

# COVID-19 Vaccines

Updates

Klaus Meyer, February 25, 2021

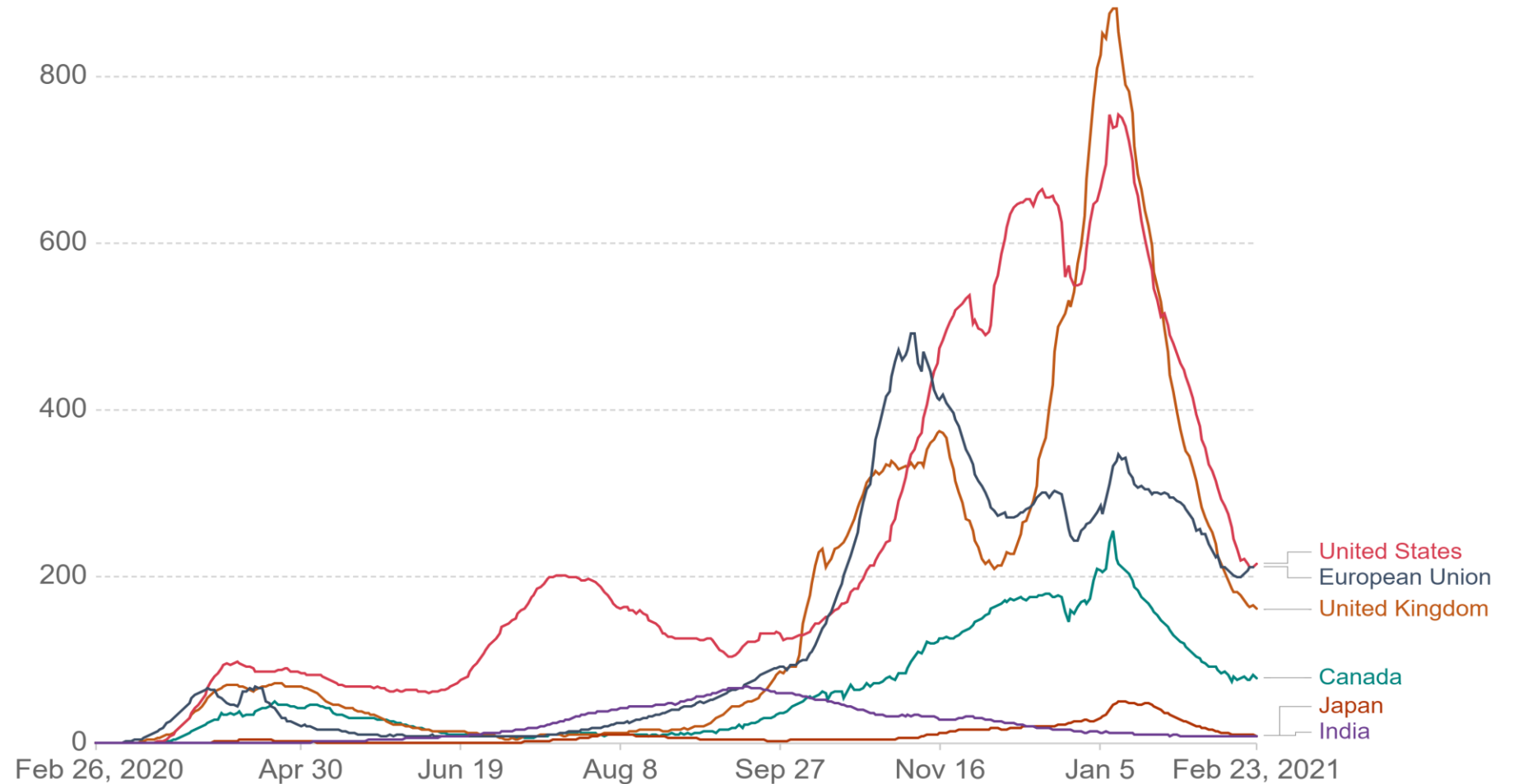
For links to the original articles, click on the logos of the news outlets

# Are we finally seeing a light at the end of the COVID tunnel?

## 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.

Our World  
in Data



Source: Johns Hopkins University CSSE COVID-19 Data – Last updated 24 February, 09:03 (London time)

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The UK and the US are racing far ahead of EU countries and Canada in getting their populations vaccinated.

