

*Deployment of COVID vaccines globally to those most in need
One year on in the life of Covid-19 pandemic*



Kate O'Brien, IVB Director

1 April 2021 | ADVAC Alumni Seminar



Then

50 million deaths
500 million cases



1918 Influenza

....in 2020

31 March 2020; SAGE Director's Report

> 33,000 deaths
>715,000 cases



2019 Sars-CoV-2

....and now

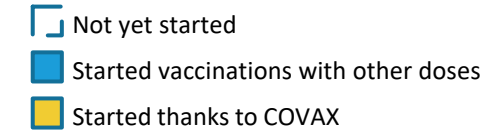
31 March 2021; ADVAC Seminar

> 2,796,561 deaths
>127,877,462 cases

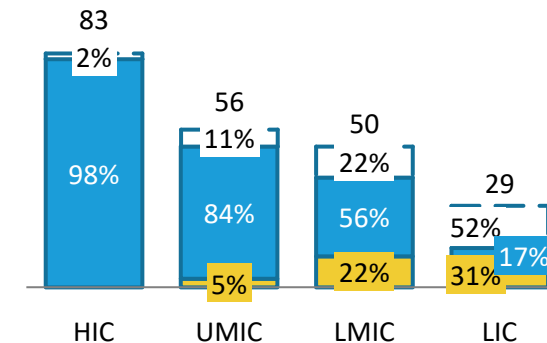


Key numbers on Covid-19 vaccine roll-out

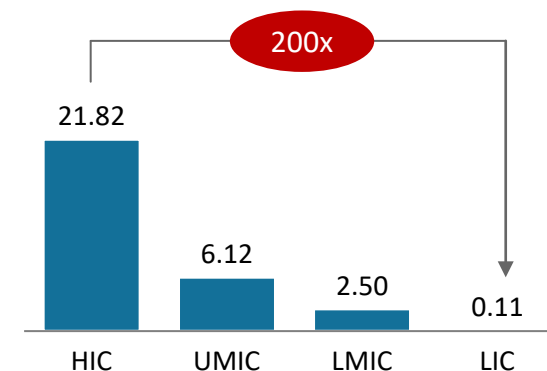
- **113 days** since first country started vaccinating
- **574 million vaccine doses** have been administered:
 - 76% in 10 countries (26% in one country)
 - At least 10 different vaccines (4 platforms)¹
- Campaigns **have started in 183 economies**²:
 - **94% of HIC/UMIC** economies have started vaccination campaigns, while only **67% of LMIC/LIC** economies have done so
- **COVAX has shipped ~ 33.3 M doses to 74 participants** including 45 LMIC/LICs²:
 - 23 COVAX participants have started their first campaigns thanks to COVAX doses



Status of vaccination campaigns by income level, #economies

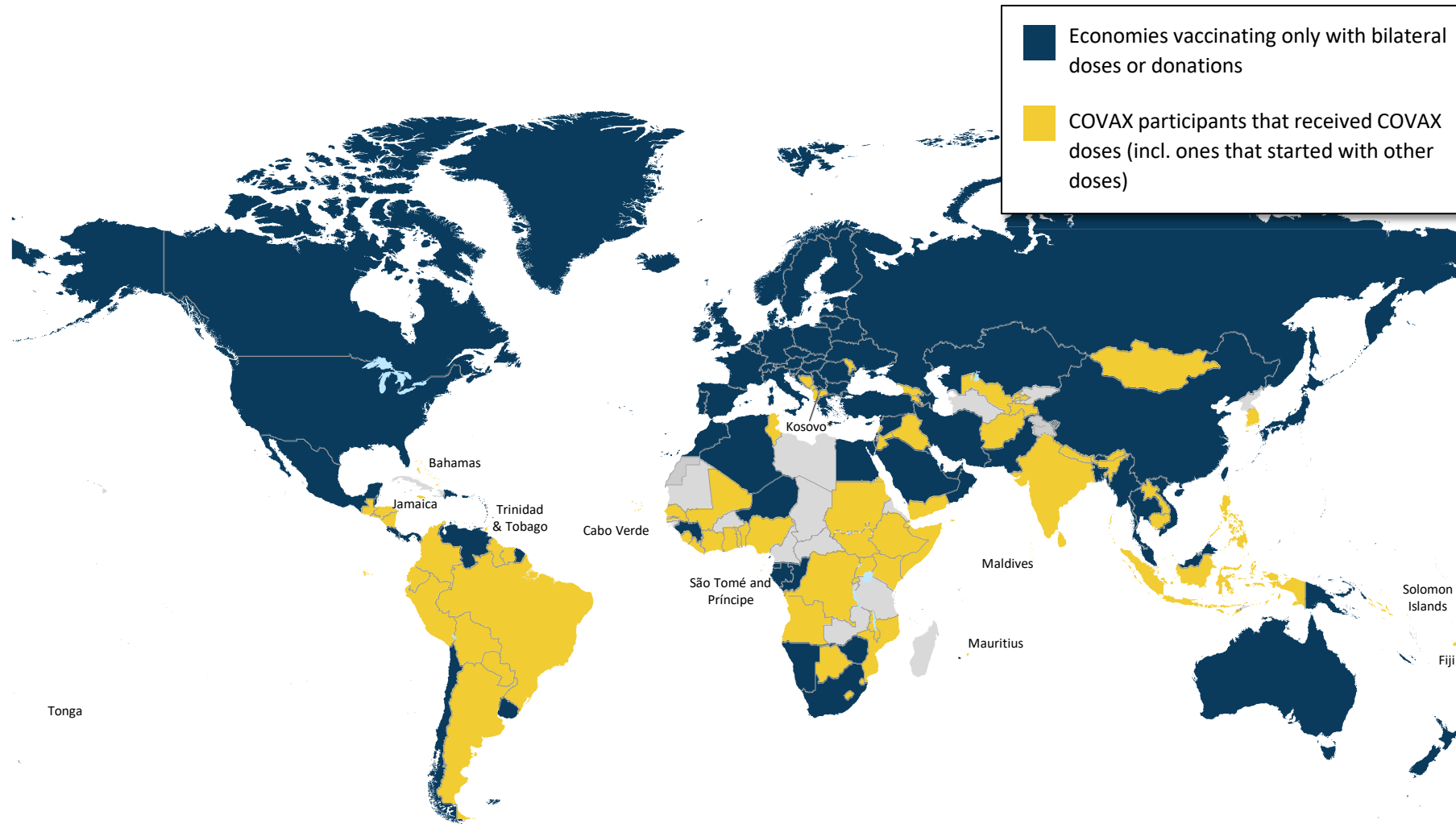


Doses administered per 100 population



1. A) Pfizer, Moderna, Gamaleya, Sinovac, Sinopharm, SII, Bharat Biotech, AZ, Johnson & Johnson, EpiVacCorona. B) Platforms: Inactivated virus, mRNA, adenoviral vector, peptide; 2. World Bank classification (2021)

74 Economies that have received doses through COVAX



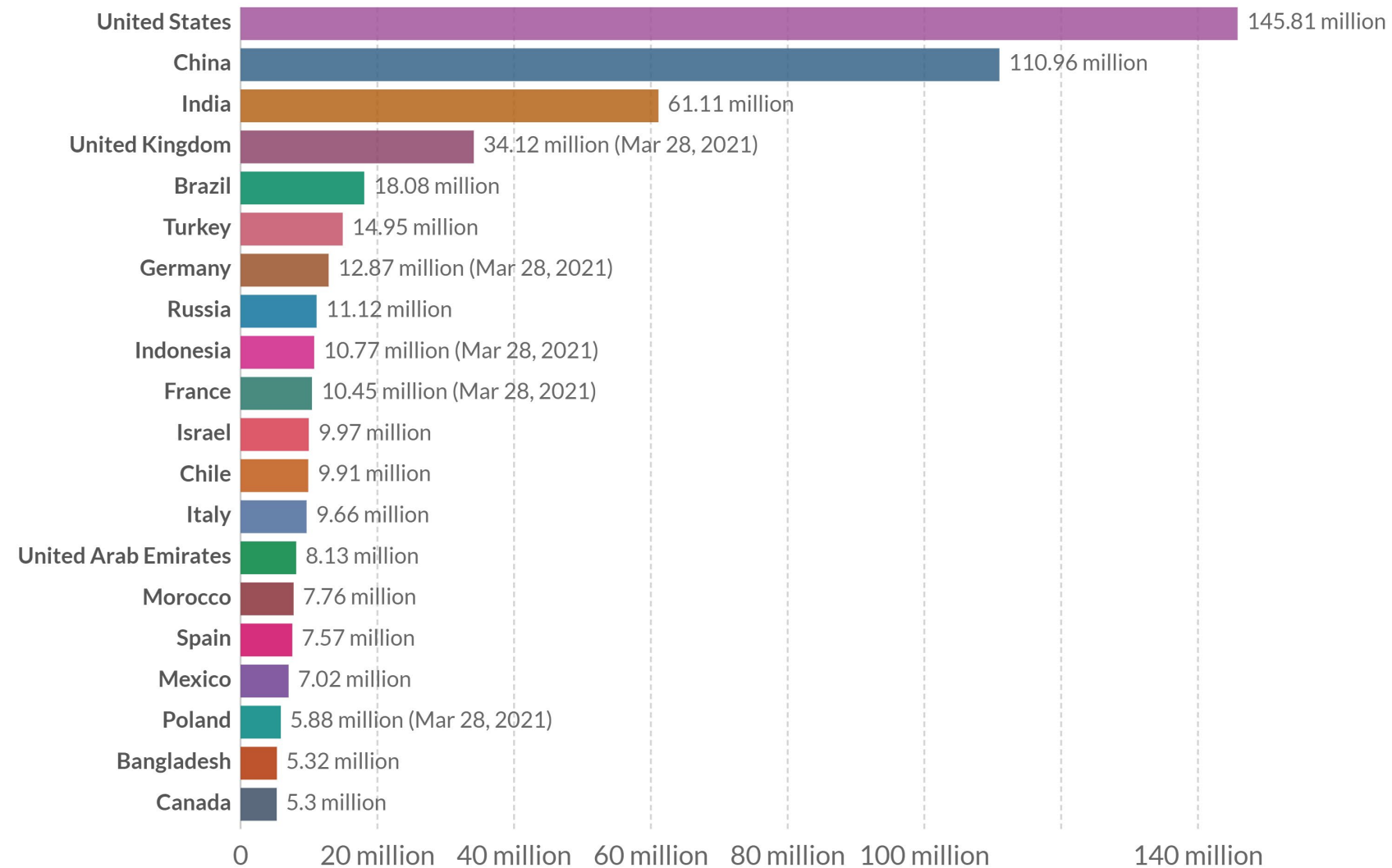
Note: The designations employed and the presentation of these materials do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

