Disaster Medicine and Public Health Preparedness

www.cambridge.org/dmp

Letter to the Editor

Cite this article: Zhang C and Sun B (2025). Addressing the Health Resilience of Underserved Populations in Public Health Emergencies. *Disaster Medicine and Public Health Preparedness*, **19**, e305, 1–2
https://doi.org/10.1017/dmp.2025.10223

Received: 31 March 2025
Revised: 31 March 2025
Accepted: 29 September 2025

Corresponding authors:
Chengmeng Zhang;
Email: chengmzhang@hotmail.com

Addressing the Health Resilience of Underserved Populations in Public Health Emergencies

Chengmeng Zhang PhD[1] and Bohan Sun PhD[2]

[1]Institute of Population Research, Peking University, Beijing, China and [2]College of Marxism, Henan University of Science and Technology, Luoyang, China

Introduction

Underserved populations, including older adults, individuals with disabilities, and those with pre-existing health conditions, face heightened risks during public health emergencies such as the COVID-19 pandemic.[1] These risks result not only from biological vulnerability, but also from factors such as social isolation, economic disadvantage, and limited access to medical and social services. Although public health research often focuses on the direct effects of specific diseases such as COVID-19, tuberculosis, or HIV, it is also important to address the broader and compounded risks affecting these groups. These risks are likely to become more prominent as the frequency and severity of emergencies continue to increase due to factors such as climate change, urbanization, and population ageing.

Discussion

Older adults, for example, may experience both the physiological effects of aging and restricted access to healthcare, mental health support, and social resources during emergencies.[2] These barriers complicate recovery and adaptation in times of crisis. In the context of climate change, heatwaves present an additional threat. Older adults are particularly susceptible to heat-related illnesses due to impaired temperature regulation and underlying medical conditions.[3] Social isolation and pre-existing conditions further increase these risks, making this group more likely to experience severe outcomes.

The compounded risks faced by older adults are often overlooked in disease-specific research, including work focused on HIV or tuberculosis coinfection.[4] A comprehensive response requires public health strategies that consider both physical and social determinants of health. Interventions should improve health monitoring, ensure timely access to medical care, and provide consistent psychological support, especially for individuals living alone or in marginalized settings. Outreach efforts through community organizations and local neighborhood networks may help ensure early identification of unmet needs. Inclusive public health approaches should reflect principles of social equity and responsibility by prioritizing vulnerable populations in resource distribution, including vaccines, medical treatment, and essential information.

Traditional Confucian thought offers meaningful perspectives for building inclusive public health frameworks. Confucian values emphasize respect for older individuals, collective well-being, and care for others within a community.[5] These principles support the moral obligation to create safe and supportive environments that encourage care-seeking without fear of stigma, while respecting individual dignity.

Conclusions

Enhancing the health resilience of underserved populations requires an integrated and inclusive approach to public health preparedness. By strengthening medical and social support systems, tailoring interventions to population-specific needs, and drawing on shared cultural values, public health responses can more effectively protect those most at risk during emergencies. Inclusive policies grounded in ethical and cultural principles are essential for creating equitable and sustainable public health systems. These policies embedded traditional thoughts, benefits for prioritizing the long-term strategies that address structural inequalities, strengthen community engagement, and promote cultural sensitivity in healthcare delivery.

Author contribution. Bohan Sun: Conceptualization, writing—original draft; Chengmeng Zhang: Conceptualization, writing—original draft, formal analysis, writing—review & editing.

Competing interests. None.

References

1. **Jiang X**, **Chen Y**, **Yu Y**, **Zhang S.** The impact of HIV or TB coinfection on COVID-19 progression: insights from a propensity score matching analysis. *Asia Pac J Public Health.* 2025;**37**(1):167–169. doi:10.1177/10105395241298114
2. **Miller EA**, **Simpson E.** Continuing implications of the COVID-19 pandemic for older adults. *J Aging Soc Policy.* Nov 1, 2024;**36**(6):1171–1182. doi:10.1080/08959420.2024.2440824
3. **Zhang C**, **Liu S**, **Chen G.** Environmental and climate impacts on physiological aging: comprehensive pathways to enhanced age-related resilience. *Aging Dis.* 2024:1218–1224. doi:10.14336/ad.2024.0478
4. **Brown MJ**, **Weissman SB**. The impact of COVID-19 on older adults living with HIV: HIV care and psychosocial effects. *J Gerontol Soc Work.* Oct 02, 2020;**63**(6-7):602–606. doi:10.1080/01634372.2020.1799281
5. **Cheung PLA**. Resilience and adaptation to changing family support among older people in urban China. *Soc Indic Res.* Nov 1, 2023;**170**(2):465–483. doi:10.1007/s11205-023-03208-4

https://doi.org/10.1017/dmp.2025.10223 Published online by Cambridge University Press