Jorgensen P, et al Vaccine. 2013;31(38):4060-2. doi: 10.1016/j.vaccine.2013.06.082.

No. specimens positive for influenza A[H1N1]pdm09 in WHO AMRO region and cumulative doses of A(H1N1)pdm09 vaccine distributed by month, May 2009– Dec 2010

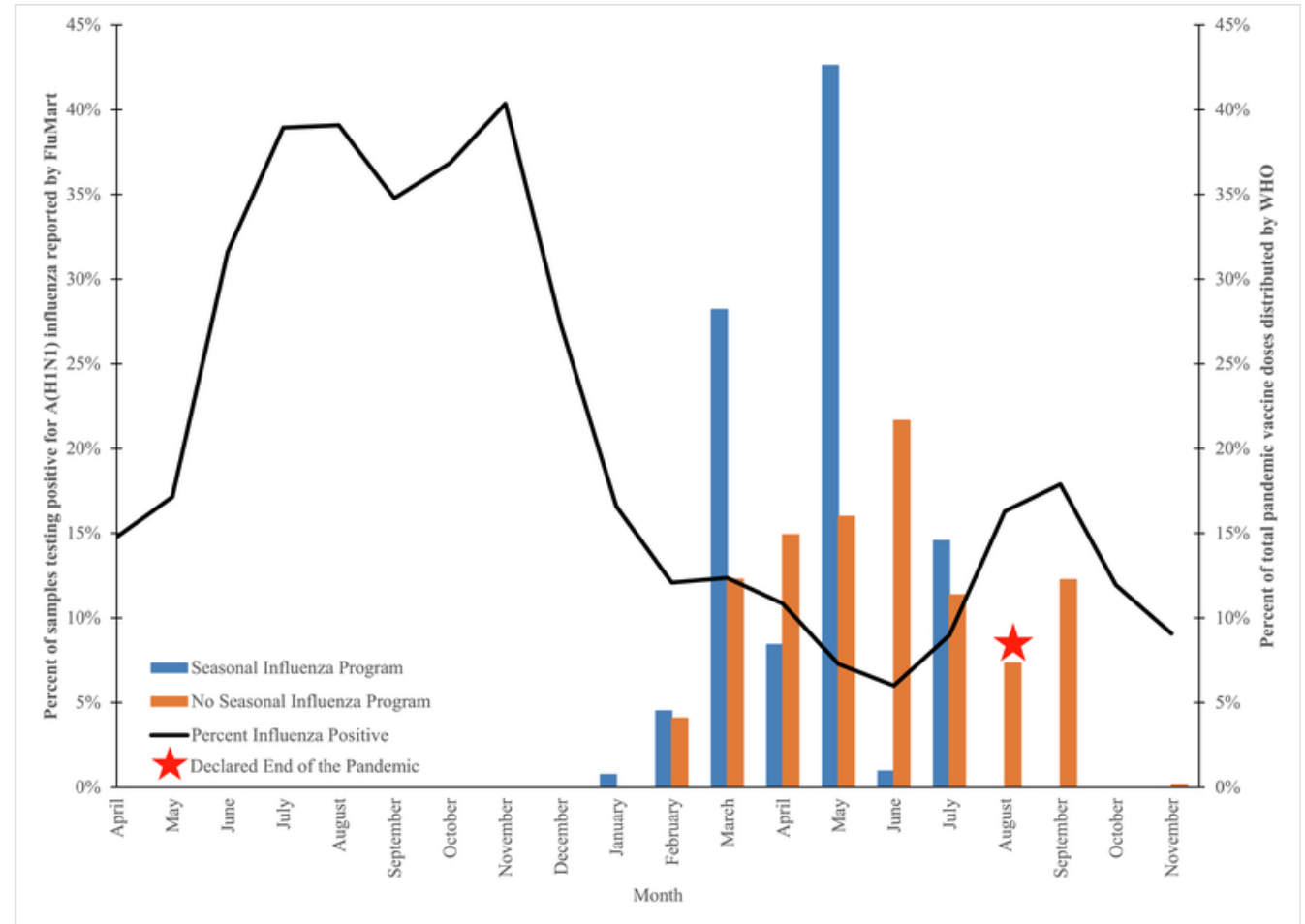


Percentage of the population planned to be vaccinated (black bars) and the % vaccinated (grey bars) in 24 African countries in 2010



Percent of specimens that tested influenza positive globally and percent of A(H1N1)pdm09 vaccine doses distributed by seasonal program and month, April 2009-November 2010.

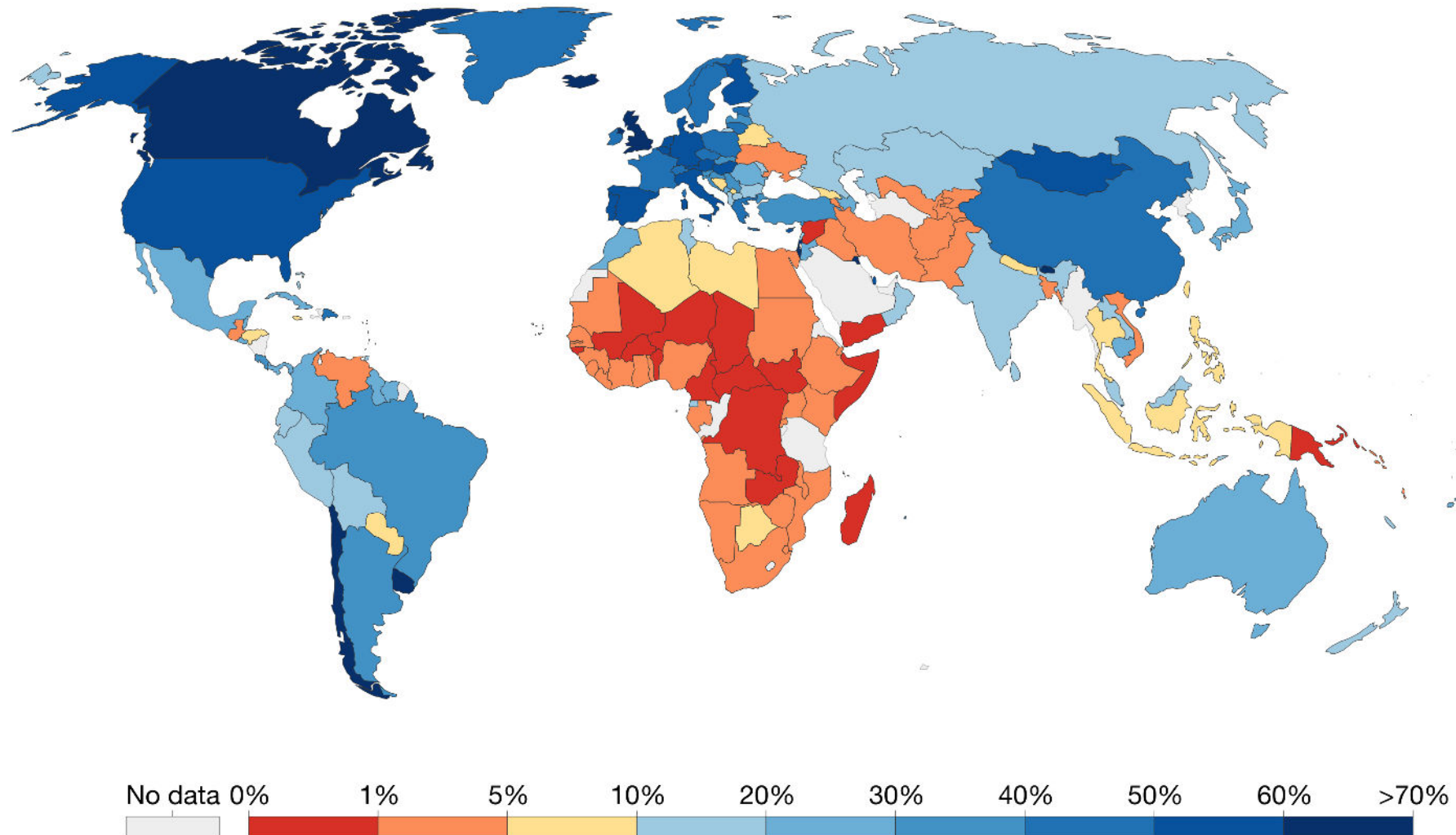
- Countries with **seasonal vaccine program** received vaccines prior to second wave
- Countries ***without*** an influenza program received vaccine during the '**post-pandemic**' period
- 83% vaccine delivered in the 'first-wave' was used, vs. 72% in the 'second-wave', and 48% after the pandemic



Porter RM, et al Vaccine. 2020;38(5):1152-1159.  
doi: 10.1016/j.vaccine.2019.11.025.