*Kosovo: All references to Kosovo should be understood to be in the context of the United Nations Security Council resolution 1244 (1999).

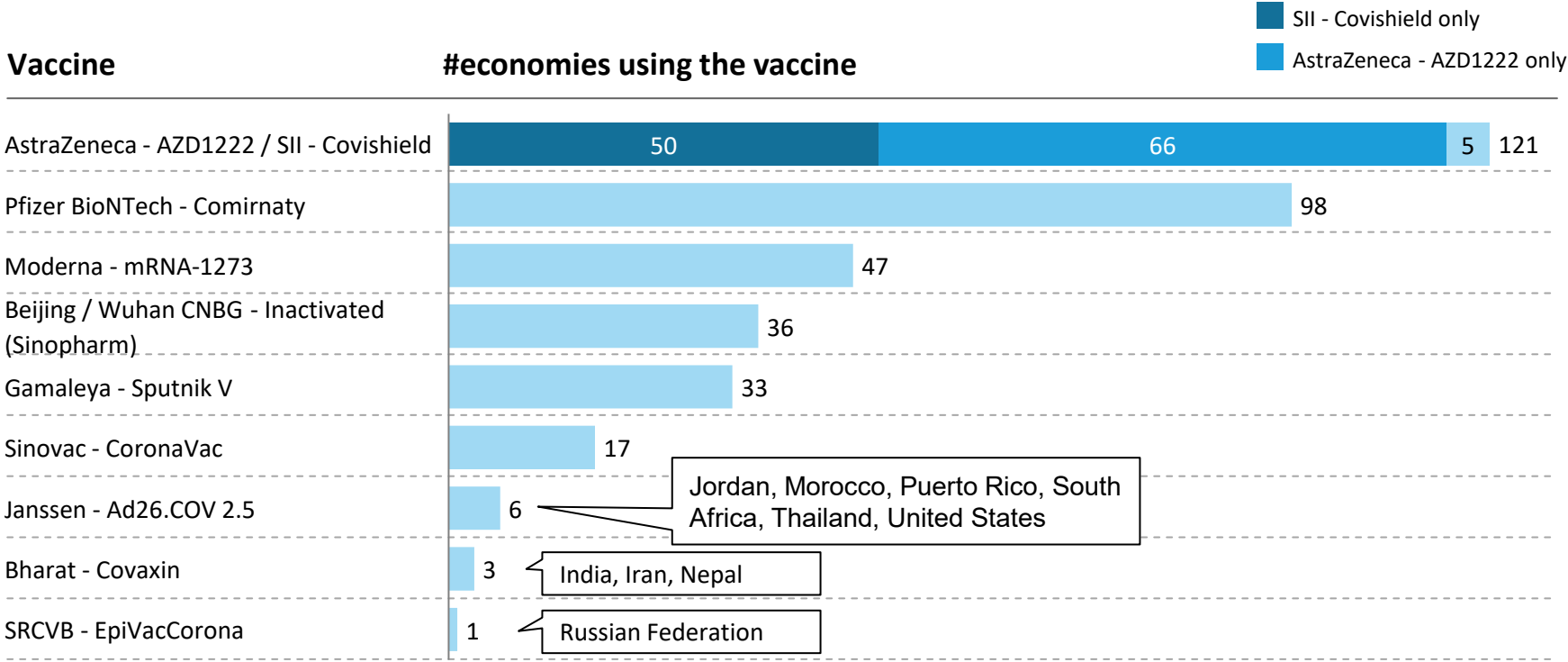
SOURCE: COVAX, WHO COVID-19 dashboard, Our World in Data; Government websites; Press research

COVID-19 vaccine doses administered, Mar 29, 2021

Total number of vaccination doses administered. This is counted as a single dose, and may not equal the total number of people vaccinated, depending on the specific dose regime (e.g. people receive multiple doses).



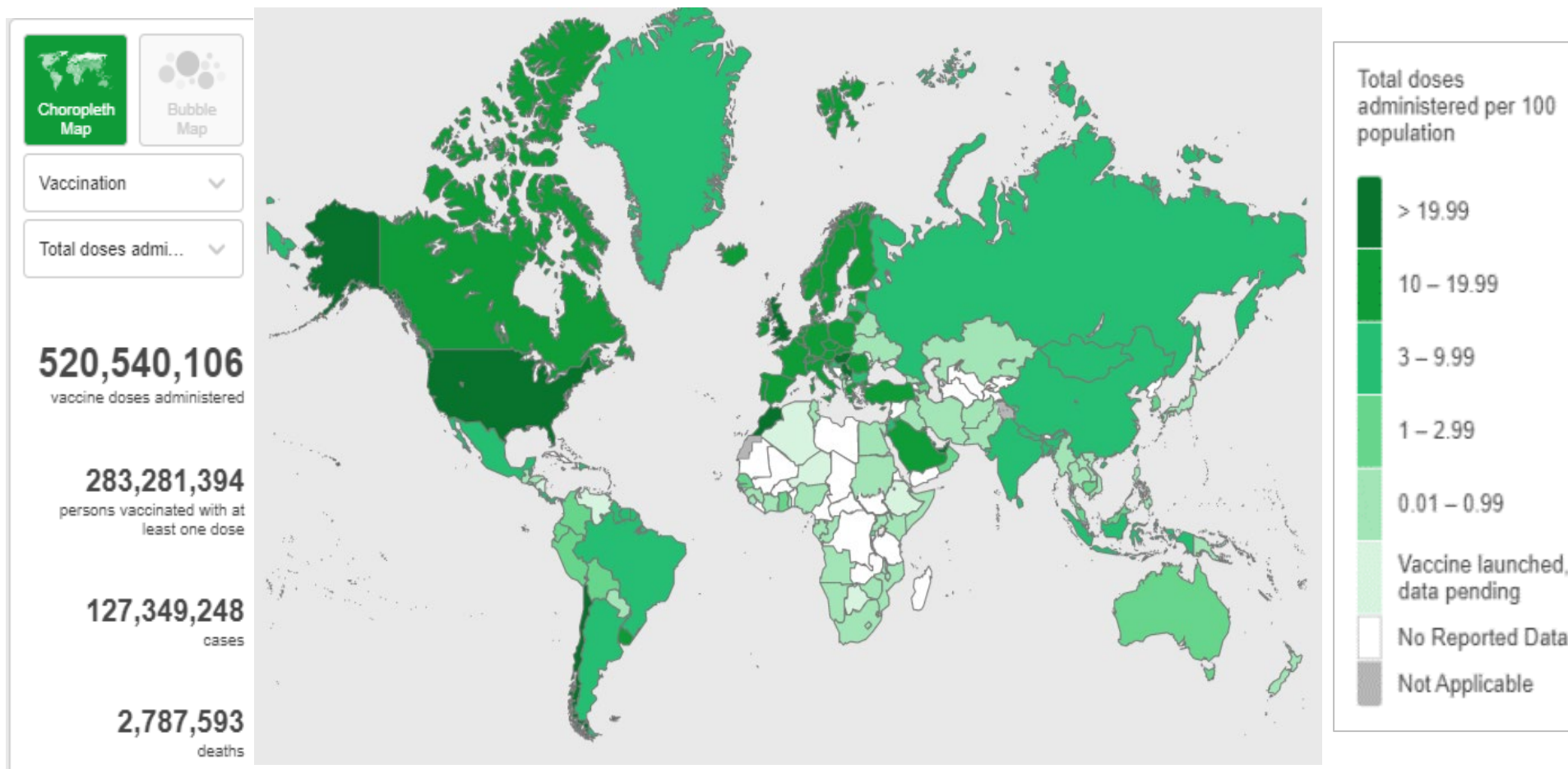
Which economies¹ are using which vaccine(s)? (data at 31 Mar 2021)



- 78 economies are using 1 vaccine vs. 105 using 2 vaccines (or more)

1. World Bank classification (2021) of 218 economies. Note: The term country, used interchangeably with economy, does not imply political independence but refers to any territory for which authorities report separate social or economic statistics.
Source: Our World in data, WHO, Government websites; Press research

COVID-19 Vaccine Rollout: WHO data at 31 March



COVAX = 33.3 M doses delivered to 74 participants

The wave of COVAX deliveries kicked off on February 24th

24 February The first batch of COVAX doses has arrived in Ghana (600,000 doses)



26 February South Korea receives 117,000 COVAX doses



2 March 3.94 million doses of COVAX vaccines arrive in Nigeria



26 February 504,000 doses have landed in Côte d'Ivoire



1 March Côte d'Ivoire and Ghana start their first COVID-19 COVAX vaccinations



...

