1. Introduction

On 3 February 2021, the world marked an historic milestone when the total number of COVID-19 vaccinations administered globally surpassed the total number of confirmed cases.\(^2\) The development in record time of several vaccines and accelerating vaccination rates—especially in Bahrain, Israel, the United Arab Emirates (UAE), the United States (US) and the United Kingdom (UK)—suggest that the end of the pandemic might be in sight for some countries.\(^3\) The global picture, however, is one of stark inequality in vaccine access and distribution, with 75 per cent of all COVID-19 vaccines administered in just ten countries, while more than 130 countries have not received a single dose (UN, 2021). Many developing countries—especially low-income economies\(^4\)—fear they will be left behind.

High-income countries have pre-purchased more than half of the 12.4 billion vaccine doses being manufactured this year, leaving the rest to be shared by the developing world—in some cases, at hugely inflated prices. For the billions of people living in developing countries, where there are little or no manufacturing capacity for vaccines and only fragile healthcare systems in place to cope with repeated waves of infection, a gruelling journey still lies ahead before full vaccination and general immunity are achieved. Indeed, some developing countries could be left waiting until 2024 to inoculate their citizens, even though the COVID-19 Vaccine Global Access (COVAX) Facility aims to secure equitable access to these lifesaving tools (Duke Global Health Institute, 2020). This situation is of grave concern, especially given the Commonwealth leaders’ commitment in July 2020 to ensuring equitable access to safe, effective, quality and affordable medicines and vaccines for all—particularly the most vulnerable and high-risk populations.\(^5\)

Although an unprecedented challenge, vaccinating the entire global population is a health, moral and economic imperative. A sustainable recovery from...
the pandemic hinges on successfully opening up economies, ending lockdowns, and loosening restrictions on the movement of goods and people, all of which requires a globally inclusive vaccination programme supported by equitable access to essential medicines for all. It is estimated that an unco-ordinated approach globally to vaccine distribution—including vaccine nationalism, which egregiously places developing countries at the back of the queue—could cost the world economy more than US$9 trillion in lost output this year. This is greater than the combined gross domestic product (GDP) of Germany and Japan. A significant share of this loss would fall on the advanced economies, given their extensive trade linkages with developing countries (ICC, 2020).

International trade has not caused this pandemic but can provide solutions to contain and eliminate it.

This issue of Trade Hot Topics provides an overview of recent developments in the evolving COVID-19 vaccine landscape. It highlights some of the challenges and opportunities for ensuring equitable and affordable access to vaccines among Commonwealth developing countries—especially small states, least-developed countries (LDCs) and countries in sub-Saharan Africa (SSA).

2. The COVID-19 vaccine landscape

2.1 Vaccine production, demand and supply

The COVID-19 vaccine landscape has evolved swiftly over recent months. As of 6 February 2021, there are more than 240 vaccines in development, of which 55 are in clinical testing, and 10 vaccines are already in use in more than 60 countries (Table 1). It is estimated that between 10 and 11 billion doses must be administered worldwide to halt the spread of the virus. The world has sufficient manufacturing capacity to produce 16 billion doses this year, 3.3 billion of which will be produced in the European Union (EU).

However, because of pre-orders placed by several developed economies with multiple manufacturers (in some cases, for coverage up to 300 per cent of the population), demand may outstrip supply to developing countries—at least for several months of 2021.

Vaccine production supply chains are quite complex. Moreover, they are highly skill- and capital-intensive. Consequently, most production facilities are concentrated in a few advanced economies (the EU, the UK and the US) and in some large developing countries (including China, India and South Korea). These few manufacturing hubs underscore the importance of international trade and specialised logistics networks in shipping vaccines across the world—especially if they require cold storage refrigeration at ultra-low temperatures (Beck, 2020).

There are only a few Commonwealth developing countries with the capacity to develop, or even manufacture, their own vaccines. India stands out, the Serum Institute of India being the world’s largest vaccine manufacturer by volume. The company is scheduled to reach production of 100 million doses of COVID-19 vaccine a month by