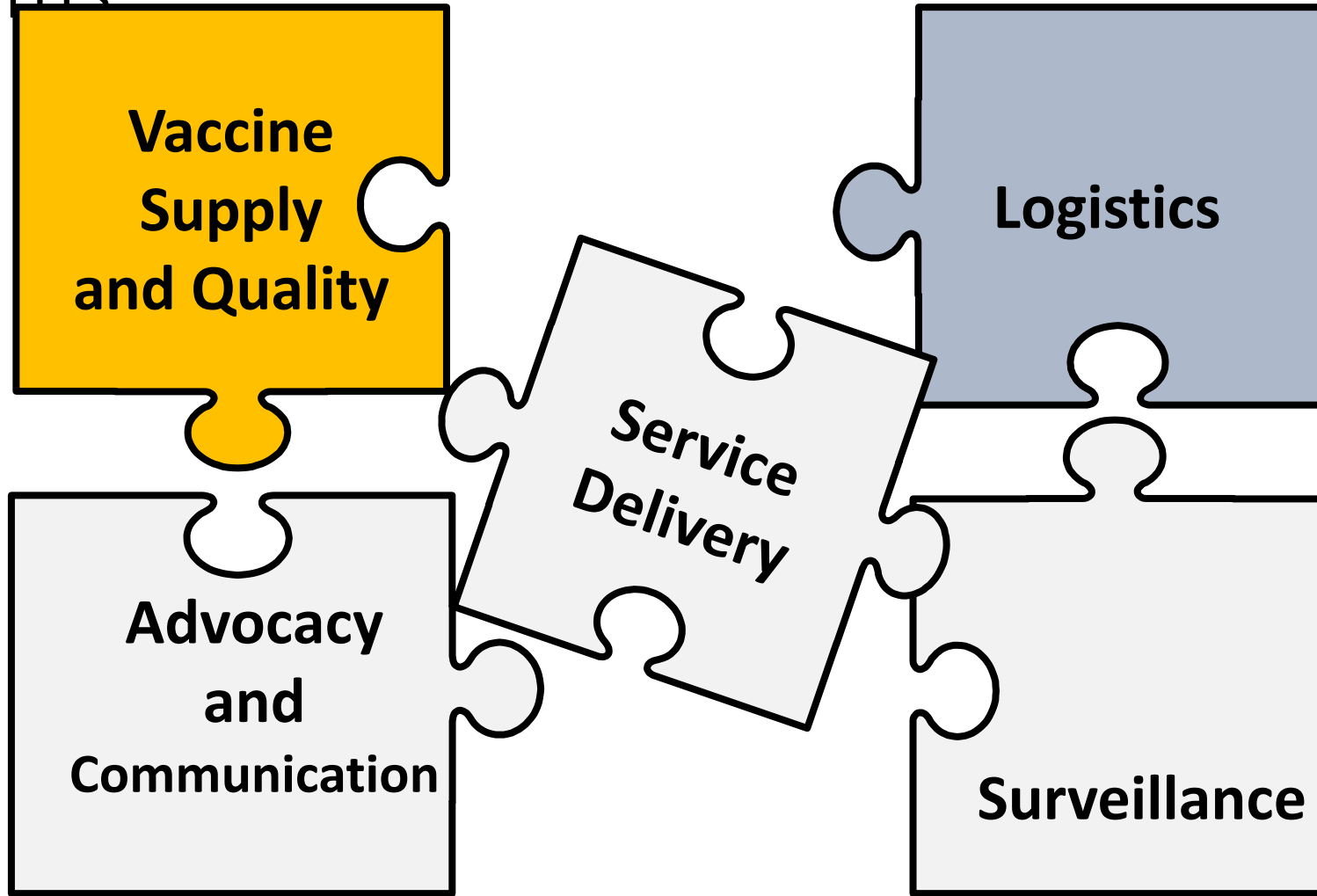


# Percent of people who have received at least one dose of COVID-19 vaccine by country

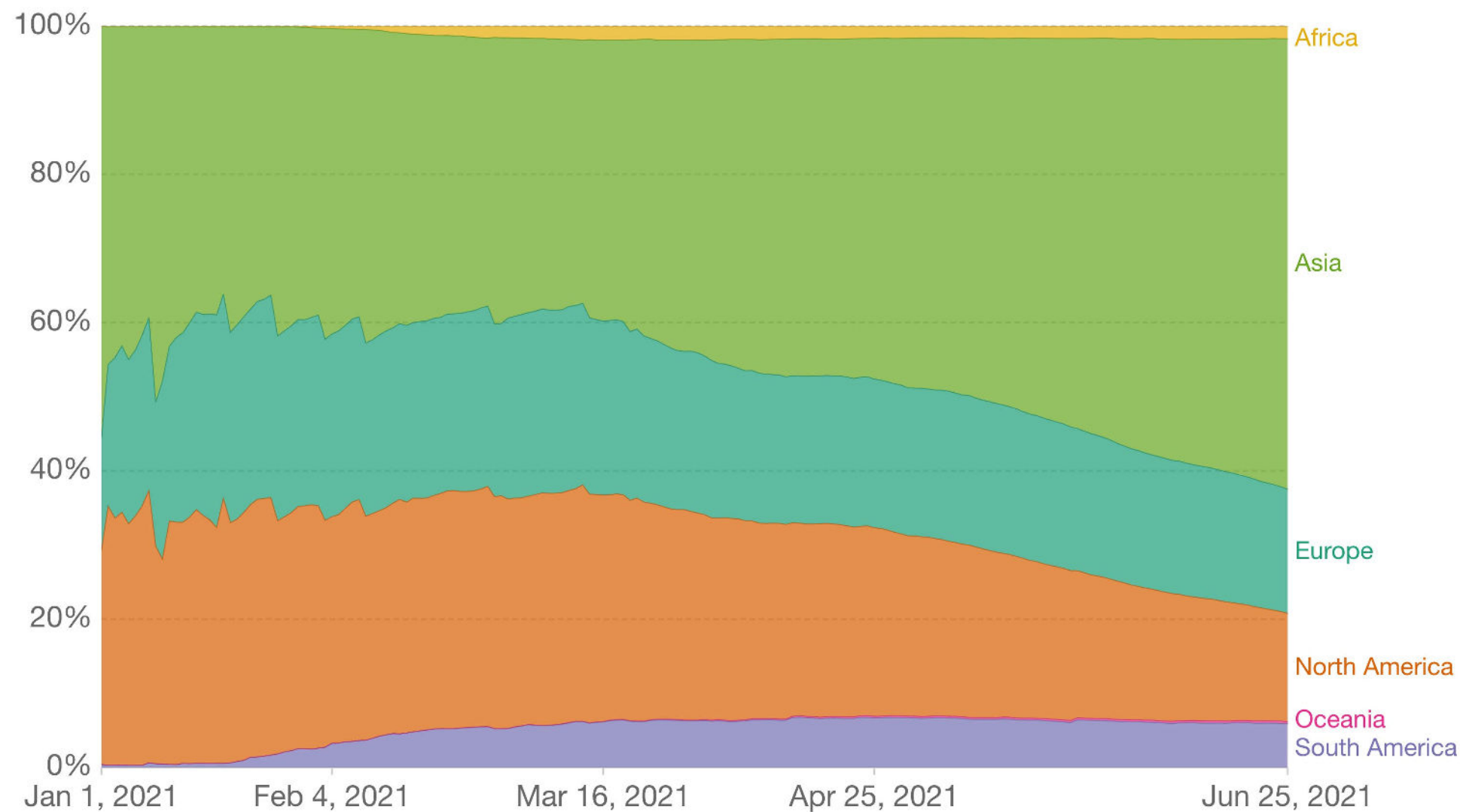




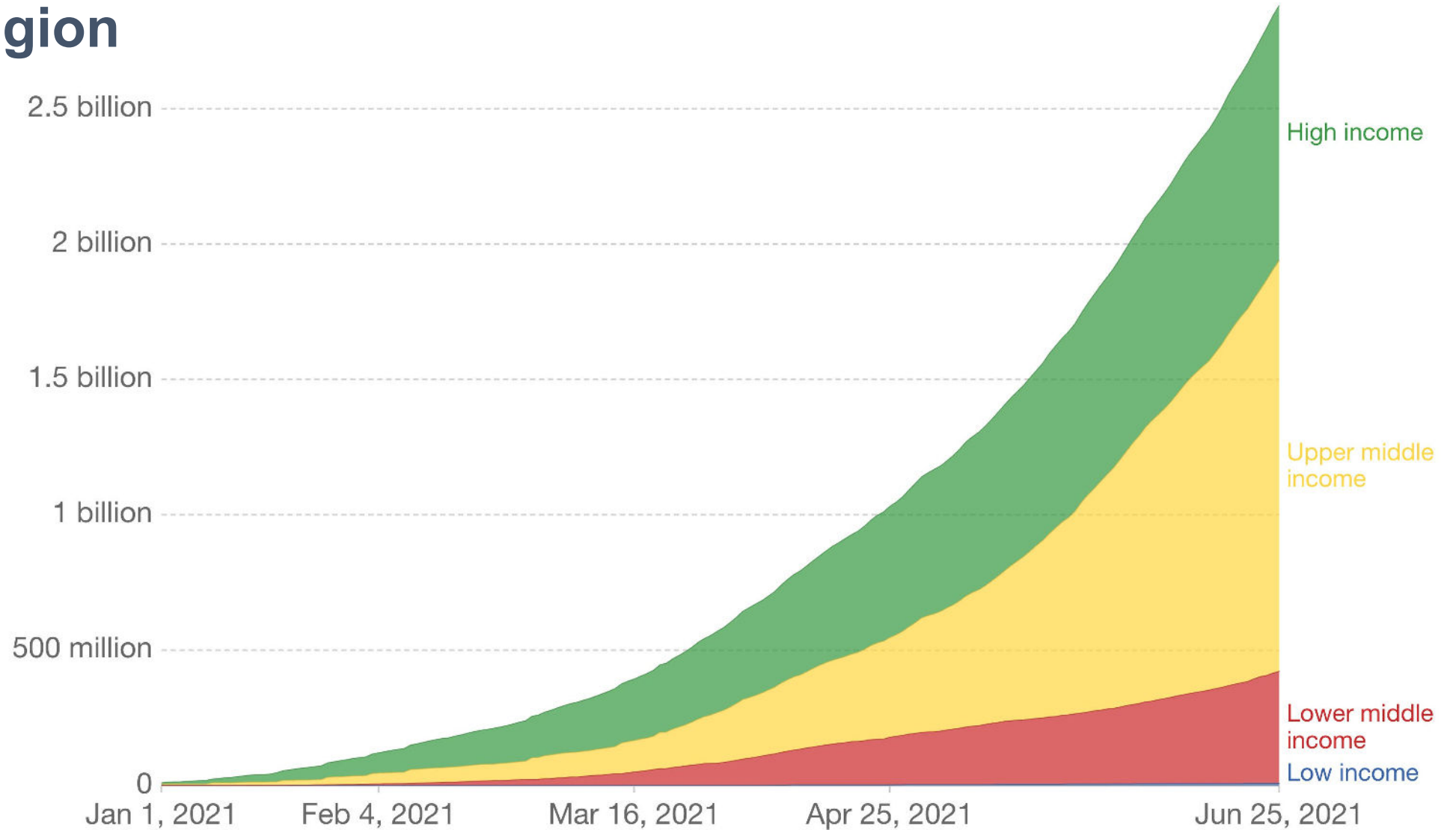
# Basic operational components of immunization programs



# Cumulative COVID-19 vaccine doses administered per continent

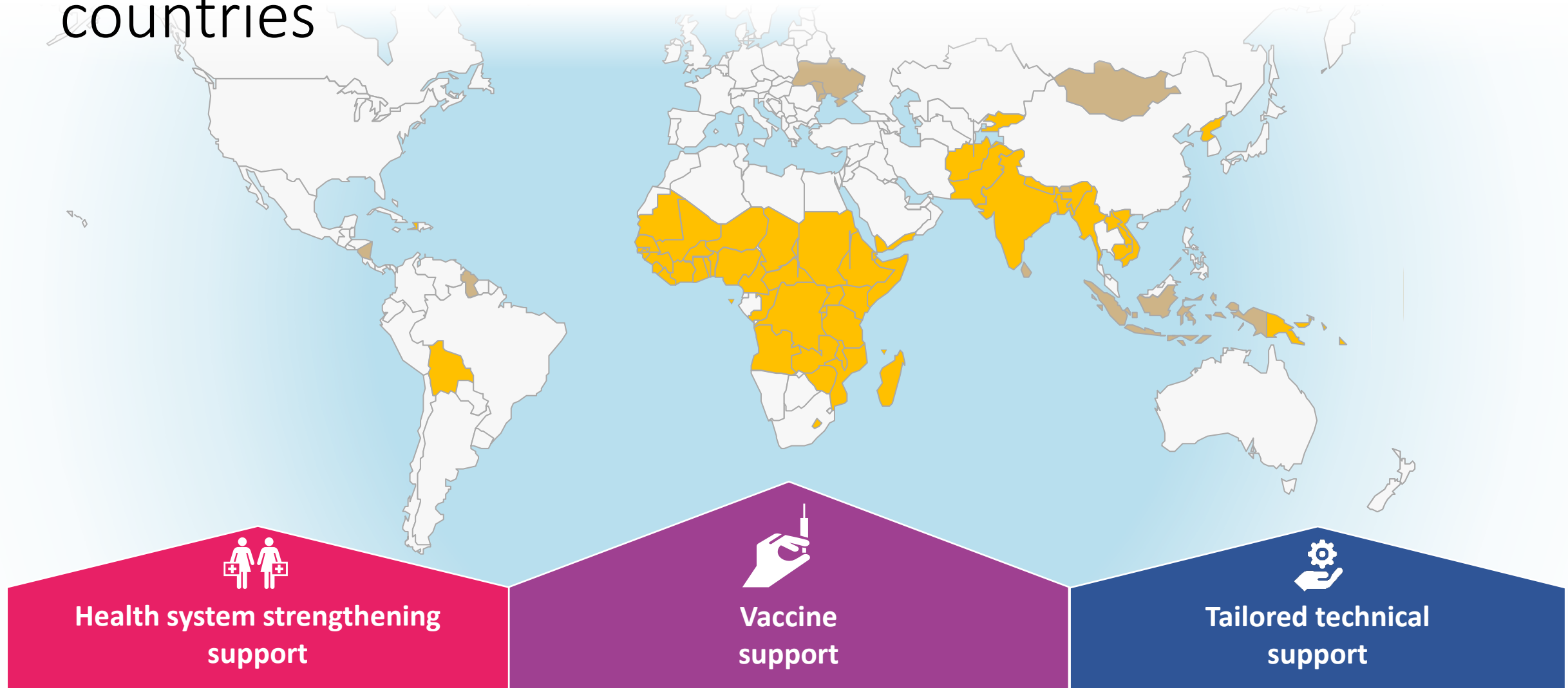