Comparison between the H1N1 and COVAX: Improving on past experience

Dimensions	Indicators	COVAX (March 2021)	H1N1 vaccine deployment Initiative	Difference	
Breadth of participation	# of letter of intent	190	94	>2x	
	# of recipients of doses	<i>tbd</i>	77	<i>tbd</i>	
Funding	Total pledges, in mn USD	5,900	56	>100x	
Time to 1 st dose	# of days after 1 st vaccination in HICs	First country	38	94	~2 months faster
		First country in Africa	78	145	
		First 10 countries reached	Est. 90	149	
Doses	# of countries that received doses after	1 month ¹	>20	~4	4-5x
		2 months	Est. 50	13	
		3 months	142	29	
	Cumulative doses delivered after... (in Mn)	1 month	20 (TBC)	<1	>25x
		3 months	Est. 250	10	
		12 months	Est. 2,000	78	

1. i.e., 1 month after the 2nd shipment of vaccines given both H1N1 initiative and COVAX had an exceptional frontrunner

COVID-19 vaccine roll-out has not yet started in 34 economies; 26 of them are LICs or LMICs

Economies classified by income level ¹	# of economies per income group	# economies where vaccination has <u>not</u> started	% of income group where vaccination has <u>not</u> started	List of economies where vaccination has <u>not</u> started
High income economies (HICs)	83	2	2%	Brunei Darussalam; Nauru
Upper-middle income economies (UMICs)	56	6	11%	Cuba; Libya; Samoa; Tonga; Turkmenistan; Tuvalu
Lower-middle income economies (LMICs)	50	11	22%	Benin; Cameroon; Comoros, Kiribati; Kyrgyz Republic; Mauritania; Tanzania; Timor-Leste; Uzbekistan; Vanuatu; Zambia
Low income economies (LICs)	29	15	52%	Burkina Faso; Burundi; Central African Republic; Chad; Congo, Dem. Rep; Eritrea; Guinea-Bissau, Haiti; Korea, Dem. People's Rep.; Liberia; Madagascar; Mali; South Sudan; Yemen, Rep.
Total	218	34	16%	

Vaccination has not started in...

- ... more than 50% of economies
- ... between 25 and 50% of economies
- ... between 10 and 24% of economies
- ... less than 10% of economies

1. World Bank classification (2021). Note: The term country, used interchangeably with economy, does not imply political independence but refers to any territory for which authorities report separate social or economic statistics. The designations employed and the presentation of these materials do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory or area or of its authorities, or concerning the delimitation of its frontiers or boundaries

In the beginning of 2021, WHO launched the 100-day-challenge, a call to action at the heart of the campaign for #VaccinEquity

Governments and vaccine producers globally are called to deliver on a collective commitment to rollout vaccines to health workers and those at highest risk of COVID-19:

- in every country in the world,
- in the first 100 days of 2021.

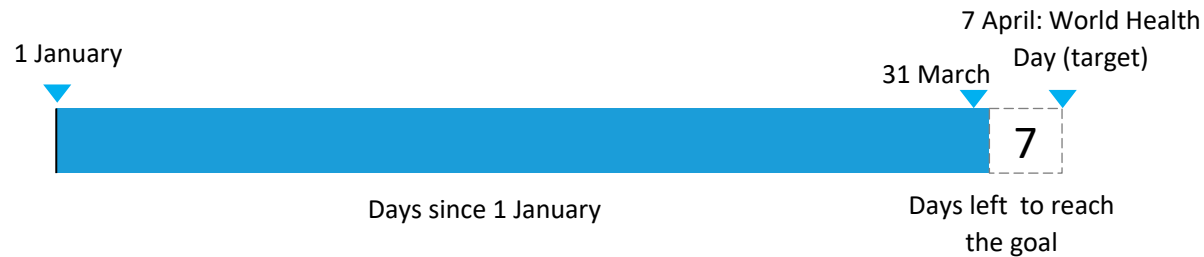
Maxwell
Ghana



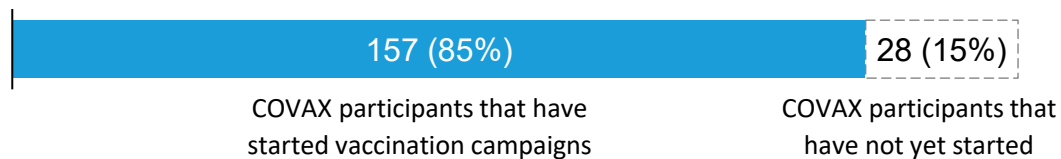
#VaccinEquity

One week before the end of the 100-day challenge, 28 COVAX participants have not started vaccinating yet

Elapsed time in 2021, Number of days



Status of vaccination campaigns, Number of COVAX participants¹



Key take-aways

- **28 out of 185 COVAX participants¹ have not started vaccinating yet**
- **26 of these participants are LMICs/LICs**
- **7 days left to reach the goal:** a series of actions could be taken immediately

1. Does not include 5 AMC-eligible economies without confirmed participation status (Burundi, Eritrea, Madagascar, Marshall Islands, Tanzania)

SOURCE: COVAX, WHO COVID-19 dashboard, Our World in Data; Government websites; Press research

In order to get closer to the immunization equity goals of the 100-day-challenge and the IA2030, attention is being brought to the challenges that impede on countries' access to COVID-19 vaccines

Challenges identified through country consultations



Multiple vaccines in country

As a result of the COVAX program and bilateral negotiations, countries receive several different products, which has a direct impact on **distribution strategies, training of health workers** (number and quality, not specific to the vaccine), **coordination of distribution schedules and priorities, ensuring cold chain capacity, monitoring and traceability.**



Costing and financing

In several countries that have received the first tranche of vaccines, vaccination has been delayed due to a **lack of operational funds. Budget gaps are not currently filled for the entire vaccine roll-out** highlighting the need for resource mobilization support to fill medium- and long-term gaps. There are reports of diversion of funds from other programs to cover operational costs.



Target populations and delivery strategies

Service delivery strategies are still quite generic, and operations will need to have the flexibility to monitor and adapt to ensure adequate coverage. Several countries are reporting diversion of doses for non-priority groups. Often because individuals cannot provide documents for verification of co-morbidity and are vaccinated, at times to prevent vaccine wastage from open vials



Cold chain and logistics

Cold chain capacity seems to be adequate for receiving and deploying initial tranches of vaccines, however, there are **concerns about capacity if there are larger shipments or concurrent shipments from different sources. Short expiration periods for vaccines at the time of arrival** are also a real issue in terms of logistics that countries must manage



Routine Immunization

Concern in AFRO and partners on a potential decline in Routine Immunization coverage as staff diverted to COVID-19 vaccine rollout. Other programs may also suffer if funds are diverted to cover operational costs for COVID-19 vaccination.

