

# Hovering threat of coronavirus disease-2019 (COVID-19) around South Asia

M. Uzair<sup>1</sup>, M. Arshad<sup>1</sup>, G. Murtaza<sup>2</sup>, K.I. Al<sup>3</sup>, A. Zafar<sup>4</sup>, S. Bashir<sup>5</sup>

<sup>1</sup>Department of Biological Sciences, Faculty of Basic & Applied Sciences, International Islamic University Islamabad, Pakistan

<sup>2</sup>Department of Zoology, University of Gujrat, Hafiz Hayat Campus, Gujrat, Punjab, Pakistan

<sup>3</sup>Laboratory of Infectious Diseases and Public Health, Department of Biosciences, Comsats University Islamabad, Islamabad, Pakistan

<sup>4</sup>CADSON College of Pharmacy, Kharian, Pakistan

<sup>5</sup>Neuroscience Center, King Fahad Specialist Hospital, Dammam, Saudi Arabia.

## ABSTRACT:

— *Coronavirus Disease 2019 (COVID-19) outbreak became a pandemic and has not even left the South Asian Association Regional Cooperation (SAARC) regions, consisting of Pakistan, Afghanistan, Bangladesh, India, Sri Lanka, Nepal, Maldives, and Bhutan. India has the worst condition with the highest number of confirmed cases in Asia and the second highest number of cases in the world. In the number of deaths, India stands on the 3<sup>rd</sup> rank in the world and first in SAARC countries. The only effective way to reduce the spread of COVID-19 is to limit human-to-human transmission by implementing lockdowns and curfews. However, the South Asian countries are now suffering from the second wave of COVID-19, in which the death rate is higher than the previous one. The COVID-19 vaccine has been developed by many countries and India is the only South Asian country that develops its own vaccine and also dispatches the doses of vaccines to other countries. Due to the densely populated region, South Asia is much vulnerable to COVID-19 rise. Protecting populations of vulnerable regions and promoting equality should be the priority of every country.*

— **Keywords:** SARS-CoV-2, COVID-19, Pandemic, South Asia, SAARC.

## INTRODUCTION

A globally continued pandemic of respiratory disorder pneumonia, known as Coronavirus Disease-19 (COVID-19), is caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) originated from the city of Wuhan in Hubei province<sup>1,2</sup>. This alarming situation raised intense attention within China and all over the world. On January 30, 2020, the WHO declared the pandemic a Public Health Emergency of International Concern (PHEIC) and called for collaborative efforts of all countries to prevent the COVID-19 from the spread<sup>3,4</sup>. With human-to-human transmission on large scale, this communicable disease has now spread to 221 countries and territories, and Europe and

the USA have become epicenters<sup>1-4</sup>. Due to the alarming situation, subsequently, WHO declared COVID-19 as a pandemic situation on March 11, 2020 and issued a set of temporary recommendations (WHO, 2020)<sup>4</sup>. As of February 14, 2021, there were more than 108 million COVID-19 cases all around the globe<sup>5</sup>.

South Asian Association for Regional Cooperation (SAARC), comprising Pakistan, Afghanistan, Bangladesh, India, Sri Lanka, Nepal, Maldives, and Bhutan. South Asia has a population of about 1.9 billion, 21% of the world's population with 12,421,84 laboratories confirmed cases of COVID-19 and 181,119 deaths<sup>6</sup> (Table 1). This region accounts for 11.4% of total cases and 7.6% of deaths in the world<sup>6,7</sup>. South Asia is a densely-populated region with underdeveloped or developing



This work is licensed under a [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-nc-sa/4.0/)

**Table 1.** The outbreak of COVID-19 in South Asia. (Total number of COVID-19 cases, deaths, recoveries, active cases, critical cases of South Asian countries with respect to their population).