# Cumulative COVID-19 vaccine doses administered by country income region

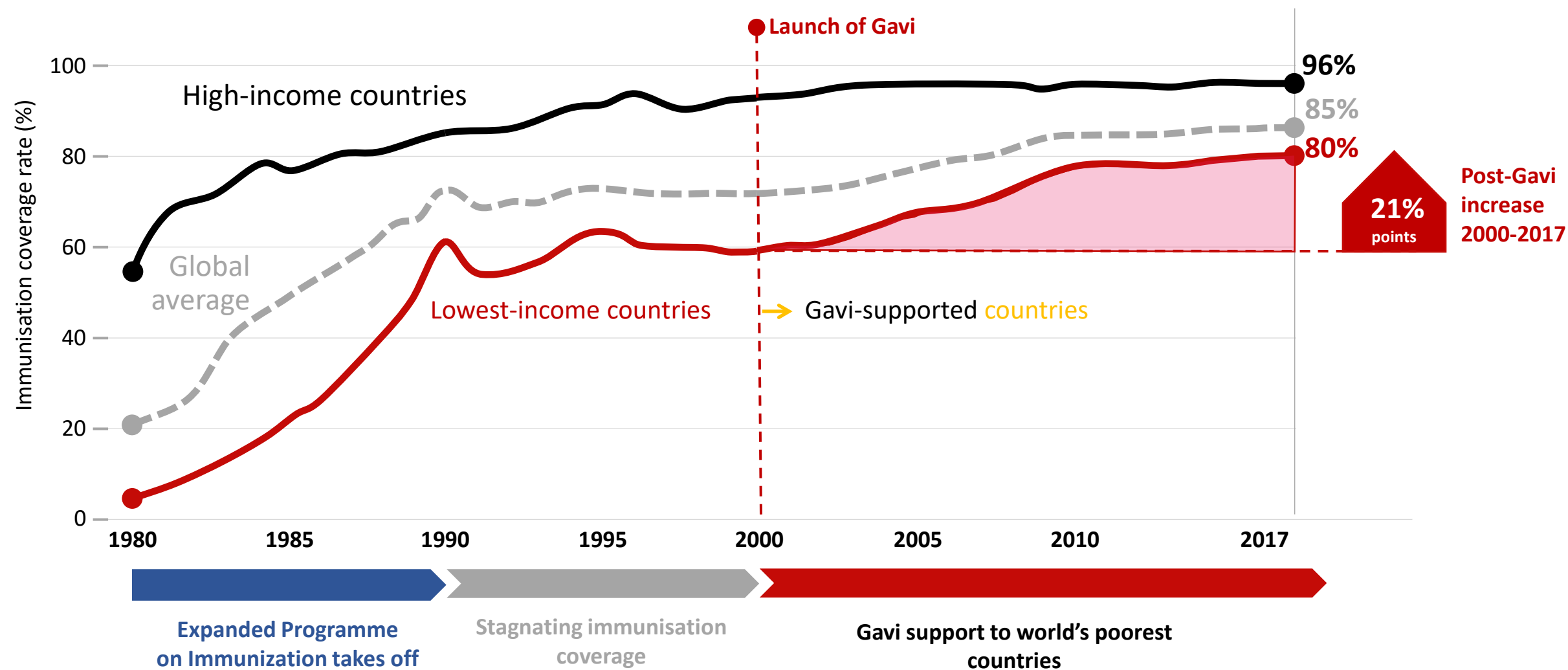


[www.ourworldindata.org](http://www.ourworldindata.org) (Last accessed June 25, 2021)

# Gavi provides three main types of support to countries



# Immunisation coverage: closing the global gap



. Note: Includes DTP-containing vaccines, such as pentavalent vaccine.