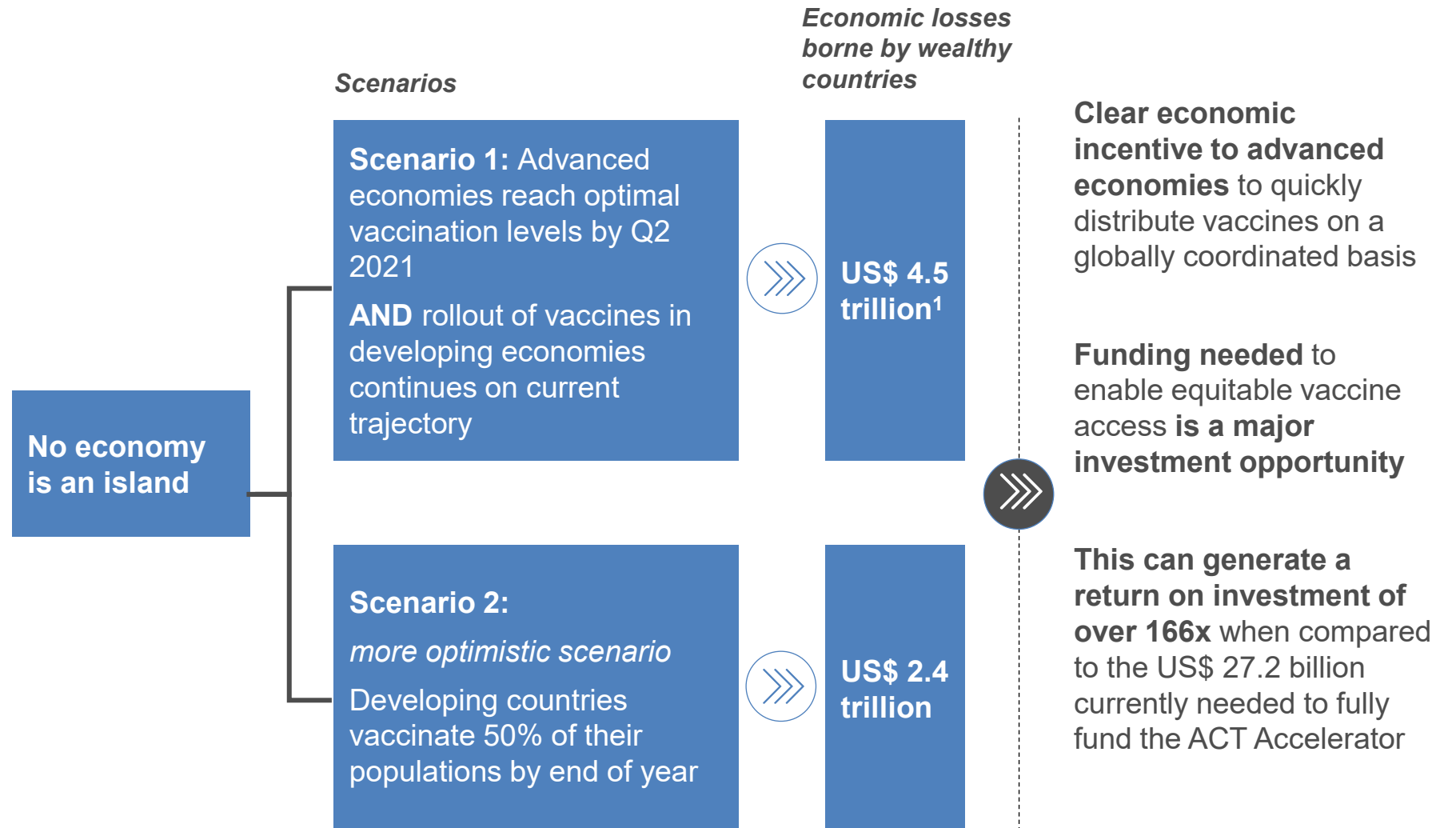
The economic case for global vaccination: key findings

“ No economy can recover fully from the COVID-19 pandemic until we have secured equitable global access to effective vaccines.”

THE ECONOMIC CASE FOR GLOBAL VACCINATION:
An Epidemiological Model with International
Production Networks

Cem Çakmaklı, Selva Demiralp, Sebnem
Kalemli-Ozcan, Sevcan Yeşiltaş, Muhammed A.
Yıldırım

JANUARY 25, 2021



1. With sectors such as construction, textiles, retail and automobiles highly exposed to the risk of output losses exceeding 5%.

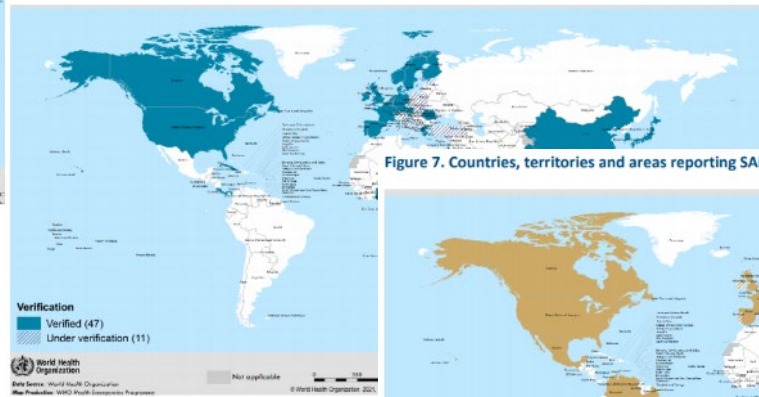
There are currently three main variants of concern

Figure 5. Countries, territories and areas reporting SARS-CoV-2 VOC 202012/01 as of 9 March 2021



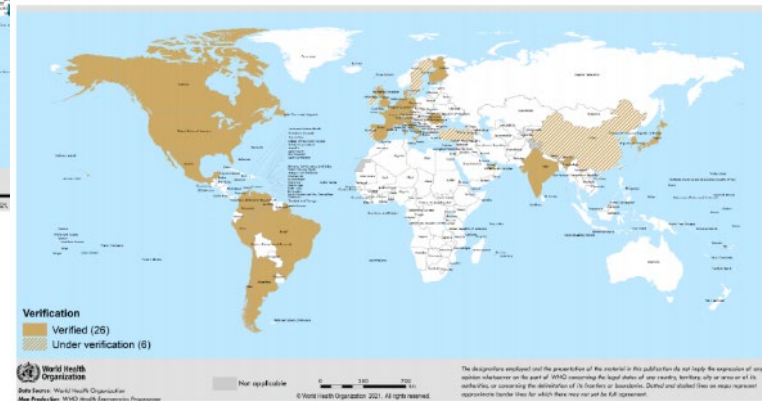
VOC 202012/01
or B.1.1.7
(first identified
in the UK)

Figure 6. Countries, territories and areas reporting SARS-CoV-2 501Y.V2 as of 9 March 2021



501Y.V2 or B.1.351
(first identified in
South Africa)

Figure 7. Countries, territories and areas reporting SARS-CoV-2 P.1 variant as of 9 March 2021



P.1 (first identified in Brazil)

Variants of concerns are defined by WHO by their transmission, disease severity or impact on COVID-19 counter measures

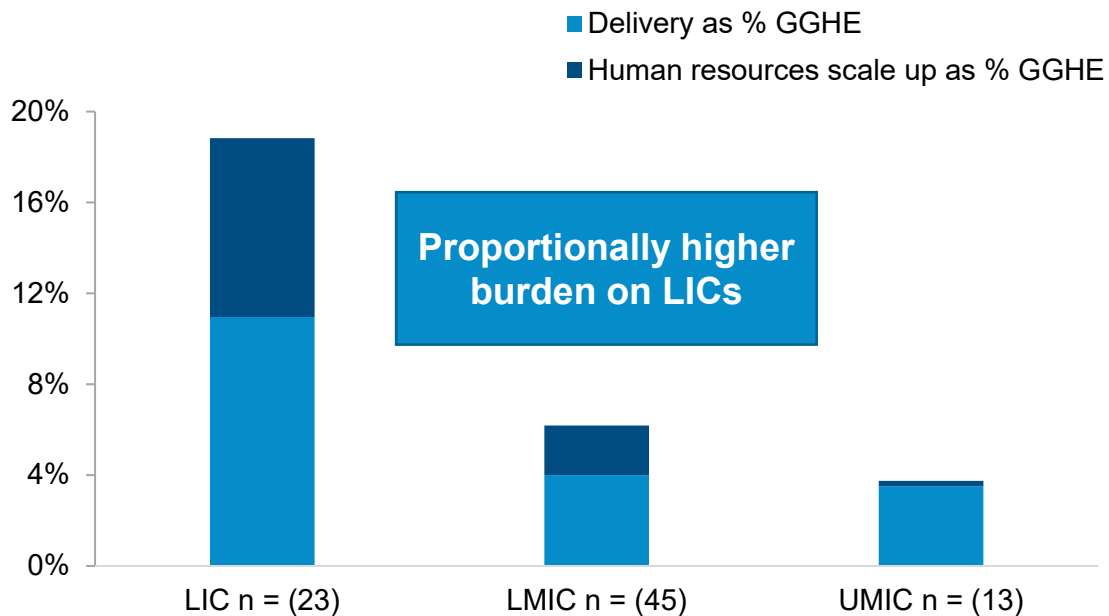
Evidence supports ongoing use of existing vaccines – with some concerns about B.1.351 vs. some vaccines *(available data still limited, early and incomplete)*

The preliminary findings highlight the **urgent need for a coordinated approach for surveillance and evaluation of variants** and their potential impact on vaccine effectiveness

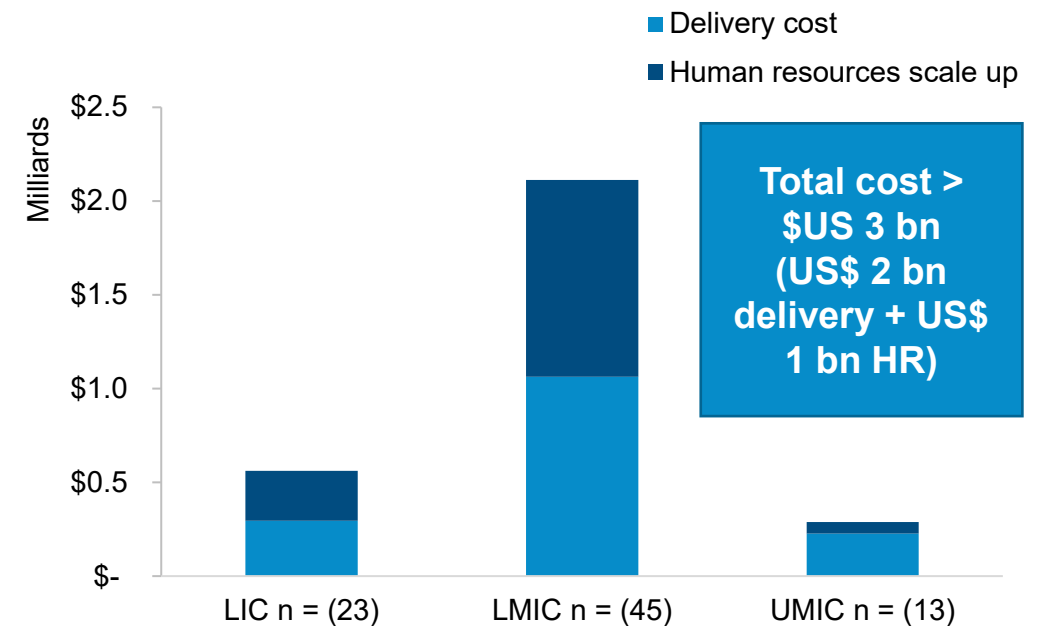
Delivery and HR surge costs to vaccinate first 20% population in AMC participants exceed \$USD 3bn for 2021, with a higher burden on LICs

