ASG Update: Covid-19 Global Progression and Response

December 16, 2021

Please note that information regarding the pandemic is quickly dated, and that statistics included in this update were current at the time of writing.

A note from ASG's chief medical officer:



As we continue to try to deal with the pandemic, now in the face of the much more contagious omicron variant, vaccinating the world equitably and expeditiously has become even more urgent. In addition to the limited availability of vaccines, factors like lack of system preparedness, poor public health education, mistrust, and misinformation continue to hinder vaccination rates in many countries.

Omicron is clearly out-competing the delta variant and is likely to become the dominant strain in the European Union in the next few months. While initial data suggests that omicron causes milder disease, some have questioned that assertion; many omicron cases have been breakthrough cases in vaccinated individuals who already had some level of preexisting immunity. The next few weeks will make the clinical picture clearer.

A third dose has shown to increase the efficacy of the mRNA vaccines against omicron. This underscores the need to accelerate vaccinations across the board. However, expanded demand for third doses has exacerbated issues of vaccine equity, as in some places many have still not received even their first dose.

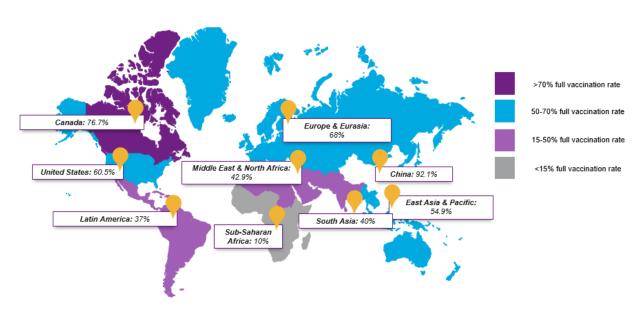
Strong data from new therapeutic agents – like Astra Zeneca's Evushield for pre-exposure treatment in immunocompromised patients and Pfizer's Paxlovid for protecting against severe Covid – is a significant development. As case numbers rise across the U.S. and experts predict new winter waves of the disease, these medications hold the promise to blunt the burdens on communities, patients, and health care systems.

Finally, multilateral efforts to enhance global pandemic surveillance systems have become a major focus. This is critically important if we are to quickly respond to and contain the next variant or a new pathogen.

With increased global vaccination rates, new medications, and stronger pandemic surveillance, we may finally see the arc of the pandemic bend in 2022.

Mehul Mehta, M.D.

Chief Medical Officer, ASG



Map of Covid-19 regional vaccination rates

Key takeaways

- The emergence of the omicron variant has rattled governments, markets, and people around the globe. Early data suggests that this variant is much more contagious than delta and much more likely to infect vaccinated people. More information about its ability to evade vaccines and the severity of the illness it causes should emerge in the next several weeks. As of now, it has been observed in 77 countries and experts expect it will spread worldwide.
- Countries around the world have tightened restrictions in response to the variant. Those
 that are able have begun, accelerated, or expanded campaigns to distribute booster
 vaccine doses even countries with persistently low vaccination rates, like Nigeria. These
 boosters do seem to increase protection against omicron. In some places, including
 France, they will soon be required to be considered fully vaccinated.
- Alongside rising inflation and high energy prices, omicron has injected some caution into economies around the globe. New travel restrictions especially threaten economic recoveries in tourism-dependent markets such as Malaysia and Morocco.
- Many travel restrictions target countries in southern Africa, where the new variant was first observed. As economic fallout looms, leaders there have questioned why their countries are being punished for discovering and warning of the new variant, describing the bans as discriminatory and without a scientific basis.

CHINA, EAST ASIA, AND THE PACIFIC

Government response: **China** continues to experience localized small-scale Covid-19 outbreaks in multiple provinces and municipalities. The most serious current outbreak is in Zhejiang province, one of China's wealthiest provinces and a major hub for the manufacturing sector, accounting for more than 14 percent of China's GDP. On December 13, Zhejiang reported

44 locally transmitted cases, bringing the total number of cases recorded since early December to 217. The province had previously reported only one case in all of 2021. Three of the province's major cities - Ningbo, Shaoxing, and Hangzhou have imposed various lockdown measures in response to the outbreak. City officials have placed more than 50,000 people under quarantine and suspended services at theaters, libraries, museums, and other public venues. Companies in multiple industries, including the pharmaceutical and electronics sectors, have been ordered by authorities to suspend their operations in Zhejiang in order to reduce the risk of further outbreaks.

China also reported its first case of the omicron variant of Covid-19 on December 13. The case was detected in the northern city of Tianjin and the infected individual was a traveler who had returned from Europe on December 9. A second omicron infection was detected in the southern city of Cases per 1M |% of population vaccinated in EAP and China as of 12/10/2021

China | 29 | 85% Indonesia | 15,337 | 37% Japan | 13,726 | 78% Laos | 11,599 | 42% Malaysia | 81,260 | 78% Philippines | 25,397 | 28% Singapore | 45,970 | 87% S. Korea | 9,811 | 81% Thailand | 30,845| 61%

Data from Coronavirus Update (Live) by WorldOMeter and Coronavirus COVID-19 Vaccine Tracker by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University

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Guangzhou on December 14. As of December 15, neither city has enacted strict lockdown measures as a result of the detected variant cases. The Chinese government seems to have no immediate intention of relaxing its stringent quarantine and travel restriction measures. A study published in late November from Peking University, one of China's top universities, warned that the country could face more than half a million infections a day if it opens international travel in a similar manner to the U.S., which would put "an unbearable burden" on China's healthcare system.

