

**From pollution to misuse: understanding RTIs in Pakistan**Nafia Hijab<sup>1</sup>, Muhammad Rafay Khan<sup>2</sup>, Khushboo Nusrat<sup>3</sup>

Dear Editor, Respiratory infections, including the common cold, pharyngitis, sinusitis, and pneumonia, are especially prevalent among immunocompromised populations. From 1990 to 2019, Pakistan experienced the fastest increase in respiratory infections among Asian countries, surpassing India, Bangladesh, and China.<sup>1</sup>

Several factors contribute to this surge. Pakistan ranks second globally for poor air quality, which is significantly linked to respiratory tract infections.<sup>2</sup> Rapid urbanisation and the use of biomass fuel in slums and rural areas have led to substandard living conditions, increasing the incidence of respiratory infections.<sup>3</sup> Misuse of antibiotics has also resulted in antibiotic-resistant organisms, raising morbidity and healthcare costs.<sup>4</sup>

Strategies to combat respiratory infections amid air pollution include encouraging public transportation, wearing masks, improving ventilation, limiting outdoor activities on high-pollution days, and implementing green infrastructure and urban planning. Additionally, improving ventilation and reducing biomass fuel use in slum areas is essential.<sup>2,3</sup>

.....  
<sup>1,2</sup>15th Year MBBS Student, Karachi Medical and Dental College, Karachi, Pakistan.  
<sup>2</sup>Department of Internal Medicine, Dow Medical College, Karachi, Pakistan.  
<sup>3</sup>Department of Internal Medicine, Catholic Health System, Sisters of Charity Hospital, Buffalo (New York), USA.

**Correspondence:** Nafia Hijab. **Email:** nafia.hijab.315@gmail.com

**ORCID ID:** 0009-0006-7144-7362

**Submission complete:** 05-08-2024 **First Revision received:** 13-01-2025

**Acceptance:** 18-01-2025

**Last Revision received:** 17-01-2025

Antimicrobial resistance, worsened by overprescribing antibiotics, is a major global issue. Interventions should enforce policies against over-the-counter sales, implement stewardship programmes, involve clinicians in audits, use rapid point-of-care tests, promote delayed prescribing, improve patient communication, and conduct primary care studies on outcomes.<sup>4</sup>

**DOI:** <https://doi.org/10.47391/JPMA.21580>

**Disclaimer:** None.

**Conflict of Interest:** None.

**Source of Funding:** None.

**References**

1. Liu Q, Qin C, Du M, Wang Y, Yan W, Liu M, et al. Incidence and Mortality Trends of Upper Respiratory Infections in China and Other Asian Countries from 1990 to 2019. *Viruses* 2022;14:2550. doi: 10.3390/v14112550.
2. Carlsten C, Salvi S, Wong GWK, Chung KF. Personal strategies to minimise effects of air pollution on respiratory health: advice for providers, patients and the public. *Eur Respir J* 2020;55:1902056. doi: 10.1183/13993003.02056-2019.
3. Checkley W, Pollard SL, Siddharthan T, Babu GR, Thakur M, Miele CH, et al. Managing threats to respiratory health in urban slums. *Lancet Respir Med* 2016;4:852-4. doi: 10.1016/S2213-2600(16)30245-4.
4. Godman B, Haque M, McKimm J, Abu Bakar M, Sneddon J, Wale J, et al. Ongoing strategies to improve the management of upper respiratory tract infections and reduce inappropriate antibiotic use particularly among lower and middle-income countries: findings and implications for the future. *Curr Med Res Opin* 2020;36:301-27. doi: 10.1080/03007995.2019.1700947.

**AUTHORS' CONTRIBUTIONS:**

**NH:** Concept, design, data acquisition, analysis, interpretation, drafting, revision and agreement to be accountable for all aspects of the work.

**MRK & KN:** Final approval and agreement to be accountable for all aspects of the work.