

**PATH TO PROGRESS:
HOW THE UK CAN DELIVER ON
THE 2021 G7 COMMITMENT TO
VACCINATE THE WORLD**

**THE UK'S ROLE AND RESPONSIBILITY
IN SUPPORTING THE FUTURE OF
GLOBAL COVID-19 VACCINATION AND
THE WIDER PANDEMIC RESPONSE**

BRIEFING PAPER – JUNE 2022

UNITED KINGDOM

unicef  | for every child

INTRODUCTION

At the UK G7 Leaders' Summit hosted in Carbis Bay in June 2021, ambitious commitments were made on accelerating global access to vaccines, including a call to action from the UK Government to vaccinate the world by the end of 2022.ⁱ

One year on, this briefing from the UK Committee for UNICEF (UUK) provides an overview of progress made toward this target, identifies where significant gaps remain and makes a series of recommendations to the UK Government on the actions they can take to deliver their commitment to end the COVID-19 pandemic this year. As the Berlin G7 Leaders' Summit approaches it is essential that world leaders take stock, assess progress and agree the ambitious action needed to end this pandemic for all.

Despite public declarations from G7 leaders, only 13% of people in low-income countries have been fully vaccinated.ⁱⁱ Even with substantial increases in available supply - made possible through dose donations and procurement of COVID-19 vaccines by COVAX¹ - significant disparities in access to COVID-19 vaccines remain, leaving the world considerably off track to reach goals on vaccine coverage, making the risk of future variants high. **Estimates of excess global deaths associated with COVID-19 are equivalent to almost a quarter of the UK population, nearly 15 million people.**ⁱⁱⁱ

**DESPITE PUBLIC
DECLARATIONS
FROM G7
LEADERS, ONLY
13% OF PEOPLE IN
LOW-INCOME
COUNTRIES HAVE
BEEN FULLY
VACCINATED**

Responding to the ongoing COVID-19 pandemic requires increased and on-going global political focus, action, and urgency. The pandemic remains far from over and a new, more deadly variant could easily emerge. While in some high-income countries memories of lockdown are becoming distant and death rates are dropping, low-and-middle income countries (LMICs) face increasing and competing health and socio-economic challenges. This is in large part due to the significant strain that COVID-19 continues to place on health systems. Given the impact COVID-19 is still having on millions of people's lives and the live threat of loss of progress to date, new and renewed commitments are urgently needed to support countries to deliver their COVID-19 response strategies.

The recently published UK International Development Strategy (IDS)^{iv} refers to the 2021 G7 commitments and describes a direction of travel that the UK will undertake to help end the pandemic and secure greater pandemic preparedness for the future. While the UK's continued prioritisation of this issue is welcome, there remains a gap in support for the wider interventions that will support the world to end the COVID-19 pandemic. These include the wider suite of COVID-19 tools, such as testing, treatments and infection prevention measures for consideration in the UK's Foreign, Commonwealth and Development Office (FCDO) COVID-19 response strategy.

Beyond ongoing disparities in access to vaccinations, LMICs continue to face shortages in access to essential COVID-19 tools. While addressing COVID-19 vaccine coverage is imperative to ending the pandemic, vaccination alone will not be enough. Countries require access to the comprehensive package of COVID-19 tools, this will enable national leaders to make informed decisions about which tools are most urgent depending on local epidemiological needs.

¹ COVAX is the vaccines pillar of the Access to COVID-19 tools – Accelerator

KEY SHIFTS IN THE GLOBAL FIGHT AGAINST COVID-19

There have been two major shifts in the global fight against COVID-19 since the summer of 2021.

Firstly, global supply of COVID-19 vaccines has increased to a point where **there are enough doses available for countries with low vaccine coverage to scale up their vaccination campaigns and meet their national targets**. Indeed, there are now enough doses available globally for all adults and adolescents to receive three doses of a COVID-19 vaccine. However, challenges at national levels in rolling out COVID-19 vaccines have significantly limited efforts to address vaccination disparities. With COVID-19 vaccine supply constraints largely resolved, there are urgent actions that G7 members, including the UK, can take in order support LMICs with their COVID-19 vaccination deployment plans.

