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BMJ Global Health

Thinking fast and slow: the urgency of crisis response must not lead us to overlook chronic needs such as tuberculosis

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The number of people facing displacement due to humanitarian crises worldwide is increasing rapidly and is likely to continue. An average 10% year-on-year increase in the last 5 years resulted in 68.3 million internally displaced people (IDP) alone in 2024.[1] While trends in conflicts and natural disasters are hard to predict, climate-related crises including droughts, flooding and food insecurity have worsened significantly.[2] Coupled with stagnating investment in humanitarian relief and development funding, this burgeoning displacement has resulted in significantly reduced funding to provide relief per capita.[3 4]

The humanitarian response in crises is generally (and appropriately) targeted at acute issues such as water and sanitation, food security, adequate shelter and infectious disease outbreaks. However, with the progressive weakening of the health system during an ongoing crisis, the majority of acute crises evolve into long-term, complex crises where populations remain internally displaced for many years.[4] Protracted crises and long-term displacement result in widespread exposure to infection, for example, due to overcrowding, and to risk factors increasing vulnerability to disease, such as undernutrition, as well as permanently reduced access to diagnosis, treatment and care. As a result, both funding and healthcare delivery programmes are needed to address critical, although more chronic, public health issues, such as tuberculosis (TB), HIV, HPV, diabetes mellitus and other non-communicable diseases in the humanitarian response.[5]

TB is an exemplar of a chronic infectious disease. Timescales can appear slow, with infection, disease, diagnosis and treatment often taking place over the order of years.[6]

SUMMARY BOX

⇒ Displaced people are a critical, and growing, population at an increased risk of tuberculosis. However, the global burden of tuberculosis resulting from displacement is unknown.
⇒ Here, we provide initial estimates of the burden of tuberculosis in internally displaced people.
⇒ This emphasises the size of the issue and the urgent need for improved estimates, funding and provision of tuberculosis care for this vulnerable population.

However, the consequences can be severe. With 40% of people with untreated TB dying as a result, TB remains the leading infectious disease killer globally.[6] The WHO guidelines published in 2022 outline a comprehensive approach to TB prevention and care among populations in humanitarian settings.[7] However, even brief disruptions to TB treatment (which is typically at least 6 months) can result in significantly poorer outcomes, including an increased likelihood of treatment failure and even death. Despite this, crisis-affected populations have historically received little attention from the broader TB community, despite the fact that several high TB burden countries are severely affected, garnering only a passing mention in routine TB reports.[8] Meanwhile, the consequences of disruptions to TB services, as were seen during the COVID-19 pandemic, can be extremely severe and long-lasting.[8]

Many high TB burden countries, such as Pakistan and Nigeria, also host the most IDP.[7] Conditions for displaced people all conspire to increase risks associated with chronic infectious diseases such as TB. Overcrowding and underdiagnosis increase the risk of pathogen transmission, food insecurity and other stressors increase the risk of progression to

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Table 1 Estimate of the potential global burden of tuberculosis among internally displaced people

Scenario	TB incidence	TB deaths	% of global TB incidence	% of global TB deaths	% of IDP deaths
Baseline, 2022	87 700 (77 400 to 98000)	14 100 (12 200 to 16000)	0.80 (0.70 to 0.90)	1.1 (0.90 to 1.3)	1.0 (0.90 to 1.1)
2 x incidence, 2022	1 75 000 (1 55 000 to 1 96 000)	28 200 (24 500 to 32000)	1.7 (1.4 to 1.9)	2.2 (1.9 to 2.6)	2.0 (1.7 to 2.2)
2 x incidence, 2 x OR death, 2022	1 75 000 (1 55 000 to 1 96 000)	49 600 (42 100 to 57100)	1.7 (1.4 to 1.9)	3.9 (3.2 to 4.6)	3.5 (3.0 to 4.0)
2 x incidence, 2 x OR death, 2035	2 80 000 (1 93 000 to 3 66 000)	79 100 (53 500 to 1 05 000)	2.8 (1.9 to 3.6)	11.0 (7.1 to 14.0)	1.4 (1.2 to 1.6)