Source: WHO/UNICEF Estimates of National Immunization Coverage, 2018

### Access to COVID-19 Tools Accelerator

#### Vaccines

2 billion doses to the world by the end of 2021

#### Therapeutics

245 million courses to LMICs by mid-2021

#### Diagnostics

500 million tests to LMICs by mid-2021

#### Health Systems Connector

Delivery Partners



**\$6.6** Billion resources mobilised for COVAX AMC



**7** vaccine candidates signed COVAX agreements

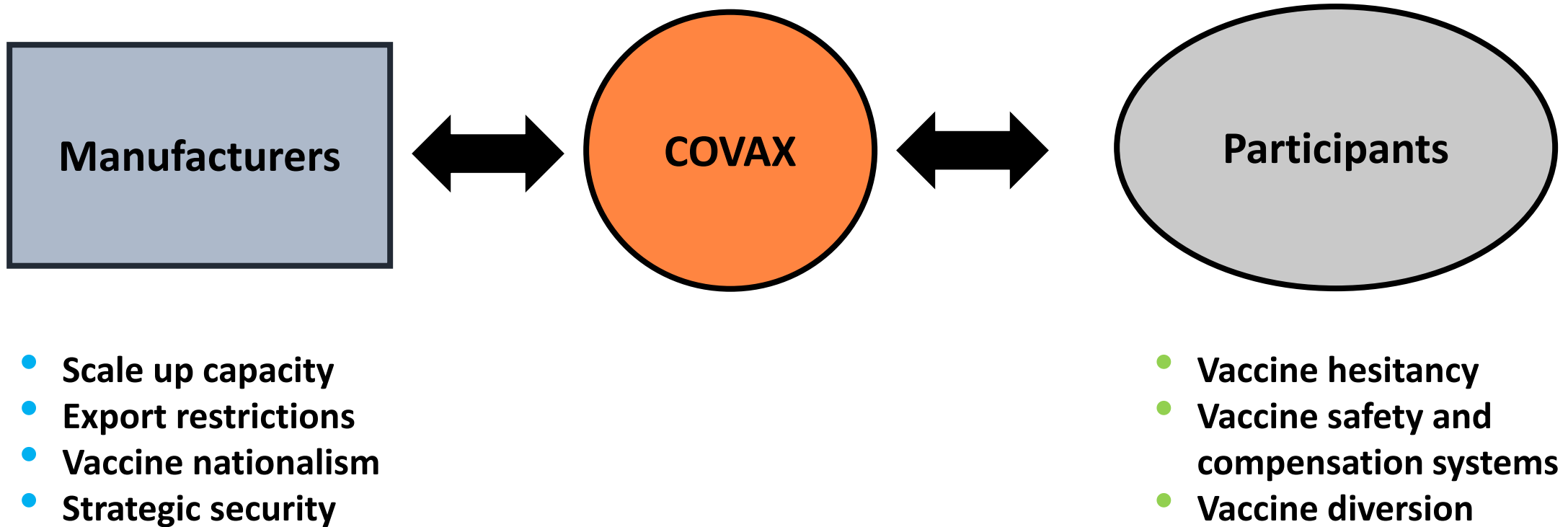
**2.2** billion doses secured through signed agreements or in negotiation for delivery in 2021



**40.8** million doses delivered from 251mn doses initially allocated

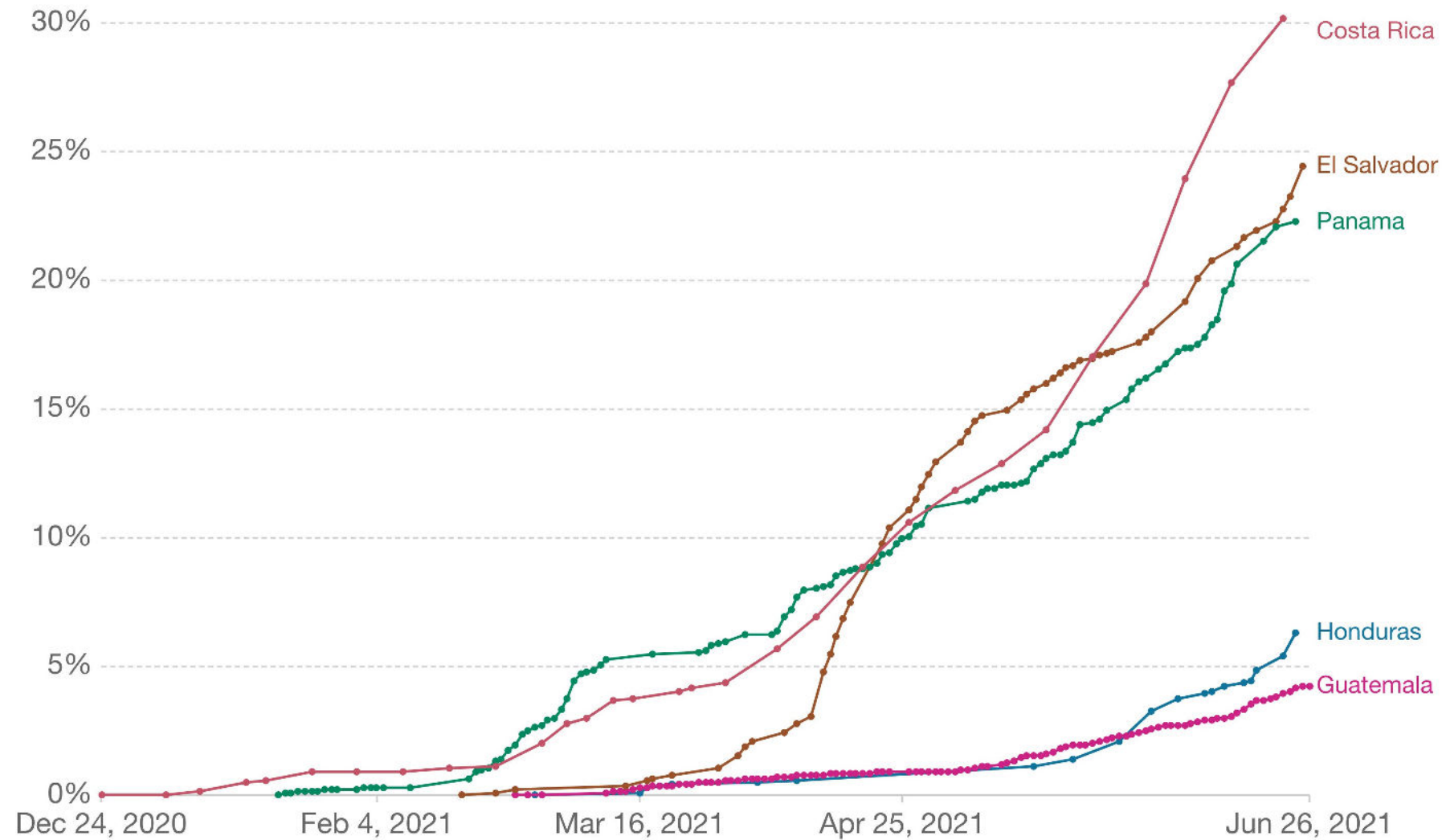
**118** initial participants have received doses of 190 confirmed and eligible participants