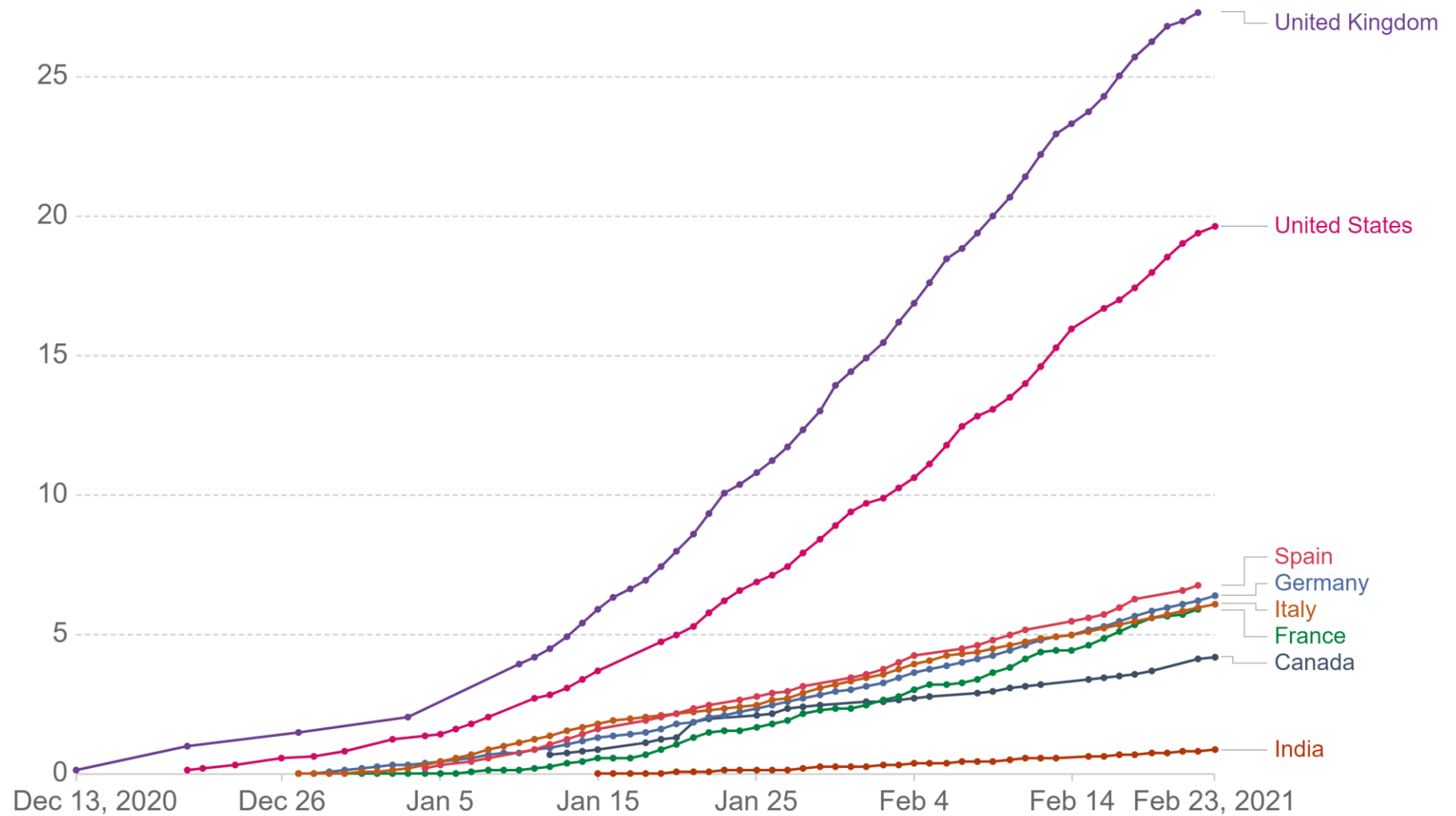
Developing countries have barely started.

Why?

## Cumulative COVID-19 vaccination doses administered per 100 people

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).

