# ACCELERATING AND LOCALIZING EFFORTS TO END TB

TUBERCULOSIS REPORT TO CONGRESS





U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT REPORT TO CONGRESS ON FISCALYEAR (FY) 2024 TUBERCULOSIS PRÓGRAMMING WITH FY 2023 **FUNDS** 

### **ACCELERATING AND LOCALIZING EFFORTS** TO END TB

Though briefly eclipsed by COVID-19, tuberculosis (TB) is once again the world's leading infectious disease killer. Despite it being preventable, treatable, and curable, this ancient disease continues to take more lives each year than HIV and malaria combined.

In 2023, 10.8 million people contracted TB, including almost 1.3 million children under the age of 15. Of these, 1.25 million people lost their lives from it, with 166,000 being children.<sup>2</sup> TB mortality decreased by nine percent compared to the 2019 baseline—representing the second year in a row that mortality decreased below pre-pandemic levels.3

Of the 10.8 million people who contracted TB in 2023, almost 8.2 million were initiated on treatment. An estimated 400,000 people developed drug-resistant TB (DR-TB), with 175,923 of those diagnosed and started on treatment. Drug-resistant forms of TB—to include multidrug-resistant TB (MDR-TB) and extensively drug-resistant TB (XDR-TB)—are one of the top ten causes of all antimicrobial resistance (AMR) deaths<sup>4</sup> and remain a global public health challenge in that these variants are more difficult and expensive to diagnose and treat. In 2024, the World Health Organization (WHO) highlighted the threat of DR-TB by adding the drug-resistant strain of Mycobacterium tuberculosis to the critical category on its Bacterial Priority Pathogens List.<sup>5</sup>

Fortunately, newer, shorter, and better-tolerated treatment regimens are curing more individuals with DR-TB. In 2023, the global DR-TB treatment success rate (TSR) was 68 percent—a five percent increase from 2022—with an even higher TSR for individuals on all-oral shorter regimens. The global TSR for XDR-TB was 61 percent, a two percent increase from the previous year.<sup>6</sup> The global TSR for drugsensitive TB (DS-TB)<sup>7</sup> remains high at 88 percent.

Despite the growing availability of WHO-recommended rapid molecular tests (the gold standard for initial TB diagnosis), many individuals with TB are not diagnosed using such tests. In 2023, only 48 percent of individuals with TB were tested with rapid molecular tests, a similar rate to 2022.8

TB persists, predominantly in low- and middle-income countries, due to socioeconomic determinants including poor living conditions, lack of access to TB services, financial constraints, stigma and discrimination, and the slow development of new diagnostics, drugs, and vaccines. TB disproportionately affects populations impacted by poverty and drives individuals, families, and communities into further financial hardship. Further, many people with TB also suffer from comorbidities and risk factors, making it more difficult to treat and cure them. These include diabetes, malnutrition, HIV infection, tobacco smoking, and alcohol-use disorders.9

The Stop TB Partnership Global Plan to End TB 2022-2030 estimates that without additional financial commitment and political action by high TB burden country governments, TB will kill 6.6 million additional people by the end of 2030, create lifelong disabilities for millions more, and cost the global economy billions of dollars. In addition, the Global Plan to EndTB estimates \$250 billion is needed to directly address the issue and end TB by 2030—with an impressive return on investment of \$40 per one dollar invested.10

### UNITED NATIONS HIGH-LEVEL MEETING ON TB

In 2023, there was renewed global momentum in the fight to end TB with the second-ever United Nations High-Level Meeting (UNHLM) on TB. Participants in the UNHLM set new ambitious targets for 2027, including reaching 90 percent of people with TB prevention and care services. If countries follow through on their commitments, it will put the world on track to achieve the Sustainable Development Goal of ending TB by 2030 by providing life-saving TB treatment for 45 million people with the disease (including 4.5 million children and 1.5 million people with DR-TB), and TB preventive treatment (TPT) for 45 million eligible individuals between 2023 and 2027.

10 Global Plan to End TB 2023-2030

I Global Tuberculosis Report 2024, World Health Organization.

<sup>3</sup> Global Tuberculosis Report 2024, World Health Organization. Data based on TB deaths in individuals without HIV.

<sup>4</sup> Global burden of bacterial antimicrobial resistance 1990–2021: a systematic analysis with forecasts to 2050. Lancet 2024; 404: 1199–226; https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(24)01867-1/

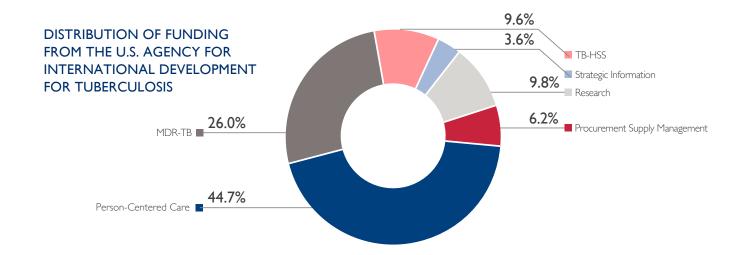
<sup>5</sup> WHO Bacterial Priority Pathogens List, 2024: bacterial pathogens of public health importance to guide research, development, and strategies to prevent and control antimicrobial resistance; https://www.who.int publications/i/item/9789240093461 6 Global Tuberculosis Report 2024, World Health Organizatio

<sup>7 &</sup>lt;u>Drug-sensitive TB is TB that is susceptible to all first-line TB drugs.</u>

<sup>8</sup> Global Tuberculosis Report 2024, World Health Organizatio

### **USAID'S** GLOBALTB PROGRAM

With continued support from Congress, USAID leads the U.S. government's (USG) global TB efforts. Guided by <u>USAID's Global TB Strategy</u>, <u>2023-2030</u>, USAID provides bilateral assistance in 24 countries<sup>12</sup> with high burdens of TB, in cooperation with their Ministries of Health. In addition, by leveraging the USG's contribution to the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund), USAID provides targeted technical assistance and supports TB grant implementation for an additional 32 countries. USAID also supports the WHO, the Stop TB Partnership, local and civil society partners, and others to achieve the Global Plan to End TB 2023-2030, End TB Strategy, and the United Nations High-Level Meeting (UNHLM) on TB targets. 13



In FY 2023, Congress appropriated \$394.5 million in resources for TB activities through USAID's Global Health Programs (GHP) account. 14 This includes programming through bilateral assistance to high-burden countries, regional platforms, and global mechanisms. 15

Globally, USAID convenes and participates in all the major coordination and technical groups organized by the key stakeholders to ensure efforts are maximized and to avoid duplication. In each country, USAID closely coordinates with a wide range of multi-sectoral TB stakeholders including Ministries of Health, the Global Fund Secretariat

and its grantees, other USG departments and agencies, the WHO, the Stop TB Partnership, civil society, local non-government organizations, faith-based organizations, affected communities, and the private sector—to support strengthening local TB networks to achieve each country's National TB Strategic Plan (NSP), with the ultimate goal of TB elimination, USAID also works with these stakeholders to enhance investment in the development and rollout of new tools and to strengthen primary healthcare (PHC) systems to improve access to TB services.

### **USAID'S GLOBAL TB STRATEGY, 2023-2030**



USAID's Global TB Strategy, 2023-2030—which aligns with the UNHLM global targets—focuses on reaching every person with the disease, curing those in need of treatment, and preventing the spread of new infections and the progression to active TB disease. This is done by evaluating new approaches, scaling up innovations, and fostering local ownership to sustain TB programs that also contribute to pandemic preparedness. In USAID's 24 TB priority countries, the strategy aims to reduce TB incidence by 35 percent and TB mortality by 52 percent by 2030 with the following results framework:



of individuals with TB diagnosed and initiated on treatment



of individuals with DR-TB diagnosed and initiated on

treatment



of individuals with DS-TB and DR-TB

successfully treated



**30M** 

eligible individuals provided with TB preventive treatment (TPT)



USAID's Global TB Strategy 2023-2030

<sup>&</sup>lt;sup>2</sup> USAID's 24 priority countries for TB programming are: Afghanistan, Bangladesh, Burma, Cambodia, Democratic Republic of Congo, Ethiopia, India, Indonesia, Kenya, Kyrgyz Republic, Malawi, Mozambique, Nigeria, Pakistan, Philippines, South Africa, Tajikistan, Tanzania, Uganda, Ukraine, Uzbekistan, Vietnam, Zambia, and Zimbabwe.

https://www.who.int/news/item/22-09-2023-world-leaders-commit-to-new-targets-to-end-tb #; w:text=The % 20 targets % 20 include % 20 reaching % 20 90, implements the start of the star

<sup>&</sup>lt;sup>14</sup> The global funding distribution chart was produced using the Agency's internal tracking tool for the TB GHP funding account.

This chart represents the distribution of USAID's Program funding according to the Agency's internal definitions, which includes two TB cross-cutting areas: training and support costs. Training is not pulled out specifically and is approximately ten percent across all categories. "Support costs" are defined as system costs to support TB diagnosis and care, including the categories of Health-Systems Strengthening (HSS) and Strategic Information (SI). TB/HIV activities are funded by PEPFAR.

### **OUR APPROACH:**

### GLOBAL ACCELERATOR TO END TB

The Global Accelerator to End TB is USAID's approach to increase commitment and leverage collaboration from governments, civil society, and the private sector, using localization best practices, to achieve the global targets. Launched in 2018, the Accelerator aims to drive countries' progress by strengthening partnerships with Ministries of Health to develop joint partnership statements and annual roadmaps; improve the sustainability of technical support through embedded advisors to build National TB Programs' (NTP) technical expertise; increase locally generated solutions by partnering directly with local organizations; and advance innovation and leverage resources through targeted interventions.



Global Accelerator to End TB Plus: https://www.usaid.gov/global-health/health-areas/tuberculosis/global-accelerator-end-tb-plus

At the 2023 UNHLM, USAID extended this approach with the Global Accelerator to End TB Plus, 16 which aims to drive progress in reaching the new global targets through interventions including:



### **SUPPORT WIDE-SCALE INTERVENTIONS TO FIND TB (SWIF-TB)**

A program to provide two USAID TB priority countries with additional funding to leverage additional domestic resources and roll out new innovations to combat TB. In March 2024. **USAID** announced SWIF-TB partnerships with the Philippines and Ethiopia, securing \$18 million in external funding for the first year from both countries' governments and private sector contributions from author and TB advocate John Green toward SWIF-TB efforts.<sup>17</sup>



### **INCREASED SUPPORT TO TB PROGRAMS** IN CONFLICT SETTINGS

-especially among the most at-risk populationswith \$8.5 million in additional funding for Ukraine, Afghanistan, and Burma.



### LOCALIZATION COMMITMENT

USAID committed to allocating 60 percent of TB country funding directly to local partners by the end of the UNHLM period (December 2027).





#### **BREACH-TB**

The design of a new foundational research clinical trial to evaluate the efficacy of bedaquiline for rifampicin-resistant TB (RR-TB) and DS-TB prevention.



#### **TPT PROGRAM**

To kickstart progress toward the prevention targets, USAID worked to secure a 30 percent price reduction for 3HP, a shortened TB prevention regimen, facilitating the procurement of \$15 million in treatments. As part of this, USAID donated treatments to I.3 million people in II TB priority countries.18



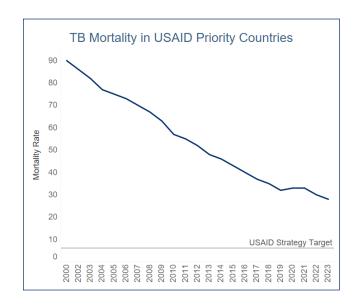
### PREVENTION TECHNOLOGY **TRANSFER**

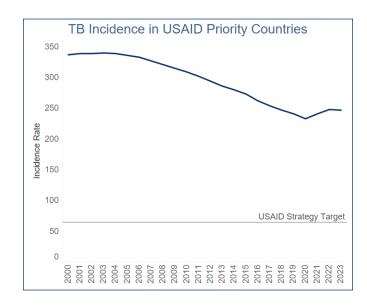
USAID initiated a technology transfer with a local company in South Africa to produce a more efficient and less expensive active pharmaceutical ingredient (API) in rifapentine, a key TB prevention drug. As the first API produced with continuous manufacturing processes in South Africa, the groundbreaking undertaking will expedite preventive treatment access across the continent.

USAID Announcement of SWIF-TB. Partnerships; https://www.usaid.gov/news-information/press-releases/mar-14-2024-usaid-secures-18-million-new-funding-accelerate-efforts-end-tuberculosis. Bangladesh, the Democratic Republic of Congo, Ethiopia, Indonesia, the Kyrgyz Republic, Nigeria, the Philippines, Tajikistan, Uganda, Ukraine, and Zimbabwe.

### A FOCUS ON RESULTS

In 2023, TB mortality in USAID's 24 TB priority countries decreased by eight percent, compared to the 2019 baseline, before the COVID-19 pandemic. Conversely, the estimated TB incidence increased by eight percent from the 2019 baseline, which is indicative of the residual impact of continuing to identify more people with TB missed during the COVID-19 pandemic. However, the rate of this increase has been slowing over the last three years. USAID developed TB recovery plans in countries with TB programs most impacted by COVID-19; these plans have now concluded.<sup>19</sup>

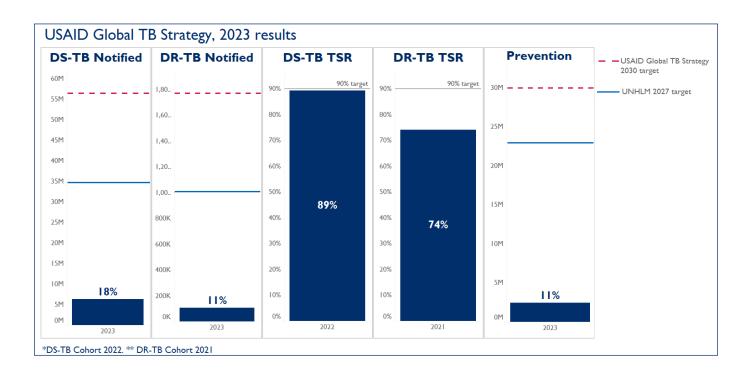




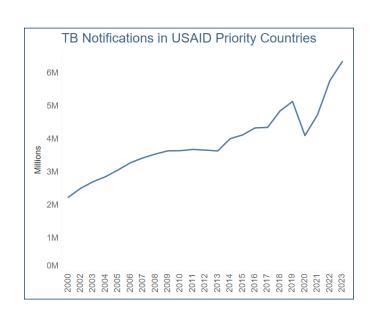
For USAID-supported countries, 2023 represents the first year of implementing and reporting on the USAID Global TB Strategy, 2023-2030 results framework and the UNHLM 2027 targets, which are aligned. While the TSRs for both DS-TB and DR-TB remain high, progress on reaching the DR-TB case notification and prevention targets requires accelerated efforts. As indicated in the USAID Priority Country Statistics 2019-2023 table (see page 11), the number of individuals with DR-TB who were diagnosed and started on treatment declined slightly in 2023 due to results reported by a few countries. USAID is working with these countries to address factors related to delays in DR-TB treatment initiation.

19 USAID TB recovery plans

### USAID TB COUNTRIES' PROGRESS TOWARD THE USAID GLOBAL TB STRATEGY 2030 AND UNHLM 2027 TARGETS



Importantly, TB case notifications in USAID's TB priority countries increased in 2023 by 10 percent compared to 2022 (5,773,695 versus 6,354,096)—a 24 percent increase in comparison to 2019 pre-COVID-19 levels.