Table 1. Leading COVID-19 vaccines across the world, February 2021

<table>
<thead>
<tr>
<th>Primary developers</th>
<th>Country of origin</th>
<th>Price per dose (US$)</th>
<th>Doses</th>
<th>Approved in</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxford/AstraZeneca</td>
<td>Sweden, UK</td>
<td>1.50–4</td>
<td>3.0bn</td>
<td>India, UK and 3 other countries</td>
</tr>
<tr>
<td>Novavax</td>
<td>USA</td>
<td>16</td>
<td>2.1bn</td>
<td>EU, UK, USA and 21 other countries</td>
</tr>
<tr>
<td>Pfizer-BioNTech</td>
<td>Multinational</td>
<td>19.5</td>
<td>1.4bn</td>
<td>Bahrain, China, Egypt, UAE</td>
</tr>
<tr>
<td>Sinopharm</td>
<td>China</td>
<td>&lt;77</td>
<td>1.3bn</td>
<td>Argentina, Belarus, Russia</td>
</tr>
<tr>
<td>Sputnik-V</td>
<td>Russia</td>
<td>&lt;10</td>
<td>1.0bn</td>
<td>China</td>
</tr>
<tr>
<td>Johnson &amp; Johnson</td>
<td>USA</td>
<td>10</td>
<td>1.0bn</td>
<td>China</td>
</tr>
<tr>
<td>Sinovac Biotech</td>
<td>China</td>
<td>14</td>
<td>900m</td>
<td>China</td>
</tr>
<tr>
<td>Moderna</td>
<td>USA</td>
<td>32–37</td>
<td>770m</td>
<td>Canada, EU, Israel, USA</td>
</tr>
<tr>
<td>Bharat Biotech-ICMR</td>
<td>India</td>
<td>1</td>
<td>720m</td>
<td>India</td>
</tr>
<tr>
<td>CureVac</td>
<td>Germany</td>
<td>12.3</td>
<td>300m</td>
<td></td>
</tr>
</tbody>
</table>

Note: Doses delivered and/or promised for 2021.
Sources: EIU (2021), press reports, company websites

6 The losses would be significantly lower if developing countries were able to vaccinate at least half of their populations by the end of the year.
7 The pharmaceutical companies with which the EU has signed contracts will produce 8.4 billion doses and 2.7 billion of those will be used within the bloc.
March 2021 (Dorfman and Kirstein, 2021). India has also developed its own COVID-19 vaccine: COVAXIN. Five Commonwealth countries participate in the 16-member Developing Countries Vaccine Manufacturing Network (DVMN). Bangladesh, which has a significant pharmaceutical industry, is one of only two LDCs in the Network.

There is some vaccine manufacturing capacity in Africa, but the continent significantly lacks the scale and sophistication necessary for COVID-19 vaccines. Senegal and South Africa already produce vaccines for diseases such as yellow fever and tuberculosis. A public–private partnership between the South African government and local healthcare firms is focused on producing vaccines for childhood immunisation programmes in southern Africa. South Africa is expected to be one of six sites globally responsible for filling and packaging the bulk-imported Johnson & Johnson vaccine (Dorfman and Kirstein, 2021).

2.2 Approvals, authorisation and upgrading for new variants

Most advanced and some developing countries have approved the use of vaccines produced by their national champions. However, so far, only the Pfizer-BioNTech and Oxford/AstraZeneca vaccines have obtained emergency use approval from the World Health Organization (WHO). Besides these specific vaccines, the US has approved the use of Ivermectin. The drug has been proven to effectively inhibit COVID-19: trials conducted in several Commonwealth countries—including Kenya, India, South Africa and Uganda, together with Mali—show that the drug can reduce mortality by 75 per cent.

Yet COVID-19 is not a stable virus. Its more than 4,000 new variants have been found in several countries, including the UK and South Africa. Some of these variants spread swiftly and are less responsive to the vaccines developed so far. Unfortunately, to date, no single vaccine has been found to be completely effective against these new variants. Pharmaceutical companies are working closely to modify their products. GlaxoSmithKline and CureVac, along with AstraZeneca and the University of Oxford, are looking to engineer new versions of vaccines to defeat the mutations.

The UK has initiated a trial mixing the Pfizer and AstraZeneca vaccines, administering different vaccines for second or booster doses. The field trials of upgraded vaccines could delay the deployment process. Alternatives, such as simply administering a third dose of an existing but different vaccine, have also been considered as potential means of staving off new variants. There is a possibility that coronavirus vaccines might have to be updated periodically, as are vaccines for influenza.

It is also imperative to test vaccines in and adapt vaccines to local conditions. The African Centre of Excellence for Genomics of Infectious Diseases (ACEGID) in Nigeria has reportedly developed a vaccine candidate built on the genome sequence of lineages of SARS-CoV-2 circulating in Nigeria and other African countries. However, there are currently no funds available for human trials of the vaccine (Edward-Ekpu, 2020).

