Infectious diseases have repeatedly reshaped the course of civilization, resulting in significant morbidity and mortality around the world. Infectious diseases respect neither borders nor barriers and 70% of the world is underprepared to prevent, detect, and respond to them quickly and effectively.\[1\].

SARS-CoV-2 is the example of the latest emerging pathogen resulting in over 426 million cases including 5.9 million deaths across the globe [2]. Similarly, in Pakistan, the number of confirmed cases reached 1,502,641 including 30,053 deaths as of February 22, 2022 [2]. We review and discuss the unprecedented upsurge in some of the notifiable diseases to highlight how COVID-19 has derailed the fight against multiple infectious diseases including typhoid, dengue, and Measles in Pakistan.

The crushing demands of the COVID-19 pandemic have strained health care systems and capacity around the world. Many communities have been responding to the pandemic and grappling with the collateral damage of COVID-19 on other public health crises including infectious diseases.

Compared with other countries around the world, Pakistan has had a relatively mild experience with the COVID-19 pandemic. On the other hand, Pakistan is endemic to multiple infectious diseases including typhoid, dengue, and Measles, which were already on the rise and have been compounded by the COVID-19 pandemic. Due to the disruption of immunization and other essential services for infectious diseases including Typhoid, Measles, and dengue the unprecedented rise in cases was reported in 2021 in Pakistan. As of December 2021, over 174,000 typhoid cases including 15 deaths have been reported in the country as compared to 22,000 cases reported from 2016 to 2020 [3]. Similarly, 60,762 dengue cases including 237 deaths have been reported in 2021 compared to 3442 cases reported in 2020 [4]. Despite the availability of a safe and effective vaccine, measles remains one of the leading causes of morbidity and mortality among children in Pakistan and, an unprecedented rise in Measles outbreaks was reported with over 28,215 suspected measles cases including 800 measles-related deaths in 2021 [5] as compared to 6000

Around 40 million children in Pakistan missed their routine vaccination shots amid the COVID-19 pandemic. The substantial decrease in routine immunization because of the COVID-19 pandemic requires public health interventions to prevent future outbreaks of vaccine-preventable diseases (VPDs).
The ongoing pandemic of COVID-19 is a threat to various routine healthcare services. Fighting COVID-19 at the expense of other infectious diseases creates another time bomb for public health across the globe.
Funding: This work was supported by Taif University Researchers Supporting Program (project number: TUR-SP-2020/128), Taif University, Saudi Arabia.

Authorship contributions: All authors contributed equally. All authors read and approved the final manuscript draft.

Competing interests: The authors completed the ICMJE Unified Competing Interest form (available upon request from the corresponding author), and declare no conflicts of interest.

1 Frutos R, Gavotte L, Serra-Cobo J, Chen T, Devaux C. COVID-19 and emerging infectious diseases: The society is still unprepared for the next pandemic. Environ Res. 2021;202:111676. Medline:34252435 doi:10.1016/j.envres.2021.111676
2 COVID-19 CORONAVIRUS PANDEMIC. Available: https://www.worldometers.info/coronavirus/. Accessed: 21 February 2022.
3 Sindh, Pune 2 lakh children fell victim to typhoid this year, 15 died. Available: https://usamaspeaks.com/50689/sindh-pune-2-lakh-children-fell-victim-to-typhoid-this-year-15-died/. Accessed: 21 December 2021.
4 Pakistan: Nationwide dengue fever outbreak continues in Pakistan through October /update 5. Available: https://www.garda.com/crisis24/news-alerts/539151/pakistan-nationwide-dengue-fever-outbreak-continues-in-pakistan-through-october-update-5. Accessed: 21 December 2021.
5 800 deaths compel authorities to vaccinate 91m children against measles in Pakistan. Available from: https://www.thenews.com.pk/print/908234-800-deaths-compel-authorities-to-vaccinate-91m-children-against-measles-in-pakistan. Accessed: 21 December 2021.
6 Rana MS, Usman M, Alam MM, Ikram A, Salman M. Overlapping clinical manifestations of COVID-19 with endemic infectious diseases in Pakistan: A looming threat of multiple lethal combinations. Infect Ecol Epidemiol. 2021;11:1873494. Medline:33537119 doi:10.1080/20008686.2021.1873494

Correspondence to:
Dr. Muhammad Suleman Rana, M.Phil, Ph.D
Department of Virology
National Institute of Health
Park Road
Chak Shehzad
Islamabad
Pakistan
ranavirologist@gmail.com