COVAX exposed the challenges faced by manufacturers and participants

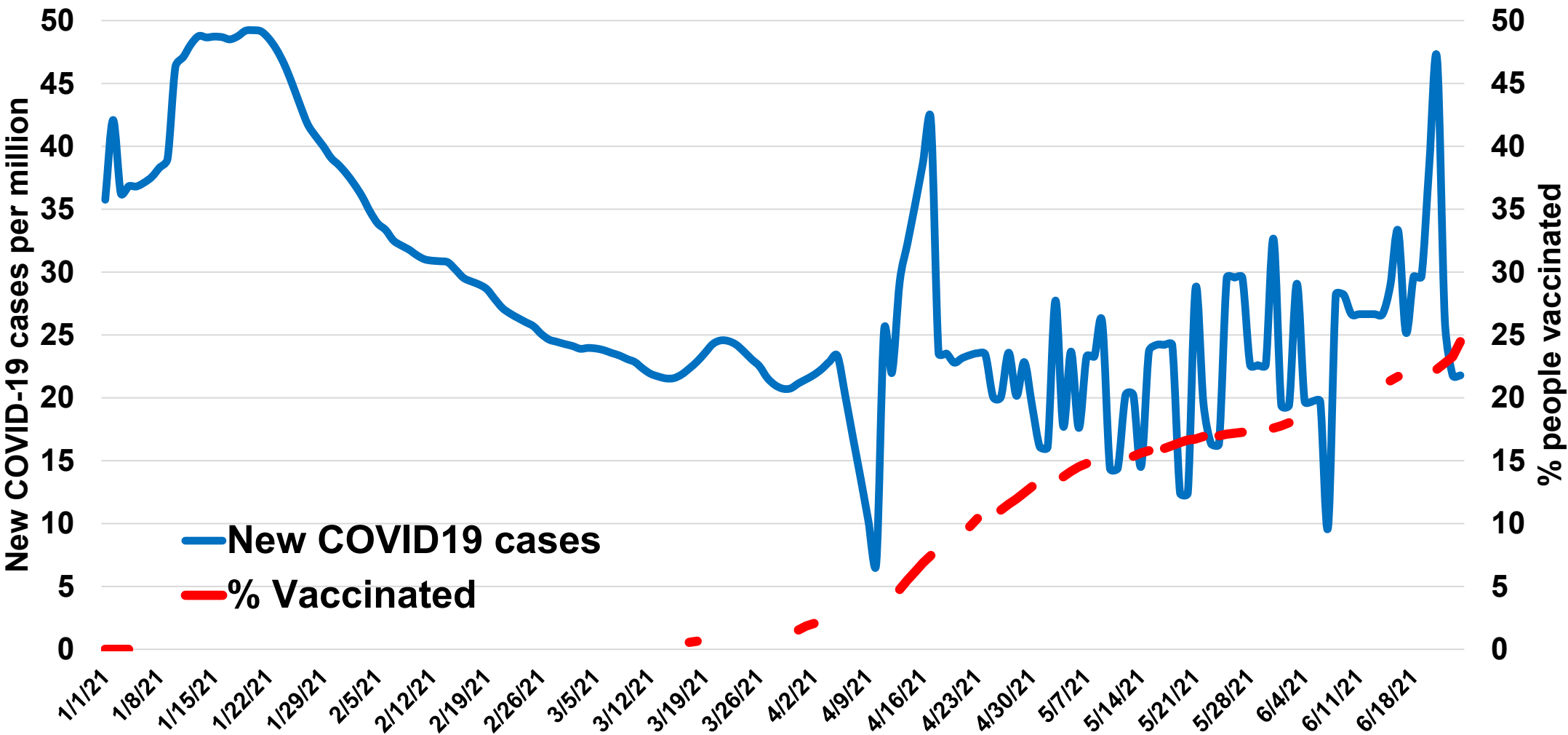


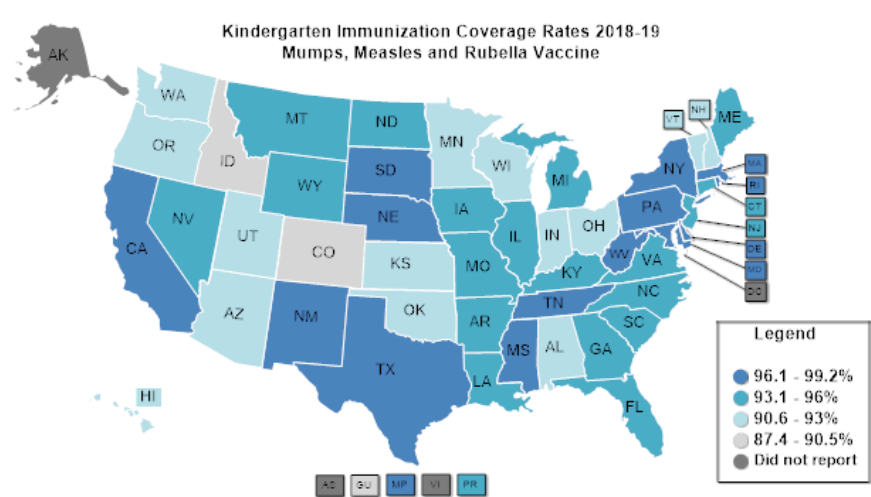


## Percent of people vaccinated with at least one dose of COVID-19 vaccine in Central America



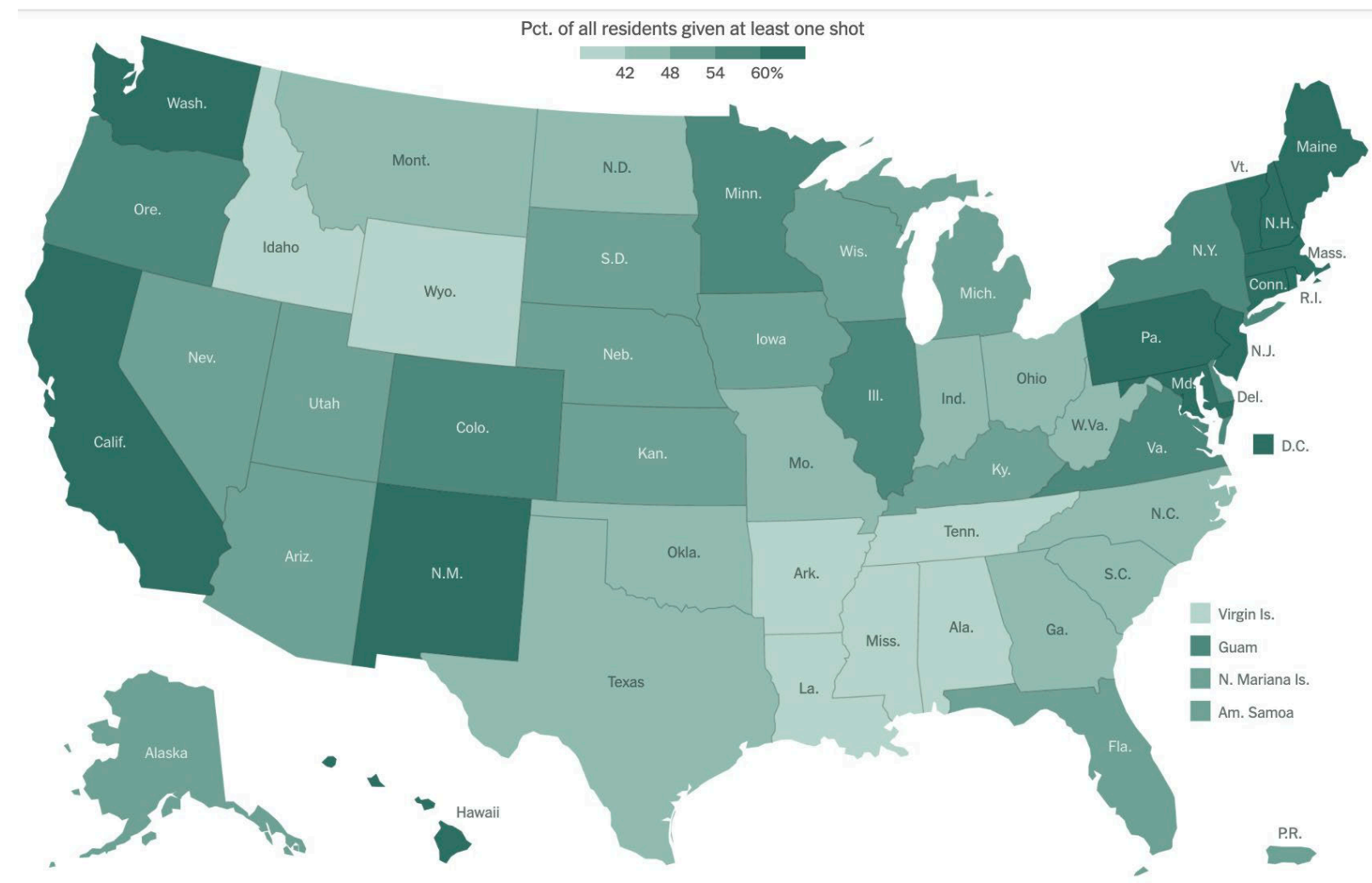
# Trends in COVID-19 new cases and proportion of population vaccinated in El Salvador – January to June 2021





Source: CDC, Morbidity and Mortality Weekly Report:  
[https://www.cdc.gov/mmwr/volumes/68/wr/mm6841e1.htm?s\\_cid=mm6841e1\\_w](https://www.cdc.gov/mmwr/volumes/68/wr/mm6841e1.htm?s_cid=mm6841e1_w)