### **USAID PRIORITY** COUNTRY STATISTICS: 2019-2023

	2019	2020	2021	2022 <sup>20</sup>	2023
REACH	4.8 million TB case notifications	3.8 million TB case notifications	4.4 million TB case notifications	5.8 million TB case notifications	6.4 million TB case notifications
	71% of individuals with TB diagnosed and initiated on treatment	56% of individuals with TB diagnosed and started on treatment	61% of individuals with TB diagnosed and initiated on treatment	72% of individuals with TB diagnosed and initiated on treatment	77% of individuals with TB diagnosed and started on treatment
	109,000 individuals with DR-TB started on treatment	82,000 individuals with DR-TB started on treatment	94,000 individuals with DR-TB started on treatment	115,000 individuals with DR-TB started on treatment	I13,000 individuals with DR-TB started on treatment
	35% of individuals with DR-TB diagnosed and initiated on treatment	31% of individuals with DR-TB diagnosed and initiated on treatment	35% of individuals with DR-TB diagnosed and initiated on treatment	40% of individuals with DR-TB diagnosed and initiated on treatment	41% of individuals with DR-TB diagnosed and initiated on treatment
CURE	88% DS-TB treatment success rate	89% DS-TB treatment success rate	89% DS-TB treatment success rate	90% DS-TB treatment success rate	89% DS-TB treatment success rate
	55% DR-TB treatment success rate	59% DR-TB treatment success rate	61% DR-TB treatment success rate	68% DR-TB treatment success rate	74% DR-TB treatment success rate
PREVENT	365,000 eligible individuals provided with TPT	347,000 eligible individuals provided with TPT	565,000 eligible individuals provided with TPT	I.7 million eligible individuals provided with TPT <sup>21</sup>	2.4 million eligible <sup>22</sup> individuals provided with TPT <sup>18</sup>
SUSTAIN	57,000 health workers trained	33,180 health workers trained <sup>23</sup>	163,538 health workers trained <sup>24</sup>	360,488 health workers trained <sup>25</sup>	252,964 health workers trained

### STRATEGY IMPLEMENTATION

To implement USAID's Global TB Strategy and achieve the global TB targets, USAID works with partners in the Agency's 24 TB priority countries on activities categorized under the strategic objectives of Reach, Cure, Prevent, Innovate, and Sustain. Illustrative examples from USAID priority countries are highlighted for each objective.



# > REACH: MAXIMIZE THE DETECTION OF ALL FORMS OF TB IN ALL INDIVIDUALS OF ALL AGES

### PORTABLE X-RAYS INCREASE TB DETECTION IN REMOTE AREAS OF BANGLADESH

When 70-year old Mohammad fell sick, making it to a hospital seemed like an insurmountable challenge. Fortunately, a village health worker told him about a community clinic near his home in Natore, Bangladesh, that offered free TB screening as part of a portable X-ray campaign. Mohammed attended a testing day at this clinic and was diagnosed with TB in February 2023, enabling him to be linked to primary health care and treatment services.

Through the introduction of new tools, USAID has increased TB screening and detection for individuals like Mohammed by providing Bangladesh's NTP with 14 ultraportable digital X-ray systems with CAD4TB software. This software, which utilizes artificial intelligence (AI), paired with ultraportable X-ray systems can identify individuals who may have otherwise remained undiagnosed—particularly in remote areas with limited access to healthcare professionals and appropriate diagnostic equipment.

USAID has supported the rollout of these portable X-ray systems in 13 districts in Bangladesh, where TB screening campaigns occur at assigned locations on a monthly schedule. Village health workers ensure that at-risk groups—including indigenous populations, household contacts of individuals with TB, and other hard-to-reach communities—are referred to the campaign sites for testing.

In 2023, this program conducted 53,519 X-rays yielding 2,652 individuals with TB-enabling them to access care and treatment and reducing community transmission. Efforts like this have contributed to a 16 percent increase in Bangladesh's case notifications from 2022 to 2023. USAID is also helping to develop approaches to apply this technology to diagnose other comorbidities.



<sup>&</sup>lt;sup>20</sup> 2022 data include the addition of Pakistan as USAID's 24th TB priority country. Data for previous years were based on 23 priority countries.

Household and close contacts of bacteriologically confirmed pulmonary TB.

Figures represent annual TPT initiations (not cumulative).

Based on provisional data from USAID Missions. Existing health workforce shortages and capacity issues were exacerbated by the COVID-19 pandemic. Prior constraints included the limited number of qualified healthcare workers at the primary healthcare level with often large workloads. During the pandemic, under-resourced TB personnel were repurposed and deployed in response to COVID-19, due to having applicable skills and

Data as reported to USAID. Three countries (Burma, Indonesia, Uzbekistan) reported less than 12 months, so the number for the year was projected (for those three countries).

<sup>25</sup> Data as reported to USAID by Implementing Partners. Four countries (Bangladesh, DRC, India and Pakistan) reported less than 12 months, so the number for the year 2022 was projected for those four countrie

## CURE: EMPOWER ALL INDIVIDUALS DIAGNOSED WITH TB TO COMPLETE TREATMENT AND BE CURED.

### IMPLEMENTING NEW DR-TB TREATMENT REGIMENS IN INDONESIA

Individuals with DR-TB often endure lengthy and taxing treatment regimens requiring the daily consumption of a substantial number of pills for nine to 24 months. In 2022, the WHO recommended the BPaLM (Bedaquiline, Pretomanid, Linezolid, and Moxifloxacin) and BPaL alloral treatment regimens as the initial choice for individuals diagnosed with MDR-TB and RR-TB. In addition to resulting in better treatment outcomes, these regimens have significantly reduced the pill burden, allowing individuals to take between two and six pills a day over a six to nine month period and boosting individuals' motivation to complete their DR-TB treatment.

In Indonesia, USAID supported the NTP in implementing these new regimens by developing technical guidelines and facilitating a national laboratory staff training on drugsusceptibility testing on Pretomanid—a critical step in determining if TB bacteria is susceptible or resistant to the drug. USAID also supported the drug quantification

and procurement process for the new regimen. Further, USAID's local partner started training healthcare workers on effectively implementing the new regimens and monitoring side effects at USAID-supported hospitals.

In 2023, the BPaLM/BPaL regimens were introduced at healthcare facilities in four provinces with the highest TB burdens in Indonesia, and a total of 236 people received BPaLM/BPaL treatment. With USAID support, the Ministry of Health is committed to expanding the implementation of this regimen to all 38 provinces in Indonesia by the end of 2024.

Efforts like this have contributed to improvements in DR-TB TSRs in USAID TB priority countries. In 2023, the DR-TB TSR was 74 percent (an eight percent increase from 2022 and 19 percent increase from 2019), and in USAID-supported countries, the TSR for individuals on the all-oral shorter regimens was even higher at 81 percent.<sup>26</sup>



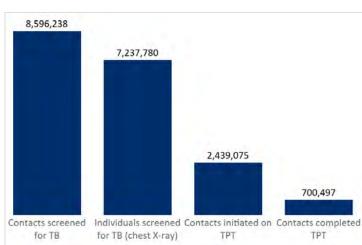
<sup>26</sup> USAID TB country data

# > PREVENT: STOP THE SPREAD OF NEW INFECTIONS AND PROGRESSION FROM INFECTION TO ACTIVE TB DISEASE

While most funding goes toward diagnosis and treatment, prevention remains a key element of USAID's Global TB Strategy, 2023-2030 and the WHO End TB Strategy; the TB epidemic cannot be halted and reversed without a significant scale-up of prevention efforts. In USAID-supported countries in 2023, almost 8.5 million TB contacts were screened. Of these, more than 7.2 million were screened using X-rays, and 2.4 million individuals were provided with TPT-up from 1.7 million in 2022. Due to the reporting period timeline and in-country data systems, only 637,492 people were recorded as completing preventive treatment.<sup>27</sup> Additionally, USAID supported efforts to ensure that all children under the age of five who are contacts of an individual with TB have access to TPT to minimize the risk of developing TB in their lifetimes.

As an airborne disease, TB Infection Prevention and Control (IPC) measures are also key in reducing TB transmission. USAID collaborates with NTPs and partners to ensure that IPC is integrated into routine care, including contact investigations. For example, individuals with TB and their household members are counseled on how to prevent spreading the disease within their families—especially to children.

HOUSEHOLD AND CLOSE CONTACTS OF INDIVIDUALS SCREENED AND TREATED FOR TB INFECTION IN **USAID'S 24 PRIORITY** COUNTRIES, 2023<sup>28</sup>



### PREVENTING TB TRANSMISSION IN TAJIKISTAN'S PRISONS

Globally, individuals in prison face a high risk of TB infection, with rates about ten times higher than in the general population. It is estimated that only 53 percent of TB cases among incarcerated individuals are detected, indicating a substantial number of correctional facility residents (and staff) with undiagnosed or unreported TB.<sup>29</sup> To address this in Tajikistan, which has one of the world's highest rates of MDR-TB and XDR-TB, USAID works with Tajikistan's NTP and healthcare workers from the prison system to expand access

to TB testing, treatment, and prevention services.

From January 2023 to June 2023, this program diagnosed 165 individuals in the prison system with TB. All newly diagnosed individuals are then started on treatment, receive psychosocial support for treatment adherence, and are separated to prevent further transmission.

Two months into his incarceration, Hatali, who was serving an eight-month sentence in Yovon prison, experienced coughing,

ethodology and will work to institutionalize it in the future.

<sup>28</sup> Global Tuberculosis Report 2024, World Health Organization and data from USAID's 24 priority countries. This data only refers to those individuals screened for TB using chest x-ray. This represents a subset of individuals screened that had screening data available and is likely an underestimation of the true number screened using all screening methods
<sup>29</sup> Global Tuberculosis Report 2023, World Health Organization

night sweats, and rapid weight loss—common TB symptoms. With USAID support, he was diagnosed with TB and was enrolled in a treatment program that also educates incarcerated individuals about TB symptoms, modes of transmission, preventive measures, curability, and the importance of staying on treatment. The program continued with Hatali after his release, addressing social and psychological issues, ensuring he finished his treatment until he was cured, and preventing further spread of the disease in the community. Committed to honoring his second chance, Hatali completed his treatment successfully.



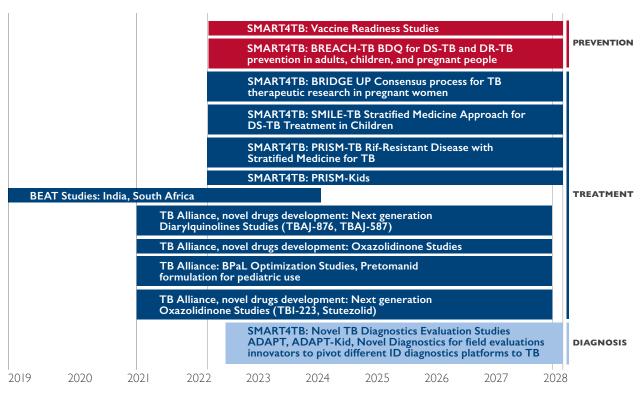
# >INNOVATE: RESEARCH, DEVELOP, INTRODUCE, AND SCALE-UP NEW TOOLS AND APPROACHES TO COMBAT TB

#### USAID'S FOCUS ON RESEARCH

One of the main barriers to ending TB is the lack of adequate tools. USAID's research efforts aim to develop the best new tools and approaches to rapidly advance TB detection and effectively cure and prevent TB. To help find individuals with TB, these efforts include advancing and selecting novel diagnostics for field evaluation and determining the feasibility and performance of non-sputum-based point-of-care TB tests in adults and children. For treatment, USAID continues to support studies evaluating novel all-oral shorter TB treatment regimens that include more tolerable new compounds, as well as studies to evaluate the efficacy and safety of various short-course combinations of new DR-TB medicines—such as bedaquiline (BDQ), delamanid, pretomanid, and linezolid. USAID also engages in country-specific operational research to get a better understanding of other factors that are associated with poor TB outcomes such as long-term TB-related disabilities. For children specifically, USAID supports research to identify and address barriers to country adoption of the WHO-recommended shorter four-month treatment for children. USAID is expanding its future research efforts to include populations typically underrepresented, such as children and pregnant people.

While other donors and agencies are leading in TB vaccine development, USAID collaborates with NTPs, local research organizations, other health programs, and communities on vaccine readiness to understand the determinants that may influence widespread adoption, scale-up, and sustainment of a new TB vaccine into health systems in high TB burden settings, as well as the factors that may increase acceptability, access, and uptake in vulnerable populations.

### LIST AND TIMELINE OF CURRENT USAID-SUPPORTED TB RESEARCH30



### TRANSFORMING PEDIATRIC TB DIAGNOSIS IN ZAMBIA

Until recently, TB testing in children under five involved invasive and painful procedures, like gastric aspiration, that could only be performed in hospitals with a trained provider. To improve pediatric TB diagnosis, USAID has supported the introduction and expansion of stool-based TB diagnosis on the GeneXpert platform, which requires far less training and avoids difficult diagnostic methods.

In Zambia, USAID utilized a multipronged approach to support the rollout of stool-based testing. In collaboration with local health authorities, the USAID advisor embedded in the country's NTP led efforts to pilot the approach in

30 USAID project work plans and programming database

Lusaka including training for laboratory staff and pediatricians at the provincial level. In addition, USAID provided ongoing supervision and mentorship to laboratory technicians and clinicians to ensure the service was scaled up to the rest of the country, especially since staff turnover is often a challenge.

As a result of stool-based testing now being available throughout the country's health system, pediatric case notifications have quadrupled—going from 1,517 case notifications in 2018 to 6,213 in 2023.

# > SUSTAIN: BUILD COUNTRY-OWNED TB SYSTEMS, LED BY LOCAL PARTNERS, THAT ACCELERATE PROGRESS AND SUPPORT PANDEMIC PREPAREDNESS

USAID works with countries to not only address urgent TB service delivery gaps, but also to strengthen the overall healthcare system—particularly primary health care (PHC). These efforts range from strengthening health worker capacity, partnering with local organizations and communities, and enhancing PHC diagnostic, treatment, and prevention services; to addressing TB's catastrophic costs, and improving the quality and affordability of drugs and commodities. The following are a few illustrative examples of activities implemented during this reporting period.

### INCREASING LOCAL PARTNER LEADERSHIP

Local partners are a key component of the sustainability of USAID's TB efforts and play a vital role in increasing access to TB-related health services, strengthening TB service delivery platforms, and preventing TB. Since the launch of the Accelerator in 2018, USAID has made 51 direct awards to 41 local organizations in 24 countries, including faith-based groups and new partners. More than 46 percent of USAID's TB country funding goes directly to local partners, a four percent increase from last year and a ten-fold increase since 2018. This represents steady progress in reaching USAID's goal of allocating 60 percent of TB country funding to local partners by the end of 2027. Through the Agency's collaborations with local partners, civil society, and communities, USAID invests in TB programs that address barriers to care. One of these programs is the Stop TB Partnership's Challenge Facility for Civil Society, which provides grants to civil society grassroots organizations to empower TB-affected communities, address stigma and gender barriers, support community-led monitoring, train community health workers to address workforce shortages, and strengthen the capacity of smaller local partners, among other initiatives. In 2023, these grants supported 114 local organizations ranging from those working at the national level to grassroots organizations working only at the village level.

## STRENGTHENING TB SERVICES AND COMMUNITY-BASED PRIMARY HEALTH CARE IN UGANDA

In response to a 2020 drop in TB case detection due to COVID-19, USAID supported Uganda's NTP in implementing a national Community-based, Active case finding, Screening, Testing and prevention campaign (CAST-TB), which enabled the country to recover from the pandemic's impact on TB services.

To further build on this success, in September 2023, USAID partnered with the Ministry of Health on a CAST-Plus campaign. This innovative strategy involved integrating essential services such as HIV, malaria, nutrition, water and sanitation, and maternal and child health into the existing CAST-TB model delivered by village health teams and PHC providers—optimizing collaboration and leveraging existing resources to lead to better health outcomes.

In just over one week, the campaign reached I14,378 households and identified and treated 339 individuals with TB (including eight individuals with DR-TB) in addition to diagnosing and treating II cases of leprosy, 74 newly HIV-positive individuals, 7,379 individuals with malaria, and 523 cases of undernutrition in children under five.

CAST-Plus demonstrated the potential success of using TB interventions as a platform for integrating health services, and strengthening community-based PHC and the country's Community Health Extension Worker program, and improving coordination and efficiency across health programs. The Ministry of Health plans to sustain and expand this model by integrating other healthcare services and leveraging support from additional donors.



### IMPROVING THE QUALITY AND AFFORDABILITY OF COMMODITIES

USAID has worked for years to build a quality-assured, affordable market to expand access to lifesaving TB drugs and commodities. USAID also ensures drug quality through continued support to manufacturers to achieve WHO Pre-Qualification as well as build regional and local manufacturing capacity.