Japan has continued to defy global trends and maintain a low Covid-19 case load amid surges in other countries in the Asia Pacific, such as **South Korea**, **Australia**, and, at much higher levels, the United States. As of December 14, Japan had only 17 confirmed cases of omicron, suggesting that there has not yet been rapid community spread. In response to the emergence of the new variant, Prime Minister Fumio Kishida quickly suspended entry by foreign nationals into Japan beginning November 30, with only limited exceptions, and imposed strict quarantine, testing, and contact tracing requirements for returning Japanese nationals and long-term residents. After a slow start, Japan's vaccination program has ramped up quickly in recent months, and nearly 80 percent of the population has been fully vaccinated. The government had just begun to administer vaccine booster shots on December 1 and is now trying to accelerate these efforts. Prime Minister Kishida has promised to take all necessary steps to prevent the rapid spread of the new variant, and the Japanese public has reacted positively so far to his administration's Covid-19 response. The Yomiuri Shimbun reported on December 6 that a telephone poll of Japanese voters conducted between December 3 and 5 found that the Kishida cabinet's approval rating was 62 percent, up 6 points from a survey conducted in November.

Prime Minister Kishida has prepared a \$490 billion-dollar Covid-19 stimulus package that is expected to pass the Diet before the end of December. In addition to funding for Covid-19 response, the package also provides resources for other Kishida policy priorities, including to promote a "new capitalism" to transform Japanese society. In addition to one-off payments to citizens and funding for healthcare workers, the package also provides funds for digitalization, natural disaster mitigation, and industrial innovation. There has been some criticism of the

stimulus package because of its expansive scope and cost, even within the ruling Liberal Democratic Party (LDP).

South Korea is in the midst of its worst Covid-19 surge since the start of the pandemic, despite a vaccination rate of more than 80 percent. The 7-day average of daily cases hit 6,620 as of December 13. This spike came after the government's decision to pursue a "living with Covid-19 policy" in early November immediately before the emergence of the omicron variant. The government has begun to reimpose restrictions, including reinstituting a ban on private social gatherings of over seven people in the Seoul Metropolitan Area, requiring a 10-day quarantine for foreign travelers, and mandating vaccination verifications at restaurants, cinemas, museums, and other indoor areas. Prime Minister Kim Boo-kyum has said that the government will take extraordinary measures if the surge in cases does not slow, although he did not provide further details. Amid the surge in cases and concerns over the omicron variant, the government has changed its guidance for receiving booster shots, now recommending that individuals get their boosters three months after their last dose, down from six months.

After a delay of several weeks due to the emergence of the omicron variant, Australia has begun to relax travel restrictions and other Covid countermeasures even as cases are beginning to rise. On December 14, the state of Victoria reported 1,290 new cases and two deaths, while New South Wales recorded 536 new cases, including increasing numbers of the omicron variant. On December 15, Australia will allow international students, skilled migrants, and people who hold working-holiday visas to travel to and from Australia if they are vaccinated. Vaccinated citizens and permanent residents were allowed to travel freely starting in November. After slow initial rollout due to supply issues, more than 90 percent of Australian adults in some parts of the country have now had two doses of a Covid-19 vaccine, one of the highest rates of vaccination globally. With infections linked to holiday parties in Sydney, New South Wales state recorded more than 800 new cases Tuesday – its highest total since October 2. As next year's elections loom, Prime Minister Morrison has come under increasing domestic political pressure over Covid-19 countermeasures, which caused the economy to contract in the July-September quarter.

Southeast Asia has seen an overall decline in cases, but in the past month many nations have increased restrictions out of fear of the spread of the omicron variant. Across the region, all ASEAN (Association of Southeast Asian Nations) members have enacted bans on arrivals from eight African countries. **Malaysia** paused its "living with Covid" plans after the country detected its first case of omicron on December 2; **Indonesia** extended its quarantine period back to 10 days; and **Singapore** halted a plan to extend quarantine-free travel to an expanded list of nations. Singapore has so far detected the most cases of the new variant in the region, all related to travelers or employees at the country's Changi Airport.

The economy: Major economic indicators in **China** present a mixed picture, with signs of an overall deceleration of economic growth emerging. The ongoing slowdown in the property market remains a significant drag on the economy, as construction starts fell by 16.8 percent year-on-year (YOY). In contrast, retail spending, exports, and industrial output all outperformed expectations, growing 4.9, 27.1, and 3.5 percent YOY, respectively. China's Producer Price Index (PPI) rose 12.9 percent YOY in November, while the Consumer Price Index (CPI) rose 2.3 percent YOY, accelerating from a 1.5 percent rise in October. China's National Bureau of Statistics indicated that rising prices were driven by shortages of certain food products, government policies restricting industrial usages of coal, as well as a seasonal increase in the demand for heating fuel.

