

COVID-19 Report on Africa

Prepared for the IFPMA

28 April 2022

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Rollout capacity and uptake in African Nations

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- Supply agreed to Africa
- Donations and deliveries to date

Testing capacity

- Across the continent, split by country

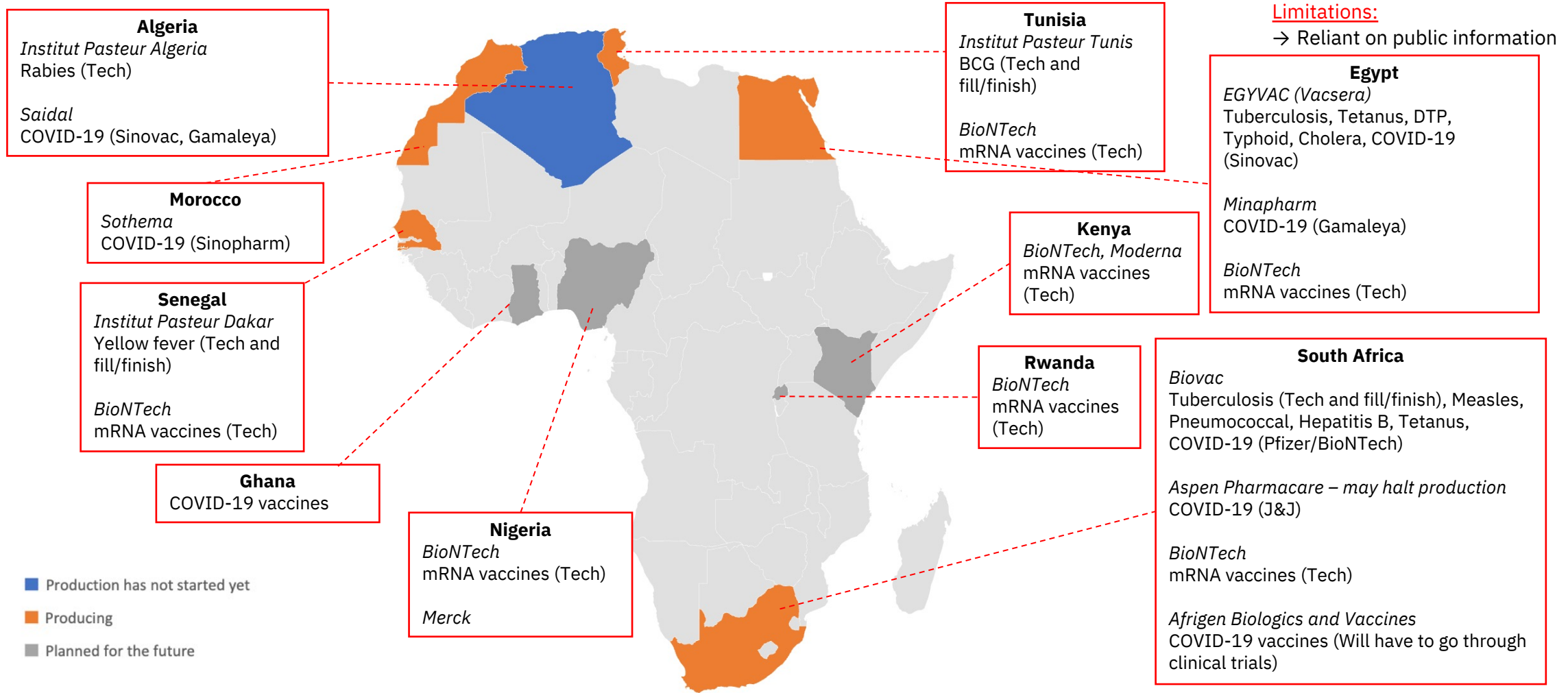
Treatment capacity

- Treatment supply and production

→ Production of COVID-19 vaccines

BioNTech to transfer mRNA technology to 6 African countries

Map of vaccine production locations in Africa, manufacturers and products



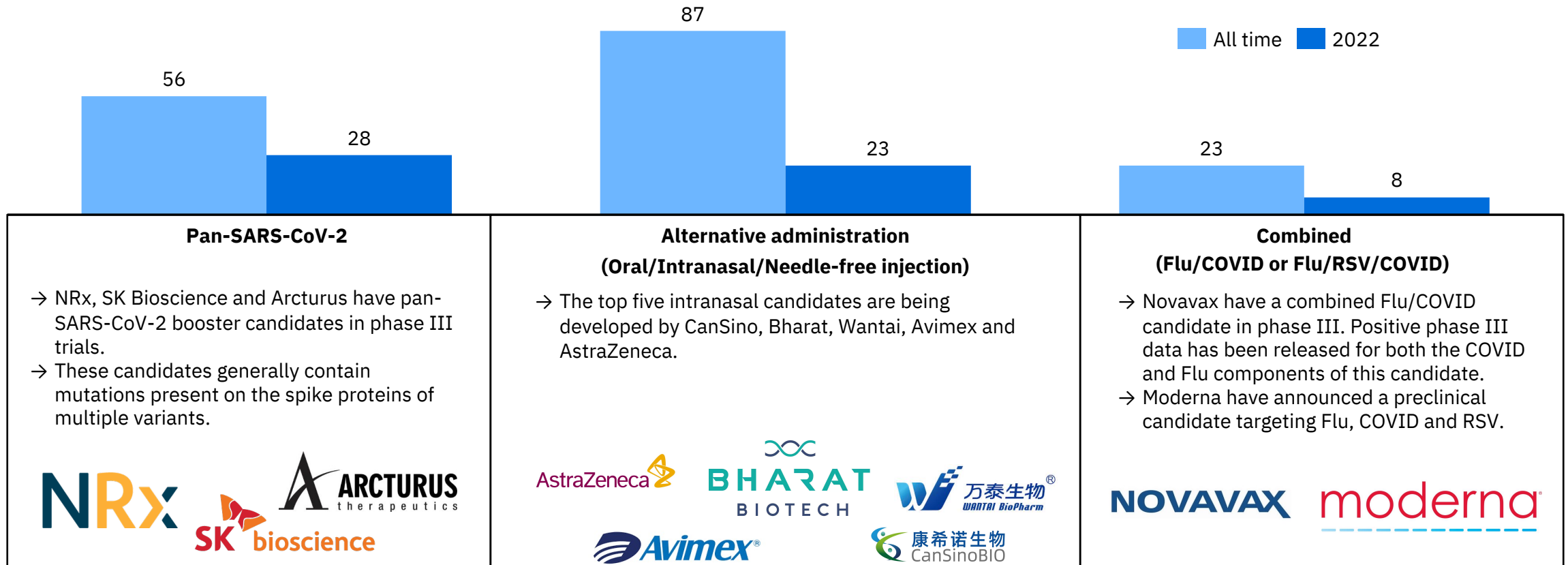
→ Innovations in COVID-19 vaccines

Second generation vaccines focus on variant-resistance, alternative administration or targeting multiple diseases

Overview of innovations in COVID-19 vaccine development

A greater proportion of new candidates have been pan-SARS-CoV-2 in 2022:

New candidates to be pan-SARS-CoV-2, alternatively administered or combined as a percentage of all new candidates



Variant specific vaccines are losing popularity

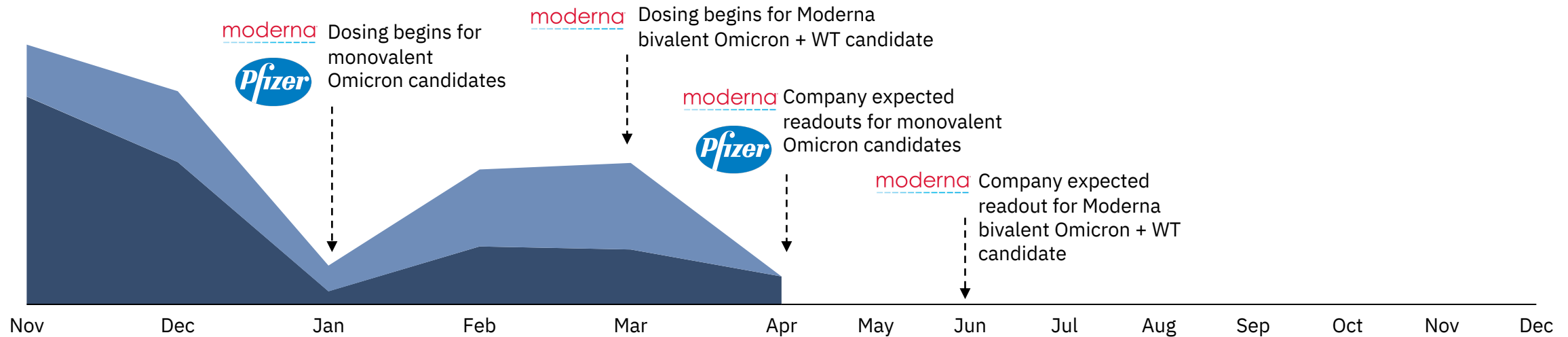
Overview of new variant-specific candidates and Omicron-specific timelines

After Omicron was detected, a large proportion of newly announced candidates targeted specific variants, mainly Omicron. In recent months, however, the proportion of new candidates to target variants has reduced. This follows preclinical data from Moderna, showing Omicron-specific boosters to be no more effective than standard boosters, in non-human primates. Nevertheless, Pfizer and Moderna have proceeded with trials of their tweaked vaccines. Data from these trials is expected this month.

New variant-vaccine announcements and Omicron-specific vaccine timelines:

(Variant-specific (including Omicron-specific) candidates as a percentage of all new candidates each month)

- New variant targeting
- New omicron-specific



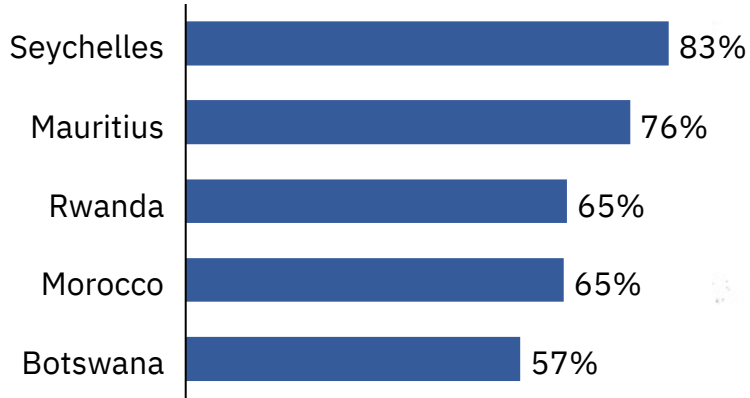
→ Rollout capacity and uptake in African countries

Range in vaccine uptake across Africa

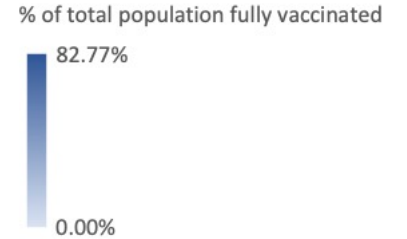
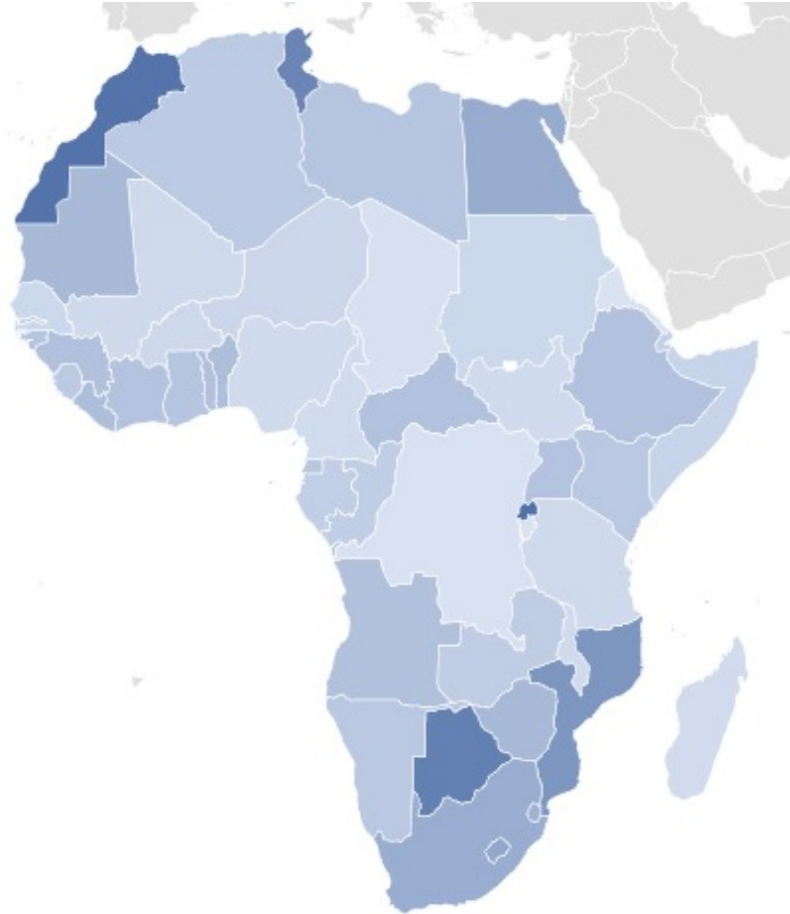
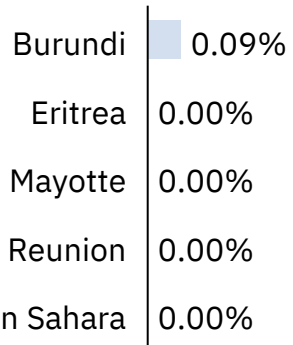
Map of vaccine uptake in Africa (fully vaccinated*)