In 2023, in addition to the 3HP drug price reduction, USAID worked to obtain a 20 percent price reduction on GeneXpert diagnostic test cartridges—expanding access to millions more high-quality TB tests in low- and middle-income countries.

Further, USAID partnered with the Stop TB Partnership's Global Drug Facility to announce a historic 55 percent price reduction for DR-TB drug bedaquiline (BDQ). This reduction enabled low- and middle-income countries to procure more than 51,000 additional BDQ treatments in just a one-year period, providing thousands more people with access to DR-TB treatment and improving treatment outcomes.

### **LOOKING FORWARD**

While steady progress continued in 2023—with the rollout and scale-up of new tools and innovations to combat TB—greater efforts are needed to achieve the 2027 UNHLM TB targets and achieve the Sustainable Development Goal of ending TB by 2030. USAID will continue to increase focused interventions that will make the largest impact, in line with the objectives of the Agency's Global TB Strategy, 2023-2030. However, countries and stakeholders must increase investments in research, the rapid introduction of existing and new tools, and strengthening diagnostic and treatment services within PHC, while bolstering local TB networks. Investments in TB technologies not only improve access to TB services for all, but are necessary to strengthen primary healthcare systems and prepare for future airborne pandemic threats.

USAID will continue to encourage high TB burden country governments to increase financing for and commitment to scientifically driven tools and approaches to, together, end TB and build healthier communities.



# **≱**F 57085 66Y (1958.MAR.09) This image is created using an external image processing unit. Cannot make a diagnosis on the basis of only this image. 21 | ACCELERATING AND LOCALIZING EFFORTS TO END TB

### **APPENDIX**

This appendix provides a snapshot into achievements during Fiscal Year (FY) 2023 in each of the 24 countries in which the U.S. Agency for International Development (USAID) provides bilateral assistance to end tuberculosis (TB).

#### **NOTES:**

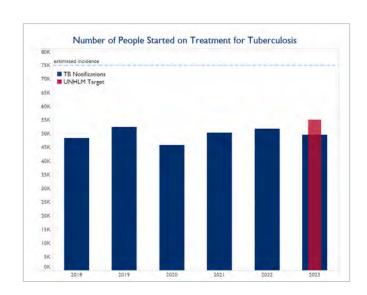
- The charts use 2023 data for the estimated burden.
- Notification data is used as a proxy for diagnosis and started on treatment, unless noted otherwise.
- The Stop TB Partnership calculated new country-level targets following the 2023 TB UNHLM. Targets were set for the commitment to enroll an additional 45 million people on TB treatment by 2027, including 4.5 million children and 1.5 million people with DR-TB, and for the commitment to provide 45 million people with TB preventative treatment, including 30 million household contacts of people with TB and I5 million people living with HIV (PLHIV).
- Targets were calculated based on a dynamic transmission model, using the WHO incidence estimates up to 2022, country TB notifications up to 2022, rapid scale-up of TB diagnosis, treatment and prevention. USAID has aligned annual targets from 2023-2027 with those from Stop TB Partnership (the full USAID Global TB Strategy spans the years 2023-2030).
- For the purpose of this appendix, "drug-resistant TB" (DR-TB) means a strain of the disease resistant to at least isoniazid and rifampicin.
- The target for preventive treatment for TB includes two categories in alignment with USAID's TB strategy: under-five child household contacts of bacteriologically confirmed TB cases and adolescent and adult household contacts more than five years of age. This is in alignment with the goals set at the UNHLM.
- Missing data on the number of TB cases attributable to certain risk factors are noted directly on the country graphs.
- The childhood TB data from previous years has been inconsistent due to a mixture of programmatic challenges with diagnosing and treating the disease in children, as well as data-reporting problems. Furthermore, Cambodia's National TB Program 2021 Report has retrospectively significantly updated the number of children started on treatment for TB in 2019, and it has been updated in their respective graph.
- For the Burden and Number of Individuals Started on Treatment by Age and Sex (2023) graph, Uganda did not report disaggregated data to WHO on the number of individuals started on treatment for 65 plus age group in 2022, and Mozambique reports data to WHO for different age groups (0-4, 5-14, and 15 plus).
- For Pakistan, historic data are shown across the different TB indicators. For consistency, Pakistan's 2021 data were not included in the aggregate total USAID 2021 TB data (except for aggregate funding data). USAID added Pakistan as a priority country and 2022 was the first year the data was available to be included in the aggregate data set.
- The charts present the distribution of USAID's program funding according to the Agency's internal budgeting and finance system, which includes two TB cross-cutting areas: training and support costs. Training is not pulled out specifically and is approximately ten percent across all categories. "Support costs" are defined as system costs to support TB diagnosis and care, including the categories of Health-Systems Strengthening (HSS) and Strategic Information (SI). TB/HIV activities are funded by PEPFAR.
- The countries' results are reported against the new <u>USAID Global TB Strategy</u>, 2023-2030 targets: 90 percent of individuals with TB and DR-TB diagnosed and intiated on treatment; 90 percent of individuals with drug-sensitive and drug-resistant TB successfully treated; and 30 million eligible individuals provided with TB preventive treatment.<sup>1</sup>
- TB preventive treatment (TPT) results only include household and other close contacts to people with TB as of 2023 (excluding PLHIV). This is in alignment with the new <u>USAID Global TB Strategy</u>, <u>2023-2030</u>. Some country graphs will show an artificial drop in TPT results because of this change.
- USAID Global TB Strategy, 2023-2030 results graphs included in this appendix represent the data results for the first year of the strategy targets (2023). Going forward, these graphs will be added to with time series graphs to track cumulative progress over time.
- WHO has revised previous global and country specific incidence and mortality estimates time series to address updates to India and other country specific modeling exercises, as well as updated the methods to account for the negative effect of COVID-19 disruptions. Estimates used in this report, including calculations, reflect the applicable updated time series.
- Implementing partners collect key case finding and treatment enrollment indicators by age group, and in many countries, case finding and treatment enrollment indicators by age group, and in many countries, case finding data is disaggregated by 0-4, 5-14 year olds to analyze trends in notification among the younger children in places where USAID is supporting rollout of innovative approaches that will benefit younger children the most.

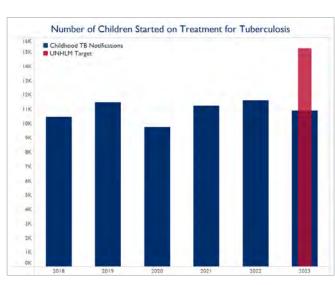
DATA SOURCES: USAID sourced the data for all of the following pages from USAID internal systems, WHO, and the countries' TB programs.

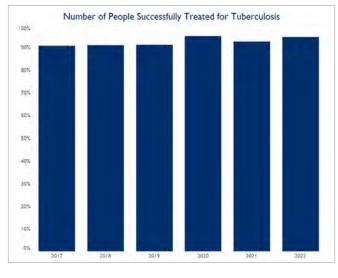
Eligible individuals defined as household contacts and close contacts of bacteriologically confirmed pulmonary TB

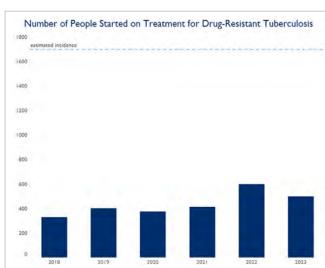
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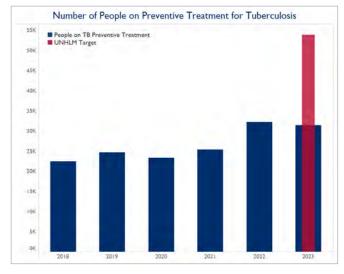
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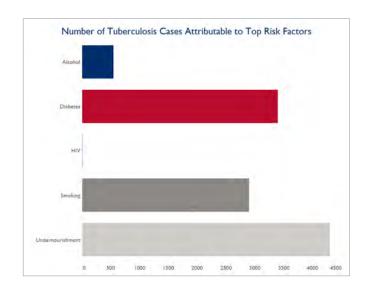


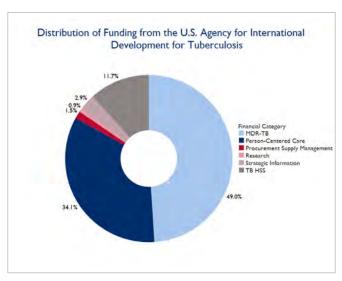


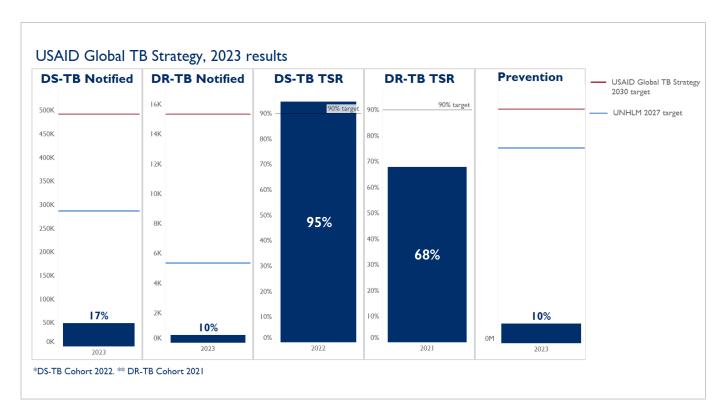




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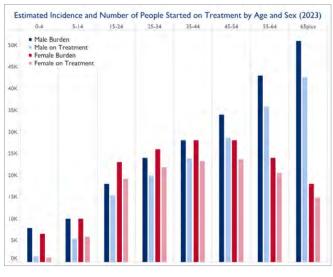


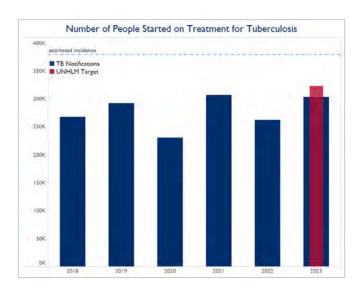


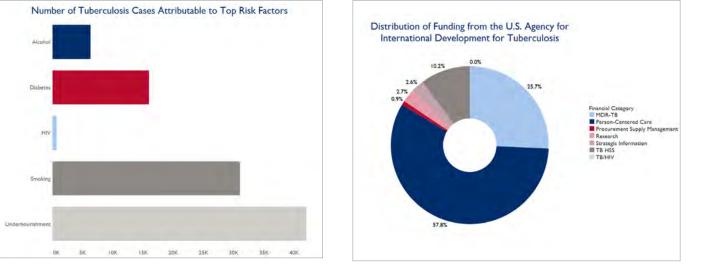


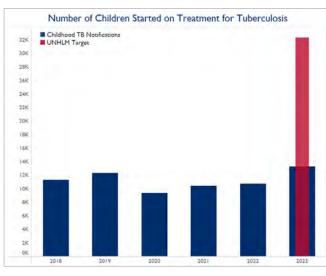
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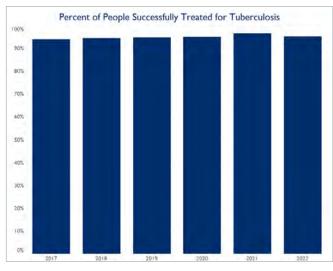
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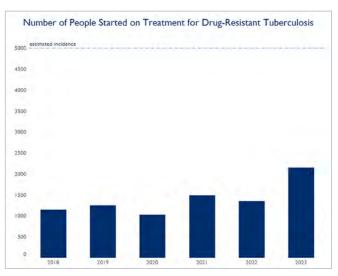


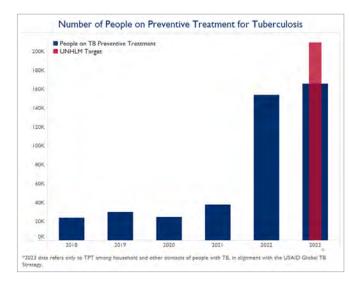


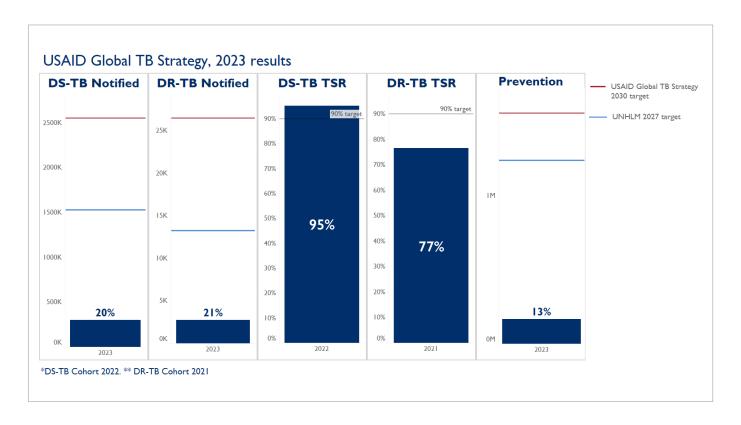






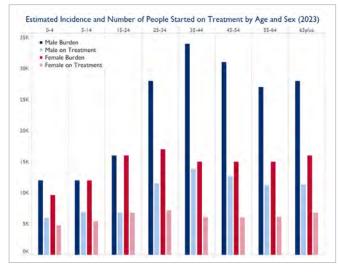


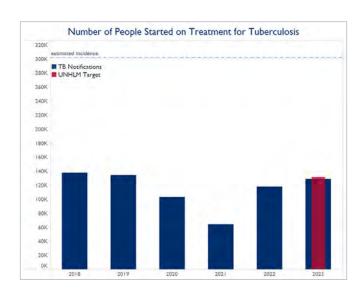


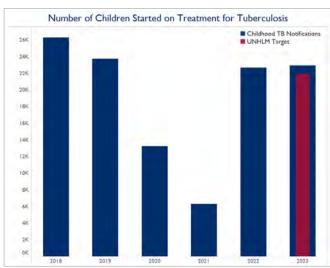


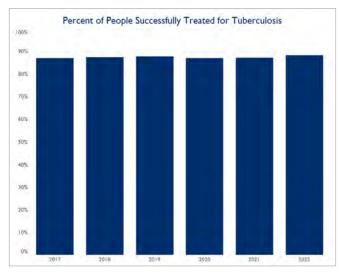
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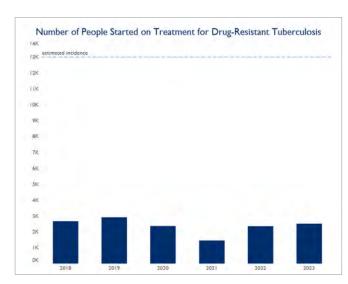
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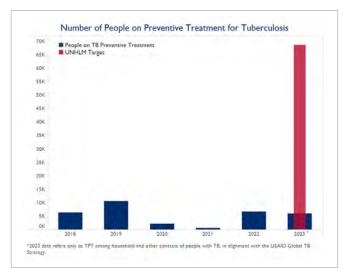