Japan's economy struggled more seriously in Q3 than initially reported, shrinking 3.6 percent YOY rather than the 3 percent estimated in early November. The downturn was linked to a slide in consumer spending, as restrictions from the pandemic throughout the late summer kept people at home. Japan's economy is expected to pick up beginning in Q4, as the government prepares to implement a massive \$490 billion stimulus package and as Covid-19 case numbers have begun to decline. As elsewhere, however, the emergence of the omicron variant could cloud Japan's economic outlook.

The International Monetary Fund (IMF) and Organization for Economic Co-operation and Development (OECD) are forecasting **South Korean** 2022 GDP growth of 3.3 percent and 3.0 percent, respectively. A recent report by LG Economic Research Institute (LGERI), estimates that the South Korean economy will expand only 2.8 percent YOY in 2022. All of these projections represent a slowdown from 2021 growth, which is expected to reach 3.9 percent. LGERI expects that weaker private consumption, combined with higher inflation caused by a return to normal export demand levels, will dampen growth. Korea's private sector seems to reflect a similar sense of caution. According to a recent survey by the Korean Economic Research Institute, half of all firms surveyed indicated that they have yet to make investment plans for 2022, citing a murky economic outlook amid omicron and inflation fears.

Reserve Bank of **Australia** Governor Philip Lowe stated that the new omicron strain is not likely to disrupt Australia's expected economic recovery. Australia's unemployment rate has fallen to 5 percent and is expected to fall further, while inflation remains only about 2.1 percent. Inflation is expected to remain low in the coming months until the labor market tightens further.

Southeast Asian finance ministers are expecting a return to robust economic growth in the next few years. **Thailand** is expected to economically recover from the pandemic by 2023, according to an early December finance minister statement. Much of Thailand's recovery will depend on the tourism industry. The country reopened its borders to vaccinated travelers on November 1, giving some hope for economic recovery. Meanwhile, Mustapa Mohamed, minister in the Prime Minister's Office in **Malaysia**, predicted 5.5 to 6.5 percent growth in 2022, with strong gains in the manufacturing, tourism, services, and agricultural sectors. The reopening of Malaysia's border with **Singapore** is a key part of that growth projection, though expected overall diminished travel and activity will hamper chances for a full recovery.

A survey of business leaders in Singapore released on December 8 reported a positive outlook for the coming year. The proportion of companies negatively affected by the pandemic halved from the previous survey in 2020, while half of respondents said their companies are confident that the economy will improve in the next 12 months. Despite this, most firms expect to take more than a year to fully recover, with construction, retail, real estate, and hospitality being the most affected.

According to **Vietnam's** Minister of Health, Covid-19 treatments Paxlovid (Pfizer) and Molnupiravir (Merck) will be licensed in their generic forms to Vietnamese pharmaceutical manufacturers. The move follows Pfizer's previous announcement that the company will enter into a voluntary licensing agreement with Medicines Patent Pool (MPP), an international health group, to produce a generic version of Paxlovid in developing countries.

Looking ahead: Australia will hold federal elections by May 2022, and Prime Minister Scott Morrison has seen his polling dip as the pandemic continues. While Morrison's vaccination

campaign has been successful in recent months and the country is reopening, a change in government is possible.

Vietnam intends to increase international flights from January 1, as the country aims to promote economic recovery and tourism following its first large-scale wave of infections in late 2021. Vaccinated visitors from countries with a "high safety factor," including China, Japan, Korea, Taiwan, Thailand, Singapore, and the United States will be allowed into the country with limited quarantine requirements.

EUROPE

Government response: Uncertainty about the omicron variant's transmissibility and immunity evasion as well as a spike in cases has led countries including **Germany**, **France**, and the **United Kingdom** to implement new travel restrictions. Throughout the EU, and most notably in the **Netherlands** and **Austria**, new restrictions targeting the unvaccinated have been met with large protests.

At the EU level, President Ursula von der Leyen is encouraging countries to consider mandatory vaccinations. The European Medicines Agency and European Centre for Disease Prevention and Control have endorsed "mixing and matching" boosters and are considering limiting their vaccine pass' duration to nine months after vaccination to encourage Europeans to get their boosters.

The U.K. government expects that most new Covid-19 cases will soon come from the highly contagious omicron variant. Despite Britain having fully vaccinated 70 percent of its population and administered boosters to 30 percent, omicron's high transmissibility will likely lead to more cases and more total hospitalizations. This has led Prime Minister

Cases per 1M | % of population vaccinated in Europe as of 12/10/2021

Austria | 134,478 | 68% Belgium | 164,166 | 75% France | 123,788 | 71% Germany | 76,497 | 69% Italy | 85,943 | 73% Netherlands | 165,575 | 74% Norway | 55,708 | 71% Russia | 68,185 | 41% Spain | 112,721 | 81% Switzerland | 126,530 | 66% Turkey | 104,906 | 60% United Kingdom | 155,866 | 68%

Data from Coronavirus Update (Live) by WorldOMeter and Coronavirus COVID-19 Vaccine Tracker by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (JHU)

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Boris Johnson to instate new mask requirements, vaccine passes for large venues, and remote work where possible. Johnson also announced a new goal to deliver booster shots to all adults by the end of the year.