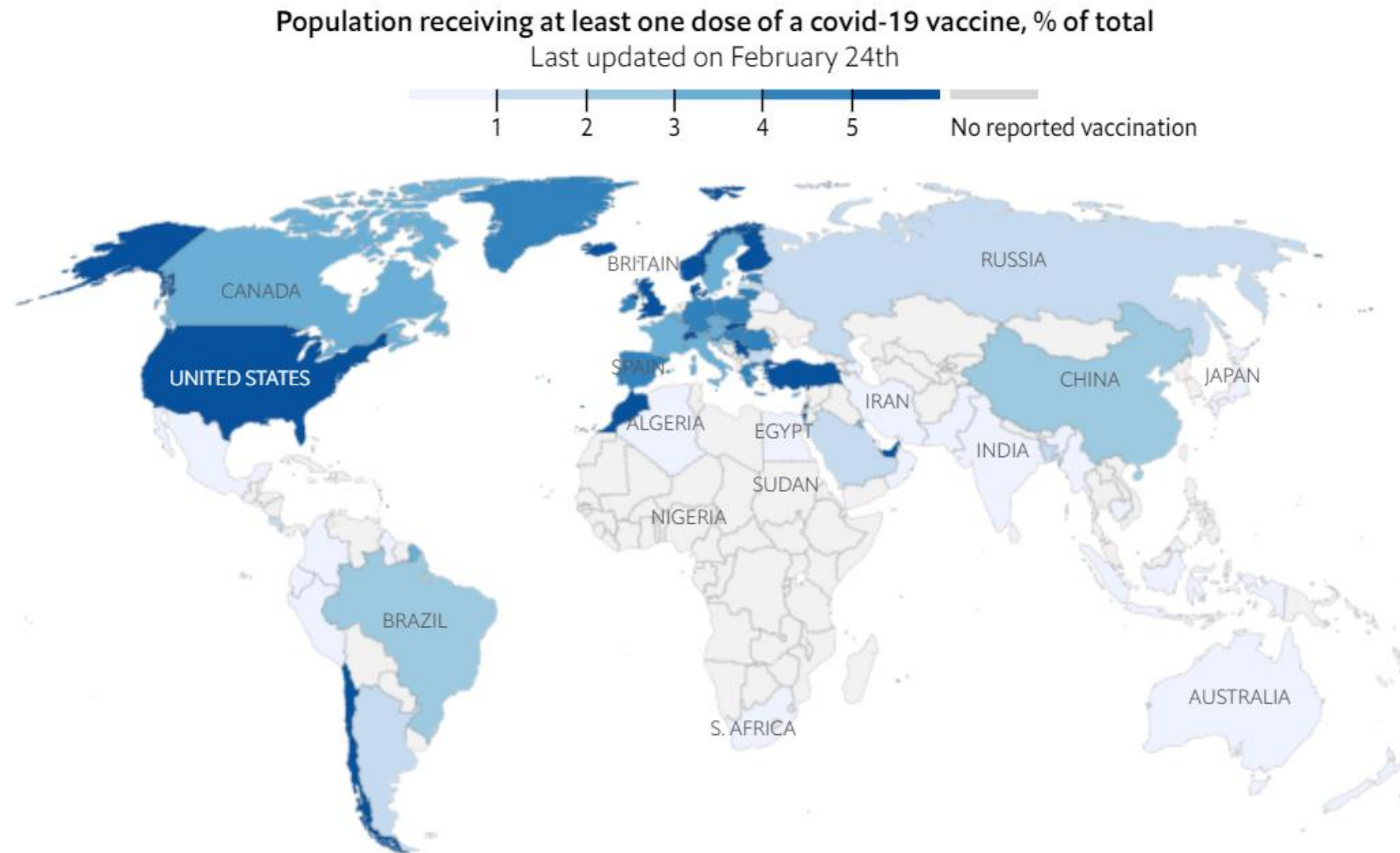
Our World  
in Data



Source: Official data collated by Our World in Data – Last updated 24 February, 10:00 (London time)

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**The UK and the US are racing far ahead.  
Developing countries have barely started.**



# What happened to the WHO's C-TAP?

Nothing

C-TAP ... *“attracted zero contributions in the eight months since it was established...”*

*“To date, 40 countries, primarily from the global south, have signed on, but C-TAP is not fully operational due to a lack of political backing, funding, and participation from patent holders and vaccine manufacturers.”*

An intellectual property waiver over COVID-19 technology was proposed by developing countries at the WTO, but received no support from advanced economies.

theguardian

By M. Safi, Jan 22



By E. Guillen,  
Feb. 8



By K. Mara,  
Dec 18

***“It is outrageous that these rich nations who have already hoarded most of the world’s vaccine supply are preventing others from producing more of this life-saving medicine.”*** Amnesty International spokesperson



# Instead, countries and pharma industry emphasize COVAX. What is the difference?

## Who created this structure?



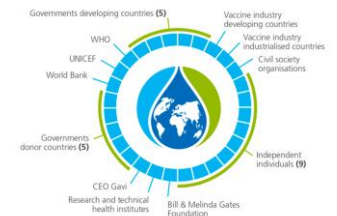
Established 2017

- Foundation sponsoring vaccine development,
- Supported by Gates Foundation, Wellcome Trust & several European countries



