

RENEWING GLOBAL EFFORTS TO END TB

TUBERCULOSIS REPORT TO CONGRESS

FY 2023



FY 2023 TB PROGRAMMING
WITH FY 2022 FUNDS



USAID
FROM THE AMERICAN PEOPLE



U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT REPORT TO CONGRESS ON FISCAL YEAR (FY) 2023 TUBERCULOSIS PROGRAMMING WITH FY 2022 FUNDS

RENEWING GLOBAL EFFORTS TO END TB

The U.S. Agency for International Development (USAID) submits this report to Congress pursuant to P.L. 110-293, the Tom Lantos and Henry J. Hyde U.S. Global Leadership Against HIV/AIDS, Tuberculosis, and Malaria Authorization Act of 2008, Section 302(d), which amended P.L. 87-195, the Foreign Assistance Act of 1961, to add Section 104B(g).

TB screening using ultra-portable digital X-ray in the Philippines. Photo: Thomas Cristofolletti for USAID

RENEWING GLOBAL EFFORTS TO END TB

Tuberculosis (TB) remains one of the world's leading infectious disease killers. Despite being preventable, treatable, and curable, this ancient disease continues to kill more people each year than HIV and malaria combined. In 2022, 10.6 million people contracted TB, and 1.3 million lost their lives to the deadly disease.¹

After two years of COVID-19-related disruptions to TB prevention, diagnosis, and treatment efforts, 2023 had the highest number of people diagnosed and started on treatment since the beginning of the disease's global monitoring in 1995²— due in part to concerted efforts to recover from the pandemic's devastating global impact. In 2022, global case notifications increased over the previous year, with 7.5 million, or 70 percent, of estimated incident cases diagnosed and started on treatment. This was a 16 percent increase in notifications from 2021 and a five percent increase as compared to 2019. TB mortality decreased by seven percent in 2022 compared to 2021 and was two percent lower compared to 2019, before the onset of COVID-19.³

However, much work remains to achieve the Sustainable Development Agenda and USAID's Global TB Strategy goals of ending TB as a major public health threat by 2030. Many individuals with TB are not appropriately diagnosed, despite a growing increase in the availability of rapid molecular tests. In 2022, only 63 percent of reported TB cases were bacteriologically confirmed (similar to 2021), and only 47 percent of individuals with notified cases were tested with World Health Organization (WHO)-recommended rapid molecular tests (a 24 percent increase from 2021).⁴

In 2022, 410,000 people developed drug-resistant forms of TB (DR-TB),⁵ which include multidrug-resistant TB (MDR-TB) and extensively drug-resistant TB (XDR-TB).⁶ These TB variants cause one-third of all deaths due to antimicrobial resistance

(AMR),⁷ and remain a global public health challenge in that they are more difficult and expensive to diagnose and treat. Of those with DR-TB, 175,650 people (43 percent) started on treatment in 2022, representing a 26 percent increase compared to 2021. With newer, shorter, and better tolerated treatment regimens, the DR-TB treatment success rate (TSR) is increasing globally. The average drug-resistant TB TSR globally in 2022 was 63 percent—a five percent increase compared to the previous year, with individuals on the all-oral shorter regimen being even higher.

TB disproportionately affects populations impacted by poverty and drives individuals, families, and communities into further financial hardship. Globally, individuals with TB have to pay more than 20 percent of TB health care costs out-of-pocket. On average, individuals with TB and their households lose 50 percent of their annual income as they suffer from, and get treatment for, the disease—even where TB services are provided free-of-charge.⁸

To make things worse, people with TB often also suffer from comorbidities and risk factors—including undernutrition, HIV infection, alcohol use disorders, smoking, and diabetes— making it harder to treat and cure them. TB persists, predominantly in low- and middle-income countries, due to lack of access to TB services, stigma and discrimination, financial constraints, socioeconomic determinants including poor living conditions and changing climate, and the slow development of new diagnostics, drugs, and vaccines.

Without urgent action, it is projected that TB will kill an estimated 6.6 million additional people through 2030, translating to a global economic loss of \$1 trillion dollars.⁹ Conversely, the

[Global Plan to End TB 2023-2030](#) estimates a total of \$250 billion dollars is needed to end TB by 2030 with an impressive return on investment of 40 dollars per one dollar invested.

8 Global Tuberculosis Report 2023, World Health Organization
9 Stop TB Global Plan to End TB



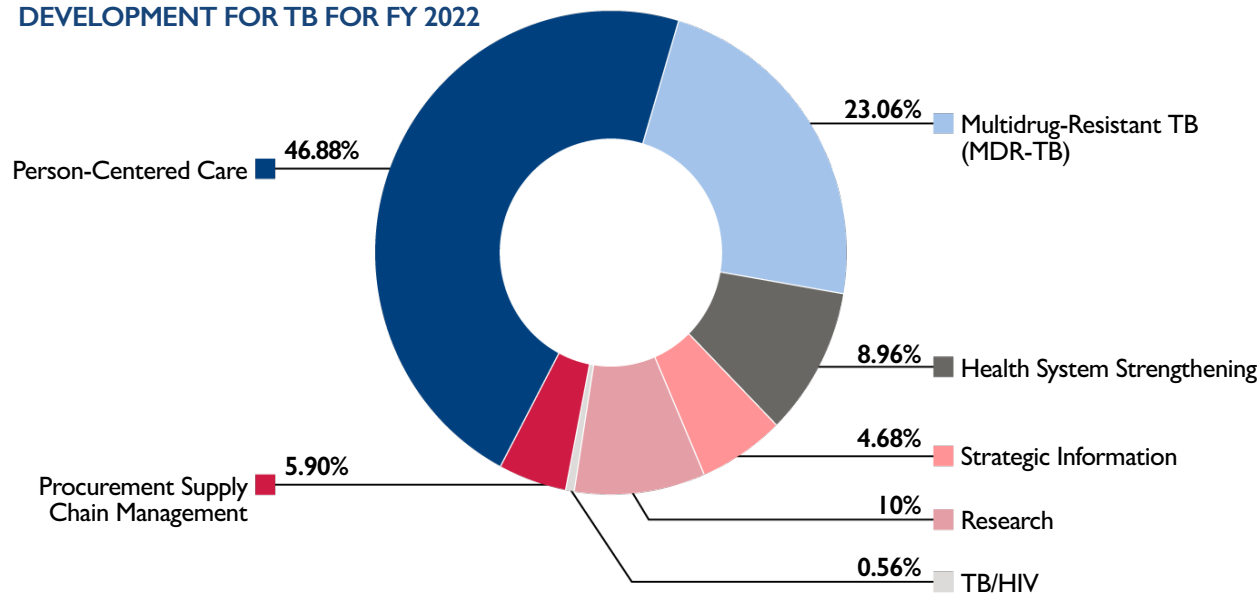
Sputum sample collection for GeneXpert TB testing in Zimbabwe. Photo: IDDS

1 Global Tuberculosis Report 2023, World Health Organization
2 Based on Agency field work and discussions with WHO. This 2022 number likely includes a backlog of people who developed TB in previous years, but whose diagnosis and treatment was delayed by COVID-related disruptions that affected access to and provision of health services.
3 Ibid.
4 Ibid.
5 Ibid.
6 MDR-TB is resistant to both isoniazid (the second-most vital drug) and rifampicin, and XDR-TB is resistant to both rifampicin and isoniazid, and other drugs used to treat MDR-TB.
7 https://amr-review.org/sites/default/files/160525_Final%20paper_with%20cover.pdf

USAID'S GLOBAL TB PROGRAM

With continued support from Congress, the U.S. Agency for International Development (USAID) leads the U.S. government's (USG) global TB efforts. In FY 2022, Congress appropriated \$371 million in resources for TB activities through USAID's Global Health Programs (GHP) account.¹⁰ This includes programming through bilateral assistance to high-burden countries, regional platforms, and global mechanisms.¹¹

GLOBAL DISTRIBUTION OF FUNDING FROM THE U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT FOR TB FOR FY 2022



Guided by USAID's [Global TB Strategy, 2023-2030](#), and in cooperation with Ministries of Health, USAID provides bilateral assistance in 24 countries¹² with high burdens of TB. In addition, by leveraging the USG's contribution to the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund), USAID supports the successful implementation of TB grants and provides targeted technical assistance to an additional 31 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](#).

In each country, USAID closely coordinates with a wide range of multi-sectoral TB stakeholders to support strengthening local TB networks to achieve each country's National TB Strategic Plan (NSP). These stakeholders include Ministries of Health, the Global Fund Secretariat and Principal Recipients, other USG departments and agencies, WHO, the Stop TB Partnership, civil society, local non-government organizations, faith-based organizations, affected communities, and the private sector. USAID also works with these stakeholders to enhance investment in the development, introduction, and scale up of new tools to find, treat, and prevent TB and to strengthen primary health care (PHC) systems to improve access to TB services for all, as well as the overall service delivery platform.

¹⁰ The Global Distribution of Funding chart was produced using final approved Agency funding levels.

¹¹ This chart represents 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).

¹² 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.

TB programs supported by USAID are working to address barriers to care, including the stigma resulting from having TB. Inclusiveness in TB programs and services is crucial to ensure that all individuals are able to access effective TB prevention, diagnosis, and treatment services. USAID has increased its collaboration with local partners, civil society, and communities to support more inclusive efforts.

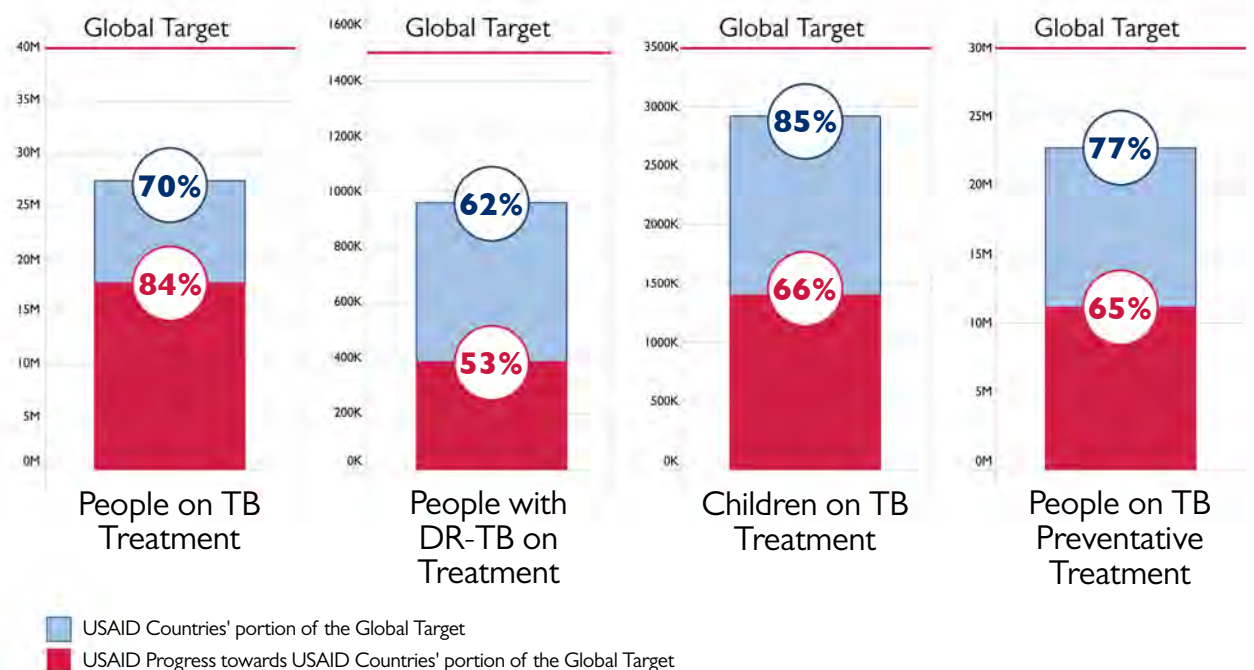
One prime example is USAID's investment in the Stop TB Partnership's Challenge Facility for Civil Society, which provides grants to civil society grassroots organizations to empower TB-affected communities, address stigma and gender barriers, support community-led monitoring, and implement a human rights-based TB response, among other initiatives. In 2022, these grants supported 77 organizations.

UNITED NATIONS HIGH-LEVEL MEETING (UNHLM) ON TB

The first UNHLM targets were set in 2018 and unfortunately were not met by 2022, both globally and in USAID priority TB countries, as a consequence of limited access to TB services during the COVID-19 pandemic and ongoing conflicts in countries such as Afghanistan, Burma, and Ukraine.

At the September 2023 UNHLM, new ambitious targets for 2027 were set. These targets include 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 ending TB by 2030 in providing life-saving TB treatment for 45 million people with the disease (to include 4.5 million children and 1.5 million people with DR-TB) and TB preventive treatment for 45 million eligible individuals between 2023 and 2027.

USAID TB PRIORITY COUNTRIES' PROGRESS TOWARDS THE 2018-2022 UNHLM TARGETS



USAID'S GLOBAL TB STRATEGY, 2023-2030



In 2022, USAID launched its new Global TB Strategy, 2023-2030. Through this Strategy, USAID 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 are also contributing to pandemic preparedness. The new UNHLM global targets are aligned with the USAID Global TB Strategy.

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:

90%
of individuals with TB diagnosed and initiated to treatment.

90%
of individuals with drug-resistant TB diagnosed and initiated on treatment.

90%
of individuals with drug-sensitive TB (DS-TB)¹³ and drug-resistant TB successfully treated.

30M
eligible individuals provided with TB preventive treatment (TPT).

OUR APPROACH: THE GLOBAL ACCELERATOR TO END TB

Launched in 2018, USAID's Global Accelerator to End TB applies a localization approach to increase commitment and leverage collaboration from governments, civil society, and the private sector to accelerate countries' progress in reaching the global targets. The Accelerator aims to drive countries' progress by **strengthening partnerships with Ministries of Health**, through joint development of partnership statements and country Roadmaps, as well as with the **private sector** and other partners; **improving the sustainability of technical support** through embedded advisors to build National TB Programs' technical expertise; **increasing locally generated solutions** by partnering directly with local organizations; and **driving innovation and leveraging resources** through targeted interventions including securing partner resources, matching funds, and [price reductions](#).

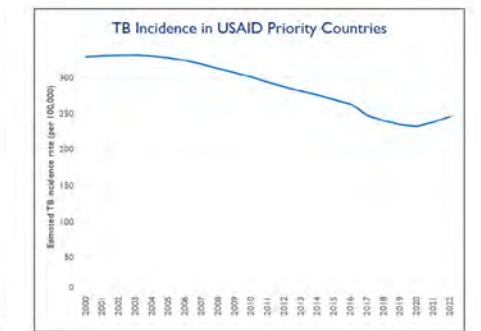
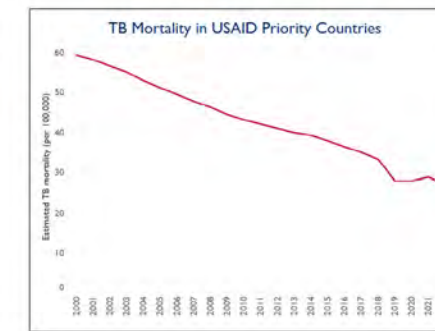
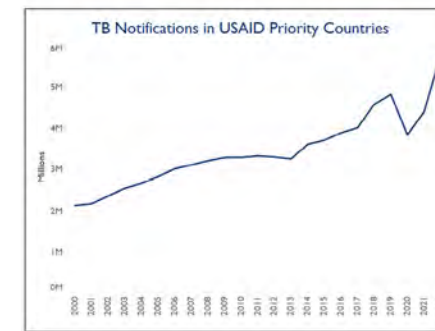
GLOBAL
ACCELERATOR
TO END TB



¹³ Drug-sensitive TB is TB that is susceptible to all first-line TB drugs.

A FOCUS ON RESULTS

Over the past several years, TB programs in USAID's 24 priority countries have innovated and adapted to recover from COVID-19's setbacks. TB case notifications in these countries have continued to increase, with a 31 percent increase in TB case notifications in 2022 compared to 2021, and a 20 percent increase in comparison to 2019. At the same time, TB mortality decreased by seven percent in 2022 compared to 2021 and is 3.6 percent lower than it was before the onset of the pandemic in 2019. However, estimated TB incidence increased by 3.4 percent in 2022 compared to 2021. This is 4.7 percent higher than the estimated incidence in 2019, representing a reversal of the downward trend sustained for many years until the onset of COVID-19 in 2020. The COVID-19 pandemic had negatively impacted access to TB diagnosis and treatment services, resulting in an increase in the number of people with undiagnosed and untreated TB and more community transmission, leading to an eventual increase in estimated TB incidence.



A medical technologist and nurse view TB screening results in Vietnam. Photo: IDDS

USAID PRIORITY COUNTRY STATISTICS: 2019-2022

	2019	2020	2021	2022*14
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
	71% of individuals with TB diagnosed and initiated on treatment	56% of individuals with TB diagnosed and initiated on treatment	61% of individuals with TB diagnosed and initiated on treatment	72% of individuals with TB diagnosed and initiated 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
	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
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
	55% DR-TB treatment success rate	59% DR-TB treatment success rate	61% DR-TB treatment success rate	68% 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	1.7 million eligible individuals provided with TPT ¹⁵
SUSTAIN	57,000 health workers trained	33,180 health workers trained ¹⁶	163,538 health workers trained ¹⁷	360,488 health workers trained ¹⁸

¹⁴ *2022 data include the addition of Pakistan as USAID's 24th TB priority country. Data for previous years were based on 23 priority countries.

¹⁵ Household and close contacts of bacteriologically confirmed pulmonary TB

¹⁶ 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 health care workers at the primary health care level with often large workloads. During the pandemic, under-resourced TB personnel were re-purposed and deployed in response to COVID-19, due to having applicable skills and experience.

¹⁷ 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).

¹⁸ 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 is 2022 was projected for those four countries.

STRATEGY IMPLEMENTATION

Through USAID's Global TB Strategy, USAID works with partners in the Agency's 24 TB priority countries to achieve the global targets through 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

Lung Health Days Improve TB Case Finding in the Philippines

In the Philippines' Subic municipality (population 112,000), TB has remained a leading cause of morbidity and mortality. To address this, USAID collaborated with the Department of Health and the local government unit to intensify community awareness of TB, improve health seeking behavior, and actively find TB cases.

In January 2022, the municipality declared every first Thursday of the month as Lung Health Day, with the aim to raise public awareness about TB and increase TB detection through the integration of screening activities in other medical services available to the public. As part of its support, USAID provided a van equipped with an ultra-portable digital X-ray with computer-aided detection (CAD) technology and Artificial Intelligence (AI) functionalities to screen targeted groups at higher risk for TB, including health care workers, tricycle operators, drivers, and LGBTQI+ individuals.

Over four consecutive months, of the total individuals with bacteriologically confirmed TB, one person was diagnosed for every 54 people screened. The targeted group screenings yielded a higher rate, with one person diagnosed for every 29 people screened. This is just one of the many examples of active case finding efforts contributing to the Philippines' 36 percent increase in TB case notifications from 2021 to 2022.



The TB screening van. Photo: USAID

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

Improving DR-TB Treatment Success in Indonesia

To improve DR-TB treatment success rates in Indonesia, USAID's faith-based local partner, Muhammadiyah works with Muhammadiyah's Gombong Hospital to establish DR-TB services. The program provides support to those undergoing DR-TB treatment through family support groups. The groups, through the local village and hospital, help find solutions to treatment completion challenges including management of treatment-related side effects, access to food, transportation

assistance, and financial support. This collaboration between the USAID project, the hospital, and the local health office has not only improved care but strengthened the local health care infrastructure and provided hope to those battling DR-TB in Indonesia. USAID support to programs like this have contributed to a 62 percent increase in Indonesia's DR-TB treatment enrollment from 2021 to 2022, and an 11 percent increase in the country's DR-TB treatment success rate.



A DR-TB support group. Photo: TBPS

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

An Integrated Infection Prevention and Control Approach

As TB is an airborne disease, Infection Prevention and Control (IPC) measures are key in reducing TB transmission. In the Kyrgyz Republic, USAID supported the introduction of a comprehensive IPC approach in 12 general hospitals, which receive some of the highest number of individuals with presumptive TB. Aligning with the latest WHO recommendations, this approach included training health care workers in hospital admission departments, systematic screenings, and creating isolation wards to safely house individuals with TB symptoms while they await diagnostic test results—in addition to active case finding (ACF) efforts and the provision of TPT to prevent further spread of TB. Based on this successful IPC intervention pilot in general health facilities, the package of TB IPC tools was integrated into the country's National Tuberculosis-VI (2023-2026) Strategy, applying to all health facilities, including the primary health care level.

Nigeria Increases TB Preventive Treatment Enrollment

TB preventive treatment (TPT) used to require taking multiple pills daily for six months or more. Now, there are short-course regimens that reduce the pill burden and treatment duration, making it more likely that individuals will complete the full treatment cycle.

In Nigeria, in November 2022, Akwa Ibon State community health care worker Ekereobong Ikobo noticed her four-year-old son, Ubong Obasi, had a cough that continued for several days. "I became concerned. Three days later, I arrived home from work, and my children informed me that some representatives from [USAID's local partner] visited our community and collected stool samples for TB testing," she said. "Hearing the news was relieving and reassuring."

Test results indicated that Ubong had tested positive for TB, and he was referred to the general hospital for treatment. Community health care workers then further investigated all household contacts. Fortunately, the rest of the household tested negative for TB, and TPT medication was administered to all members to prevent further disease. Ubong successfully completed his treatment and is in good health, and no other household members developed TB. In Nigeria, efforts such as community screenings have contributed to a more than five-fold increase in the number of contacts enrolled on TPT from 2021 to 2022, and a more than nine-fold increase from 2019 to 2022.



Ekereobong Ikobo (second from right) with community health workers. Photo: KNCV Nigeria

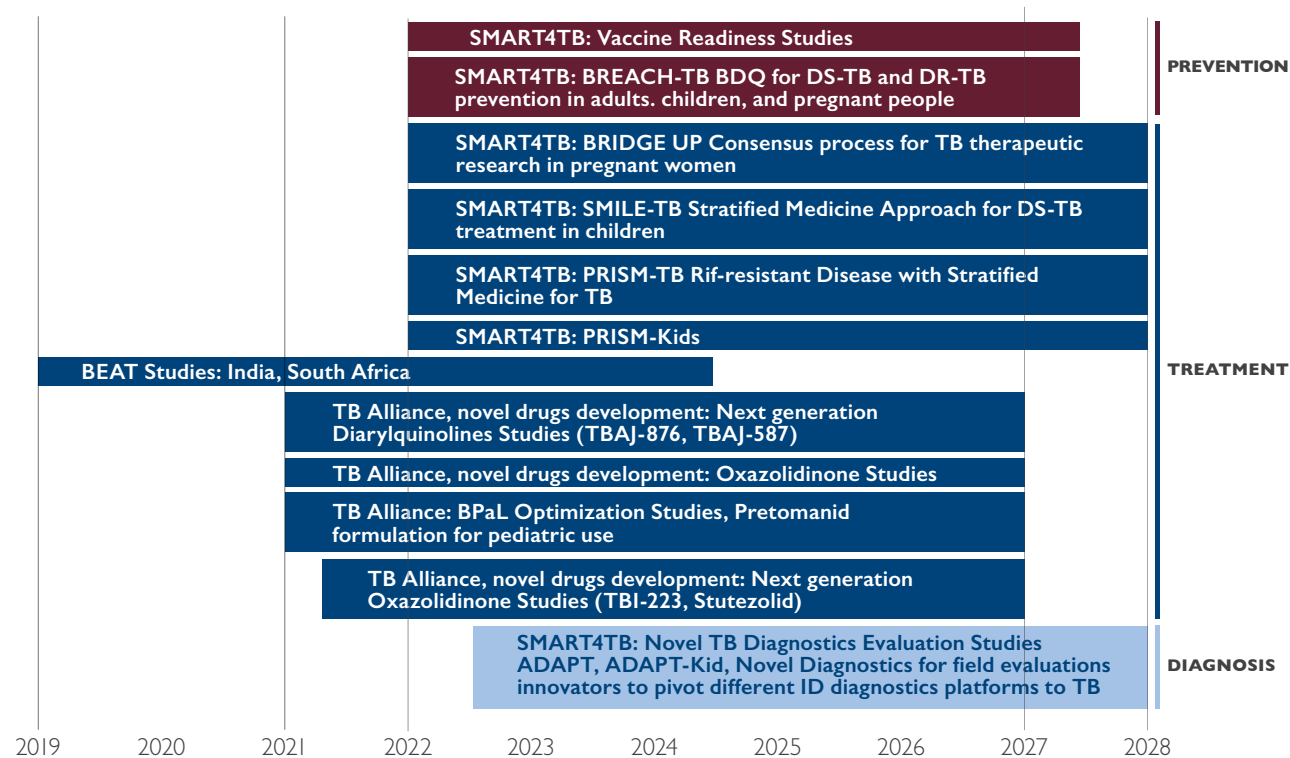
➤ INNOVATE: RESEARCH, DEVELOP, INTRODUCE, AND SCALE-UP NEW TOOLS AND APPROACHES TO COMBAT TB

USAID’s Focus on Research

USAID’s research efforts aim to identify new tools and approaches that will significantly advance rapid TB detection and cure rates. USAID’s diagnosis research efforts include the evaluation of a new swab-based TB test that could increase the number of people accessing molecular testing for TB and eventually improve DR-TB diagnosis and supporting efforts for innovators to apply COVID-19 diagnostic concepts to TB to increase the availability of new TB diagnostic tools. For treatment, USAID continues to support studies evaluating novel TB treatment compounds that can be incorporated into new shorter and more tolerable treatment regimens, as well as studies that evaluate the efficacy and safety of various short-course combinations of new DR-TB medicines—such as bedaquiline (BDQ), delamanid, pretomanid, and linezolid. USAID plans to include populations typically not included in such studies, such as children and pregnant people, in future research. In 2022, USAID supported the planning of BREACH-TB, a new clinical trial that will evaluate the efficacy and safety of BDQ for TB and DR-TB prevention.

USAID also engages public and private sector research and academic institutions to strengthen local partner research in high TB burden countries and support studies that evaluate novel approaches, interventions, and tools to combat TB—including diagnostic tests, new treatment drugs and regimens, socioeconomic and health system challenges, methods to interrupt TB transmission, and TB vaccine readiness and delivery.

USAID TB RESEARCH PORTFOLIO SNAPSHOT



Using Artificial Intelligence to Screen for TB in Vietnam

USAID continues to support new tools and interventions to combat TB. In Vietnam, the country’s national algorithm for TB screening is called the Double X strategy, which consists of screening individuals at risk for TB using digital X-ray first, then testing those with abnormal results with GeneXpert. In 2022, to help further increase TB case notifications in the country, USAID supported the incorporation of ultra-portable digital X-ray systems with CAD technology with AI functionalities into the Double X strategy. These innovative X-rays have been rolled out in primary health care facilities and community-based settings in four provinces. This approach helps find individuals with TB earlier, and the new tools help address health care worker shortages,

since the AI function does not require experienced radiologists at this level to read the results.

Utilizing this approach, Vietnam has successfully reached hundreds of individuals with TB who would have otherwise gone undetected, enabling them to access the care they need earlier and reducing community transmission. As of March 2023, more than 32,000 individuals were screened. Of these, 3,500 individuals had abnormal chest X-ray results, and more than 400 individuals were diagnosed with TB. This contributed to Vietnam reporting a 32 percent increase in TB case notifications, and a 36 percent increase in DR-TB case notifications and enrollment on treatment in 2022 compared to 2021.



TB screening using chest X-ray in Vietnam. Photo: FHI360 Vietnam

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

Local Partner Leadership

Local partners are the cornerstone of ensuring the sustainability of country TB systems and services. Since the launch of the Accelerator in 2018, USAID has made 48 direct awards to 39 local organizations in 24 countries, including faith-based groups and new partners. More than 42 percent of USAID's TB country funding goes directly to local partners, a steady increase since last year and a nine-fold increase since 2018. To further this, at the 2023 UNHLM, USAID committed to allocating 60 percent of TB country funding by the end of 2027.

USAID's TB program is leading in the implementation of the Agency's Local Capacity Strengthening Policy, which guides investments in local actors. To go beyond direct support and build the next cadre of TB local partners, USAID has helped improve the organizational, management, and technical capabilities of 115 local partners (110 local non-governmental organizations and five local government entities) through TB programming efforts during 2022.



A USAID local partner at a lab in Zambia.
Photo: Cynthia Matonhodze for USAID

Restoring of Essential TB Services in Ethiopia

Ethiopia had made significant gains in its effort to end TB, until multiple internal conflicts disrupted essential TB and other health services. Millions of people were displaced from their homes; road access was hampered, disrupting TB activities; and health facilities were damaged, resulting in the loss or destruction of medical equipment including essential TB diagnostic and treatment commodities.

In efforts to restore TB services, in 2022, a USAID local partner received a grant to procure and distribute critical equipment and supplies. USAID's local partner collaborated with the NTP, regional health bureaus, and vendors to obtain, transport, and distribute the required supplies to 90 facilities—10 MDR-TB initiating centers; 51 treatment follow-up centers; and 29 GeneXpert sites—in Amhara and Afar, the two regions impacted by conflict.

LOOKING FORWARD

While country TB programs have recovered from COVID-19's impact on TB services, much work remains for countries to reach the Sustainable Development and USAID TB Strategy goals of ending TB by 2030. The 2023 UNHLM provided an opportunity for heads of state and global stakeholders to recommit and refocus global TB efforts, but ending the global TB epidemic will require translating these commitments into actions.

USAID remains committed to leading the global response. In order to leverage additional resources and to support countries in reaching the new UNHLM targets, USAID launched the [Global Accelerator to End TB Plus](#) at the UNHLM. This enhanced package of interventions will drive progress in the fight to end TB through co-financing TB innovations with priority countries, increased support to TB programs in conflict settings, prevention programs and a foundational prevention drug clinical trial, dramatic drug and diagnostic price reductions, and an increased localization commitment.

USAID will continue to increase its efforts through focused interventions that will make the largest impact, in line with the objectives of the Agency's Global TB Strategy, 2023-2030. USAID will also encourage increased efforts and commitments from countries, partners, and donors, which are needed to step up financing for new research, innovation, and overall TB efforts.