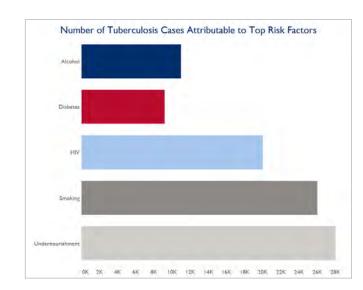


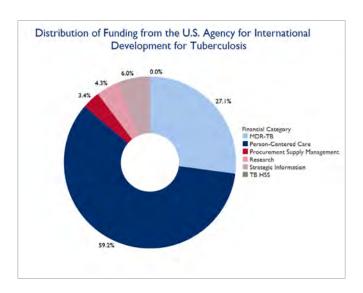


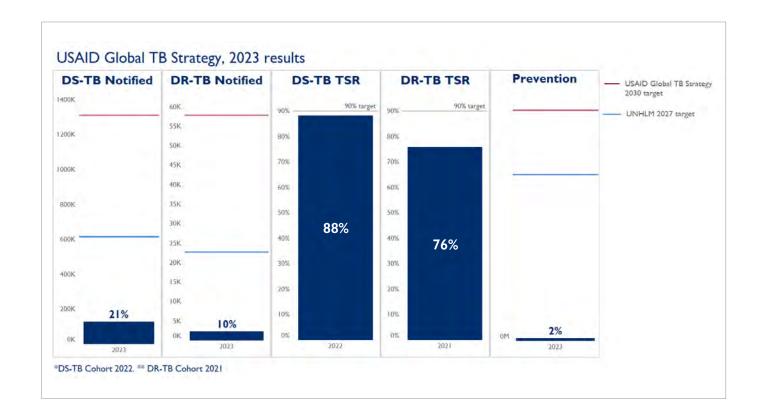






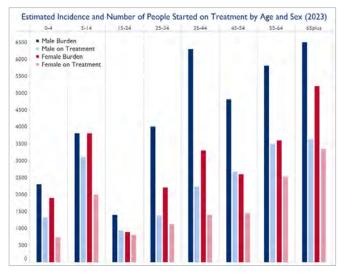


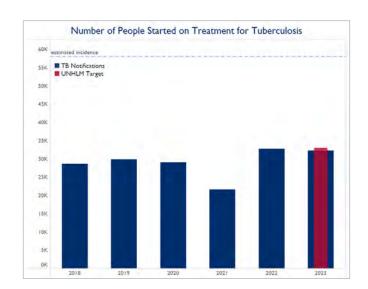


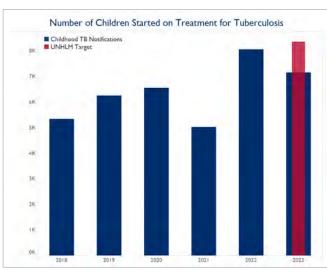


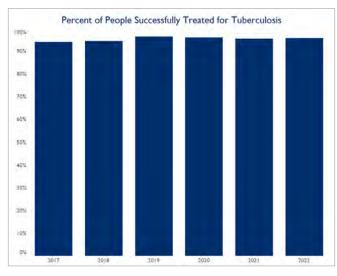
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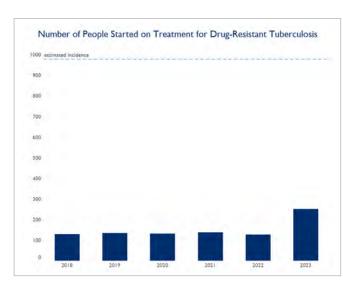
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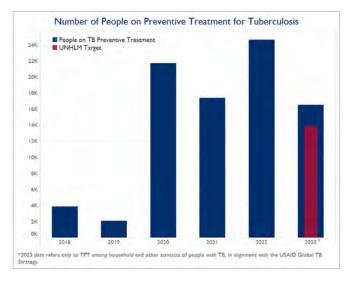


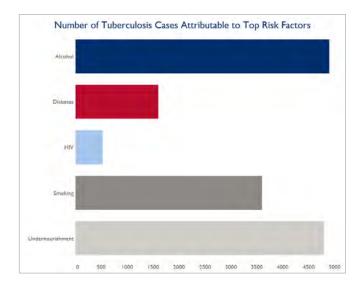


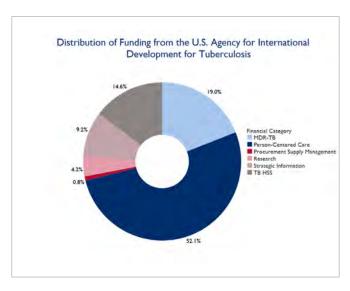


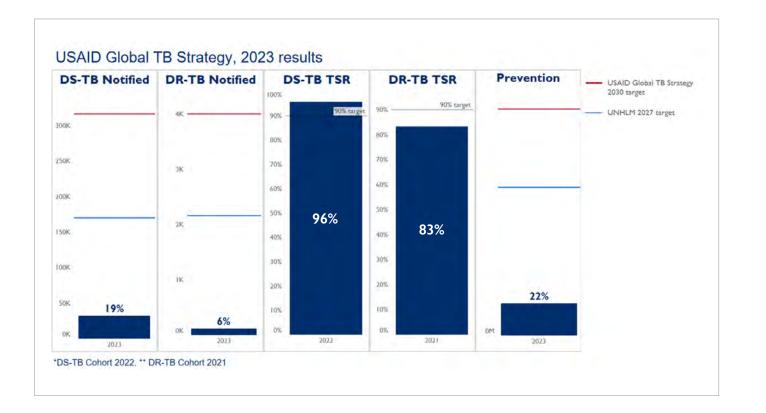






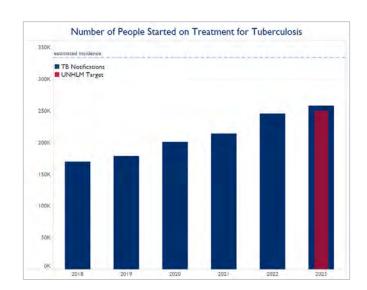


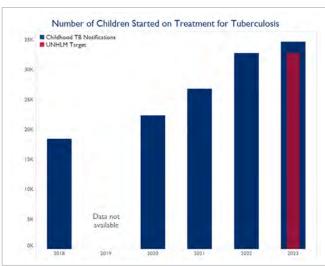


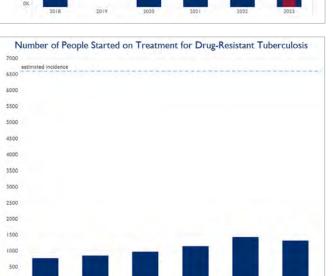


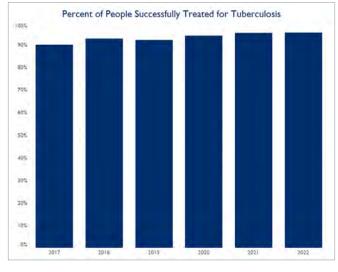
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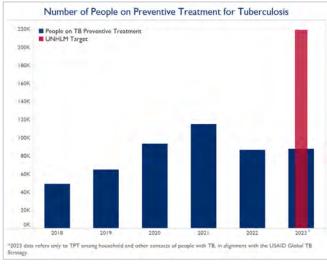
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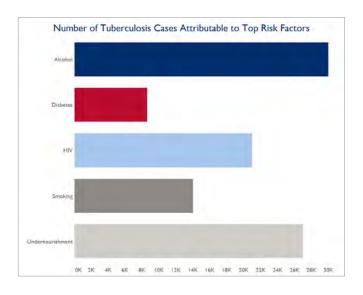


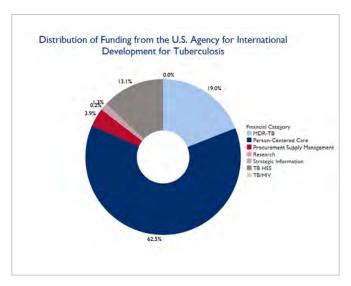


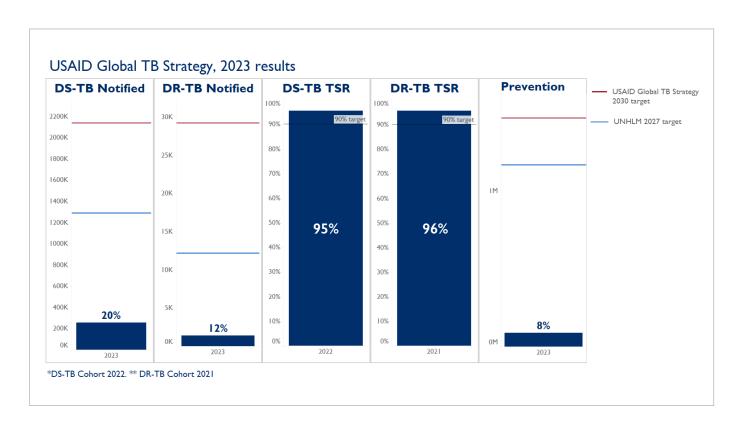




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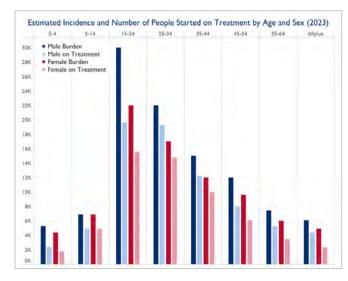


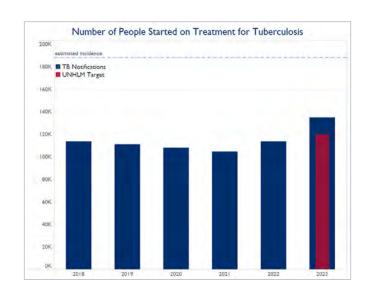


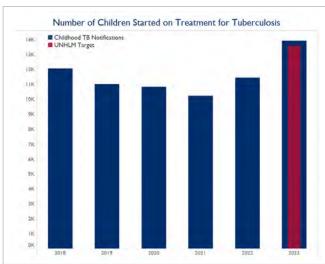


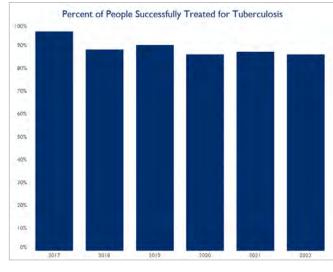
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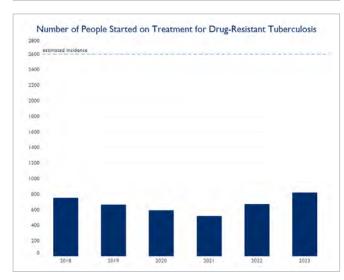
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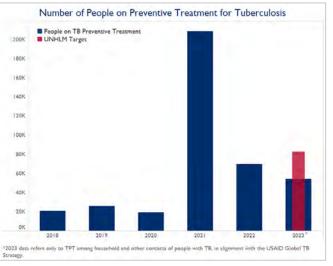


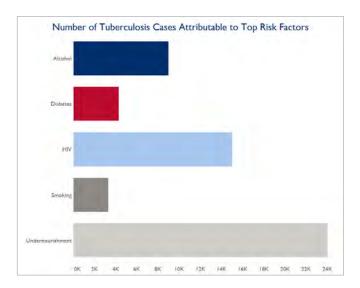


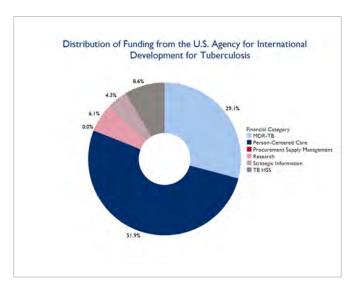


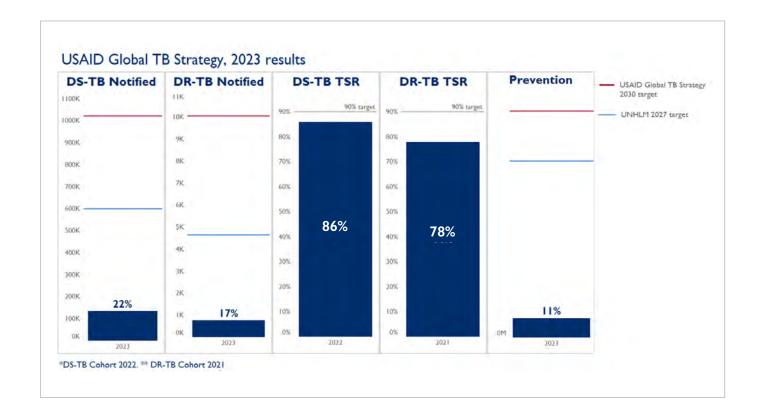






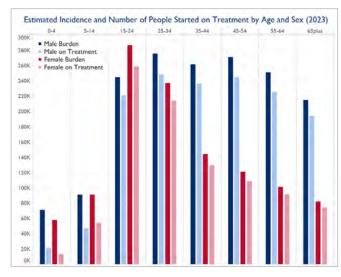


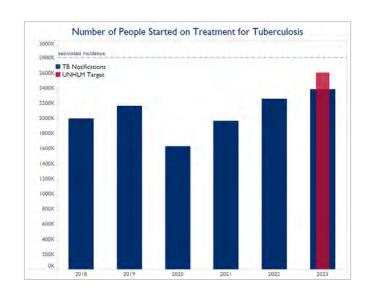


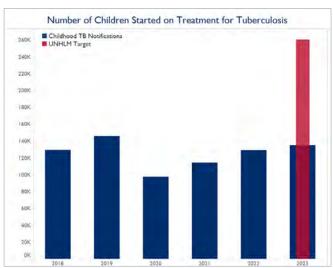


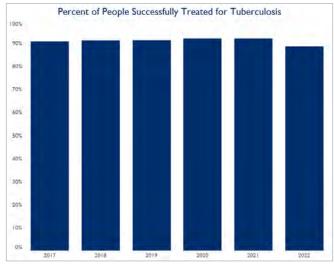
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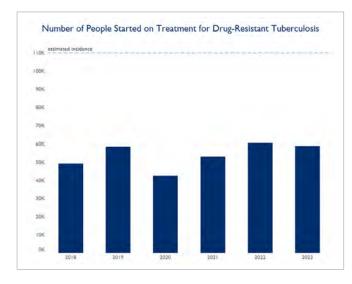


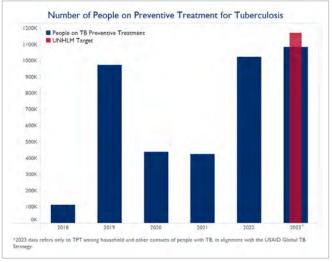


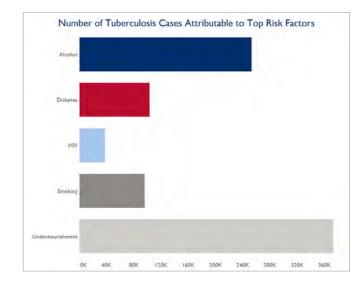


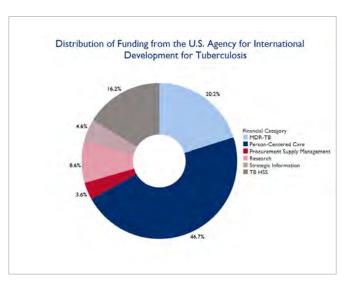


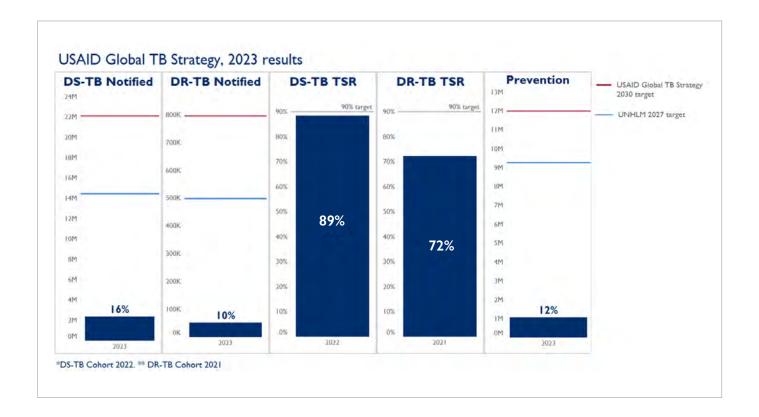






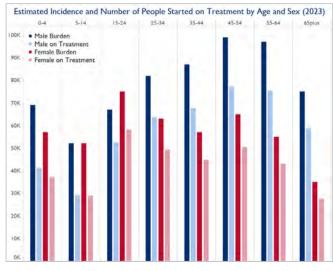


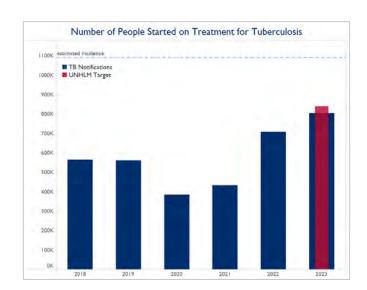


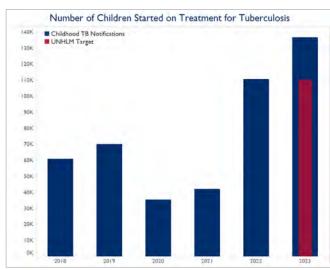


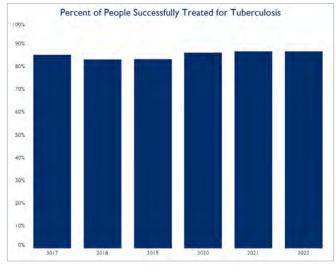
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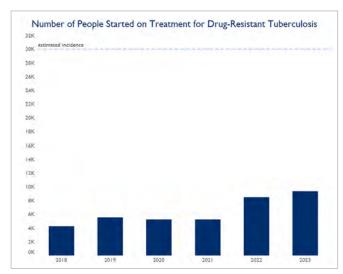
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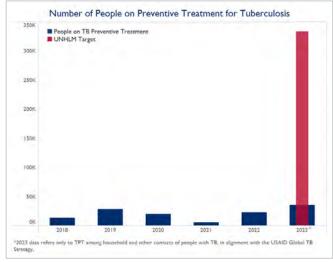