Limitations:
→ Reliant on public information

Top 5 highest vaccination rates



Top 5 lowest vaccination rates

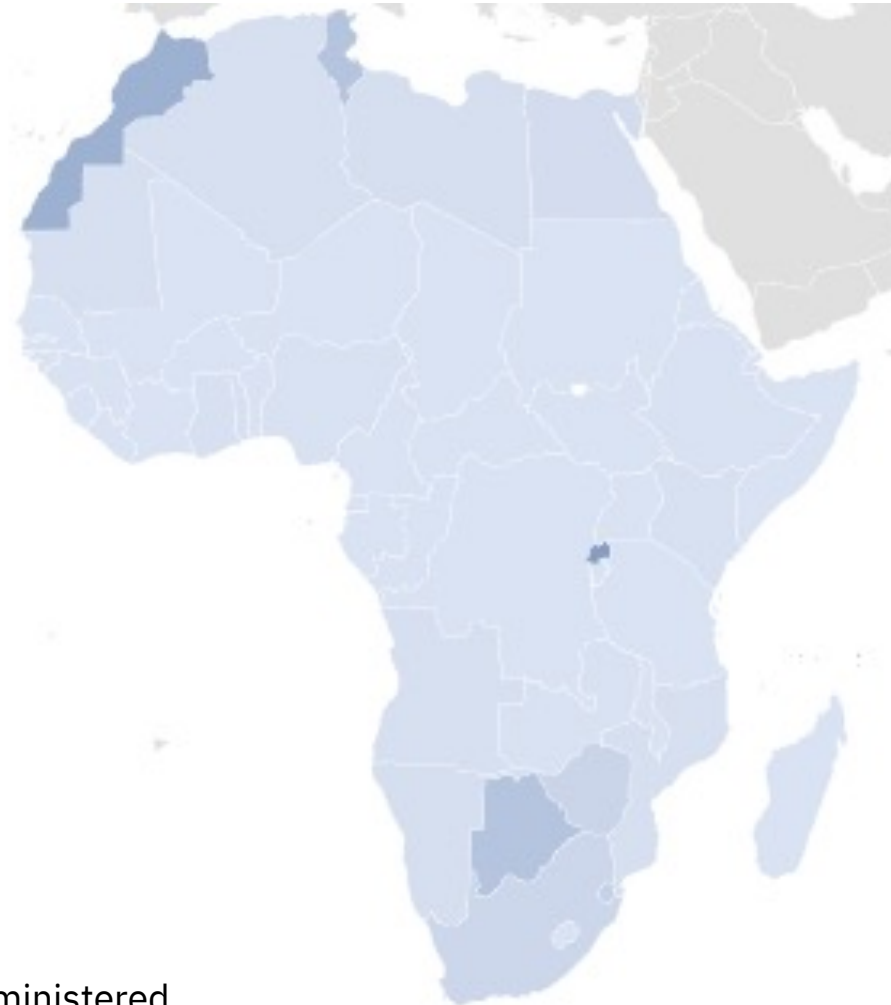
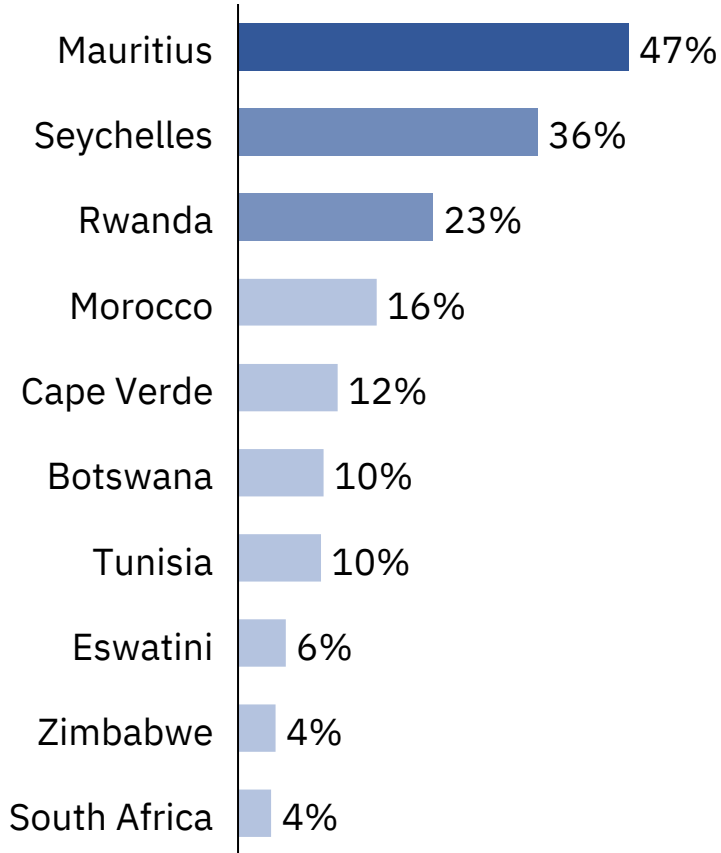


■ % of total population fully vaccinated

Range in vaccine uptake across Africa

Map of vaccine uptake in Africa – for those boosted

Top 10 highest boosted (total population)



Limitations:

→ Reliant on public information

% of total population who have had a booster



% of total population who have had a booster administered

If all boosters have gone to over 50s, some countries have been able to achieve good coverage

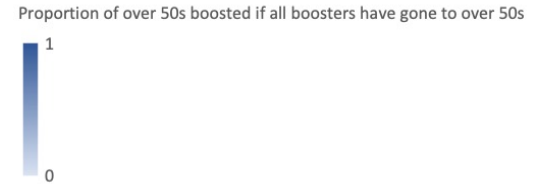
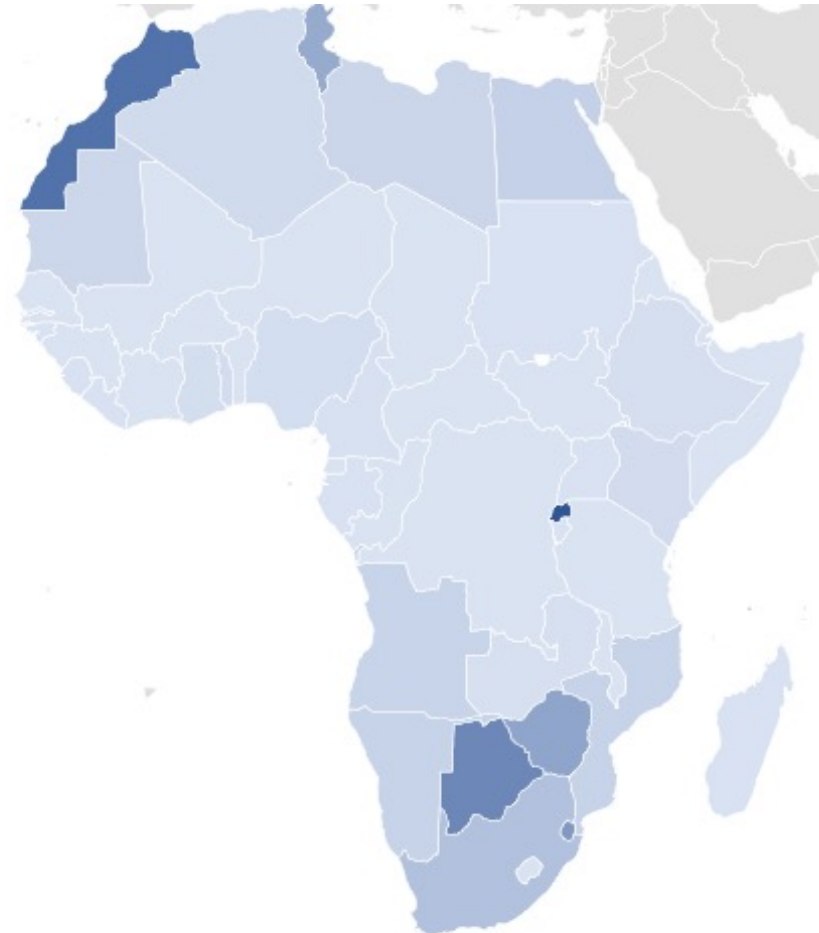
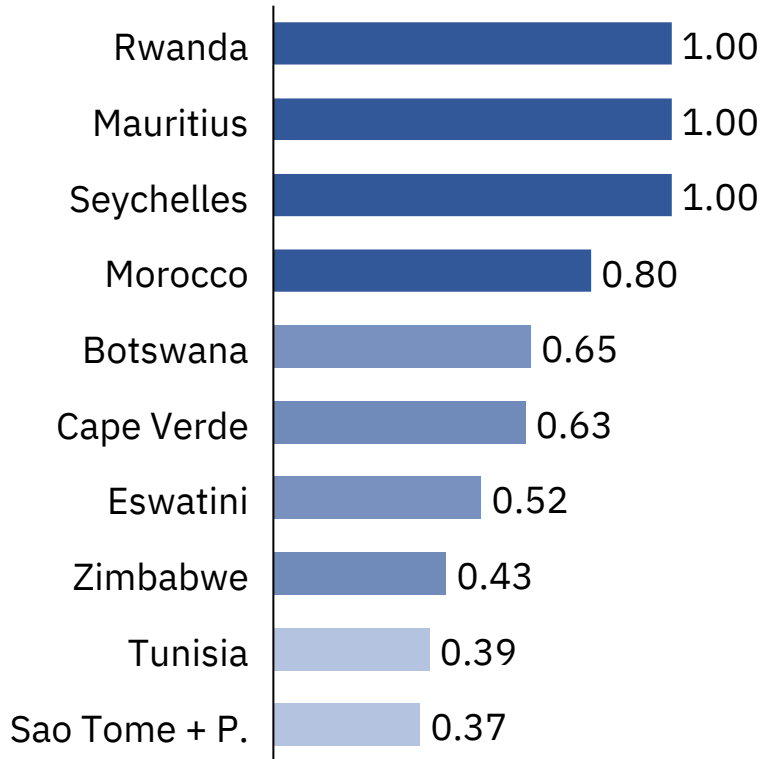
Map of vaccine uptake in Africa – for those boosted

The charts below summarise what booster uptake would be if all boosters administered in the country have been administered to those over the age of 50, which may not be the case.

Limitations:

- Reliant on public information
- Assumes all boosters have gone to those over the age of 50 which may not be the case

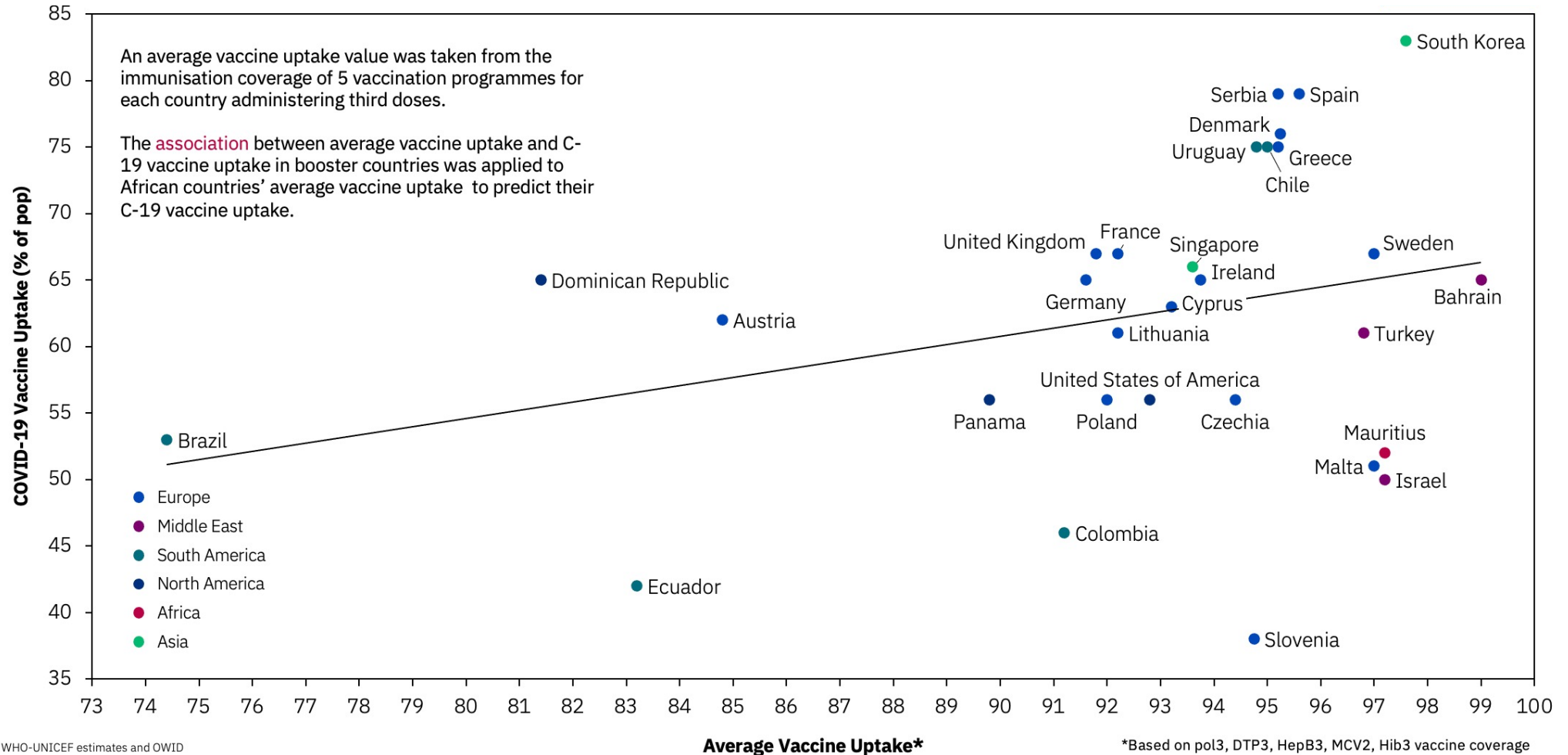
Top 10 highest boosted (if all boosters have gone to over 50s)