Truenat rapid molecular testing device. Photo: Cindy Liu for IDDS

USAID TB PRIORITY COUNTRIES



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:

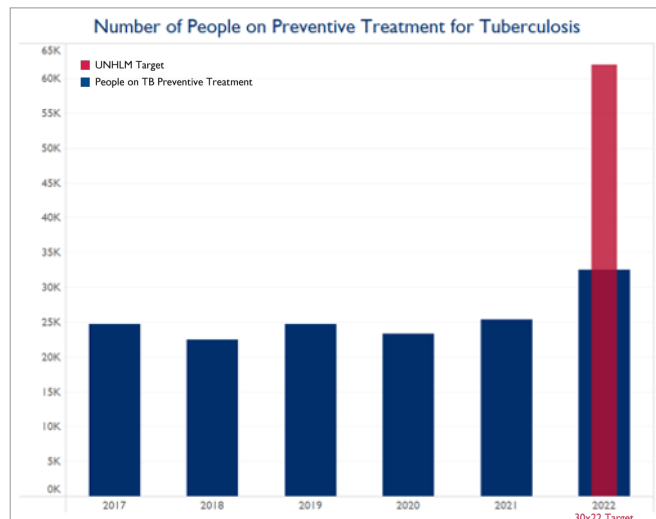
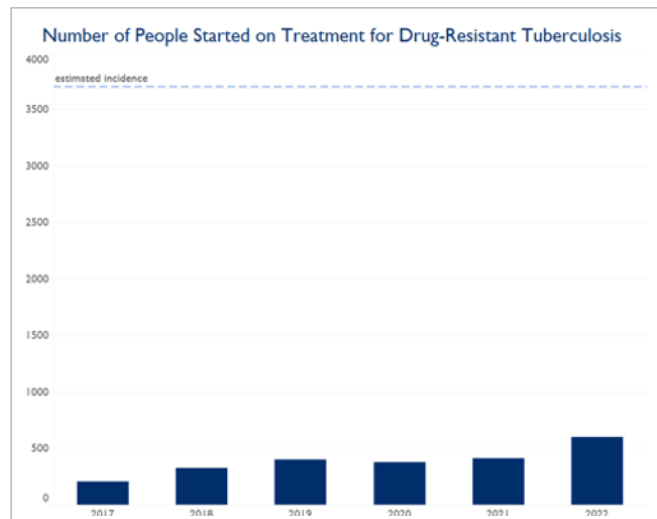
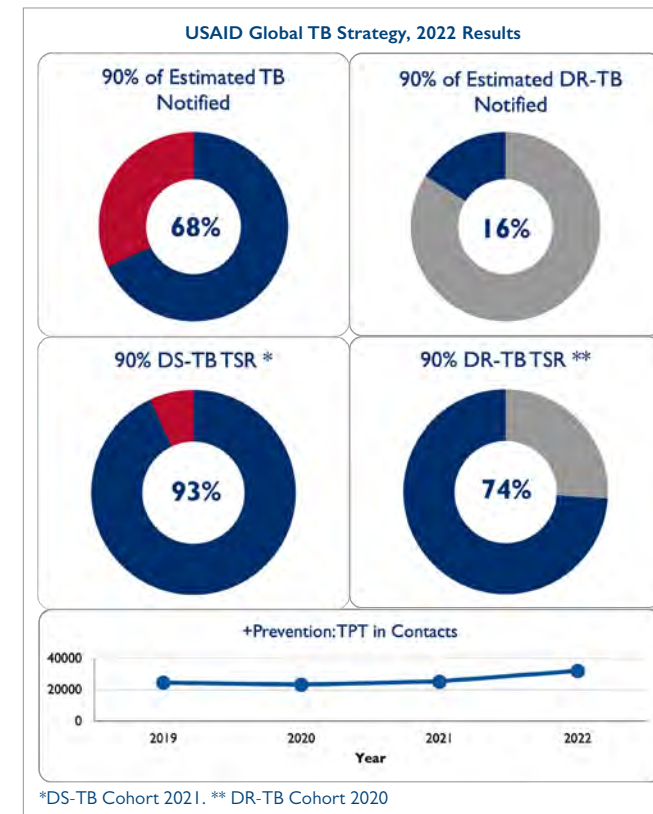
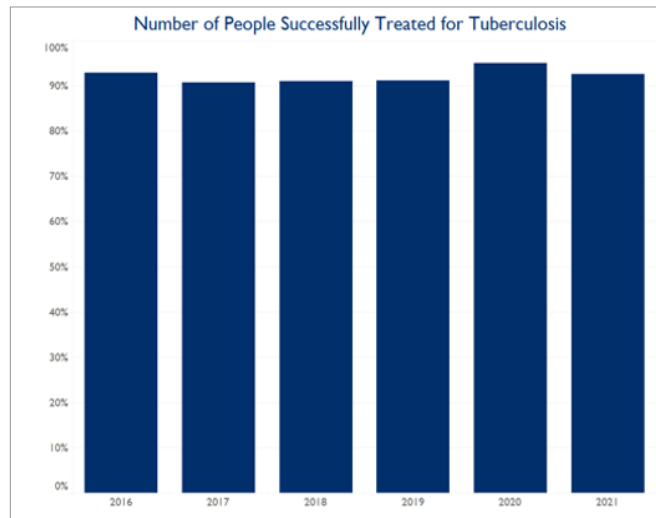
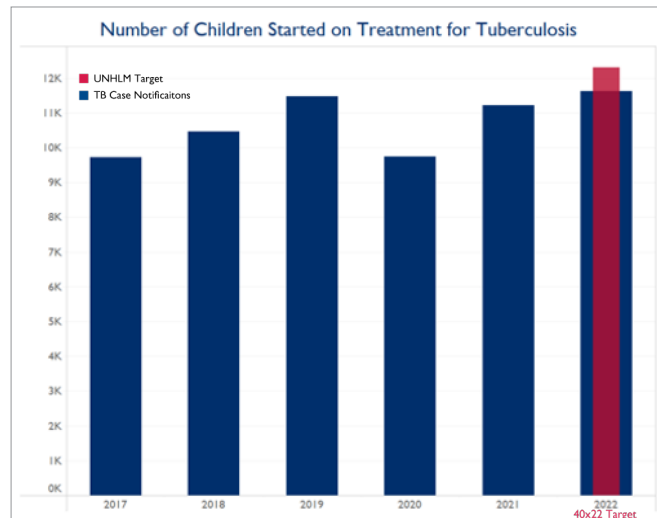
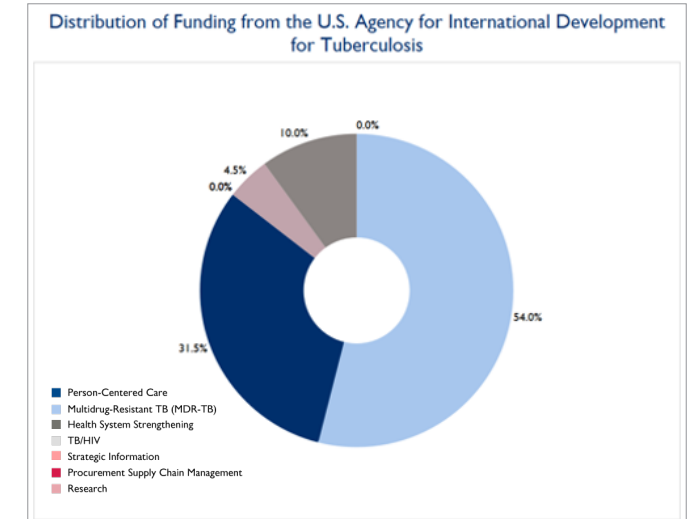
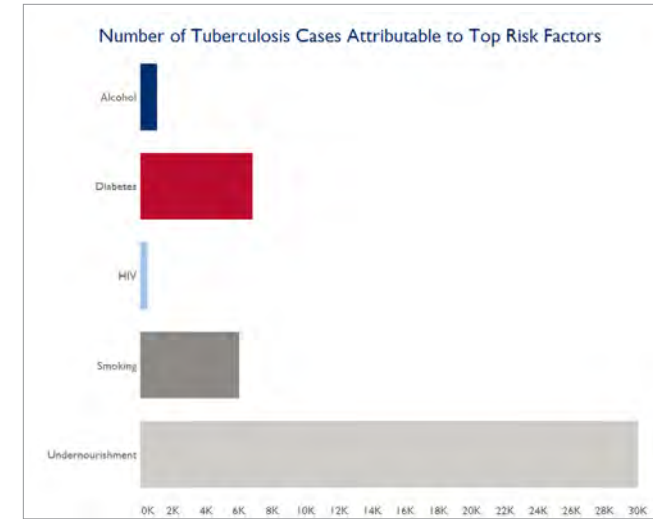
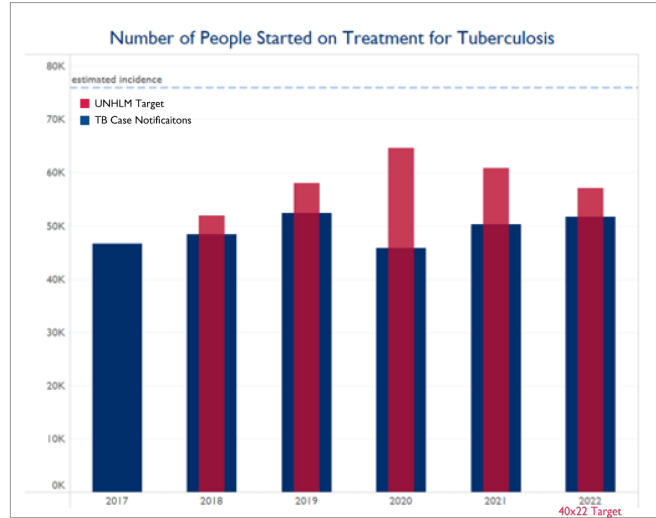
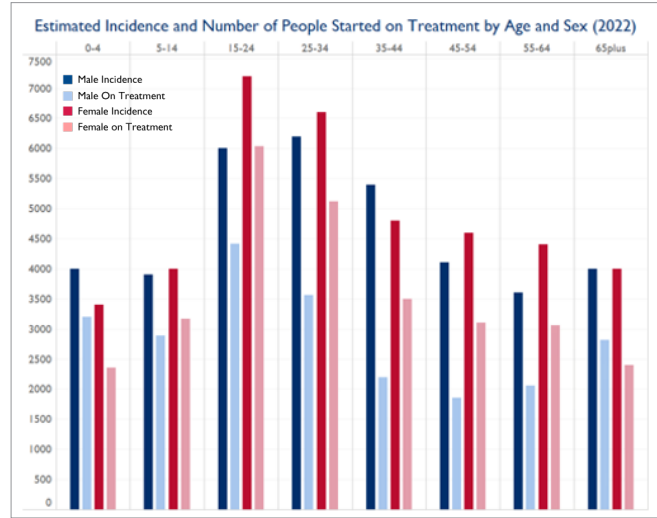
- The charts use 2022 data for the estimated burden.
- Notification data is used as a proxy for diagnosis and started on treatment, unless noted otherwise.
- The Stop TB Partnership calculated the targets for “40x22” (diagnosing and enrolling an additional 40 million people on treatment for TB by 2022, with a focus on countries with the highest burden of the disease) and “30x22” (enrolling 30 million on preventive therapy for TB) by using the latest estimates generated by the World Health Organization (WHO) for the incidence of TB and the number of notifications available publicly. With the exception of the Republics of India and the Philippines, USAID calculated all projections by using the Tuberculosis Impact Model and Estimates (TIME) model implemented by Avenir Health. To reflect country ambition, USAID adjusted upward the targets for TB treatment in India and the Philippines based on their governments’ announcements at the United Nations General Assembly High-Level Meeting on TB (UNHLM) in September 2018. Please note that the Stop TB Partnership updated the targets in November 2019 to reflect most recent burden estimates. This report uses the updated targets for 2019 and onward. Please note that new country level targets will be used next year to align with the 2023 TB UNHLM targets.
- 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 three categories: under-five child household contacts of bacteriologically confirmed TB cases, adolescent and adult household contacts more than five years of age, and persons who are living with HIV (PLHIV). This is in alignment with the goals set at the UNHLM.
- Data for preventative treatment for TB in 2022 were either partially available or unavailable for Afghanistan; Bangladesh; Burma; the Democratic Republic of Congo; Ethiopia; Indonesia; Malawi; Mozambique; South Africa; Tanzania; Uzbekistan; and Zambia.
- 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 a mixture of programmatic challenges with diagnosing and treating the disease in children, as well as data-reporting problems. Furthermore, Cambodia 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 (2022) graph, Uganda did not report disaggregated data to WHO on the number of individuals started on treatment for the 65 plus age group in 2022, and Mozambique reported 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).
- The countries’ results are reported against the new [USAID Global TB Strategy, 2023-2030](#) targets: 90 percent of individuals with TB and DR-TB diagnosed and initiated 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.¹⁹
- 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.
- [Global TB Strategy, 2023-2030](#) results graphs included in this appendix represent the data results for the first year of data governed by the strategy (2022). Going forward these graphs will be replaced with time series graphs to track annual and cumulative progress over time

DATA SOURCES: USAID sourced the data for all of the following pages from USAID internal systems, WHO, and the countries’ TB programs.²⁰

¹⁹ Eligible individuals defined as Household contacts and close contacts of bacteriologically confirmed pulmonary TB.
²⁰ An [accessible version of country data](#) may be accessed at the USAID website.

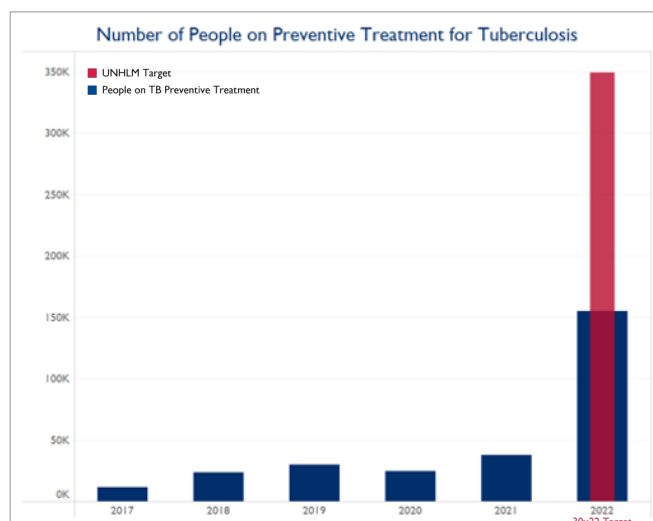
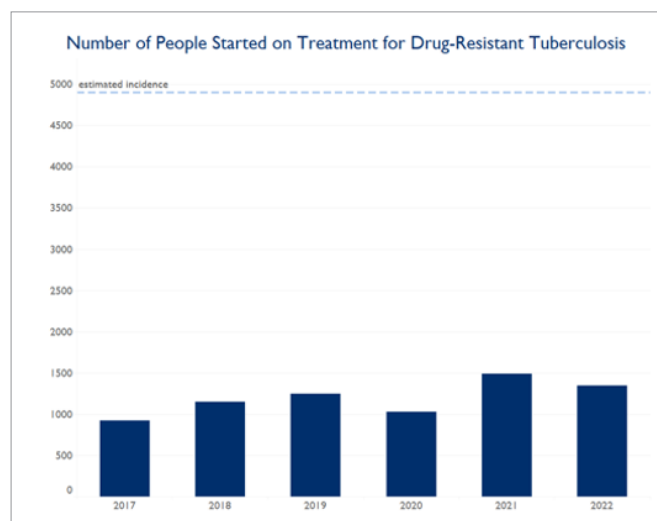
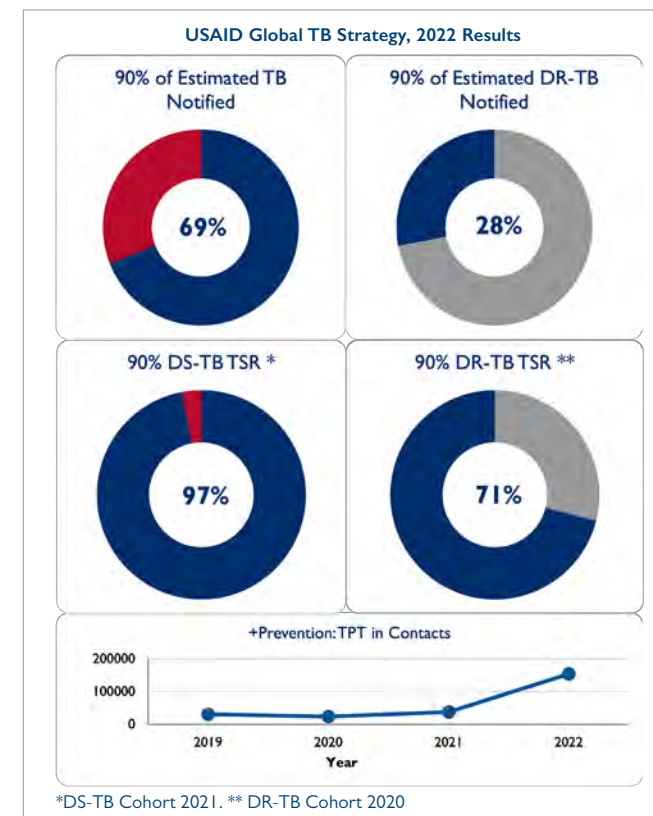
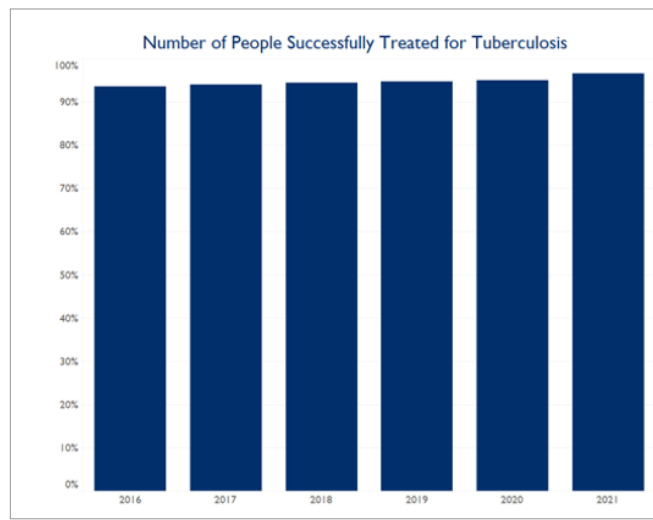
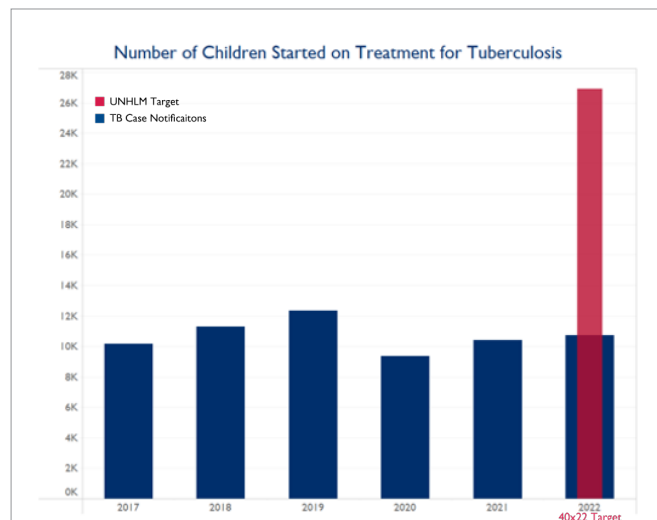
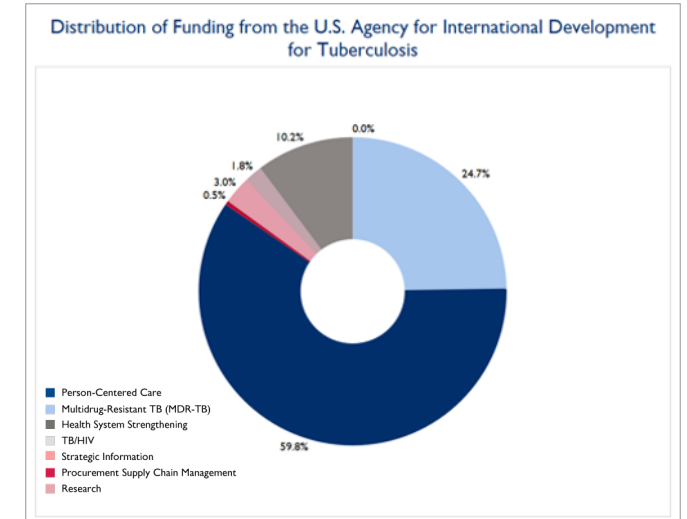
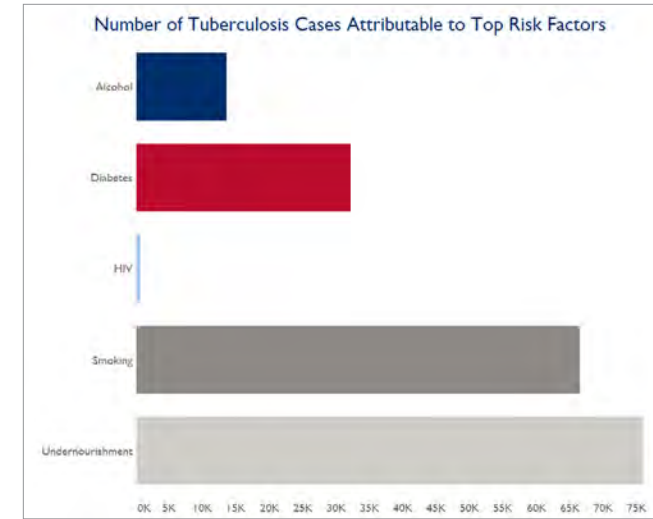
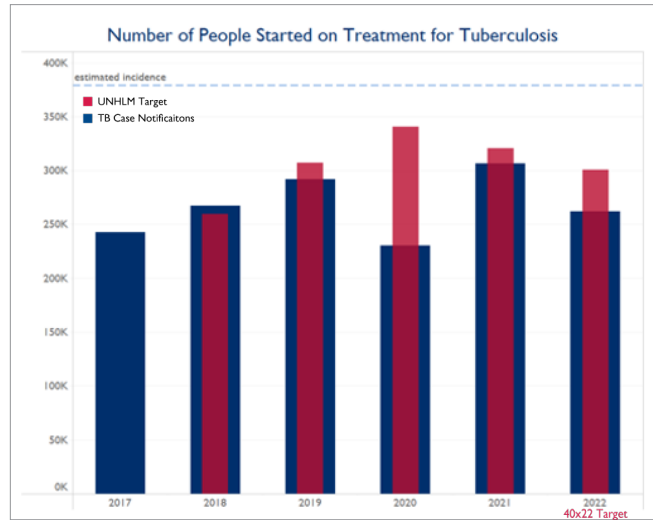
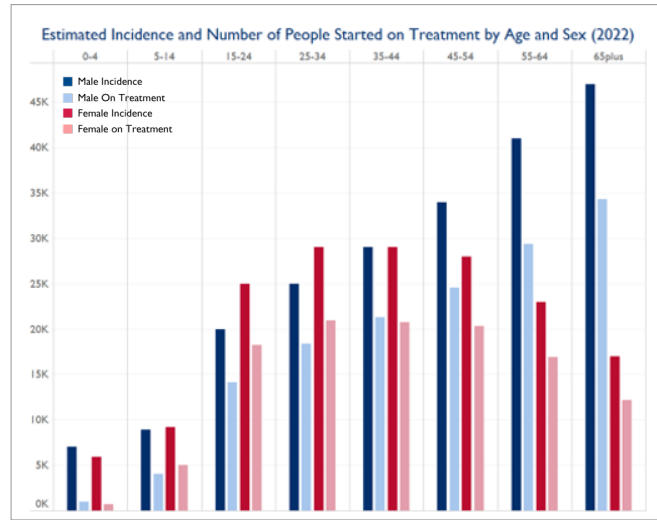
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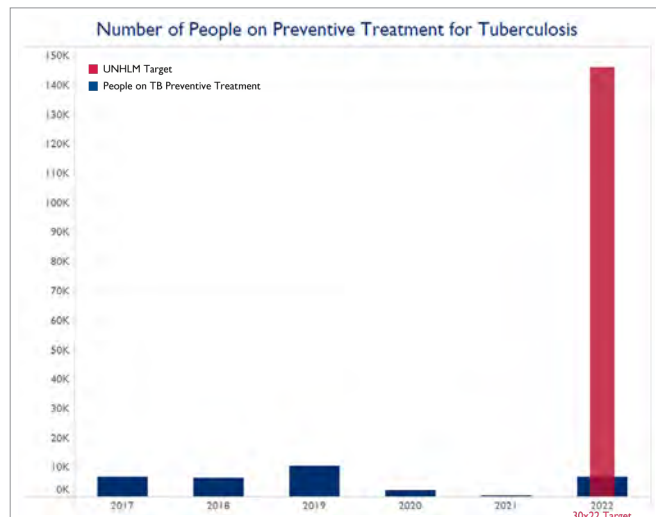
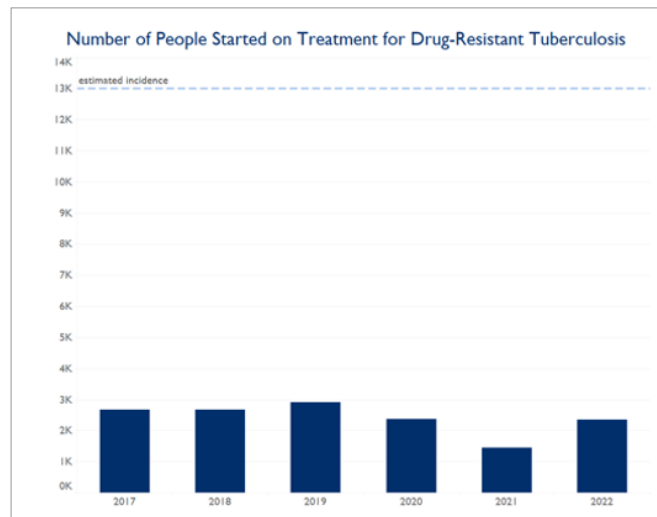
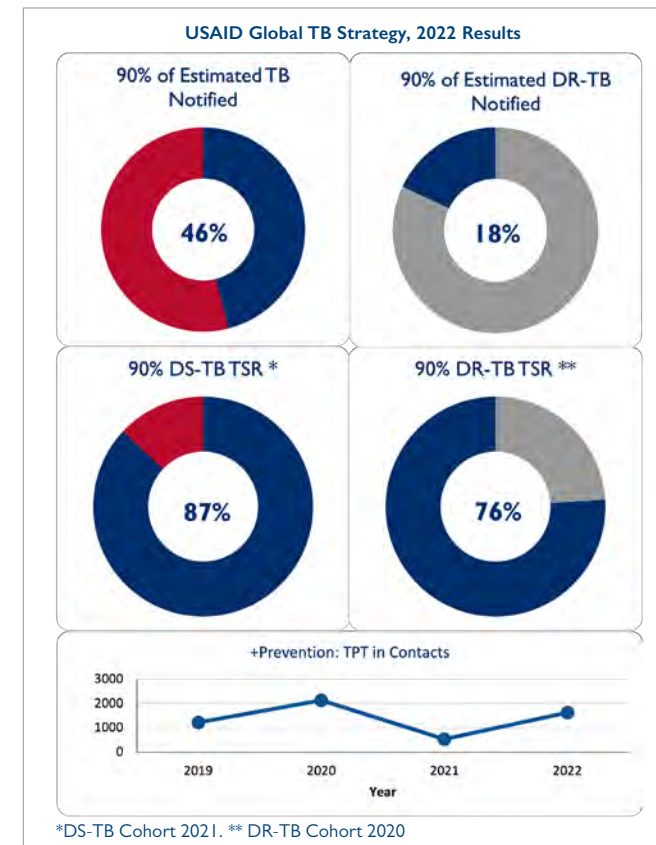
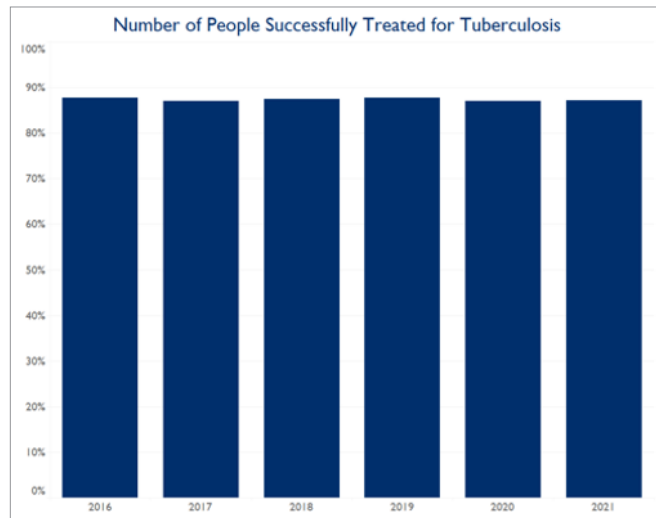
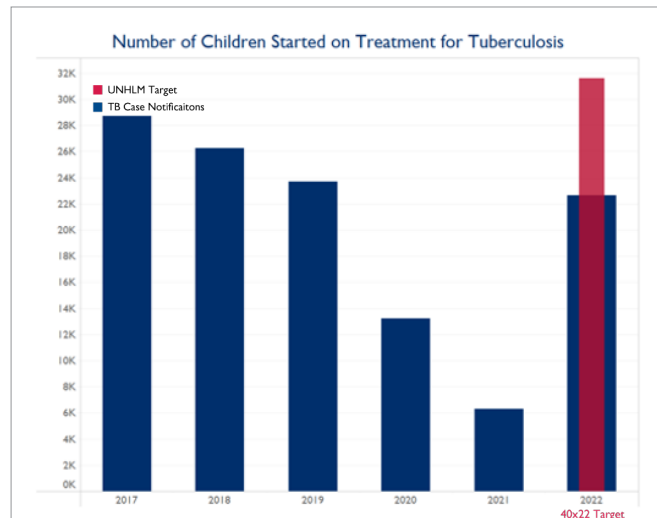
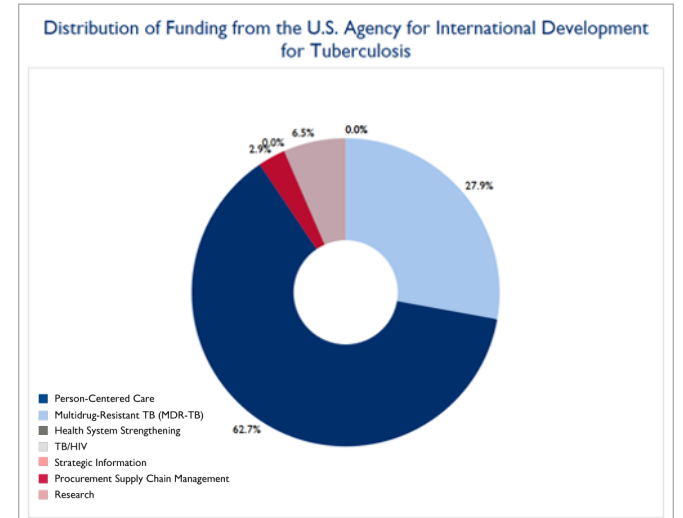
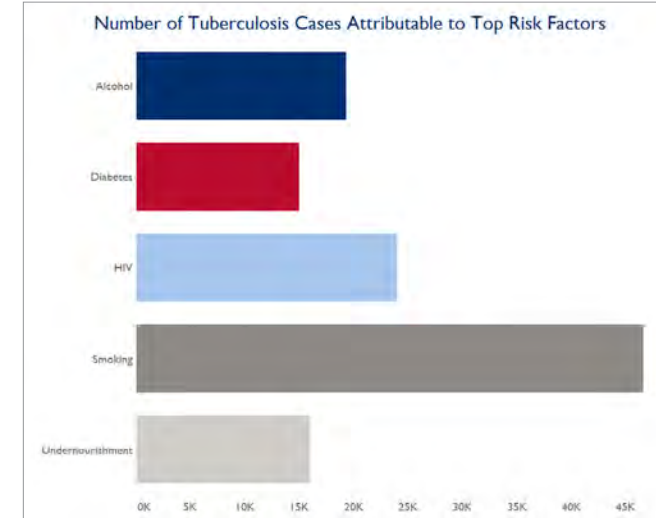
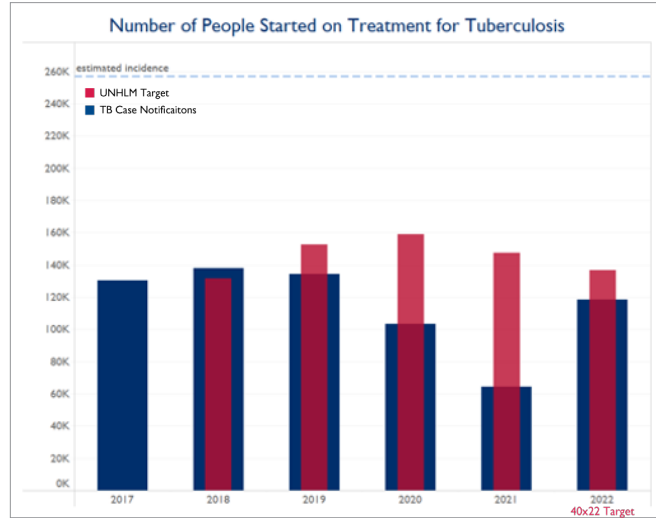
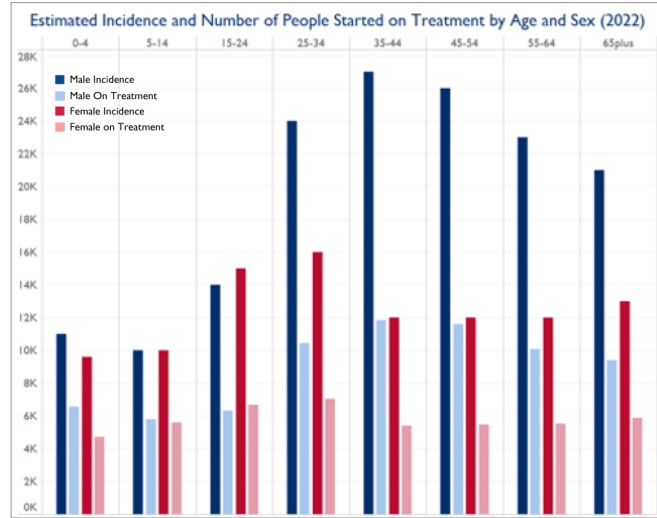
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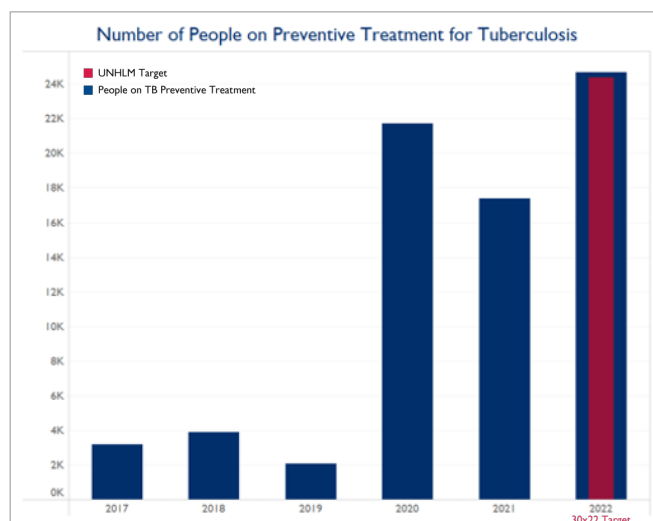
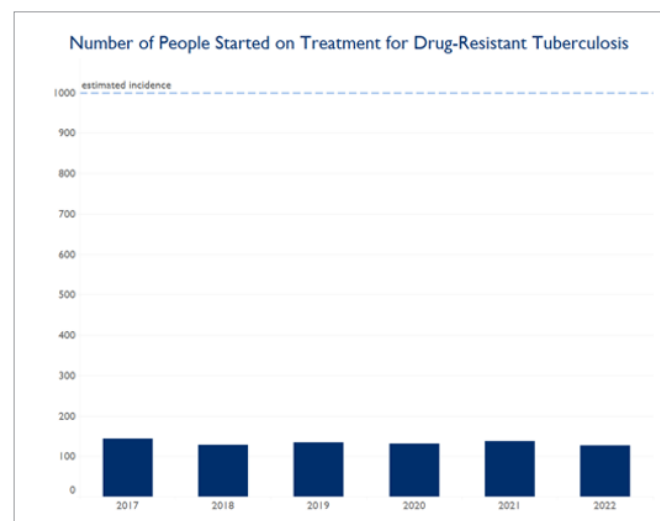
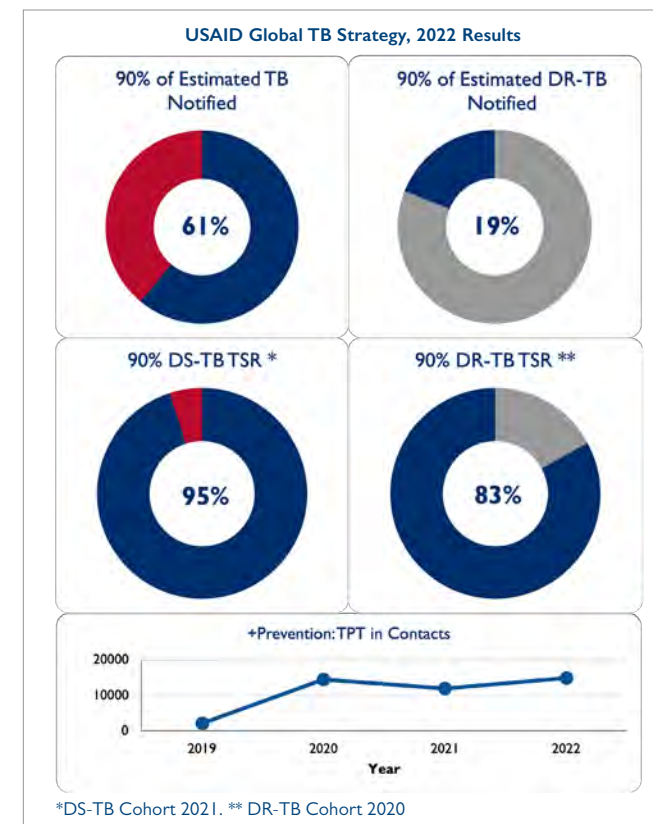
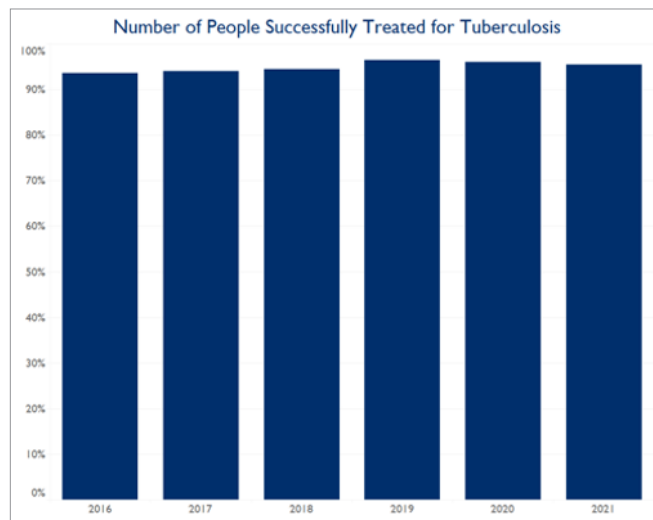
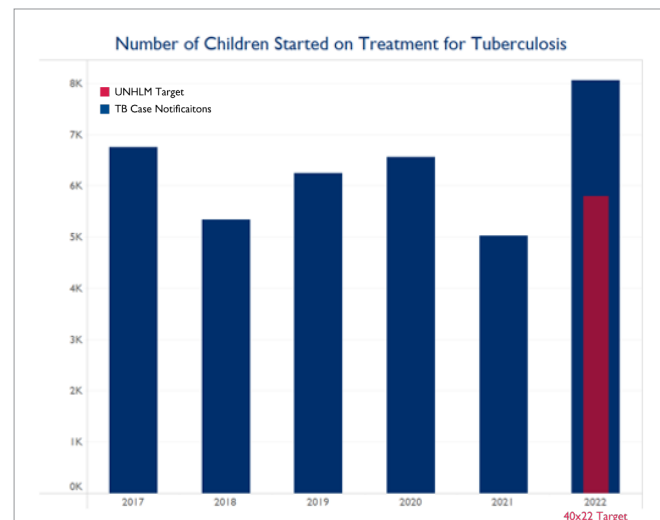
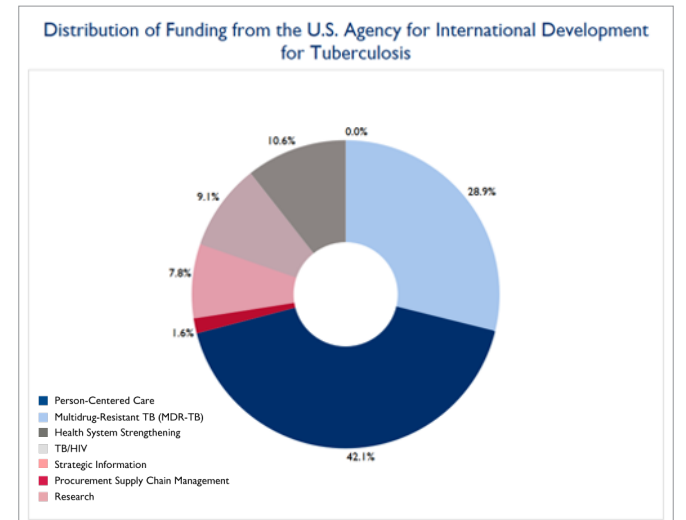
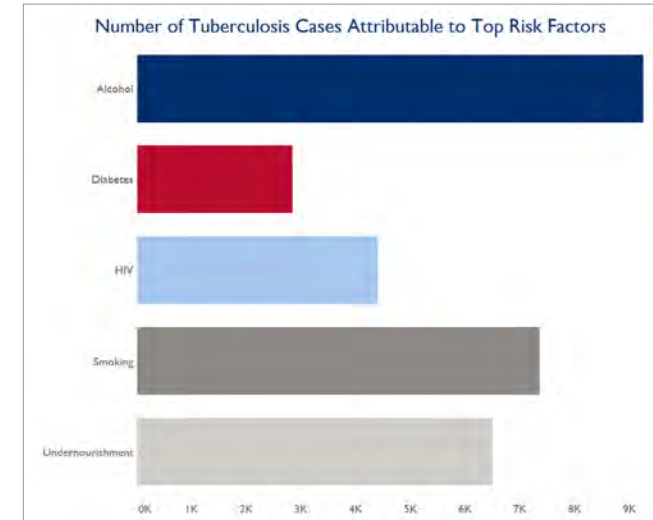
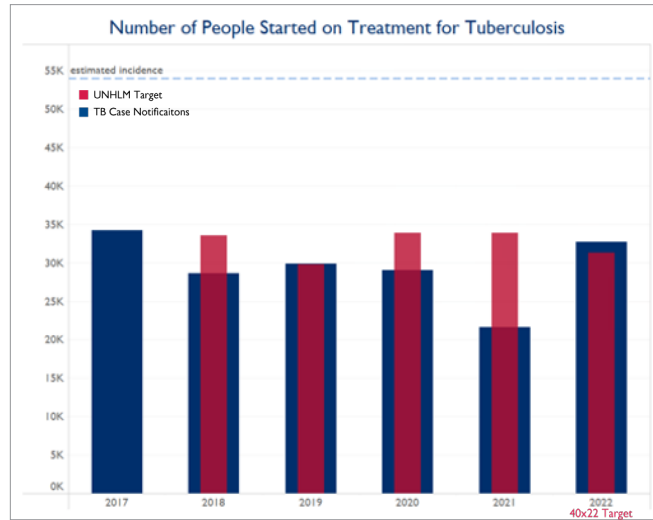
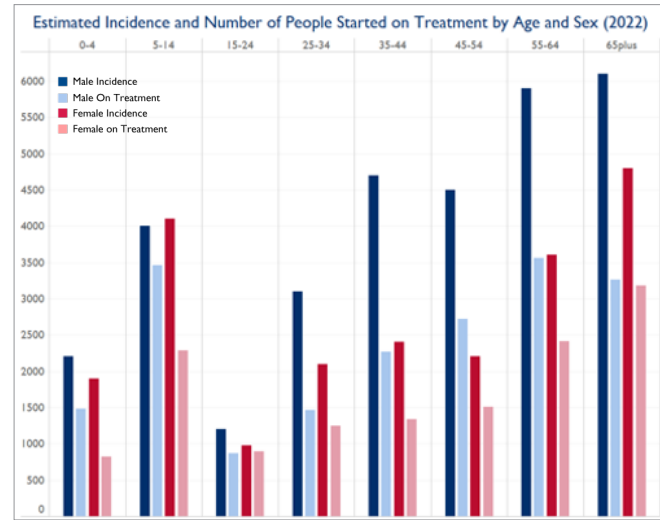
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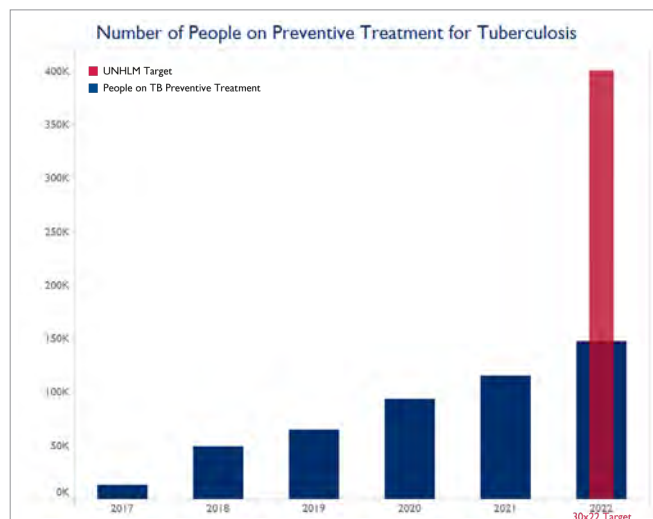
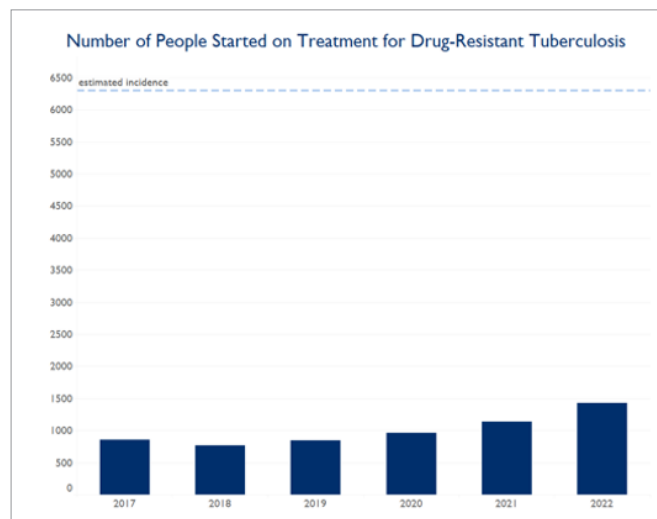
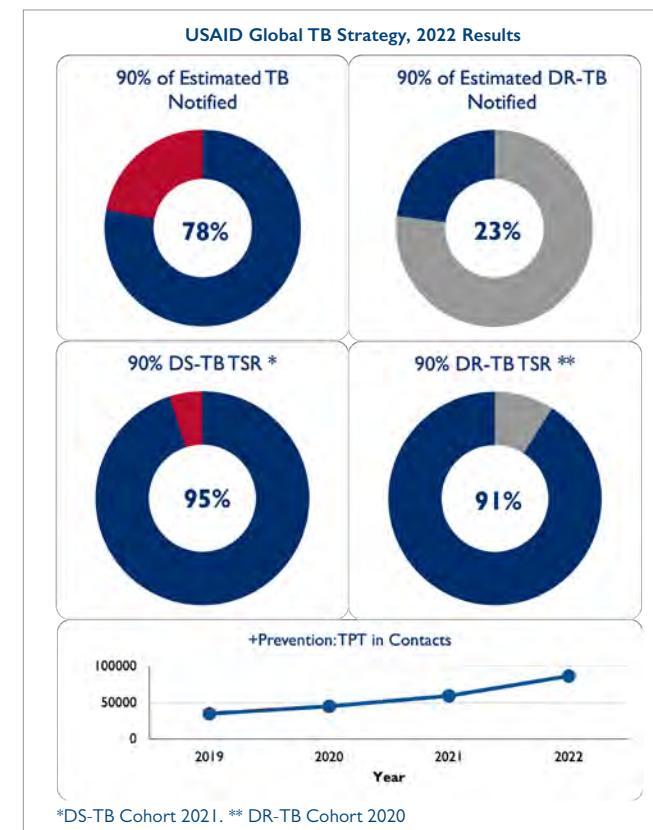
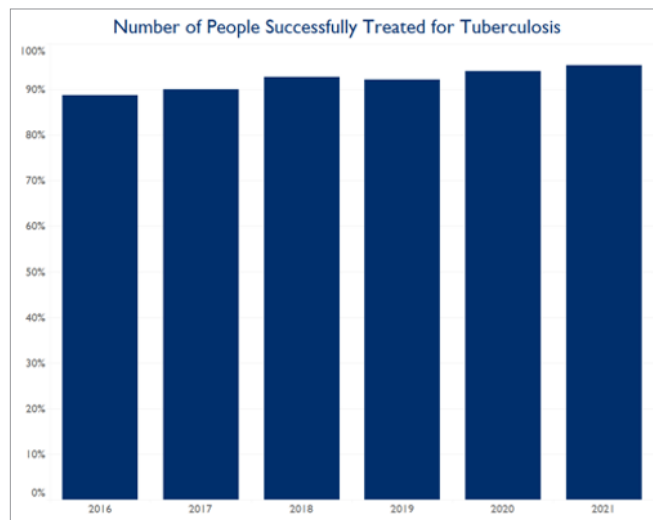
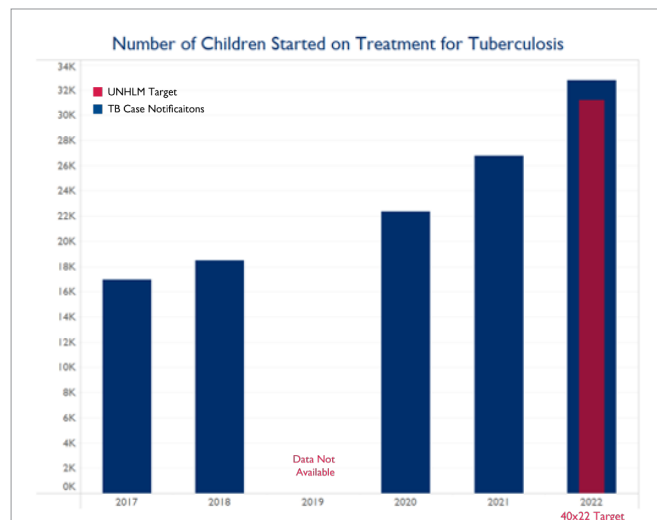
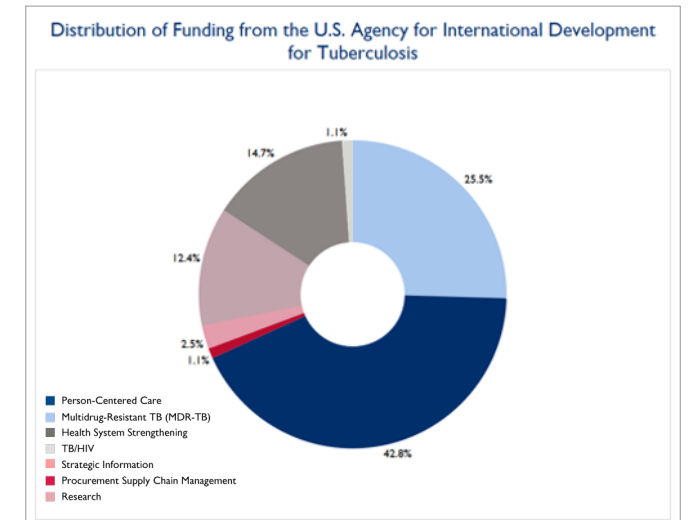
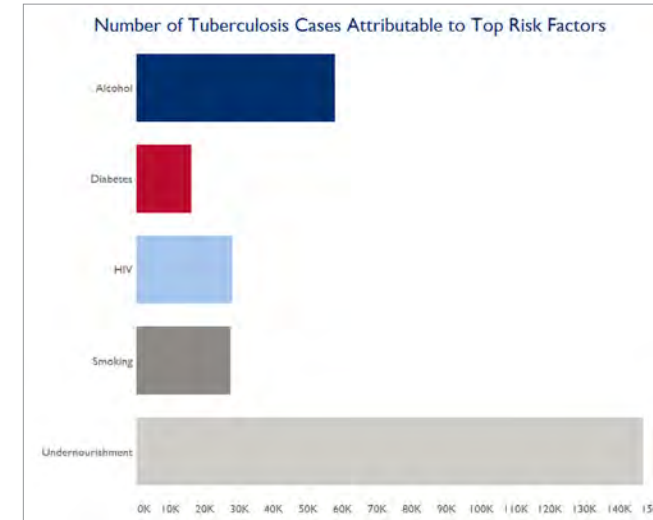
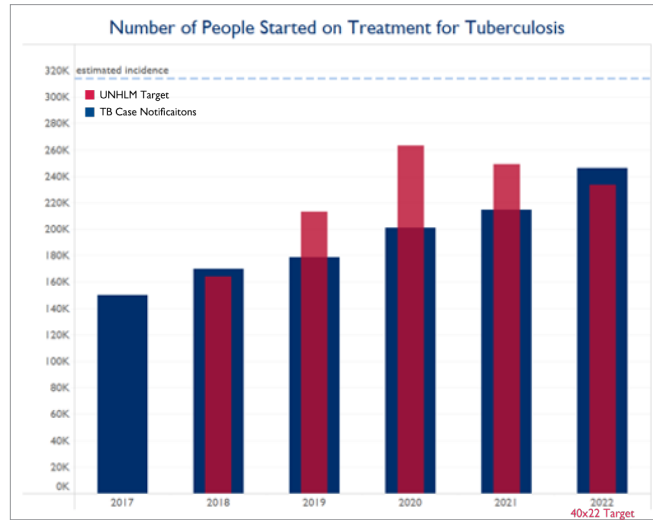
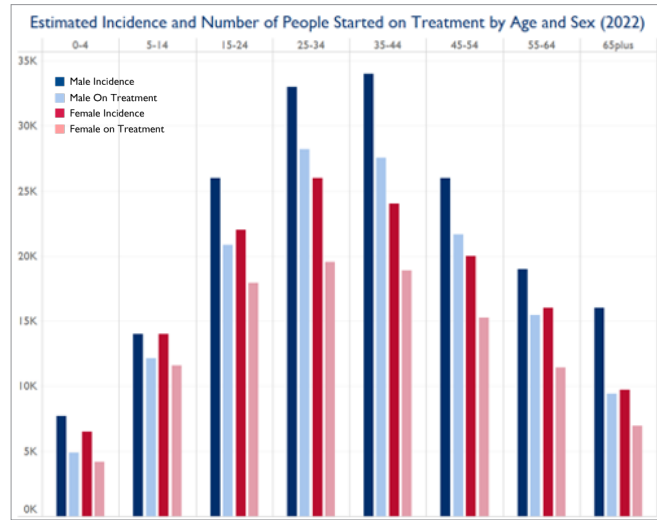


