WHERE WILL C19 VACCINE SUPPLY OUTSTRIP DEMAND THIS SUMMER?

Background

One of the biggest challenges facing efforts to scale up COVID-19 vaccination globally has been supply; there simply have not been enough vaccines to meet the overwhelming global demand. That dynamic is changing quickly with supply set to outstrip demand for vaccines in six of the G7 countries by the end of the summer. These same countries have purchased enough doses to vaccinate their entire population and still have more than 1 billion doses left over, which could be used to reduce the spread of variants, reopen the global economy and end the global pandemic faster.

Meanwhile, demand is accelerating in other parts of the world and many countries are struggling to protect even their most vulnerable citizens. At the start of May 2021, less than 1% of vaccines administered globally have gone to people in low-income countries. Daily vaccinations in Africa have declined over the past few weeks, with just over 140,000 administered on May 2 – which is among some of the lowest daily numbers since the start of the vaccine rollout.[1]

Leaders of the G7 and other countries with advanced vaccine programmes need to act urgently to ensure that vaccines do not sit unused while the virus remains unchecked in other parts of the world.

Where will supply of vaccines outstrip demand this summer?

An analysis from the Kaiser Family Foundation found that the supply of vaccines would outstrip demand in the United States by mid-May 2021. ONE has applied a similar methodology[2] to all G7 countries to approximate when national demand would dip below their growing supply. The results show that six countries will reach the tipping point where supply outpaces demand for COVID-19 vaccines by the end of summer -- many much sooner (Figure 1). The US will almost certainly reach this tipping point first, followed by Canada, France, Germany, Italy and the UK.

Note, the estimated target dates assume that vaccination will continue at the current rate of first doses administered per day. If the pace of vaccination picks up in some places, they will hit this tipping point sooner. If challenges arise that slow the pace of vaccination (delayed delivery of doses, increased hesitation, etc.) it could take longer.

The outlier in this analysis is Japan. Based on the current rate of daily first doses being administered in Japan, the country isn't expected to meet demand for vaccines until early 2022. Japan approved its first vaccine, the Pfizer-BioNTech jab, over two months after the UK and US approved it for emergency use, leading to a later rollout. Japanese regulators deliberately took a more cautious approach due to higher levels of vaccine skepticism in the country, hoping to build public trust in the vaccine. Other vaccines, including AstraZeneca's, are in the approval process now and could be added in the coming weeks, greatly increasing the doses administered daily. As a result, we expect supply outstrip demand before the date presented in Figure 1 once additional vaccines come online and increase the pace.

[1] ONE Africa COVID-19 Tracker. https://www.one.org/africa/issues/covid-19-tracker. Accessed 18 May 2021.

[2] Method: We used the most recent, credible national polling data available publicly to estimate the number of adults who have said they are willing to get a COVID-19 vaccine in each country (sources provided as footnotes in table). We removed adults that have already received at least one dose to predict the number of willing adults who have not yet been reached. This figure was divided by the 7-day rolling average, calculated using data from Our World in Data, of daily first doses administered for the respective country to estimate the number of days it will take to reach all willing adults with at least one dose.

Finally, slowing demand for COVID-19 vaccines in some parts of the world is nothing to celebrate and does not mean the job is done; vaccine hesitancy anywhere risks impeding the path to herd immunity globally. Vaccination programs in these countries must continue in earnest to reach a sufficient level of vaccination for herd immunity. However, this tipping point is an early warning sign for when and where we may start to see growing stockpiles of unused surplus doses.

Country	Share of adults willing to get vaccinated	Daily doses administered (7-day rolling average)[3]	Target date for meeting demand
Canada	82%[4]	333,756	12 June 2021
France	70%[5]	334,916	09 July 2021
Germany	86%[6]	534,342	11 July 2021
Italy	70%[7]	310,638	12 July 2021
Japan	62%[8]	220,569	02 March 2022
UK	87%[9]	171,669	20 July 2021
US	61%[10]	766,951	23 May 2021

Implications for COVID-19 Response

An analysis from ONE[11] finds that G7 countries plus the EU bloc have pre-purchased enough vaccines to protect 100 percent of their population and still have nearly 1.7 billion doses left over. This means that G7 countries will soon have a rapidly growing supply of COVID-19 vaccines amid waning demand.

Evidence shows that these inequities will prolong the impact of the pandemic globally. The longer the virus remains unchecked anywhere on the planet, it will continue to mutate, breach borders, and wreak havoc on communities and the global economy:

- There could be twice as many deaths from COVID-19 if rich countries monopolize the first doses of vaccines instead of making sure they are distributed globally.[12]

[3] ONE analysis using Our World in Data, 2021, Daily COVID-19 vaccine doses administered, https://ourworldindata.org/explorers/coronavirus-data-explorer?zoomToSelection=true&time=2020-03-01..latest&pickerSort=desc&pickerMetric=new_deaths_per_million&Metric=Vaccine+doses&Interval=7-day+rolling+average&Relative+to+Population=false&Align+outbreaks=false&country=USA~ITA~FRA~CAN~DEU~GBR

[4] Insights West, 19 April 2021, Nationwide Poll Shows in Addition to Those Vaccinated (16%), Only 43% of Canadians are 100% Certain to Get Vaccine, https://www.insightswest.com/news/vaccine-hesitancy-apr-21/?utm_source=Insights+West+Newsletter&utm_campaign=0443a489c6-EMAIL_CAMPAIGN_2019_12_18_07_30_COPY_01&utm_medium=email&utm_term=0_940fc75a9a-0443a489c6-76169133