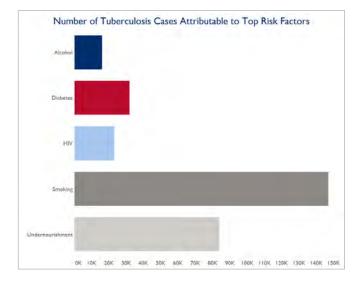


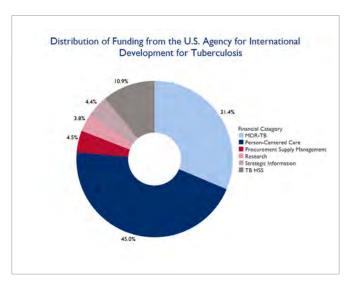


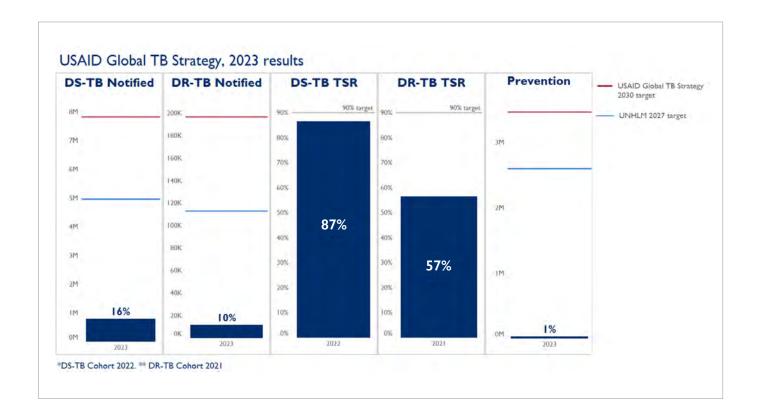






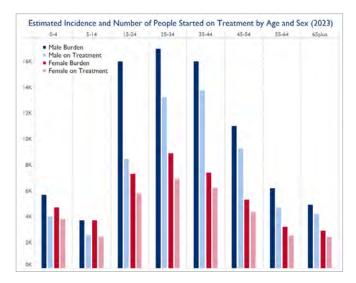


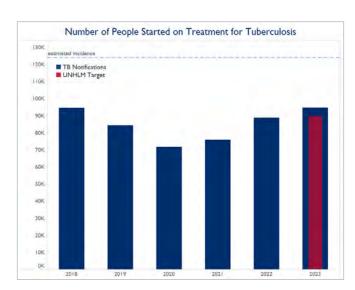


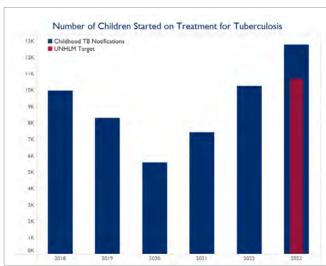


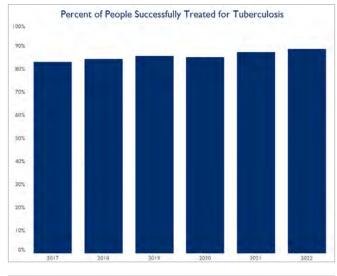


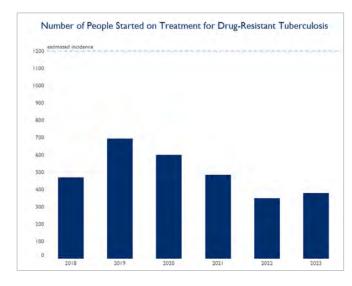


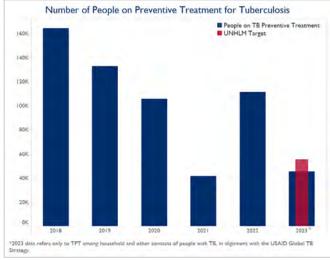


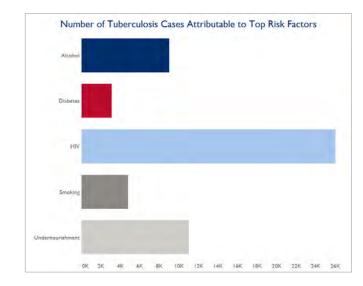


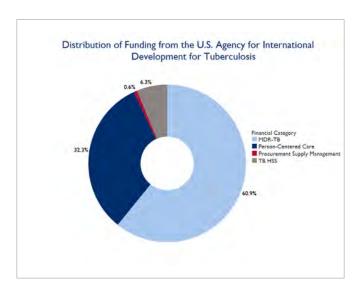


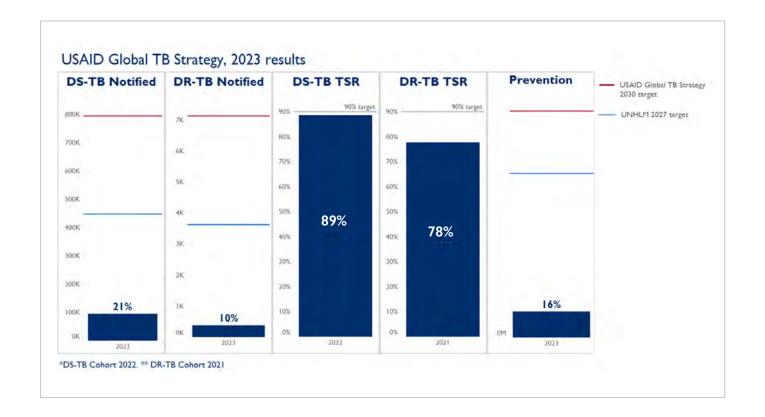






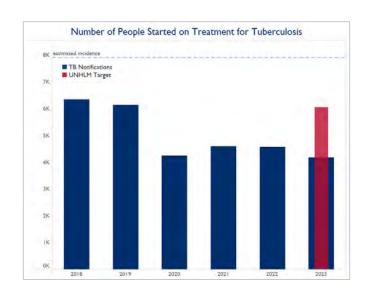


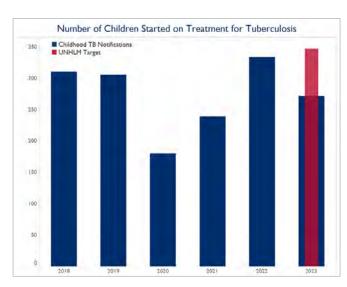


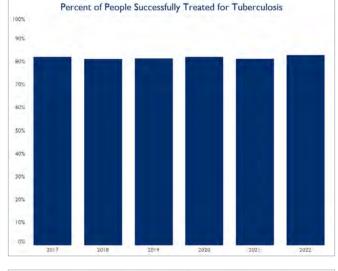


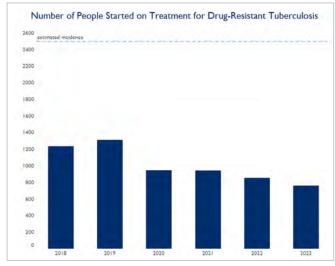
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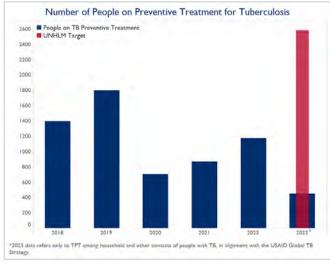
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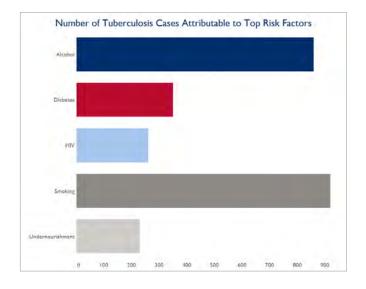


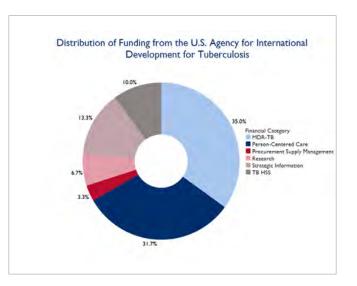


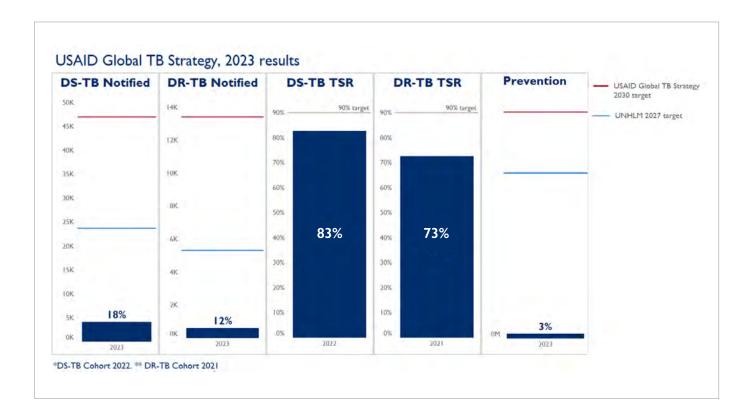




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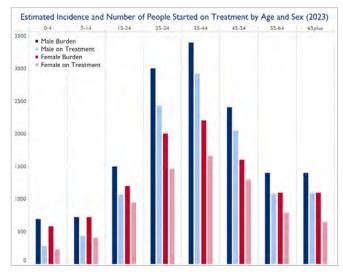


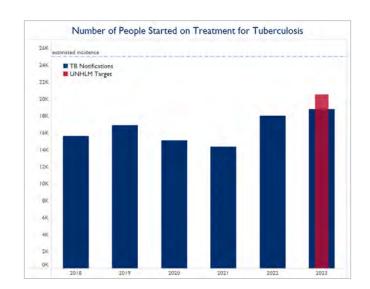


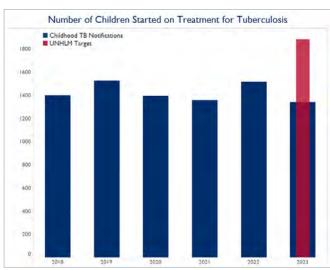


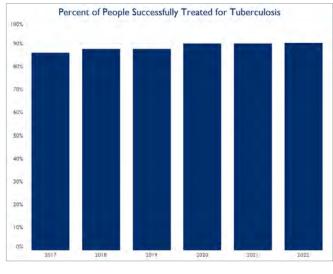
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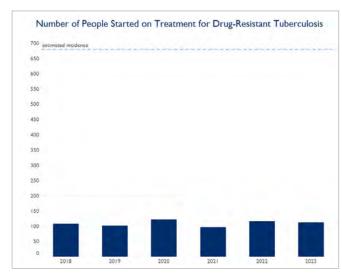


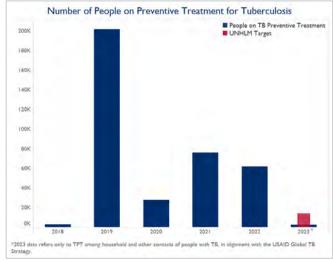


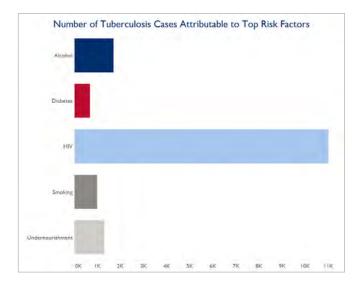


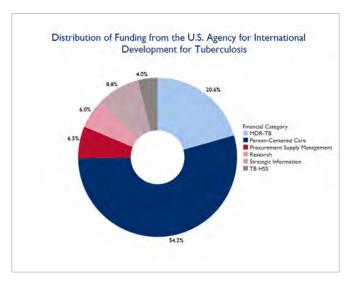


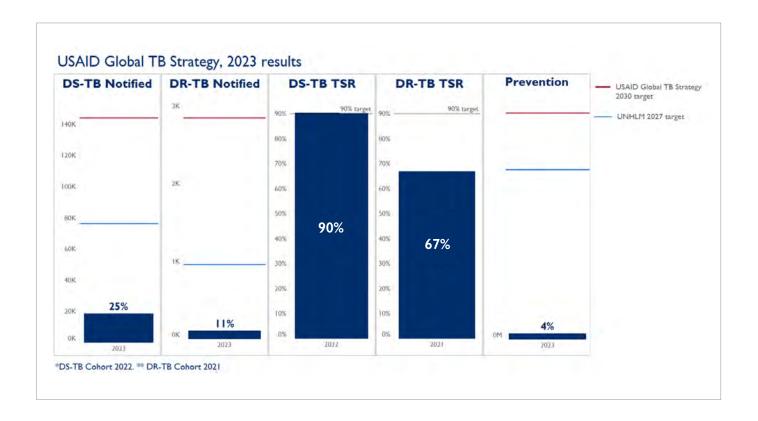






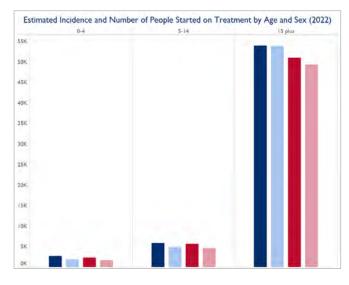


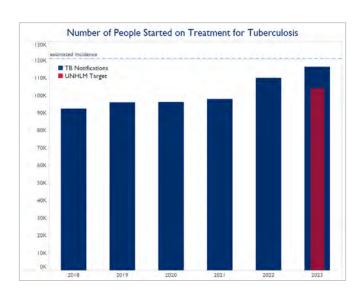


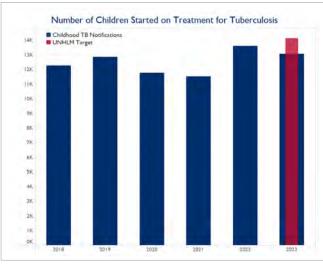


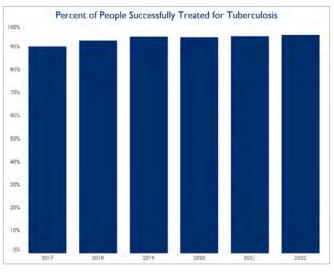
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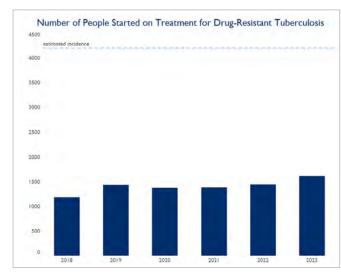
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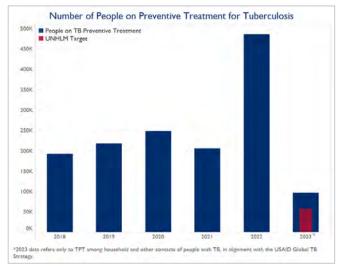