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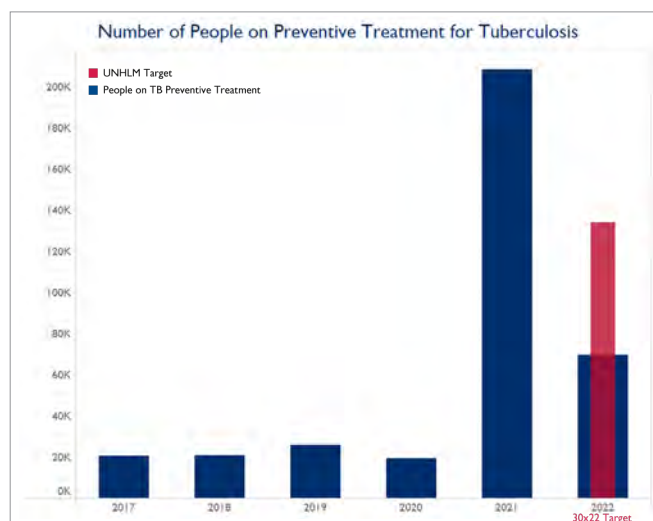
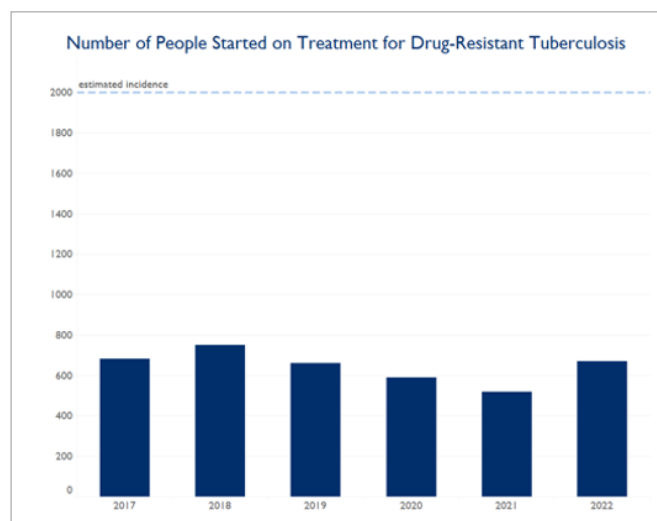
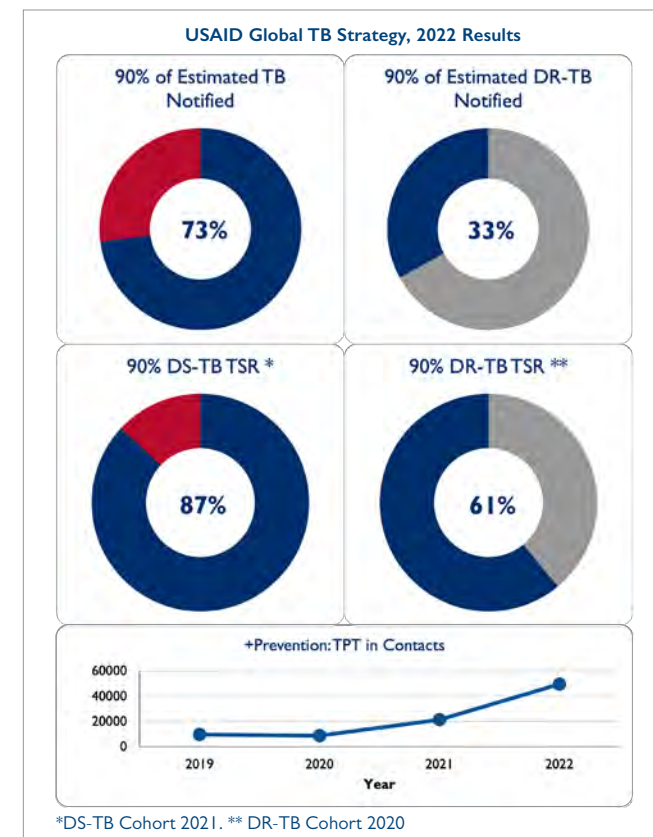
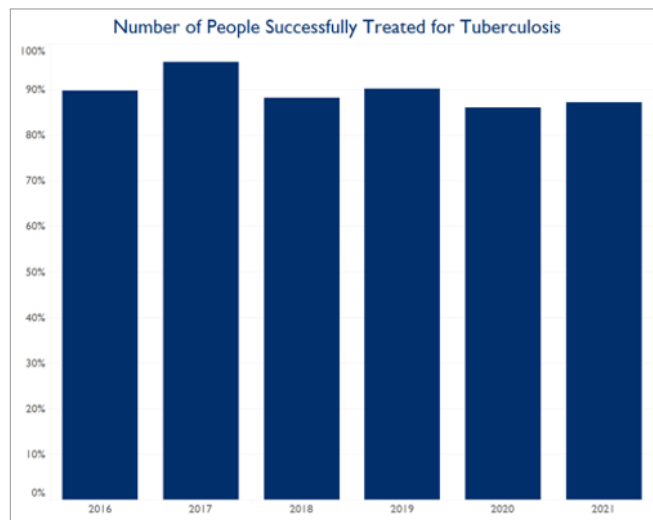
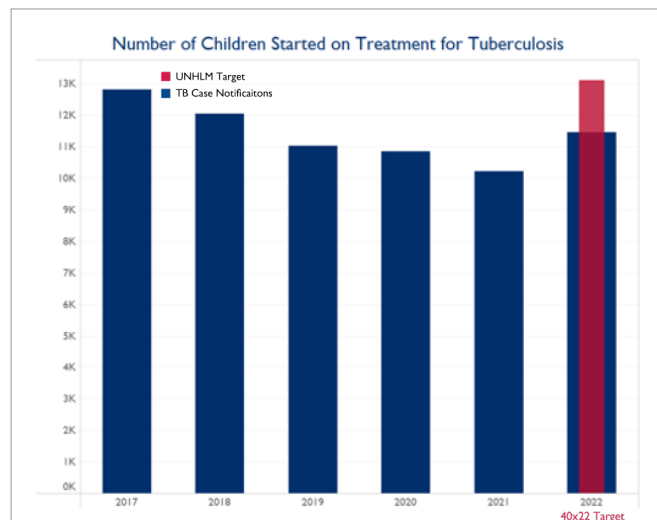
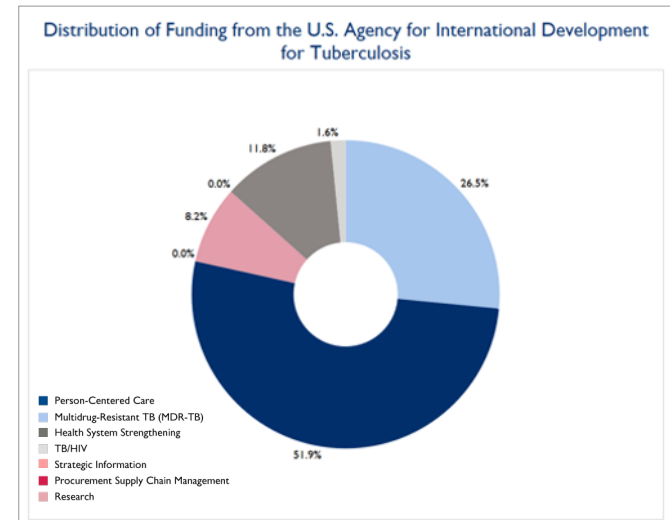
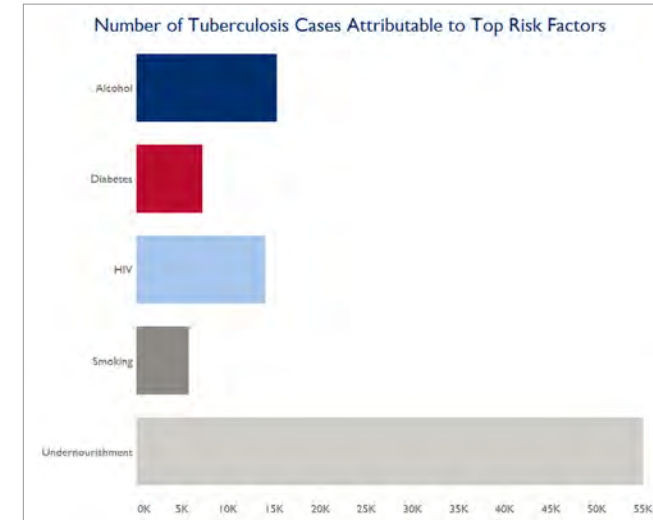
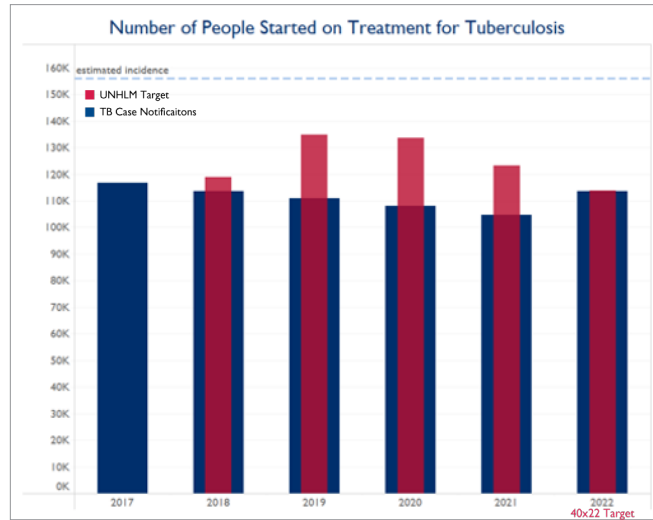
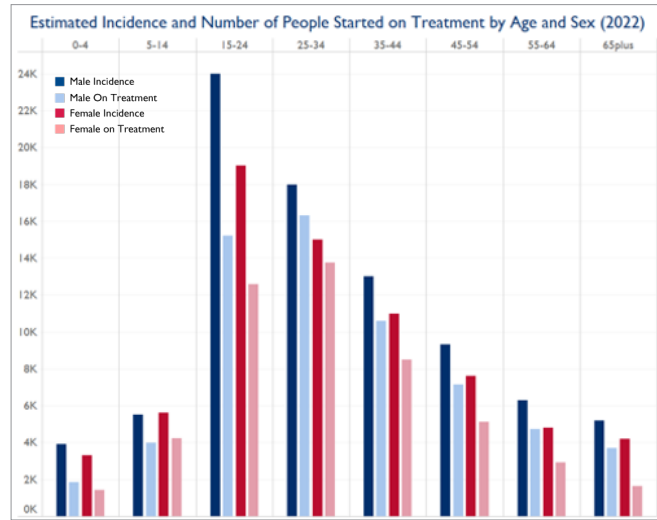
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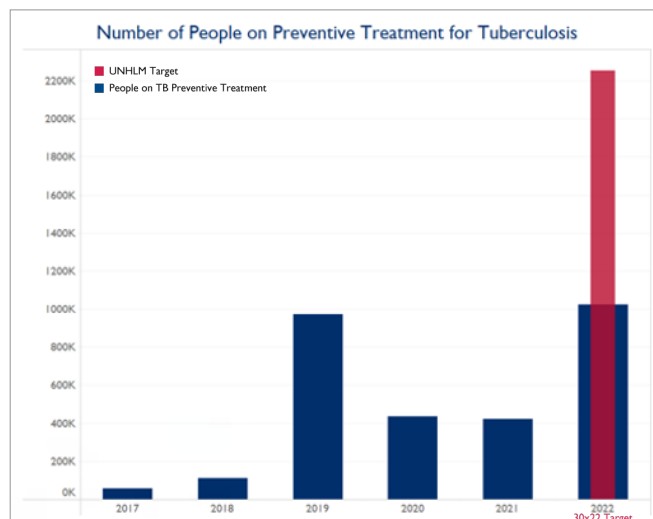
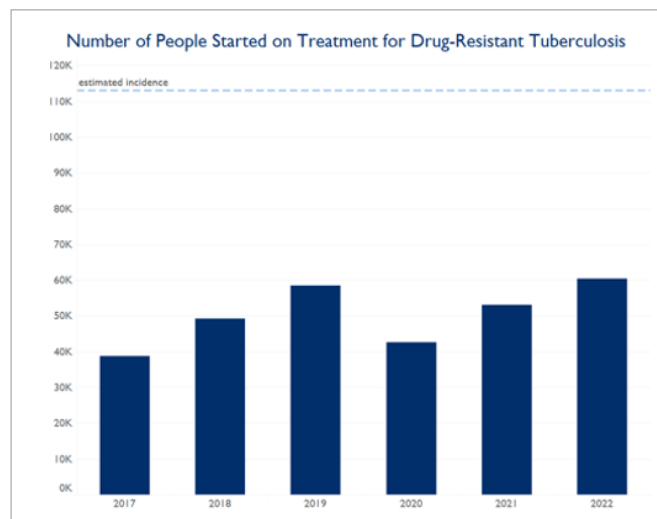
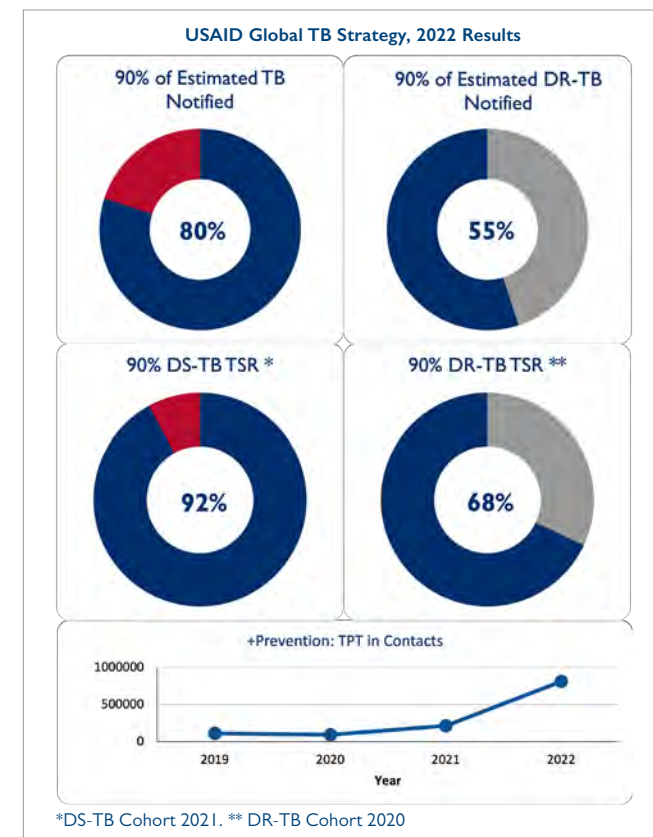
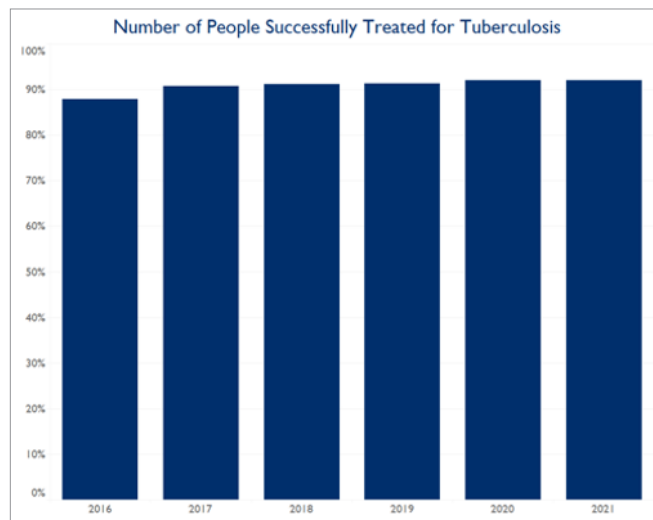
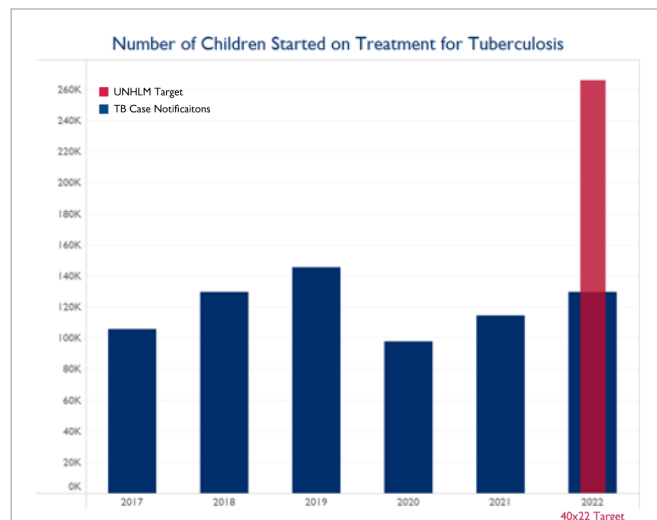
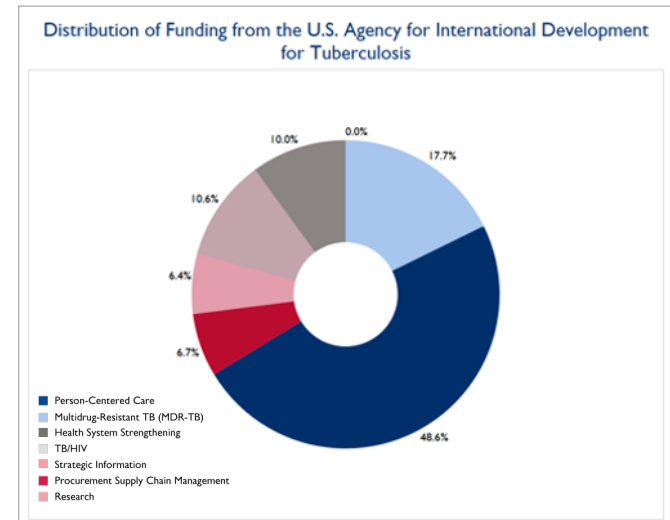
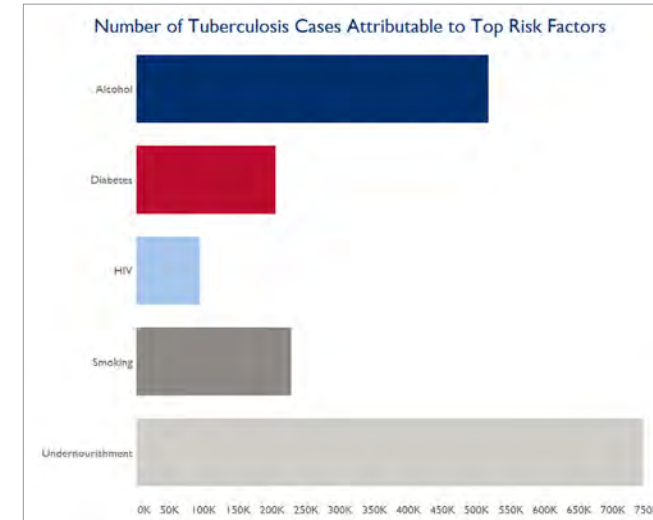
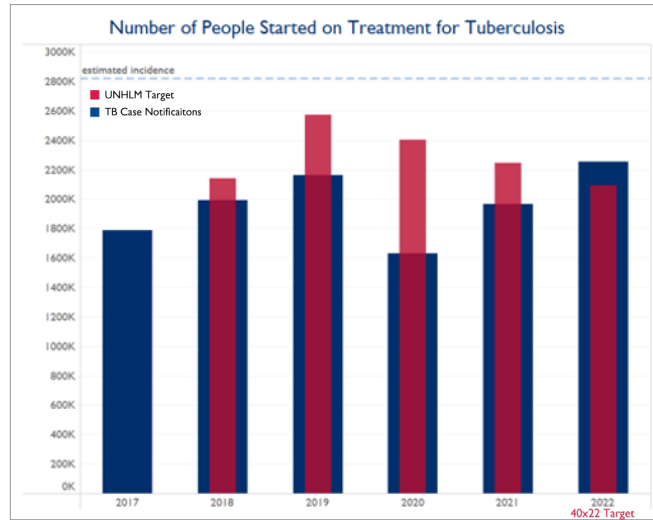
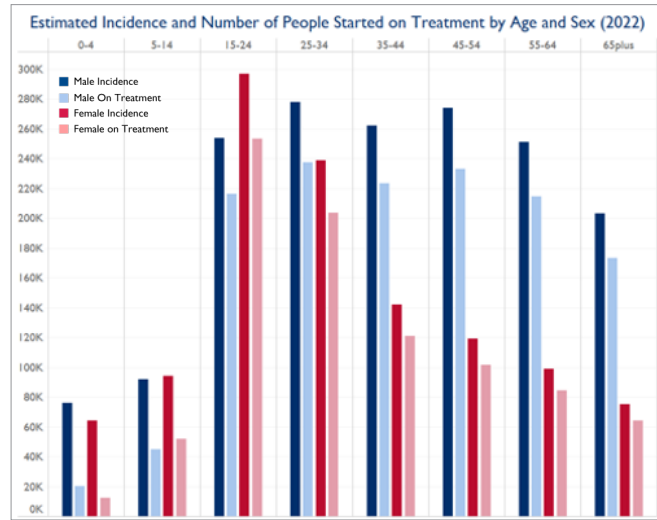
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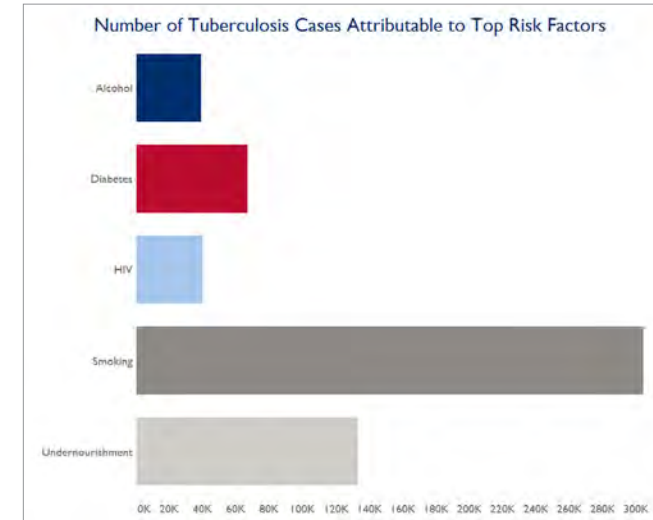
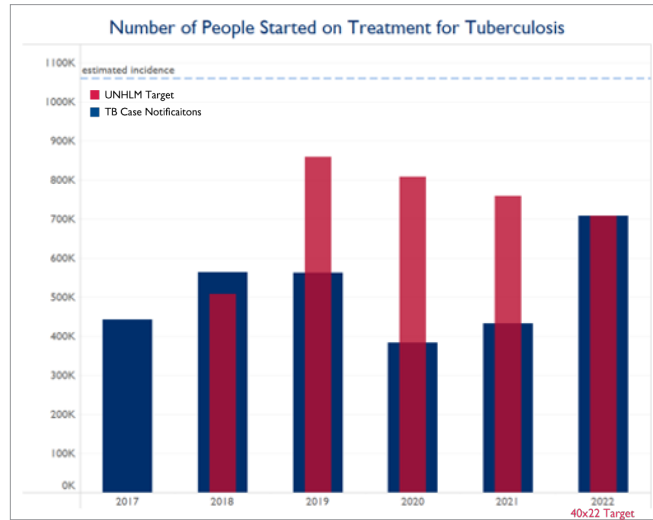
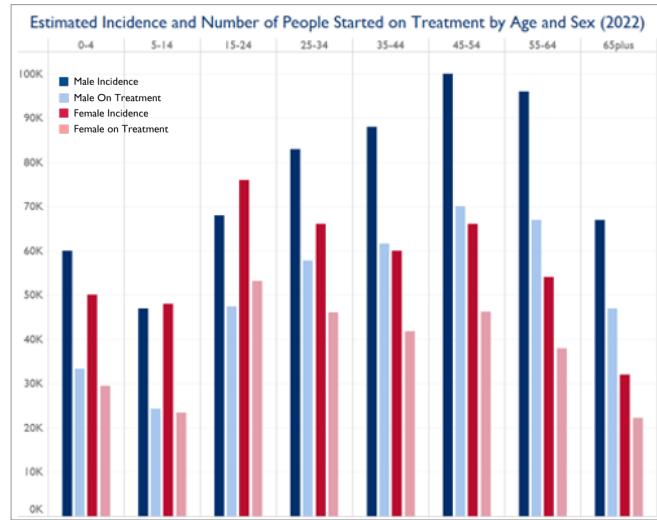