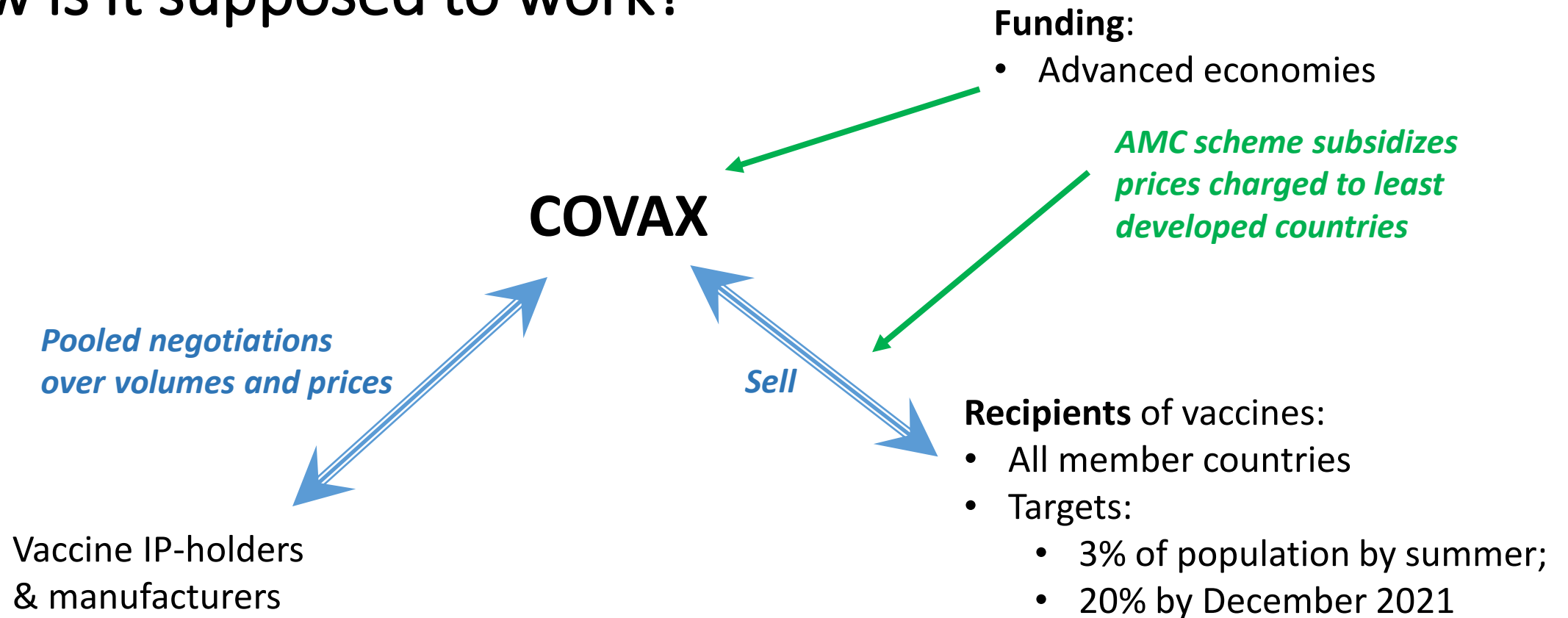
Established 2000

- Foundation sponsoring vaccine dissemination to developing countries,
- Supported by private & public sector actors



Instead, countries and pharma industry emphasize COVAX.  
What is the difference?

How is it supposed to work?



→ IP rights remain with the manufacturers, and fully protected

# Can COVAX deliver?

**Target:** 2bn doses in 2021

**February 19:** G7 committed to double their contribution to COVAX, total funding now \$10.3bn (almost on target)

**February 23:** First ever delivery (to Ghana)

- *Budget insufficient to buy sufficient vaccines (advanced economies bid up prices)*
- *20% of developing country population by December very ambitious given various constraints (funding, logistics)*
- *Lack of funding to immunize full population*