[5] Odoxa-Backbone Consulting, 8 April 2021, Oui à la vaccination! Mais pas avec AstraZeneca, http://www.odoxa.fr/sondage/oui-a-vaccination-astrazeneca/

[6] Statista, 6 May 2021, Wären Sie grundsätzlich bereit, sich gegen das Coronavirus (COVID-19) impfen zu lassen? https://de.statista.com/statistik/daten/studie/1147628/umfrage/umfrage-zur-corona-impfbereitschaft-in-deutschland/

[7] Ipsos, 12 April 2021, Italia Covid oggi, sondaggi: le opinioni degli italiani sui vaccini, https://www.ipsos.com/it-it/italia-covid-oggi-sondaggi-opinioni-italiani-vaccini-2021-aggiornamento-7

[8] Iizuka, S., 17 March 2021, The Japan Times, 62.1% of Japanese willing to have COVID-19 vaccination, survey says, https://www.japantimes.co.jp/news/2021/03/17/national/vaccine-poll-results/

[9] Bose, P., 15 March 2021, Study suggests COVID-19 vaccine acceptance on the rise in UK, https://www.news-medical.net/news/20210315/Study-suggests-COVID-19-vaccine-acceptance-on-the-rise-in-UK.aspx

[10] Kaiser Family Foundation, 20 April 2021, Supply vs Demand: When Will the Scales Tip on COVID-19 Vaccination in the U.S? https://www.kff.org/policy-watch/supply-vs-demand-when-will-the-scales-tip-on-covid-19-vaccination-in-the-u-s/

[11] ONE, 18 February 2021, Rich countries on track to stockpile at least 1 billion surplus C19 vaccines, https://www.one.org/international/policy/richcountries-on-track-to-stockpile-at-least-1-billion-surplus-c19-vaccines/

[12] How Many Lives Could Equitable Vaccination Save? Chinazzi, Matteo, Jessica T. Davis, Natalie E. Dean, Kunpeng Mu, Ana Pastore y Piontti, Xinyue Xiong, M. Elizabeth Halloran, Ira M. Longini Jr., Alessandro Vespignani. Estimating the Effect of Cooperative Versus Uncooperative Strategies of COVID-19 Vaccine Allocation: A Modeling Study . Laboratory for the Modeling of Biological and Socio-

- Vaccine hoarding could cost the global economy up to $9.2 trillion. Rich countries will bear half those costs because of supply chain disruptions and demand shocks.[13]
- Each new infection is an opportunity for mutation. Already there are over 4,000 variants of COVID-19 and some – like the South African and UK variants – are proving more transmissible than other strains. And with each new strain, the higher the risk of the disease evolving to an extent where current vaccines, diagnostics and treatments no longer work. The only way to prevent new and possibly more dangerous variants is to dramatically slow transmission of the virus through widespread vaccination.[14]

G7 countries must do their part to ensure global access to a vaccine in 2021. This is the fastest way to protect to speed the recovery everywhere.

Recommendations

The G7 should take the following steps to prevent hoarding and increase global access to COVID-19 vaccines:

- Share doses to maximize global coverage. G7 countries must commit and plan to share all surplus doses with COVAX by the end of the year. COVAX already has distribution channels set up in low-income countries, and is well positioned to facilitate donations and redistribution of doses ensuring vaccines get where they are needed most. Surplus doses donated from countries where supply and outstripped demand is particularly needed in the near term to fill gaps in global coverage due to export bans and other delays in the supply chain.
- Fully fund the Access to COVID-19 Tools Accelerator (ACT-A) and COVAX. The ACT-A and COVAX remain the best mechanisms to help deliver vaccines and therapeutics to low-income counties in 2021 at scale and at speed. These global partnerships were designed explicitly to expedite the delivery of these tools to the world's poorest countries. COVAX, the advanced market mechanism that is procuring vaccines for low-income countries, has already delivered over 38 million vaccines to over 100 economies in less than two months. It is the only global mechanism with the expertise and mission to deliver vaccines equitably. COVAX needs $2 billion by the end of June to vaccinate the most vulnerable people in low-income countries by the end of the year. Achieving this target is mission critical if we are going to scale up vaccination globally this year.
- Raise global ambition to reach global herd immunity next year. COVAX was designed to vaccinate 20-30 percent of the population in low-income countries -- an ambitious target when it was set in mid-2020. Today, with four safe and effective vaccines on the market, we can and must do better. In June, G7 leaders will gather in person for the first time since this pandemic began and they can and must take this issue head on by agreeing to a comprehensive global strategy for herd immunity and a burden sharing model to deliver in the near term.

technical Systems (MOBS LAB), Northeastern University (website), September 2020. https://www.mobs-lab.org/uploads/6/7/8/7/6787877/global_vax.pdf.

[13] International Chamber of Commerce, 2019. The Economic Case for Global Vaccination: An Epidemiological Model with International Production Vaccination. https://iccwbo.org/media-wall/news-speeches/study-shows-vaccinenationalism-could-cost-rich-countries-us4-5-trillion/

[14] WHO, 2020, Coronavirus disease (COVID-19): Virus Evolution, https://www.who.int/news-room/q-a-detail/sars-cov-2- evolution