Based on **81 AMC participants** with data available¹

Delivery and human resources surge cost²,
% of 2018 governmental health expenditure (GGHE)³

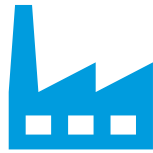


Total delivery and human resources surge cost²,
\$USD bn



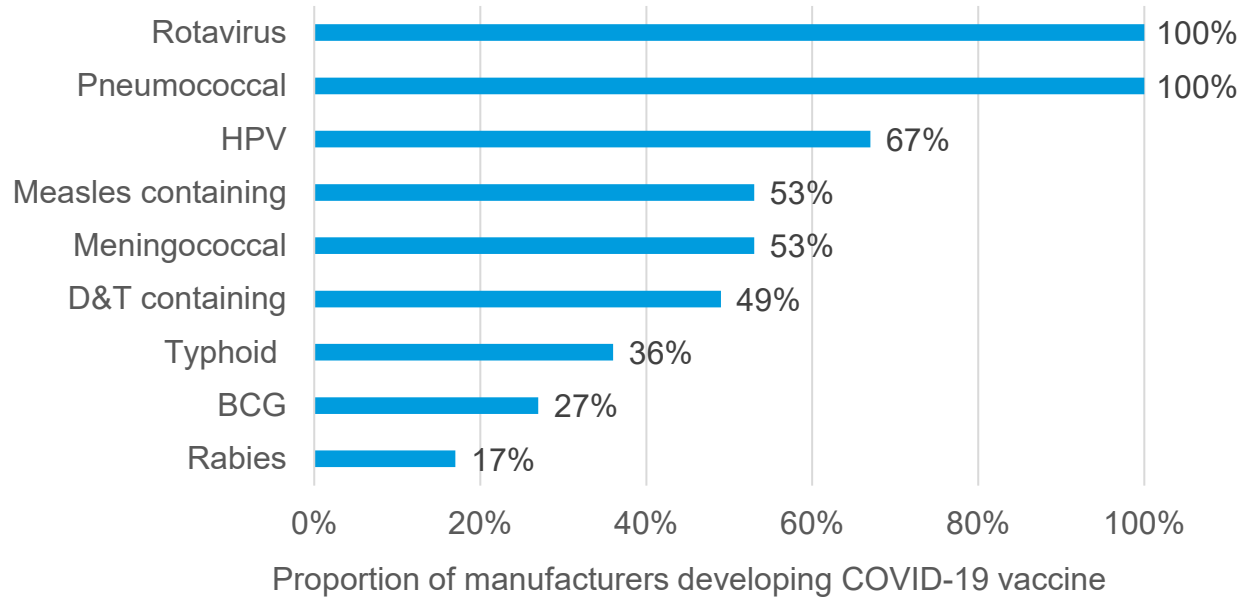
1. Excludes COVAX AMC participants without NDVPs (Burundi, Eritrea, Madagascar, Marshall Islands and Tanzania) and those without 2018 GGHE estimate (Kosovo, North Korea, Somalia, Syria, West Bank and Gaza, Yemen). Source for income classification: The World Bank, 2019
2. Services delivery scale up costs have been estimated by the CRD Costing and Financing Working Group. Human resources scale up costs have been produced by the WHO Health Workforce team. Estimates include costs related to vaccinators (59%), support staff (32%) and social mobilisers (10%) surge.
3. General Government Health Expenditures includes on-budget donor funding and loans and has been extracted from the [Global Health Expenditure Database](#)

Manufacturers key to different vaccines markets are engaged in COVID-19 vaccine development/production



Global supply

Proportion of total vaccine manufacturers developing COVID-19 vaccine, by vaccine market



Vaccine development

Across key antigens, an average of 70% manufacturers with Phase III candidates are engaged in Covid-19 development'

So far **no disruption** in available supply, but first delays/reallocations: **Td, DT, OPV, IPV, PCV, influenza, measles.** Pipeline products delayed: **HPV**

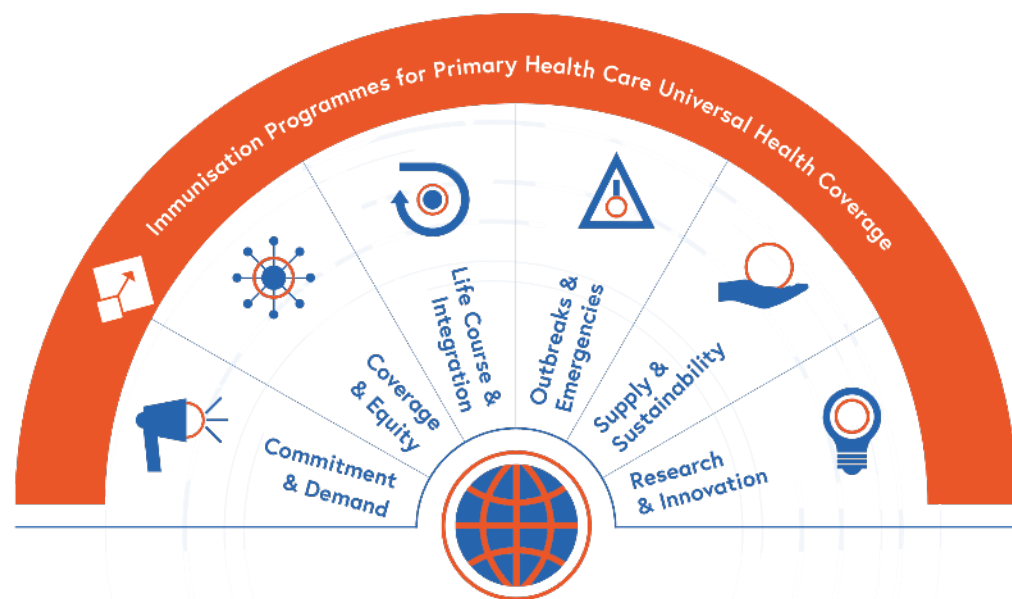
Note: analysis does not include vaccine manufacturers who are engaged in the production, packaging or distribution of COVID-19 vaccines developed by other manufacturers

1. Vaccine markets included in analysis: BCG, D&T containing, HPV, Pneumococcal, Measles, Rotavirus, Rabies, Typhoid

Source: WHO COVID-19 Vaccine Development Tracker (access 19th February), WHO MI4A Market Studies

IA2030 Launch

26 April 2021
Strategic priorities



People
Centred



Country
Owned



Partnership
Based



Data
Guided



IMMUNIZATION AGENDA 2030

A global strategy to leave no one behind



World Immunization Week, 24 to 30 April 2021

‘Vaccines Bring Us Closer’

Brought to life with timely executions:

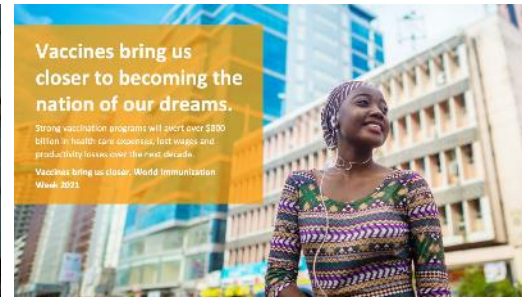
Collective
progress

Closer to
Understanding

Shared
Endeavours

Emotional
Connection

Towards
Physical
Closeness



BACKUP

Public COVAX roll-out dashboard resources

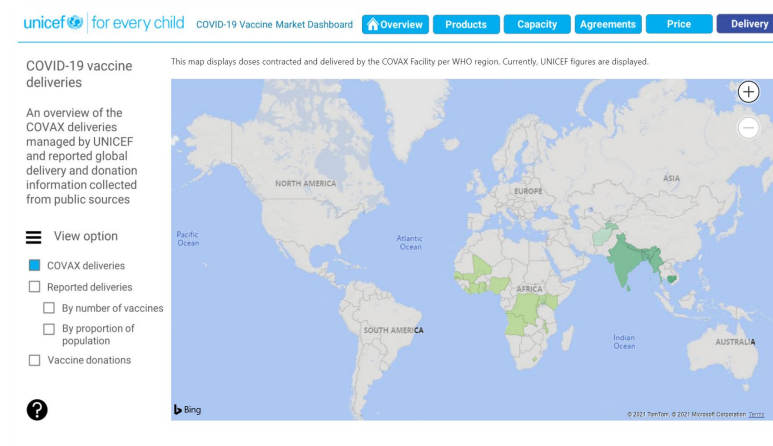
1. Gavi for deliveries

<https://www.gavi.org/live/covax-vaccine-roll-out>



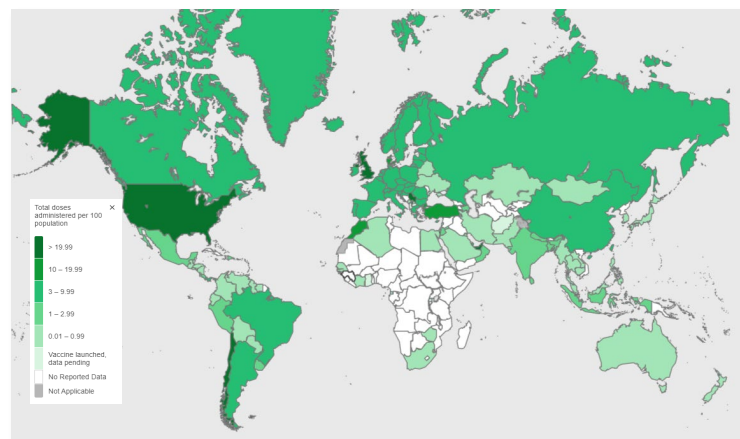
2. UNICEF for planned shipments and POs

<https://www.unicef.org/supply/covid-19-vaccine-market-dashboard>

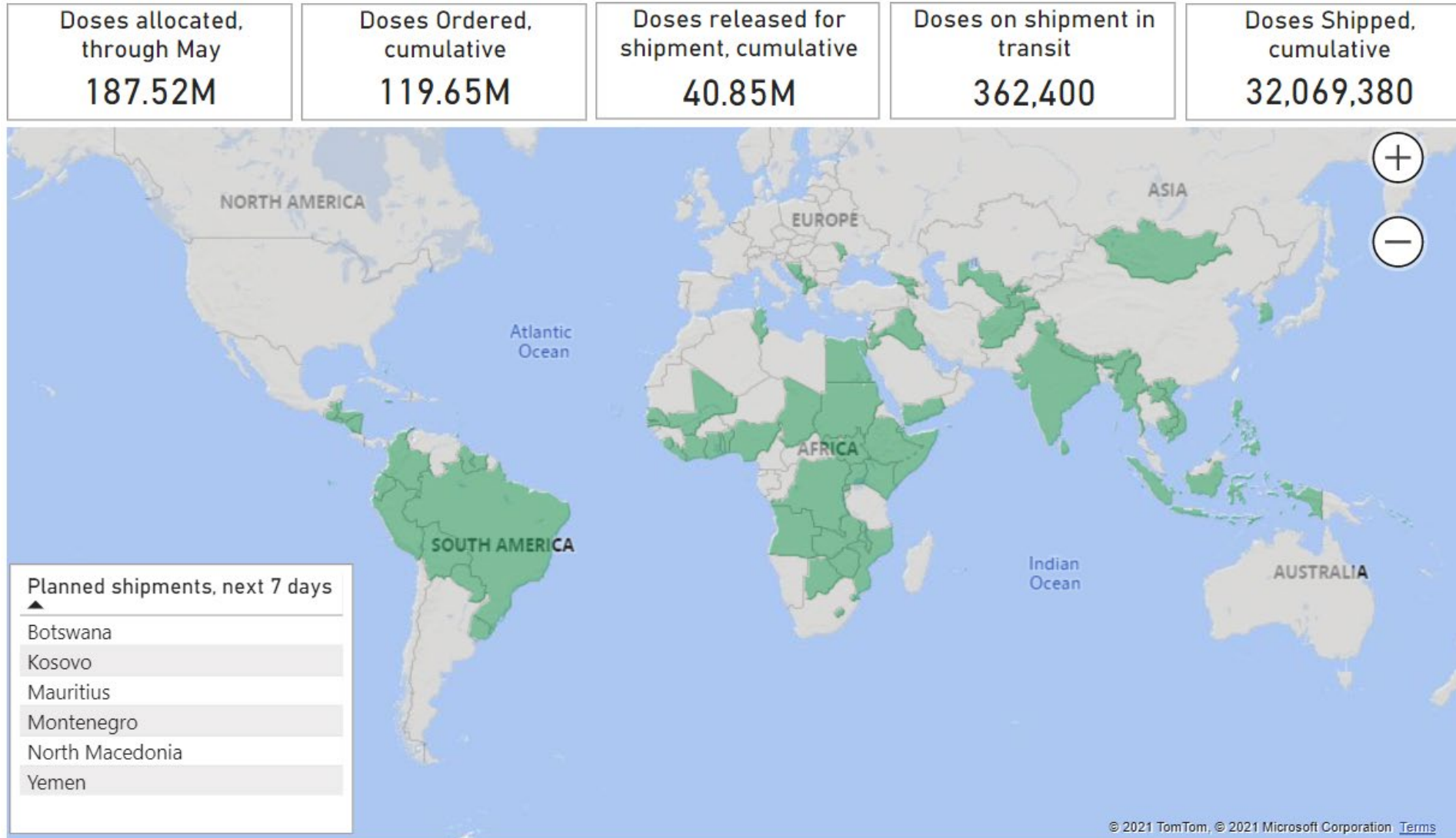


3. WHO for vaccinations worldwide

<https://covid19.who.int/>



Six additional countries are expected to receive doses through COVAX in the next seven days



COVID-19 Vaccine Introduction Toolkit has LAUNCHED



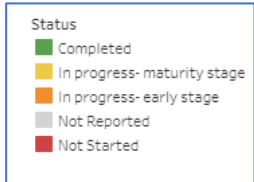
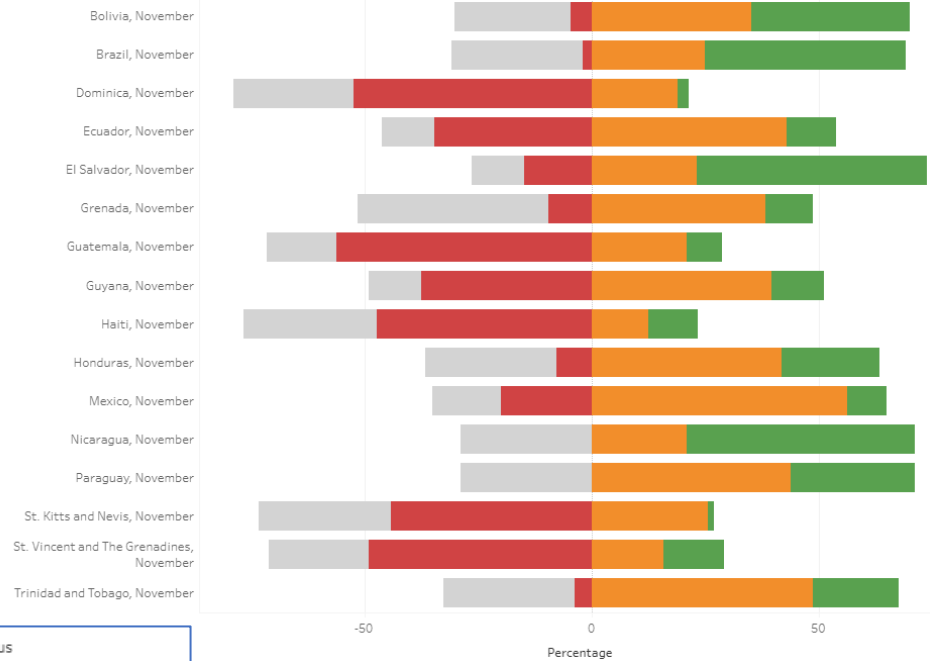
Email
COVID19vaccineresources@who.int
with comments, questions, and/or
feedback.

The COVID-19 Vaccine Introduction Toolkit (<https://www.who.int/tools/covid-19-vaccine-introduction-toolkit>) is a one stop shop of guidance, resources, tools, and trainings to support COVID-19 vaccine introduction.