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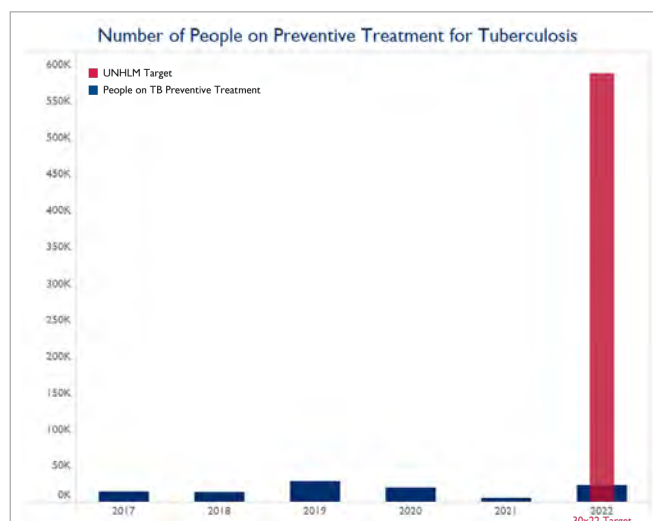
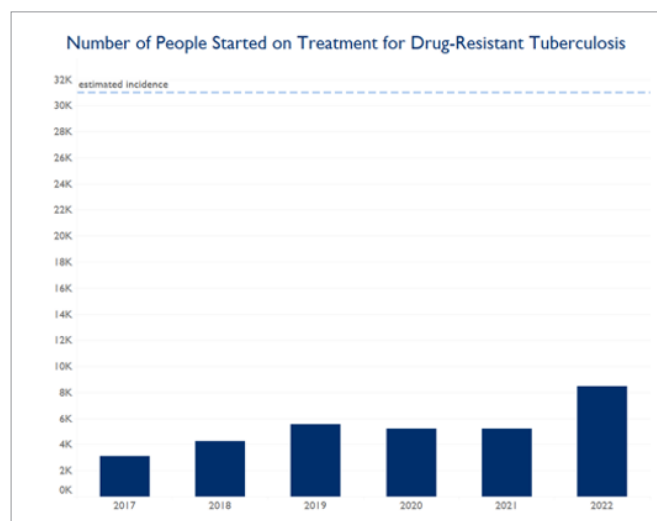
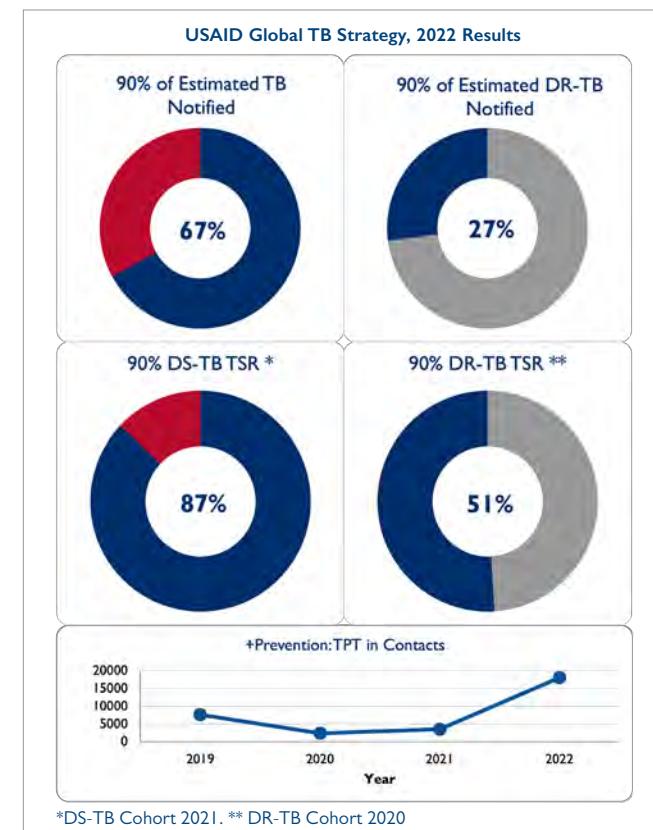
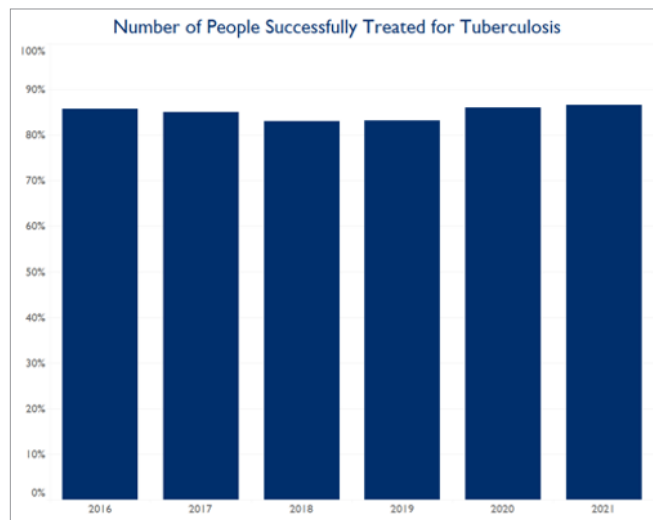
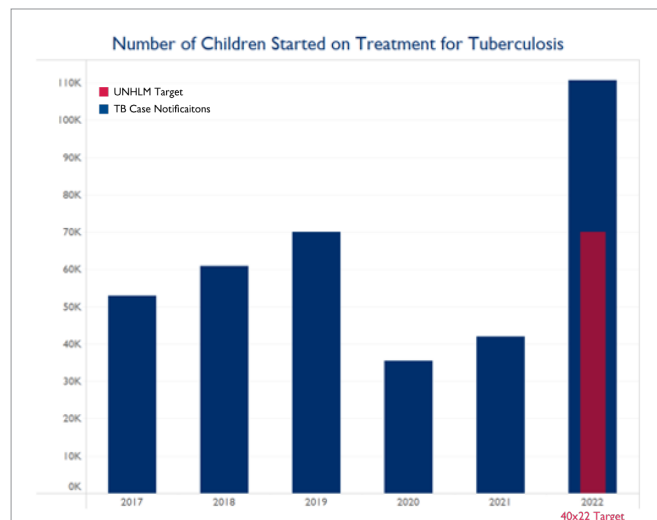
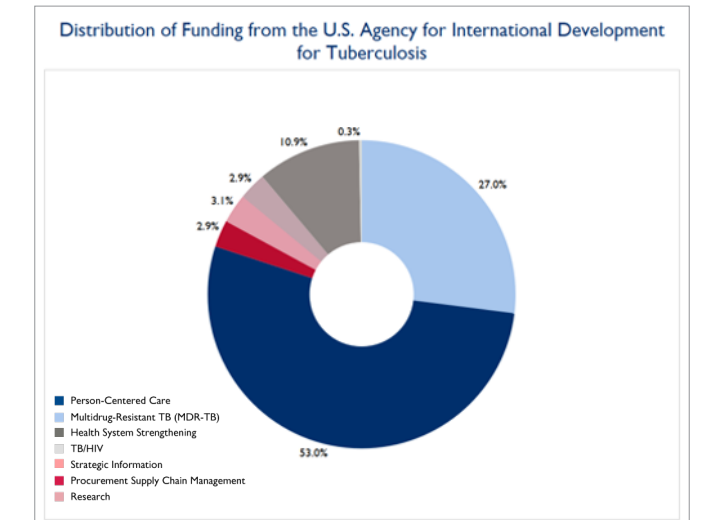
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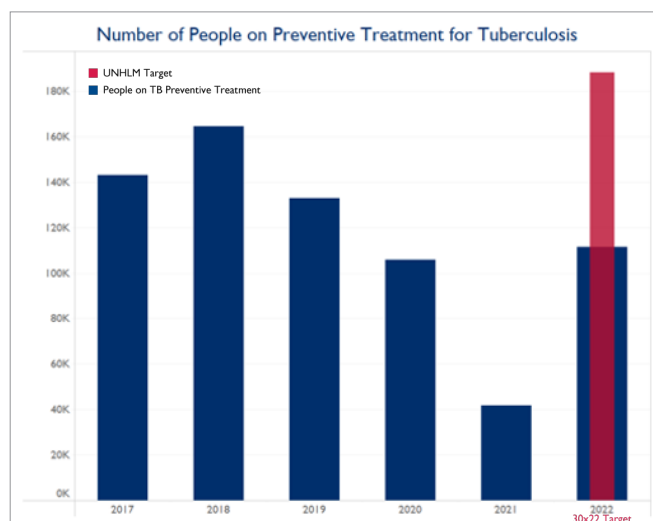
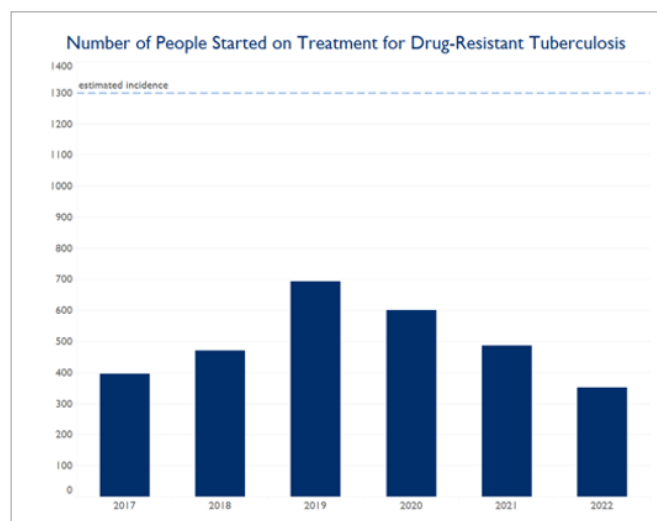
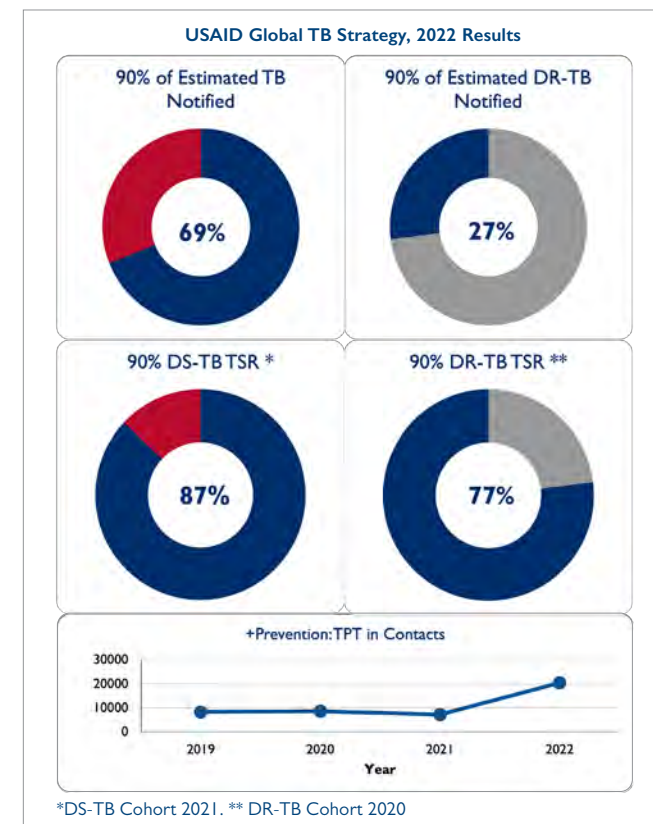
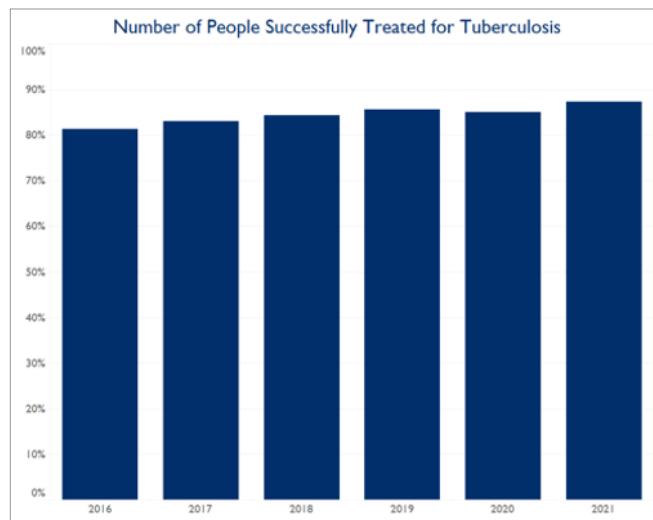
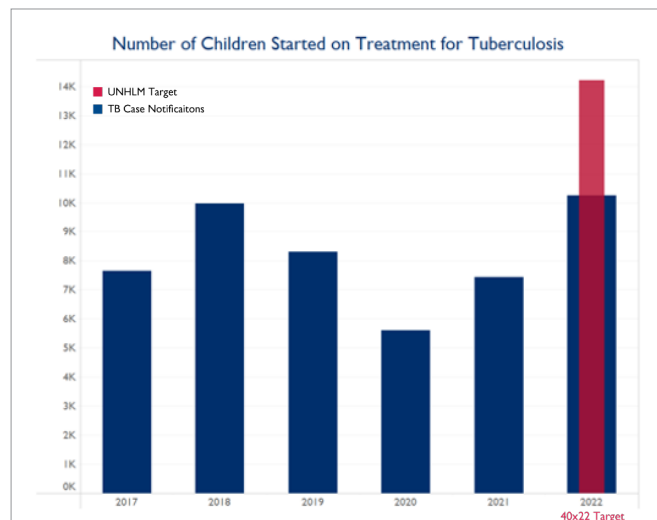
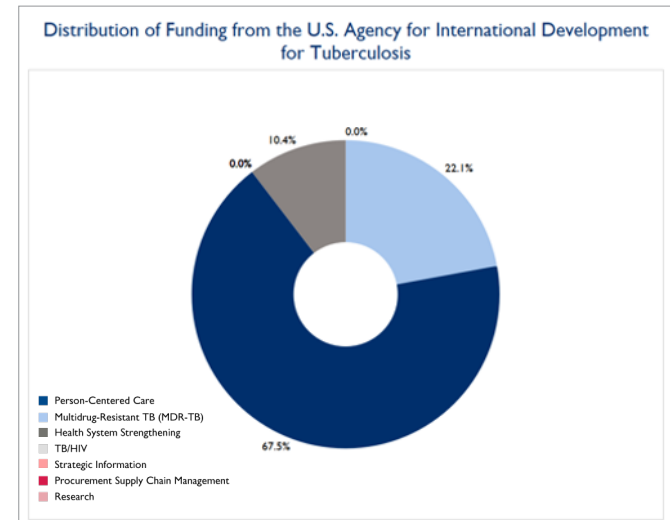
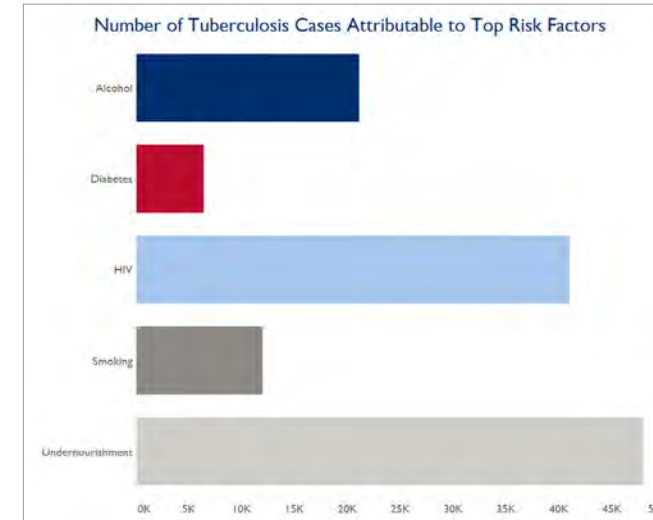
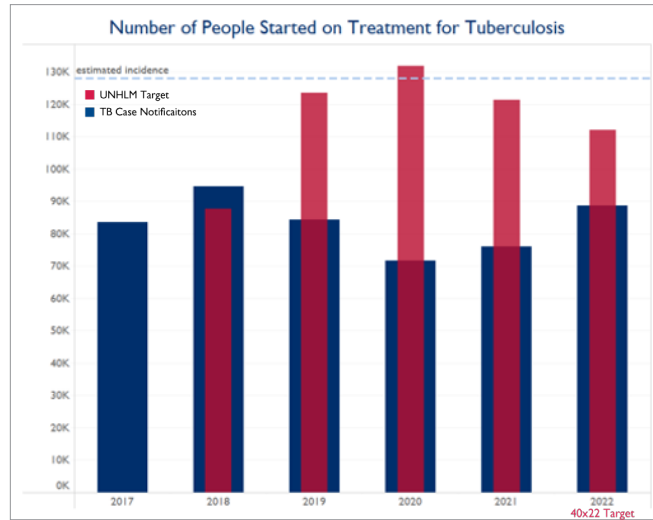
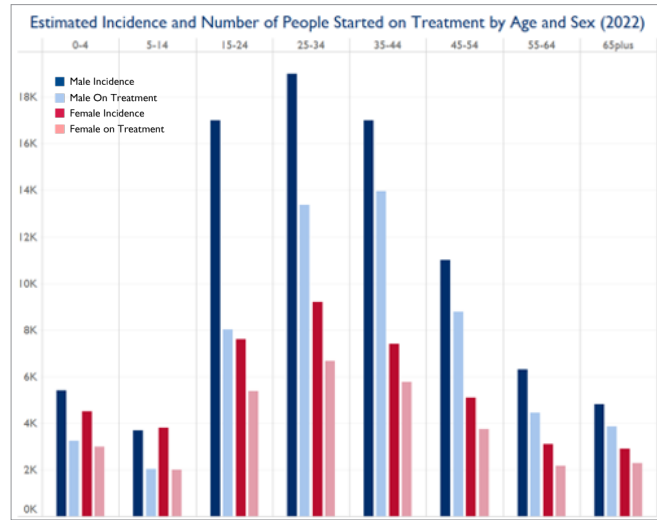