% of over 50s boosted if all boosters have gone to over 50s

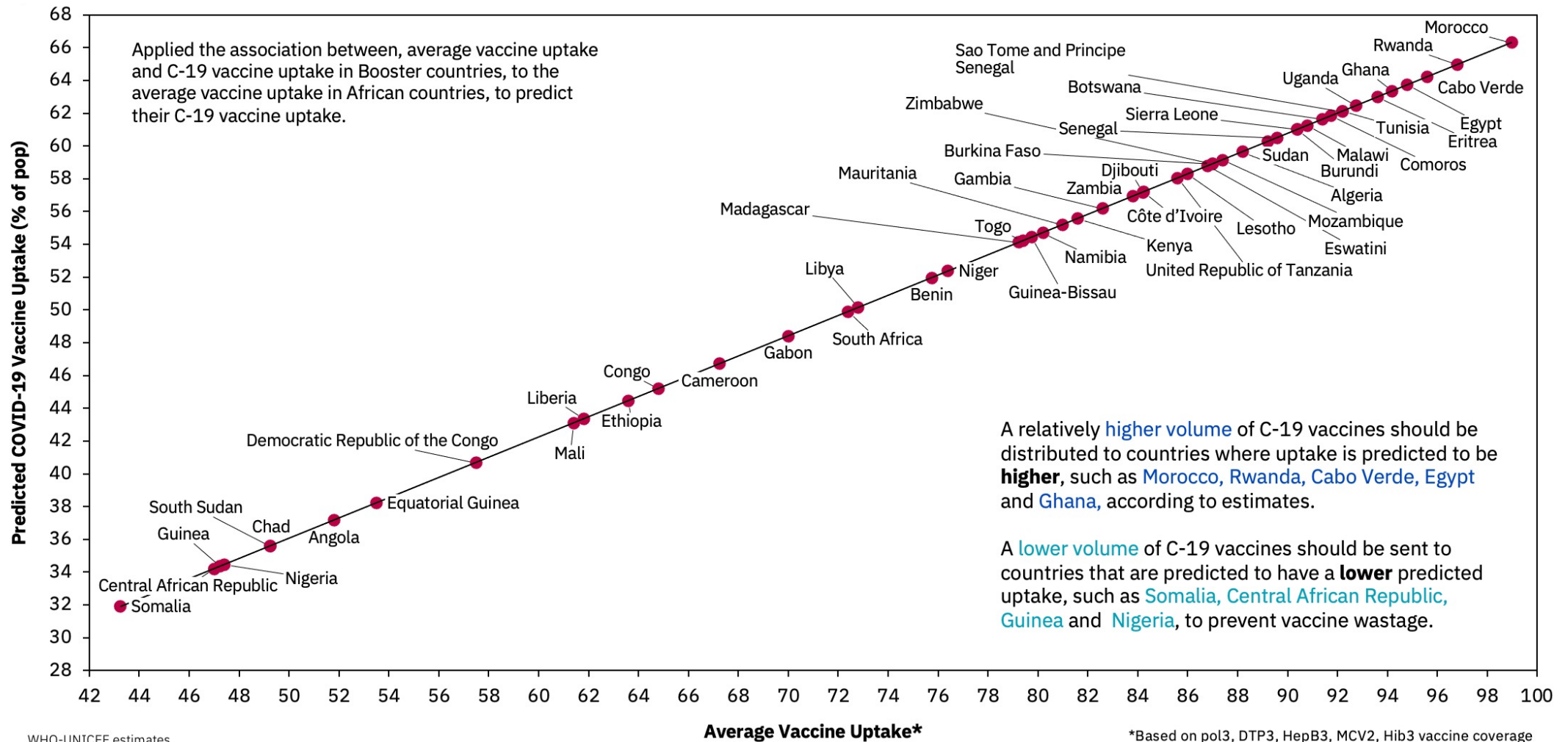
Relationship between past vaccination coverage and COVID-19 vaccination coverage in booster countries

Applying this association to African countries to predict their COVID-19 vaccination uptake if they had full vaccine supplies



Predicting COVID-19 Vaccine Uptake in Africa

Countries predicted to have a higher vaccine uptake should be given a higher volume of C-19 vaccines to prevent wastage



A relatively **higher volume** of C-19 vaccines should be distributed to countries where uptake is predicted to be **higher**, such as **Morocco, Rwanda, Cabo Verde, Egypt** and **Ghana**, according to estimates.

A **lower volume** of C-19 vaccines should be sent to countries that are predicted to have a **lower** predicted uptake, such as **Somalia, Central African Republic, Guinea** and **Nigeria**, to prevent vaccine wastage.

Limitations:
→ Reliant on public information

Data and Visualisations: Airfinity

→ Supply agreed

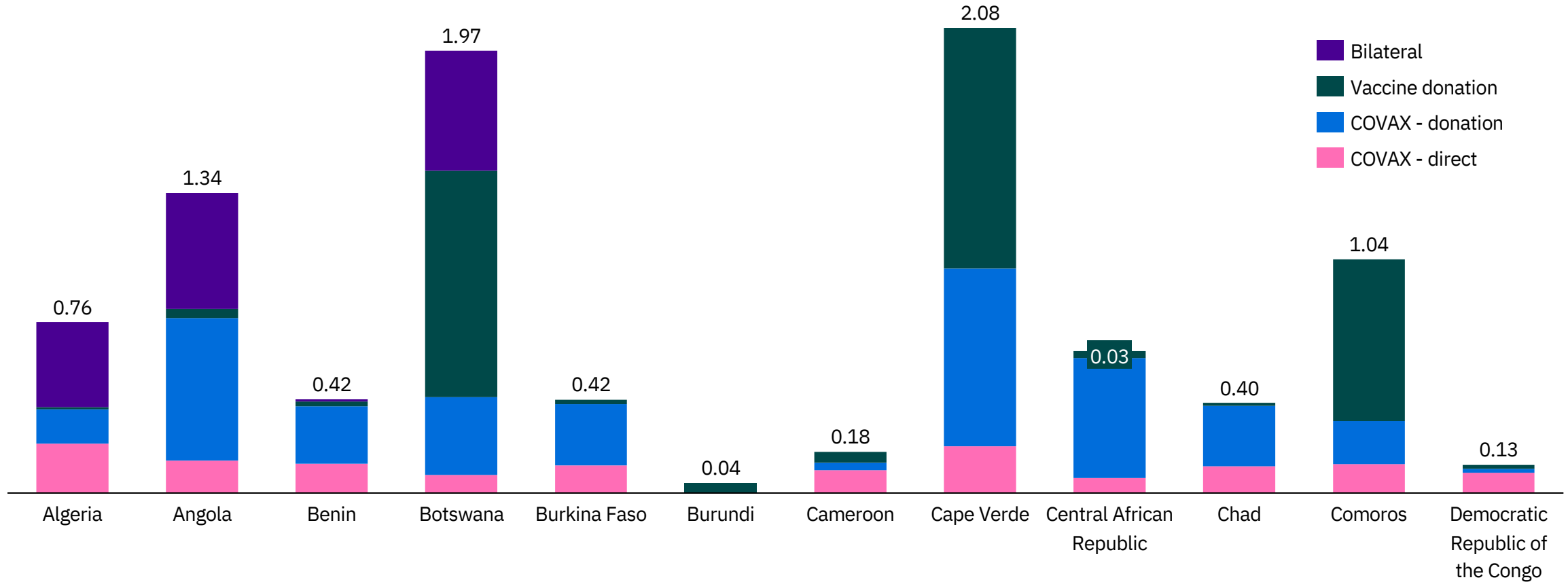
→ 45,746,900 doses of J&J have been delivered through AVAT

Range seen in doses secured per capita in Africa

Supply agreed to date

Limitations:

- Reliant on public information
- Doses procured by the African Union are excluded as allocation per country has not been confirmed