Feb 19



Feb 24



Feb 24



Feb 12



Feb 24 <sup>1</sup>

THE CONVERSATION

By M. Fallah, Jan 14



# Can COVAX deliver the vaccines much of the world needs?



By M. Peel,  
D. Pilling &  
D.P. Mancini,  
February 12

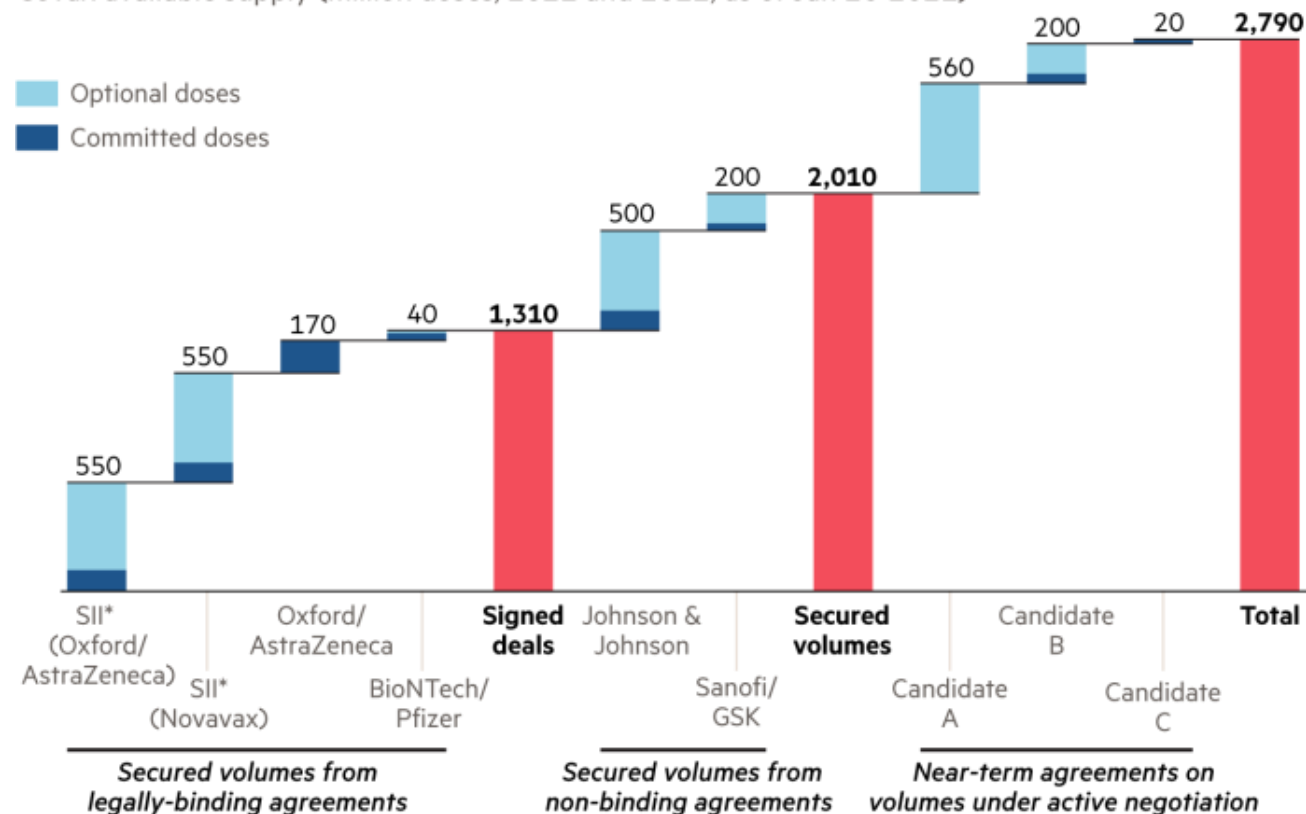
COVAX mainly contracted with **Oxford University / Astra Zeneca**, rather than **BioNTech/Pfizer** or **Moderna**.

The original contract between Oxford and AZ contains a commitment to supply at marginal cost to developing country (condition of public funding)

The **Serum Institute of India** eventually will play a key role of producing vaccines for the developing world.

## Covax's vaccine portfolio

Covax available supply (million doses, 2021 and 2022, as of Jan 20 2021)



\* Serum Institute of India - the world's largest vaccine manufacturer  
Source: Covax Global Supply Forecast (Cepi, Gavi, WHO)  
© FT