2.3 Progress on vaccination delivery

The rollout of vaccines has started in most advanced and some developing economies. So far, 95 per cent of vaccinations have been administered in just 10 countries, only one of which is a low-income country. Among Commonwealth countries, the UK is leading the vaccination drive and has immunised around 12 million people (Table A1). Globally, Bahrain, Israel, the UAE and the US are ahead of the rest of the world in terms of the proportion of their populations vaccinated (Figure 1). In Israel, around 23 per cent have received two vaccine doses and 47 per cent have received at least one. African countries are at the back of the queue for vaccines. The Economist Intelligence Unit predicts that the African region will struggle to obtain sufficient doses to achieve general immunity before 2024.

The COVAX Facility has set out a plan for global distribution of 337 million vaccines to low-income countries by mid-2021. The 145 countries participating, including developed and developing nations, will receive doses in proportion to their population size. A first tranche will reach around 3.3 per cent of each country’s population—enough to inoculate healthcare workers. Four large developing Commonwealth countries (in terms of population)—India (97.2 million), Pakistan (17.2 million), Nigeria (16 million) and Bangladesh (12.8 million)—will benefit from the plan. Two advanced economies—namely, Canada (1.9 million) and New Zealand (0.25 million)—are also on the COVAX interim distribution list (Table A1).

Globally, the two most populous countries, China and India, have developed their own vaccines. Given that the two countries have populations in
the billions, other countries that depend on vaccines imported from China and India may experience significant delays to their own mass immunisation programmes, potentially through 2022 and even into 2023.

2.4 Supply of vials and syringes

The successful mass inoculation of the entire world also hinges on adequate supplies of syringes and glass vials. China is the biggest producer of these goods, with capacity to manufacture around 8 billion vaccine containers a year, followed by India. Even so, manufacturers of this basic medical equipment are facing extreme demand; consequently, some firms are considering including multiple doses in one vial.

Some vaccines, including those made by Pfizer-BioNTech and Moderna using advanced mRNA technology, need to be stored at ultra-low temperatures. The raw materials used to manufacture the vials in which these vaccines are stored must pass stringent quality tests to ensure their durability and that they can withstand thermal shock.

3. Deployment challenges in developing countries

Commonwealth small states, LDCs and SSA countries face several challenges to effective access, distribution and deployment of vaccines. These include pricing and logistics, and may also include trade-restricting measures among producing nations.

3.1 Affordability and pricing

Developing countries are being disadvantaged in the marketplace for COVID-19 vaccines. There are...
reports that some high-income countries have negotiated bilateral procurement agreements with vaccine manufacturers that could see the delivery of vaccines to inoculate their entire populations many times over. The hoarding and stockpiling of superfluous vaccines—previously witnessed with personal protective equipment (PPE), ventilators and other medical supplies related to COVID-19 (Vickers et al., 2020)—poses a significant threat to developing countries, many of which are raising legitimate concerns about inequitable access to these lifesaving tools.

Variable pricing and profiting from some of the vaccines are also major challenges (see Table 1). The AstraZeneca vaccine, priced at US$3 a dose for lower and middle-income countries, is expected to be the frontrunner among developing countries. Pfizer’s vaccine may be a less tenable option, because it could cost developing countries as much as $19.50 per dose, while the Moderna vaccine is almost double that price—reportedly up to $37 a dose, if purchased in smaller quantities (Curtis, 2020).

It is important to note that while these prices have been publicly listed, there is no guarantee that they will be standard among all developing countries. Pricing to market is not uncommon in the pharmaceutical industry and, owing to the non-disclosure agreement that buyers are required to sign, many countries do not divulge price information. However, South Africa and Belgium recently disclosed their vaccine prices, demonstrating marked price disparities between developing and developed countries. South Africa, having purchased 1.5 million doses of the AstraZeneca vaccine, reported a cost of US$5.25 a dose—two times higher than the price of $2.15 a dose negotiated in the EU, as revealed in a tweet by the Belgian budget secretary (Dyer, 2021). The exorbitant prices being charged to developing countries is cause for concern; likewise the explanation that prices are discounted for high-income countries because they invested in the research and development of the vaccines.

While some high-income countries have aided developing countries to purchase vaccines through COVAX, more needs to be done. The Facility is struggling to meet its target of raising US$6.8 billion to purchase vaccines, with the aim of allowing developing countries to vaccinate at least the most vulnerable 20 per cent of their populations by the end of 2021 (Schnirring, 2020).

3.2 Distribution and logistical challenges

Even if Commonwealth small states, LDCs and SSA countries manage to procure sufficient volumes of an effective vaccine, they may face challenges in distributing the doses. Once vaccines reach a country, they need to be stored, transported by air and/or road, and then administered to their intended recipients. This will exert considerable pressure on local supply chains.

