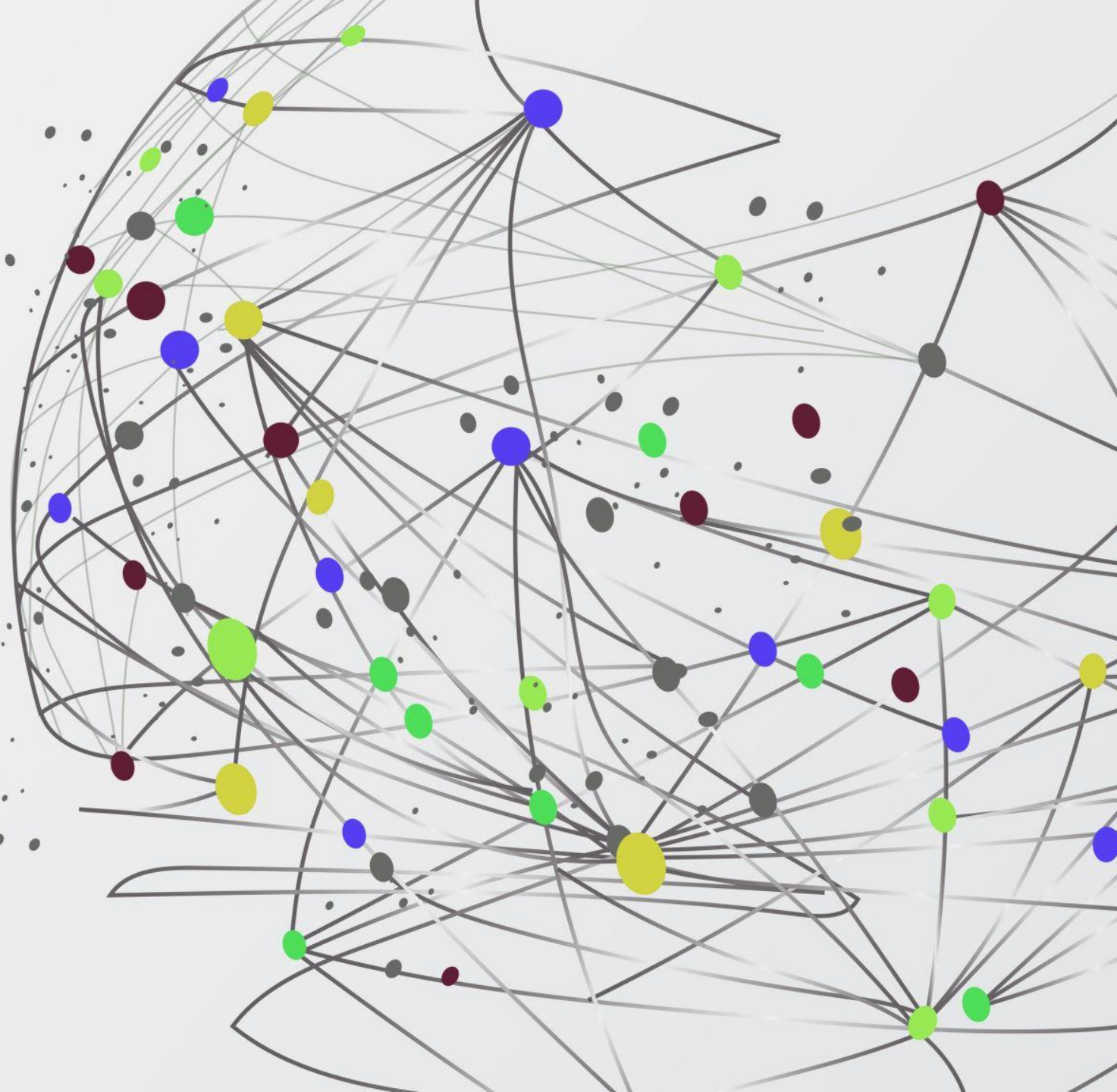


Worrying Trends in COVID-19 Vaccine Prices

Reshma Ramachandran, MD MPP
National Clinician Scholars Program
Yale School of Medicine
August 16, 2021



Disclosures

I have no relevant financial relationships with commercial entities that produce health-care related products or services relevant to the content of this presentation.

My views are my own and not that of my employers (U.S. Government, U.S. Department of Veterans Affairs, Yale School of Medicine) nor the organizations I work with.