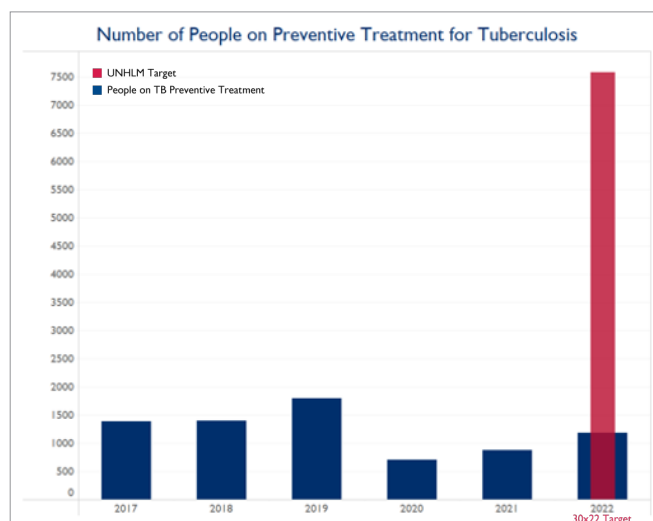
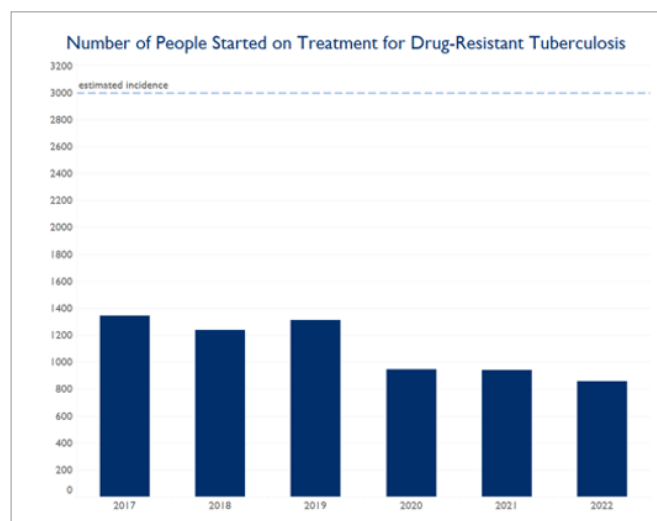
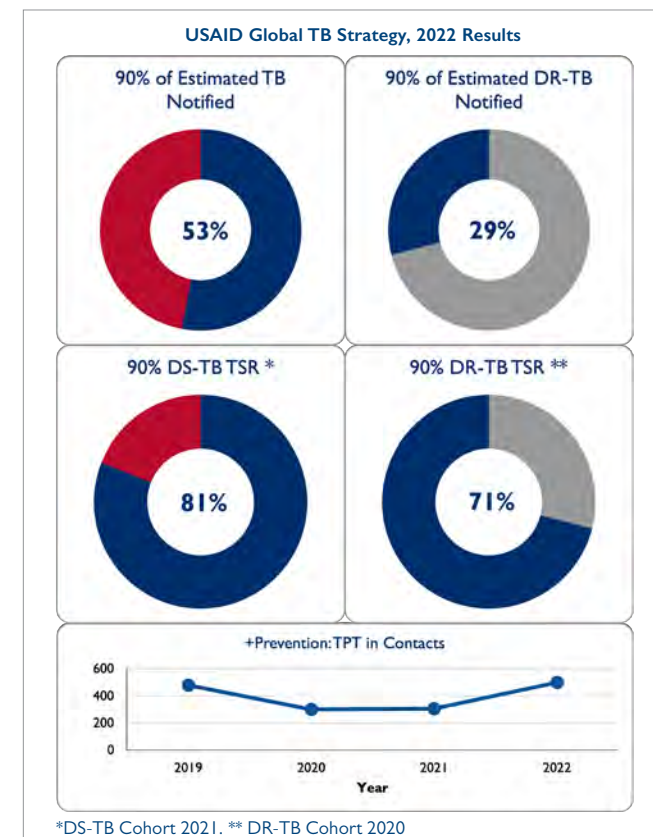
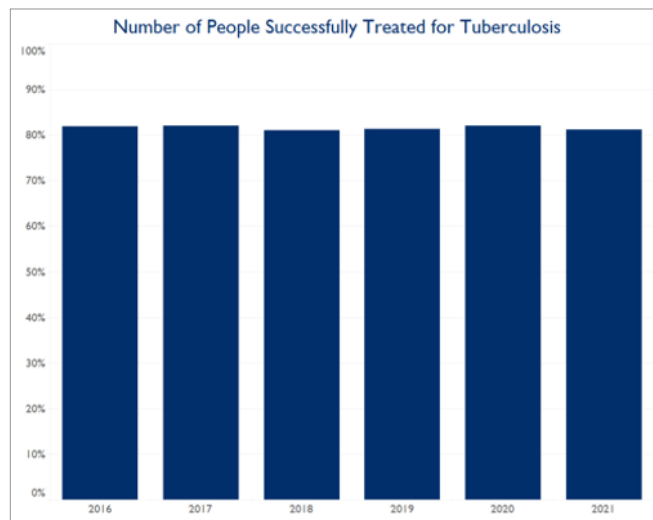
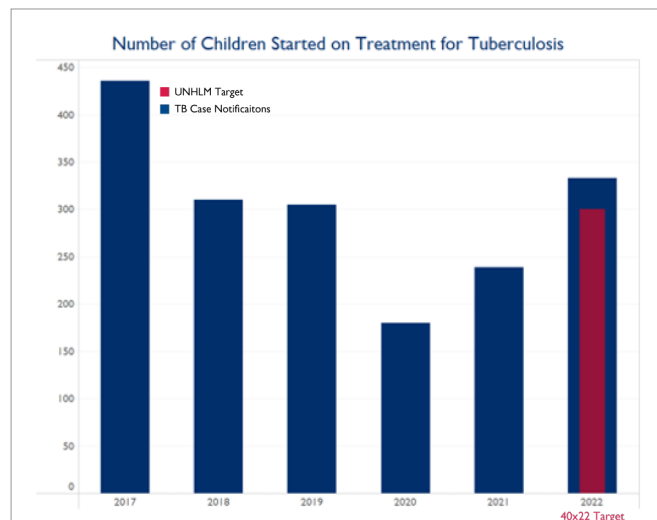
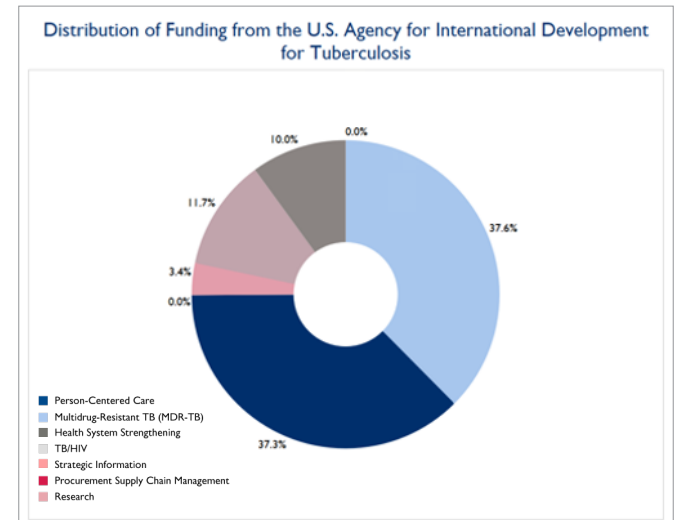
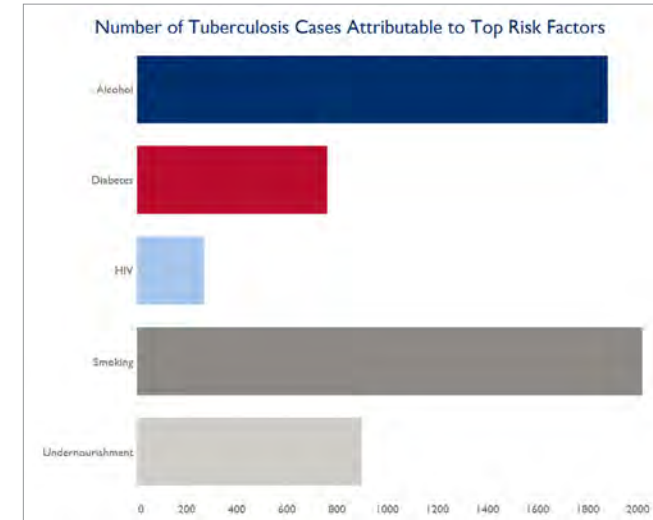
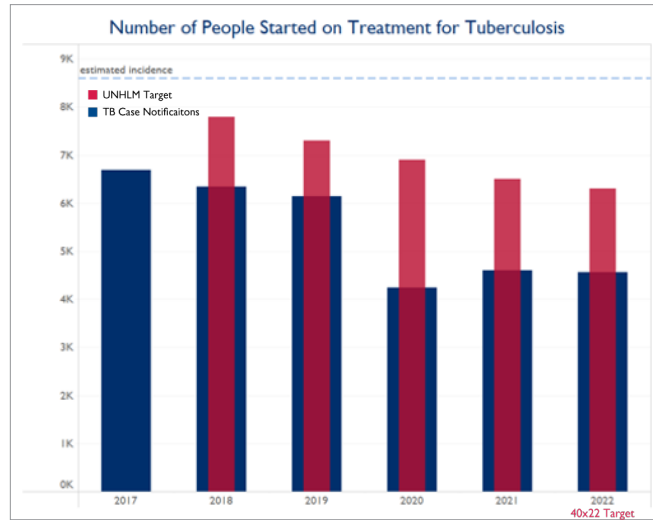
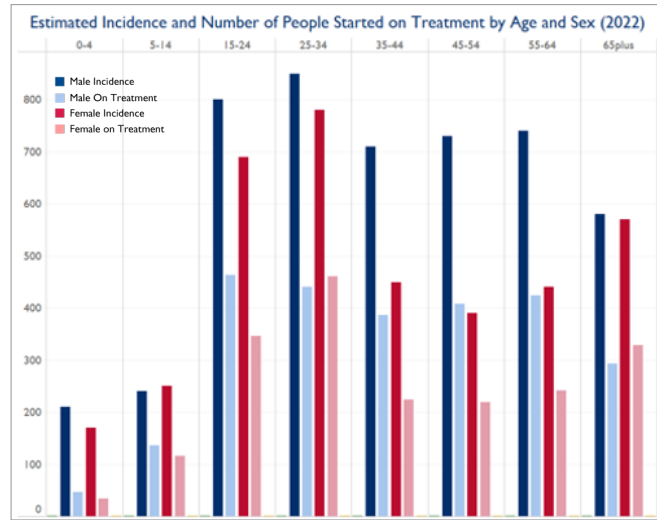
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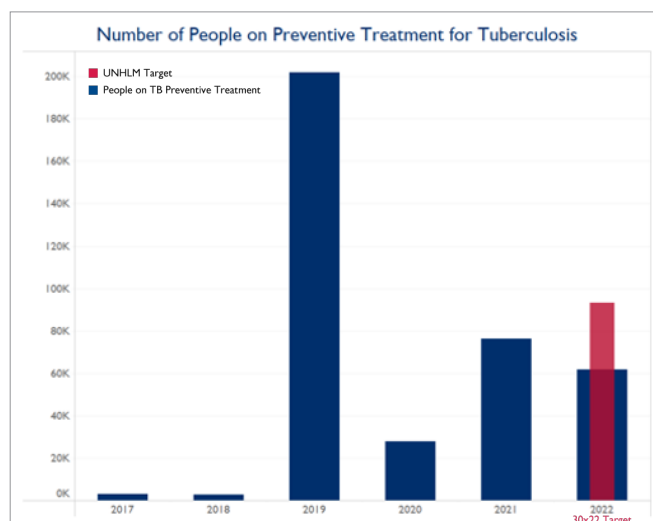
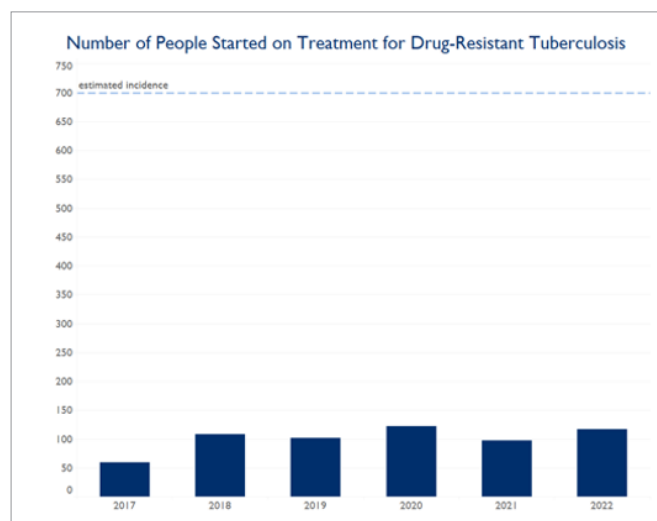
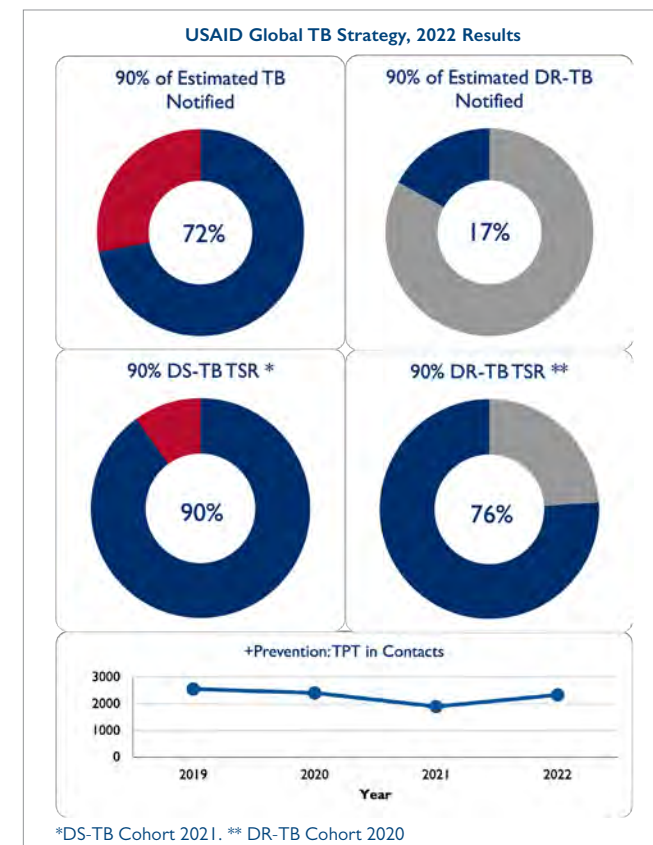
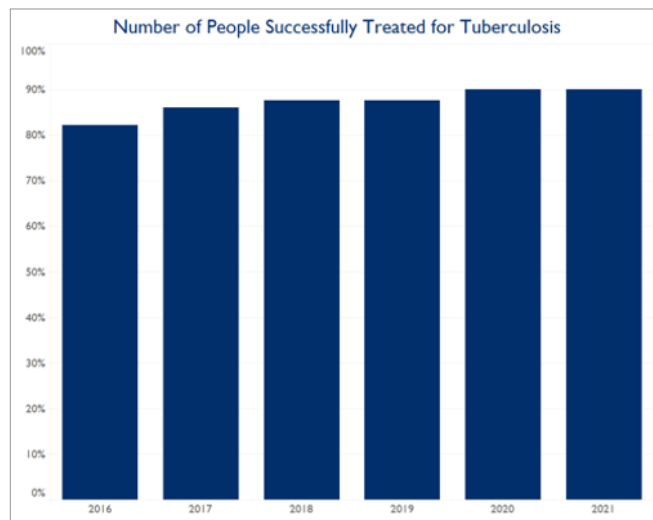
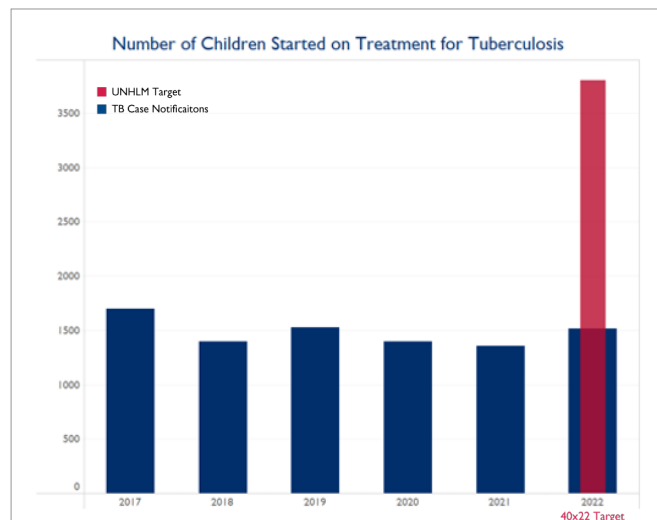
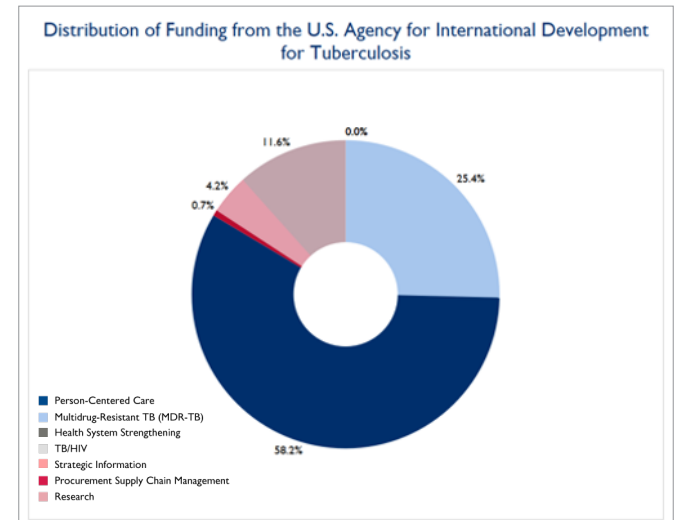
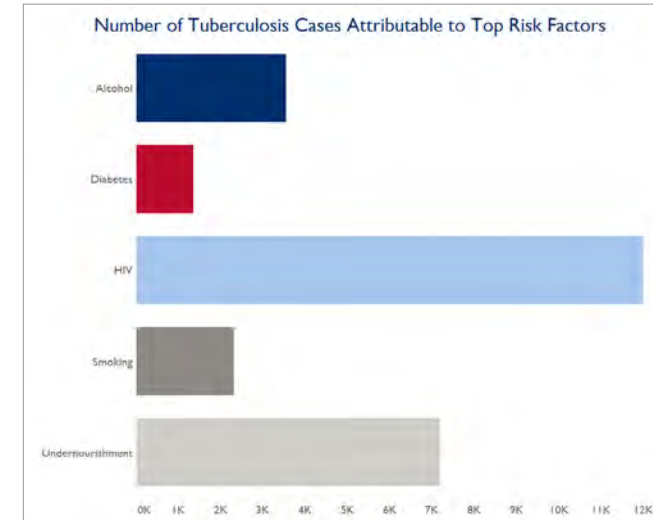
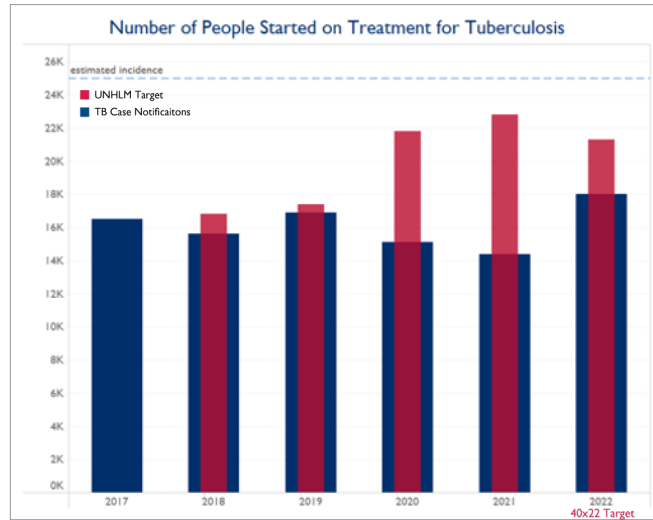
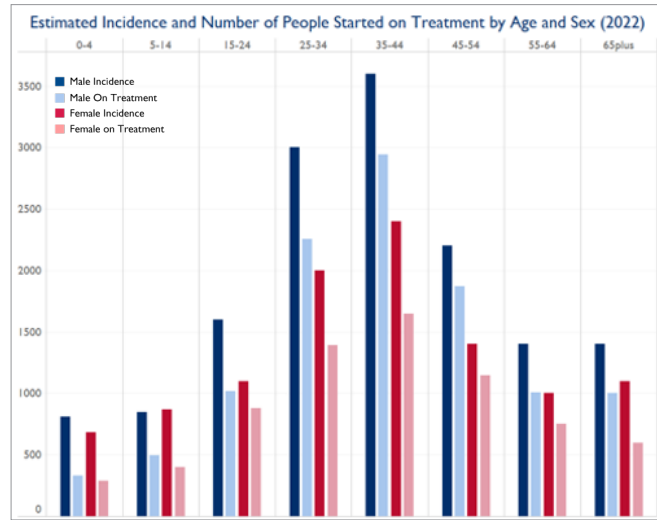
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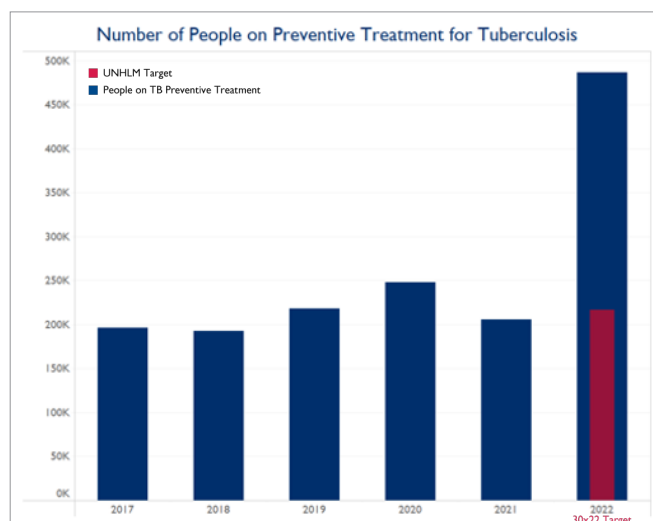
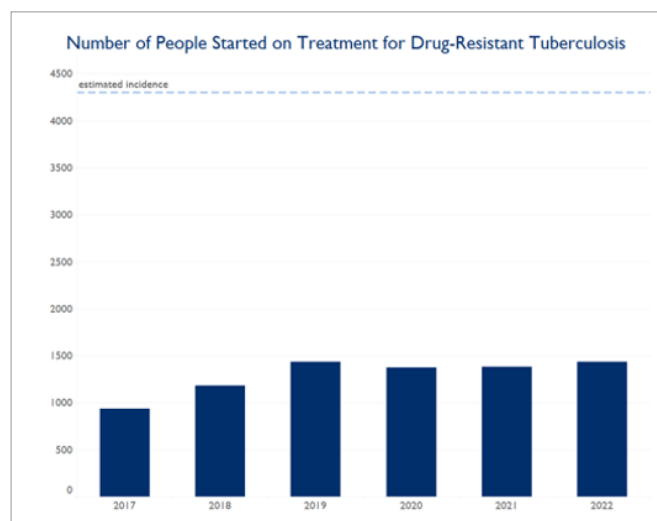
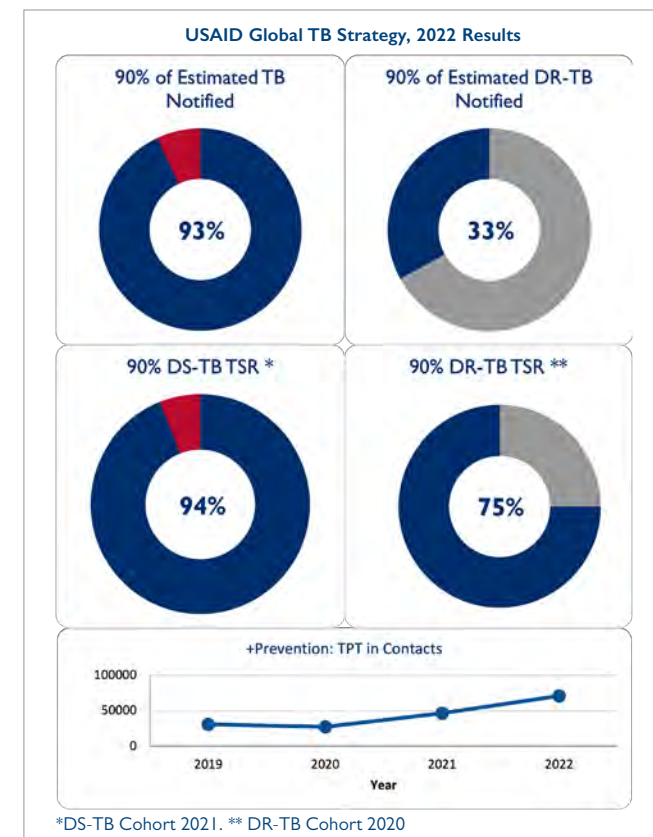
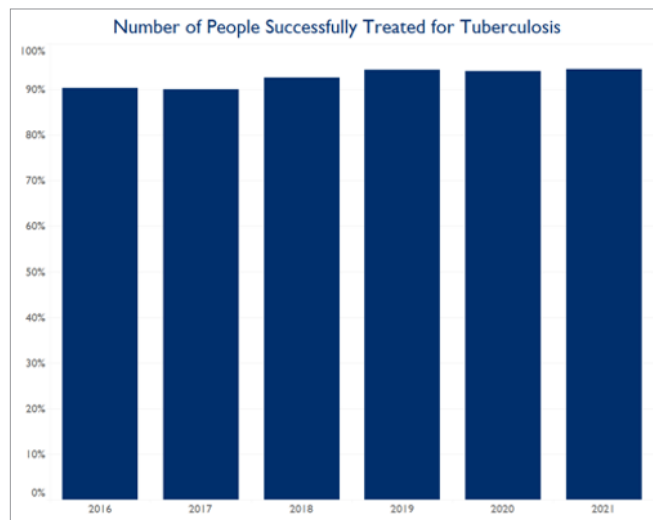
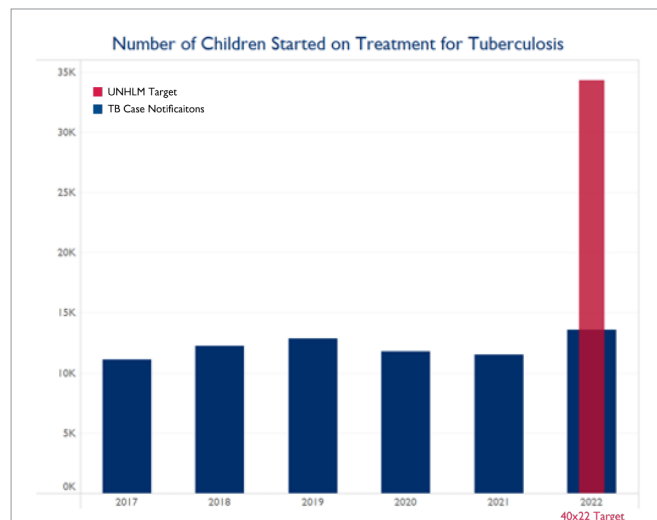
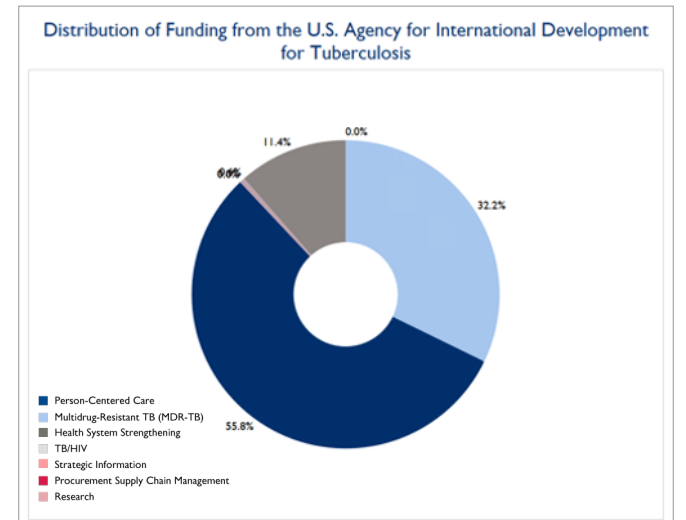
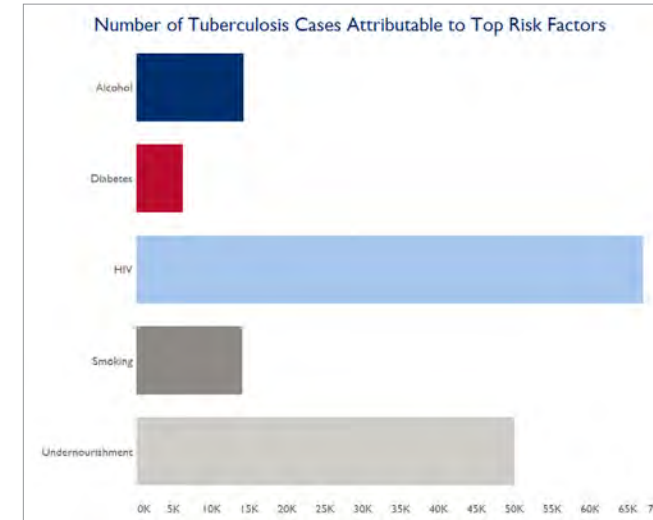
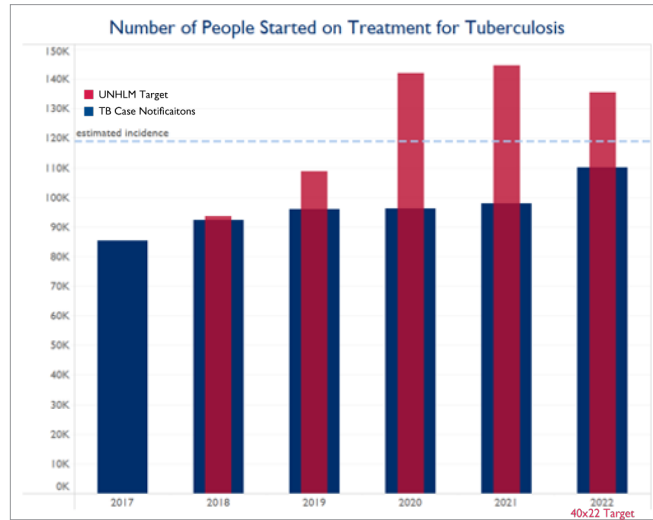
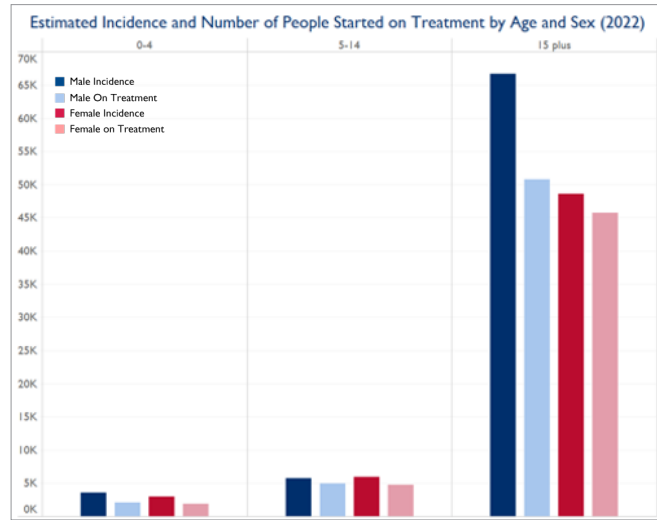


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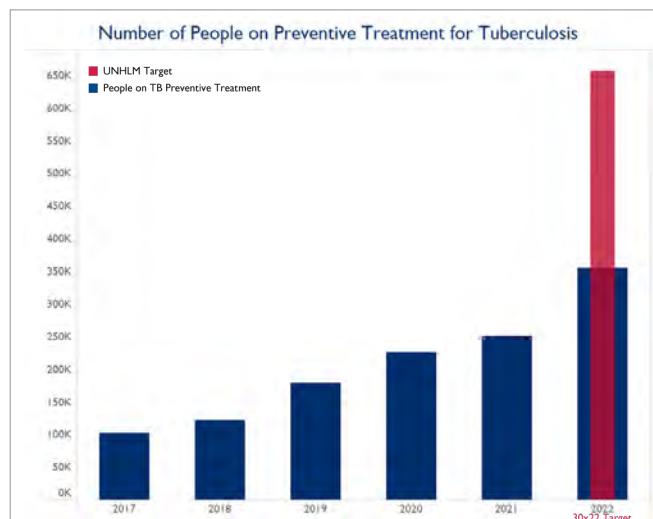
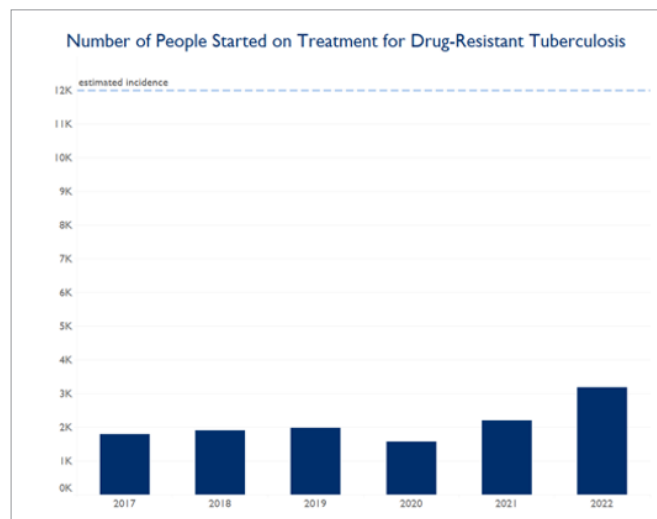
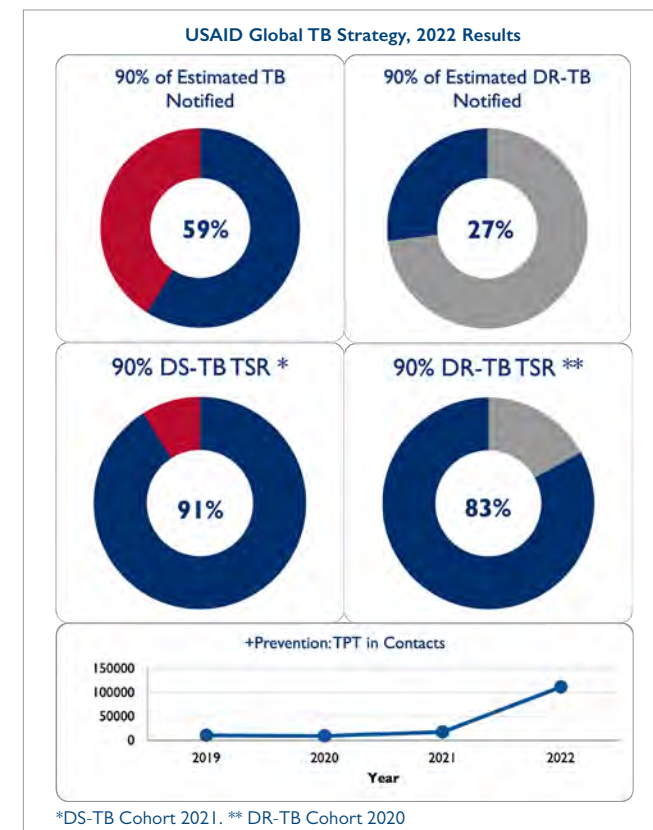
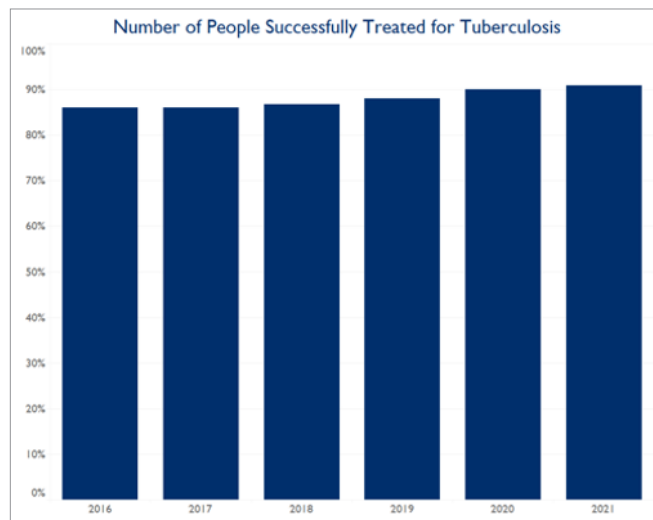
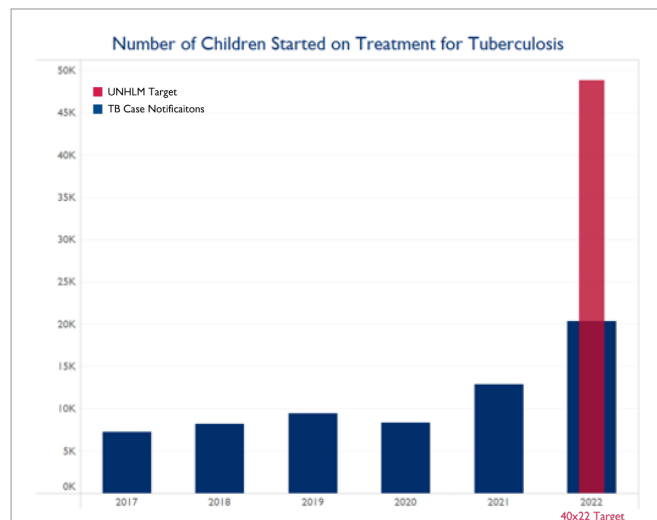
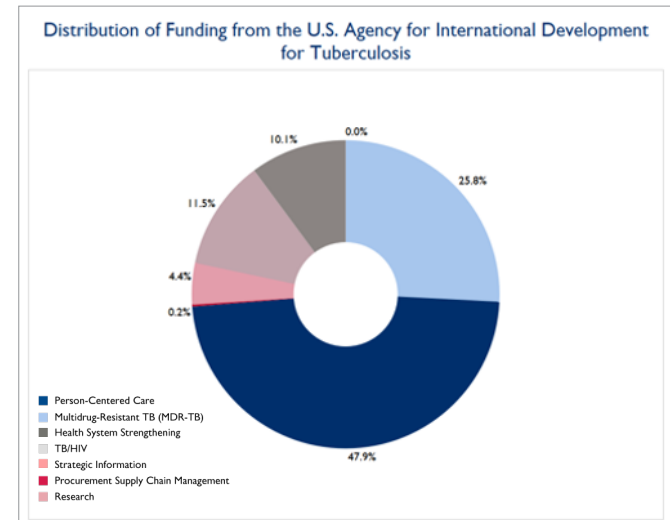
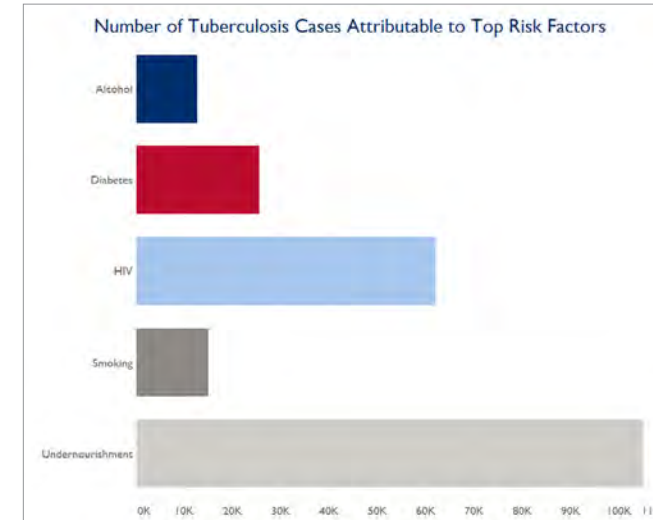
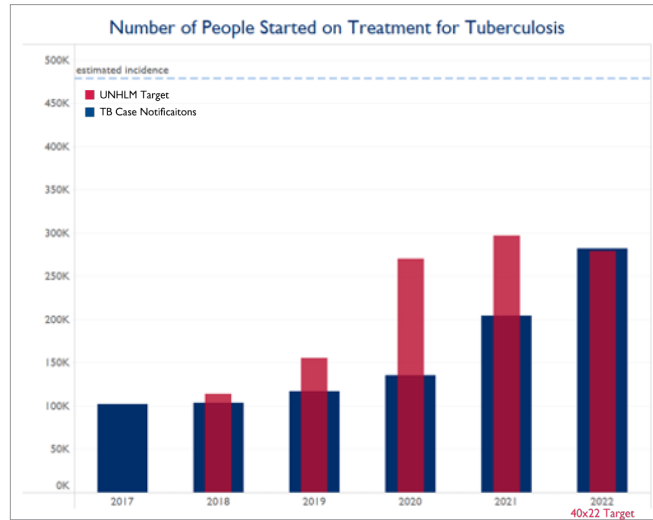
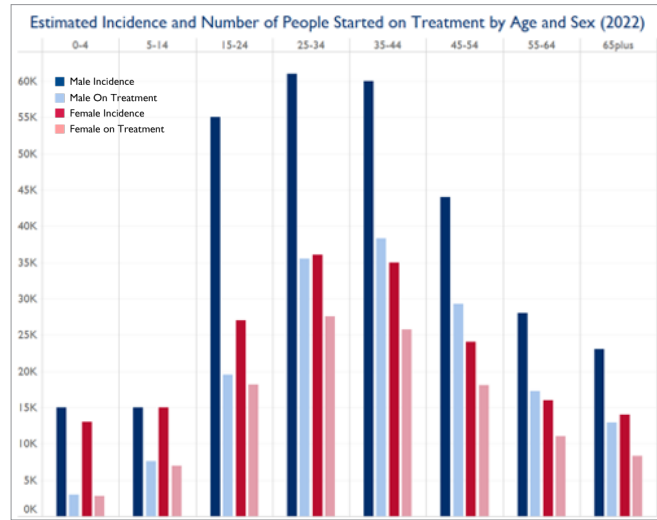