Austria is poised to roll out Europe's first universal vaccine mandate in February 2022, though its legality is still in question. The decision follows a nationwide shutdown in late November which was lifted on December 12; access to bars, restaurants, and other venues remains limited to vaccinated individuals.

Germany could join Austria in mandating vaccines beginning in February 2022. As hospitalizations strain Germany's health system and threaten to climb higher, new Chancellor Olaf Scholz has not ruled out more restrictions during the Christmas holiday. He aims to administer 30 million more shots before the year's end. On December 10, Germany mandated health workers be vaccinated by March 2022 or risk suspension.

Before omicron came to dominate headlines, France extended booster shot availability to all people aged 18 and older. The number of shots administered has tripled since November and, beginning on January 15, 2022, boosters will be required to enter restaurants, bars, and other

public spaces. In response to the omicron variant, France now requires all travelers from outside the European Union to provide proof of a negative test taken 48 hours before arrival.

Even though **Russia** continues to experience high caseloads and near-record deaths, the government has returned to its more relaxed approach after imposing a brief, nationwide work-from-home order. In the face of low vaccination rates, President Vladimir Putin is urging Russians to get their jabs and boosters. A new federal law, expected to come into effect in February, will introduce a health pass akin to France's; several regions have already imposed such measures.

The economy: Estimates of the eurozone's Q3 growth remain unchanged at 2.2 percent as GDP approached 99.5 percent of its Q3 2019 levels. However, news of the omicron variant and high inflation remain of concern for Q4 and 2022. In the EU, inflation hit a record 4.9 percent in November, but the European Central Bank has resisted pressure to raise interest rates. **France** is expected to support consumer spending with an "inflation subsidy" in 2022. The Bank of **England** said it will raise interest rates to address inflation but has been reluctant to do so.

Spain will be the first member state to receive European recovery funds after the European Commission greenlit the country's first installment of €10 billion out of a total of €70 billion. Every country in the EU but the **Netherlands** – where parliamentary deadlock has prevented internal consensus – has submitted a plan required to access recovery funds. Requests by **Poland**, **Hungary**, and **Sweden** are still pending Commission approval, though Poland remains locked in a legal and political dispute with the EU over the rule of law and judicial independence.

Looking ahead: Governments across Europe will likely introduce social distancing, mask, and vaccine requirements ahead of the holidays with the aim of sustaining their economic recoveries

and limiting hospitalizations. Regional and international travel is expected to take a hit from the omicron variant and resulting travel rules changes, dampening prospects for economic recovery in the services and hospitality industries.

In early 2022, **Germany** will assume the G-7 presidency and can help shape the global response to Covid recovery. The presidency will serve as an early indicator of how Germany's new governing coalition will want to be seen on the global stage: as a leader or mediator among states.

MIDDLE EAST & NORTH AFRICA

Government response: In response to the omicron variant, countries with higher vaccination rates have accelerated their booster campaigns but otherwise avoided reimposing major restrictions. Saudi Arabia announced that starting in February anyone over the age of 18 will require a booster shot to engage in nearly all types of public activities. The UAE has made Pfizer and Sputnik boosters available to all adults and approved the single-dose Sputnik Light vaccine as a universal booster shot. Oman and Qatar have opened registration for booster shots to all adults, and Kuwait and Bahrain have announced that citizens can obtain their

Cases per 1M | % of population vaccinated in MENA as of 12/10/2021

Algeria | 4,717| 12% Bahrain | 155,608 | 67% Egypt | 3,488 | 16% Iran | 71,909 | 57% Iraq | 50,274 | 12% Israel | 144,664 | 62% Jordan | 96,485 | 37% Kuwait | 94,837 | 73% Lebanon | 101,034 | 26% Libya | 53,879 | 10% Morocco | 25,336 | 61% Oman | 57,564 | 54% Qatar | 87,267 | 77% Saudi Arabia | 15,457 | 64% Syria | 2,706 | 4% Tunisia | 59,936 | 44% UAE | 73,806 | 88%

Data from Coronavirus Update (Live) by WorldOMeter and Goronavirus COVID-19 Vaccine Tracker by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (JHU)

No data available

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boosters without prior registration. In Bahrain, failure to receive a third dose will lower a person's vaccination status and restrict their public movement. **Jordan** issued a new defense order urging people 18 and over to receive a booster shot and will require at least two doses to enter government buildings starting in 2022. All of these countries and **Israel** have detected omicron cases, and most have banned flights to countries believed to have high rates of omicron. After reopening its borders to all tourists on November 1, Israel has since banned travel to more than 50 African countries, as well as to the U.K. and Denmark.