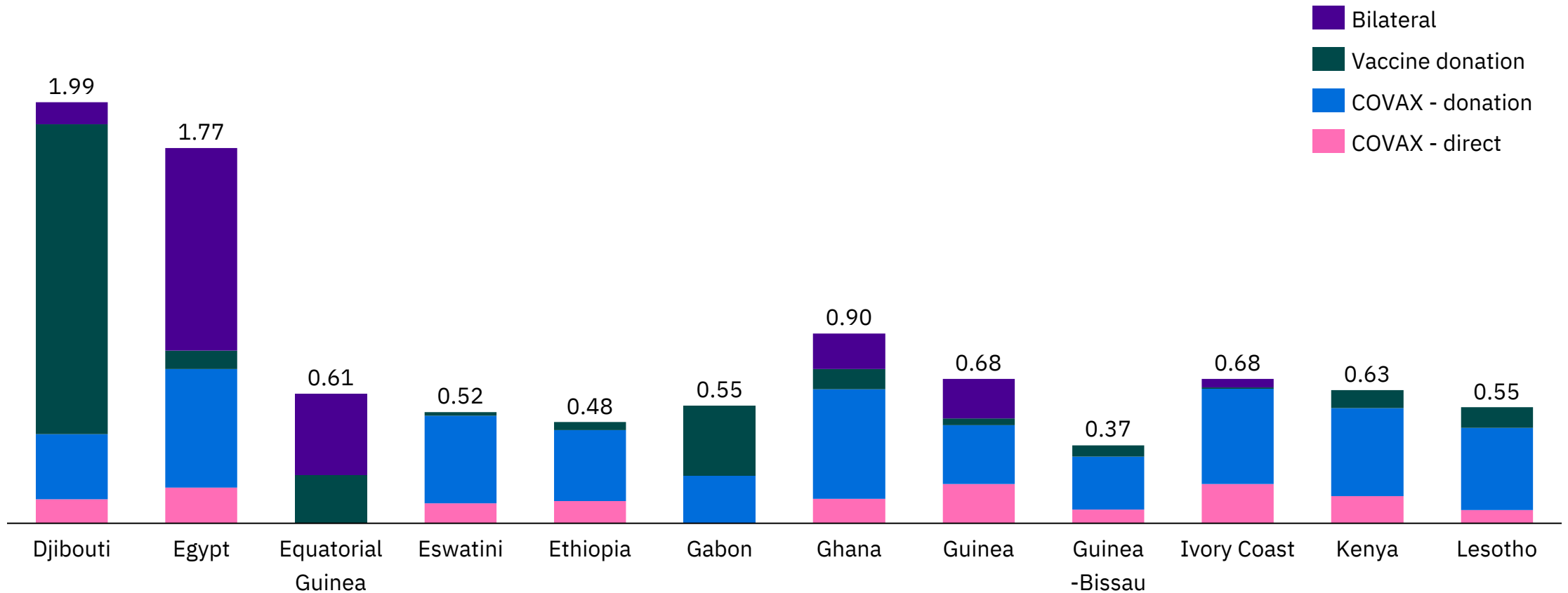


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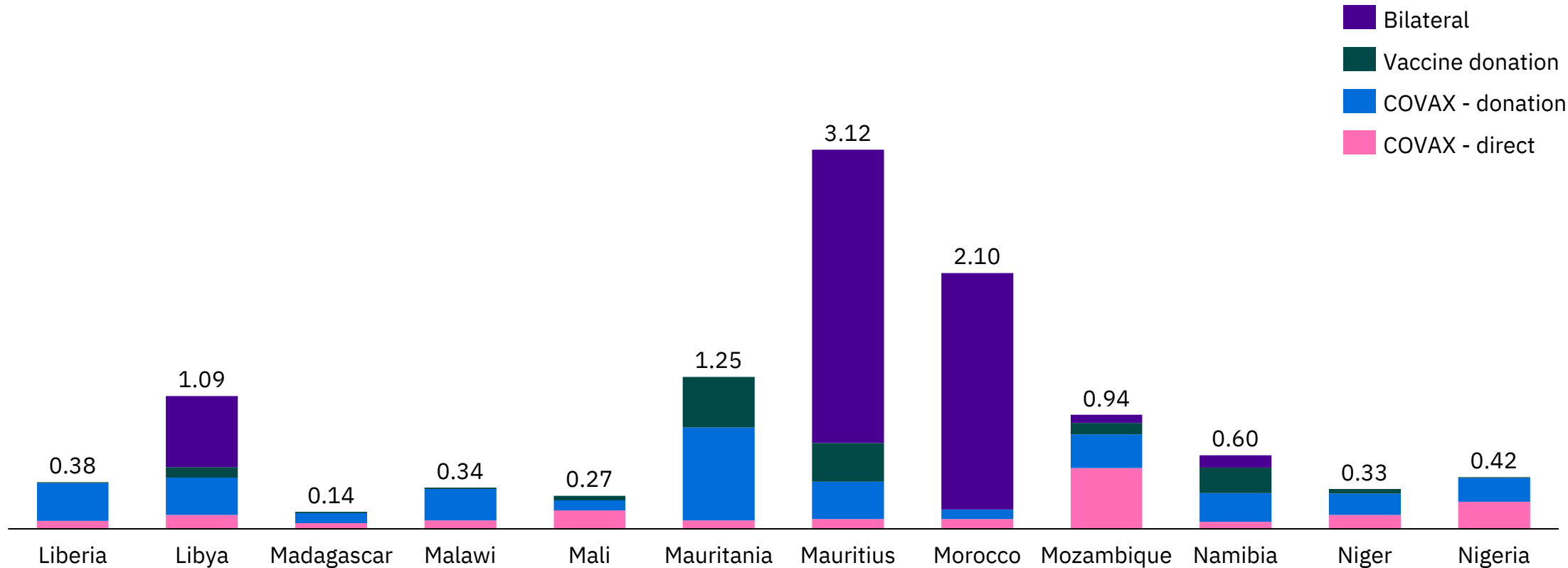


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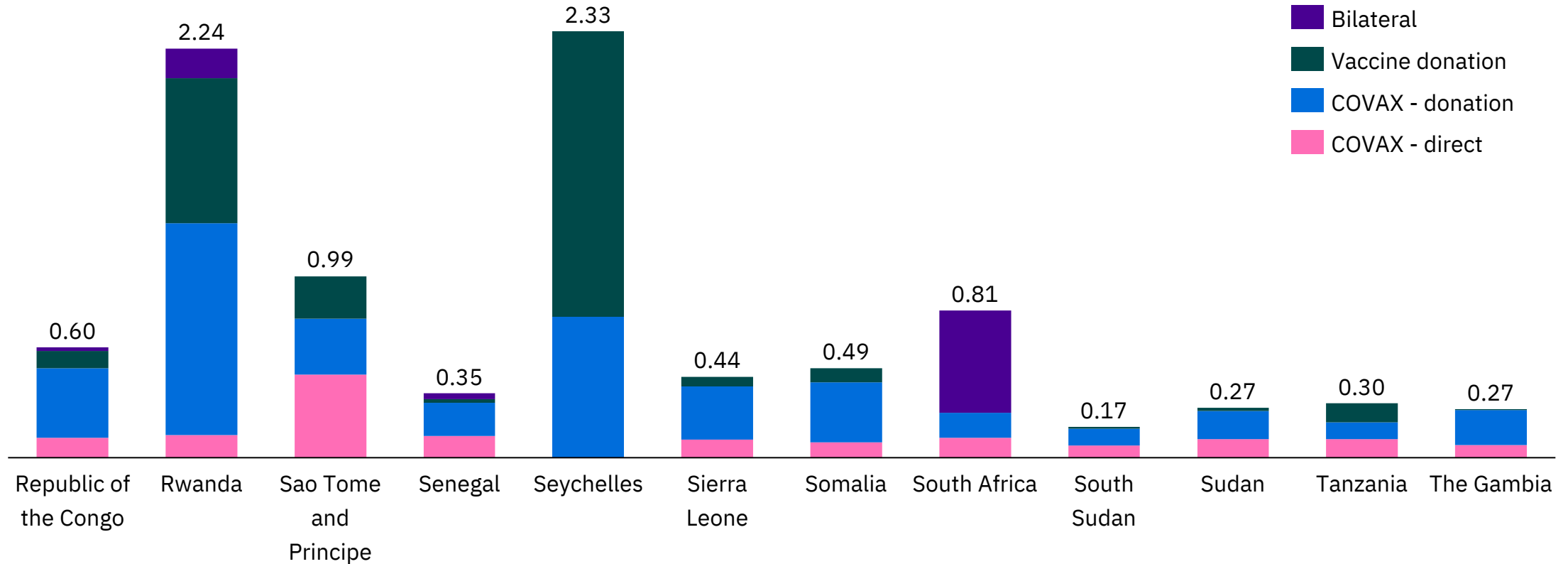


Range seen in doses secured per capita in Africa

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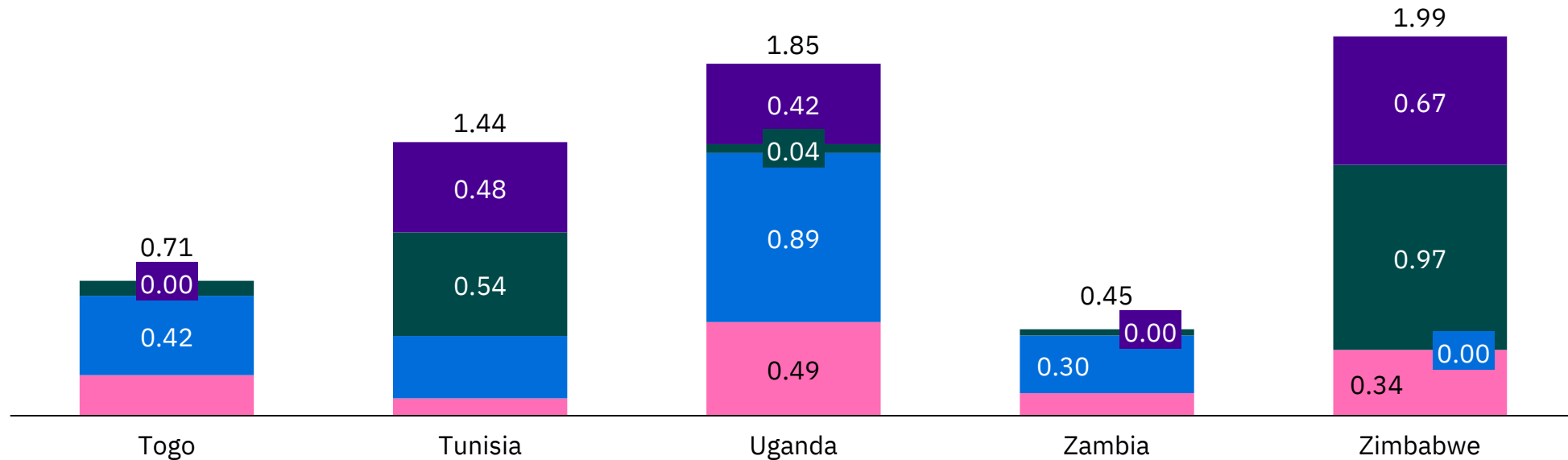
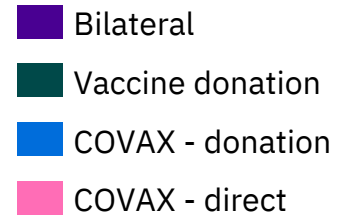


Range seen in doses secured per capita in Africa

Supply agreed to date

Limitations:

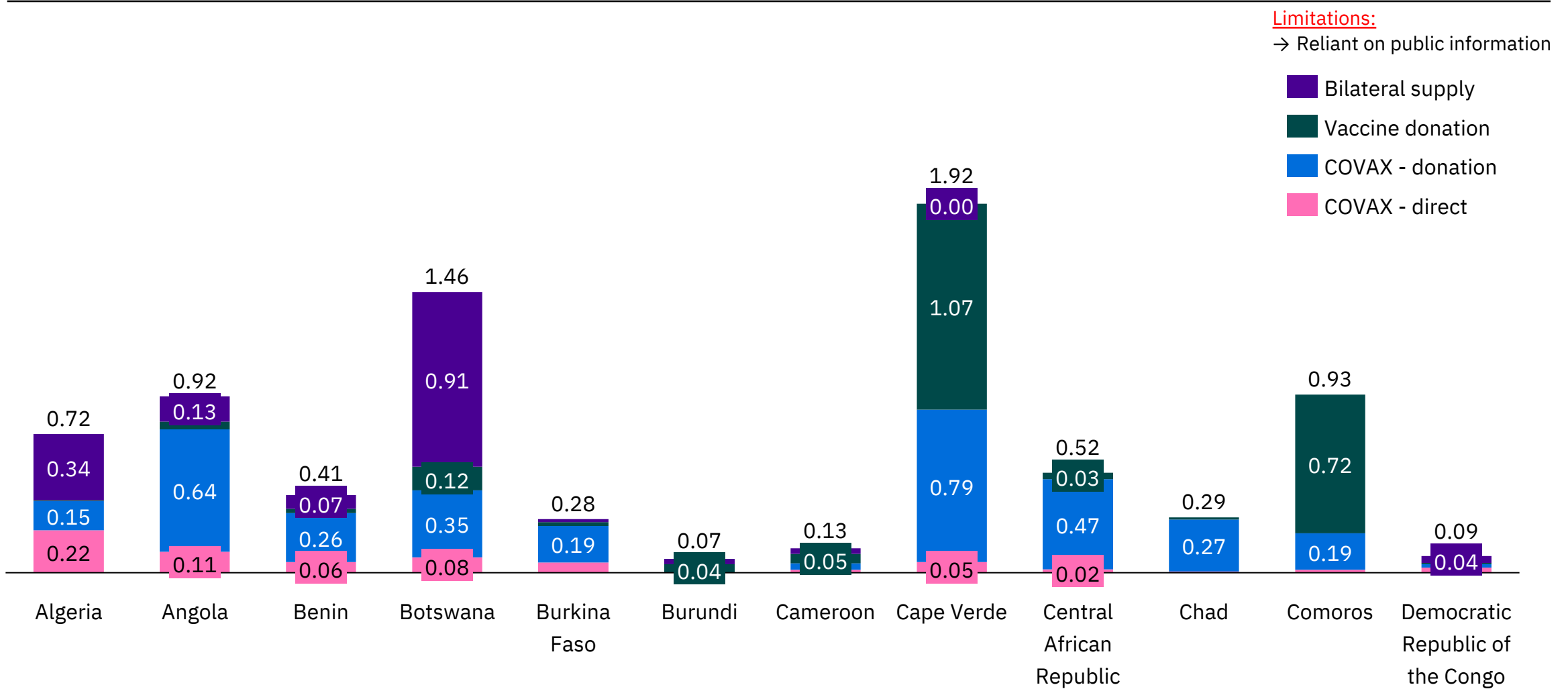
- Reliant on public information
- Doses procured by the African Union are excluded as allocation per country has not been confirmed



