

## **COVID-19 and TB control in immigrant communities**

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**Running Title:** COVID-19 and TB control

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Dear Editor,

For immigrant communities in the United States, community spread of COVID-19 into the existing mix of poor healthcare access, higher poverty rates, and political disenfranchisement creates a perfect storm. This threatens an epidemiological disaster about which there appears to have been little to no discussion by policymakers.

Early reports suggest that TB and latent TB infection (LTBI) are associated with increased risk for novel coronavirus infection and development and greater acuity of COVID-19 disease.<sup>1,2</sup> One study of a cohort of 49 TB patients diagnosed with COVID-19 (across eight countries) reports a high percentage (18.3%) who were diagnosed with both TB and COVID-19 within the same week, with a case fatality rate of 12.3%.<sup>3</sup> A separate study suggests a 11.6% case fatality rate among patients diagnosed with both TB and COVID-19.<sup>4</sup> These compare to a current case-fatality rate of 5.6% in the United States (according to the Johns Hopkins Coronavirus Resource Center,

Baltimore, MD, USA). Given the common ground both pathogens and their illnesses share, this is unsurprising. Both TB and COVID-19 transmission thrive with crowding, close contact with actively ill individuals, aerosol transmission, and have many other socioeconomic, epidemiologic, and other risks in common.<sup>5,6</sup> Severe and life-threatening pulmonary health risks during acute illness are also a hallmark of the two conditions.<sup>5,6</sup> While our understanding of how TB and LTBI interact with COVID-19 remains incomplete, some things seem clear. Chief among these is the likelihood that prevalent TB infection and current or historic TB disease prevalence are both important population-level indicators for novel coronavirus infection, transmission, and associated morbidities and their acuity. Furthermore, in the United States, foreign-born persons—especially those immigrating from TB-endemic regions—are known to be at disproportionate risk for both TB infection and TB disease.<sup>7</sup>

Policy risks threaten to compound the biological and epidemiologic risks for TB and COVID-19. Although this will initially be felt most heavily among immigrants and other vulnerable populations, it will quickly and ultimately impact the entire US population. Barriers to rapid and complete diagnosis and management of either TB or COVID-19 threaten the control of both, and expose broader populations to unchecked spread. Unfortunately, lack of affordable healthcare stands as one such barrier to the very large population of undocumented or legal but recently arrived immigrants residing in the United States. Under the 1996 Personal Responsibility and Work Opportunities Act (PRWOA), all undocumented immigrants, and nearly all recently authorized immigrants, are ineligible for federally funded healthcare programs such as Medicare and Medicaid, and few states fund Medicaid benefits for these immigrants.<sup>8</sup> Similar exclusions prohibit health insurance purchases through the Affordable Care Act's exchanges by undocumented immigrants, and other factors leave them less likely to receive employer-sponsored insurance.<sup>8</sup> Consequently, the majority (59%) of undocumented immigrants lack health insurance.<sup>9</sup> Compounding this, one in five undocumented immigrants live below the federal poverty line and many work in industries (such as construction and services) that face substantial contraction during the COVID-19 pandemic.<sup>9,10</sup> Many immigrants may also curtail their healthcare use in light of the federal "public charge" rule, in which US visa applicants may be held responsible if they receive public benefits. These significant legal and economic challenges may have the same chilling effect on both testing and care-seeking by immigrants if they develop symptoms for COVID-19 as is seen for TB and other health issues. Widespread mask use in public could mitigate some of these

issues, and this has been a critical and very effective component of the public health response to COVID-19 in many countries, including China.<sup>11</sup> Mask use will also have clear benefits in mitigating TB spread outside of the household. However, mask use has not been fully embraced as a policy by many state and federal policymakers.

The ongoing global economic impact of COVID-19 will have far-reaching effects on infectious disease suppression and treatment. Recent estimates predict that the US gross domestic product (GDP) will contract by over 30% in the second quarter of 2020, severely impacting US trading partners.<sup>12</sup> Furthermore, COVID-19 infections are increasing in Mexico, Brazil, and elsewhere, which are likely to lead to widespread “stay at home” orders and much slower economic activity. The United States is implementing multi-trillion dollar monetary and fiscal interventions to mitigate the economic damage from COVID-19. However, low- to middle-income economies are much more constrained in the monetary and fiscal measures that can be implemented.

Personal remittances from immigrants to families in their countries of origin are a critical social safety net for low-income communities. Unfortunately, the economic and health hardships experienced by US immigrants will likely have an important negative spillover for these communities. Personal remittances by immigrants to their countries of origin account for a significant proportion of those countries’ GDP. Among the nine largest immigrant countries of origin in the United States, personal remittances account for an average of 7.3% of their GDP, including 9.8% for the Philippines, 13% for Guatemala, and 20.8% for El Salvador (see Figure).<sup>13</sup> During the 2007–2009 Recession, US GDP fell by only 4%, but immigrants’ remittances to Mexico decreased by 18%.<sup>13</sup> A large proportion of immigrants are employed in the construction and service industries in the United States, which are acutely impacted by “stay at home” orders and economic contraction, and we therefore expect remittances to decrease substantially.<sup>10</sup> The above global macroeconomic implications of COVID-19 may threaten continued funding of TB control programs in those countries that are especially vulnerable to spread of TB.

As global economies contract and COVID-19 infection rates increase, it is likely that limited public health resources in low-income countries will shift away from surveillance and mitigation of long-standing infectious disease threats to COVID-19, thus increasing the risk of resurgence in TB and other diseases.<sup>14</sup> In 2018, approximately 1.5 million people died from TB, and some of the major sources of immigrants to the United States originated in countries with the highest incidence of TB.<sup>3</sup> For example, India, China, and the Philippines account for 27%, 9%,

and 6%, respectively, of global TB cases.<sup>5</sup> In China's struggle with the COVID-19 epidemic, resources for testing and treatment of TB were re-allocated to COVID-19 patients.<sup>15</sup>

The consequences of poor health—and especially communicable disease—are not limited to immigrant and other vulnerable populations but have important economic and health impacts that ripple across society to every strata. While this has always been true, the current pandemic brings this truth into sharp focus. Harm reduction in the pandemic era requires US health policymakers to broaden access to Medicaid and the health insurance exchanges to all residents, regardless of status or origin. The alternative is to risk increasingly severe societal impacts. In addition, global efforts to suppress and mitigate COVID-19 should not be made at the expense of efforts to contain long-standing and dangerous infectious diseases such as TB, which may more than offset any population health benefits from containing COVID-19.

*Conflicts of interest:* none declared.

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**Figure.** Personal remittances from US residents as a proportion of GDP for selected nations, October 2019.<sup>13</sup> GDP = gross domestic product.