Many of the distributional challenges are exacerbated in Commonwealth countries with large, fragmented and isolated rural populations, as well as in landlocked members with limited international transit routes, geographically isolated small island developing states (SIDS), and LDCs with underdeveloped air and road transport infrastructure.

Existing national vaccination distribution infrastructure and logistical systems in many Commonwealth developing countries, including those in Africa, are primarily set up to immunise children or targeted groups of adults, such as families, neighbours or co-workers of those infected with diseases such as Ebola. Consequently, they are generally unprepared for vaccinating adult populations on the scale required for COVID-19 (Cushing, 2020; Nkengasong et al., 2020). This means significant upgrading of logistics systems to distribute, manage and track the large volumes of vaccines required to inoculate unprecedented numbers of adults and vulnerable people.

Major hurdles exist in Commonwealth countries with limited air transport infrastructure and underdeveloped road networks. For vaccines transported by air, these challenges will be exacerbated by second and, in some cases, third waves of lockdowns and other restrictions on movement, which may include the closure of airports and flight shortages.

Structural issues create additional difficulties. Target populations may live in remote areas inaccessible to healthcare services and underserved by transport infrastructure and logistics. Similarly, it can be very difficult to reach vulnerable populations or internally displaced persons, who are often highly mobile—especially in conflict-affected regions such as parts of Mozambique (Mancini, 2020).

The complex storage conditions required for COVID-19 vaccines are particularly challenging. Some of the vaccines widely approved by
regulators, including the Pfizer-BioNTech and Moderna vaccines, need to be stored at very low temperatures (-70°C and -20°C, respectively).\(^8\) All currently available vaccines involve a cold supply chain, meaning high-capacity freezers and/or refrigerators are needed to store doses at all stages of transportation. The cold storage chain must remain intact throughout the various stages of distribution or the vaccine becomes unusable (Mancini, 2020). This is problematic for Commonwealth developing countries that lack the requisite infrastructure. In Africa, for example, even before COVID-19, the WHO and the United Nations International Children’s Emergency Fund (UNICEF) concluded that most countries on the continent do not meet the minimum standards necessary to store, distribute, handle and manage vaccines effectively (Lydon et al., 2015). Another pre-pandemic study with coverage across Commonwealth regions found many countries eligible to participate in the Global Alliance for Vaccines and Immunisation to be ill-equipped with cold chain equipment and facilities. Across 134,000 immunisation points in 57 countries—including 18 Commonwealth members—many sites had poor-performing (41 per cent), outdated (23 per cent) or broken (14 per cent) cold chain equipment (Lydon et al., 2014). Unreliable electricity supplies in some Commonwealth members are further cause for concern, with the potential to compromise the cold chain even in instances in which suitable facilities are available.

The complex storage requirements and short shelf lives of some of the available vaccines present a high risk of wastage if doses are subject to inadequate storage and transportation conditions, exposed to high temperatures or misused.\(^9\) An additional layer of complexity is introduced if countries need to import related medical supplies, such as syringes, and ensure they are available at the time the vaccines need to be administered (Duke Global Health Institute, 2020). Significant wastage may come at a high cost to Commonwealth developing countries, not only financially but also in terms of missed opportunities to vaccinate individuals—a potential cost of lives.

Beyond these immediate distribution challenges, shortages of healthcare workers in some developing countries where health systems are underfunded and resources are already stretched will mean a longer timeline for vaccine deployment. Given the scale of the immunisation effort, some healthcare workers may need to undergo further training and require additional supervision before they are able to administer the doses safely. The process of administering COVID-19 vaccines may be slowed further in cases in which there is widespread scepticism about their safety and efficacy (Reuters, Bengaluru, 2021).

Finally, the limited supplies of COVID-19 vaccine doses, coupled with high levels of demand, make them major targets for theft or diversion (Cushing, 2020). Supply limitations are also likely to create a market for substandard, unregulated, unapproved or falsified vaccines. This could pose risks to health and exacerbate distrust of the genuine vaccination effort.

### 3.3 Trade restrictions

Given limited production of vaccines and complex supply chains, there is a risk that some countries may impose export restrictions or stockpile to ensure they retain adequate supplies for their own citizens. This could have major implications for the ability of Commonwealth developing countries to secure doses in sufficient quantity. Since the start of the pandemic, there have been numerous examples of countries imposing restrictions to curb exports of PPE and essential medical supplies. More recently, the EU imposed restrictions on exports of the Oxford/AstraZeneca vaccine to make up delivery shortfalls resulting from production delays at plants in Belgium and the Netherlands.