→ Donations and deliveries overview

Range seen in doses delivered per capita in Africa

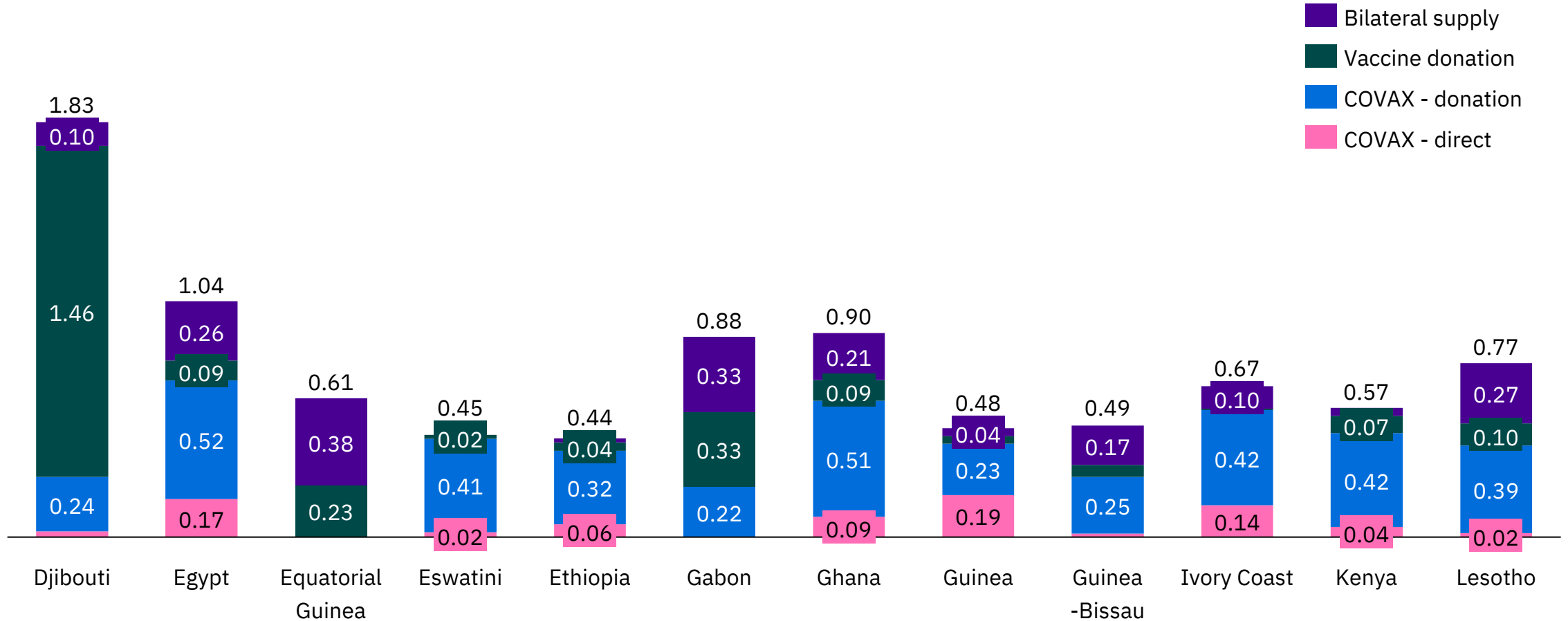
Deliveries to date per capita



Range seen in doses delivered per capita in Africa

Deliveries to date per capita

Limitations:
→ Reliant on public information

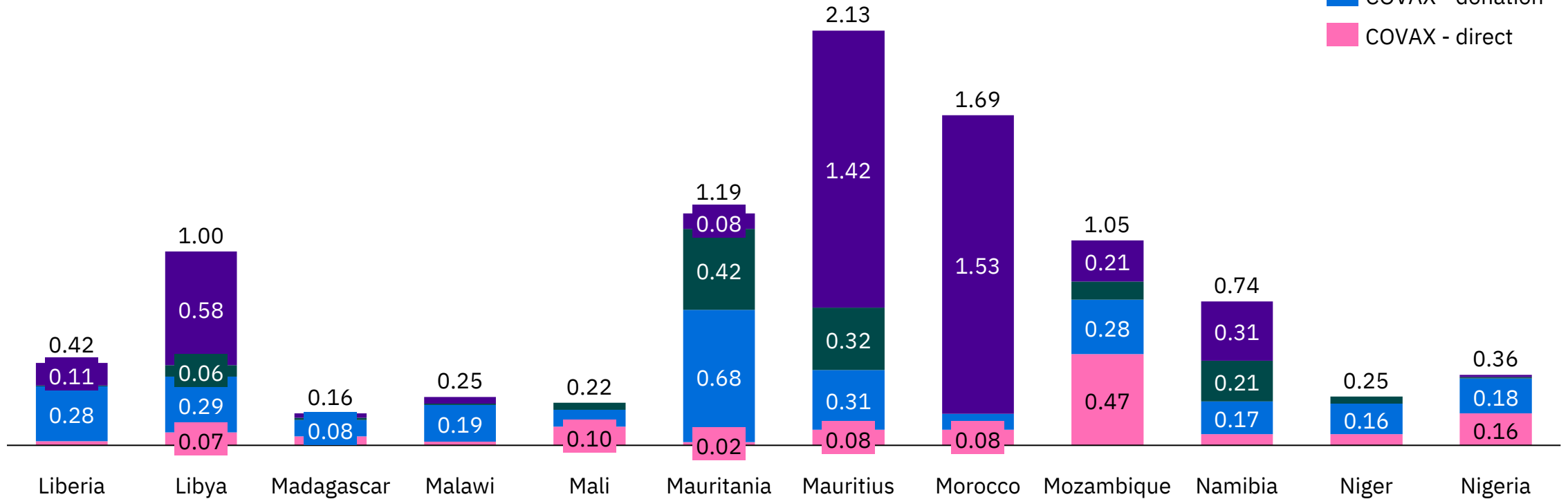


Range seen in doses delivered per capita in Africa

Deliveries to date per capita

Limitations:
→ Reliant on public information

- Bilateral supply
- Vaccine donation
- COVAX - donation
- COVAX - direct

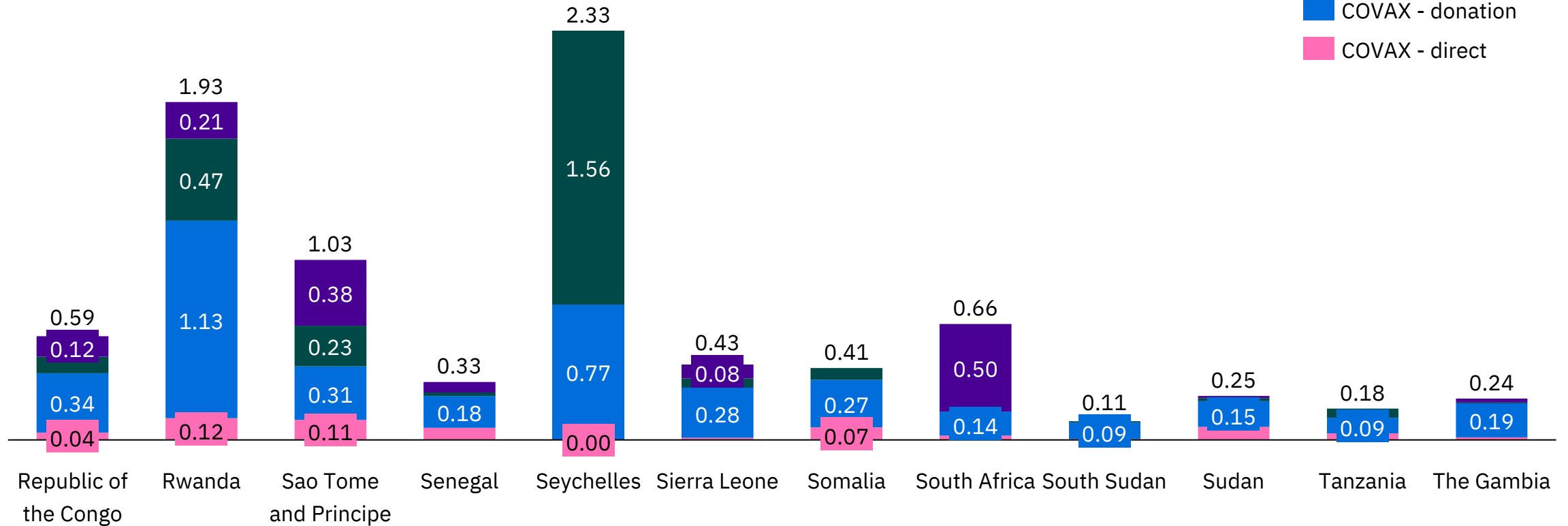


Range seen in doses delivered per capita in Africa

Deliveries to date per capita

Limitations:
→ Reliant on public information

- Bilateral supply
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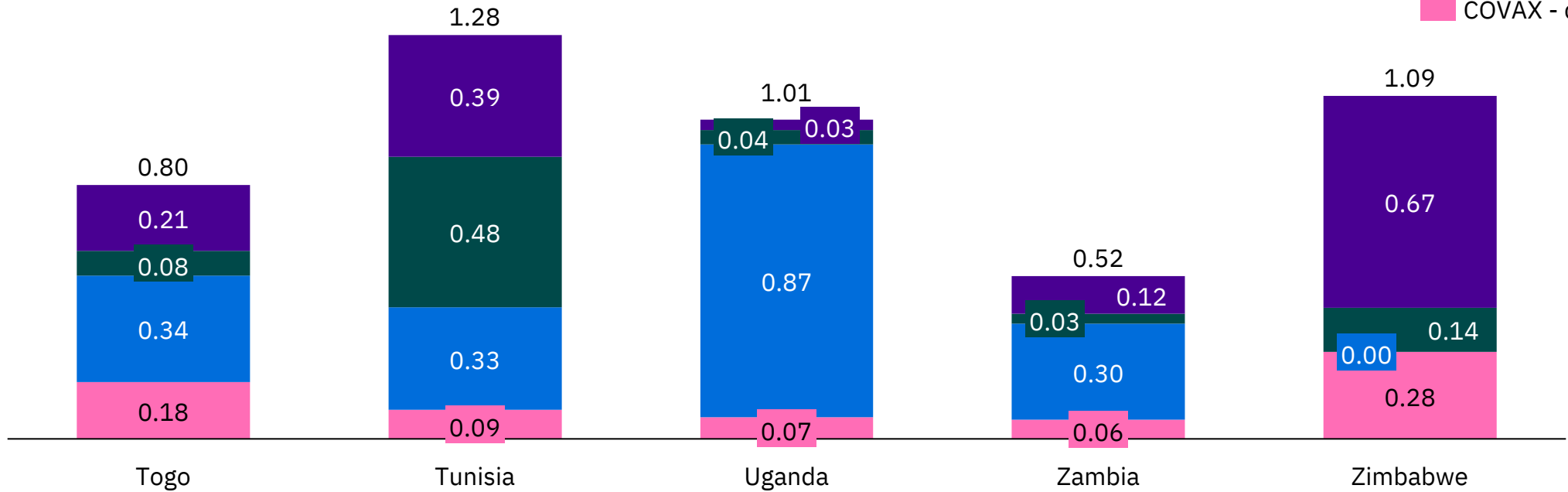
Range seen in doses delivered per capita in Africa

Deliveries to date per capita

Limitations:

→ Reliant on public information

- Bilateral supply
- Vaccine donation
- COVAX - donation
- COVAX - direct



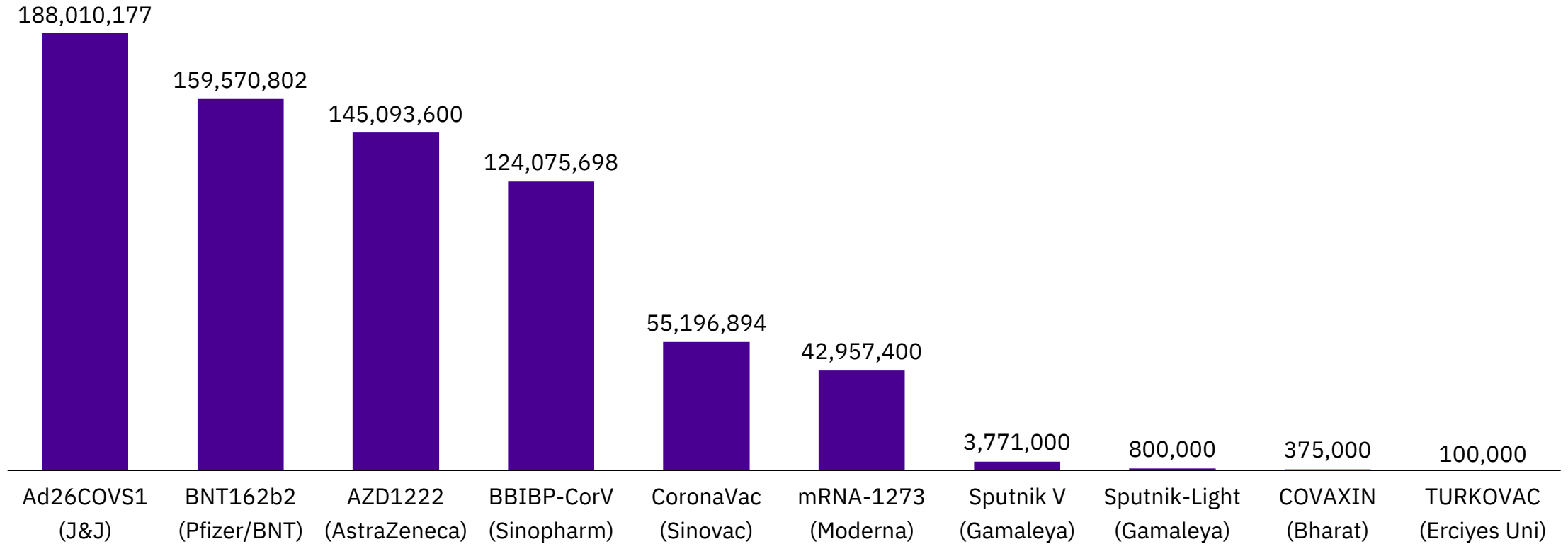
J&J makes up the vaccine delivered most to Africa

Doses delivered split by vaccine

■ Total deliveries to date

Limitations:

→ Reliant on public information

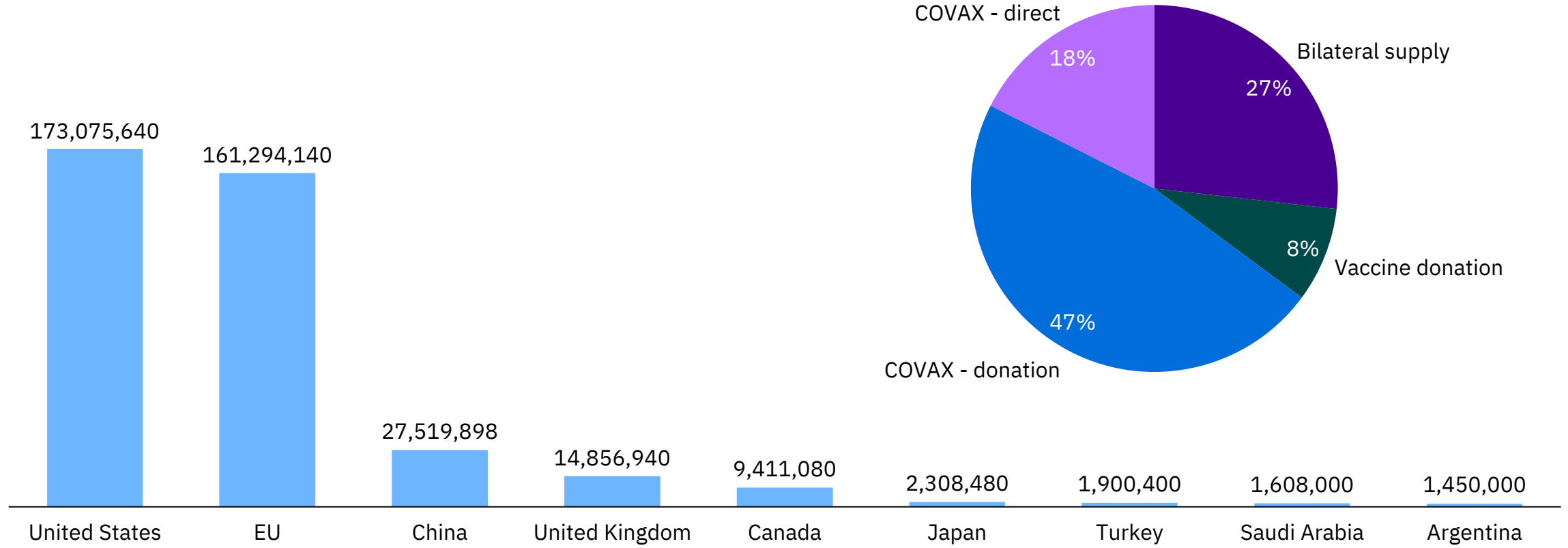


US are the biggest donor to Africa to date

Total donations to Africa to date

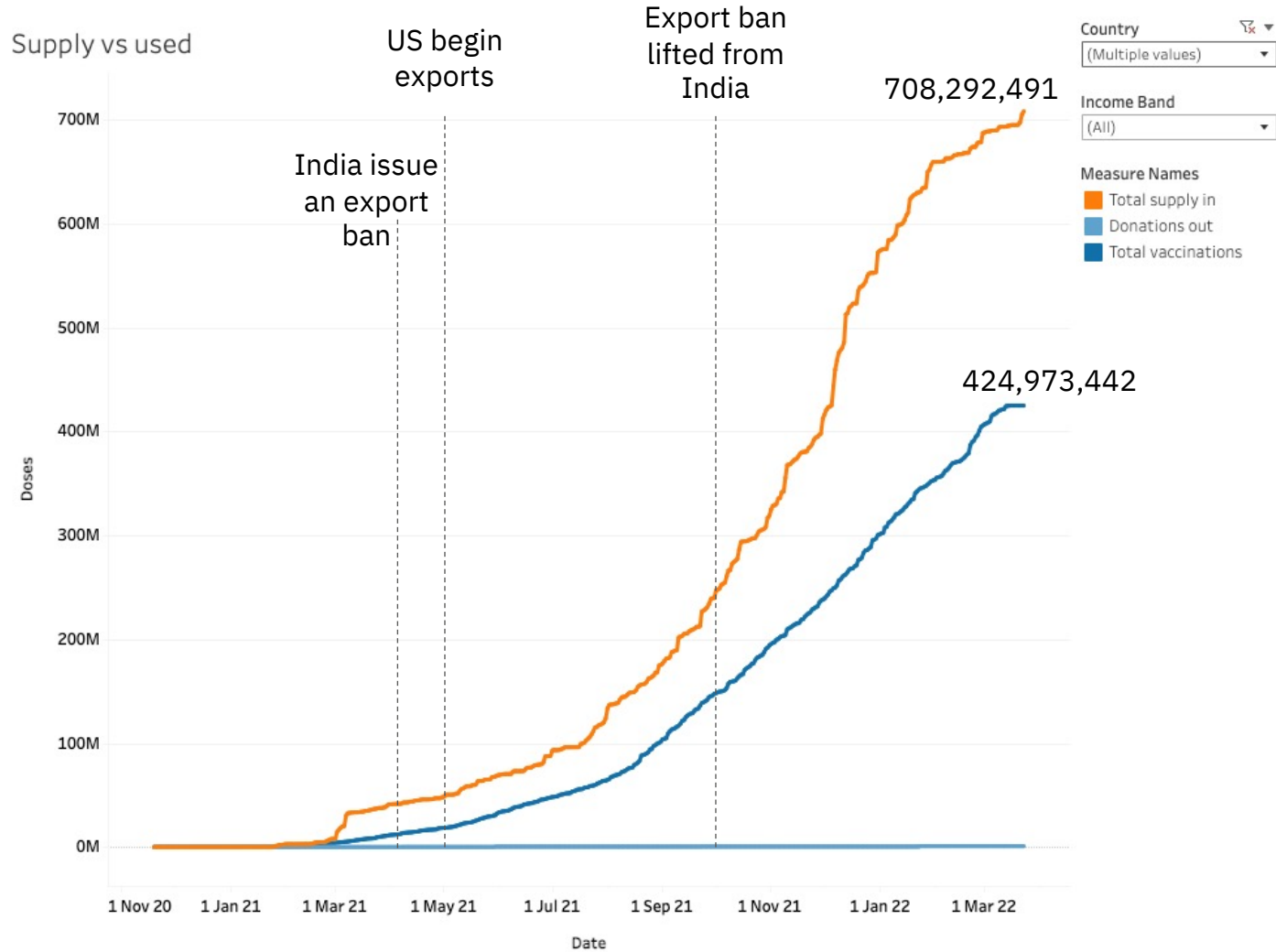
■ Total donations to Africa to date

Limitations:
→ Reliant on public information



60% of doses delivered to Africa have been administered to date, 21% have received at least one dose

An overview of doses delivered vs. doses administered to the continent



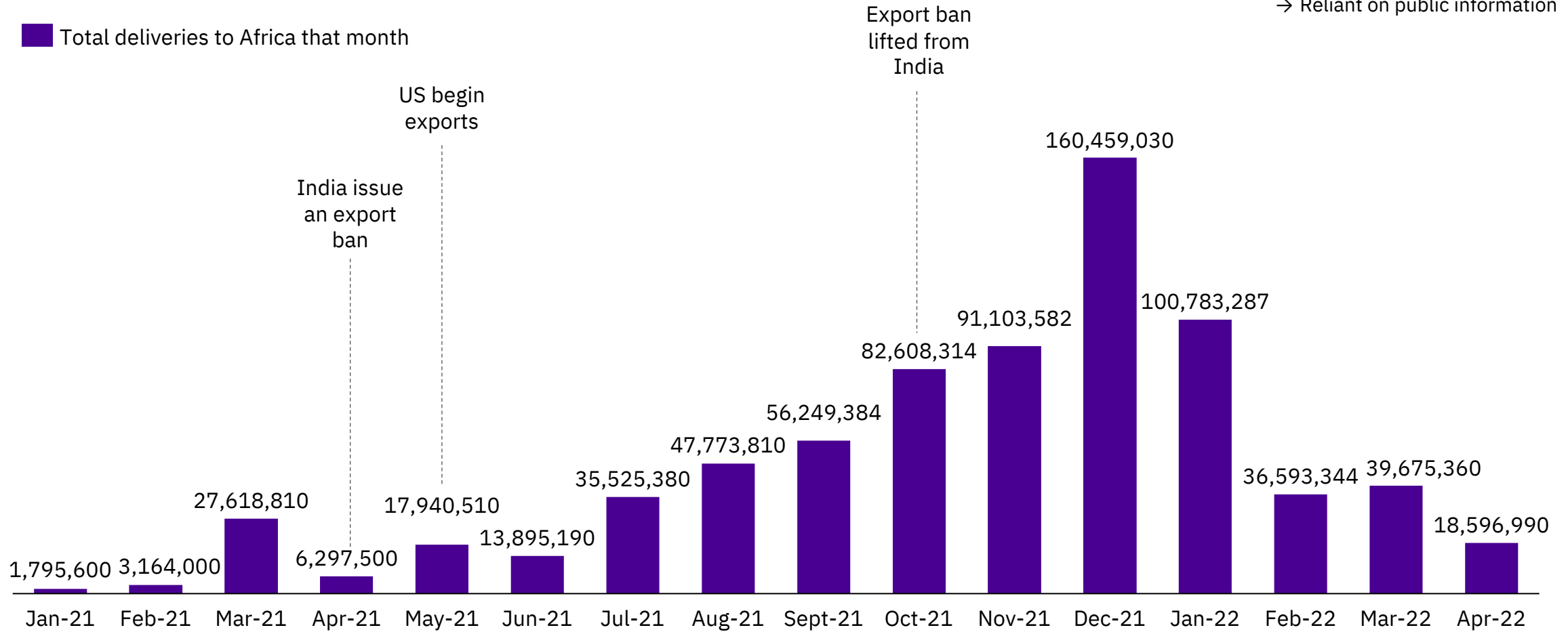
Limitations:
→ Reliant on public information

Highest number of deliveries was in Dec 2021

Deliveries per month to Africa

■ Total deliveries to Africa that month

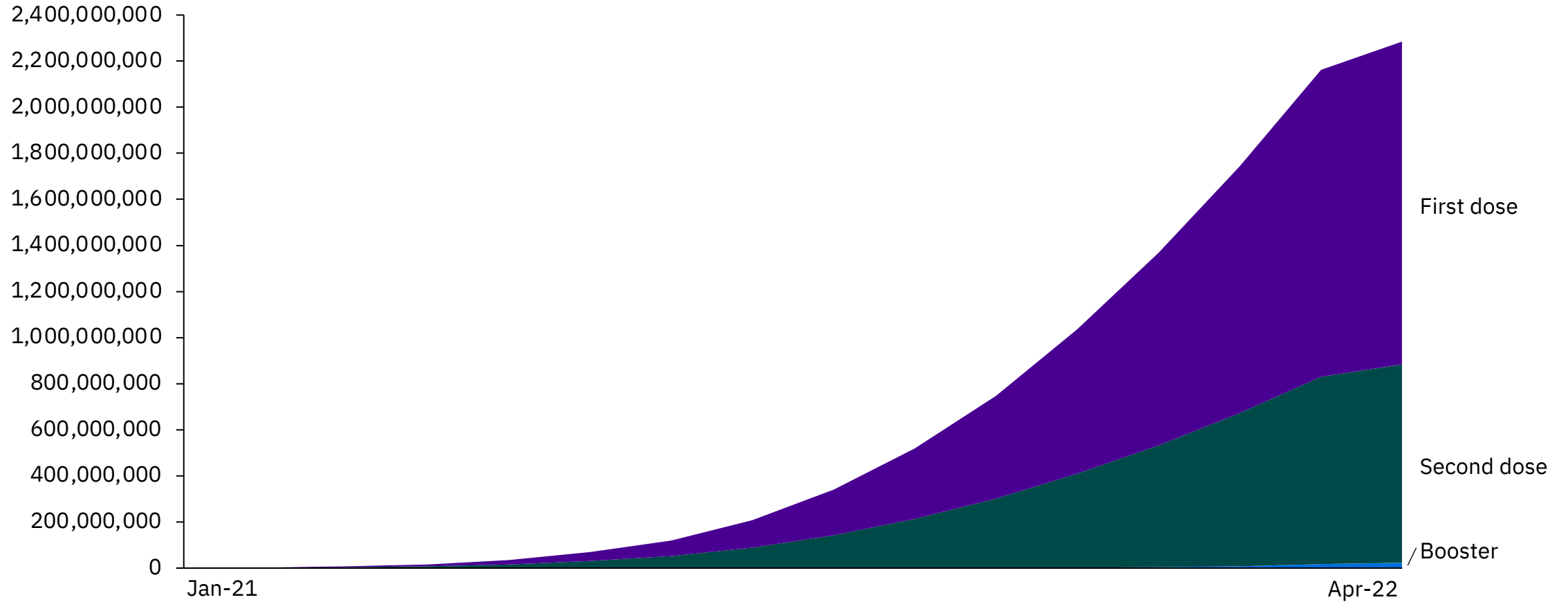
Limitations:
→ Reliant on public information