For countries across the region with lower vaccination rates, the omicron variant has lent added urgency to vaccination efforts and resulted in renewed restrictions. Despite having the highest vaccination rate in Africa, **Morocco** took the drastic step of suspending all incoming flights for a period of two weeks over omicron fears. **Egypt**, which is far behind its year-end target of vaccinating 40 percent of its population and denies reports of at least two omicron cases, now requires proof of vaccination or a negative PCR test taken within the past 72 hours to enter government buildings. It has also banned travel to seven southern African countries. **Lebanon**, which detected its first omicron case last week and has only fully vaccinated 25 percent of its population, has imposed a three-week curfew for the unvaccinated and will soon require all essential workers to be vaccinated.

The economy: The Gulf Cooperation Council (GCC) countries are broadly expected to return to pre-pandemic GDP levels in Q1 2022, driven by the rebound of oil prices to their highest sustained levels since 2014 and the continued recovery of the non-oil economy. According to new projections from economists at the Institute of Chartered Accountants in England and Wales and PwC, GDP growth in the GCC countries is on track to accelerate from an estimated 2.7 percent this year to 5 percent next year, outpacing the region as a whole, which is expected to average 4.4 percent growth in 2022. While the omicron variant poses risks to the global economic recovery, the GCC's high rates of vaccination should limit the need to re-impose tight restrictions on travel and economic activity. Although investor concerns over omicron have caused some oil price volatility in recent weeks, OPEC+ remains optimistic that the impact of the variant on oil markets will be modest and short-lived and has shown no signs of reversing course on its plan to increase monthly production by 400,000 barrels per day in January 2022. The combination of high oil prices and rising production is having a positive impact on government budgets across the GCC. Saudi Arabia expects to achieve its first budget surplus in 10 years in fiscal year 2022, and Oman projects that its budget deficit will fall from 5 percent to 2.5 percent.

Outside the GCC, the economic outlook is more mixed. High energy prices are weighing on the recovery of manufacturing and export sectors in oil-importing countries. The omicron variant poses an added challenge for countries that rely heavily on travel and tourism, such as **Jordan**, **Morocco**, and **Tunisia**. Jordan's economy is expected to grow by just 1.5 percent this year and 2.2 percent in 2022, constrained by the slow recovery in tourism and structural economic challenges. Morocco is expected to achieve more than 6 percent GDP growth for full-year 2021, one of the highest rates in the region, but the government's aggressive policy response to the omicron variant poses a challenge for the tourism sector and the broader economy heading into 2022. Meanwhile, the economic crisis in **Lebanon** continues to worsen. In late November, the Lebanese pound sank to a new low on the black market. More than three-quarters of the country's population now lives in poverty.

Looking ahead: As countries across the region work to avoid a resurgence in case numbers due to the omicron variant, we expect the highly vaccinated GCC countries and **Israel** to maintain their present course of keeping their economies open and aggressively rolling out booster shots.

Less-vaccinated countries will face a choice between keeping their economies open and reimposing certain restrictions on travel and economic activity. Some countries like **Egypt** have signaled that they will not reimpose restrictions barring a massive surge in cases that threatens to overwhelm the healthcare system, while others like **Morocco** are prepared to take a more restrictive approach focused on minimizing transmission even at short-term risk to the economy.

LATIN AMERICA

Government response: Governments across Latin America are carefully watching the omicron variant and have begun to impose new restrictions in response, though most health experts believe its eventual spread throughout the region is inevitable. The new variant has thus far been detected in travelers in seven countries in Latin America and the Caribbean – **Argentina**, **Brazil**, **Bermuda**, **Chile**, **Cuba**, **Mexico**, and **Trinidad and Tobago** – though as of this writing no evidence of local transmission has been found.

Several governments have responded to the threat of the new variant with travel restrictions. Brazil has imposed travel constraints on Botswana, Eswatini, Lesotho, Namibia, South Africa, and Zimbabwe, and authorities in major cities have announced the suspension of New Year's Eve celebrations. Chile has barred entry to non-resident foreigners who spent any time in South Africa, Namibia, Lesotho, Botswana, Eswatini, or Mozambique during the previous 14 days.

Cases per 1M | % of population vaccinated in Latin America as of 12/10/2021

Argentina | 116,853 | 67% Brazil | 103,279 | 65% Chile | 91,973 | 84% Colombia | 98,487 | 50% DR | 37,212 | 51% Ecuador | 29,406 | 64% Mexico | 29,888 | 50% Panama | 108,808 | 56% Peru | 977 | 48.1% Venezuela | 15,417 | 34%

Data from Coronavirus Update (Live) by WorldOMeter and Coronavirus COVID-19 Vaccine Tracker by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (JHU)

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Mexico and Argentina have not imposed travel bans but require travelers to be vaccinated prior to entry. Other countries that have yet to detect the omicron variant such as **Paraguay**, **Guatemala**, and **Peru** have imposed restrictions on travelers coming from several African countries; Peru has already seen a resident test positive for the variant while traveling to Japan.

With the exception of Central America, where new infections have decreased by 37 percent, much of the region has seen an increase in cases in recent weeks and vaccine inequity continues to be a concern. Currently, about 56 percent of people in the region are fully vaccinated; however, 20 countries have yet to meet the World Health Organization's year-end target of fully vaccinating 40 percent of their populations. The region has benefitted from large vaccine donations from the United States over the last several months and should expect to receive more supplies from its other northern neighbors going forward, as **Canada** and Mexico reached an agreement with the U.S. during the North American Leaders Summit in November to send millions of doses to the region to pay forward donations they received from the U.S.