I co-Chair the Doctors for America Drug Affordability Action Team whose work is funded by the Laura and John Arnold Foundation. I also sit on the boards of the AMSA Foundation and Universities Allied for Essential Medicines (UAEM) North America. UAEM co-hosts the Free the Vaccine campaign and is a member organization in the People's Vaccine Alliance.

July 2020: A Not-for-Profit COVID-19 Vaccine?

Federal government weakened its march-in rights for coronavirus drugs



Bob Herman



Operation Warp Speed Vaccine Investments

Companies	Amount Invested	Phase
Moderna	\$2.5b	3
Sanofi with GSK	\$2b	1/2
Pfizer with BioNTech	\$1.95b	3
Novavax	\$1.6b	1/2 (US) 3 (UK)
Johnson & Johnson	\$1.5b	3
AstraZeneca	\$1.2b	3

Data: U.S. Department of Health and Human Services



A Warning: Pfizer's Q4 2020 Earnings Call

- ◆ Pfizer is charging the U.S. \$19.50 per dose, D'Amelio said, which is “not a normal price like we typically get for a vaccine—\$150, \$175 per dose. So, pandemic pricing.”
- ◆ Projections for revenue in 2021 (at the time of call): \$15 billion
- ◆ Other manufacturers following suit:
 - Moderna CEO: “Post-pandemic, as we get into those what I will call seasonal epidemics that you would expect to happen with a SARS-CoV-2 virus, we would expect more normal pricing based on value.”
 - Janssen (J&J) EVP: “...noted that investors could expect the company to reevaluate the vaccine for ‘pricing that’s much more in line with a commercial opportunity’ when the pandemic is over.”

History Repeating Itself?

