



Tourism & Monkeypox in South East Asia

Ranjit Sah^{1, 2*}, Aroop Mohanty³, Rama Shankar Rath⁴, Bijaya K Padhi⁵

- ^{1*}Harvard Medical School, Boston, MA 02115, USA.
- ^{2*}Department of Microbiology, Tribhuvan University Teaching Hospital, Institute of Medicine, Kathmandu Nepal.
- ³Department of Clinical Microbiology, All India Institute of Medical Sciences, Gorakhpur, India.
- ⁴Department of Community Medicine and Family Medicine, All India Institute of Medical Sciences, Gorakhpur, India.
- ⁵Department of Community Medicine and School of Public Health, Postgraduate Institute of Medical Education and Research, India.

Correspondence: *Dr. Ranjit Sah MBBS, MD, Infectious Diseases Fellowship, Clinical Research (Harvard Medical School) Email: ranjitsah@iom.edu.np. https://orcid.org/0000-0002-2695-8714

Received: 20 November 2022 Accepted: 13 March 2023 Published: Jun 2023

Copyright Currier et al. This article is distributed under the terms of the Creative Commons Attribution License,

Abstract

The Southeast Asia Region is famous for tourism. Medical Tourism is also increasing day by day due to the low cost of medical procedures and safety comparable to international standards. The COVID-19 pandemic has declined tourism in this region over the past two years including medical tourism and is yet to recover completely. With the appearance of Monkeypox in this region, the tourism sector is likely to be affected adversely.

Introduction

The South East Asia Region (SEAR) consists of 11 countries spread across a wide geographical area with wide variation in wildlife thus attracting tourists across the globe. Tourism is one of the major sources of income for countries in the SEAR region [1]. According to the World Tourism Organization report, a total of 139 million tourists visited the region in 2019 almost double that reported in 2010. The total budget of the tourism industry in the Asia Pacific region was 875 billion US Dollars for the year 2019 [2]. This shows that tourism has a great impact on the economy of the region. Apart from tourism related to travel, the area is also famous for medical tourism. The health indicators & healthcare system in the SEAR region vary widely across the countries [3]. Due to its low cost and reasonable quality of care, the region is also famous for medical tourism. Countries like Thailand, and India are central to the medical tourism industry [4]. Medical tourism in 2019 in Thailand accounted for 595 million US Dollars [5]. In the SEAR region in 2019, the majority of the inbound tourist is received by Thailand, followed by India, Indonesia, and Sri Lanka. The majority of tourists in Thailand are from China, India from Bangladesh, and Indonesia from Malaysia. In Nepal and Sri Lanka, the majority of the tourists are contributed by India. [6] Thus, in SEAR majority of the tourists come from the region outside SEAR. The SEAR countries are prone to natural disasters, health problems related to climate change, and communicable diseases. One of the causes of the rapid spread of the diseases may be the heavy population density.

Impact of the COVID-19 Pandemic on Tourism

In different time frames, the various outbreaks have shown their impact on the tourism sector either locally, regionally, or globally. [7] So is COVID-19. The impact of COVID-19 on tourism was mainly due to government regulation on travel, the closure of the hospitality sector, and economic uncertainty, which lead to poor expenditure on tourism long after a decrease in the number of cases in certain regions. [8] These were mainly driven by the non-availability of pharmacological interventions at the global level. According to the World Tourism Organization (UNWTO) report, countries worldwide have not yet ful-

ly recovered from the impact of COVID-19 [9]. Worldwide tourism has declined by 54% from the pre-pandemic period and the same has been observed in the Asia-Pacific region where this decline is around 90%. For the South-East Asian region, the decline is around 60% and, in the Asia, Pacific region, it is around 93%. [10] The number of cases of the COVID-19 and worldwide cases started declining in late May 2022 hoping the world to recover from the lasting economic crisis due to the pandemic.

Recovering Tourism and Hospitality Sector

International tourists arriving in SEAR in 2022 are less than in 2019 by 77 %, middle east this is less by 17% in Europe it is less by 21%. International tourism has recovered from tourist visits in 2021. [6] With efforts from the government improvement was noted in the tourism sector. In countries like India and Nepal, there were no fiscal, monetary, or other sectors except restarting tourism. There was no active intervention by the Government in these countries. However, countries like Thailand, Sri Lanka, and Indonesia with active intervention from the government in the sectors of monetary, and fiscal policy and by establishing public-private partnerships has lead to improvement in the tourism sector. [6]

Emergence of Monkeypox

During the same time, cases of Monkeypox (mpox) started appearing in the scene. [11] In the month of May 2022, an outbreak of Mpox disease began in the world affecting numerous countries in Europe, North America, and the Middle East mostly linked to travellers to those countries. In Africa, it spread to countries like Cameroon (3 confirmed cases), Ghana (5 confirmed cases and the Central African Republic (8 confirmed cases). Further, the disease also spread to Europe where the United Kingdom, Spain, and Germany were severely affected. As on 9th February 2023, a total of 85777 confirmed cases of Mpox have been reported worldwide of which 97 deaths were reported [12]. Approximately, 30% of cases were reported from the United States. [12] With the ongoing COVID-19 pandemic, India had the unfortunate tag of being the first country in the SEAR to detect the first case of confirmed Mpox disease on 14th July 2022 [13]. A total of 22 cases were reported in India till now. [12] To date four of the SEAR countries have reported almost 40 cases. The highest being from India followed by Thailand (15) Sri Lanka (2) and Indonesia (1). [12]

Factors regulating Impact of Monkeypox outbreak on Tourism in South-East Asia

Very adverse steps like the closure of the hospitality sector will depend on the following parameters of the disease and intervention.

