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CORRESPONDENCE

Impact of Afghan refugees on the infectious disease profile of Pakistan: beyond economy

Pakistan, in the last three decades, has provided shelter to millions of war-affected Afghan refugees, with the majority being clustered in the north of the country. In 1990, the official figure of registered Afghan refugees in Pakistan was 3.27 million.¹ The impact of this colossal human movement on the economy of Pakistan and consequently the country's health system has been well elaborated. However, it is imperative to recognize that this massive movement of refugees across the Pakistani border has exerted detrimental effects on the health profile of the country by means of direct disease transfer as well.

Advanced analyses have indicated that the influx of Afghans into Pakistan has resulted in a substantial alteration of the local disease profile of malaria. The endemicity of the disease shifted over from southern and eastern parts of the country to the north and west. The more virulent *Plasmodium falciparum* has become endemic, and there have been repeated concerns about the alarming surge in chloroquine resistance.^{2,3} Similarly, Ibrahim and Laaser reported an emerging epidemic of multidrug-resistant tuberculosis (MDR-TB) among recently migrated Afghan refugees back in 2002.⁴ Since then, two studies indicating a dramatic rise in the incidence of MDR-TB in Pakistan have been published.⁵ Moreover, the Afghan refugee influx in the north of Pakistan is widely deemed responsible for a failure of eradication of poliomyelitis from Pakistan. Measures to eradicate poliomyelitis from Pakistan were rendered futile when millions of unvaccinated Afghan children migrated to Pakistan in October 2001. Presently, the prevailing political instability at the Pakistan–Afghanistan border remains the biggest challenge in ensuring a complete eradication of poliomyelitis from the country.^{6,7}

Also noteworthy remains the fact that Afghanistan historically has remained home to numerous highly morbid infectious diseases, which are much less common in the rest of the world. These include West Nile meningitis, Q fever, anthrax, sandfly viral fevers, chikungunya, and echinococcal infections.⁸ The Public Health Agency of Canada has recently issued an alert to all hospitals about the potential importa-

tion of MDR-*Acinetobacter baumannii* through the military personnel returning from Afghanistan.⁹ Considering the virtually non-existent vaccination strategies and a lack of proper surveillance at the portals of entry spanning across the Pakistan–Afghanistan border, it is highly likely that these unusual diseases may have inadvertently wafted into Pakistan. A dearth of reliable prevalence data from either country, coupled with a lack of knowledge of the average physician regarding these infections, creates a situation where a frail Pakistani health system is further taxed.

With the restoration of peace in Afghanistan and the subsequent return of the refugees, Pakistan will undoubtedly be relieved of a major economic burden. However, the impact of the direct transfer of disease on the country's health profile will not fade away for many years to come—a fact we hereby attempt to bring to the attention of international relief agencies.

Conflict of interest: No conflict of interest to declare.

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