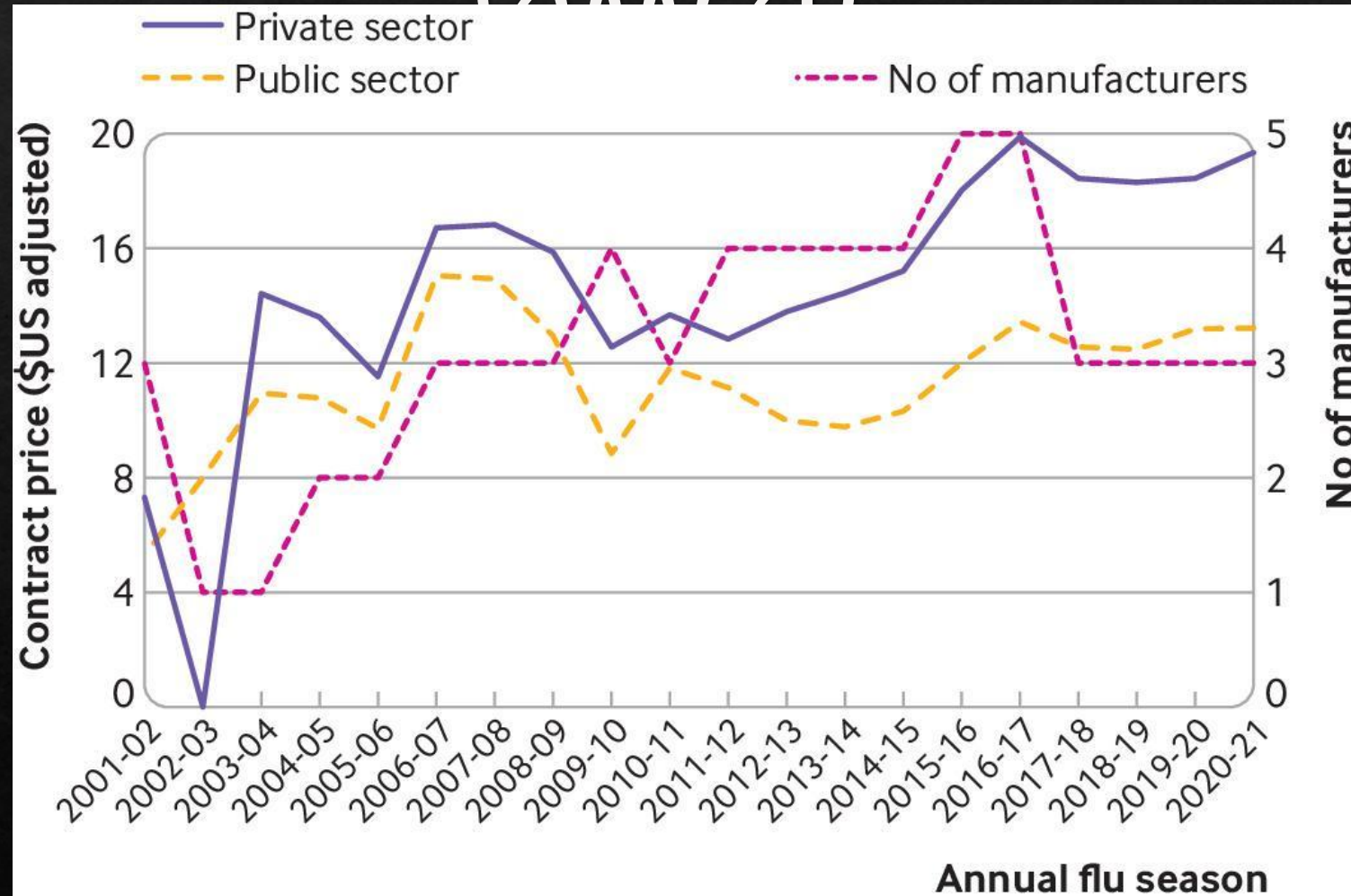
COVID-19 Vaccine

- ◆ Discovery through public investment
- ◆ Significant public investment into R&D and manufacturing (and procurement)
- ◆ Multiple vaccines produced by multiple manufacturers
- ◆ Possibly endemic disease
- ◆ R&D for modifications against variants
- ◆ No “game changing” antiviral treatment

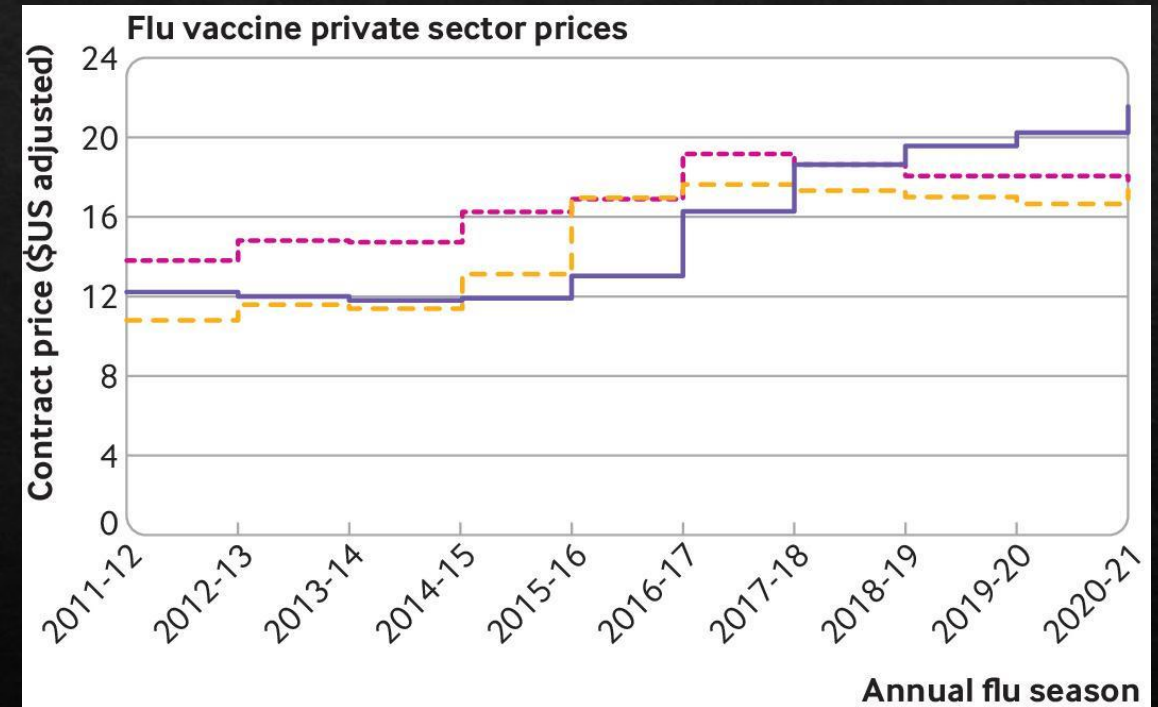
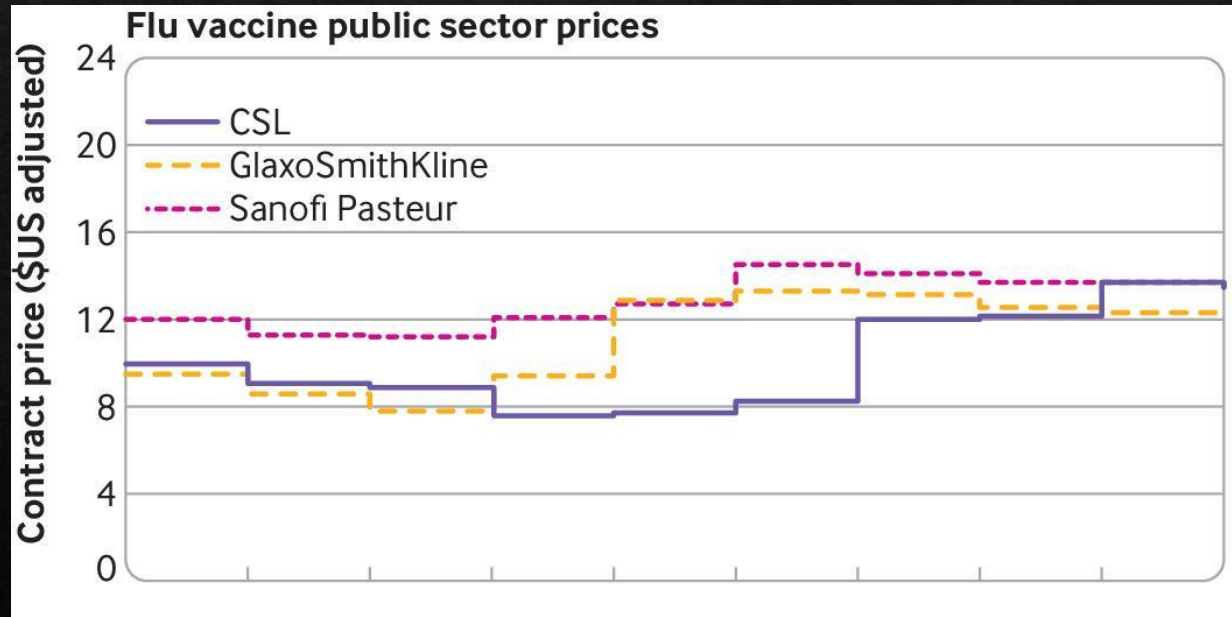
Influenza Vaccine