The economy: Latin America has experienced a strong economic recovery in 2021, but growth is expected to slow in the coming months as central banks respond to high levels of inflation and remain under fiscal pressure due to the lingering effects of pandemic-related stimulus spending. In countries including **Brazil**, **Chile**, **Colombia**, **the Dominican Republic**, **Mexico**, **Paraguay**, **Peru**, and **Uruguay**, inflation is above the central banks' target, leading monetary policy officials across the region to raise their interest rates. Brazil – which slipped into a technical recession after new official data revealed that GDP contracted by 0.1 percent in the third quarter – has led

one of the most aggressive responses to inflation, now with a benchmark interest rate of 9.25 percent after hiking rates seven times this year. Despite concerns over inflation and fiscal sustainability, a new cash transfer program was passed in Brazil this month in a move widely interpreted as part of an attempt by President Jair Bolsonaro to shore up his popularity ahead of a run for reelection next year. While economic growth is slowing down across the region, high commodity prices are partially alleviating some economic constraints. Large commodity-exporting countries in South America are expecting a boost in exports and public revenues in 2022 as economic activity ramps back up.

Looking ahead: A slower economic recovery in 2022 and government responses to future Covid-19 variants are likely to remain key political issues for the region moving forward. In **Honduras**, leftist candidate Xiomara Castro won the presidential election, becoming the country's first female president and ending 12 years of the right-wing party's rule. Investors will be watching Chile's presidential runoff on December 19 between the far-right Jose Antonio Kast and left-of-center Gabriel Boric, where the divergent priorities of the two remaining candidates mirror an increasingly polarized political environment amid an electoral cycle that has been defined by repudiation of the political class and broadening alienation among voters. In Brazil and Colombia, incumbents continue to see their popularity fall as next year's electoral races take shape.

SUB-SAHARAN AFRICA

Government response: After a decline in the number of reported Covid-19 cases in the last couple of months, the omicron variant is spreading quickly in Africa, particularly in southern Africa, African countries where the new variant has been identified so far include Botswana, Ghana, Mozambique, Namibia, Nigeria, Senegal, South Africa, **Uganda**, **Zambia**, and **Zimbabwe**. South Africa is seeing the fastest spread of the variant, with omicron now the dominant strain of the virus in the country.

Access to vaccines has increased in Africa but remains inconsistent, as many countries continue to struggle to vaccinate their populations due to a combination of erratic supply, vaccine hesitancy, and logistical obstacles. Only 245.2 million of the 431.9 million doses received in Africa Cases per 1M | % of population vaccinated in Sub-Saharan Africa as of 12/10/2021

Cameroon | 3,912 | 2.3% Ghana | 4,101 | 2.6% Guinea | 2,256 | 6% Nigeria | 999 | 1.8% Senegal | 1,011 | 5.5% South Africa | 51,231 | 25%

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have been administered. Around 11 percent of Africans have received their first dose and just 7.4 percent have been fully vaccinated. There has been an increase in vaccine supply from Europe to many African countries, but the African Vaccine Acquisitions Trust and the Africa Centres for Disease Control and Prevention say many deliveries arrive with short notice and in unpredictable quantities. They claim that the haphazard nature of these deliveries risks disrupting national vaccine campaigns. Dr. Ayoade Alakija, co-chair of the African Vaccine Delivery Alliance, says that inconsistent deliveries can also contribute to vaccine hesitancy as governments cannot properly plan for large vaccine rollouts.

The omicron Covid-19 variant has had a disproportionate impact in Africa. The variant was first identified by South African scientists thanks to that country's advanced detection capabilities; however, several countries reacted by immediately imposing blanket travel bans on southern

Africa. This has led to growing tensions between African countries and other regions in the world. At the Dakar International Forum for Peace and Security, African leaders called for international solidarity in addressing the pandemic and world security. Speaking at the forum, South African President Cyril Ramaphosa said that recent international travel restrictions are punishing the countries that helped inform the world of the new Covid-19 variant, and that the restrictions are negatively affecting struggling economies in the region that rely on tourism.

Since the first report of the omicron variant by South African scientists on November 24, governments in several other countries have found the variant – retroactive testing in Nigeria detected omicron cases as far back as October. Additionally, according to Botswanan officials, the first identified cases of omicron that came through South Africa and Botswana may have originated in Europe. Nonetheless, an array of countries including the U.K. and the U.S. have banned travelers from southern Africa. Nigeria has since imposed retaliatory travel bans on Argentina, Canada, Saudi Arabia, and the U.K. World leaders including Ramaphosa, the Nigerian High Commissioner to London Sarafa Tunji Isola, and UN Secretary-General António Guterres have criticized the measures imposed against African nations, labeling the bans as "travel apartheid."

