Managing Long COVID in East Asia and the Pacific

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The highly contagious Delta variant is fueling new outbreaks in East Asia and the Pacific (EAP). It is becoming evident that COVID-19 is not leaving any time soon and may be here to stay. Countries with high vaccination coverage show, however, that transition to a relatively benign phase of “managed endemicty” may be possible. At current trends, and given vaccine availability, many EAP countries are expected to vaccinate more than 60 percent of their populations by the first half of next year. Achieving and sustaining high coverage will require improving distribution capacity, overcoming vaccine hesitancy, and expanding regional production of vaccines to ensure reliable supplies for persistent COVID-19. Countries will also need to sustain the process of testing, tracing, and isolation, as well as precautions such as social distancing and wearing masks. Finally, countries need to strengthen their health systems to cope with long COVID.

Key Messages

The process of testing, tracing, and isolation, which was a successful strategy in 2020, has been less effective against the highly infectious Delta variant in East Asia and the Pacific (EAP). Vaccination, which would have helped reduce mortality and transmission, has been slow. Despite the limited availability of vaccines in the near term, many EAP countries are expected to vaccinate more than 60 percent of total populations by the first half of 2022, thereby transitioning to a relatively benign phase of COVID-19. However, this cannot be taken for granted. Countries should improve vaccine distribution capacity and overcome vaccine hesitancy, while maintaining the process of testing, tracing, and isolation and continuing precautionary measures such as social distancing and wearing masks. Health systems must be strengthened to deal with the lingering presence of COVID-19. And production of vaccines, including regionally, must expand to cope with sustained high demand and unreliable imported supply.

What is Happening?

East Asia and the Pacific region is suffering a reversal of fortune. In 2020, many EAP countries successfully contained COVID-19 and economic activity swiftly revived as other regions struggled with the pandemic and economic recession. Now the region is being hit hard by the COVID-19 Delta variant while many advanced economies are on the path to economic recovery.

The Delta variant is fueling new and serious outbreaks in the region. All major EAP economies, except China, are suffering from the largest COVID-19 outbreaks of infection and fatalities since the beginning of the pandemic. The Delta variant currently accounts for over 97 percent of total new COVID-19 cases in Indonesia and Malaysia, and over 80 percent in Thailand – the three countries with frequently reported genome sequencing.

The Delta variant is spreading because pre-vaccine containment strategies are proving insufficient, populations have low immunity, and vaccination has been slow (figure 1a, 1b). In the pre-COVID-19 vaccine era, many countries in the region were able to contain the disease by imposing short periods of stringent restrictions on domestic and international mobility and then transitioning to intensive testing-tracing-isolation. This approach proved very effective and was implemented with varying degrees of success in Cambodia, the Lao PDR, and Vietnam, and less so in Indonesia and the Philippines. Previous strategies were either not well-equipped or sufficiently intensive to cope with the highly infectious Delta variant, and vaccination has been slow; therefore, countries are being forced to impose longer restrictions on mobility (figure 1c). A cross-country econometric analysis reveals that delayed vaccination is hurting economic activity. A 10-percentage point increase in a country’s vaccine coverage is associated with an approximately half a percentage point increase in quarterly GDP (figure 1d).

Vaccination faces constraints that differ across countries in the region. A survey shows that vaccine availability is now the binding constraint on vaccination in the larger EAP countries like Indonesia, the Philippines, and Vietnam (figure 2). Smaller, poorer countries such as Papua New Guinea and Fiji have benefited from vaccine donations but some, such as Papua New Guinea, are constrained by inadequacies in their distribution infrastructure. Several countries must still persuade a significant minority of citizens to be vaccinated.

What can be Expected?

Countries with high vaccination coverage show that transition from the malignant phase of the disease to a relatively benign phase of “managed endemicty” may be possible. Like most other countries, the United Kingdom (UK) initially suffered recurrent waves of the pandemic which were associated with high levels of infection and significant mortality. As vaccination coverage surpassed 60 percent, the UK relaxed social restrictions allowing for a resumption of economic activity (figure 3). The expectation was that a certain threshold level of immunity, due to a combination of vaccination and infection, would usher in a phase where we still see waves of infection but less severe illness and mortality. The reason is that vaccines do not offer sterilizing immunity, critical for preventing transmission, and different vaccine types differ in their efficacy as far as infection and mild illness are concerned, but most offer high levels of protection against hospitalization and death and differ much less in this respect. The current situation is in line with...
Figure 1. The relatively low level of vaccination and high levels of susceptibility are necessitating stringent lockdowns and hurting growth in many EAP countries.

Figure 2. Delivery delays drive slow vaccination and are perceived as the major problem for larger EAP countries; distribution capacity perceived to be the major constraint for smaller and poorer countries.
expectations except that high levels of transmission have led to significant deaths even though case fatality is low – mortality in the UK is higher than a year ago when nobody was vaccinated but less infectious variants prevailed. The country has found the sustainability of this benign phase is conditional on vaccination staying a step ahead of the disease, in terms of immunity offered across people and over time against old and new variants. The recent upturn in mortality in the UK suggests: (i) immunity wanes after a certain period and may require booster shots to sustain it; and (ii) absent other measures to suppress transmission, new variants can lead to increased levels of infection and hence mortality putting pressure on health systems even though case fatality rates are low.