- ◆ Discovery through public investment
- ◆ Significant public investment into R&D (some for manufacturing and procurement)
- ◆ Multiple vaccines produced by multiple manufacturers
- ◆ Endemic disease
- ◆ Modified annually against mutations
- ◆ No “game changing” antiviral treatment

Average public and private sector prices for influenza vaccines in the United States (2000-21)



Trends in US influenza vaccine prices for three manufacturers (2011-21) in public and private sector



THE TIMES

Today's sections ▾

Past six days

Explore ▾

Times Radio


Log in

CORONAVIRUS

Booster doses for next year cost £1bn after Pfizer puts price up

Steven Swinford, Political Editor | Kat Lay, Health Editor

Wednesday August 11 2021, 12:00pm BST, The Times



The next batch of Pfizer jabs have gone up from £18 a shot to £22

IAN FORSYTH/GETTY IMAGES

FINANCIAL TIMES

HOME WORLD US COMPANIES TECH MARKETS CLIMATE OPINION WORK & CAREERS LIFE & ARTS HOW TO SPEND IT

Latest on Covid-19 vaccines

US agency authorises Covid booster for vulnerable people

First to vaccinate and first to party, Israel now mulls lockdowns

Coronavirus latest: Reproducibility and infection rates in England to reverse trend

Covid-19 vaccines + Add to myFT

Pfizer and Moderna raise EU Covid vaccine prices

Calls for booster shots and spread of more infectious variants underpin demand for products

Twitter

Facebook

LinkedIn

Share

Save



THE WALL STREET JOURNAL

Home World U.S. Politics Economy Business Tech Markets Opinion Life & Arts Real Estate WSJ Magazine Sports

BREAKING NEWS A federal judge left the new eviction moratorium in place, saying she didn't have the authority to block it despite misgivings about its legality

SHARE

Facebook

Twitter

LinkedIn

Print

Email

BUSINESS | HEALTH CARE | HEALTH

U.S. Buys 200 Million Covid-19 Vaccines From Pfizer and BioNTech at About \$24 a Shot

The price is higher than the \$19.50 in previous deals, which Pfizer says reflects additional packaging and formulations



UPCOMING EVENTS

Sep 14 2021 12:30 PM - 2:00 PM EDT The Future Of Transport

Oct 5 2021 12:00 PM - 5:00 PM EDT WSJ Jobs Summit

Oct 6 2021 12:30 PM - 2:00 PM EDT The Future Of Health

ADD TO CALENDAR

MOST POPULAR NEWS

New Orders, New Prices

Whose orders will be filled first?