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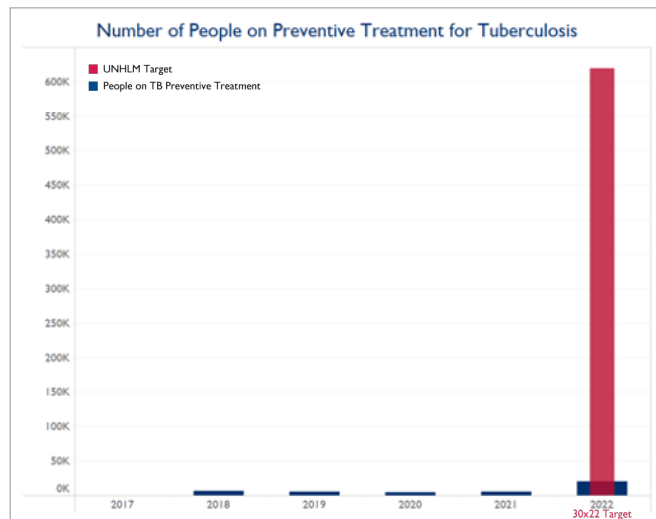
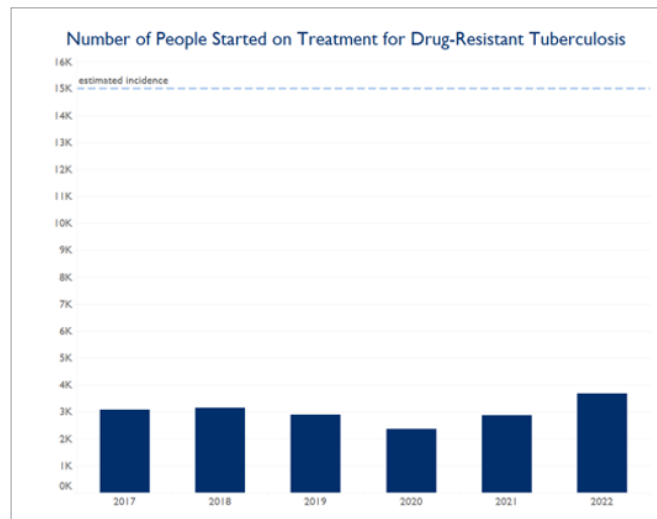
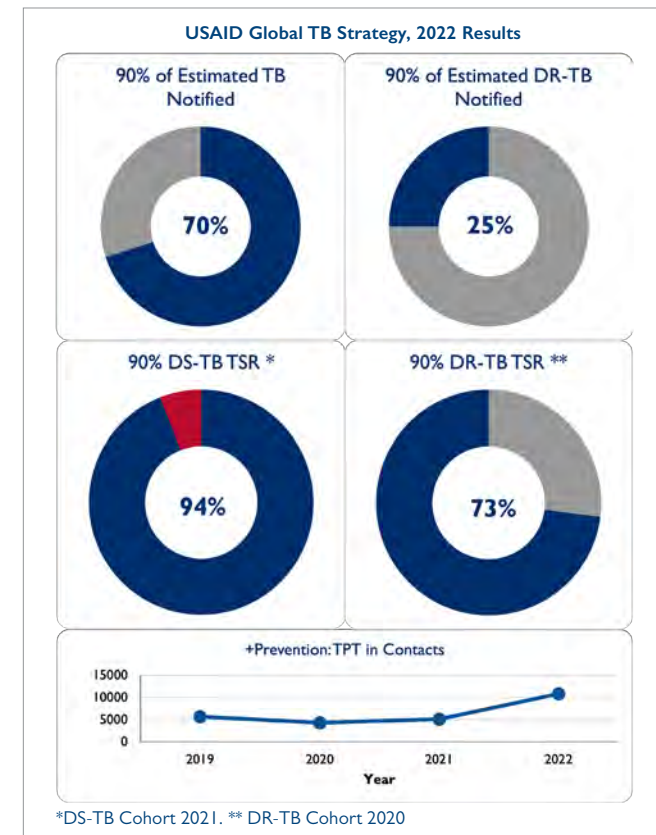
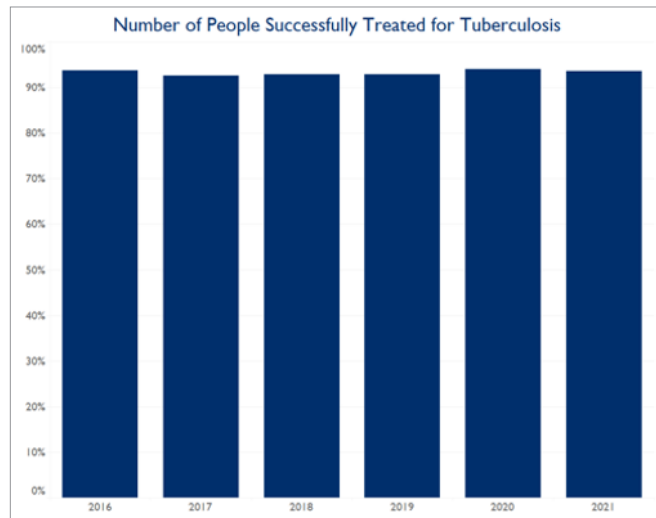
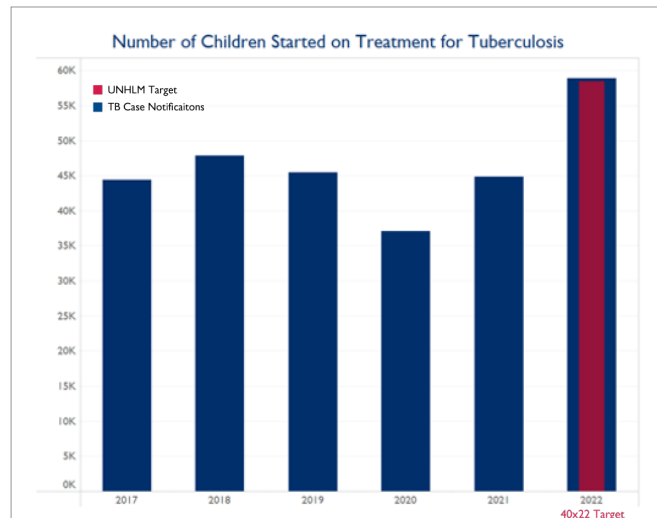
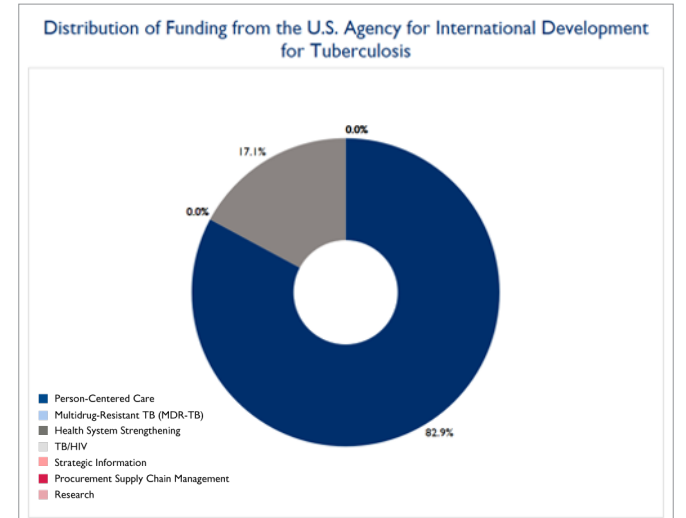
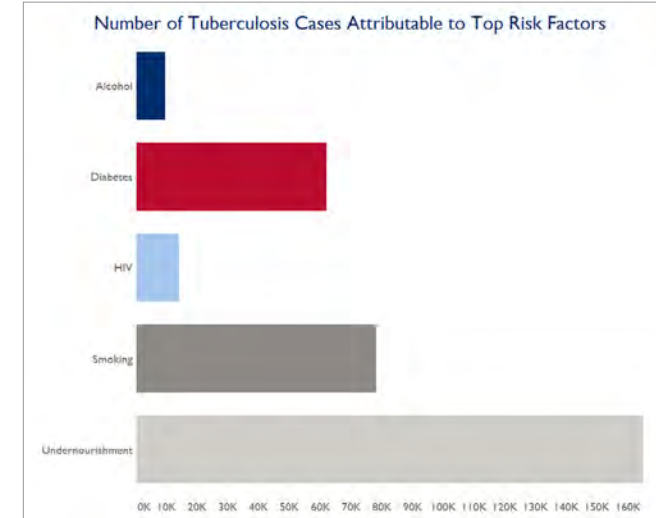
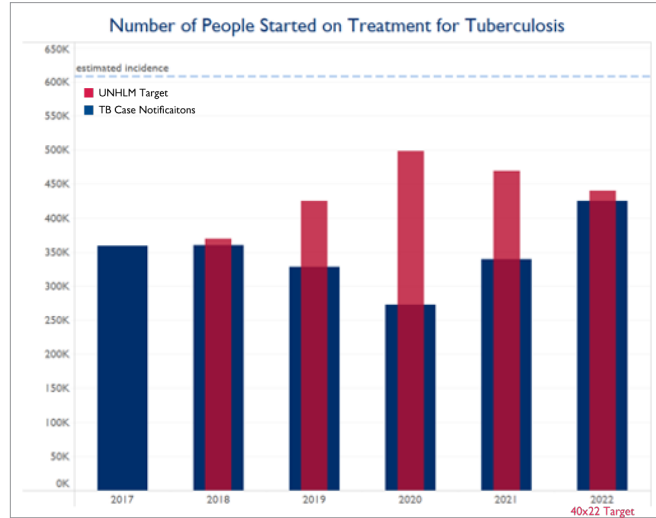
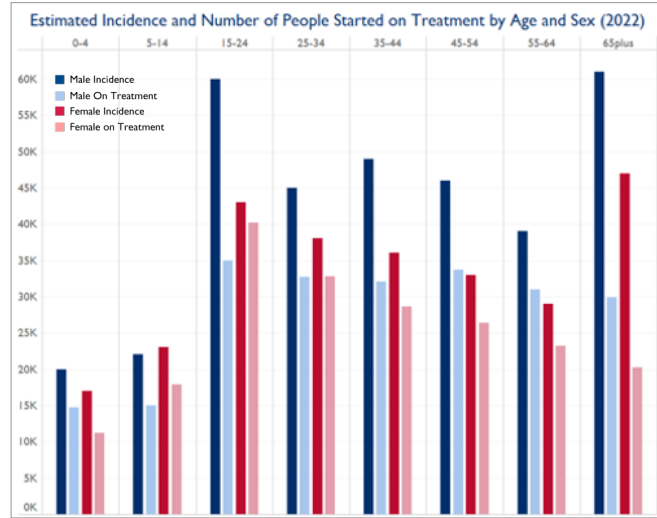


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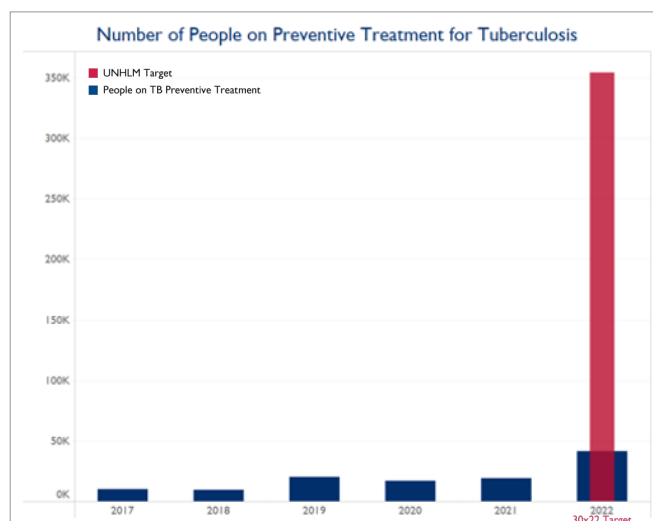
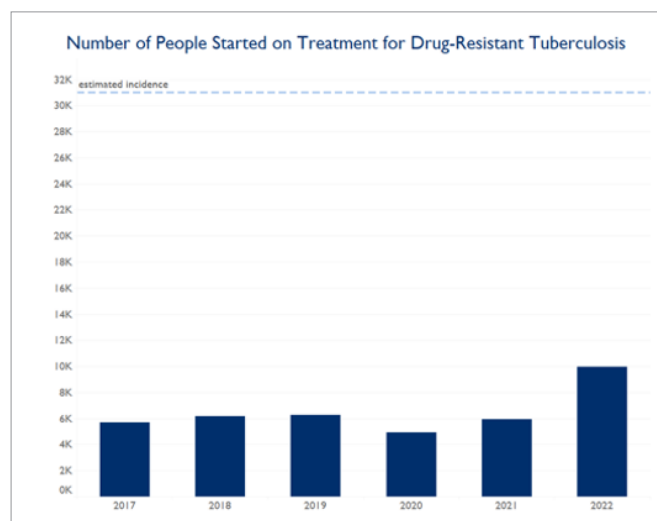
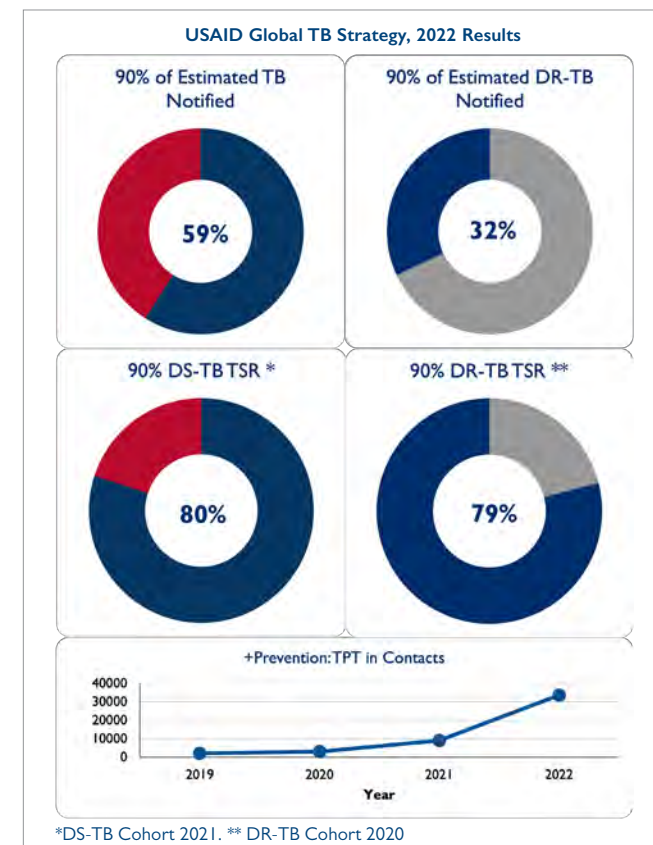
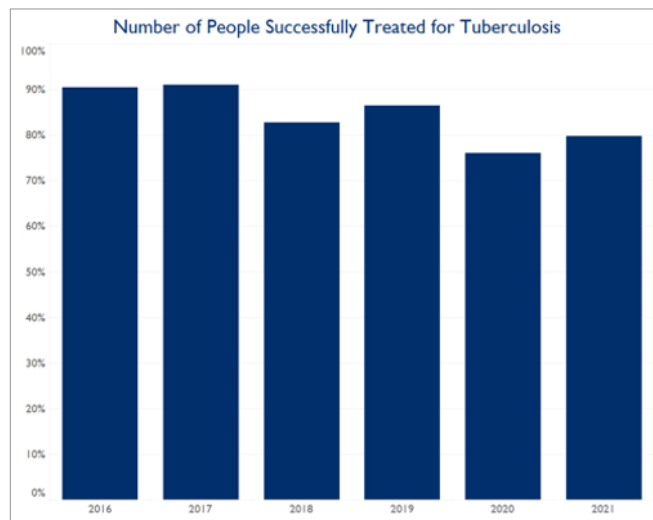
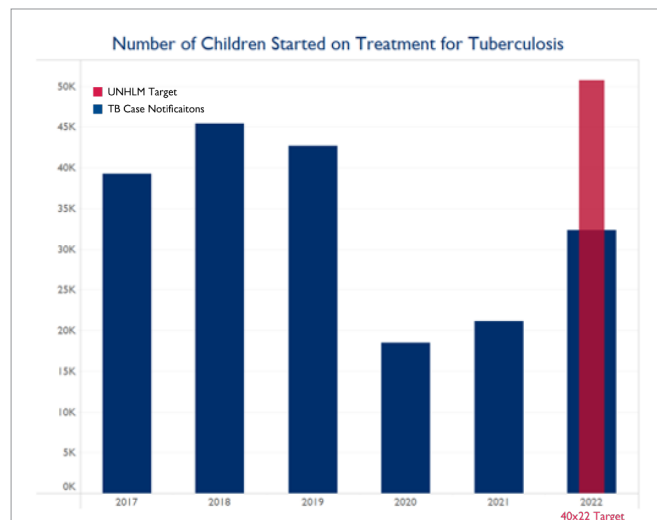
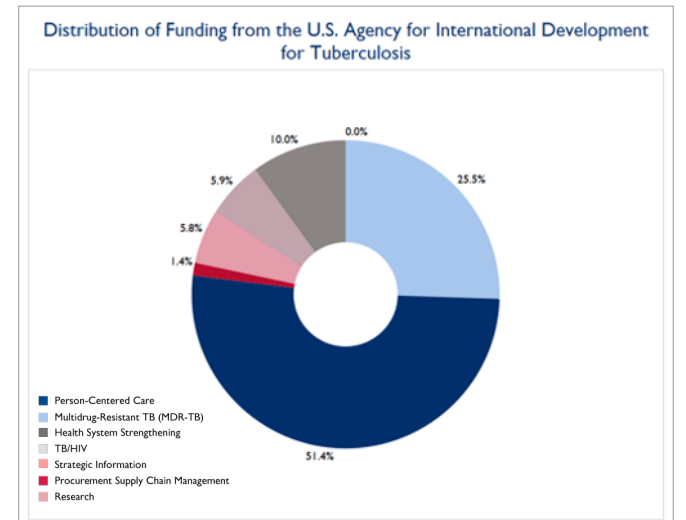
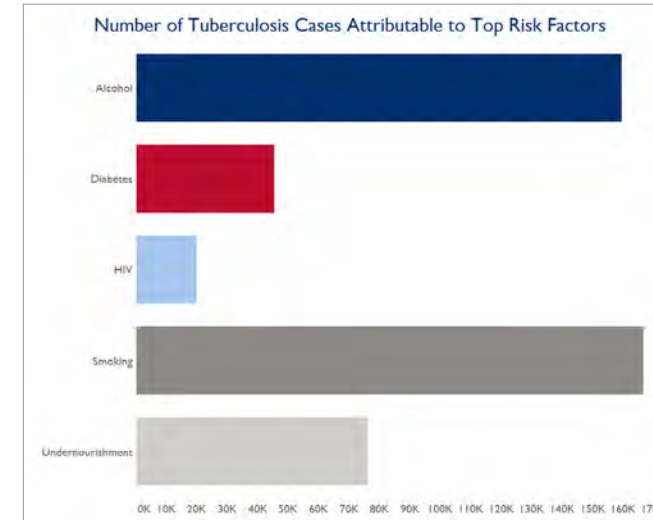
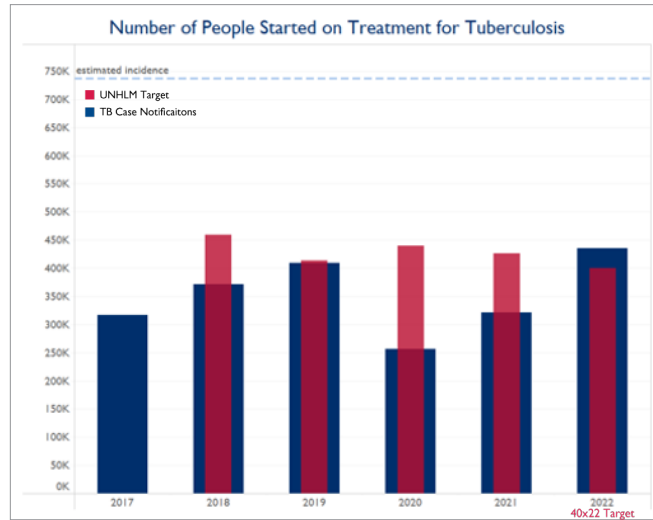
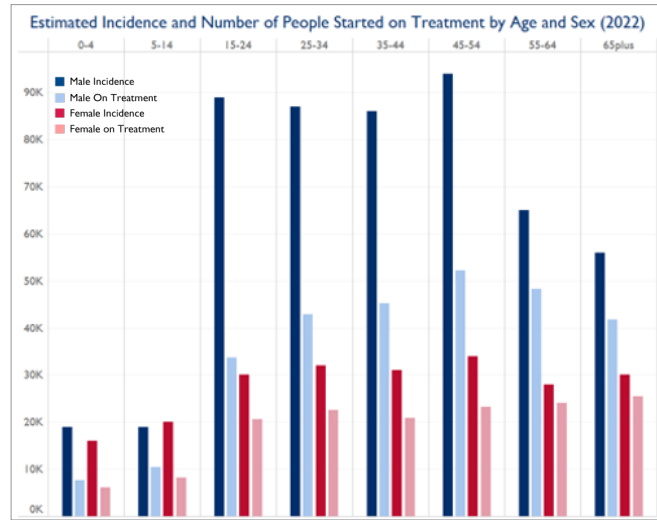
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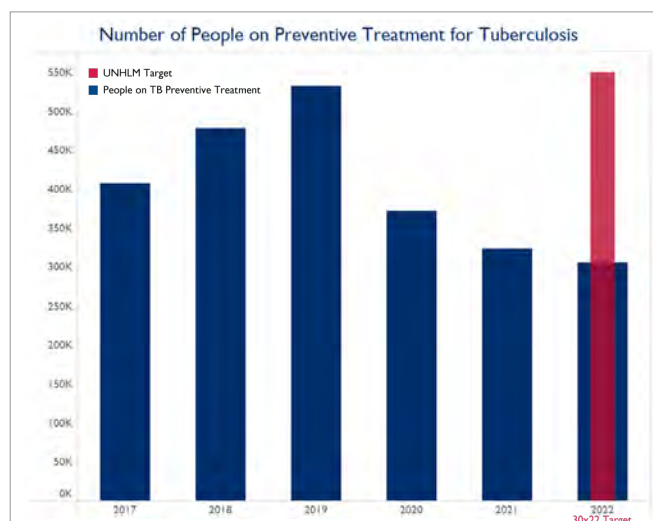
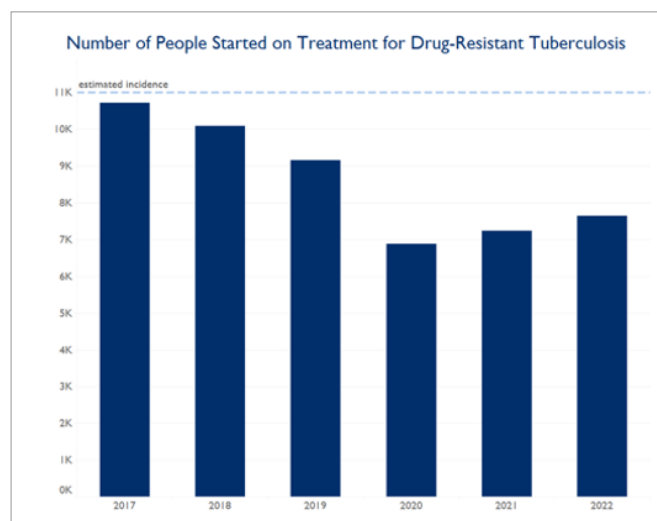
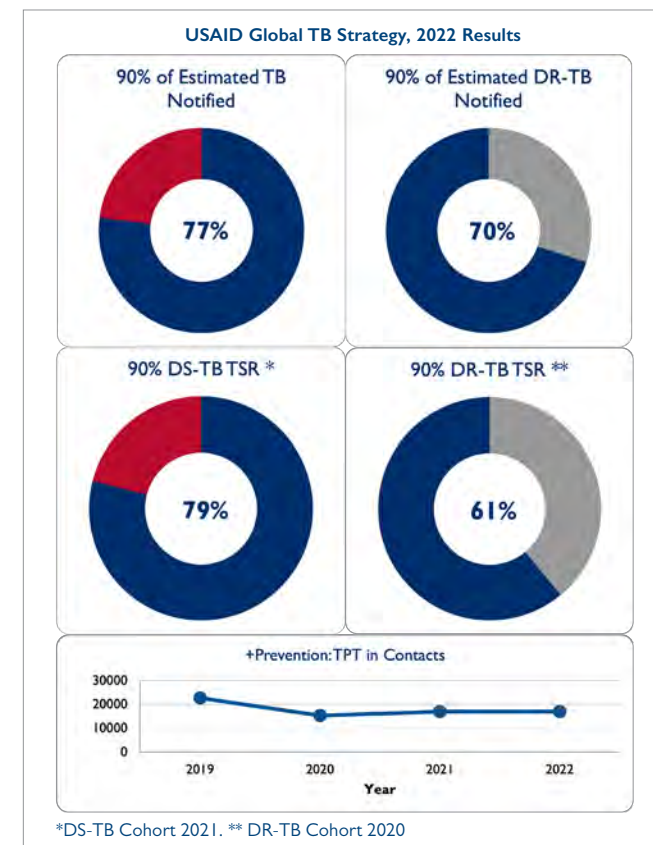
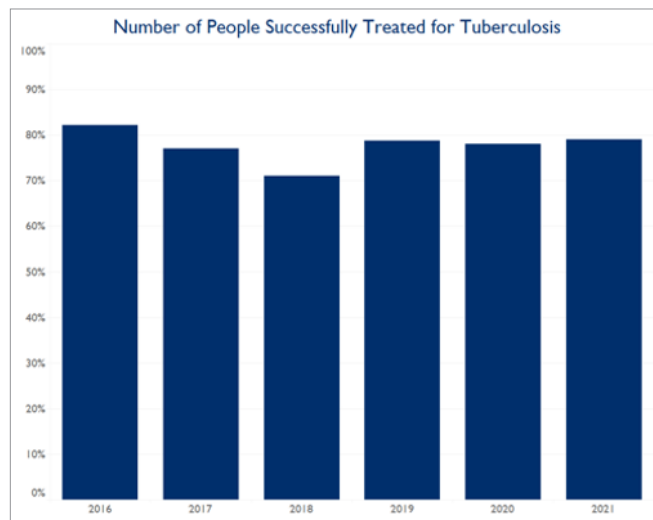
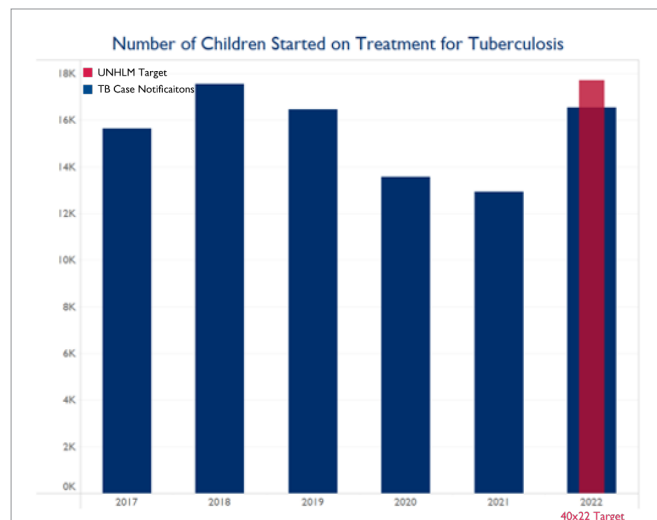
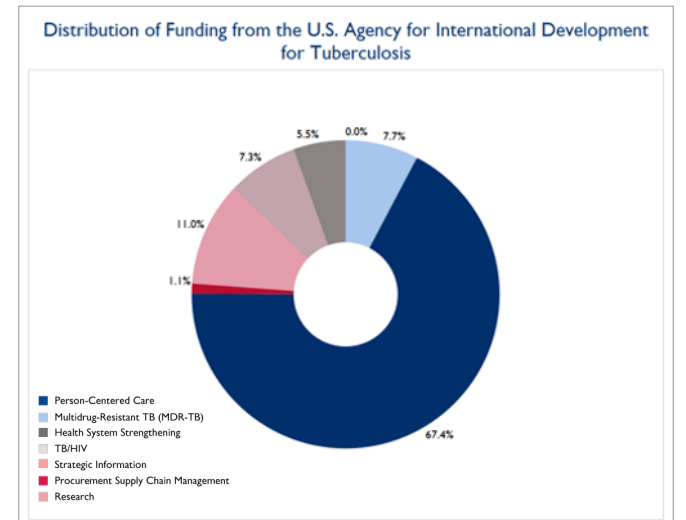
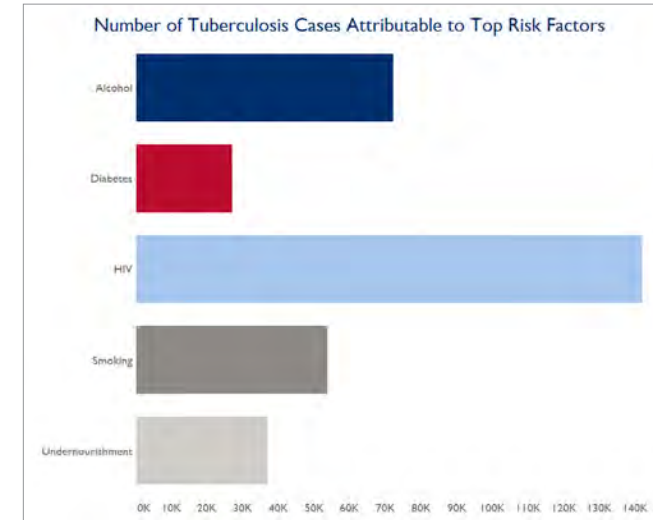
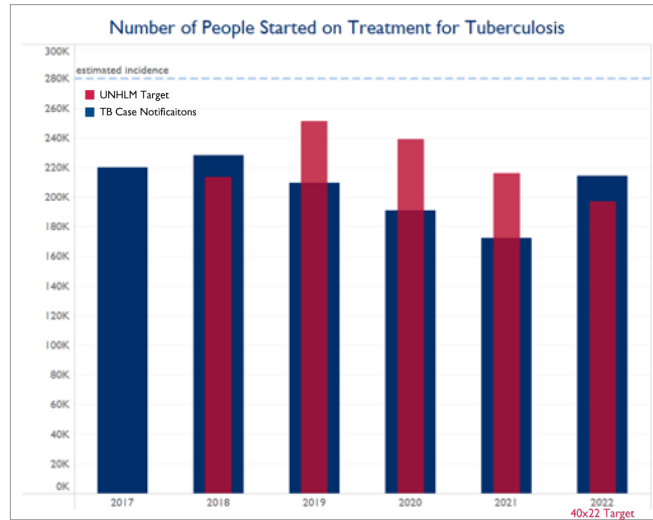
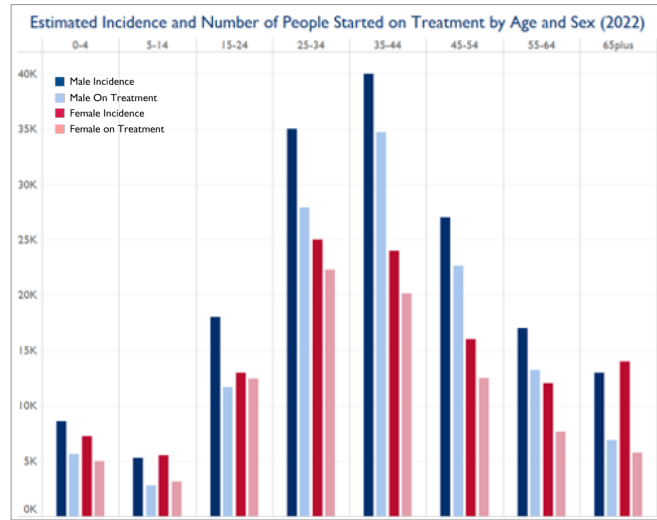
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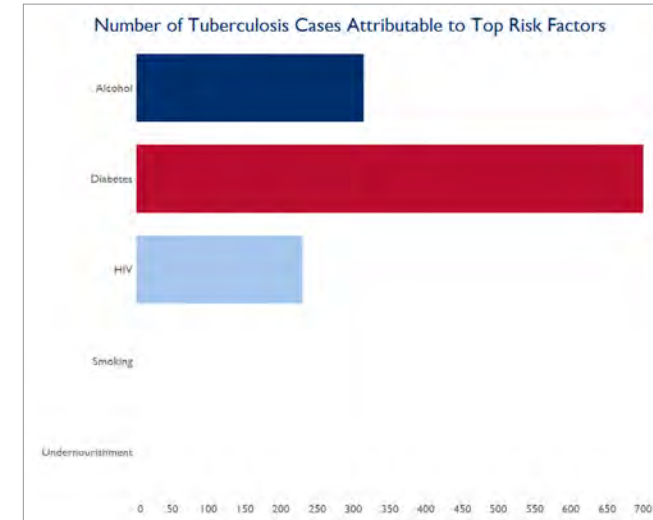
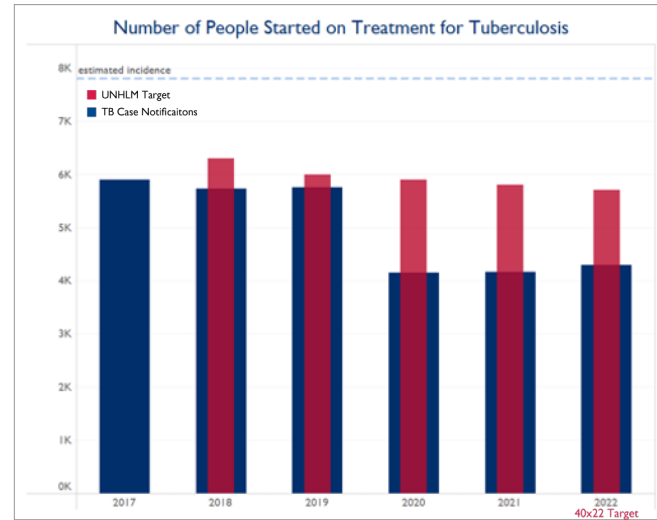
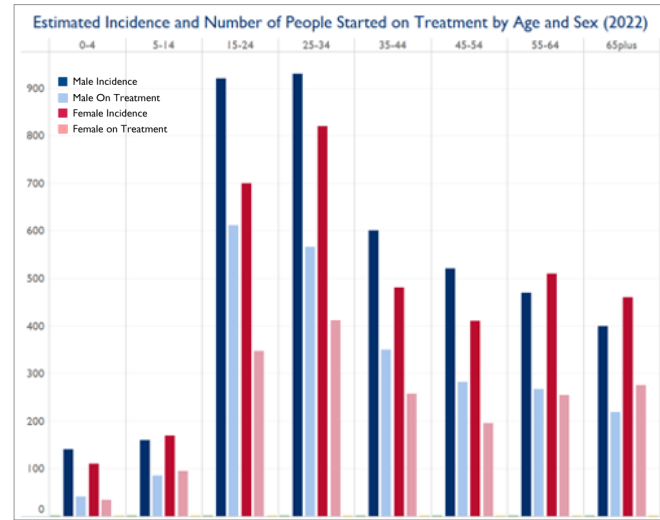