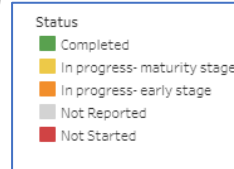
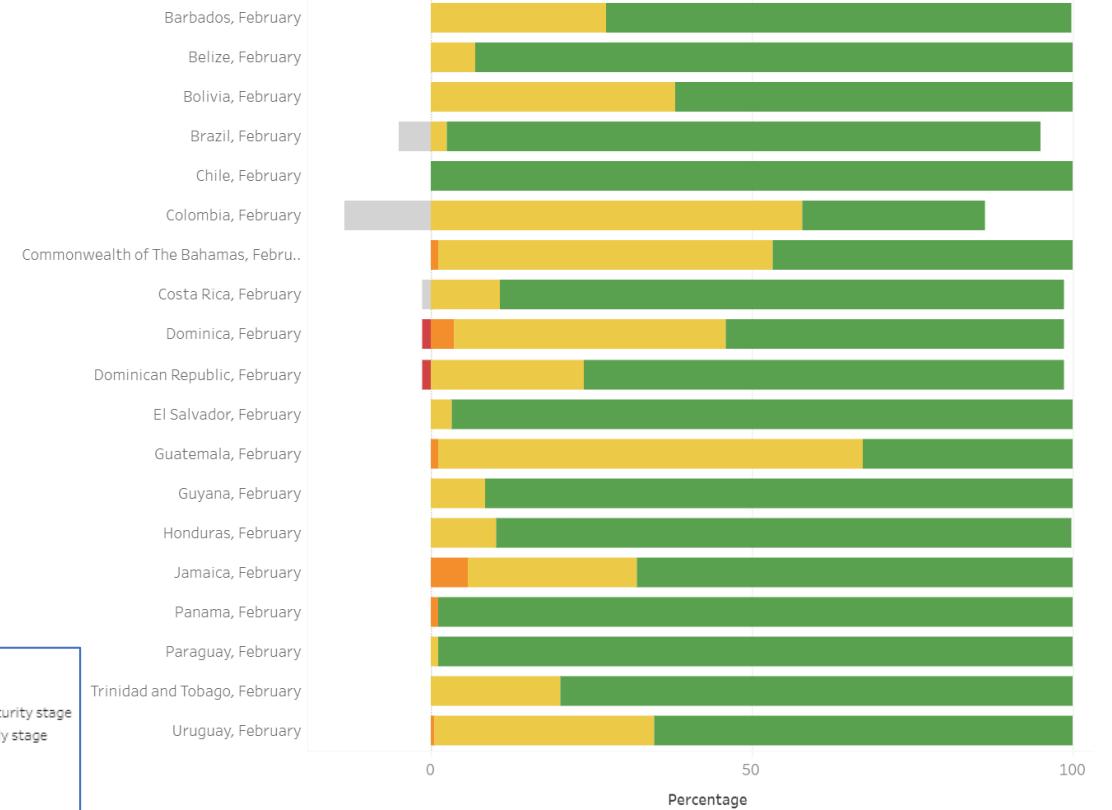
Important Progress of LAC Towards Country Readiness for COVID-19 Vaccine Introduction



VIRAT as November 2020*



VIRAT as February 2021*



*Includes countries that submitted/resubmitted VIRAT in that month. Source: PAHO Regional Dashboard. Available at: <https://www.paho.org/en/covid-19-vaccines>

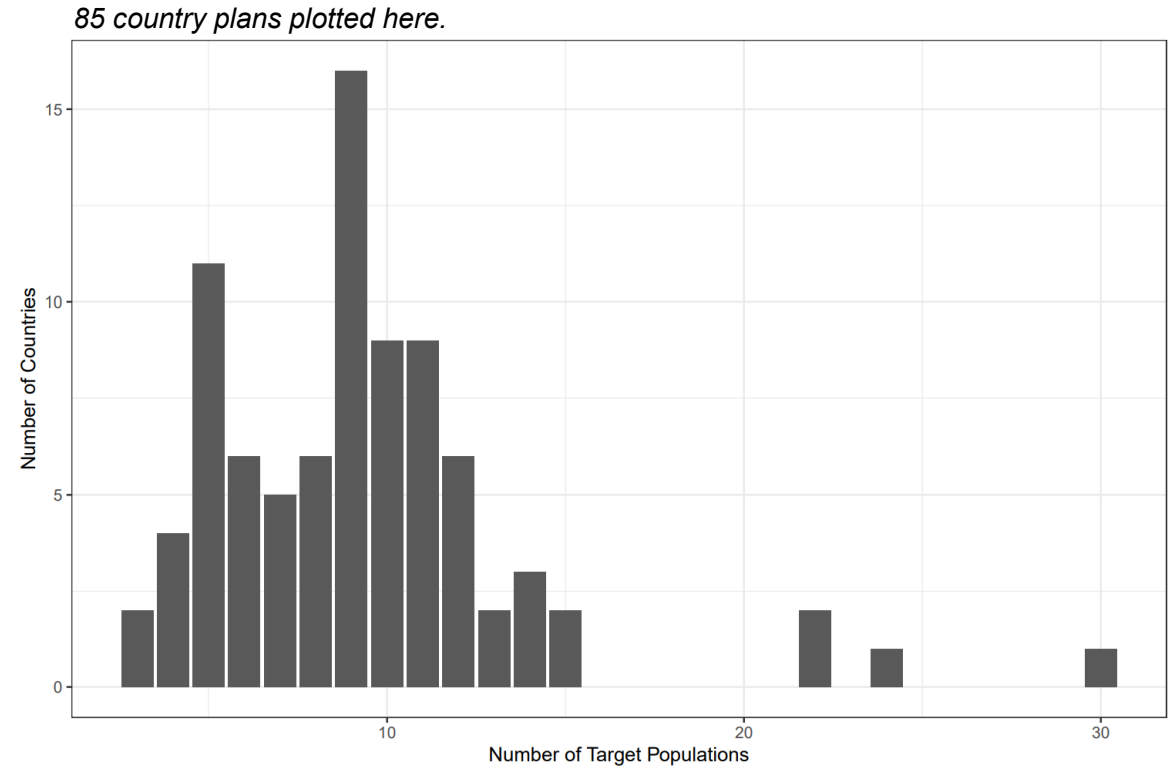
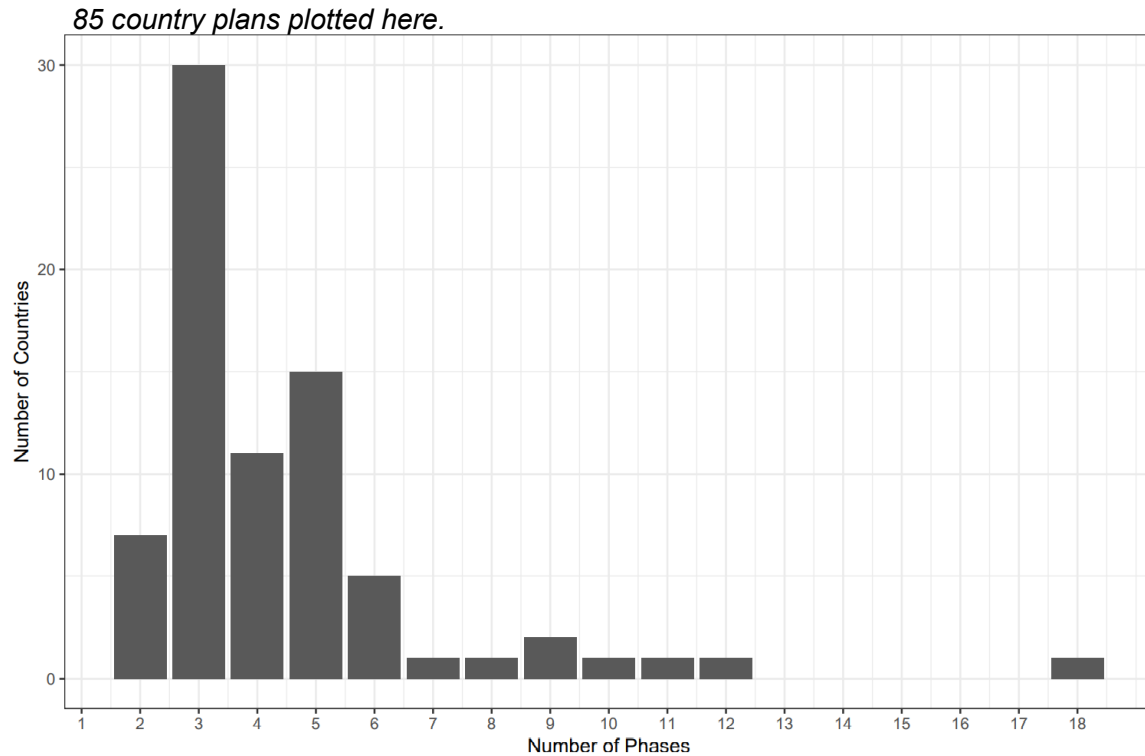
ANALYSIS OF NDVPS

Goal: Consistently code data from 85 GAVI countries who submitted NVDP plans on the COVID-19 Partners Platform. 5000+ pages of text analyzed between March 1-15, 2021.