Secondly, the global response to the COVID-19 pandemic is entering a new phase with a more diffuse strategy. Access to COVID-19 Tools – Accelerator (ACT-A) and COVAX partners, including UNICEF, are stepping into a role of supporting countries to deliver their own COVID response plans based on their own national vaccination targets and increasing access to other COVID-19 tools, such as personal protective equipment (PPE), testing and treatments. This is a welcome transition from their role to date, which has included setting global targets and centrally managing delivery.

In January 2022, the COVID-19 Vaccine Delivery Partnership (CoVDP) was established by UNICEF, Gavi the Vaccine Alliance (Gavi) and the World Health Organization (WHO) to provide concerted support to 34 countries with less than 10% vaccination coverage, while building on existing resources to support the 92 Advanced Market Commitment (AMC) countries. The CoVDP adopts a ‘One Country Team’, ‘One Plan’, ‘One Budget’, approach to identify vaccination challenges, develop budgeted plans and coordinate key partners at the national level.

ONGOING DISPARITIES AND THE IMPACT ON CHILDREN

Despite the gains, some challenges have become more entrenched.

In addition to inequitable access to COVID-19 vaccines and tools, many countries, including Ethiopia, Nigeria and Malawi, are facing increasing competing health and socio-economic challenges that impact children and children’s health. This is in large part due to the continued strain COVID-19 places on countries health systems which were already stretched before the pandemic. It is concerning that gaps in infrastructure and health worker shortages are still such a prevalent issue more than two years into the pandemic. This should be treated as an alarm bell which requires urgent global attention.

As long as the pandemic continues, children’s futures will be at risk because of its disrupting impact on children’s access to education and healthcare, including routine immunisation services. Until all countries achieve access to the full package of COVID-19 tools and health systems are comprehensively strengthened to support their delivery alongside other essential healthcare, vital services for children will continue to be disrupted and suffer.

DELIVERING ON THE LEGACY OF THE 2021 UK HOSTED G7

Dose donations to COVAX have played an integral role in increasing access to COVID-19 vaccines around the world and the protection of high-risk populations and healthcare workers. This is one of the great legacies of the UK hosted G7 2021 Leaders’ Summit which led to commitments from G7 leaders

to donate 870 million doses to countries around the world.^v To date over 670 million delivered through COVAX have come through dose donations,^{vi} including 31.6 million doses from the UK Government.²

However, ending the pandemic cannot be achieved through dose donations alone. Investments, coordination and continued political leadership will be required to overcome challenges in vaccine delivery and enable countries to implement their own national COVID response strategies. These further actions will be critical to ensuring that the efforts made to date on stabilising the supply of COVID-19 vaccines, including dose donations, can be fully leveraged to turn vaccines into vaccinations.

As recently outlined in the IDS, the UK has committed to playing a leading role in creating equitable access to COVID-19 vaccines and other tools^{vii}. However, to deliver on the shared commitment to accelerate vaccine access, additional urgent support for vaccine delivery and expanded access to COVID-19 tools will be required.