Majority of doses administered in Africa are first doses

Doses administered over time in Africa

Limitations:
→ Reliant on public information



→ Testing capacity

Testing rates per capita are lower in Africa than any other continent

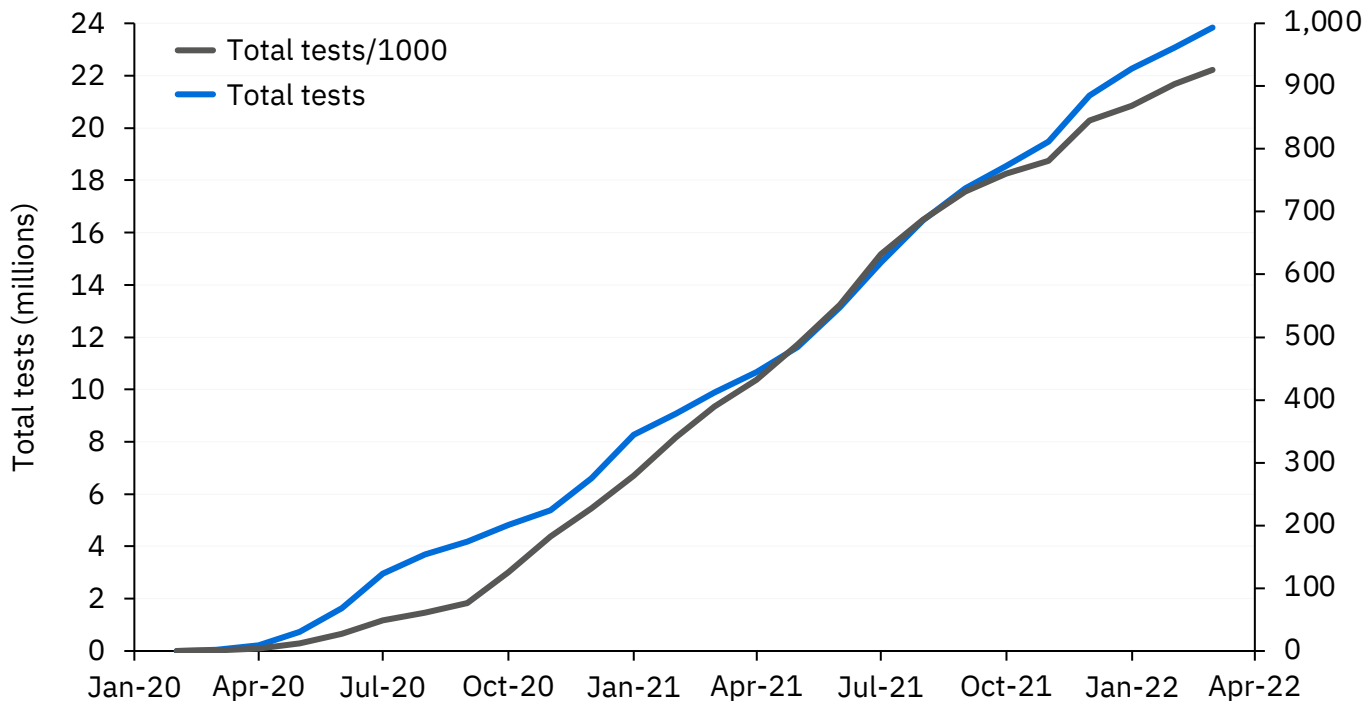
Comparison of COVID-19 testing data by continent

The number of tests performed has been steadily increasing in Africa since the start of the pandemic, however, testing rates on the continent are the lowest globally. This is partly due to data reporting across the continent; out of 55 African countries only 16 have reported testing data for over half the duration of the pandemic. Low testing rates mean that infection levels are difficult to monitor, and fewer people will be eligible to antiviral treatments (where available) that require on a COVID-positive diagnosis prior to administration.

Limitations:

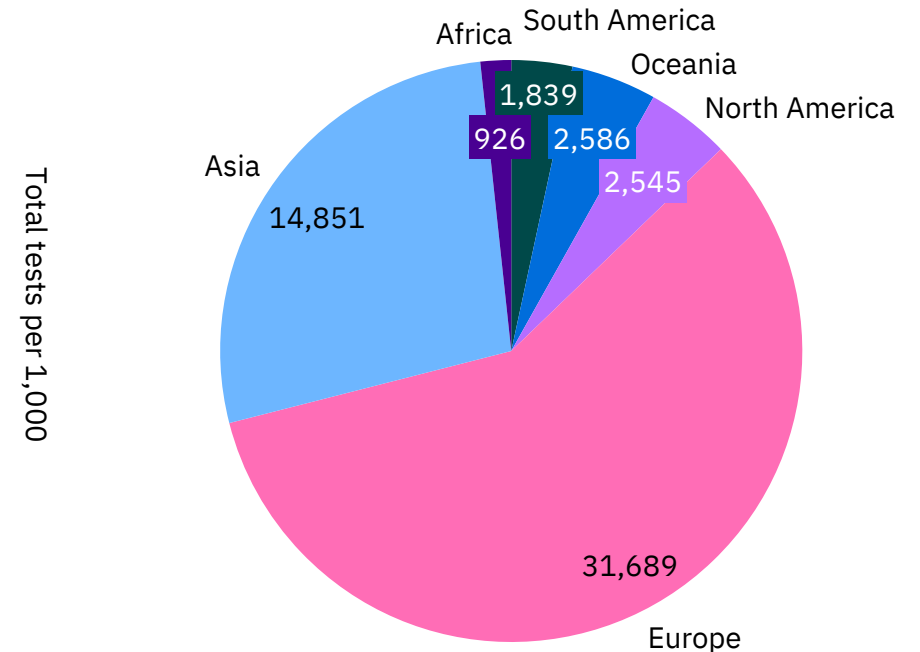
- Different countries publish their testing data according different definitions.
- Testing data is not available for every country.

Total tests and total test per capita in Africa, Jan 2020-present



Total tests performed per 1000 by continent

*As of 31/03/22



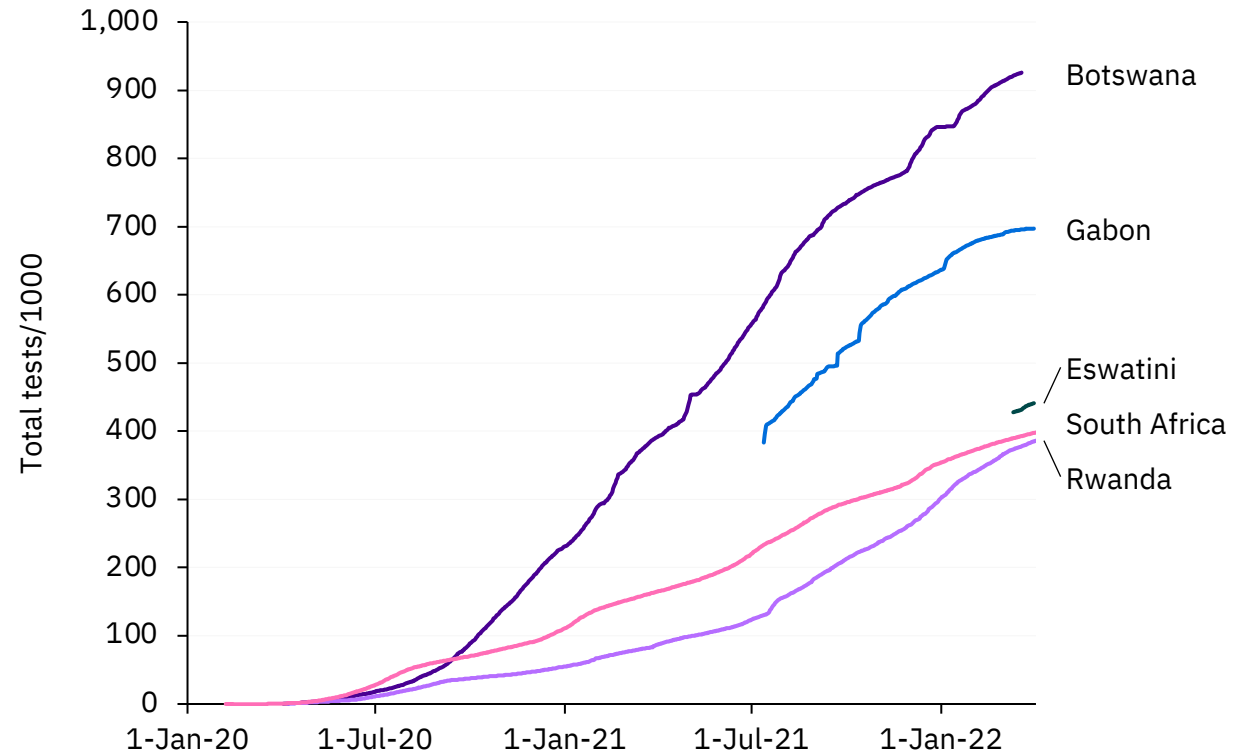
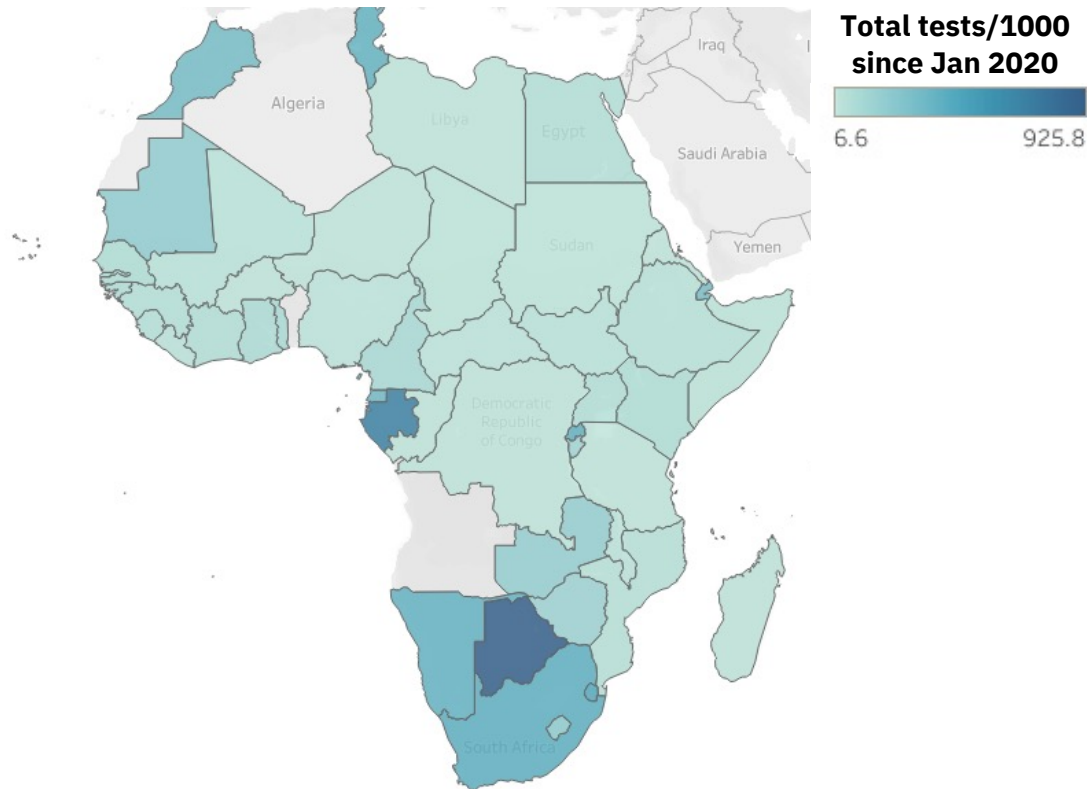
Testing rates are highly variable across Africa

Analysis of test per capita data of individual African countries

There is a large range of testing rates across Africa. Algeria has reported the fewest tests throughout the pandemic, recording a total of 5.2 tests/1000 over the course of the pandemic. Botswana has reported the most tests per capita (925.8 tests/1000). However, it is the only country in Africa that has performed more tests per capita than the global average of 800 tests/1000.

Limitations:

- Different countries publish their testing data according different definitions.
- Testing data is not available for every country.