Similarly, the race to secure supplies of COVID-19 vaccines has prompted vaccine nationalism, with countries prioritising access for their own populations. This is contributing to a rollout of vaccines generally skewed in favour of the world’s developed countries. The COVAX initiative will go some way toward addressing this issue by supporting equitable global access to COVID-19 vaccines through vaccine sharing.

\(^8\) Certain vaccines with less onerous storage requirements offer hope for wider and faster distribution in Commonwealth developing countries. The Oxford/AstraZeneca vaccine, for example, can be stored in a normal fridge (at between 2°C and -8°C) for up to six months (Curtis, 2020). Another vaccine candidate developed by Johnson & Johnson can be stored at normal refrigeration temperatures for several months and is administered in a single dose, but its supply to developing Commonwealth countries may be limited because a number of high-income countries have already negotiated large pre-purchasing agreements (Duke Global Health Institute, 2020).

\(^9\) There is pre-pandemic evidence of high levels of vaccine wastage in developing countries. Karp et al (2015), for instance, estimated that wastage accounts for around 8 per cent of the total cost of vaccination programmes in low- and middle-income countries.
4. The way forward

The international community needs to appreciate that COVID-19 anywhere means COVID-19 everywhere. A series of concerted actions at multilateral, regional and national levels are required to ensure universal global vaccination.

4.1 Global co-ordination

Enhancing global co-ordination and co-operation is key to successfully tackling the pandemic, including ensuring access to vaccines for all—especially the most vulnerable groups in developing countries. Various existing multilateral arrangements and agreements could be leveraged to this end, including the WHO COVAX Facility and Access to COVID-19 Tools (ACT) Accelerator, the World Trade Organization (WTO) and its Agreement on Trade-related Aspects of Intellectual Property Rights (TRIPS), and the Technology Access Partnership of the United Nations’ Technology Bank for LDCs.

International co-operation in the development and distribution of COVID-19 vaccines is also critical to ensure affordable vaccines are available to every person in the world. Despite trade in vaccines for human medicine having increased fivefold since 2005, shortages of vaccines occur regularly (WTO, 2020). The need for enhanced international co-operation is even starker against a backdrop of trade restrictions and stockpiling, as discussed earlier.

Generally, most medicines are expensive to develop but relatively cheap to produce, making it unsustainable for pharmaceutical companies to invest in product development only for their competitors to produce replicas. Intellectual property rights (IPRs) promote innovation and the development of new medicines; they can also contribute to high prices, the exclusive right itself distorting the consequently inefficient market.

To ensure affordable vaccines, several Commonwealth countries led by India and South Africa have requested at the WTO for a general waiver to TRIPS for drugs, vaccines, diagnostics and other technologies related to COVID-19 (WTO TRIPS Council, 2020). The submission proposed a suspension of rights related to copyrights, industrial designs, patents and undisclosed information (trade secrets) for the duration of the pandemic (i.e. ‘until the majority of the world’s population has developed immunity’). If granted, the waiver would enable capable WTO members to produce, develop and export generic vaccines and meet national and global demand.

However, some countries challenged the request, arguing that the Doha Declaration on TRIPS and Public Health already provides sufficient flexibilities to strike the right balance between safeguarding IP holders’ rights and public health considerations.11 Engaging members to find a solution is likely to be an immediate priority of the new WTO Director-General Ngozi Okonjo-Iweala (Okonjo-Iweala, 2021).

Box 1. Doha Declaration on TRIPS and Public Health

The 2001 Doha Declaration on TRIPS and Public Health clarified specific flexibilities in the TRIPS Agreement for practical policy reasons aimed at protecting public health. It confirms the right of WTO members to use the flexibilities in the TRIPS Agreement to protect public health, including the right of members to grant compulsory licences and to determine the grounds upon which such licences may be granted (WTO, 2001). Article 31bis of TRIPS, which came into force in January 2017, provides a mechanism to allow low-cost generic medicines, as well as drugs (and their active ingredients), vaccines, diagnostic tests and other supporting devices, to be produced and exported under a compulsory licence exclusively to serve the needs of those countries that cannot manufacture those products themselves.

However, most developing countries continue to face constraints and are unable to take full advantage of flexibilities such as compulsory licensing. The constraints include political and economic pressure from some industrialised countries, the complexity of implementing the licences in practice, inadequate institutional capacity, and a lack of co-ordination between patent offices, government ministries and regulatory authorities (WTO et al., 2020).

Elsewhere, in a declaration issued at Riyadh on 21–22 November 2020, G20 leaders recognised the ‘role of extensive immunisation as a global public good’ and encouraged multilateral co-operation to help more countries to access COVID-19 tools (G20, 2020).