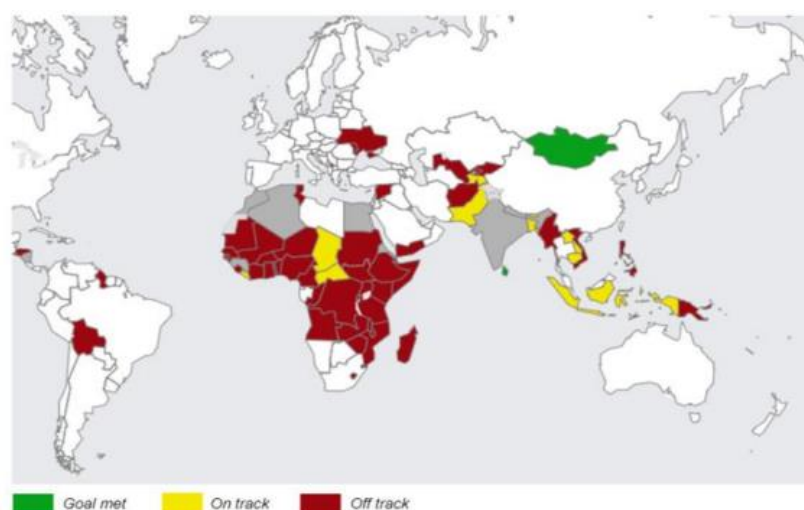
RECOMMENDATIONS TO THE UK GOVERNMENT

To deliver on the 2021 G7 commitment to vaccinate the world by 2022, the UK Government should:

1. **Provide additional financial commitments to the international COVID-19 response through ACT-A** and in-country delivery support, totaling at least £1 billion in 2022, including at least £285 million in support of vaccine delivery and access to COVID tests, treatments, risk communication and infection prevention through UNICEF and,
 - a. encourage other donors, development banks and the private sector to make flexible and sustainable funding available to help countries with low vaccine coverage scale up their pandemic response plans.
2. **Coordinate with global health and COVAX partners** to ensure future investments and interventions are coordinated efficiently with the CoVDP 'One Country Team', 'One Plan', 'One Budget' approach and,
 - a. coordinate and collaborate with humanitarian partners to ensure alignment between service delivery in humanitarian settings and COVID-19 vaccine delivery.
3. Show continued **political leadership at the G7 2022 Summit in Berlin** by ensuring G7 leaders make renewed commitments in the Leaders' Communiqué which support countries to deliver their national COVID-19 vaccination strategies and increasing access to full comprehensive package of COVID-19 tools.
4. Ensure that **health system strengthening to support vaccine delivery and broader primary health care services (PHC), including addressing disruptions to routine immunisation,** features in the next phase of the UK's COVID-19 vaccine and response strategy.

² Doses to COVAX only, not counting bilateral dose donations

THE STATE OF COVID-19 VACCINE DELIVERY IN 2022: SITUATIONAL REPORT AND ANALYSIS



viii

Figure 1: Status of progress against individual country coverage targets across COVAX Advanced Market Commitment participants (92) as of 21 April 2022

To date (mid-June 2022), COVAX has shipped over 1.525 billion vaccines to 146 countries around the world.^x COVAX shipments account for 82% of vaccines delivered to low-income countries and the majority of COVID-19 vaccines have been administered in humanitarian settings.^x COVAX partners are no longer seeking additional dose donations as there are enough vaccines on the market, and the focus is on helping countries roll them out. However, additional financial commitments to fund COVAX delivery costs are required to turn donated doses into vaccinations.

Despite significant increases in COVID-19 vaccine supply, **persistent and intersecting challenges continue to undermine countries abilities to deliver COVID-19 vaccinations to their populations**, including many long-term systemic health systems challenges that prevent access to a range of other essential PHC services, such as routine immunisation. These challenges include:

- Inadequate infrastructure and cold chain facilities;
- A lack of funding for operational costs for vaccine delivery;
- Limited health workforce capacity;
- Competing priorities as countries face other health and socio-economic issues; and
- Shifts in perception and decline in perceived urgency for vaccination.

Disparities in access to COVID-19 vaccines and other tools create:

- A serious risk of new variants developing;
- Large surges in infections and deaths;
- Undermine global economic recovery; and
- Further disruption to essential services for children.

CASE STUDY: THE ROLE OF UNICEF IN STRENGTHENING VACCINATION CAPACITY

UNICEF continues to play an integral role in the journey of a vaccine from port to arm alongside other COVAX partners. In 2021, UNICEF delivered over 800 ultra-cold chain freezers to nearly 70 countries with a storage capacity of up to 200 million mRNA vaccines³ (which require storage in ultra-cold chain freezers and temperatures between -60°C to -80°C).^{xi}

UNICEF has also played a pivotal role in ensuring that doses are supplemented with the correct ancillary supplies to enable vaccines to be administered. In 2021, the number of syringes UNICEF procured increased fourfold on an average year to meet demands for COVID-19 vaccines and routine immunisation services: in 2022 UNICEF has secured over three billion auto-disposable syringes.^{xii} UNICEF has also provided cold chain boxes needed to transport vaccines to communities, including remote locations, and safety boxes to ensure syringes can safely be disposed of after use.