Documents downloaded Feb 28, 2021. Plans in French and Spanish were translated into English

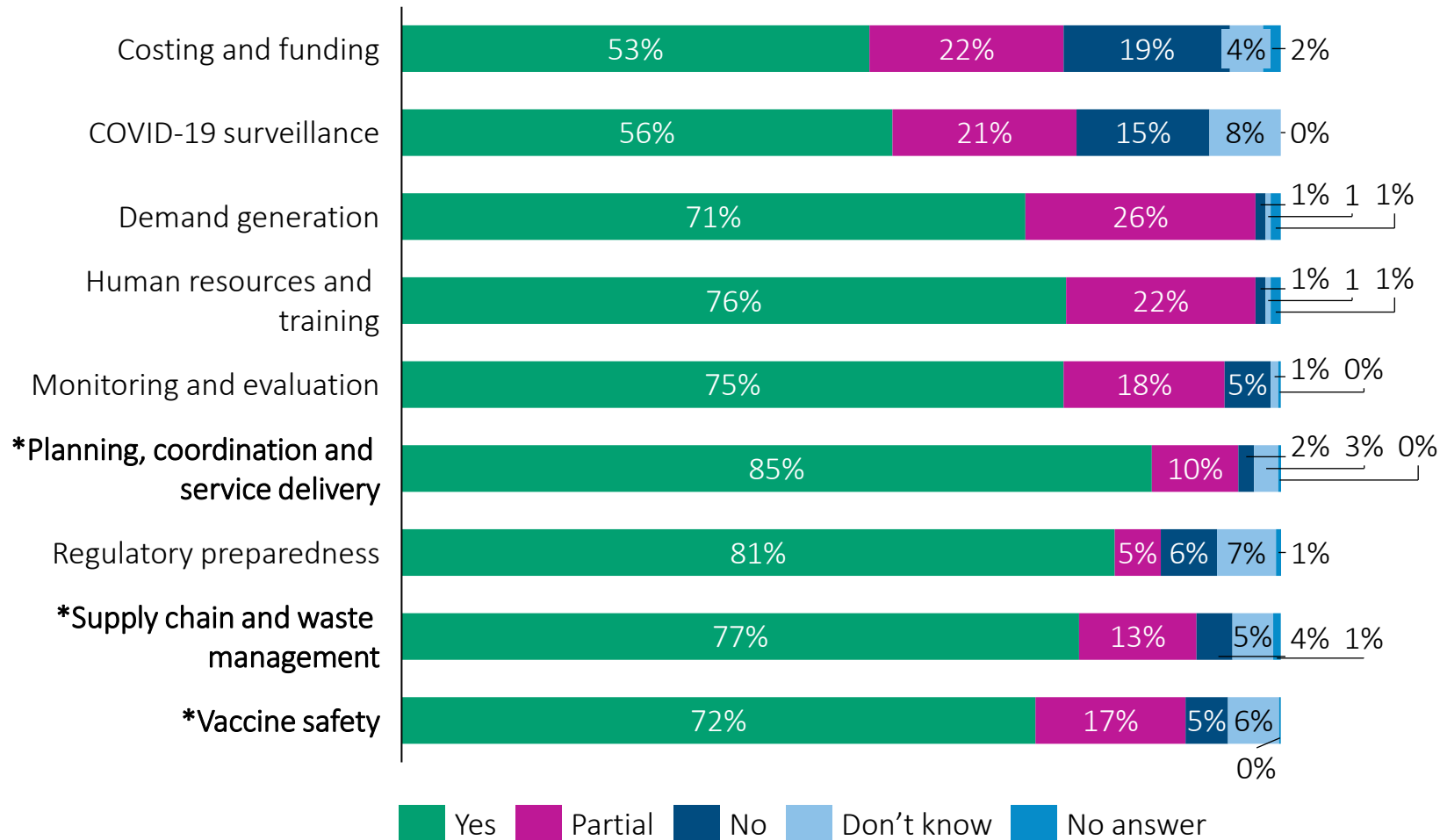


HOW COMPLEX ARE THE ROLL-OUT ELIGIBILITY PLANS?



- *Many countries prioritize 'Tourism sector workers' as essential workers*
- *143M People with Co-morbidities targeted in NVDPs*
- *9% of target populations explicitly referenced 'spatial prioritization' in the delivery strategy (73 / 818)*

Breakdown of SRF question responses by content category



Initial observations:

- ‘Costing and funding’ and ‘COVID-19 surveillance’ feature the smallest percentages of “Yes” responses
- ‘Costing and funding’ presents with the greatest percentage of “No” responses
- ‘Planning, coordination and service delivery’ features the greatest percentage of “Yes” responses

*Category: three minimum requirements for NDVP approval

ASSORTED STATISTICS

Exemplars

- Integrated campaigns: Mali, Lesotho
- EHS, HSS, PHC improvement focus: Sierra Leone, Afghanistan, Rwanda
- Overall quality: Cote D'Ivoire, Laos, Honduras, Kiribati, Bangladesh, Philippines

Operations

- 47 countries (55%) of countries indicate 'Active' AE surveillance in their plans
- 51 countries (60%) plan for demand surveys.
- 78 countries (92%) plan to use 'paper based tools' for data collection.
- 35 countries (41%) indicate specific vaccines anticipated. Of these, average # to be introduced is 2.2.
- 41 countries (48%) indicate need for additional workforce to rollout COVID vaccines

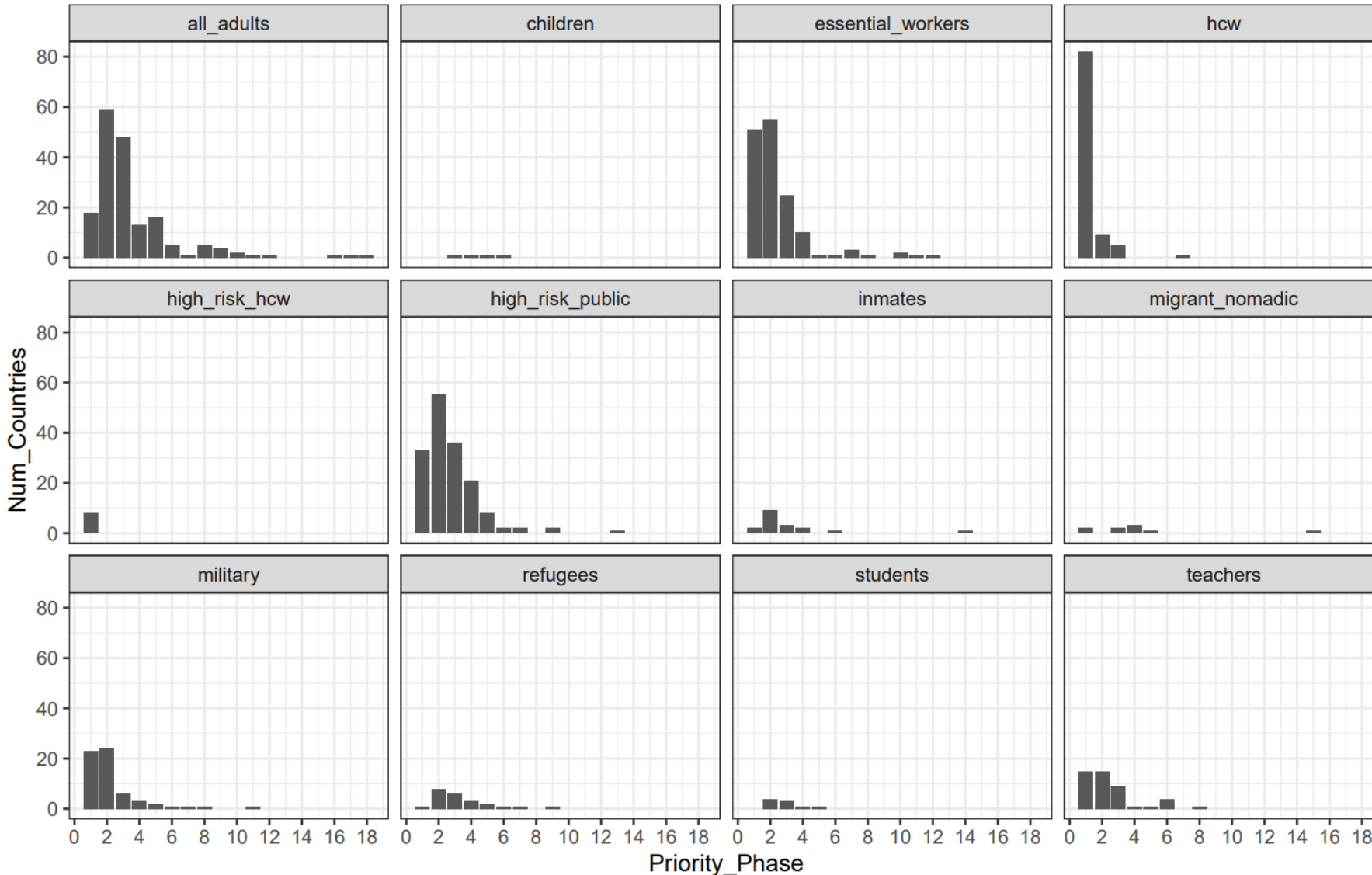
Gender

- Only 30 NVDPs (35%) specifically reference gender equity in their vaccine distribution planning.
- Bangladesh: Commercial sex workers and transgender population prioritized in Stage II. Vaccination teams must include a woman.
- Nepal: Emphasis on women included in vaccination committees.

WHO ARE COUNTRIES PRIORITIZING?

Phase Assignment of Target Pops

85 country plans plotted here.



- **High Risk HCW:** Defined by countries as specifically those treating COVID Patients, typically
- **Essential Workers:** Inclusive of government officials, and all other explicitly defined groups by profession
 - 'essential' varies country to country, but we captured specific details of each in notes
- **Military:** Police, Security, Armed Forces, etc
- **High Risk Public:** Those defined by country as belonging to a 'high risk' group
 - with comorbidities (not age-specific), living in overcrowded conditions, homeless, living in extreme poverty
- **All Adults:** General population, subdivided into age based categories for prioritization

WHICH CADRES ARE BEING TAPPED AS VACCINATORS?

146 listed cadres from 85 country plans plotted here.