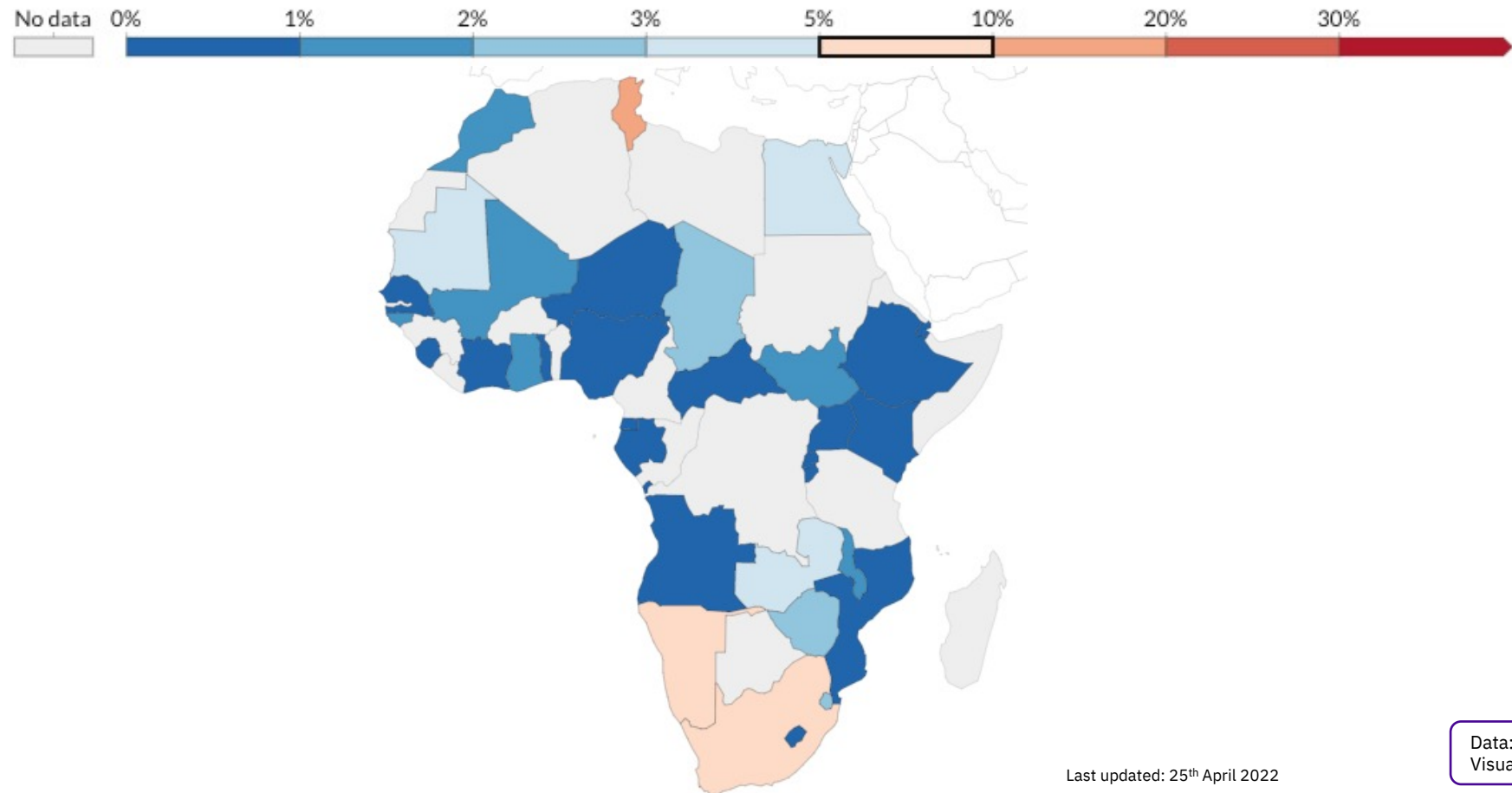
For countries providing testing data, positivity rates are low

Analysis of positivity rates of tests in Africa

For countries that provide testing data and positivity rates, the majority are testing sufficiently according to WHO's criteria of sufficient testing to prevent an outbreak.

Limitations:

- Different countries publish their testing data according different definitions.
- Testing data is not available for every country.



→ Treatment capacity

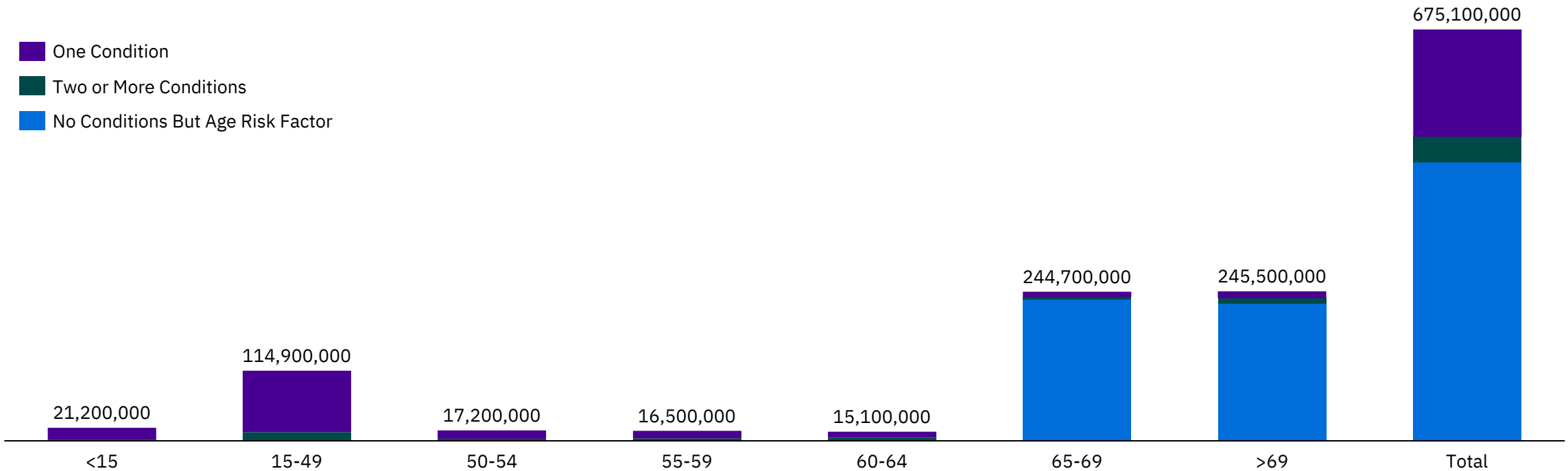
675 million people in Africa are at high-risk of progression to severe COVID-19

Overview of the total number of those at high-risk of progression to severe COVID-19 in Africa

Limitations:

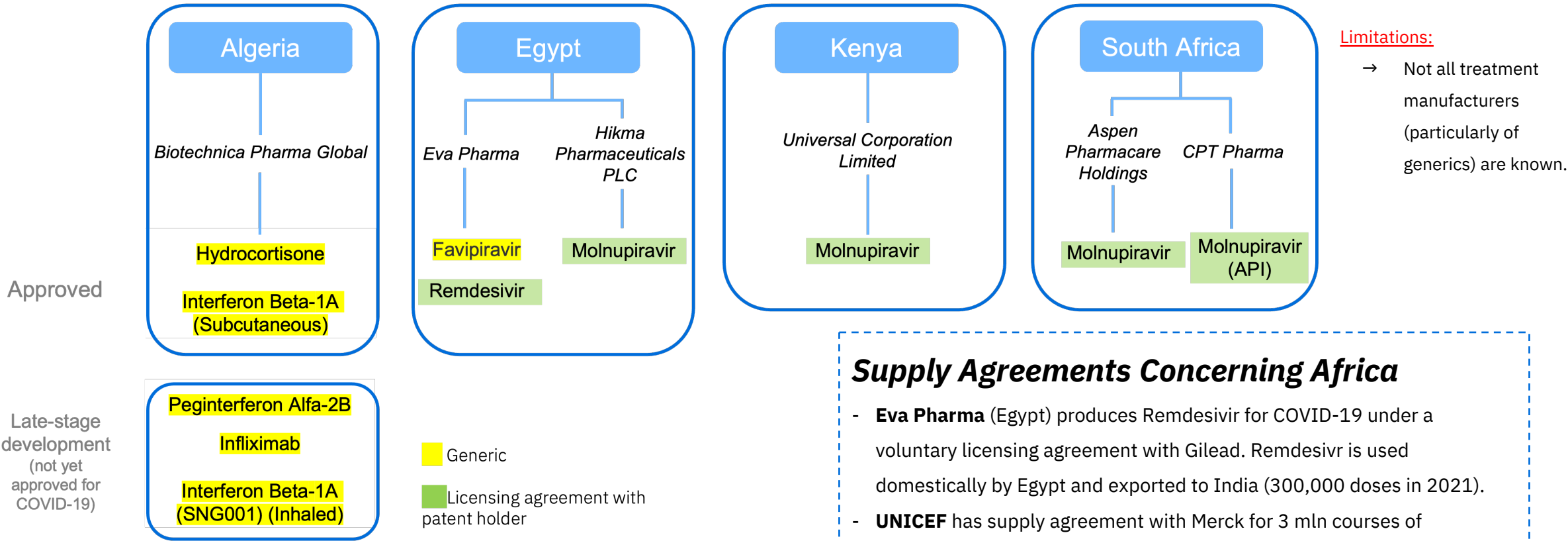
- Does not include average case rates for Africa; not all of the high-risk population will be infected.
- Does not take into account re-infection.

Number of Those At High-Risk of Progression to Severe COVID-19 in Africa



COVID-19 treatment manufacturing in Africa

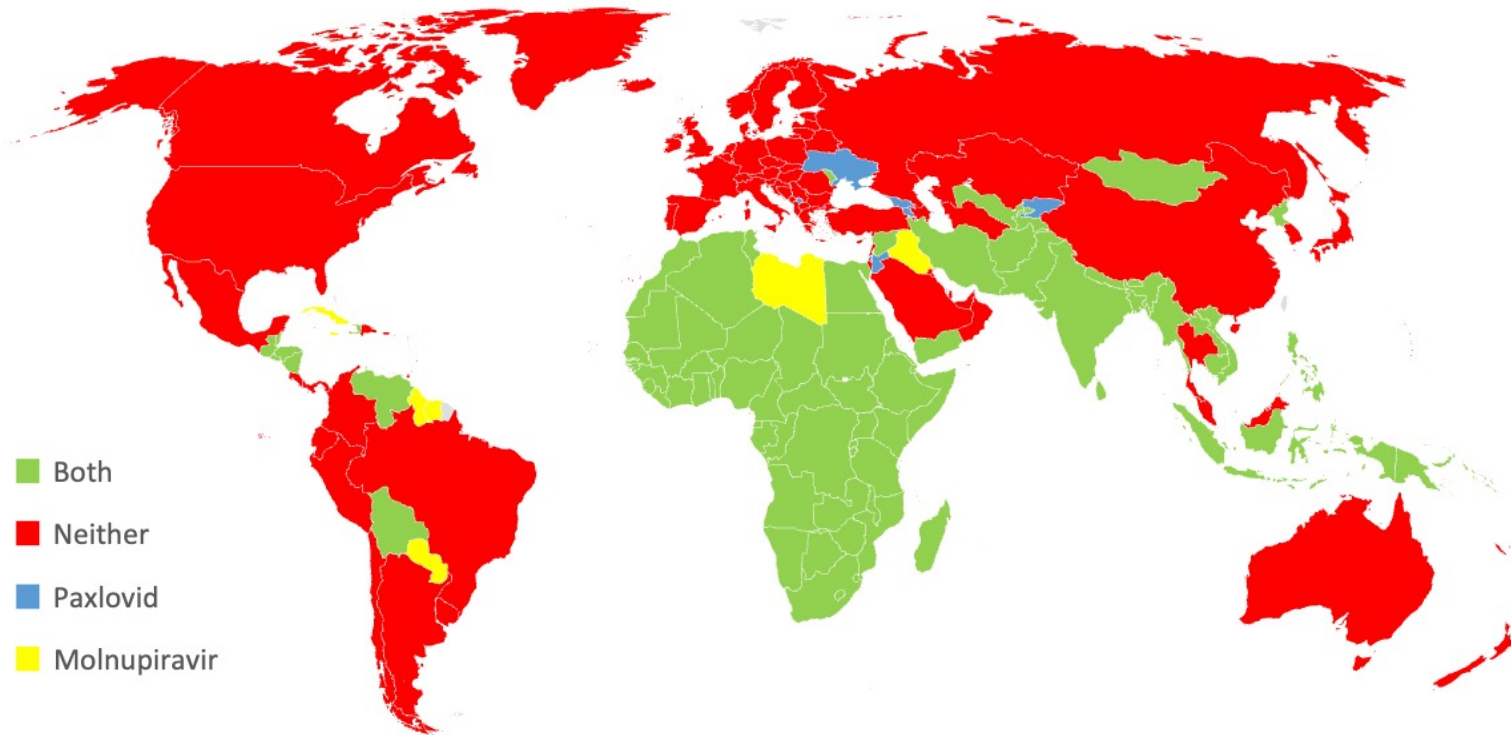
Six known manufacturers of approved COVID-19 treatments in Africa



Antivirals accessible to African nations through Medicines Patent Pool

Paxlovid, Molnupiravir MPP agreements cover all of Africa

Countries covered by MPP agreement



Africa and the MPP agreements

- Under agreements signed by Pfizer/Merck, and the MPP, generic manufacturers can produce and export Paxlovid/Molnupiravir to 105+ countries (including all African nations).
- 27 manufacturers have been granted sublicenses to produce and distribute Molnupiravir, 3 of which are in Africa (Kenya, Egypt, South Africa). Generic forms of this treatment are expected to go to market Q1 2022.
- Paxlovid generic manufacturers unknown currently.

→ Appendix

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