In order to ensure progress on alleviating pressure of COVID-19 vaccine supply is sustained, the UK along with other bilateral donors, must ensure careful management of existing dose donation commitments so that they can be effectively utilised by the countries receiving them. Donors with outstanding dose donation commitments should seek and follow guidance from COVAX partners on what is needed, where and when.

THE COVID-19 VACCINE DELIVERY PARTNERSHIP

At the start of 2022, UNICEF, the WHO and Gavi convened the CoVDP which identified 34 countries⁴ that had less than 10% vaccination coverage and therefore in urgent need of concentrated and accelerated support. The number of countries requiring concerted support has since been reduced, due in large part to the efforts of the CoVDP in increasing uptake of COVID-19 vaccines with doses and ancillary supplies made available through COVAX.

Of the 34 countries identified, all aim to reach 50% of their populations by the end of 2022, whilst 15 of the countries have set targets at or above the WHO's 70% coverage target.^{xiii} Of the countries targeted for support, half have since risen above the 10% coverage mark. However, 18 of the original 34 countries have remained below 10% coverage, with 14 of these countries currently experiencing humanitarian crises.

Alongside the efficient coordination of external financing, the 'One Country Team', 'One Plan', 'One Budget' approach supports the CoVDP to identify bottlenecks to COVID-19 vaccination coverage, develop budgeted plans to address challenges and leverage partners to deliver rapid results. The approach is essential for ensuring that external financing for vaccine delivery support is fit for purpose, utilised efficiently for identified bottlenecks, with adequate solutions and budgeted plans provided.

³ A type of vaccine that delivers a genetic molecule called messenger RNA (mRNA) directly to the cell. Examples include Pfizer and Moderna COVID-19 vaccines

⁴ 34 countries identified by the CoVDP for concerted support: Afghanistan, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Democratic Republic of the Congo, Côte d'Ivoire, Djibouti, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Haiti, Kenya, Madagascar, Malawi, Mali, Niger, Nigeria, Papua New Guinea, Senegal, Sierra Leone, Solomon Islands, Somalia, South Sudan, Sudan, Syrian Arab Republic, United Republic of Tanzania, Uganda, Yemen, Zambia

The current financing gap for CoVDP's work stands at \$1.1 billion for vaccine delivery costs alone.^{xiv} The \$1.1 billion budget is split between UNICEF and the WHO and comes in addition to country specific delivery support, with contributions from bilateral donors and multilateral development banks delineated by the CoVDP for each country.^{xv}

ONGOING CHALLENGES IN VACCINATION EFFORTS

Despite progress in the 34 countries targeted for additional support through the CoVDP and the 92 COVAX Advance Market Commitment (AMC) countries, persistent challenges remain. These require increased financial and technical support to ensure countries can deliver their national COVID-19 vaccinations strategies alongside other essential national health priorities, such as preventing outbreaks of vaccine preventable diseases. For example, Senegal has seen decreased demand for COVID-19 vaccination in light of a polio and measles outbreak, whilst in Haiti an outbreak of diphtheria has created a national health crisis requiring urgent prioritisation.

Funding for the roll-out of COVID-19 vaccines and tools, which includes technical assistance support, is one of the most critical elements to help countries access and deliver COVID-19 vaccines and scale up coverage, while maintaining essential services. Delivery support also plays an integral role in countries' abilities to address funding gaps required to scale-up delivery including delivery costs, strengthening of cold chain systems, and supporting the health workforce. This funding also ensures countries do not continue to divert resources from other health interventions, like routine immunisation. Without additional financial investment in COVAX delivery, the work of the CoVDP will be undermined and other essential health services will continue to suffer.