10 Some epidemic infectious disease vaccine candidates cost in excess of US$100 million (Gouglas et al., 2018).
11 Some developing countries have countered that implementing flexibilities under the Doha Declaration is challenging because the actions involved in obtaining a compulsory licence are cumbersome and time-consuming at a time-critical point in the effort to halt the pandemic. These can include lengthy negotiations with the holder(s) of the IPRs, including over adequate remuneration.
The WHO has also declared a COVID-19 vaccine to be a universal common good (WHO, 2020a). The effect of such declarations is to increase the need for international co-operation in the production and supply of vaccines to ensure their affordability.

To this end, the COVAX Facility and ACT Accelerator initiatives were established: the former, to provide a global COVID-19 vaccine procurement pool; the latter, to expedite the development, regulatory approval, delivery and equitable allocation of COVID-19 tests, treatments and vaccines, and to ensure that vaccines, diagnostics and therapeutics for COVID-19 are accessible to every person globally (WHO, 2020a, 2020b).

In pursuit of uninterrupted supply chains and raw material inputs, and speedy delivery of vaccines, governments should consider enforcing and fast-tracking some of the relevant provisions of the WTO’s Trade Facilitation Agreement. Furthermore, government procurement rules at the international level that promote efficient trade and best practices in public procurement can play an important role in improving the accessibility and availability of affordable vaccines to the most vulnerable (WTO et al., 2020; WTO, 2020). In addition, a coordinated global vaccine effort could help to strengthen collaboration on other global issues, such as the climate crisis, and to restore confidence in multilateralism.

4.2 Regional co-operation

Strengthened regional co-operation is an imperative first step to the procurement and delivery of vaccines, the implementation of national immunisation plans, and the safe reopening of economies and reviving of cross-border movement and trade.

The African Union (AU) aims to vaccinate approximately 60 per cent of the continent’s 1.3 billion people in the next three years. Achieving this target will require a ‘whole-of-Africa’ co-ordinated approach among its member states to prepare for the development, purchase and rollout of COVID-19 vaccines (Nkengasong et al., 2020). While the continent faces existing challenges related to poverty and inequality, low access to essential health care and limited productive capacities, it has also gained considerable experience over the years in tackling infectious diseases such as Ebola, HIV/AIDS, tuberculosis, measles and many others. At the local level, African countries have set up accessible immunisation systems; at the continental level, the Africa Centres for Disease Control and Prevention (Africa CDC) was established in 2017 to support public health initiatives and strengthen the capacity of African health institutions.

Regional efforts to co-ordinate procurement and distribution efforts, including Africa CDC’s Africa Medical Supply Platform, and a vaccine-financing framework put in place by the Africa Export Import Bank to allow purchases of medical supplies and support for vaccine manufacture, may help to dismantle some of the barriers to success. Through international and continental efforts, African countries are forecast to receive 1.27 billion doses (600 million from COVAX and 670 million through the African Vaccine Acquisition Task Team) between this year and 2022 (Adepoju, 2021; Soy, 2021).

In addition, to ensure longer-term sustainability, Africa CDC has identified eight organisations in several African countries that might reasonably aspire to retool operations and manufacture COVID-19 vaccines. However, this requires significant technology transfer, project financing and scaling up (Nkengasong et al., 2020).

Caribbean Community (CARICOM) leaders are also advocating for greater collaboration and co-ordination to deal with the pandemic, including a call for a global summit in the context of the WHO ACT Accelerator Facilitation Council to address concerns about equitable access and distribution of vaccines (CARICOM, 2021). With funding from the EU, the Caribbean Public Health Agency, through the Pan-American Health Organization, made an initial payment of US$2 million to access a share of the COVAX allocations (CARICOM, 2020). However, the Americas, of which the Caribbean region forms part, is expected to receive only 35.3 million doses of vaccines in the first phase of COVAX—enough to inoculate only 5 per cent of the 630 million people living in the area from Argentina to Mexico, including the Caribbean (The Barbados Advocate, 2021).

Many Caribbean countries have consequently started looking elsewhere to supplement the COVAX allocation, including to Cuba, China, India...
and Africa (Campbell, 2021). China has designated a US$1 billion loan to help Latin America and the Caribbean access its vaccine (Suarez, 2020; Wilkinson, 2021). The AU has also promised the region a share of the 270 million vaccine doses it has secured, which the Union will make available later this year (Caribbean National Weekly, 2021a). India has committed to donating 500,000 doses of the vaccines it produces to CARICOM (Medley, 2021). Cuba has been partnering with CARICOM countries to fight the pandemic. For example, it deployed to Barbados more than 110 medical, nursing and lab technicians, and it provided a similar share of medical personnel across other Caribbean islands (Caribbean National Weekly, 2021b). This sort of collaborative effort is expected to continue as the region embarks on vaccinating its population.