To curb the spread of omicron and increase the uptake of vaccines, some African countries are considering making vaccines mandatory. Uganda's health minister is set to table a bill in the Ugandan parliament that would make vaccines mandatory and South Africa is exploring doing the same. Ghana will vaccinate returning citizens and residents against Covid-19 upon arrival at the airport from December 13 if they have not already received shots. African countries have also turned to booster shots to combat the omicron variant. The South African Health Products Regulatory Authority approved the Pfizer vaccine as a booster shot for people 18 years and older and Nigeria will begin administering boosters as well, even though less than 4 percent of Nigerians have been fully vaccinated so far.

The economy: The United Nations Conference on Trade and Development has released the Economic Development in Africa Report 2021. According to this report the African Continental Free-Trade Area (AfCFTA), which came into effect in January 2021, could reduce Covid-19-induced economic contractions and promote sustainable and inclusive growth on the continent. According to the report, Africa's untapped export potential amounts to around \$21.9 billion (43 percent of intra-African exports) with the potential for an additional \$9.2 billion through partial tariff liberalization under the AfCFTA over the next five years.

The 2021 African Economic Conference was held in Cabo Verde from December 2 to 4. Participants urged countries to implement crucial governance and economic reforms to see the continent through the pandemic. Policymakers at the conference said that Africa can rebuild by pushing through urgent reforms that tackle outflows of illicit funds, improve management of indigenous resources, and invest in human capital. The African Development Bank estimates that African governments require additional financing of about \$484.6 billion within the next three years to close the financing gap and emerge from the Covid-19 crisis with more resilience. According to economic experts speaking at the conference, many African countries face the risk of defaulting on loans if the G-20's Debt Service Suspension Initiative is not extended beyond 2021.

Looking ahead: South Africa's Biovac Institute will start manufacturing the Pfizer vaccine early in 2022 after receiving the drug substance from Europe. Biovac's "fill and finish" deal with Pfizer covers the final stages of manufacturing, where the vaccine is processed and put into vials, but

this deal does not represent a transfer of the intellectual property of the vaccine. Nonetheless, an increase in consistent vaccine supplies manufactured on the continent will help African countries expand vaccination efforts in 2022.

SOUTH ASIA

Government response: As of December 12, the number of average active Covid-19 cases in **India** has decreased by 9 percent compared to the prior two-week period. The average number of deaths has also decreased by 27 percent. The total number of confirmed cases in India now stands at 34.7 million with 475,636 total deaths.

Countries across the region followed the global trend of imposing temporary travel restrictions on sub-Saharan African countries and others due to concerns about the rapid spread of the omicron variant. Nevertheless, the omicron variant has reached South Asia: India has seen 40 cases of the variant as of December 13, with 20 of those cases located in Maharashtra. So far, the symptoms in these cases have been mild, though it remains too early to make conclusions.

Cases per 1M | % of population vaccinated in South Asia as of 12/10/2021

Bangladesh | 9,451 | 25% India | 24,777 | 36% Maldives | 167,458 | 67% Nepal | 27,562 | 29% Pakistan | 5,674 | 25% Sri Lanka | 26,517 | 64%

Data from Coronavirus Update (Live) by WorldOMeter and Coronavirus COVID-19 Vaccine Tracker by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (JHU)

- No data available
- % of population that received 1 dose "estimated % of population that received at least 1 dose based on doses administered and population size

Pakistan, Sri Lanka, and Nepal have each detected at least one case of omicron within their borders as well. South Asia is relatively poorly covered in terms of genomic surveillance, so the actual case rate could well be higher.

In Pakistan, the number of weekly confirmed cases dropped significantly in mid-November but began rising again towards the end of the month. In Nepal, the weekly number of cases and deaths has decreased from those seen in October. The number of Covid infections in Bangladesh is rising, with an average of 284 new cases every day. In Sri Lanka the number of confirmed cases has increased since October. While the number of deaths was in decline in early November, there was a 35 percent increase during the week of November 22.

The economy: India's economy appears to be recovering from the effects of the pandemic – of the 22 high-frequency indicators being monitored, 19 have returned to pre-pandemic levels. India's central bank has held its lending rates at a record low of 4 percent to support growth. Economists predict that the lending rate will not be changed before the second half of 2022, to promote a durable recovery. However, according to the Centre for Monitoring Indian Economy, exports from India declined by 16.1 percent and the trade deficit rose to an all-time high of \$23.3 billion in November compared to the prior year.

India will likely offer a food and health security package to **Sri Lanka**, as well as an energy security package and currency swap, to help ease the island's economic crisis. The food and health package would offer a line of credit that covers the costs of importing food, medicines, and other essential items from India. The energy portion would cover the costs of importing fuel from India.

In **Nepal**, the emergence of the omicron variant may inhibit a tourism industry that had seemed on the road to recovery. In November, 26,283 tourists traveled to Nepal, the most since the pandemic began. However, the emergence of the new variant has members of the tourism industry worried.

Looking ahead: As of December 10, 59.2 percent of the **Indian** population has received at least one vaccine dose, and 36.4 percent are fully vaccinated. The National Technical Advisory Group on Immunization and the National Expert Group on Vaccine Administration for Covid-19 are considering the scientific evidence available on booster doses, and will advise the government on whether boosters will help prevent further spread.