Alongside financial resources to ACT-A, grant funding for in-country delivery, including in humanitarian settings, must be flexible to enable funding to be allocated quickly and efficiently to countries facing financing gaps. This will be imperative to account for delays and bottlenecks in vaccine roll-outs, which could in turn lead to countries with fragile health systems choosing not to apply for grant funding to support rollout efforts.

In addition to significant financing gaps, fragmentation of existing financing and funding streams has also been a challenge to efficiently mobilising resources for vaccine delivery. In addition to providing additional financial resources to fill resourcing gaps, bilateral donors such as the UK, which are providing direct support to country governments, must also be involved in coordination with CoVDP partners regarding vaccine delivery funding gaps to avoid duplication and to complement the objectives of the CoVDP.

The CoVDP reports that countries have shown strong intentions to vaccinate, although this does not translate into increased coverage rates. Evidence indicates there is a willingness to be vaccinated with COVID-19 vaccines if vaccination services are easily accessible and there is sufficient information about available vaccines.^{xvi} It is therefore vital that alongside increased ease of access to COVID-19 vaccination, communities are reached with the right information about vaccines as part of a concerted effort to increase public health guidance and trust.

Health workforce capacity is vital to both the rollout of COVID-19 vaccines and tools alongside the restoration and increased uptake of essential PHC services. However, in the first 18 months of the

pandemic alone, 115,000 health and care workers are estimated to have died of COVID-19.^{xvii} Limited workforce capacity and the urgent need to increase uptake of COVID-19 vaccines also creates a severe threat to countries immunisation capacity, which in turn presents a severe risk to routine immunisation services. Healthcare worker levels were not high enough before the pandemic and are still not sufficient, a capacity issue that must be urgently addressed to end the COVID-19 pandemic and reach wider child health targets outlined the Sustainable Development Goals.

EMERGING OPPORTUNITIES

THE INTRODUCTION OF COVID-19 VACCINES OFFERS A PIVOTAL OPPORTUNITY TO STRENGTHEN HEALTH SYSTEMS

The introduction of COVID-19 vaccines offers a pivotal opportunity to strengthen immunisation systems and increase uptake of routine services for children, however, limited capacity often threatens the ability to sustain these services.^{xviii}

UNICEF country offices have reported that the diversion of resources to the COVID-19 vaccine rollout has led to reduced capacity for routine immunisation delivery. Mitigating negative impacts on routine immunisation services requires COVID-19 vaccine delivery costs to be fully financed to ensure necessary infrastructure, equipment, cold chain, and health workforce capacity is not diverted from routine immunisation

services. Despite opportunities for catalytic investment into immunisation systems strengthening, evidence has emerged of donors opting to take vertical approaches, solely orientated towards the financing of COVID-19 vaccines without choosing to strengthen immunisation platforms through which COVID-19 vaccination services are being delivered.

Leveraging political capital will be important for ensuring humanitarian actors can contribute to vaccination efforts. With 14 out of 18 countries with the lowest vaccination coverage facing significant humanitarian crises, alignment and integration between delivery of services in humanitarian settings with COVID-19 vaccination could prove to be an effective tool in reaching unvaccinated communities in humanitarian contexts.

CASE STUDY: PROGRESS IN ETHIOPIA

Despite facing conflict and a humanitarian emergency, Ethiopia has increased the number of people vaccinated fivefold. UNICEF and the WHO recently provided over \$US4.4 million to the conflict-affected Tigray region to support vaccination operational costs and the integration of COVID-19 vaccine deployment with a childhood immunisation campaign conducted in May. Alongside financial support, the CoVDP has been working with the Ethiopian Government to identify challenges and areas in which CoVDP can support increased vaccination efforts. Ethiopia has recently agreed to continue funding for 5000 additional health workers and is working to improve sub-national access to COVID-19 vaccination.^{xix}

BEYOND VACCINES – COVID-19 TOOLS AND GETTING PHC SERVICES BACK ON TRACK

FOCUSING ON VACCINES ALONE WILL NOT END THE PANDEMIC

Whilst increased access to COVID-19 vaccination is imperative to ending the pandemic, it is clear vaccination alone will not be enough. For LMICs to effectively deliver their national COVID response strategies, they will need access to the full comprehensive package of COVID-19 tools to tailor country-led and nationally-owned approaches based on local epidemiology.