Despite two-thirds of the Pacific Island countries (PICs) remaining free of COVID-19, the pandemic has had considerable effect on their economies. This impact could cut deeper than some of the worst cyclones of previous years (IMF, 2020). The region’s remote geography, together with vaccination, will provide double protection for these countries, to allow their economies to rebound. With Australia having abandoned its vaccine manufacturing project, the region will have to rely on vaccines imported from elsewhere. However, worldwide bans on international movement are likely to interrupt the delivery of vaccines to most PICs—especially considering the reduction in both passenger and cargo flights. In addition, quarantining and social distancing measures are likely to further limit air transport, which is critical for vaccine delivery to PICs. As such, Australia, New Zealand and the PICs will do well to consider establishing public health corridors by implementing measures to ensure as far as possible that the aviation sector remains free of COVID-19 (ICAO, 2020). The PICs can also implement appropriate risk mitigation measures to enable travel and revive intra-regional tourism, for example by including low risk countries in planned travel bubbles (Kampel, 2020).

4.3 National preparedness

Commonwealth governments and healthcare providers face a significant challenge to overcome vaccine hesitancy and develop public trust in COVID-19 vaccines. Public education campaigns can play an influential role in these endeavours by providing communities with information, counselling and support (Nkengasong et al., 2020). Digital tools could be used to support information dissemination, for example in similar vein to the WhatsApp messaging system the WHO is using to dispel misinformation about COVID-19 itself (Nkengasong et al., 2020). Commonwealth governments can also work with social media platforms to disseminate information and to harness the influence of senior government leaders, sportspeople, musicians and other celebrities, to reassure people that vaccines are safe.

Trust can also be built through transparency in identifying vulnerable populations and in sequencing vaccine rollout programmes, with emphasis on ensuring equitable distribution. In turn, Commonwealth governments, working in tandem with healthcare providers, should develop strong oversight mechanisms for quality assurance to prevent falsification and the development of substandard and unsafe vaccines, and to guard against black market or illegal sales and distribution (Cushing, 2020).

The development of national allocation frameworks and distribution plans can help to guide the rollout of vaccines in all Commonwealth countries. Such plans need to be supported by expertise in supply chain management to develop integrated purchasing systems, forecast needs, maintain adequate stock levels, determine quantities for distribution to specific health facilities and monitor immunisation progress.

Commonwealth countries can harness support from the private sector to overcome the significant distributional challenges associated with implementing national vaccination programmes at the scale required to combat COVID-19. Leveraging private-sector capacity and promoting inter-industry co-operation within countries can help to meet the complex cold chain requirements for storing and transporting existing vaccines. This might involve collaboration with commercial partners possessing cold chain facilities, such as food and beverage companies. Outsourcing components of supply chain logistics to the private sector can also help to reduce delivery and inventory costs, and improve flexibility, while freeing up public-sector resources (Lydon et al., 2015; Songane, 2018).

Technology can be leveraged to manage aspects of national COVID-19 vaccination programmes. For example, mobile phone technology could be used
to register healthcare workers, schedule vaccination appointments, record vaccination histories and report on vaccine stock levels. Similar approaches using a smartphone app have proven successful in managing infant vaccinations in Mozambique (GSK, 2016; Songane, 2018). There is also scope to deploy innovative technologies in other areas of the distribution chain. For example, solar-powered refrigerators have been used in Nigeria to store vaccines in remote areas (Shittu et al., 2016).

These measures can be complemented by wider efforts to revive domestic economic activity. For instance, the use of certificates of immunity or vaccine passports may eventually provide some confidence to enable individuals to go back to work and travel internationally. The Seychelles is already allowing international tourists who have been vaccinated against COVID-19 to enter the country. This type of approach, as part of a broader risk mitigation strategy, could play a key role in reviving tourism sectors in Commonwealth countries—particularly SIDS—that rely heavily on international arrivals, provided that their citizens are suitably protected and/or vaccinated. Technology enabling digital versions of vaccine passports are already available or being developed. In Denmark, for example, individuals will be able to carry confirmation they have been vaccinated on their mobile phones. Similarly, CommonPass, a globally interoperable platform, is currently in development to enable individuals to document their COVID-19 status, including through health declarations, confirmation of polymerase chain reaction (PCR) tests and receipt of vaccinations.¹³

References


¹³ There are, however, some concerns that vaccine passports may be politically divisive and discriminatory. Those unwilling or unable to access COVID-19 vaccines and hence without vaccine passports may face additional conditions or restrictions on their movement or their ability to obtain secure employment (The Economist, 2021). Existing digital divides within and between Commonwealth countries could exacerbate these issues. Moreover, the policy of prioritising the vaccination of older people in most countries may create a generational divide, with older individuals enjoying more freedoms than younger people not yet vaccinated.