On December 10, the Indian government warned against the lessening use of masks, as health officials are concerned that Covid-appropriate behaviors have declined and will be less effective in limiting the spread of variants like omicron. The Indian government has advised states to increase surveillance at airports and monitor international visitors, increase testing capabilities, and continue monitoring hotspots of infection. Additionally, the Delhi government has announced that it will consider implementing additional restrictions during Christmas and New Years to curb the spread of infection.

In **Pakistan**, 26 percent of the population is fully vaccinated, while 39 percent has received at least one dose. The government of Pakistan has been open about its desire to reduce restrictions, but continues to review the situation and adjust requirements for entry, travel, and other activities. In **Bangladesh** and **Nepal**, 26 percent and 31 percent of the population is fully vaccinated, respectively.

The **Sri Lankan** government is looking to relax restrictions on tourism in a bid to boost its economy amid a severe financial crisis. Sri Lanka announced that it will make Covid vaccination cards a requirement to enter public spaces; as of December 10, 15.9 million people out of Sri Lanka's population of 21 million have been vaccinated, or around 75 percent. The Health Ministry also intends to replace physical vaccination records with a mobile app.

VACCINES AND THERAPEUTICS

Vaccines: Global efforts to vaccinate the world continue, with over 8.28 billion doses of various Covid-19 vaccines having been administered in at least 218 countries and territories. 44.9 percent of the global population has received two doses of vaccine. Despite increasing vaccination rates, Covid-19 cases have totaled more than 267 million with 5.27 million reported deaths. Vaccine inequity remains a global challenge, with only 6.3 percent of low-income country populations having received at least one dose. New variants such as omicron (B.1.1.529), are driving new waves of cases around the world.

Omicron surprisingly has over 50 mutations, 30 of which are spike mutations; these are of particular concern because they make the virus more infectious. Spread patterns suggest that it transmits twice as fast as previous variants and is three times more likely to reinfect vaccinated individuals. Currently omicron has been detected in 77 countries and in 35 states in the U.S.

While the effectiveness of the current mRNA vaccines is lower against omicron compared to the delta variant, it is also becoming clear that with a third booster dose, vaccine effectivity dramatically rises to 75 percent. This has led the Biden administration and other governments around the world to allow and encourage third doses for all eligible individuals. Since current

vaccines seem to be effective at preventing severe disease, especially after the third dose, it does not seem likely that an omicron-specific vaccine will be required in the short term.

Experts are emphasizing the need for rapid, increased global vaccination efforts in combination with genomic surveillance to reduce morbidity, mortality, and slow the transmission rate. Through Covax, the global initiative aimed at equitable vaccine access, more than 635 million doses have been delivered to low-income countries. In support of these donation efforts, the Biden administration has pledged to produce one billion vaccines per year and to improve manufacturing infrastructure in 2022. The Chinese government has also pledged one billion vaccines to the African continent, among other initiatives to aid pandemic recovery.

Global genomic surveillance programs monitoring the spread and mutations of Covid-19 have continued to strengthen, helping build the infrastructure for future pandemic readiness. In response to omicron and the need for stronger genomic surveillance systems, the Biden administration has committed \$1.7 billion to establish a nationwide viral surveillance program. The WHO along with the German government has developed a hub in Berlin, and multiple other governments and non-profit entities are developing their own pandemic preparedness programs. Multilateral discussions on a possible international treaty on pandemic preparedness are also ongoing.

Therapies: Astra Zeneca has just received emergency use authorization for its combination polyclonal Evushiled (tixagevimab with cilgavimab) as a preexposure prophylaxis for immunocompromised patients older than 12. This passive immunoprophylaxis has shown to be 83 percent effective at six months in preventing Covid in immunocompromised people. While studies on effectiveness in omicron are still ongoing, the company's preclinical assays suggest that immune escape with omicron does not occur. This development has clinical and epidemiological significance. While immunocompromised patients constitute 2 percent of the global population, they are at high risk for severe Covid and death. In the absence of normal immune pressure, the virus has a propensity to significantly mutate in such patients, resulting in much more contagious strains. This is likely the origin of most of the contagious strains, including omicron; any new tool to combat Covid in immunocompromised patients is important.

Eli Lilly has received U.S. Federal Drug Administration (FDA) approval for its cocktail of bamlanivimab and etesivimab for high-risk children under 12. It was already approved for use in those aged 12 and up but has now become the first Covid-19 treatment for young children. Its efficacy against omicron has yet to be investigated. Given early, it is effective in preventing hospitalization and death; however, it is not a substitute for vaccination. Pfizer and Merck are still awaiting emergency use authorization for their antiviral pills. Merck's molnupiravir has turned out to be less effective than anticipated, reducing the risk of hospitalization and death by 30 percent instead of 50. However, Pfizer's paxlovid retains its efficacy of 89 percent. Omicron is not expected to affect the efficacy, since the treatment targets a replication enzyme instead of the virus' spike proteins. The pills support lethal mutagenesis in Covid-19 instead of targeting preserved epitopes. That said, not all therapies have stood up to the omicron variant, including Regeneron's monoclonal antibody combination of casirivimab and imdevimab for example.

About ASG

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For questions or to arrange a follow-up conversation please contact Anthony Cino.