Despite the limited availability of vaccines in the near term, many East Asia and the Pacific countries could vaccinate more than 60 percent of total population by June 2022 (figure 4). Coverage is

**Figure 4. Many EAP countries will fully vaccinate more than 60 percent of their populations by June 2022**

![Figure 4](image_url)

Source: World Bank staff calculations. Oxford Covid-19 Government Response Tracker (OxCGRT) (Hale et al. 2021) and Agarwal and Gopinath 2021. Note: Latest available vaccination data as of 31 August 2021 from OxCGRT. Expected availability at end-2021 refers to provisional estimates from Agarwal and Gopinath (2021) (or “IMF estimates”). It is defined as vaccine doses expected to be delivered by end-2021 per 100 people, divided by 2, and corresponds to a notional concept of the effective share of the population that is fully vaccinated. Estimated timing of 60 percent effective population coverage is calculated based on current vaccine coverage, IMF’s estimates of expected vaccine availability, and the average daily vaccines administered in August 2021, assuming non-binding constraints on vaccine availability and administration. IMF= International Monetary Fund.
still low in several EAP countries, like Indonesia, Philippines, and Vietnam, and vaccine availability still an issue because of limited global production capacity and the decision to provide booster vaccines in industrial countries. However, at current pace of vaccine administration, and given estimates of availability, several EAP economies could reach 60 percent of total population that is fully vaccinated over the next 9 months, with China and Mongolia already there and Indonesia and the Philippines likely to get there in the first half of next year.

**What Needs to be Done?**

Widespread vaccination with safe and effective vaccines is a necessary condition for a sustainable economic recovery. China, Malaysia, Mongolia, Nauru, and Palau have already fully vaccinated more than 60 percent of their people. Most countries in the region, including Indonesia and the Philippines, are expected to vaccinate more than 60 percent of their populations by the first half of 2022 (figure 4). But as vaccination coverage increases, distribution to remote areas is likely to vary and vaccine hesitancy to become a binding constraint, as has been the case even in industrial countries. Therefore, the attainment of these goals cannot be taken for granted and will continue to require a special effort to acquire vaccines, distribute them, and persuade people to get vaccinated. The experience of high vaccination countries like the UK indicates that while currently available vaccines significantly reduce hospitalization and mortality among the infected, they do not eliminate infections. High infections can lead to higher hospitalization and mortality, prompting limits on mobility that hurt economic activity. Therefore, the region will need to make a serious effort to enhance testing, tracing, and isolation, encourage precautionary behavior, and strengthen health systems. International assistance is needed to support national efforts in all these areas, especially in countries with limited capacity.

Most importantly, East Asia and the Pacific countries must maintain emphasis on non-pharmaceutical interventions, especially testing, tracing, and isolation. In many EAP countries, vaccination coverage is low, and a high share of population is susceptible (figure 1a, 1b). Precautionary measures, such as some levels of social distancing and wearing masks in crowded spaces, will need to continue. In the EAP region, a group of high vaccination/high testing countries is emerging, of which China, Chinese Taipei, New Zealand, and Singapore are the best examples. Unfortunately, COVID-19 testing coverage and pace are uneven in the region. Among the Association of Southeast Asian Nations (ASEAN) countries, Malaysia and Vietnam have been ramping up COVID-19 mass testing in the effort to control the growing number of COVID-19 cases in the community but the levels are still low compared to Singapore. Testing coverage has increased to a lesser extent in Indonesia, Thailand, and Philippines since the second quarter of 2021, and is plateauing.

Since zero COVID-19 may not be an affordable option for most East Asia and the Pacific countries, they must adapt their health systems to live with long COVID. When COVID-19 first struck, several countries, like Australia, China, and New Zealand, sought to eliminate it completely. The highly infectious Delta variant significantly raised the economic cost of elimination because of the stringency and duration of lockdowns. Vaccination helps soften the tradeoff by reducing transmission and the adverse consequences of infection. However, the economic costs of elimination are expected to remain steep for EAP countries because vaccines available in the region is not likely to be sufficient to prevent transmission, and thereby vaccination coverage and the duration of immunity will be limited. For most countries in the region, therefore, living with the disease may be more acceptable than striving for zero COVID-19 using economically debilitating measures. In these circumstances, the priority will be to strengthen health systems. Monitoring hospitalizations and deaths as well as infection cases will be important to guide policy responses. Vaccinating (and eventually re-vaccinating) high-risk groups is critical, but so is managing underlying health conditions that exacerbate vulnerability to the disease. Countries may also invest in improving diagnostics to detect cases that are more likely to progress to severe illnesses.

In parallel, production of vaccines, including regionally, needs to be accelerated because global supply remains unreliable and regional demand will remain high. To reach and sustain the state of “managed endemicity,” a large and predictable supply of vaccines is needed. Relying on suppliers in industrial countries would be naïve, because the political imperative to vaccinate and revaccinate their populations is stronger than the political incentive to share. Greater efforts must therefore be made to expand regional production by acquiring technology, repurposing production lines, and facilitating operation of supply chains. While the scope for expanding production of mRNA vaccines may be limited in the near term because of the difficulty in transferring technology, there is a greater scope for the expansion of vector vaccines, like Oxford-AstraZeneca, and protein adjuvant vaccines, like Novavax. Production of the Astra Zeneca has already been initiated in China, the Republic of Korea, and Thailand. Through an agreement signed by COVAX co-lead, Gavi, China-based Clover is set to make over 400 million doses of its protein-based vaccine available for procurement in 2021 and 2022, pending Emergency Use Listing (EUL) from the World Health Organization. Other initiatives are underway; for example, Thailand is also considering domestic production for both mRNA and sub-unit protein vaccines.

**References**