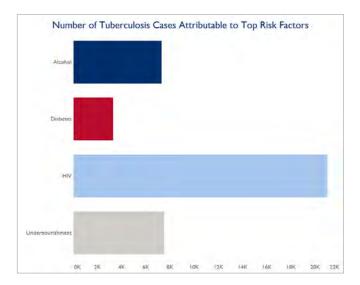


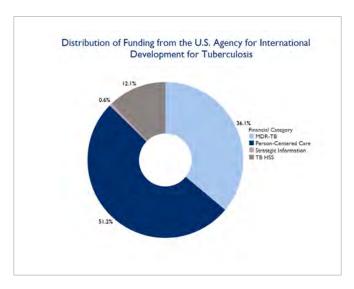


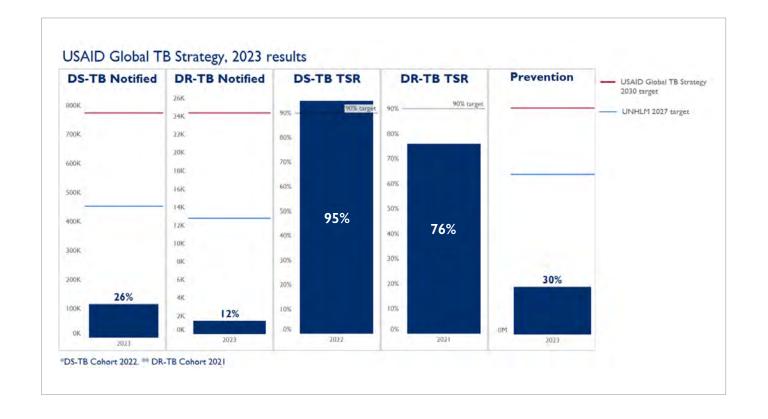






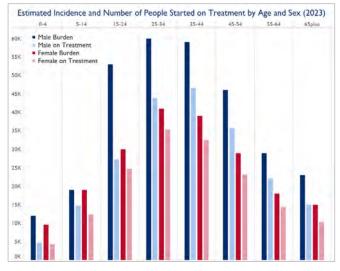


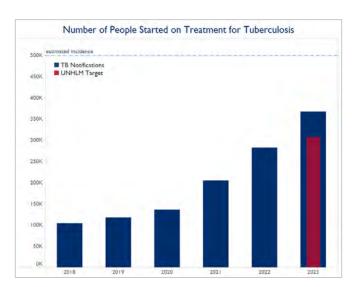


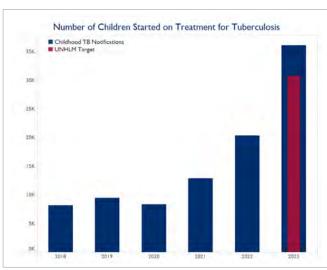


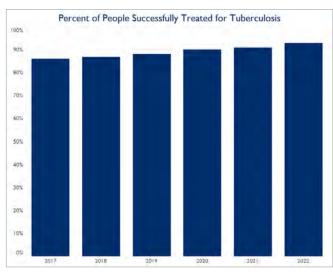
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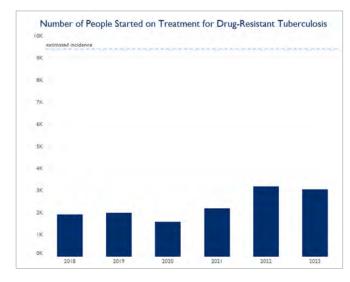
### **NIGERIA**

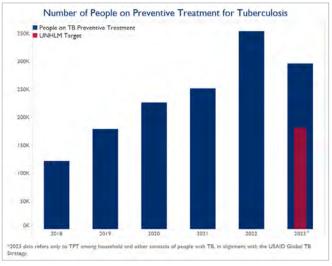


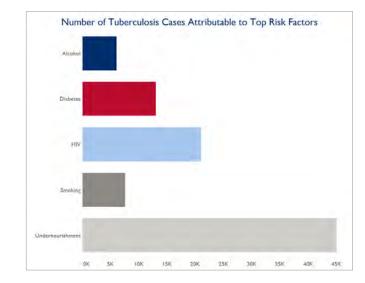


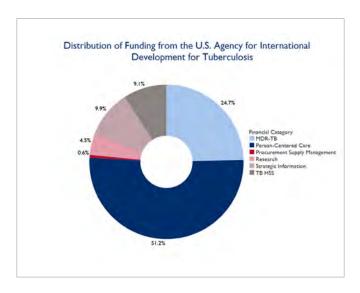


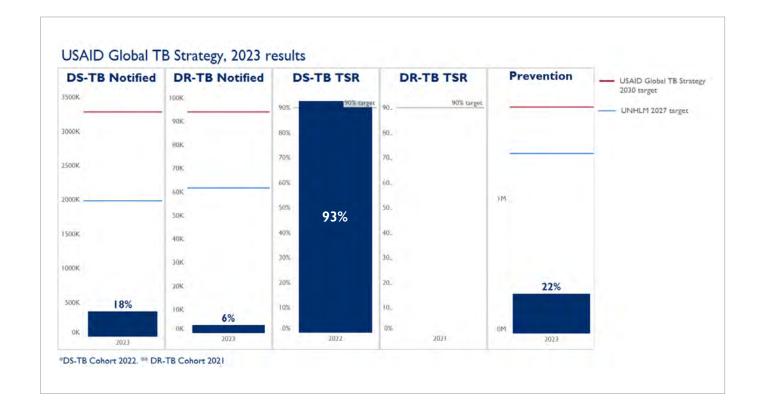






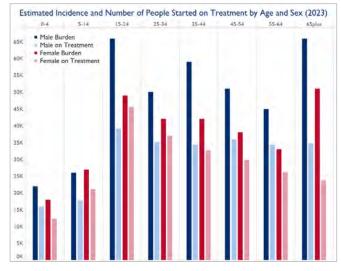


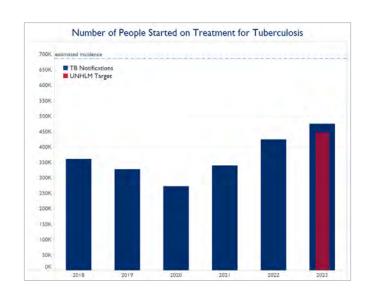


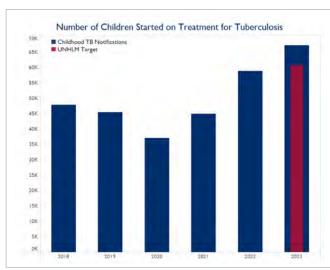


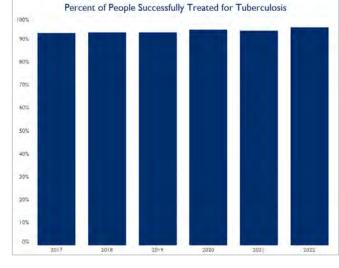
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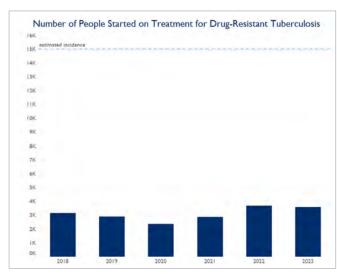
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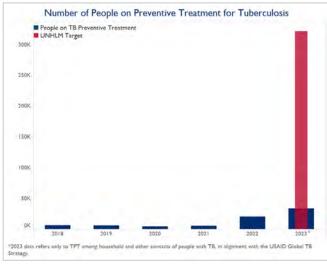


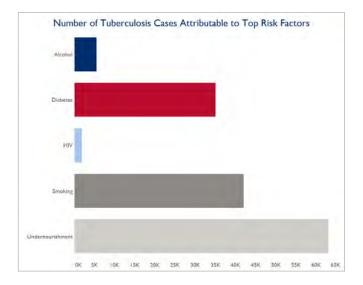


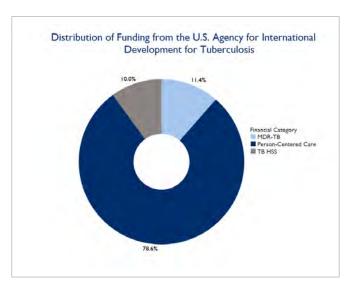


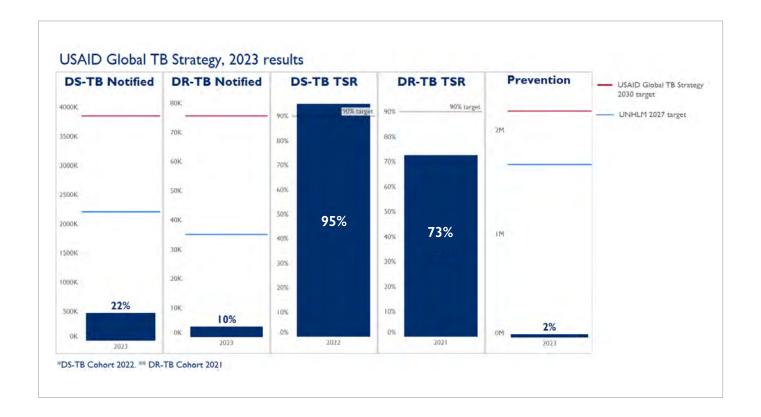






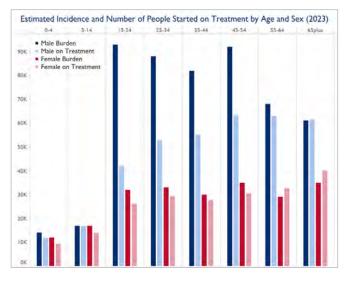


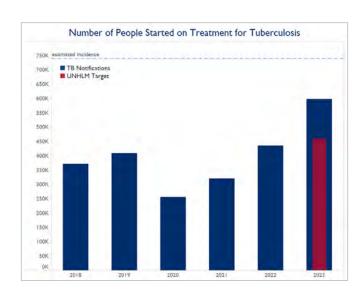


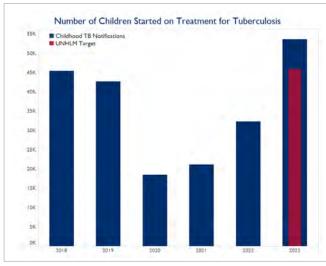


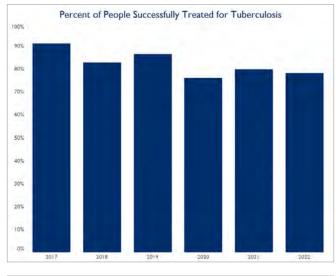
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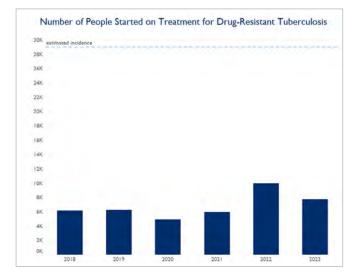
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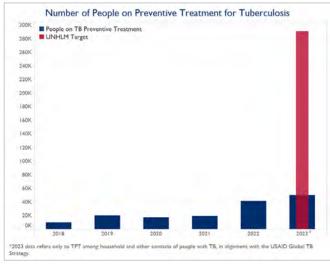


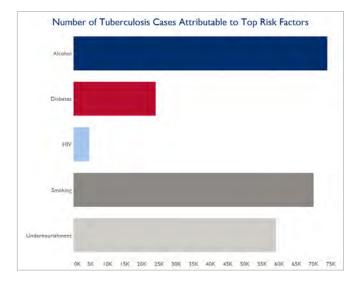


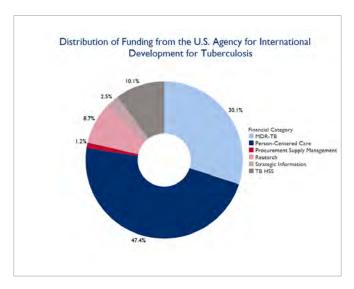


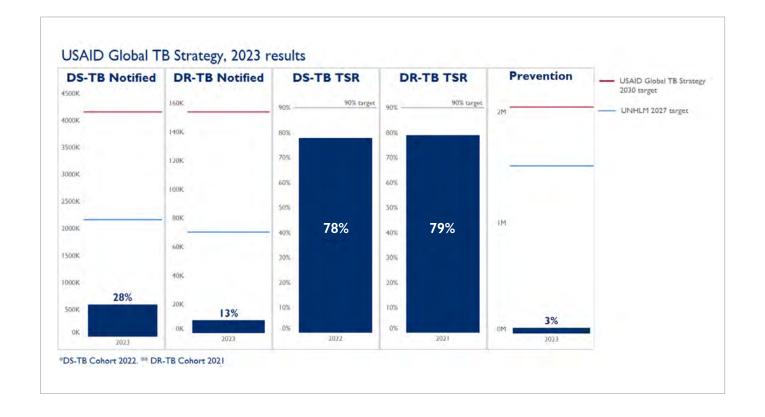






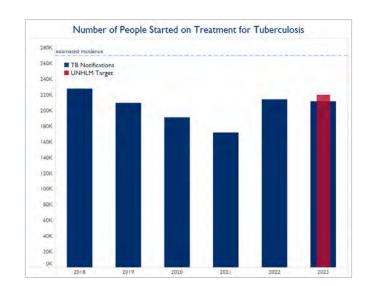


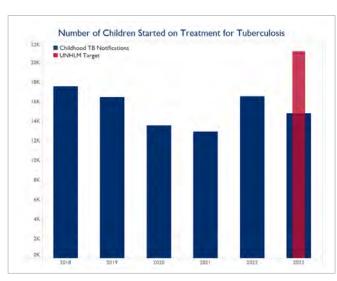


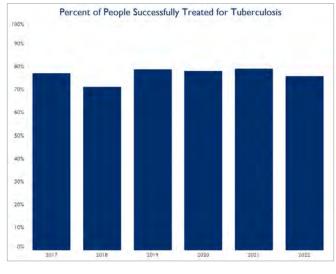


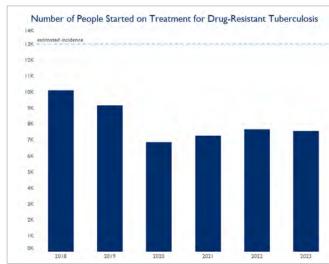
### **SOUTH AFRICA**

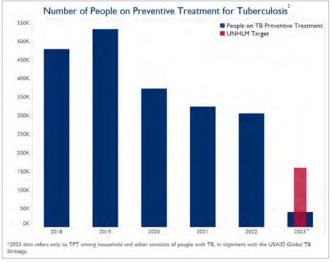
# Estimated Incidence and Number of People Started on Treatment by Age and Sex (2023) 0-4 5-14 15-24 23-34 35-44 45-54 55-64 65plus 40K Male on Treatment Female Burden Female on Treatment.



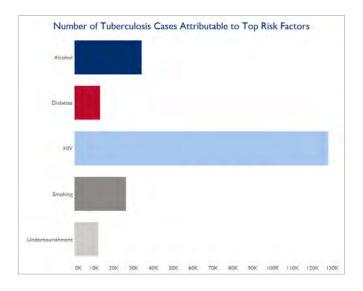


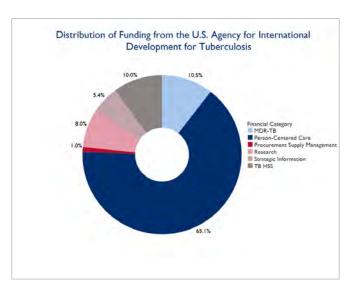


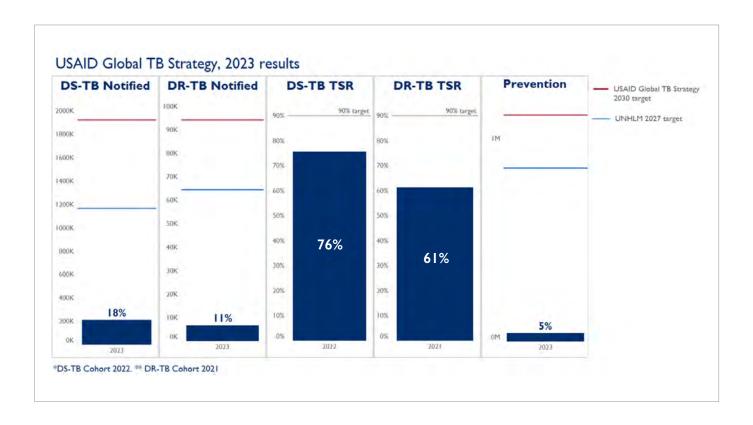




### **SOUTH AFRICA**



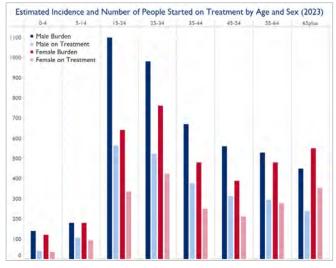


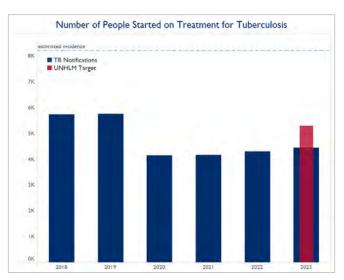


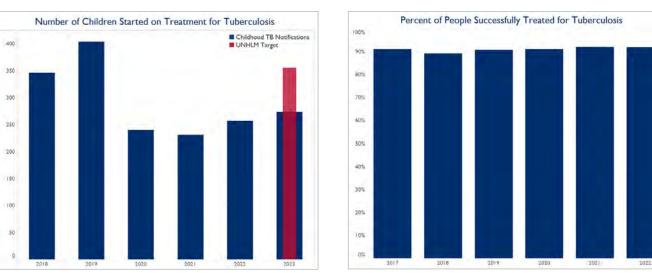
 $<sup>^{\</sup>rm 2}\,$  Number of people on TPT dropped due to not counting PLHIV in 2023.