# An interview with, Adar Poonawalla, CEO of the Serum Institute of India

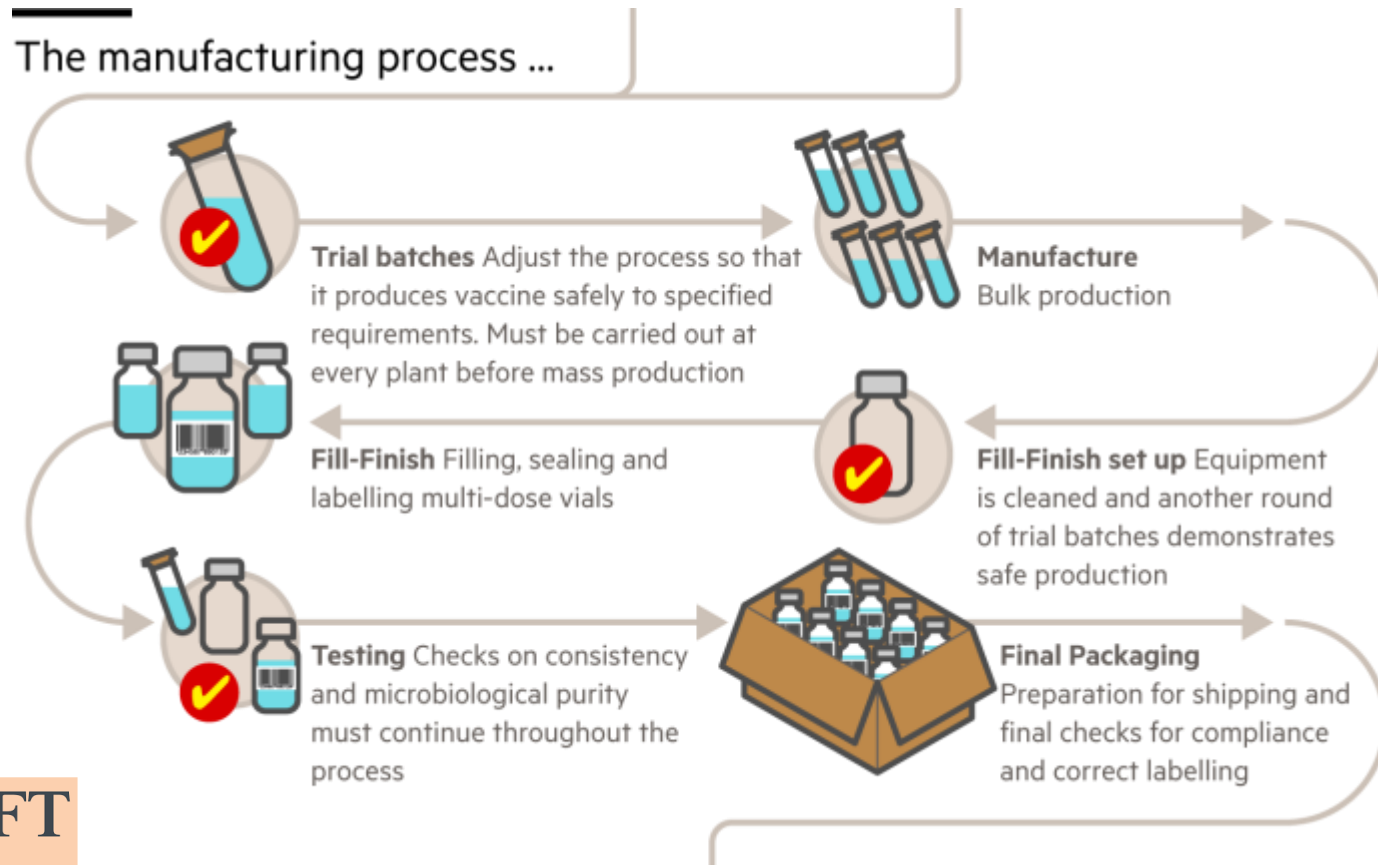
*'We took a huge risk': the Indian firm making more COVID jabs than anyone*  
February 14, 2021

**theguardian**



Serum Institute of India is a private company that invested heavily in building manufacturing capacity for COVID-19 vaccines.

# Why is it so difficult to manufacture vaccines?



- Intellectual property
- It is a biological process that cannot be scaled up quickly
- Quality control in manufacturing is key.

→ Big investment  
→ Takes time to build

# How did the UK get access to vaccines so much faster than the EU or Canada? (1)

The UK governments started negotiating in April to build the supply chain within the UK in return for support for R&D investments.



By C. Cookson,  
February 10



- 1 The Valneva vaccine is manufactured in Livingston
- 2 Novavax will manufacture its vaccine using FUJIFILM Diosynth Biotechnologies's facilities in Billingham, Stockton-on-Tees
- 3 The Oxford/AstraZeneca vaccine is manufactured in Oxford and Newcastle-under-Lyme. Fill-finish is in Wrexham
- 4 Currently under construction, the Vaccines Manufacturing and Innovation Centre (VMIC) at Harwell is set to open late this year
- 5 Cell and Gene Manufacturing and Innovation centre under construction. Due to open end of 2021
- 6 The BioNTech/Pfizer vaccine is imported from Puurs in Belgium

The UK government “*established the vaccines task force (VTF) in April [2020] with a budget of billions of pounds to secure supplies of Covid-19 vaccines for the UK from a range of manufacturers using different technologies. At that point it was not clear which would work well ... ‘In our discussion with manufacturers we committed to supporting manufacturing in any case where that would help get us earlier supplies,’ said Kate Bingham, who chaired the task force*”.

(also see this article, towards the end)

**POLITICO**

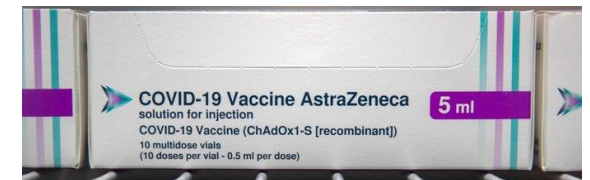
# How did the UK get access to vaccines so much faster than the EU or Canada? (2)

**POLITICO**

[How the UK gained an edge with AstraZeneca's vaccine commitments, February 24, 2021](#)

The details in the **contracts** matter.