Territories	Total cases	Total Deaths	Total Recovered	Active Cases	Critical	Populations
Afghanistan	55,492	2,427	48,392	4,673	1,012	39,465,679
Bangladesh	540,226	8,266	486,767	45,233		165,702,507
Bhutan	863	1	855	7	3	776,851
India	10,898,663	155,653	10,603,213	139,797	8944	138,382,654
Maldives	17,507	58	15,142	2,3076	178	546,396
Nepal	272,614	2,054	268,929	1,631		29,458,887
Pakistan	561,625	12,276	523,700	25,649	1,692	223,526,127
Sri Lanka	74,852	384	67,831	6,637		21,468,862

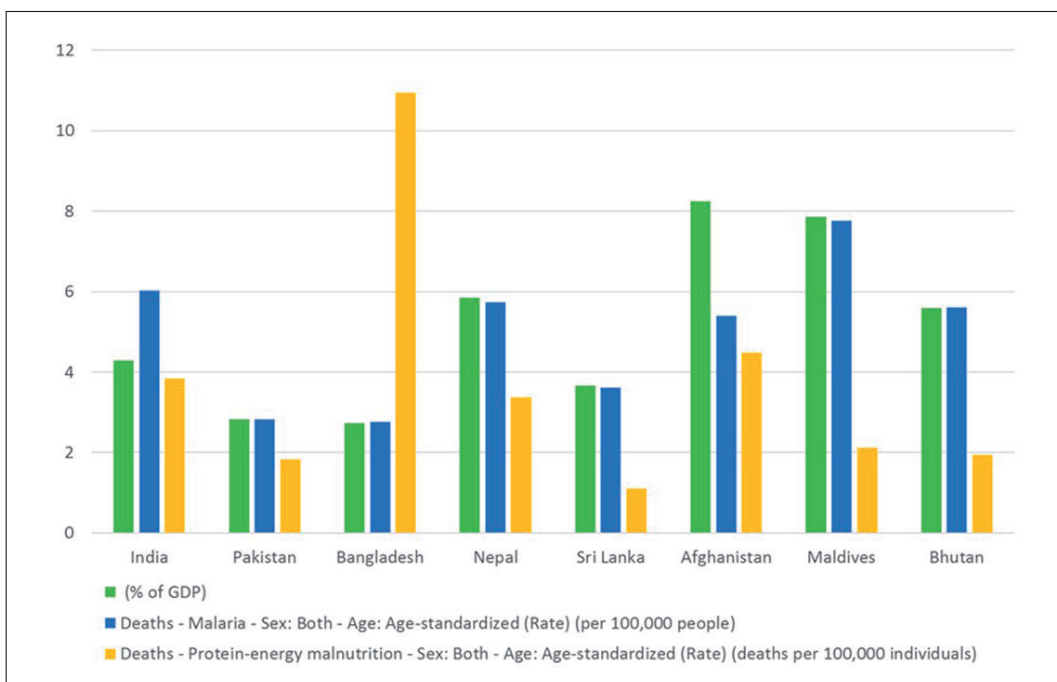
countries, as well as weak public health systems, thus vulnerable to COVID-19<sup>8</sup>. The outbreak of COVID-19 has also affected the South Asian countries adversely and health systems were also not prepared. India, being part of South Asia, has the highest number of confirmed cases of COVID-19 in Asia and second highest in the world, after the United States of America (USA), with nearly nine million cases<sup>7,8</sup>. However, in the region, Nepal was the first South Asian country to document the index case of COVID-19 from Kathmandu, on January 23, 2020<sup>8,9</sup>. It was followed by India (January 30, 2020), Afghanistan (February 24, 2020), Pakistan (February 26, 2020), Bhutan (March 6, 2020), Bangladesh, and Maldives (March 7, 2020)<sup>9</sup>.

This was an alarming situation for South Asian countries due to unstable multiple socio-economic factors including poverty, overpopulation, low literacy about common health and health care system issues, natural disasters, and lack of decisive precautionary approaches<sup>9-11</sup>. Moreover, South Asian countries are also continuously struggling to deal with poverty, communicable and non-communicable diseases like malaria, HIV/AIDS, malnutrition, diabetes, etc. (Figure 1), as well as pollu-

tion, and water shortage are major challenges. Moreover, the educated and trained human resources to deal with the epidemic are also low in SAARC countries<sup>12,13</sup>.

The dual frontiers of pandemic and economy could not be combated simultaneously; therefore, the government itself is trying to make a balanced strategy that could minimally affect the lives of people on both issues. The vaccine is available for the virus but not for all population in early stages and therefore “Prevention is better than cure”<sup>14</sup>.