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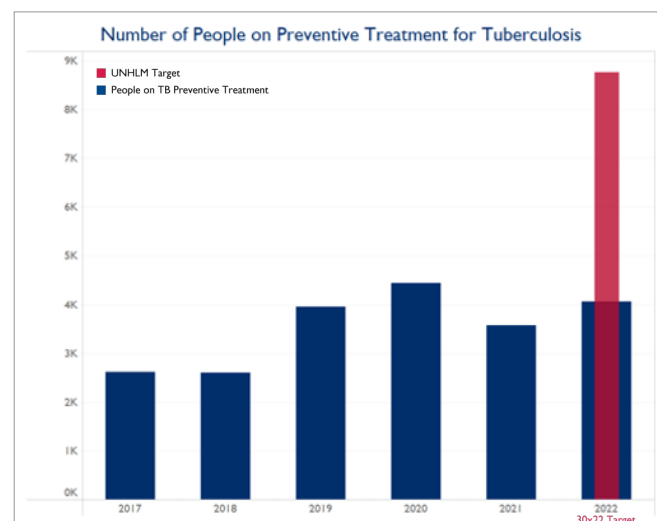
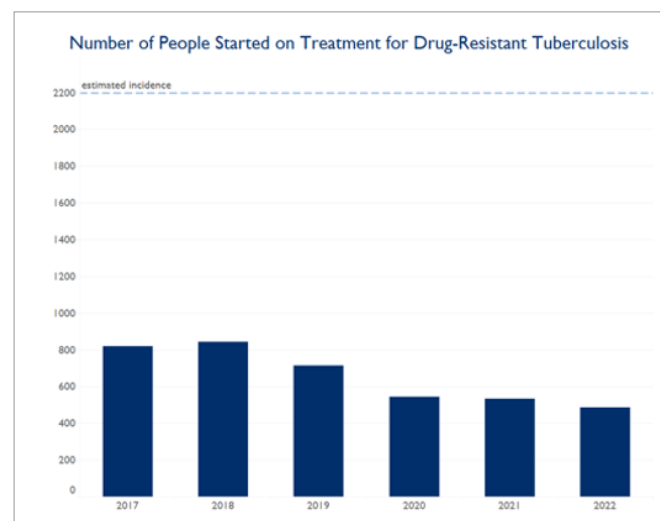
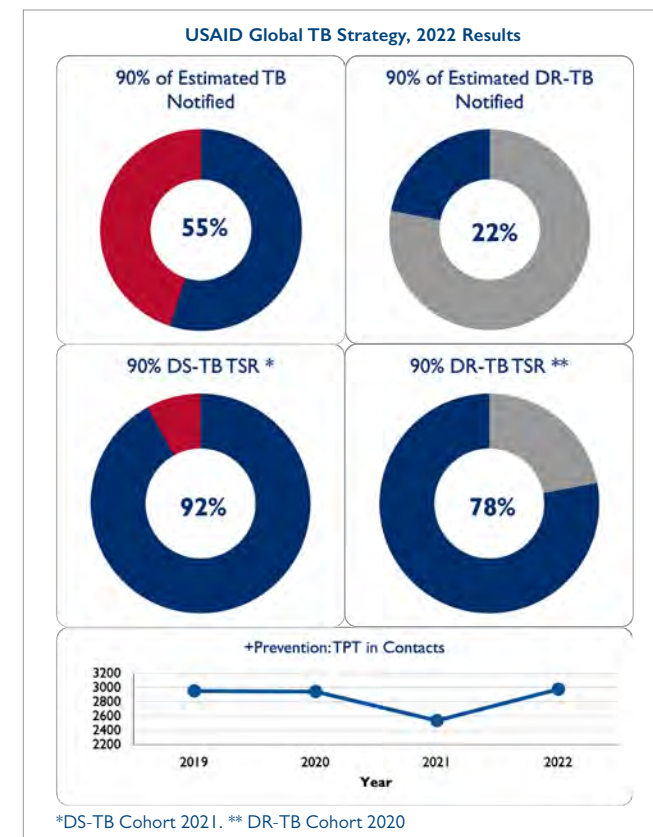
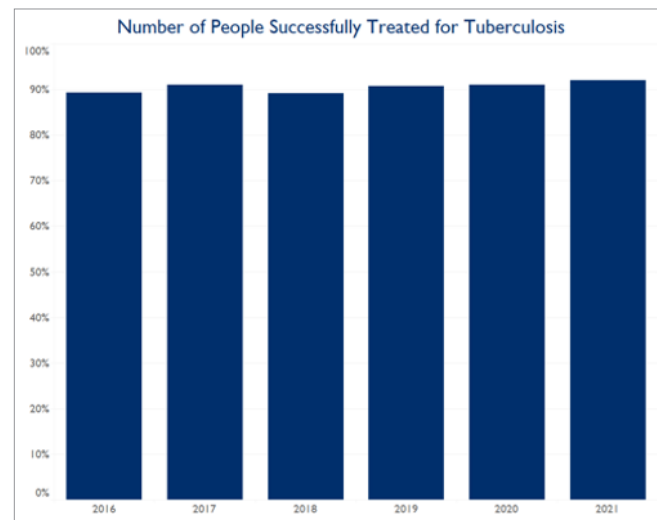
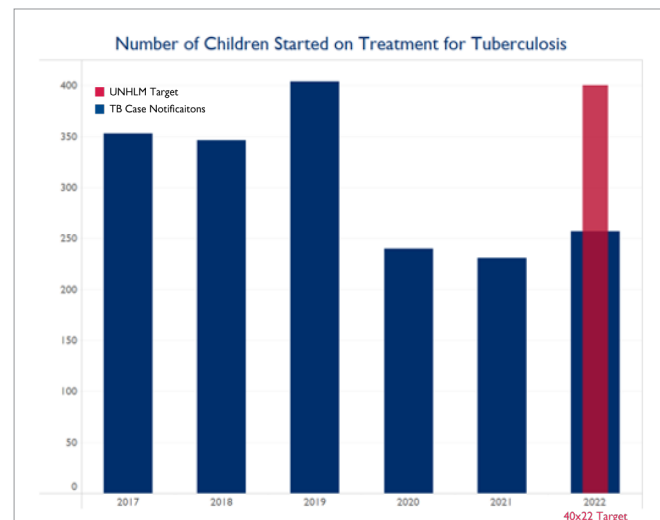
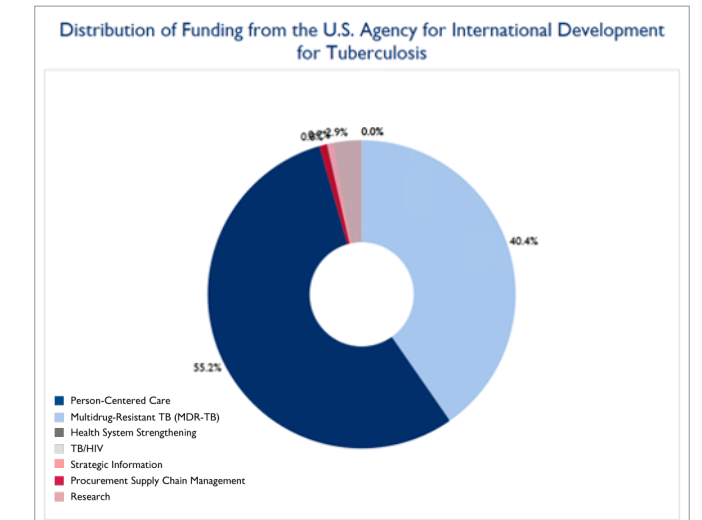
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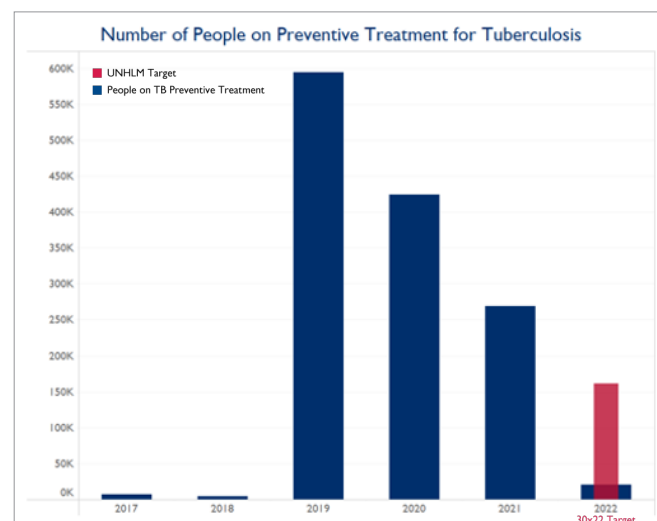
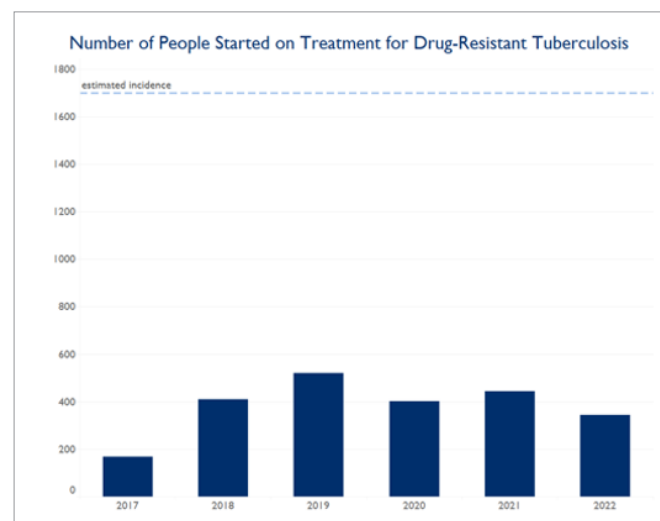
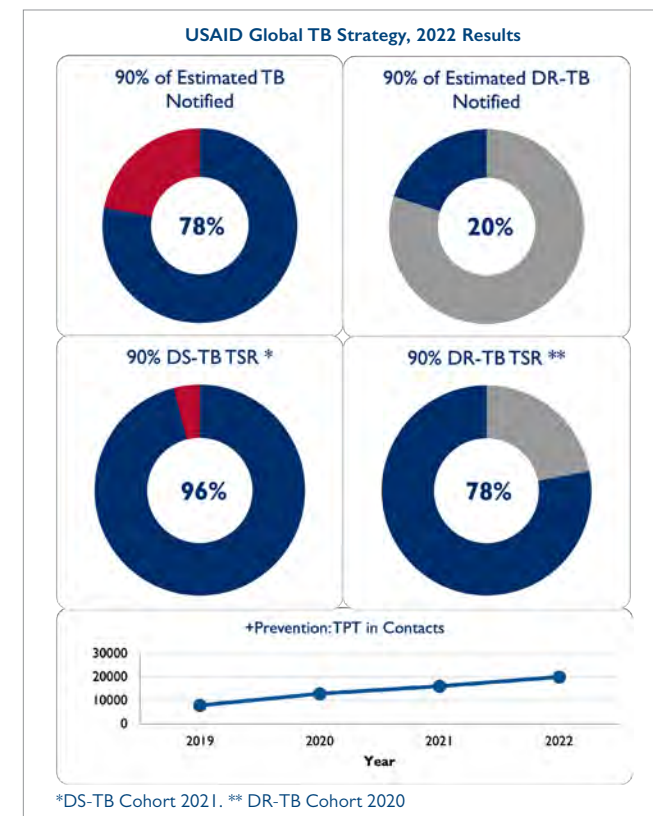
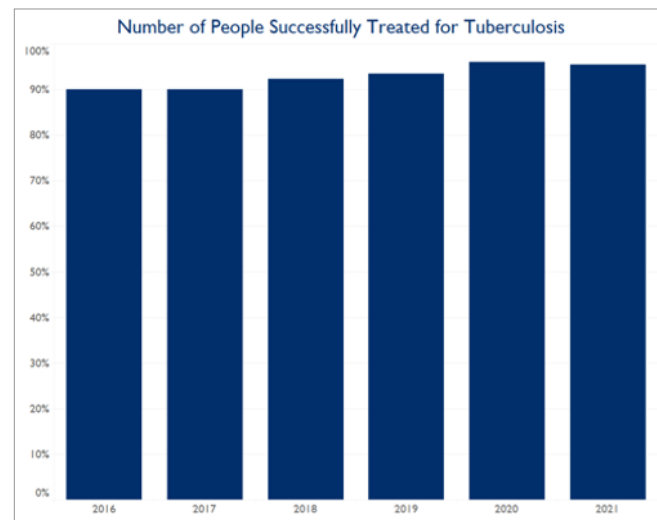
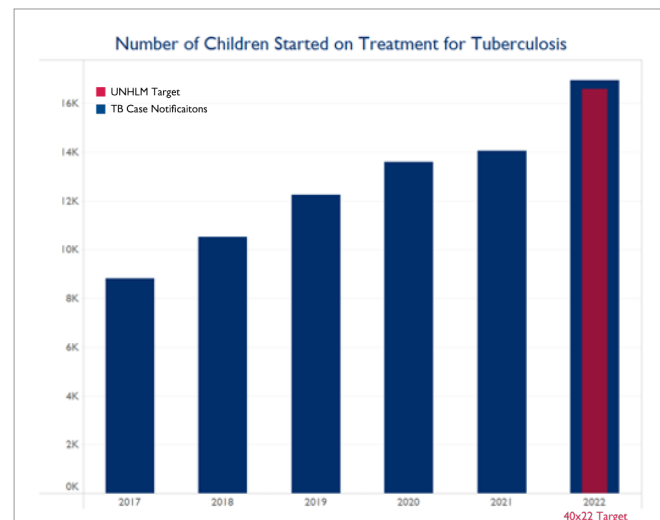
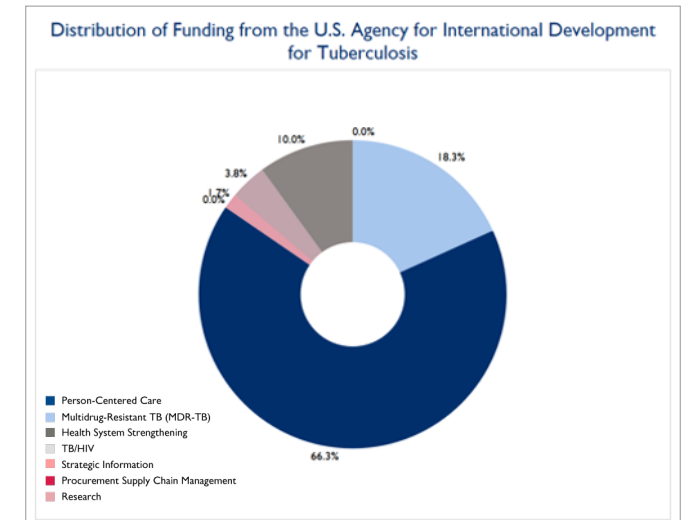
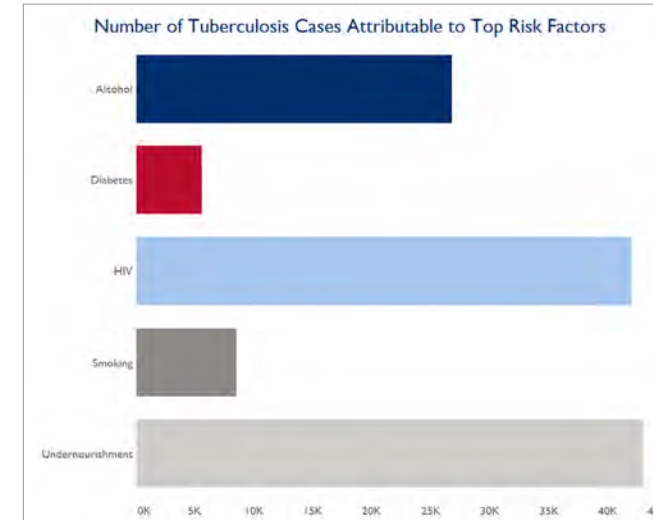
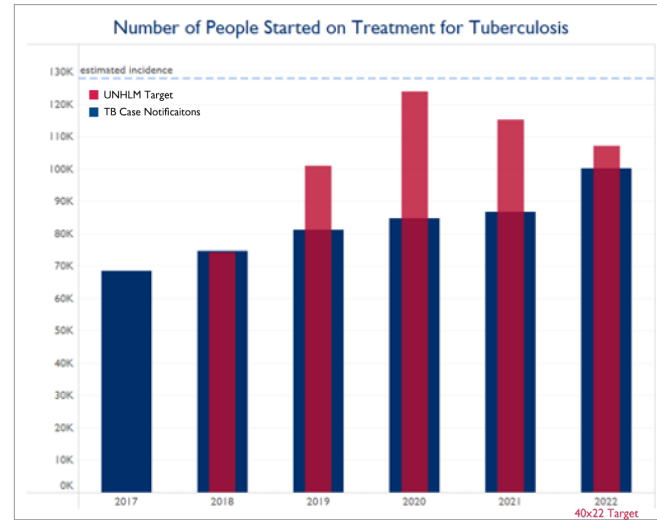
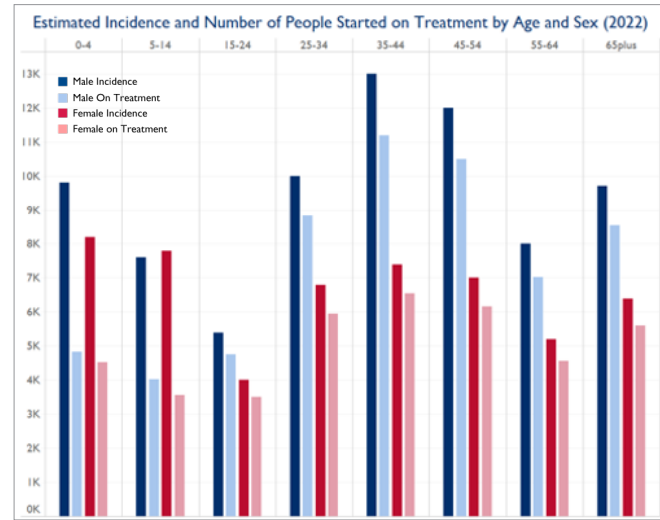


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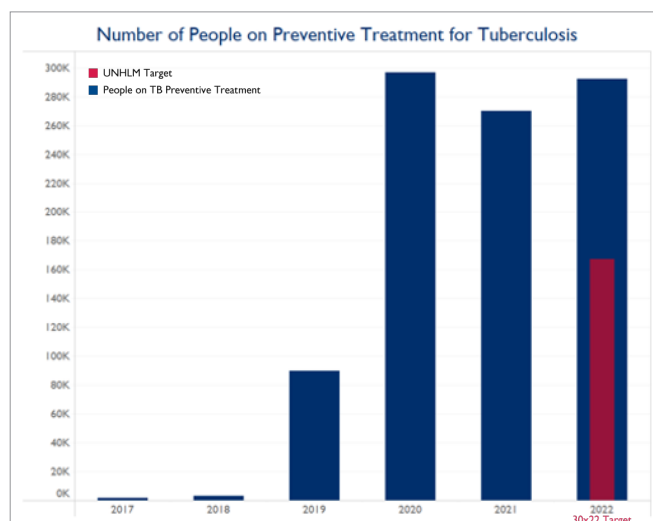
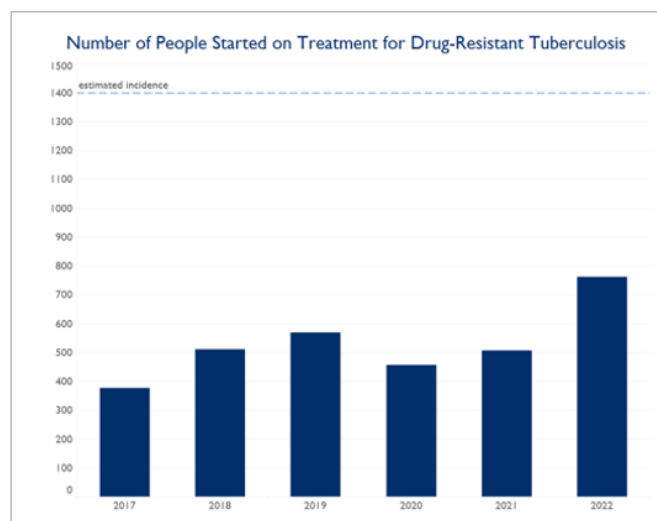
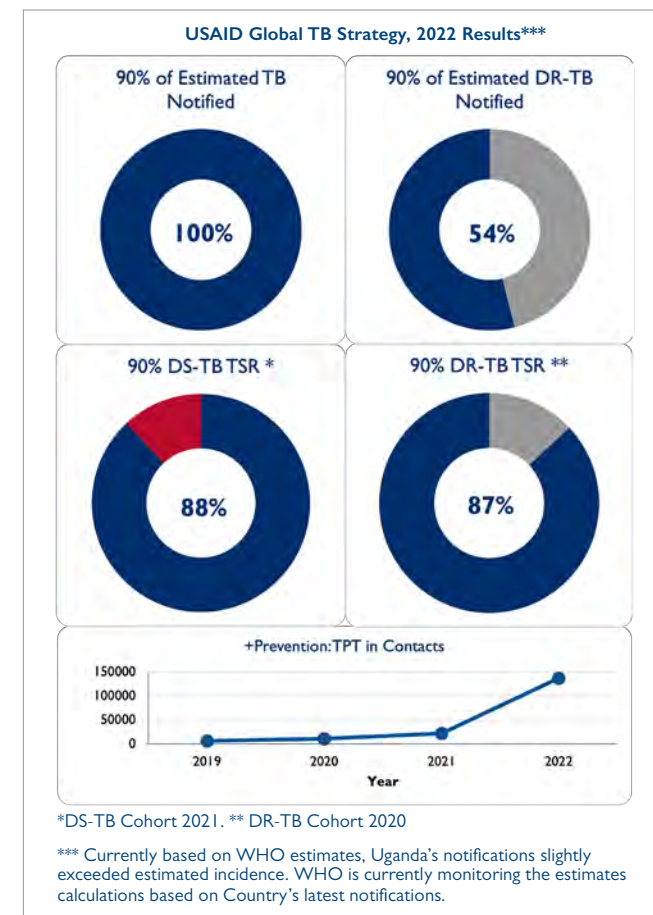
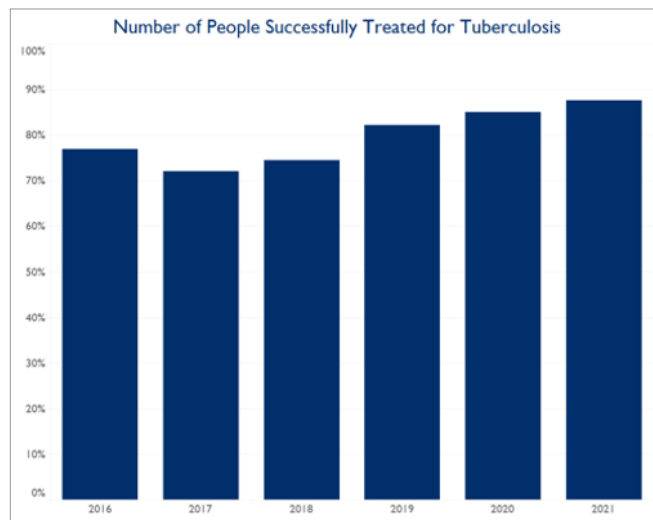
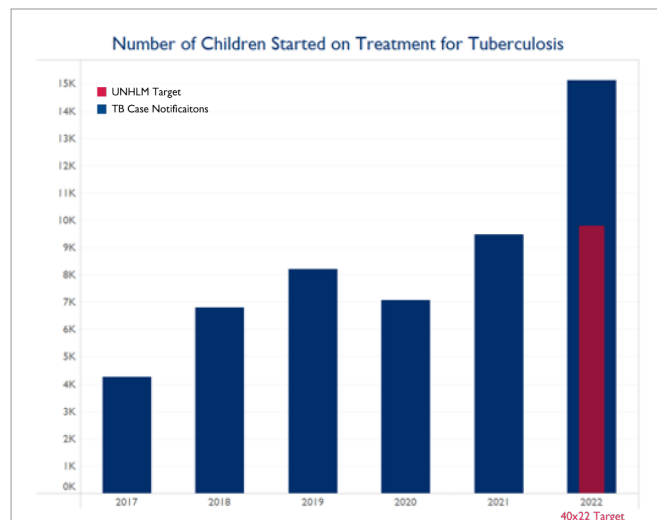
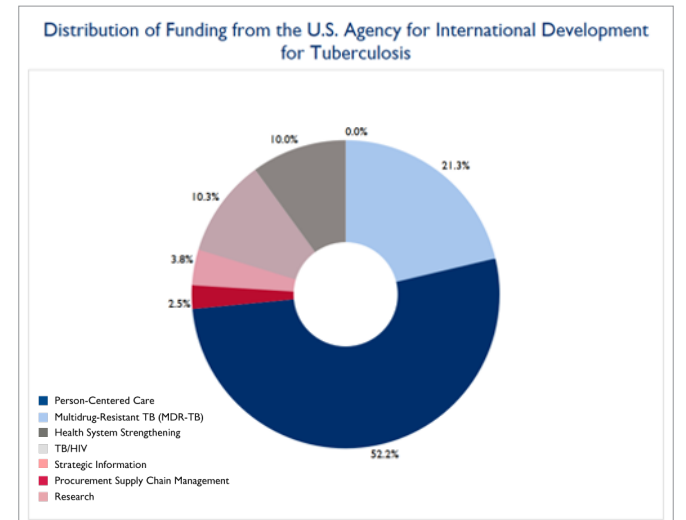
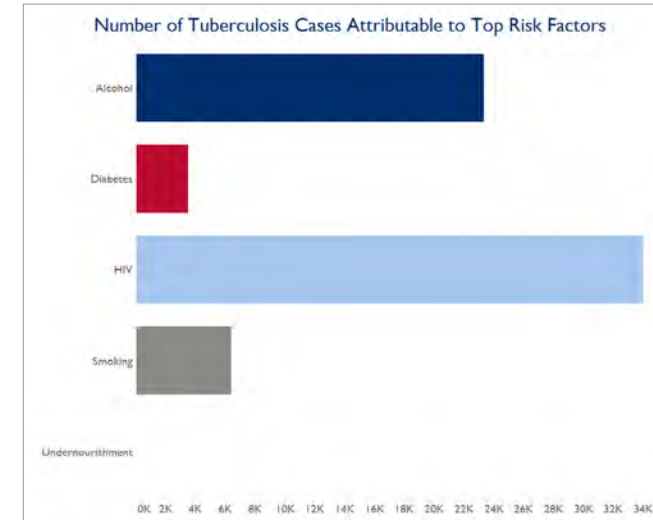
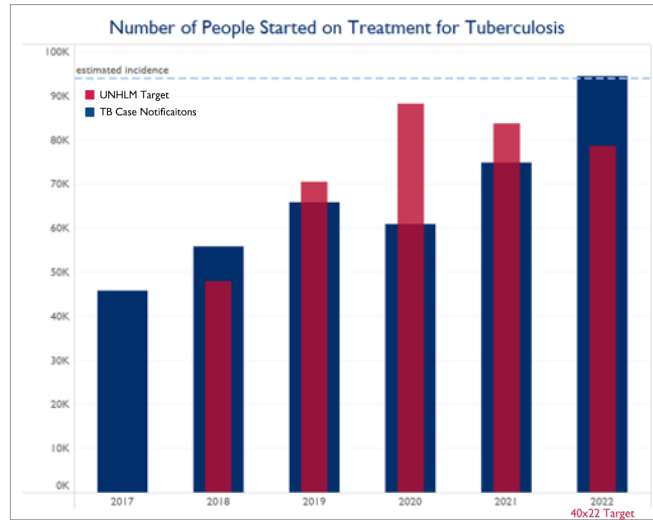
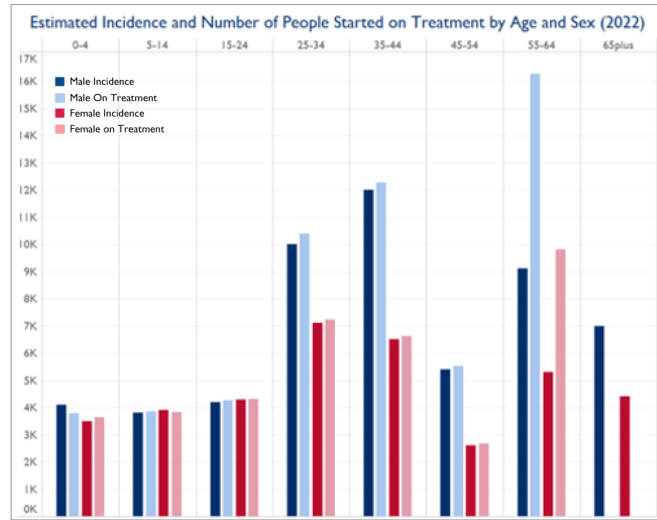


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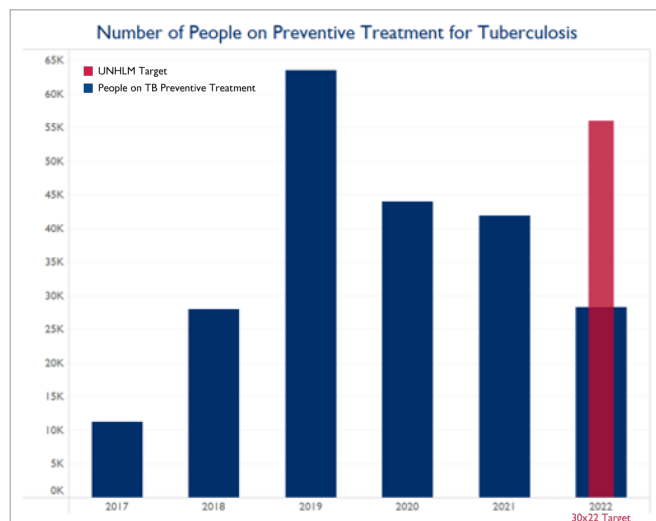
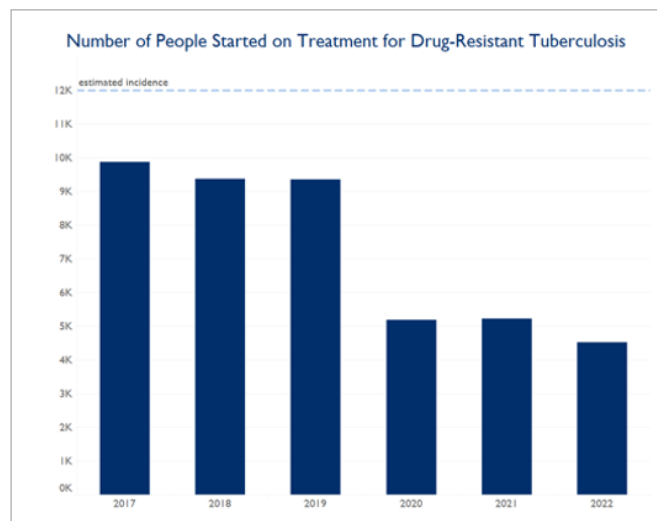
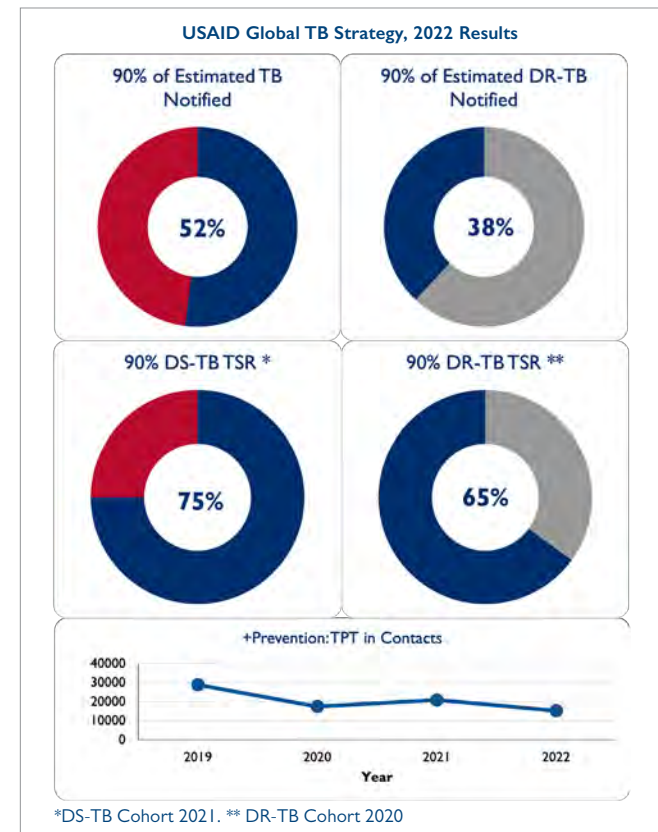
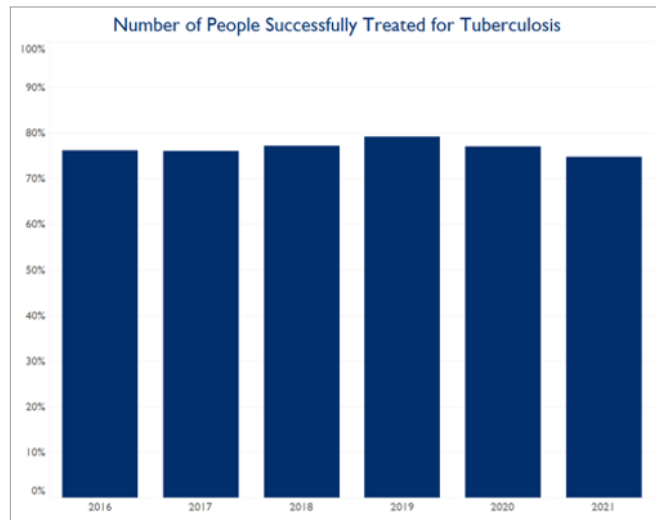
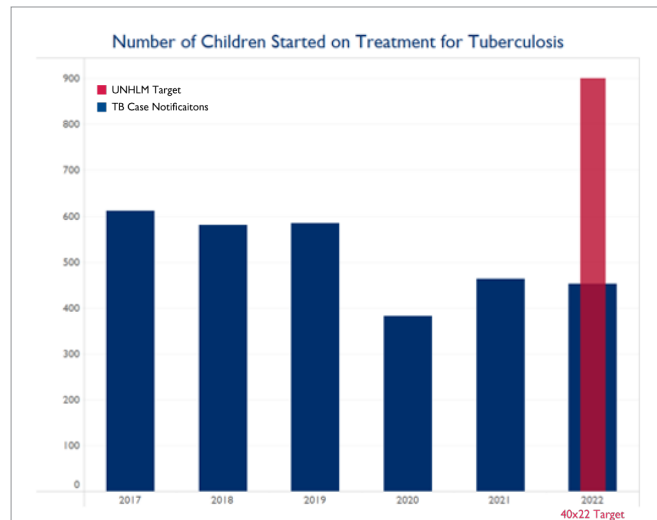
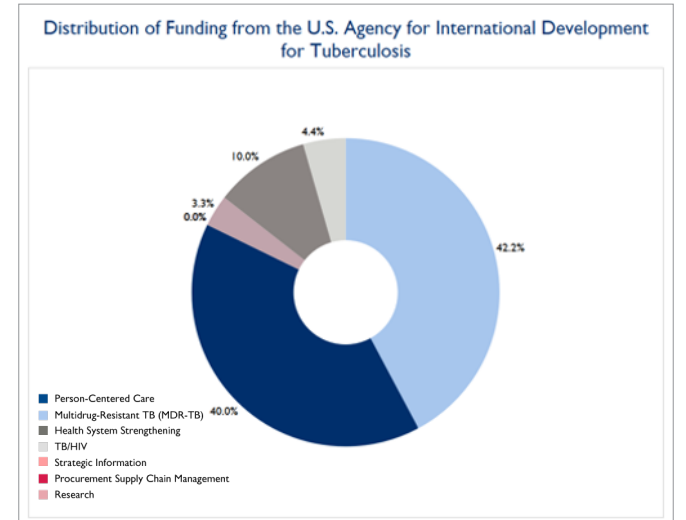
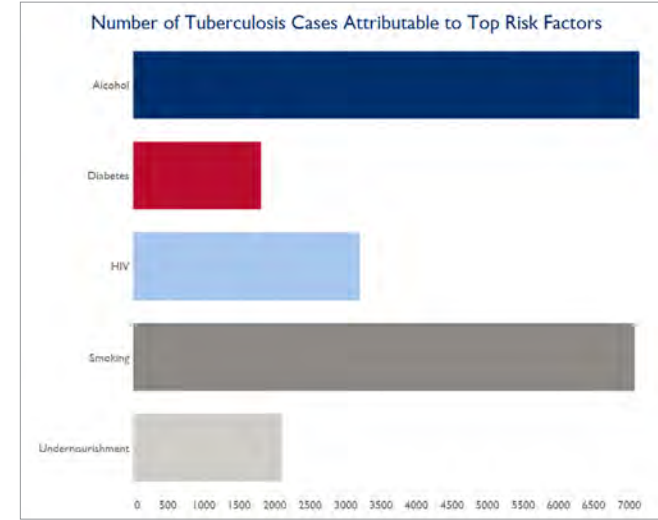
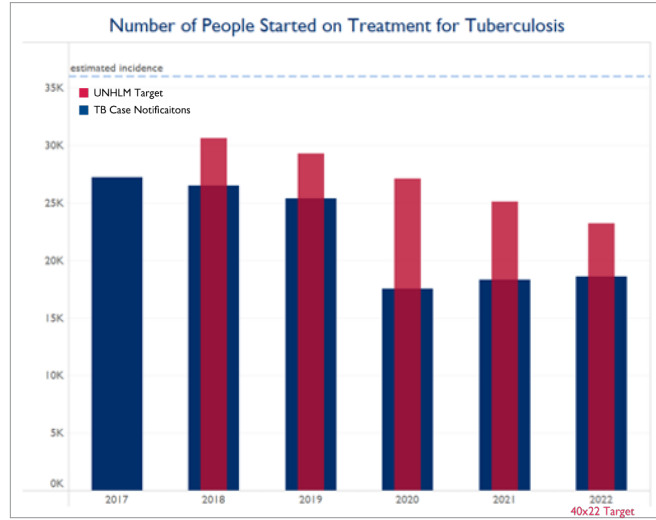
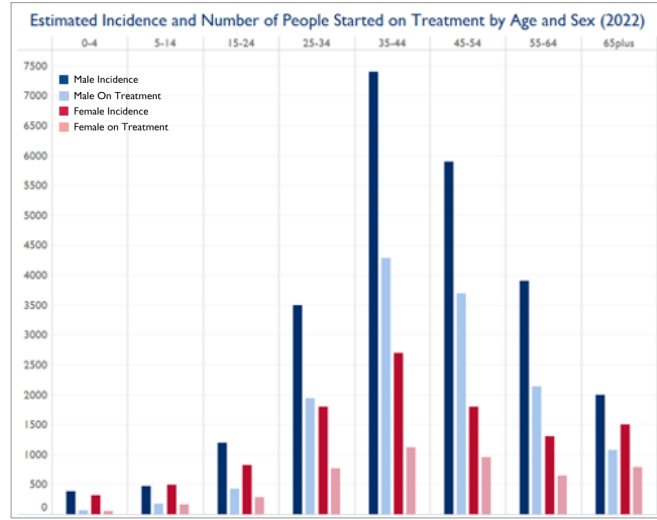