- UK contract contains **commercial penalties** in case of non-delivery or late delivery, whereas the EU contract does not.
- UK contract “contains a commitment by AstraZeneca that the British **supply chain** ‘will be appropriate and sufficient’ for the supply of the doses the U.K. purchased.” ... “By contrast, the EU’s contract basically states that AstraZeneca will only make its “**best reasonable efforts**” to supply and manufacture the vaccines in the EU.”



*“the contract sealed with London was written by people with significant experience of purchasing agreements, specifically drug-buying deals. The European Commission’s contract, by contrast, shows a lack of commercial common sense, in the lawyer’s view.”*

# How did the UK get access to vaccines so much faster than the EU or Canada? (3)

Canada does not have domestic manufacturing facilities to manufacture COVID-19 vaccines.

**THE CONVERSATION**

By J. Lexchin, Feb 8, 2021

→ Facilities owned by Sanofi (in Toronto) and GSK (Ste-Foy) are at capacity producing other vaccines.

**THE GLOBE AND MAIL\***

→ Historically, Canada had a strong vaccine industry, but failed to invest in the industry.

By C. Rutt, Sept 14, 2020

The US will not export vaccines until all of its population is vaccinated (policy by Trump, confirmed by Biden). Hence, Canada depends on EU and India, which also struggle getting sufficient supplies.

# How did Chile get access to vaccines so much faster than others in Latin America? (4)

Key arguments in the FT:

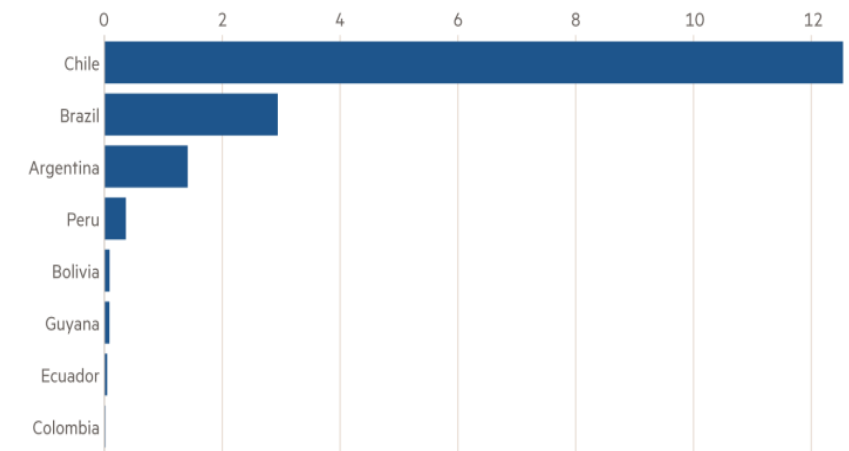
- good political relationships and trade agreements with many other countries.
- portfolio approach,
  - negotiating early with several potential vaccine makers,
  - permitting clinical trials in the country.
- Vaccines include 4m doses from Sinovac (China).



By B. Mander,  
February 23

Chile leads the way in vaccinating its populace compared with other South American countries

Doses given per 100 residents



Source: Our World in Data  
© FT



# What is happening in India?

**FT video**, February 10:

- India's COVID-19 infection rates are not as high as in some other countries.
- A domestically developed vaccine was approved in early January
- India is ramping up its considerable pharma manufacturing industry to produce and export vaccines



“India turns to private sector to boost sluggish Covid-19 vaccine drive”, February 24

- Roll out of mass vaccination is delayed by logistics challenges and bureaucracy (‘license raj’)





# What is happening in China?



China **started** vaccinating critical staff (military, border controls, health care) **in summer** before Phase 3 trials had been completed / results been published.

