

1 **DOI: <https://doi.org/10.47391/JPMA.5289>**

2
3 **Climate Change – A monumental risk to Pakistani health.**

4
5 **Moosa Zulfiqar Ali¹, Amna Akmal², Laveeza Fatima³**

6 **1,2** Combined Military Hospital, Lahore Medical College and Institute of Dentistry, Lahore, Pakistan;

7 **3** 2nd Year MBBS Student, Allama Iqbal Medical College, Lahore, Pakistan.

8 **Correspondence:** Moosa Zulfiqar Ali. **Email:** moosa.zulfi1@gmail.com

9
10 Climate change is one of the greatest threats to the world's population. Rising global
11 temperature is a significant aspect of climate change. The evidence is clear: a
12 temperature rise of 1.5°C greater than pre-industrial levels poses a grave threat to human
13 health, which will be incredibly hard to reverse.¹

14 Global warming leads to an increased incidence of heat-related, vector- borne illnesses
15 and vastly increases cardiovascular and respiratory morbidity and mortality, along with
16 adverse effects on mental health.² The World Health Organization (WHO) published a
17 report quantitatively assessing the effects of climate change on specific causes of death.³

18 It conservatively estimated that 250,000 mortalities could occur every year due to
19 climate change attributable heat-related illnesses, diarrheal illnesses, malaria, and
20 dengue. In this publication, WHO stated that climate change induced heat-related deaths
21 in South Asia could amount to 21,648 in 2030 and 62,821 by 2050. WHO also shed
22 light upon climate change induced deaths due to diarrheal illness (base case scenario
23 reported 170,817 deaths in children < 15 years of age in 2030) and the population at risk
24 of contracting the dengue virus in our region. In South Asia, the number of individuals
25 at risk of contracting the dengue virus could increase to 1.67 billion by 2030.

26 Wondmagegn et al. showed that morbidity due to climate change would contribute to
27 more frequent hospital admissions, prolonged hospital stays, and increased healthcare
28 costs.⁴

29 Even though climate change is a grave challenge faced by humankind, it does not affect
30 all populations equally. Unfortunately, Pakistan ranks at 8th position in the top 10
31 countries most vulnerable to climate change; thus, the Pakistani population will be
32 among the few nations to be affected especially hard by this predicament.⁵ This means
33 that morbidity and mortality attributable to climate change as discussed previously is
34 highly relevant to the Pakistani population. Health professionals can play an important
35 role in mitigating the effects of climate change. They must campaign for policy change
36 and train colleagues to inform the general public to put pressure on the government to
37 take significant action in preparing for climate change. Research is required to identify
38 the Pakistani communities and demographics most sensitive to climate change, and to
39 devise solutions at a community level. To summarize, climate change is a significant
40 hazard to the health of the Pakistani population and steps must be taken to prepare our
41 significantly lacking healthcare infrastructure for the upcoming challenge.

42
43 **Acknowledgement:** None to declare.

44 **Disclaimer:** None to declare.

45 **Conflict of interest:** None to declare.

46 **Funding disclosure:** None to declare.

47 48 **References**

49 1. IPCC, 2018: Summary for Policymakers. In: *Global Warming of 1.5°C. An IPCC*
50 *Special Report on the impacts of global warming of 1.5°C above pre-industrial levels*
51 *and related global greenhouse gas emission pathways, in the context of strengthening*
52 *the global response to the threat of climate change, sustainable development, and efforts*
53 *to eradicate poverty* [Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea,
54 P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R.
55 Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, and T.
56 Waterfield (eds.)]. *World Meteorological Organization, Geneva, Switzerland, 32 pp.*
57 <https://www.ipcc.ch/sr15/chapter/spm/>. Accessed September 9, 2021.

- 58 2. A H, K E. The Imperative for Climate Action to Protect Health. *N Engl J Med*.
59 2019;380(3):263-273. doi:10.1056/NEJMRA1807873.
- 60 3. World Health Organization. (2014). Quantitative risk assessment of the effects of
61 climate change on selected causes of death, 2030s and 2050s. World Health
62 Organization. <https://apps.who.int/iris/handle/10665/134014> Accessed September 10,
63 2021.
- 64 4. Wondmagegn BY, Xiang J, Dear K, et al. Increasing impacts of temperature on
65 hospital admissions, length of stay, and related healthcare costs in the context of climate
66 change in Adelaide, South Australia. *Sci Total Environ*. 2021;773:145656.
67 doi:10.1016/J.SCITOTENV.2021.145656.
- 68 5. Global Climate Risk Index 2021 | Germanwatch e.V.
69 <https://germanwatch.org/en/19777>. Accessed September 10, 2021.

70

Provisionally Accepted for Publication