G20 (2020) G20 Riyadh Summit Leaders Declaration. 22 November. www.g20riyadhsummit.org/pressroom/g20-riyadh-summit-leaders-declaration/


Mancini, D.P. (2020) ‘Logisticians grapple to map out “cold chain” for vaccine campaign’. Financial Times, 8 October. www.ft.com/content/c71d254c-14f3-4226-a3e8-df1ee83e5692


### Table A1. COVID-19 infections, vaccine deployment and COVAX vaccine allocations to Commonwealth member countries

<table>
<thead>
<tr>
<th></th>
<th>COVID-19 Statistics (as of 23.02.21)</th>
<th>Interim COVAX vaccine allocation</th>
<th>Vaccination progress</th>
<th>Health Expenditure (% of GDP)</th>
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<tr>
<td></td>
<td>Total cases</td>
<td>Total deaths</td>
<td>Total tests</td>
<td>AZ/SR (indicative distribution)</td>
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Note: Interim COVAX vaccine allocation includes exceptional allocation for a limited number of countries.
Note: This interim COVAX distribution is only for the first and second quarters of 2021.

Note: Tanzania and the Seychelles are excluded. Tanzania has opted out of this initiative. The Seychelles has expressed interest in the COVAX Facility and is yet to be included.


<table>
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<th>Region</th>
<th>Country</th>
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<th>Doses Remaining</th>
<th>Doses Administered</th>
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<td>3.4</td>
</tr>
</tbody>
</table>

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This Trade Hot Topic is brought out by the International Trade Policy (ITP) Section of the Trade Division of the Commonwealth Secretariat, which is the main intergovernmental agency of the Commonwealth – an association of 54 independent countries, comprising large and small, developed and developing, landlocked and island economies – facilitating consultation and co-operation among member governments and countries in the common interest of their peoples and in the promotion of international consensus-building.

ITP is entrusted with the responsibilities of undertaking policy-oriented research and advocacy on trade and development issues and providing informed inputs into the related discourses involving Commonwealth members. The ITP approach is to scan the trade and development landscape for areas where orthodox approaches are ineffective or where there are public policy failures or gaps, and to seek heterodox approaches to address those. Its work plan is flexible to enable quick response to emerging issues in the international trading environment that impact particularly on highly vulnerable Commonwealth constituencies – least developed countries (LDCs), small states and sub-Saharan Africa.

### Scope of ITP Work

ITP undertakes activities principally in three broad areas:

- It supports Commonwealth developing members in their negotiation of multilateral and regional trade agreements that promote development friendly outcomes, notably their economic growth through expanded trade.
- It conducts policy research, consultations and advocacy to increase understanding of the changing international trading environment and of policy options for successful adaptation.
- It contributes to the processes involving the multilateral and bilateral trade regimes that advance more beneficial participation of Commonwealth developing country members, particularly, small states and LDCs and sub-Saharan Africa.

### Selected Recent Meetings/Workshops Supported by ITP

- 21–23 October 2020: Recovery from COVID-19 – Tackling Vulnerabilities and Leveraging Scarce Resources, organised in the framework of the LDC IV Monitor and held virtually on the road to the Fifth UN Conference on Least Developed Countries (LDCs) in collaboration with the OECD Development Centre, UN-OHRLLS and FERDI.
- 29 January 2020: Looking to LDC V: A Critical Reflection by the LDV IV Monitor (in partnership with the OECD Development Centre and the Centre for Policy Dialogue, Bangladesh) held at Marlborough House, London, United Kingdom.
- 11 October 2019: Tapping the Tourism Potential of Small Economies: A Transformative and Inclusive Approach (WTO Public Forum) held in Geneva, Switzerland in collaboration with the WTO and the UNWTO.
- 10 October 2019: Commonwealth Trade Ministers Meeting held at Marlborough House, London, United Kingdom.
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<td>COVID-19 and tourism: Charting a sustainable, resilient recovery for small states</td>
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<td>Leveraging Digital Connectivity for Post-COVID Competitiveness and Recovery</td>
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Series editor: Brendan Vickers

Produced by Trade, Oceans and Natural Resources Directorate of the Commonwealth Secretariat

For further information or to contribute to the Series, please email b.vickers@commonwealth.int