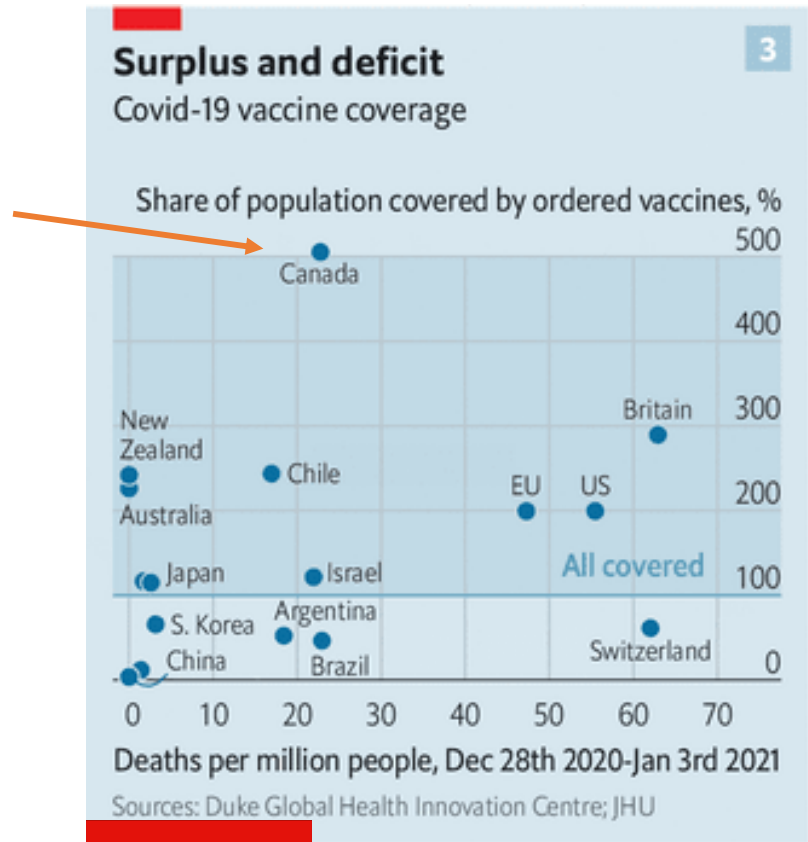
**Chinese vaccines** have been tested in – and sold to – other middle income economies like Brazil, Turkey and Chile.

→ *Efficacy rate statements vary: 75% - 50%.*

Roll out started early, but is not accelerating as fast as expected.

→ *Not clear why, perhaps bottlenecks in manufacturing.*

Some commentators make a big fuzz about advanced economies (notably Canada) securing orders for vaccine far in excess of what they need. What is that all about?

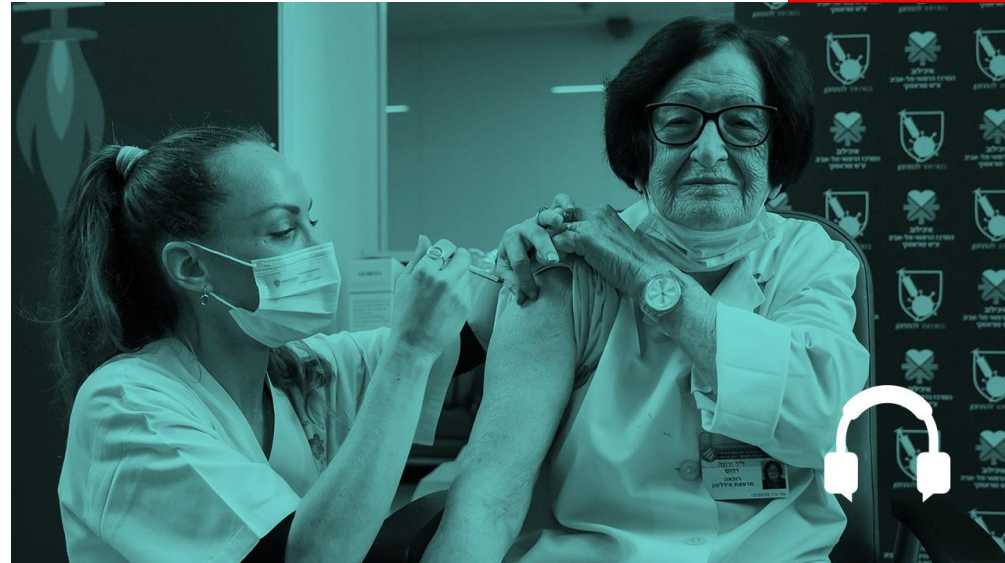


- *Contracts include vaccines not yet approved*
  - *They may fail during the trial process*
- *Contracted ≠ actually delivered,*
  - *it depends on the details of the contract (see POLITICO articles discussed above)*
- *Data cited by Western media do not seem to include Chinese and Russian vaccines*
- *Canada committed to pass vaccine on to developing countries if excess actually emerges*

# The Jab—how well will vaccines work?

A podcast at the sharp end of the global vaccination race

February 15, 2021



The medieval German town at the heart of the fight against Covid,  
*Financial Times*, February 22.



### Key points:

- A new facility to produce the BioNTech/Pfizer vaccine is in **Marburg**, central Germany.
- Expected capacity is 750m doses/year
- This university town has a small biochemical industry going back to Emil von Behring, 1904 Nobel Prize in Medicine