- 1. Transmission dynamics: Unlike COVID-19, Mpox is only transmitted from one person to other with close contact specifically by body fluids. [14] The R0 of the disease is around 0.83- 0.96, which is lower than that of the COVID-19 pandemic. [15, 16] However the future trend of transmission will depend on the change in the virulence over a long-time frame as observed in COVID-19. [17]
- 2. Case Fatality: Till now, none of the countries has reported a high case fatality rate worldwide and in SEAR. Of 111 countries that have reported the cases, only 18 have reported deaths due to Mpox. The Case Fatality Rate (CFR) drops rapidly with an increase in the number of cases. The USA with more than 30000 cases has a CFR of 0.11. Whereas in COVID-19 high burden countries like USA and India have reported CFR of 1.1 and 1.2 respectively, 10 times higher than Mpox. [12, 18]
- 3. Available interventions: The cases of Mpox are found mostly in specific population groups. Thus, behavioral change communication and awareness in the community is the primary mode of intervention. [16] Apart from the presence of effective vaccination will also act as a weapon in fighting against the disease. [19]

Conclusion: Although unlike COVID-19 only approximately 86000 cases have been reported worldwide to date. The future impact of Mpox on tourism will depend on the future course of the outbreak, the virulence of the organism and government policies to tackle the same. However proactive government policies to recover the tourism sector is the need of the hour.

Acknowledgement: None

Author contributions: RS and BKP were responsible for the idea generation and reviewing whereas AM and RSR prepared the manuscript.

Statement of Conflict of Interest: No conflicts of interest

References

- 1. Maneejuk, P.; Yamaka, W.; Srichaikul, W. Tourism Development and Economic Growth in Southeast Asian Countries under the Presence of Structural Break: Panel Kink with GME Estimator. Mathematics 2022, 10, 723. https://doi.org/10.3390/math10050723.
- 2. Travel and Tourism Competitiveness Report 2019 World Economic Forum (weforum.org).
- 3. Chongsuvivatwong V, Phua KH, Yap MT, et al. Health and health-care systems in Southeast Asia: Diversity and transitions. Lancet. 2011; 377(9763):429-437.
- 4. Tatum M. Will medical tourism survive covid-19? BMJ 2020; 370: m2677 doi:10.1136/bmj.m2677
- 5. Karnjanatawe K. Medical tourism report released. Bangkok Post. 2019. https://www.bangkokpost.com/travel/1803964/medical-tourism-report-released (Accessed on February 10, 2023)
- 6. World Tourism Organization, Global and Regional Tourism Performance, Available at: https://www.unwto.org/tourism-data/global-and-regional-tourism-performance (Accessed on February 10, 2023)
- 7. Škare M, Soriano DR, Porada-Rochoń M. Impact of COVID-19 on the travel and tourism industry. Technol Forecast Soc Change. 2021 Feb;163:120469. doi: 10.1016/j.techfore.2020.120469. Epub 2020 Nov 16.
- 8. Rath RS, Lohiya A, Ahamed F, Kathiresan J, Suliankatchi RA. Public health response to COVID-19 in selected countries Hits and misses. J Family Med Prim Care. 2020 Nov 30;9(11):5580-5587. doi: 10.4103/jfmpc.jfmpc_1482_20.
- 9. UNWTO Tourism Recovery Tracker | Tourism Dashboard. Available at: https://www.unwto.org/tourism-da-ta/international-tourism-and-covid-19
- 10. Understanding the impact of Covid-19 on Penang medical tourism. Buletin Mutiara. 2020. https://www.buletinmutiara.com/understanding-the-impact-of-covid-19-on-penang-medical-tourism/
- 11. World Health Organization, Monkeypox United Kingdom of Great Britain and Northern Ireland, Available at: https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON381 (Accessed on February 10, 2023)
- 12. Centre for Disease Control, Monkeypox outbreak Global Map, Available at: https://www.cdc.gov/poxvirus/monkeypox/response/2022/world-map.html, (Accessed on February 10, 2023)
- 13. World Health organization. South-East Asia. India confirms the first case of monkeypox in WHO South-East Asia Region. India confirms first case of monkeypox in WHO South-East Asia Region (Accessed on July 23, 2022).
- 14. World Health Organization, Mpox Available at: https://www.who.int/health-topics/monkeypox/#tab=tab_3, (Accessed on February 11, 2023)
- 15. Alimohamadi Y, Taghdir M, Sepandi M. Estimate of the Basic Reproduction Number for COVID-19: A

- Systematic Review and Meta-analysis. J Prev Med Public Health. 2020 May;53(3):151-157. doi: 10.3961/jp-mph.20.076.
- 16. Burki T. The end of the mpox pandemic? Lancet Infect Dis. 2023 Feb;23(2):159-160. doi: 10.1016/S1473-3099(23)00015-4.
- 17. Nature: The monkeypox virus is mutating. Are scientists worried? Available at: https://www.nature.com/articles/d41586-022-03171-z (Accessed on February 11, 2023)
- 18. Johns Hopkins University & Medicine, Corona Virus Resource Centre, Available at: https://coronavirus.jhu.edu/data/mortality, (Accessed on February 12, 2023)
- 19. Centre for Disease Control and Prevention, Mpox Available at: https://www.cdc.gov/poxvirus/monkeypox/community/congregate.html (Accessed on February 10, 2023)