Based on merging United Nations High Commissioner for Refugees data on Internally Displaced People for 2022 (excluding Gaza)[1] with the WHO tuberculosis estimates across 177 countries[8]; deaths in Internally Displaced People estimated using United Nations World Population Prospects[14] crude death rates with factor of 2.5 applied.[15] Projections model linear growth in Internally Displaced People based on data from 2018 giving predicted increase of 1.2 (95% prediction interval 1.0–1.4) for 2025 compared with 2022; projections in global population and per capita tuberculosis incidence use a log-linear model, which predicted factor changes of 1.0 (0.95–1.18) in 2025 relative to 2022. We assume no change in case fatality rate of tuberculosis over time in this population. The decline in the percentage of IDP deaths over time is due to global declining per capita TB.
Data and analysis code available on GitHub at https://github.com/petedodd/IDPTB.
IDP, internally displaced people; TB, tuberculosis.

disease, reduced access to and provision of healthcare reduce the likelihood of diagnosis and treatment and an excess of comorbidities and risk factors, as well as disrupted access to treatment and support, increase the risk of poor treatment outcomes.[7] Importantly, disrupted access to healthcare also increases the risk of acquisition of antimicrobial resistance (AMR) through treatment interruptions, which is compounded by limited drug-susceptibility testing with associated delays in the initiation of appropriate treatment, leading to increased person-to-person transmission of drug-resistant strains. TB-related drug resistance is a critical priority in the wider AMR agenda. While these risks are individually well-documented, data remain weak on the collective differential health and economic TB outcomes displaced people face as a direct result of these health and socioeconomic inequities.

Considering population size alone, globally at least 87 700 IDPs are likely to develop TB disease annually, with 14 100 dying as a result. However, limited data suggest that these individuals may face at least double the incidence rate of the general population,[9 10] suggesting as many as 175 000 people with incident TB. Furthermore, these individuals may also face increased risk of death,[11] suggesting as many as 49 600 deaths in IDP are attributable to TB annually—nearly 4% of all TB deaths and 3.5% of all deaths in IDP (see table 1). In some countries, such as Syria, Somalia, Ukraine, Yemen and South Sudan, 10–30% of all incident TB is expected to be in IDP. Meanwhile, the Democratic Republic of the Congo, Somalia, Afghanistan, Nigeria and Myanmar each likely experienced 1000–2500 TB deaths in IDP in 2022 alone. These estimates exclude refugees and non-displaced people affected by crises, who experience similar or even higher levels of risk.[12]

There is a pressing duty to address the unmet chronic health needs of displaced people, which requires estimation of burden and assessment of current provision to effectively intervene. Funding for the prevention and treatment of TB in crises comes in part from humanitarian donors, who need to move away from short-term funding cycles to address the likely high burden of chronic diseases. A lack of sustainable funding makes the investment required to address conditions with delayed consequences unattractive. However, funding also comes from the Global Fund to Fight AIDS, Tuberculosis and Malaria, who have an existing strategy for crisis-affected countries but where more engagement is required.[13] This is particularly the case given the increased risks of TB disease and death faced by displaced people, meaning interventions are more likely to be cost-effective. Ultimately, providing care for chronic conditions such as TB in displaced people will require more flexibility in healthcare models, including space for social protection, food security and safety, and this is rapidly becoming a necessity. The need is there, and only likely to increase.

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Contributors PJD, PYK and CFM conceived the study. PJD, PYK, CFM, KvZ and FC designed the analysis. PJD did the analysis. PJD, PYK, CFM, KvZ, FC, UK and MH interpreted the findings. All authors contributed to the drafting of the manuscript. PJD and CFM are responsible for the overall content as guarantors.

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