Together We Can
Take on Typhoid

Typhoid + Urbanization

Key Messages

- **To accommodate rapid urbanization, municipal and health officials must plan ahead,** recognizing trends and ensuring proper investment in infrastructure, municipal services, and health systems.
- **Systematic and infrastructure changes often take substantial time and investments, which will likely be outpaced by the current rate of urbanization.** To keep urban populations typhoid-free, municipal and health officials need to ensure that preventive measures—including typhoid conjugates vaccines (TCVs) and hygiene behavior change—are priorities and that policies, and budgets reflect these changes.

The world continues to experience significant trends of rural to urban migration driven by economic opportunities and social changes.

Urban areas are most commonly characterized by high population density and diversity. Urban areas often serve as hubs of culture and business, driving development, innovation, and social change. However, informal urban settlements can also be marked by social stratification, poverty, and environmental degradation—all characteristics that have important public health implications.

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Photo: PATH/Ruhani Kaur

Typhoid

Typhoid is a serious and potentially life-threatening enteric fever spread through contaminated food and water.

While largely eliminated in industrialized countries, it remains a substantial public health issue that disproportionately affects children and adolescents in low- and middle-income countries. The Global Burden of Disease study estimates that in 2023 there were **more than 6 million cases and more than 71,000 deaths due to typhoid worldwide**. However, the burden is likely underestimated due to difficulties with surveillance and diagnostics.

Research shows that the burden of typhoid goes beyond physical illness and mortality. Even with prompt treatment with antibiotics, **typhoid infections can force children to miss school for weeks**, impacting attendance and performance. **A child's illness has catastrophic economic impacts on the family** due to medical and transport expenses, and time lost from work to care for a sick child.

Improved water quality, sanitation, and hygiene are the major ways to break the typhoid transmission cycle in the long term. However, until these investments can be made in all countries, vaccination with TCV is an important and effective way to prevent typhoid.

Expanded use of TCVs through routine immunization will allow children to remain healthy, stay in school, and for families to continue to work and prosper, preventing the socioeconomic burden from typhoid. It also has the potential to reduce the need for antibiotics and slow further emergence of drug-resistant typhoid.

Urbanization

More than half of the world's population now lives in urban areas, which by 2050 is projected to increase to nearly 70%.[1]

Inequalities expose the urban poor to a host of environmental and health hazards.

Much of this urbanization is expected to be highest in Africa and Asia[2]—bringing massive social, economic, and environmental changes to these regions. Historically, urban areas have been focal points for opportunity and prosperity. Urban areas offer unique opportunities for residents to increase income, mobilize for political action, and benefit from increased access to education, health, and social services—major driving influences for rural-urban migration.

Despite the many opportunities that urban life can offer, rapid and unplanned urbanization also presents many challenges, especially in low- and middle-income countries where the rate of urbanization is projected to be fastest. **Many municipal and national governments are ill-equipped to build the essential infrastructure and provide the necessary basic services to keep up with the pace of urbanization.** As such, urban residents in rapidly growing informal settlements increasingly grapple with extreme poverty, exclusion, and marginalization. These inequalities expose the urban poor to a host of environmental and health hazards, including substandard housing and crowded living conditions; problems with food and water safety; inadequate sanitation and water disposal services; and difficulties affording and using health services. **As the urban poor population grows, public health solutions have an increasingly important role in improving urban health**.

1. United Nations Population Division. World Urbanization Prospects 2018. https://esa.un.org/unpd/wup/Publications/Files/WUP2018-KeyFacts.pdf
2. World Health Organization. Hidden cities: Unmasking and overcoming health inequalities in urban settings. 2010.https://apps.who.int/iris/bitstream/handle/10665/44439/9789241548038_eng.pdf?sequence=1&isAllowed=y

Typhoid + Urbanization

The greatest share of health problems in rapidly urbanizing areas can be attributed to the poor living and working conditions that one in three urban residents encounter in slums and informal settlements.

Within these settings, water and sanitation infrastructure is either poorly designed or completely absent. Substandard housing—ranging from high-rise tenements to shacks to plastic sheet tents on sidewalks—tend to be unregulated, overcrowded, and located in areas that are vulnerable to extreme weather events, such as flooding. **Further, while urban areas tend to have higher concentrations of health care workers and facilities than rural areas, these resources are often inaccessible to the urban poor, either because of geography and/or affordability.**

Infectious diseases, including typhoid, often thrive in these types of environments. **Almost half of urban residents in Africa and Asia suffer from at least one disease caused by a lack of clean water and sanitation.** The deaths of children in urban areas are often directly related to contaminated water and poor sanitation.[2] Climate change is likely to exacerbate these scenarios. Severe storms and flooding often destroy homes and health care facilities, disrupt municipal services, contaminate water supplies, and drive further rural-urban migration. Rising temperatures and droughts endanger the quality and availability of safe water. In the face of rapid urbanization and climate change, the prevalence of typhoid in urban settings is likely to increase. **Preventive interventions—including vaccines and access to clean water, sanitation, and proper handwashing—can greatly reduce disease transmission and allow families to live healthier, more productive lives**

In sub-Saharan Africa, the urban poor spend at least one third of their incomes on treatment of waterborne diseases, including typhoid.

Photo: PATH/Ruhani Kaur

Take Action Now!

- **Update infrastructure and health policies to ensure that access to safe water and improved sanitation**, including sewage systems, is prioritized and funded between the ministries of health, water, and infrastructure.
- **Conduct educational campaigns for urban residents** to increase knowledge and understanding of hygiene behaviors, including handwashing.
- **Consider introducing preventive interventions such as new TCVs,** and potentially target at-risk urban areas when planning campaigns, to keep populations healthy and protected against typhoid.

Additional Resources

- **Take on Typhoid website**
- **United Nations Habitat website**
- **World Health Organization urbanization and health resources**

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Visit www.takeontyphoid.org for the complete series, which includes information about:

- Climate Change
- Drug Resistance
- Forced Migration
- Universal health coverage (UHC) and the Sustainable Development Goals (SDGs)
- Urbanization
- Water, Sanitation, and Hygiene

February 2026

TyVAC Typhoid Vaccine Acceleration Consortium
CENTER FOR VACCINE DEVELOPMENT • OXFORD VACCINE GROUP • PATH

COALITION AGAINST TYPHOID
a program of the Sabin Vaccine Institute