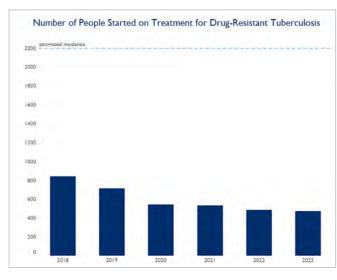
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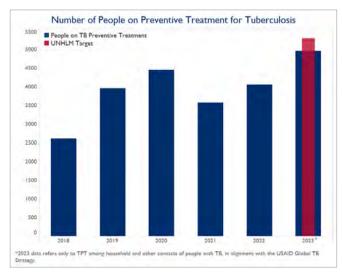
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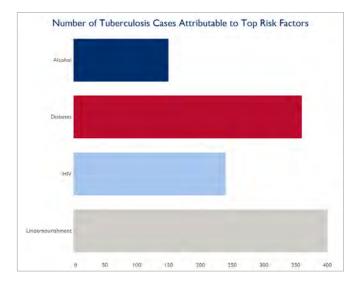


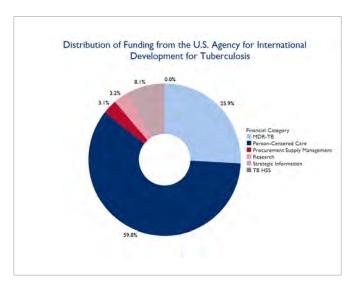


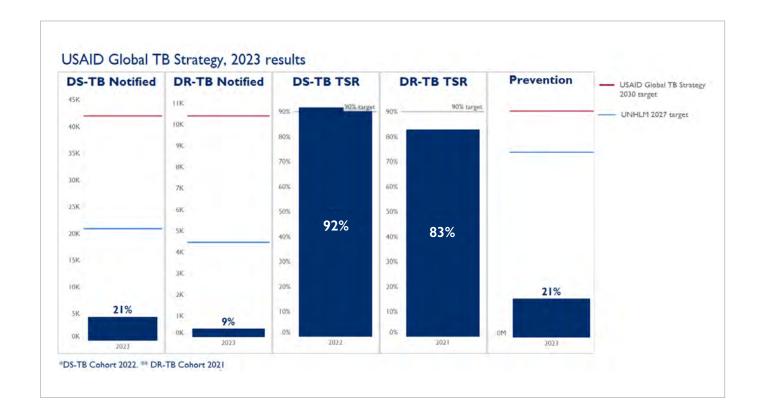






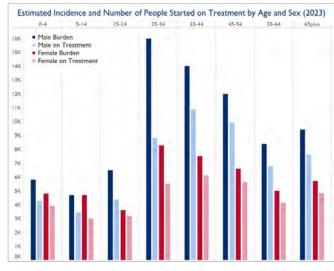


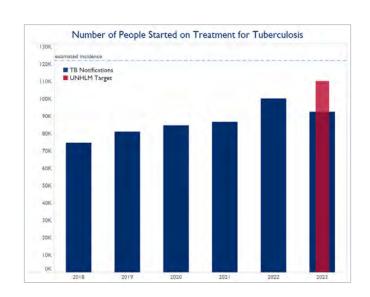


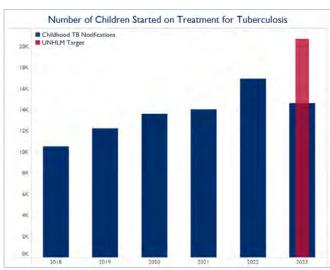


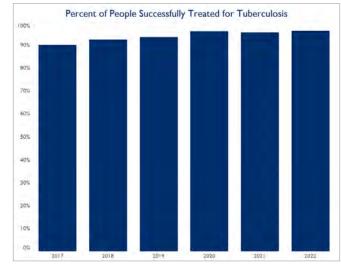
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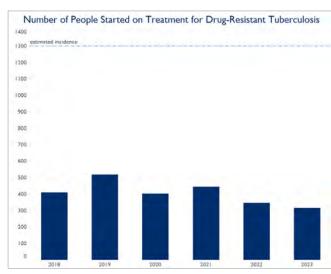
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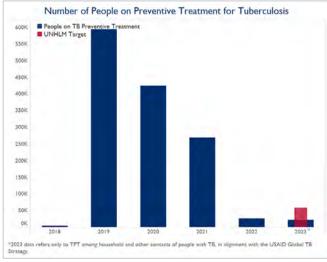


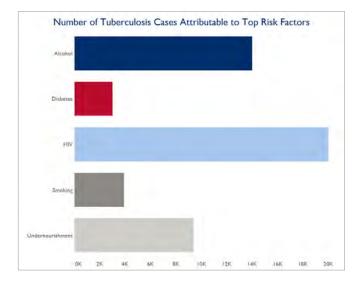


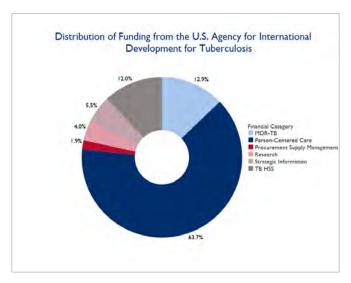


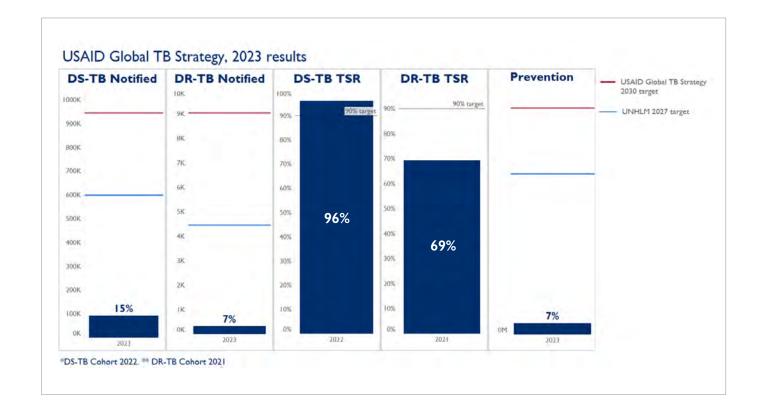






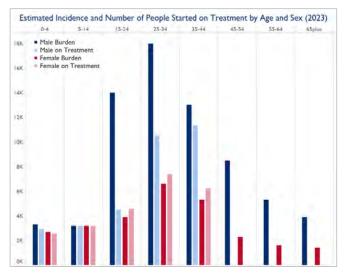


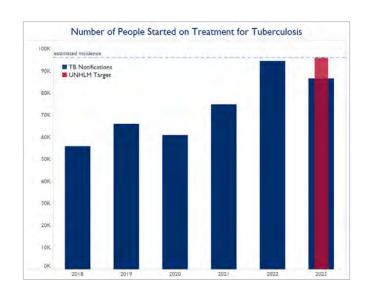


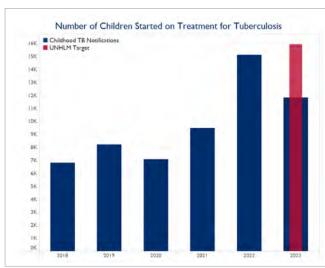


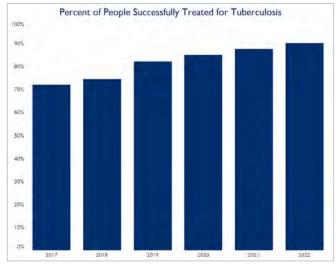
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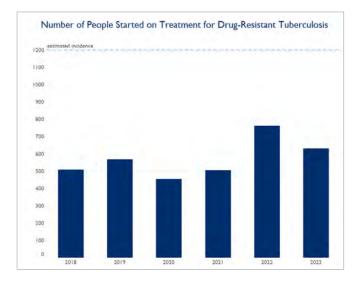
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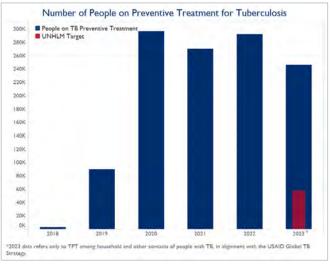


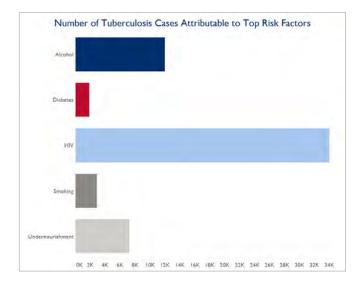


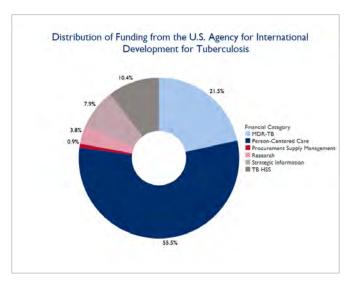


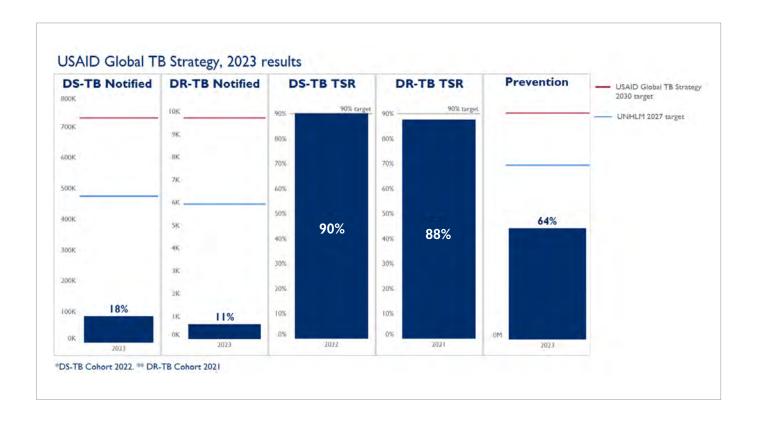










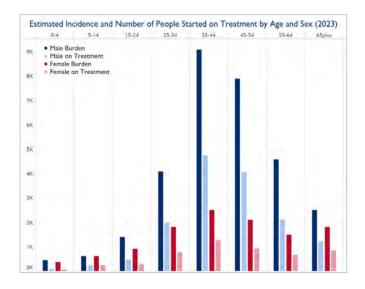


### **UKRAINE**

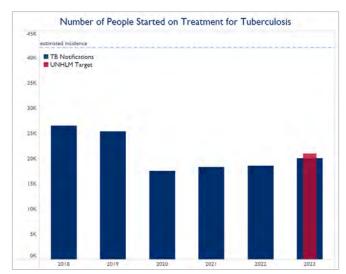
650 Childhood TB Notifications
UNHLM Target

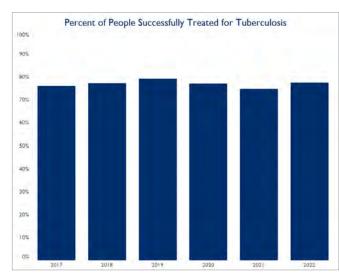
300

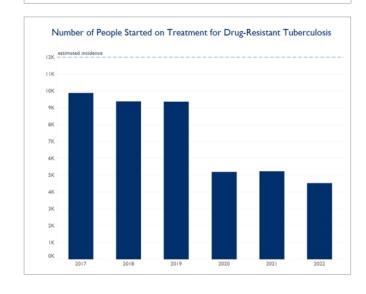
### **UKRAINE**

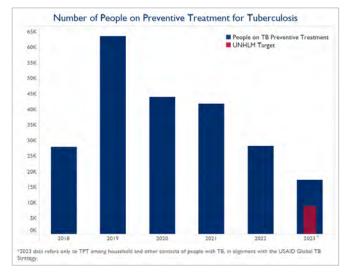


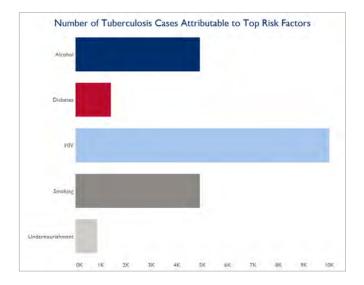
Number of Children Started on Treatment for Tuberculosis