Knowledge of the scale of the pandemic globally, the extent of current COVID-19 cases, and the evolution of the virus, is compromised if we are unable to adequately test cases. Testing is essential to track the evolution of the pandemic, the emergence of new variants, and which populations require boosters. The WHO concluded in 2021 that only 14.2%, or one in seven, of COVID-19 infections were being recorded in Africa.^{xx} Despite persistent challenges over the course of the pandemic in identifying cases in low-income countries, and urgent appeals by ACT-A partners to enhance access and availability of diagnostics, testing capacity for COVID-19 was found to have decreased at an alarming rate in 2022 - dropping between 70 and 90% in the four months leading up to April 2022.^{xxi}

ACCESS TO THE COMPREHENSIVE PACKAGE OF COVID-19 TOOLS AND PHC – THE WAY FORWARD

It is clear that unless equitable access to the full array of COVID-19 tools is achieved, it will be impossible to get PHC back on track and meet wider global commitments such as the SDGs and targets due to the disruption and diversion the pandemic has had and is continuing to cause. Commitments on COVID-19 vaccination are important, but existing commitments to child health cannot be forgotten especially given how far off-target the world remains.

For example, one third of health care facilities do not have what is needed to clean hands where healthcare is provided; one in four facilities have no water services, and 10% have no sanitation services. This equates to 1.8 billion people using facilities that lack basic water services and 800 million using health facilities with no toilets^{xxii}. It is these services, which are an essential part of preventing and protecting health during infectious disease outbreaks.

CONCLUSION AND RECOMMENDATIONS

Despite significant developments in the availability of COVID-19 vaccines, significant disparities in access to COVID-19 vaccines and other essential tools remain. Equitable access to COVID-19 vaccines *and* the full comprehensive package of COVID-19 tools is essential to ending the global pandemic. Such access will enable countries to deliver their national COVID response plans, seize opportunities to strengthen their health systems and prepare for future pandemics. This will also enable the restoration of essential education and health services for children that were severely disrupted by the COVID-19 pandemic.

Fulfilling commitments made on accelerating global vaccine access during the 2021 UK G7 presidency will require new and renewed commitments to address continued challenges in the international COVID-

19 response, including further financial commitments, coordination with key global health partners and continued political leadership. As the COVID-19 response enters a new and critical phase, action from the UK Government on accelerating access to COVID-19 vaccines and tools will be essential to sustain the legacy of the UK G7 Presidency and to ensure progress against commitments to global health in the UK's International Development Strategy, including ending preventable deaths and health systems strengthening.

In order to accelerate progress on ending the global COVID-19 pandemic and protecting children's futures, UNICEF UK urge the UK Government to take the following actions:

1. **Provide additional financial commitments to the international COVID-19 response through ACT-A** and in-country delivery support, totaling at least £1 billion in 2022, including at least £285 million in support of vaccine delivery and access to COVID tests, treatments, risk communication and infection prevention through UNICEF and,
 - a. encourage other donors, development banks and the private sector to make flexible and sustainable funding available to help countries with low vaccine coverage scale up their pandemic response plans.
2. **Coordinate with global health and COVAX partners** to ensure future investments and interventions are coordinated efficiently with the CoVDP 'One Country Team', 'One Plan', 'One Budget' approach and,
 - a. coordinate and collaborate with humanitarian partners to ensure alignment between service delivery in humanitarian settings and COVID-19 vaccine delivery.
3. Show continued **political leadership at the G7 2022 Summit in Berlin** by ensuring G7 leaders make renewed commitments in the Leaders' Communiqué which support countries to deliver their national COVID-19 vaccination strategies and increasing access to full comprehensive package of COVID-19 tools.
4. Ensure that health system strengthening to support vaccine delivery and broader PHC, including addressing disruptions to routine immunisation, feature in the next phase of the UK's COVID-19 vaccine and response strategy.