The SAARC regions imposed lockdown all over the countries, stop flight operations, quarantine protocols, using of mask mandatory, promotion of hand hygiene, efficient social distancing, and other standard operating procedures (SOPs) given by the World Health Organization (WHO) were implemented to ensure the limit of COVID-19 spread<sup>10-12</sup>. The longest lockdown period was observed in Nepal for about 120 days. But the number of cases was increasing daily, especially in India, Pakistan, and Bangladesh. Pakistan is very efficiently monitoring the cases and deaths from COVID-19 until October 2020; however, officials reported the second wave of COVID-19 in the late-October 2020. Sri Lanka



**Figure 1.** The number of deaths per 100,00 populations due to malaria and malnutrition in South Asian countries.

initially controlled the COVID-19 cases; however, the second wave attacked the country with a daily increase in cases and death<sup>10</sup>.

The COVID-19 pandemic has exposed the country level preparedness and health care facilities of SAARC countries. The region that includes two nuclear powers still lacks in facing pandemic, infectious disease surveillance, and public health control systems<sup>15,16</sup>. Due to the weak governance, low health GDP, inadequate health infrastructure, and lack of epidemiological expertise a sudden increase was observed in the SAARC region (Figure 1)<sup>13-16</sup>. A large number of South Asians live under the poverty line and in very crowded places. Many families are living in small houses where quarantine and isolation protocols are not possible to follow. Moreover, healthcare facilities and sanitation are also limitedly accessed to the South Asians. In such conditions, the spread of the virus is predictable. Furthermore, India was the only South Asian country that stepped forward for vaccine synthesis of COVID-19, and successfully produces her first indigenous COVID-19 vaccines, COVAXIN™ and COVISHEILD (the Oxford-AstraZeneca developed vaccine made in India)<sup>16</sup>. India is not only vaccinating its population, it is also reaching out to the South Asian neighbors, Afghanistan, Bangladesh, Bhutan, Maldives, Nepal, Sri Lanka, and other non-SAARC countries. India had started Vaccine Maitri (or Vaccine Friendship) to provide vaccine to other countries and evoked a positive response globally<sup>16-18</sup>.

The governments of South Asian countries are attempting to fight against the pandemic. On March 15, 2020, the political leadership of SAARC countries put aside the political differences and met over a video conference to coordinate a response to the pandemic through the regional organization<sup>16</sup>. The joint COVID-19 Emergency fund for the SAARC countries was proposed to tackle this pandemic. About US \$21.8 million were collected by the 8 SAARC countries<sup>17</sup>. Moreover, in early April 2020, the World Bank provided approximately \$7.9 billion to the SAARC regions. In South Asia, the International Monetary Fund (IMF) has gone to Pakistan (US \$1.386 billion), Afghanistan (US \$370 million), Bangladesh (US \$732 million), Maldives (US \$28.9 million), and Nepal (US \$214 million) to address the COVID-19 pandemic<sup>19</sup>. Moreover, the US has provided US \$18 million to Afghanistan, US \$9.6 million to Bangladesh, US \$ 9.4 million to Pakistan, US \$5.9 million to India, US \$1.8 million to Nepal, US\$1.3 million to Sri Lanka, and US \$0.5 million to Bhutan<sup>20</sup>. The international funding agencies should take serious notice of this pandemic and its rise in poor countries, like South Asia with 1,947,628,100 inhabitants, and step forward to assist South Asian countries in fighting out COVID-19 as they are contributing to the eradication of other diseases, such as TB, HIV, and malaria. Poor countries should be provided with personal protective equipment (PPE), testing kits, and funds to control the pandemic. As many of the vaccines are now produced against COVID-19, developed countries should help the developing and under-developing countries by providing vaccines at a low price so that the population of such

countries, including SAARC, remains protected against this pandemic. Safeguarding populations of vulnerable countries and enhancing evenhandedness should be the priority of every nation.

## CONCLUSIONS

The number of infection rate is increasing in South Asia after the second and deadly wave of COVID-19. The size of the epidemic is also increasing in the densely-populated SAARC, with the highest number of cases in India. The COVID-19 pandemic has revealed that the SAARC nations have low-level epidemic preparedness and public health infrastructure. Due to poverty, weak public health policies, and insufficient preparedness levels, South Asian countries have a weak system to combat communicable and non-communicable diseases (e.g., COVID-19, diabetes, HIV/AIDS, etc.). Many international funding agencies financially assist the SAARC nations in tackling the pandemic. Vaccines for COVID-19 are developed, furthermore, India was the only SAARC nation that developed its vaccine. Additionally, the developed countries should assist poor countries, like South Asian ones, eradicate the deadliest COVID-19 pandemic.