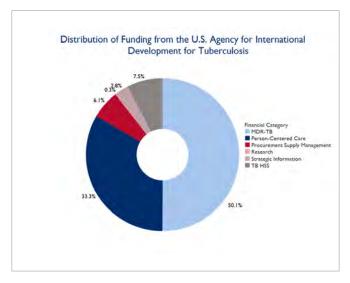


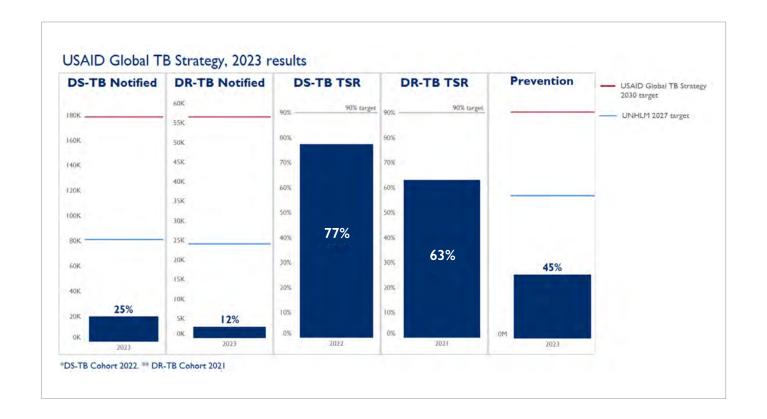






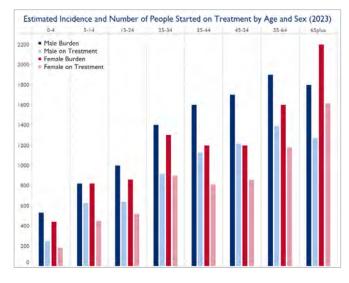


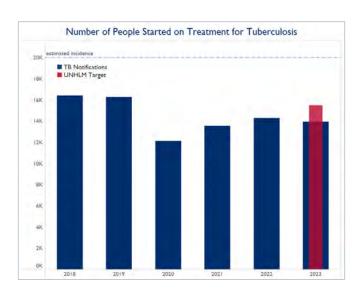


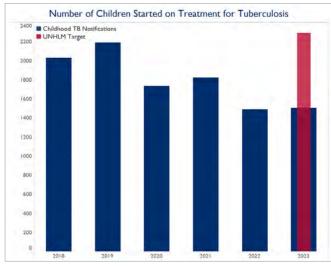


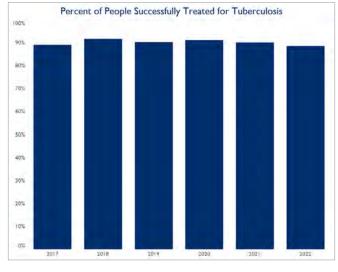
### **UZBEKISTAN**

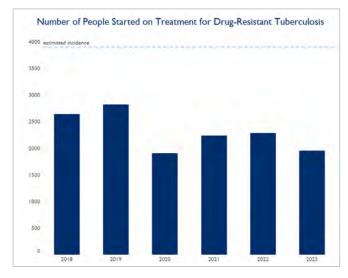
### **UZBEKISTAN**

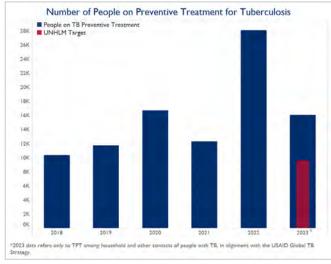


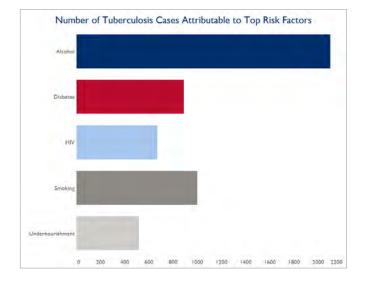


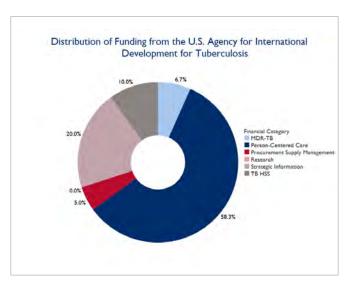


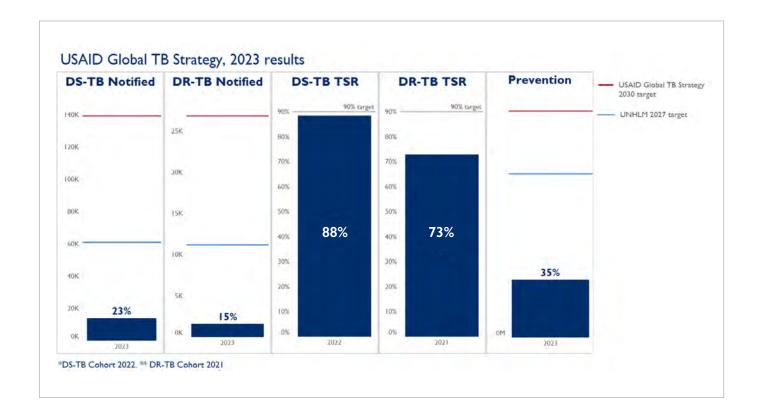






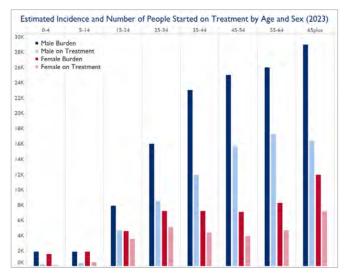


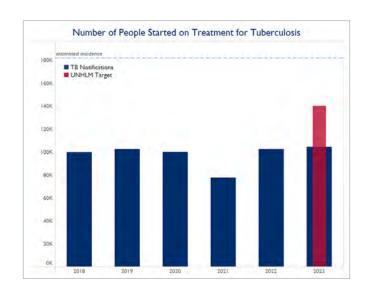


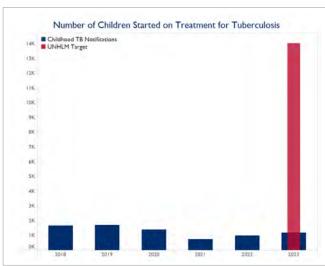


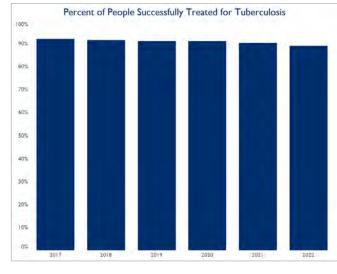
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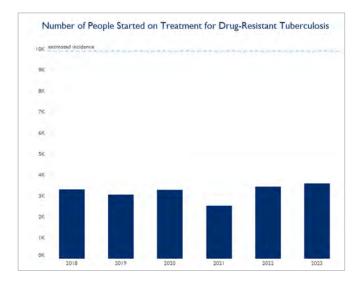
### **VIETNAM**

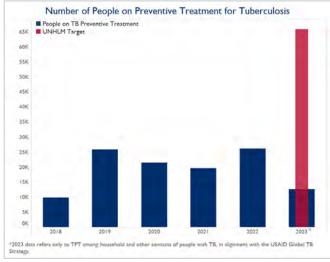


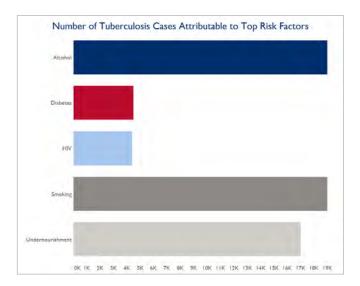


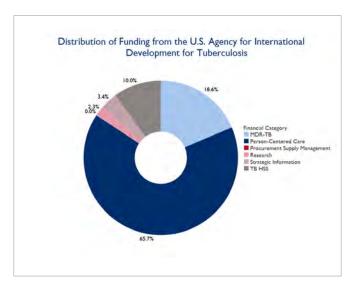


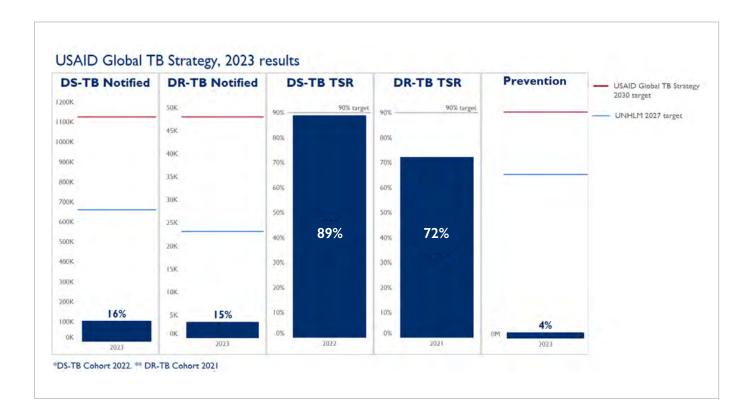






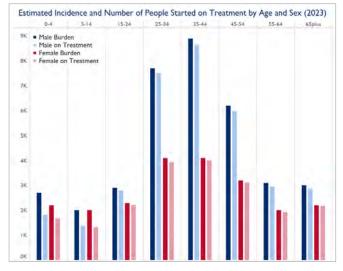


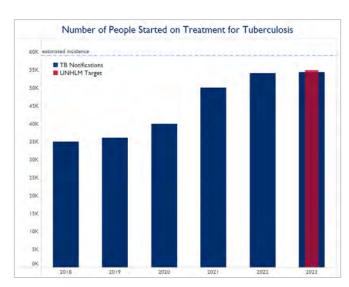


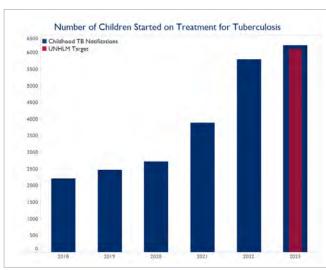


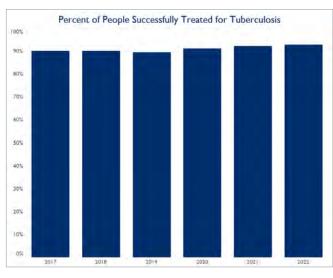
### **ZAMBIA**

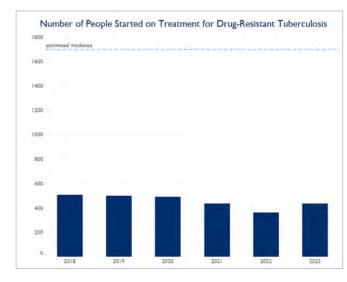
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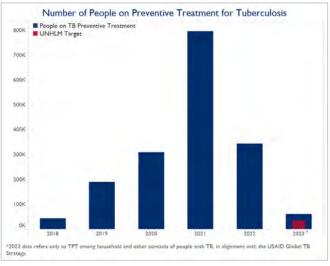


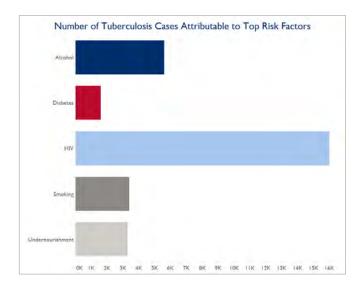


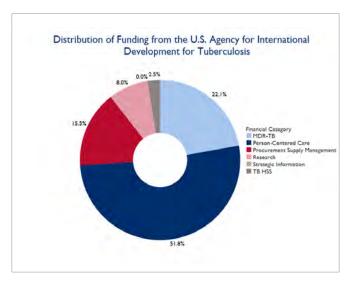


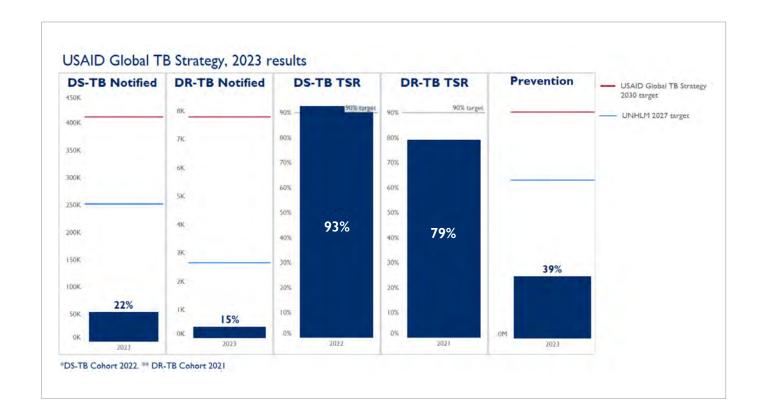






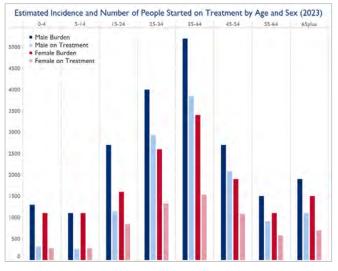


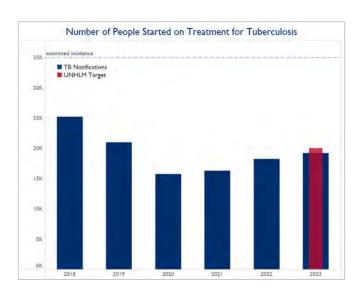


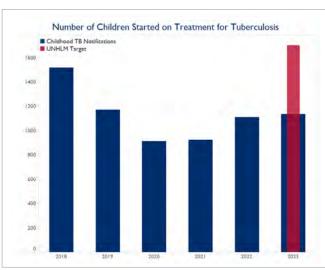


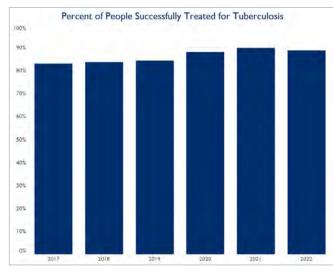
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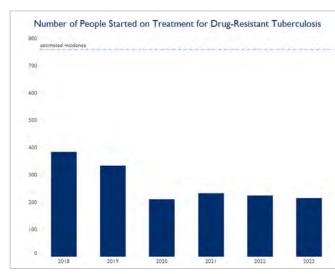
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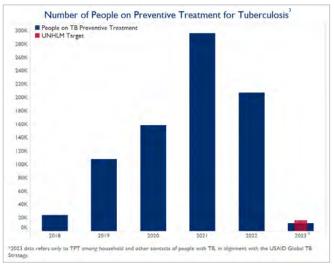


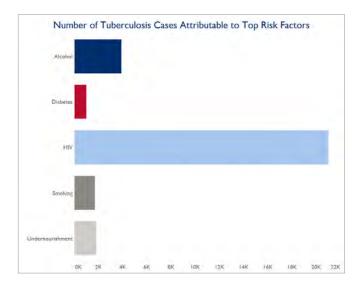


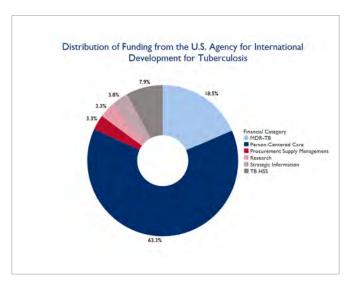


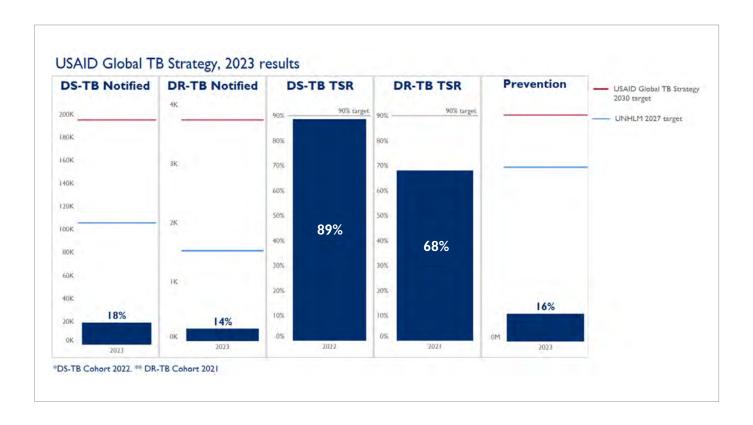












 $<sup>^{\</sup>rm 3}\,$  Number of people on TPT dropped due to not counting PLHIV in 2023.

The U.S. Agency for International Development (USAID) submits this report pursuant to Section 7019(e) of the Department of State, Foreign Operations, and Related Programs Appropriations Act, 2024 (Division F, Public Law II8-47), Senate Report II8-71 and House Report II8-46 Section I04B(g) of the Foreign Assistance Act of I961 (Public Law 87-195):

House Report 118-146: The Committee directs the Administrator of USAID to submit a report to the appropriate congressional committees not later than 180 days after the date of enactment of this Act on progress in implementing a comprehensive strategy to: (I) achieve TB elimination by simultaneously searching actively for TB disease and infection; (2) treat TB disease and infection, including multidrug-resistant TB; (3) enable infection control at key congregate settings including hospitals and prisons; (4) support patients so they are able to complete their treatment; (5) develop appropriate and accessible vaccines against TB for use in low resource settings; and (6) support the development and implementation of TB recovery plans in the countries most impacted by COVID-19. Such a report shall include specific details on programs to improve TB case-finding in children, prevent childhood infection, ensure children's access to treatment regimens, and collect and evaluate data on TB disaggregated by age groups. This report may be combined with existing reporting requirements.

Foreign Assistance Act of 1961 (P.L. 87-195), Section 104B(g): The President shall submit an annual report to Congress that describes the impact of United States foreign assistance on efforts to control tuberculosis, including—(I) the number of tuberculosis cases diagnosed and the number of cases cured in countries receiving United States bilateral foreign assistance for tuberculosis control purposes; (2) a description of activities supported with United States tuberculosis resources in each country, including a description of how those activities specifically contribute to increasing the number of people diagnosed and treated for tuberculosis; (3) in each country receiving bilateral United States foreign assistance for tuberculosis control purposes, the percentage provided for direct tuberculosis services in countries receiving United States bilateral foreign assistance for tuberculosis control purposes; (4) a description of research efforts and clinical trials to develop new tools to combat tuberculosis, including diagnostics, drugs, and vaccines supported by United States bilateral assistance; (5) the number of persons who have been diagnosed and started treatment for multidrug-resistant tuberculosis in countries receiving United States bilateral foreign assistance for tuberculosis control programs; (6) a description of the collaboration and coordination of United States anti-tuberculosis efforts with the World Health Organization, the Global Fund, and other major public and private entities within the Stop TB Strategy; (7) the constraints on implementation of programs posed by health workforce shortages and capacities; (8) the number of people trained in tuberculosis control; and (9) a breakdown of expenditures for direct patient tuberculosis services, drugs and other commodities, drug management, training in diagnosis and treatment, health systems strengthening, research, and support costs.

**Senate Report 118-71:** Not later than 180 days after the date of enactment of the act, the USAID Administrator shall submit a report to the Committees on Appropriations summarizing efforts in each USAID TB priority country, including, to the maximum extent practicable: (1) the number of individuals screened for TB disease and TB infection, including through active case finding outside of health facilities; (2) the number of close contacts who are screened for TB infection; (3) the number of individuals, including close contacts, who are started on treatment for TB infection; (4) the number of individuals who complete treatment for TB infection; and (5) a description of efforts by USAID to implement a comprehensive TB elimination strategy within each country, and the extent to which such strategy is coordinated with other donors. Such report shall include detail on how USAID is strengthening its efforts to reach children in each such intervention.



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