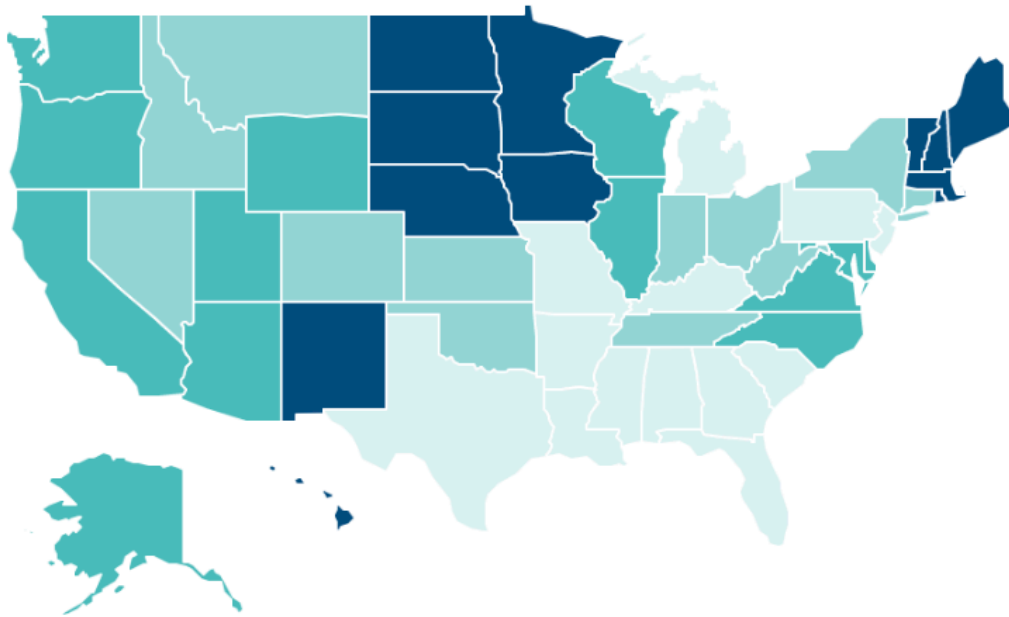
# Could we predict COVID-19 vaccine coverage based on childhood vaccine data?



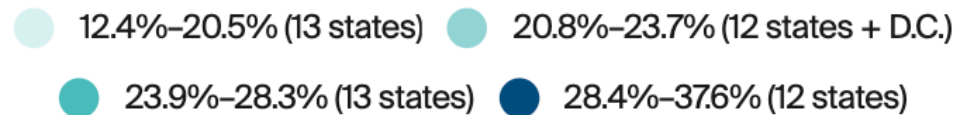
Source: Centers for Disease Control and Prevention

Distribution and take-up of the H1N1 vaccine in 2009–2010 fell short in many states that today have higher total COVID-19 burdens

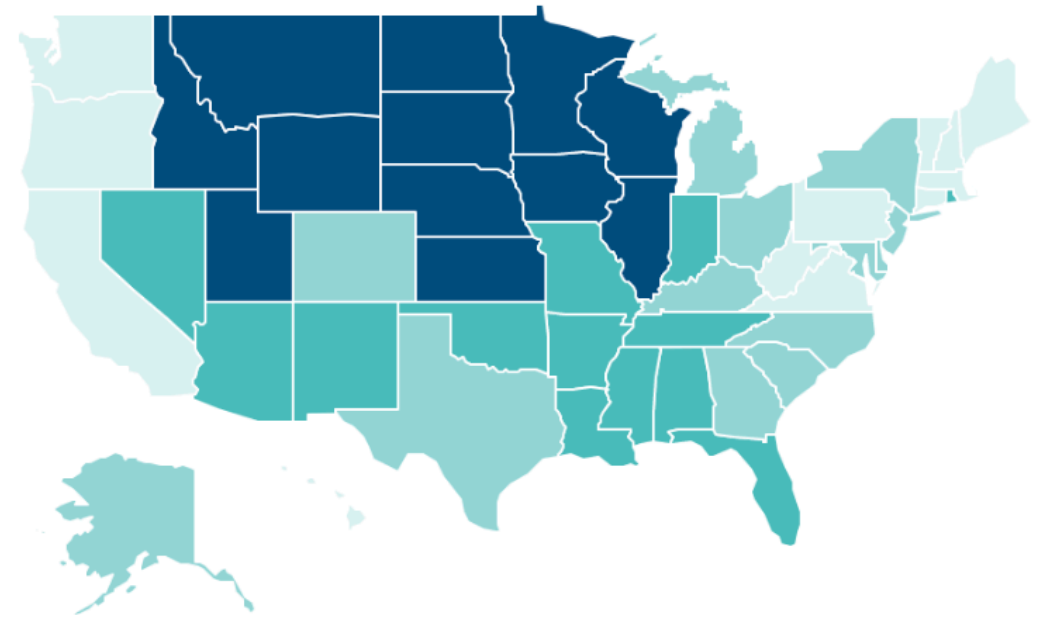
**H1N1 vaccination, Oct. 2009–May 2010**



*Vaccination rates (age 18+)*



**COVID-19 cases**



*Cases per 100,000 people*

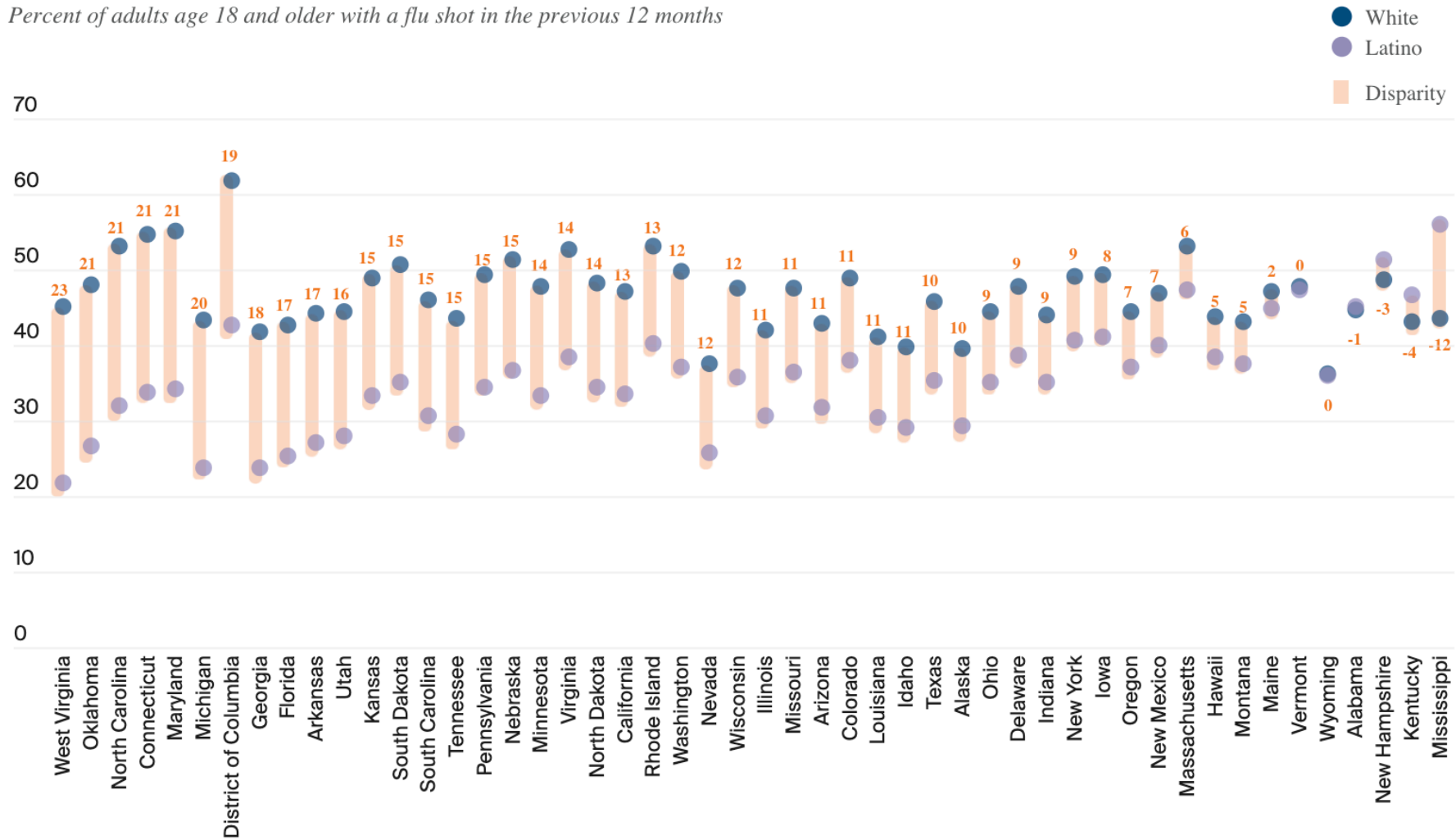


**Source:** Jesse C. Baumgartner et al., How Prepared Are States to Vaccinate the Public Against COVID-19? Learning from Influenza and H1N1 Vaccination Programs (Commonwealth Fund, Dec. 2020). <https://doi.org/10.26099/y667-yr94>