### CONSENT FOR PUBLICATION:

"Not applicable".

### ETHICS APPROVAL AND CONSENT TO PARTICIPATE:

"Not applicable".

### COMPETING INTERESTS:

The author(s) declare(s) that there is no conflict of interest regarding the publication of this paper.

### FUNDING:

The author(s) declare(s) that there is no funding available for the publication of this paper.

## REFERENCES

1. Lu H, Stratton CW, Tang YW. Outbreak of pneumonia of unknown etiology in Wuhan, China: The mystery and the miracle. *J Med Virol* 2020; 92: 401-402.
2. Zhu N, Zhang D, Wang W, Li X, Yang B, Song J, Zhao X, Huang B, Shi W, Lu R, Niu P, Zhan F, Ma X, Wang D, Xu W, Wu G, Gao GF, Tan W; China Novel Coronavirus Investigating and Research Team. A Novel Coronavirus from Patients with Pneumonia in China, 2019. *N Engl J Med* 2020; 382: 727-733.
3. Eurosurveillance Editorial Team. Note from the editors: World Health Organization declares novel coronavirus (2019-nCoV) sixth public health emergency of international concern. *Euro Surveill* 2020; 25: 200131e.
4. World Health Organization . 2020. Infection Prevention and Control During Health Care When Novel Corona Virus (nCoV) Infection is Suspected. <https://www.who.int/publications/i/item/10665-331495> [Online].
5. WHO Coronavirus Disease (COVID-19) Dashboard. World Health Organization website. <https://covid19.who.int/>. Accessed February 14, 2021.

6. Worldometer coronavirus cases. Reference Source Accessed February 14, 2021.
7. Rolling updates on coronavirus disease (COVID-19). World Health Organization website. <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/events-as-they-happen>. Accessed February 14, 2021.
8. United Nations . United Nations; New York: 2019. World Economic Situation and Prospects 2019.
9. Sarkar A, Liu G, Jin Y, Xie Z, Zheng ZJ. Public health preparedness and responses to the coronavirus disease 2019 (COVID-19) pandemic in South Asia: a situation and policy analysis. *Glob Health J* 2020; 4: 121-132.
10. Chakrabarti P. Curing Cholera: Pathogens, Places and Poverty in South Asia. *Int J South Asian Stud* (New Delhi) 2010; 3: 153-168.
11. Babu GR, Khetrpal S, John DA, Deepa R, Narayan K MV. Pandemic preparedness and response to COVID-19 in South Asian countries. *Int J Infect Dis* 2020; 104: 169-174.
12. The COVID-19 paradox in South Asia. The Hindu website. <https://www.thehindu.com/opinion/lead/the-covid-19-paradox-in-south-asia/article31417806.ece>. Accessed April 25, 2020.
13. Domestic general government health expenditure (% of GDP) - South Asia. World Bank website. <https://data.worldbank.org/indicator/SH.XPD.GHED.GD.ZS?locations=8S>. Accessed February 14, 2021.
14. Out-of-pocket expenditure (% of current health expenditure) - South Asia. World Bank website. <https://data.worldbank.org/indicator/SH.XPD.OOPC.CH.ZS?locations=8S>. Accessed April 24, 2020.
15. Bhutta ZA, Basnyat B, Saha S, Laxminarayan R. Covid-19 risks and response in South Asia. *BMJ* 2020; 368: m1190.
16. Bhuyan A. India begins COVID-19 vaccination amid trial allegations. *Lancet* 2021; 397: 264.
17. Paul, A., Chatterjee, S., & Bairagi, N. J. M. (2020). Prediction on Covid-19 epidemic for different countries: Focusing on South Asia under various precautionary measures.
18. Ramachandran, S. (2020). India's Vaccine Diplomacy: <https://thediplomat.com/2021/01/indias-vaccine-diplomacy-a-potent-card/>
19. South Asia Economic Focus, Spring 2020: The Cursed Blessing of Public Banks. World Bank website. <https://openknowledge.worldbank.org/handle/10986/33478>. Accessed May 1, 2020.
20. The pandemic is ravaging the world's poor, even if they're untouched by the virus. The Washington Post website. <https://www.washingtonpost.com/world/2020/04/15/pandemic-is-ravaging-worlds-poor-even-if-theyre-untouched-by-virus/>. Accessed May 12, 2020.