Table 1. Access to any COVID-19 vaccine in countries with completed clinical trials categorized by national income group (as of June 8, 2021)

Countries Tested (World Bank Classification)	Countries with Clinical Trials, No. (%)	Countries with Clinical Trials with Authorization/Approval, No. (%)	Countries with Clinical Trials with Delivered Doses, No. (%)	Vaccination Series Delivered Per Capita ^a in Countries with Clinical Trials, Median % (IQR)
Completed Clinical Trials	21	19 (90.5)	18 (85.7)	7.1 (1.4-23.7)
Low-Income	0 (0.0)	N/A	N/A	N/A
Lower Middle-Income	1 (4.8)	1 (100.0)	1 (100.0)	11.2
Upper Middle-Income	10 (47.6)	9 (90.0)	8 (80.0)	3.4 (0.8-19.6)
High-Income	10 (47.6)	9 (90.0)	9 (90.0)	12.4 (1.6-24.4)
Ongoing and Completed Clinical Trials	32	29 (90.6)	29 (90.6)	15.0 (2.1-26.5)
Low-Income	0 (0.0)	N/A	N/A	N/A
Lower Middle-Income	4 (12.5)	4 (100.0)	4 (100.0)	6.4 (3.5-10.3)
Upper Middle-Income	13 (40.6)	10 (76.9)	10 (76.9)	2.5 (1.1-16.9)
High-Income	15 (46.9)	15 (100.0)	15 (100.0)	29.8 (19.6-38.8)

^a Data at the country level for populations ages 15-64 as well as 65 and above was extracted from the World Population Dashboard hosted by the United Nations Population Fund. Data for populations ages 18 and above as well as other specific age groups was unable to be extracted.

Which countries are manufacturers

prioritizing?

Table 2. Access to COVID-19 vaccines in countries hosting completed clinical trials categorized by manufacturer (as of June 8, 2021)

Manufacturer (Vaccine)	Number of Countries with Completed Clinical Trials	Countries with Completed Clinical Trials with Authorization/Approval, No. (%)	Countries with Completed Clinical Trials with Doses Delivered, No. (%)	Completed Trials in LMICs (Median % Delivered Per Capita ^b , range)	Completed Trials in UMICs (Median % Delivered Per Capita ^b , range)	Completed Trials in HICs (Median % Delivered Per Capita ^b , range)	COVAX Doses Procured (% Delivered)
Pfizer-BioNTech (BNT162b2)	6	6 (100.0)	5 (83.3)	0 (N/A)	4 (0.7, 0.0-2.2)	2 (29.8, 24.7-34.9)	40,000,000 (6.8)
Moderna (mRNA-1273)	1	1 (100.0)	1 (100.0)	0 (N/A)	0 (N/A)	1 (27.3)	500,000,000 (0.0)
Janssen (Ad26.COV2.S)	12	10 (83.0)	5 (41.7)	0 (N/A)	6 (0.0, 0.0-0.4)	6 (1.0, 0.0-7.6)	500,000,000 (0.0)
AstraZeneca/Serum Institute of India (AZD1222/Vaxzevria/Covishield) ^a	10	7 (70.0)	8 (80.0)	0 (N/A)	6 (1.3, 0.0-10.4)	4 (3.8, 0.0-36.5)	720,000,000 (9.8)
Sinopharm (BBIBP-CorV)	5	5 (100.0)	5 (100.0)	1 (7.4)	2 (9.8, 7.1-12.4)	2 (19.6, 17.6-21.5)	0
Sinovac (CoronaVac)	3	3 (100.0)	3 (100.0)	0 (N/A)	3 (13.5, 12.2-21.6)	0 (N/A)	0

^aAs the same efficacy data was submitted for the vaccine Covishield, manufactured by the Serum Institute of India as the vaccine AZD1222 (Vaxzevria) by their common developers, Oxford University and AstraZeneca, this was considered to be a single vaccine for the analyses. ^bThis refers to the population within tested countries that is 15 years and older.

Thank you!

WHO Director General Tedros Adhanom Ghebreyesus: “We are living through a global crisis, but rhetoric is outpacing action. I’ve heard political and industrial leaders talk about the need to vaccinate the world because “no one is safe until everyone is safe.” At the same time, these leaders are signing bilateral deals that further exacerbate the gap between the haves and have nots.” (*Time Magazine, August 2021*)