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Dengue fever on the rise in Southeast Asia

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In the wake of the 2019 dengue fever epidemic, Southeast Asian health authorities knew that another fierce battle with the neglected tropical disease would probably occur in the next few years. While most of the region's countries managed to overcome that particular outbreak by the end of the year, a multitude of unforeseen events were looming on the horizon by the beginning of 2020 which deprived these countries of a much-needed cooling-off period and which later provoked experts and health authorities to reassess the dengue situation in the region.

These events, of course, was a devastating pandemic of a novel Coronavirus, and widespread socioeconomic disruption, draconian containment measures, new lifestyles and behavior, allocation of resources toward mitigating the pandemic's impact at the expense of other diseases, an interruption of the vector control programs and awareness campaigns, and an exacerbating problem of global warming. Furthermore, dengue cases might have been underreported since then due to the comparable clinical manifestations of dengue and COVID-19, the psychological distress which might have restrained dengue-patients from seeking medical consult in clinics and the enormous burden of the new threat on healthcare systems. All these events might have impacted the surveillance and containment of dengue fever in the region, and there has been a growing body of literature examining the impact of each one of them since the beginning of the pandemic.

Recently, the number of dengue fever cases is increasing tremendously again across the region, recording higher numbers when compared to the same period of 2021 in each country. The rainy monsoon season, which likely boosts mosquito's population and facilitates dengue's transmission, will last through October, meaning that numbers might increase dramatically toward the end of the year. In Vietnam, over 120,000 cases have been recorded as of 27 July, which implies that the number has more than tripled compared to the same period of 2021. 40 patients have passed away [1]. According to the Ministry of Health, the main circulating serotypes are DENV-1 and DENV-2 [1]. Ho Chi Minh City alone has accounted for 32,011 of the recorded cases by 21 July [1]. The deputy director of the city's Department of Health illustrated earlier that most cases were caused by DENV-1, however an increase of DENV-2 has been witnessed since that statement, and with that an increase in the number of severe cases.

Singapore is one of a few countries where the number of dengue cases surged in 2020, whereas it plunged in other Southeast Asian countries. Compared to the first quarter of 2022, the second quarter saw a 345% increase in the number of reported cases [2]. DENV-3 was the main circulating serotype in the country during the first half of the year, accounting for the majority of infections followed by DENV-2 and a small proportion of DENV-4 [2]. 21,350 cases have been recorded up to the epidemiological week 29. The National Environment Agency expected in June that the number of infections would continue to increase, attributing that to the spread of the less common DENV-3 serotype, the hot, humid, and rainy weather and the substantial mosquito population.

The 73,909 dengue cases recorded in the Philippines as of 29 July represent a 96% increase compared to the same period of 2021, while 299 fatalities have been announced in that period [3]. Meanwhile, Malaysia, Laos, Thailand, Myanmar, and Cambodia are also fighting their way out of this upheaval. Cambodia's National Dengue Control program director attributed this uptick in cases to climate change, pointing out that the increased rainfalls the country has witnessed this year provided a suitable breeding ground for mosquitoes [4]. The Department of Disease Control in Thailand warned in March against a spike of cases following the Songkran festival in April driven by DENV-2 serotype [5]. The increased number of cases was attributed to the waning immunity of the Thai population after two years of relative rest [5]. The highest case-fatality rates were reported from the countries

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splitting the island of Timor, where the rates amounted to 0.95% and 1.2% in Indonesia and Timor-Leste respectively, according to the latest figures announced by the authorities.

The current situation in the region is challenging. The introduction and domination of less common serotypes, the potential low immunity of the populations due to dengue preventive measures, and the heavy rainfalls are the main suspects behind the current spike of cases, yet it is of paramount importance to not overlook the potential impact of the COVID-19 pandemic. Another factor that should be further investigated is the alarming reports of insecticide resistance in dengue's vectors which could further exacerbate the problem. Taking into consideration the upcoming national festivals in the region, and the fact that COVID-19 cases are rising once again; Southeast Asian countries must intensify their efforts to overcome this predicament.

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