# Influenza vaccination gaps between white and Latino respondents in the United States by state

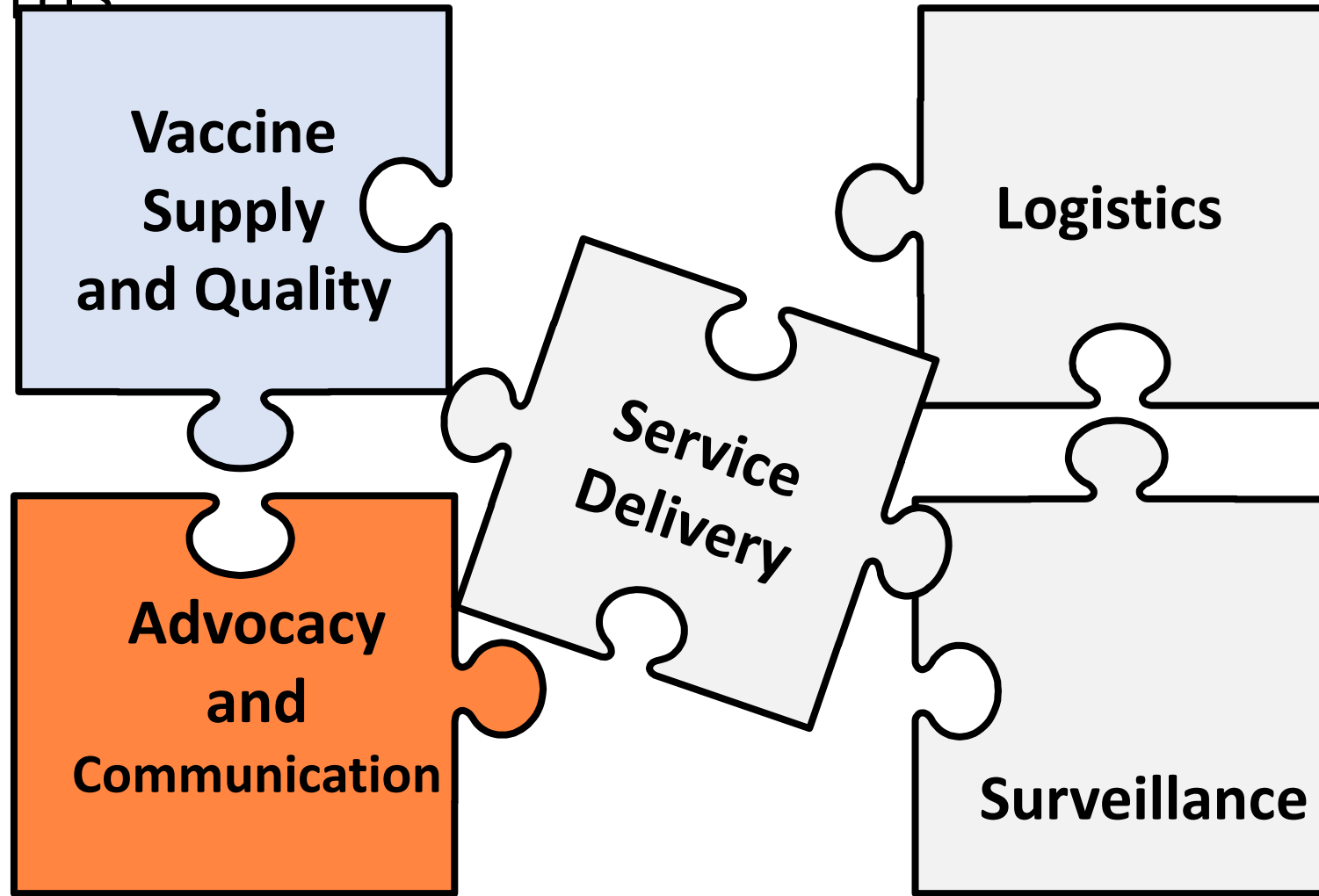
(Data: Behavioral Risk Factor Surveillance System (BRFSS), 2019)

*Percent of adults age 18 and older with a flu shot in the previous 12 months*

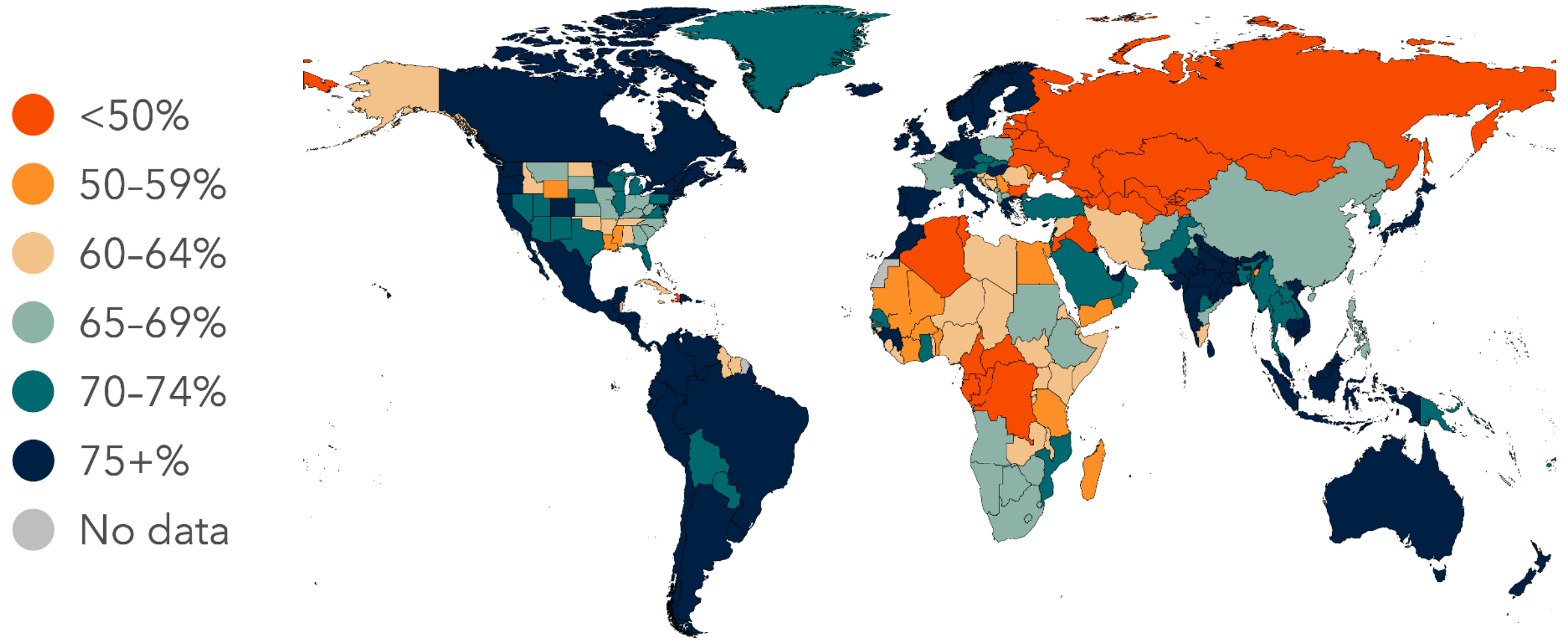


**Source:** Jesse C. Baumgartner et al., How Prepared Are States to Vaccinate the Public Against COVID-19? Learning from Influenza and H1N1 Vaccination Programs (Commonwealth Fund, Dec. 2020). <https://doi.org/10.26099/y667-yr94>

# Basic operational components of immunization programs



# Percent of adults who would accept or probably accept vaccine, March 23



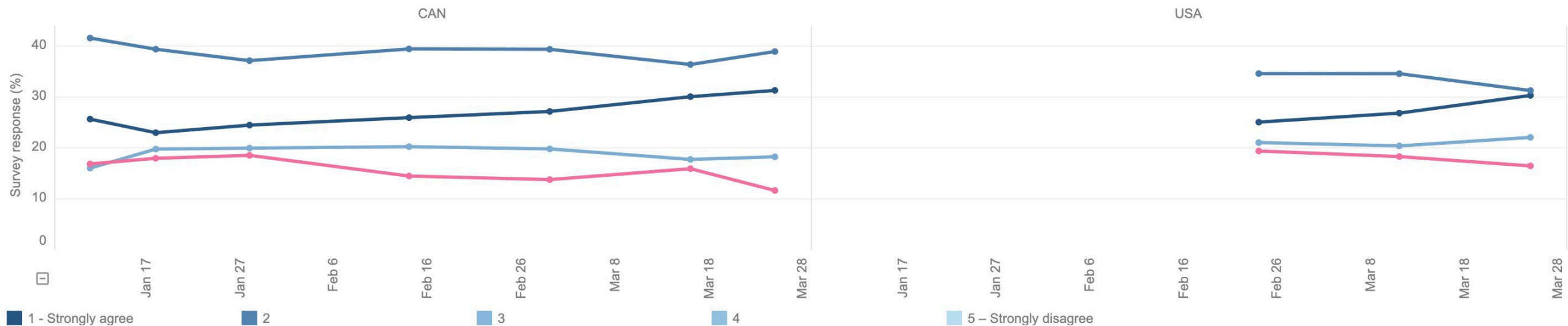
Communication paramount to confidence in vaccines