ACKNOWLEDGEMENTS

This briefing was written by Neil Raw and Jenny Vaughan, Senior Policy Advisors (Child Health) at UNICEF UK. We are grateful to many colleagues across UNICEF for their support and contributions.

For more information, please contact NeilR@unicef.org.uk and JennyV@unicef.org.uk

REFERENCES

-
- ⁱ G7 UK. Prime Minister Calls of G7 Leaders to vaccinate the world by the end of next year. Available online at: <https://www.g7uk.org/prime-minister-calls-on-g7-leaders-to-vaccinate-the-world-by-end-of-next-year/>
- ⁱⁱ WHO. June 2022. WHO Coronavirus (COVID-19) Dashboard. Online available at: <https://covid19.who.int/table>
- ⁱⁱⁱ WHO. May 2022. Global excess deaths associated with Covid-19 January 2020 - December 2021. Online available at: <https://www.who.int/data/stories/global-excess-deaths-associated-with-covid-19-january-2020-december-2021>
- ^{iv} UK Government. 2022. The UK Government's Strategy for International Development. Online available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1075328/uk-governments-strategy-international-development.pdf
- ^v WHO. 13 June 2021. G7 announces pledges of 870 million COVID-19 vaccine doses, of which at least half to be delivered by the end of 2021. Online available at: <https://www.who.int/news/item/13-06-2021-g7-announces-pledges-of-870-million-covid-19-vaccine-doses-of-which-at-least-half-to-be-delivered-by-the-end-of-2021>
- ^{vi} UNICEF. 09 June 2022. COVID-19 Vaccine Market Dashboard. Online available at: <https://www.unicef.org/supply/covid-19-vaccine-market-dashboard>
- ^{vii} Supra 4.
- ^{viii} COVID Vaccine Delivery Partnership. Situational Analysis: April 2022.
- ^{ix} Supra 6.
- ^x WHO. 20 May 2022. COVAX calls for urgent action to close vaccine equity gap. Online available at: <https://www.who.int/news/item/20-05-2022-covax-calls-for-urgent-action-to-close-vaccine-equity-gap>
- ^{xi} UNICEF. 24 January 2022. Going ultra-cold: How UNICEF is supporting countries for COVID-19 vaccination rollout. Available at: <https://www.unicef.org/supply/stories/going-ultra-cold-how-unicef-supporting-countries-covid-19-vaccine-roll-out>
- ^{xii} UNICEF. 22 February 2022. Transporting syringes to the world. Available at: <https://www.unicef.org/supply/stories/transporting-syringes-world>
- ^{xiii} WHO. April 20 2022. Accelerating COVID-19 Vaccine Deployment. Available at: <https://www.who.int/publications/m/item/accelerating-covid-19-vaccine-deployment>
- ^{xiv} Ibid.
- ^{xv} Ibid.
- ^{xvi} COVID Vaccine Delivery Partnership. Situation Report: April 2022.
- ^{xvii} WHO. September 2021. The impact of COVID-19 on health and care workers: a closer look at deaths. Available at: <https://apps.who.int/iris/bitstream/handle/10665/345300/WHO-HWF-WorkingPaper-2021.1-eng.pdf>
- ^{xviii} UNICEF UK. 25 April 2022. Path to Progress: Immunization Beyond COVID-19. <https://www.unicef.org.uk/path-to-progress-immunisation/>
- ^{xix} COVID-19 Vaccine Delivery Partnership. Situation Report: April 2022.
- ^{xx} WHO. 14 October 2021. Six in seven COVID-19 infections go undetected in Africa. Available at: <https://www.afro.who.int/news/six-seven-covid-19-infections-go-undetected-africa>
- ^{xxi} William Rodriguez, CEO of FIND, ACT-A Diagnostics Pillar. Speaking at WHO Press Conference, April 2022.
- ^{xxii} WHO. 30 November 2021. Global progress report on WASH in healthcare facilities: Fundamentals first. Available at: <https://www.who.int/publications/i/item/9789240017542>