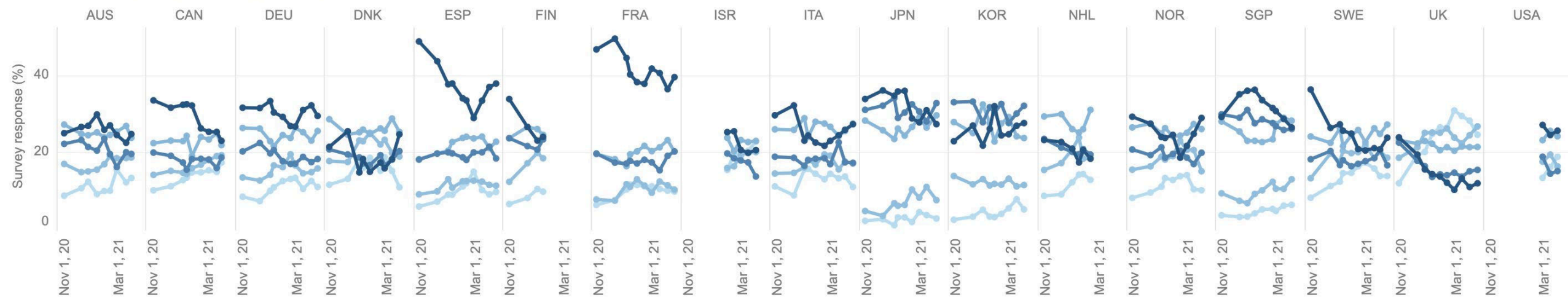
# Trends in confidence on COVID-19 vaccines

Not at all      A little      Moderately      Very much

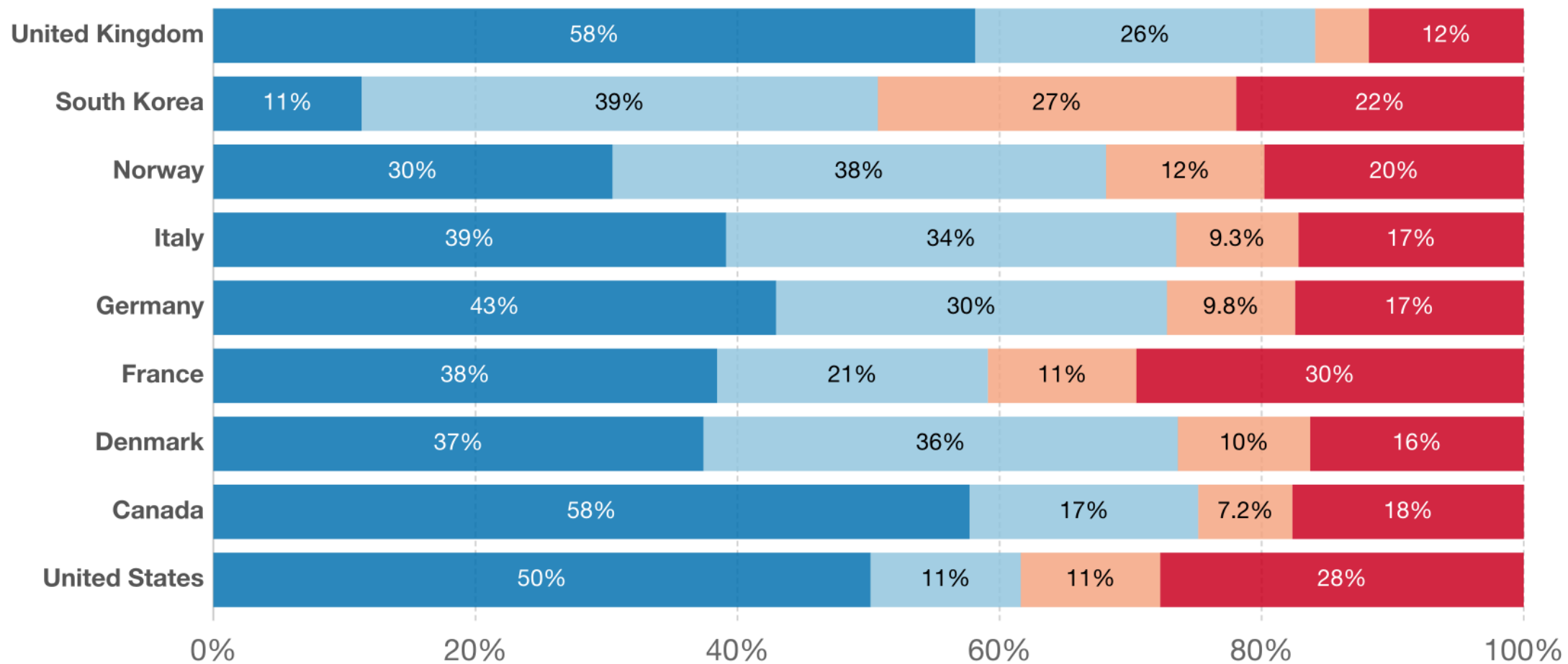
How much do you trust COVID-19 vaccines?



To what extent do you agree or disagree that you are worried about potential side effects of a COVID19 vaccine



■ Vaccinated (with at least one dose) ■ Unvaccinated and willing to get vaccinated  
■ Unvaccinated and uncertain if willing to get vaccinated ■ Unvaccinated and not willing to get vaccinated



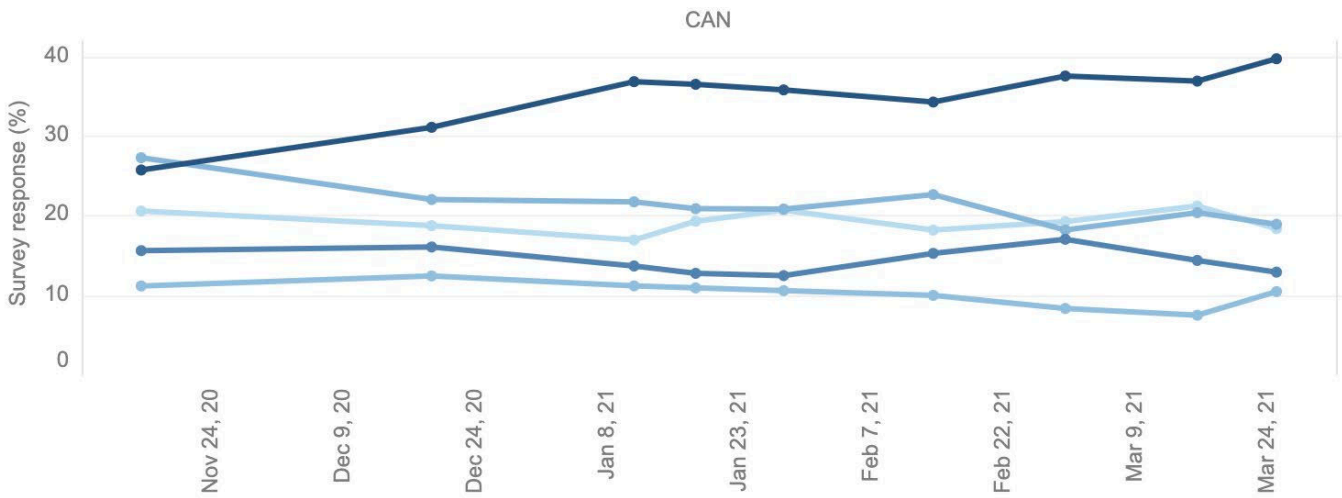
# Regrets of not getting the COVID-19 vaccine?

## Canada

## United States

1 - Strongly agree   2   3   4   5 - Strongly disagree

To what extent do you agree or disagree that if you do not get a COVID19 vaccine when it is available, you will regret it



# Lessons learned

- Inequities in epidemic response systems and immunizations programs major drivers of COVID-19 vaccine gaps
- **COVAX** first global mechanism to bring equity response
- Central American countries have shown major differences in response to the epidemic and vaccine deployment
- Gaps in distribution of vaccines poses a threat to control of the COVID-19 pandemic globally and a national security issue given emergence of variants
- Communication on safety, efficacy and risk-based deployment of vaccines has been not optimal

# Questions?

*Put in the chat now!*