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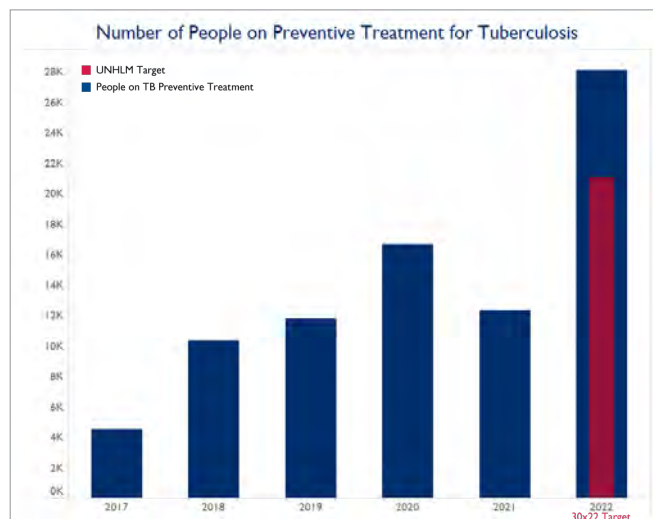
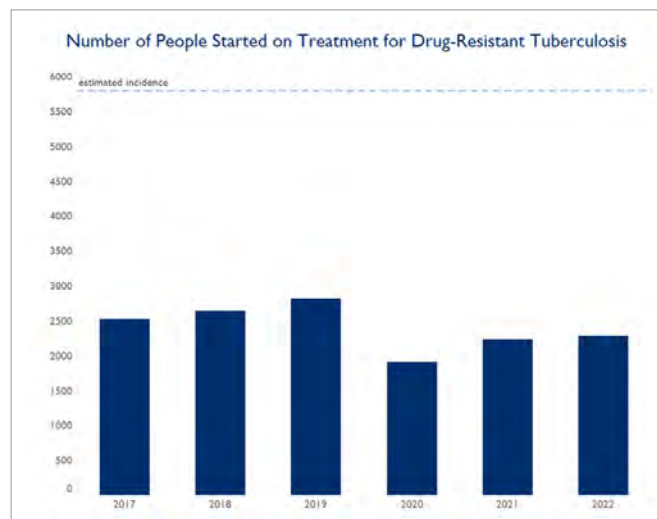
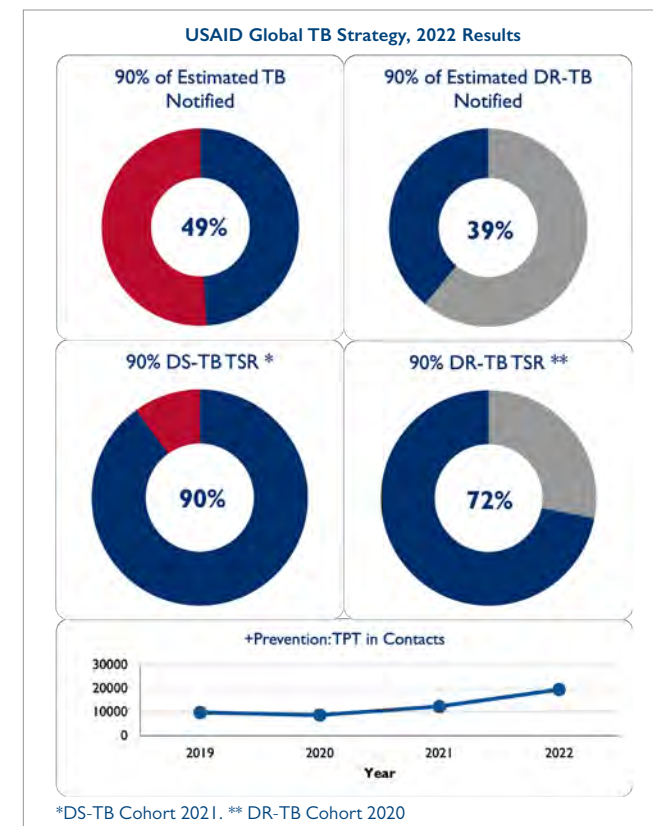
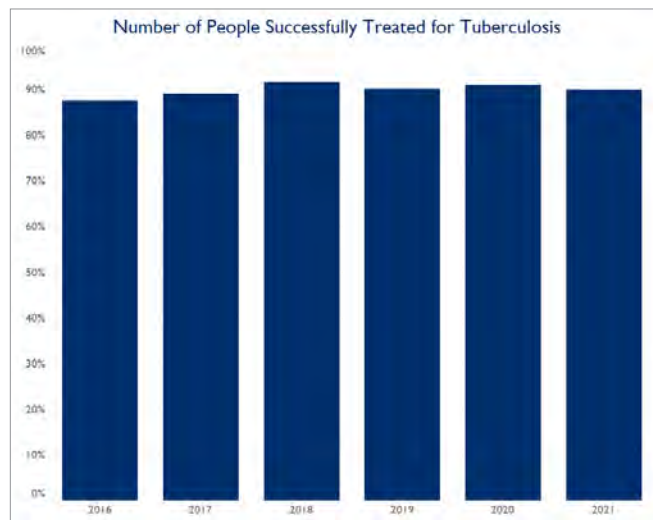
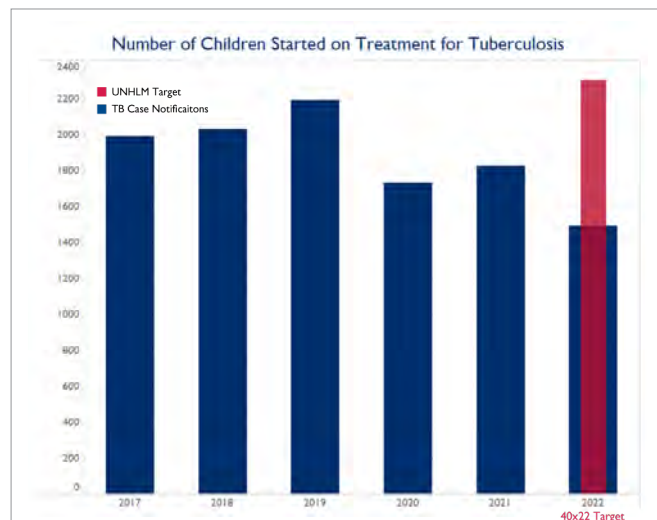
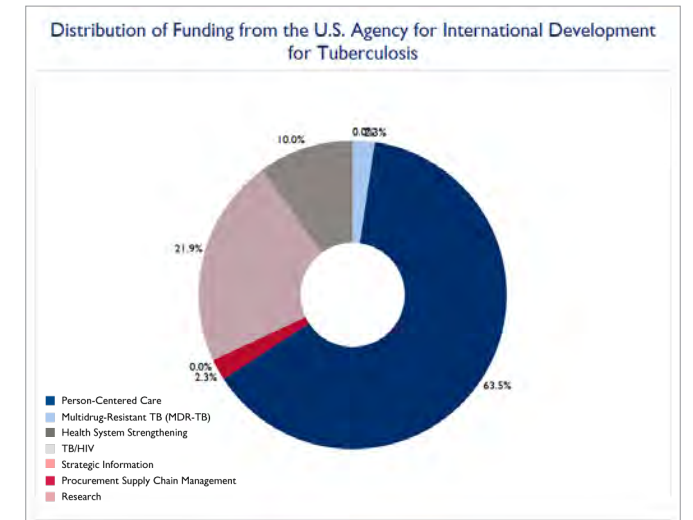
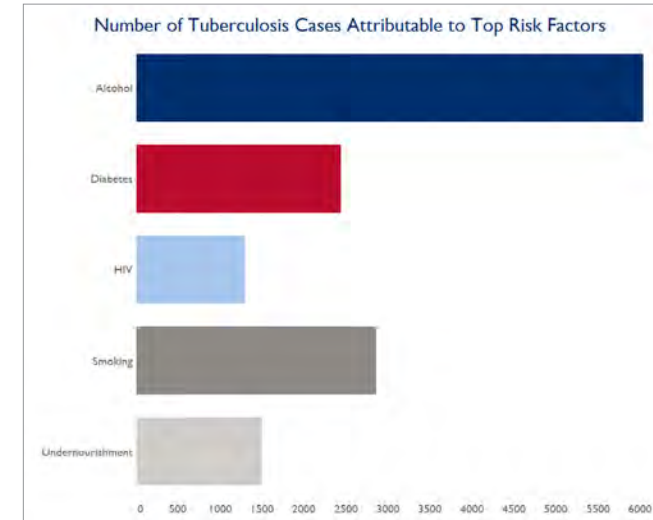
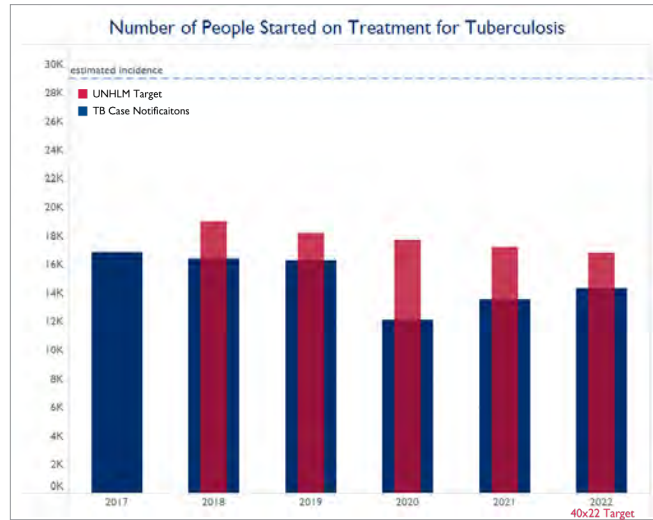
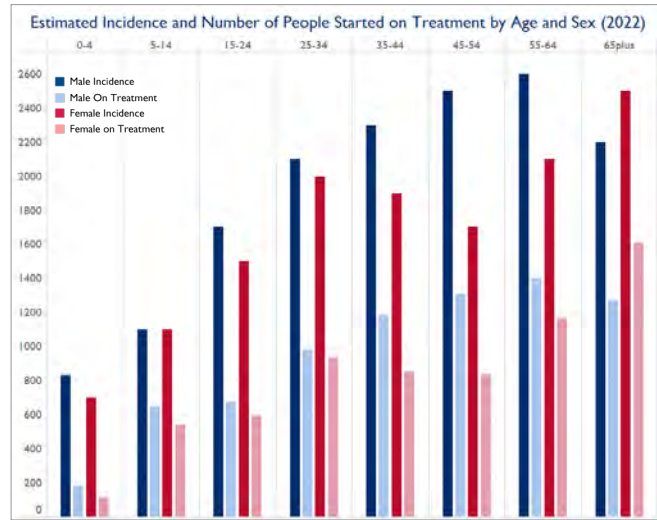
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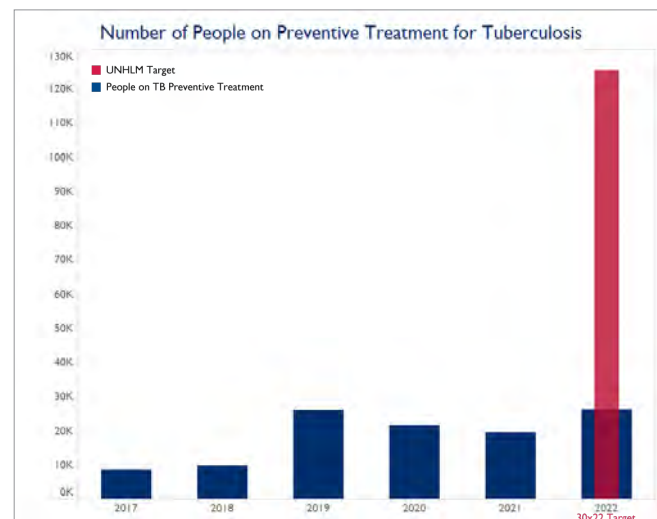
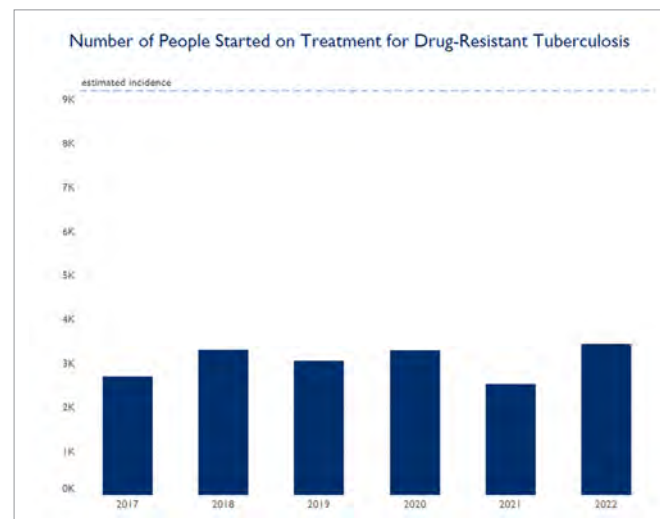
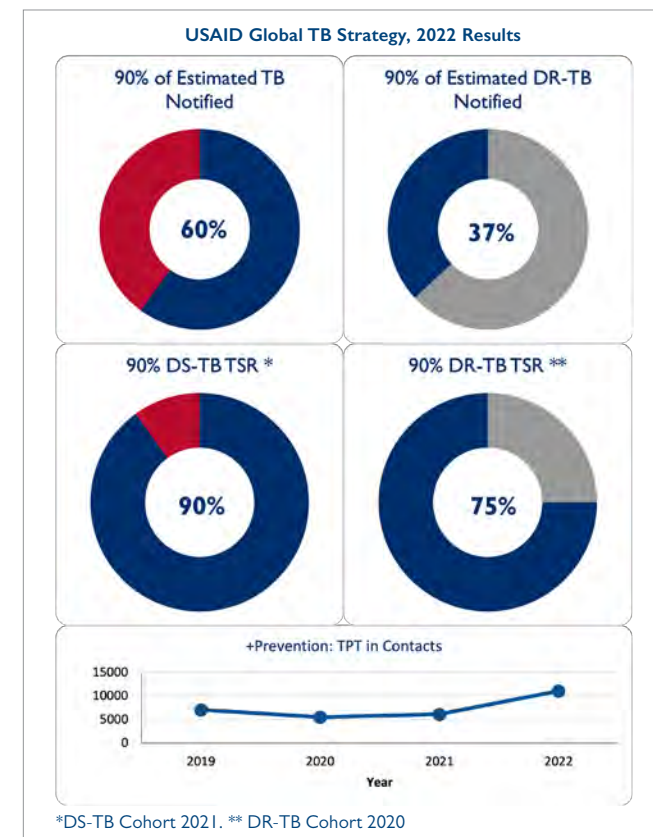
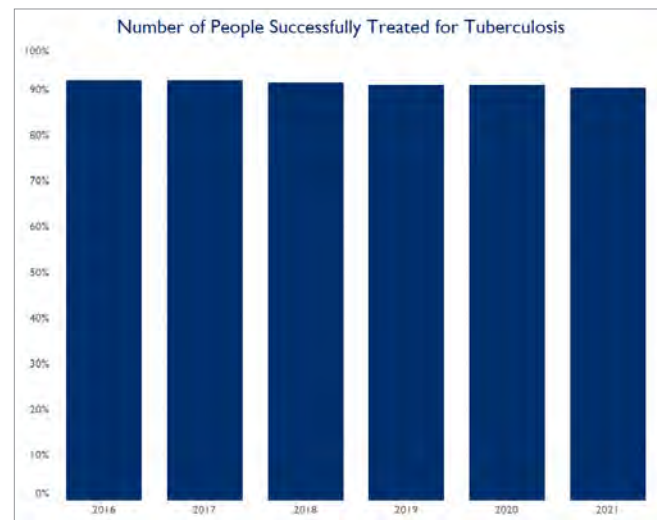
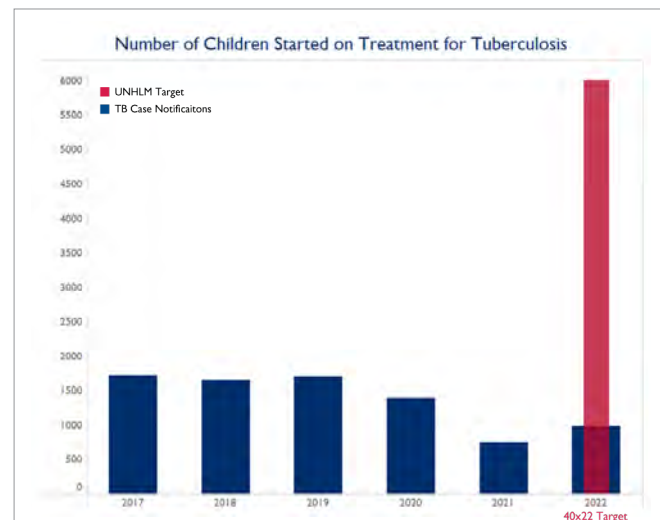
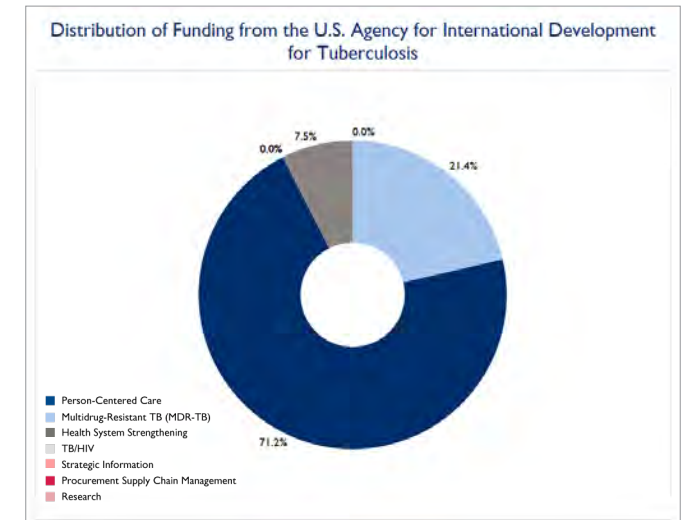
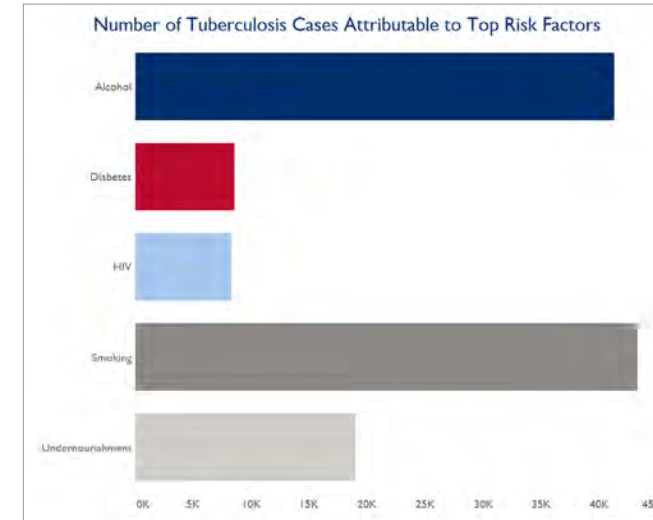
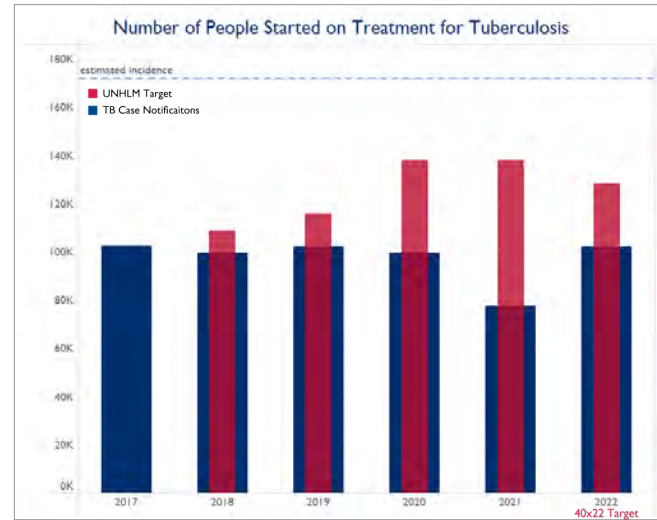
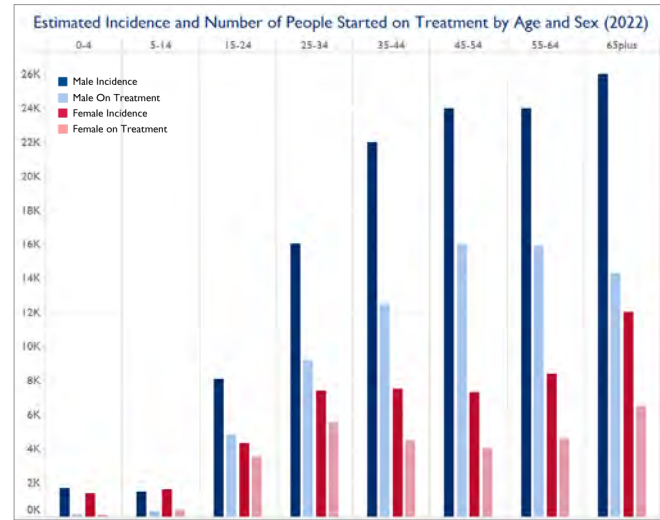
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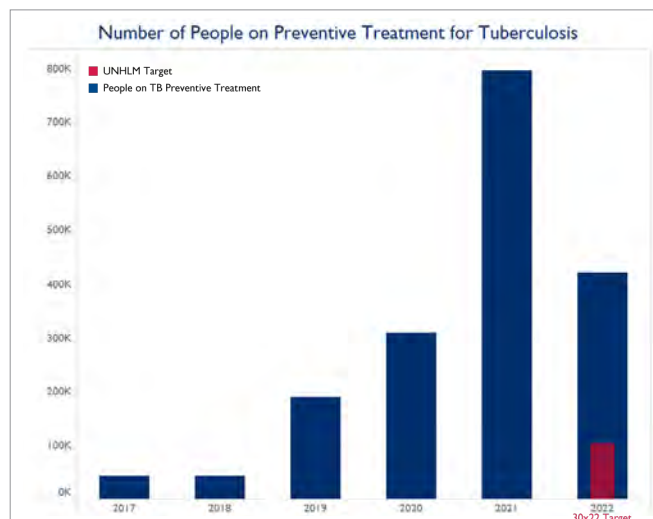
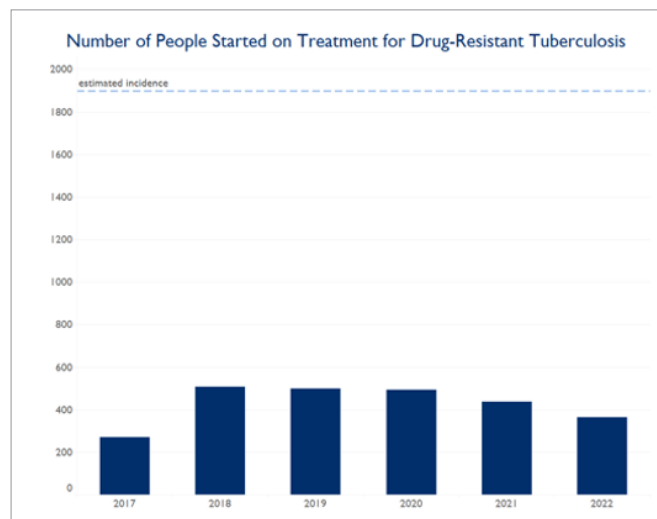
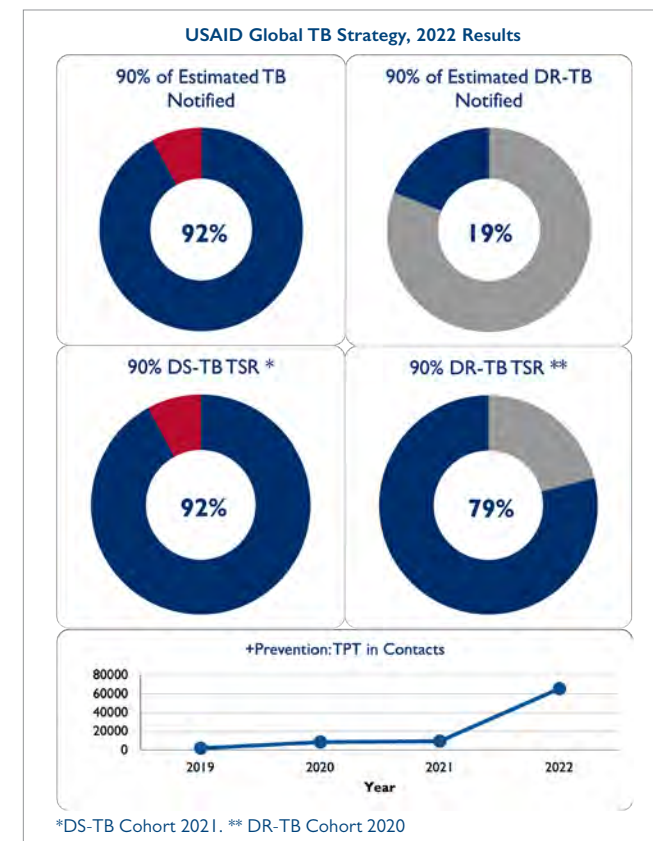
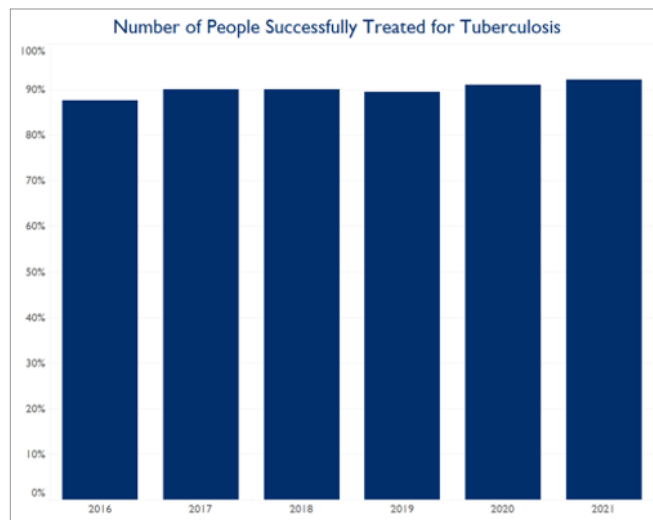
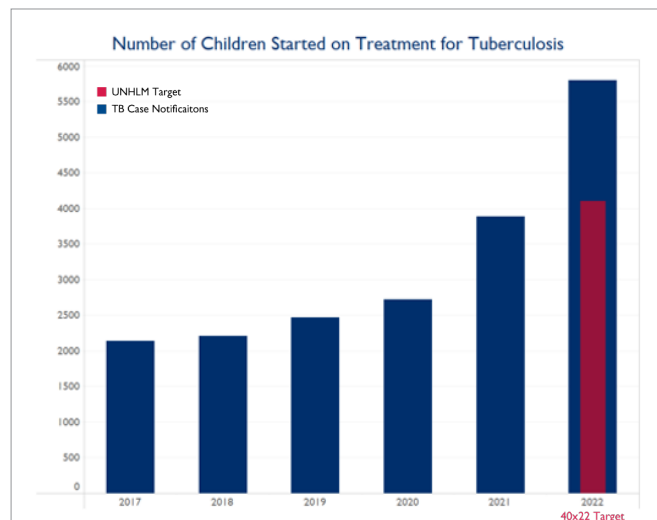
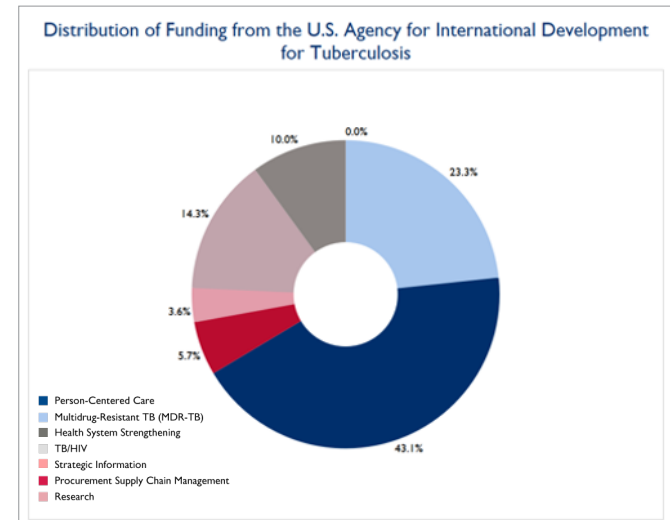
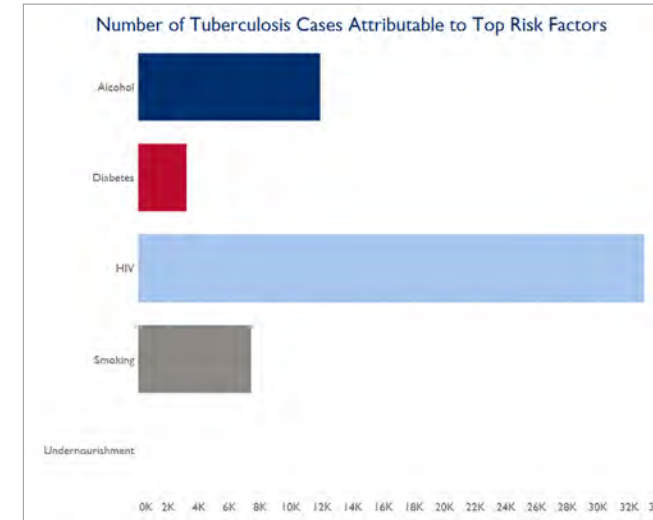
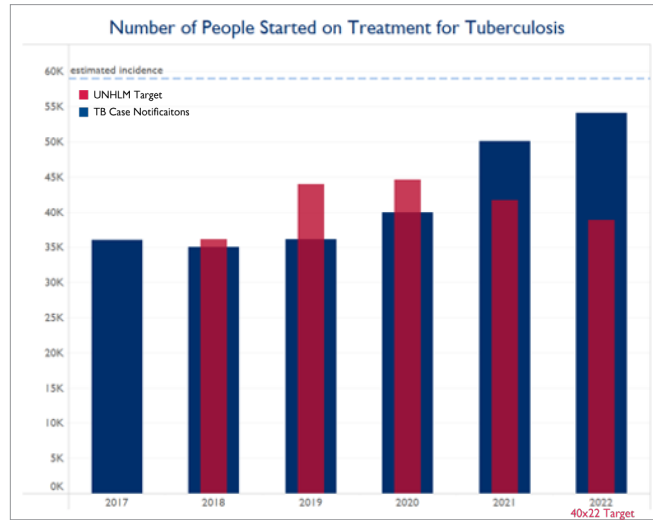
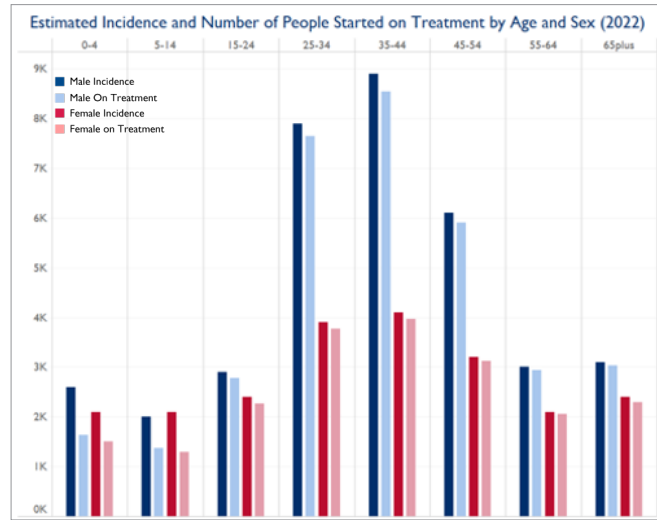
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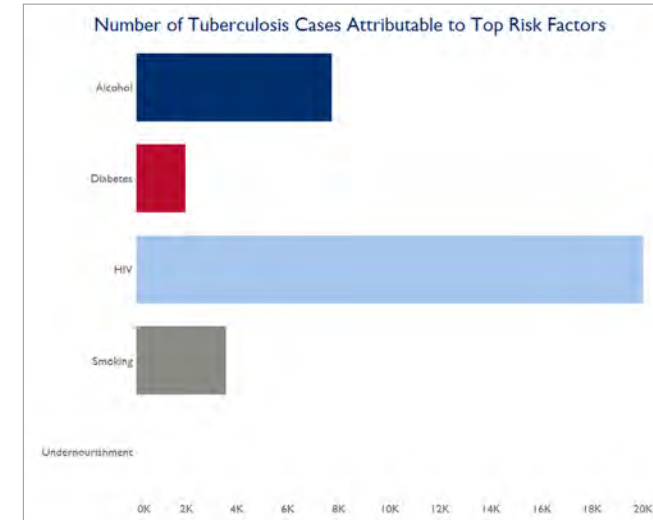
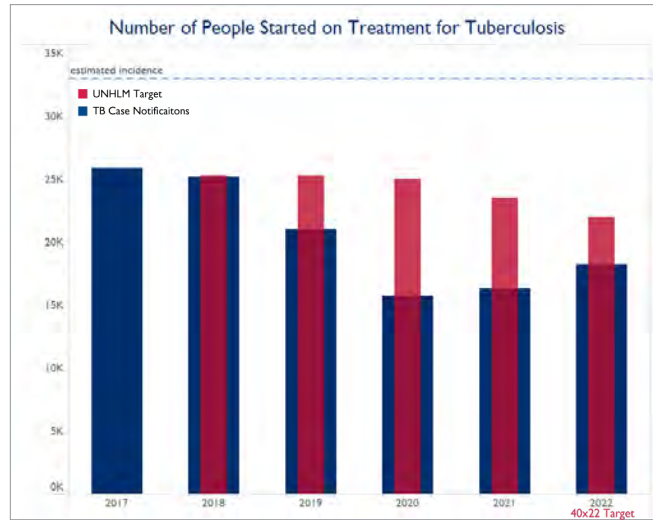
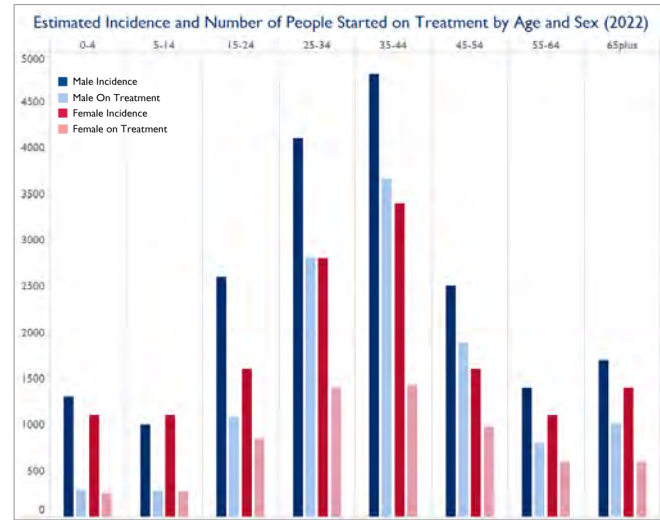


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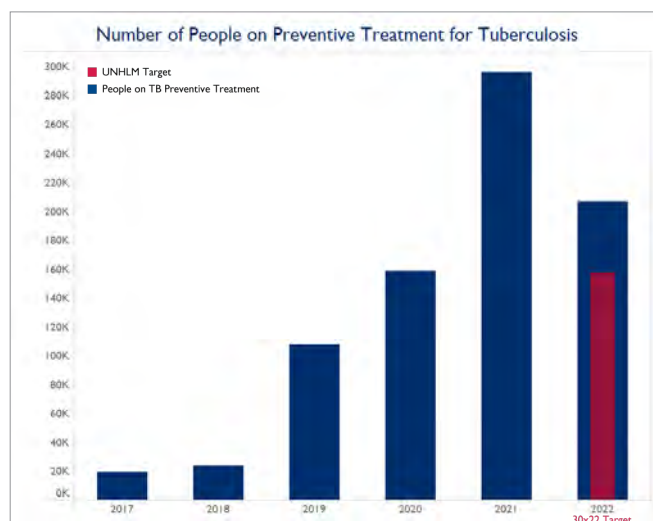
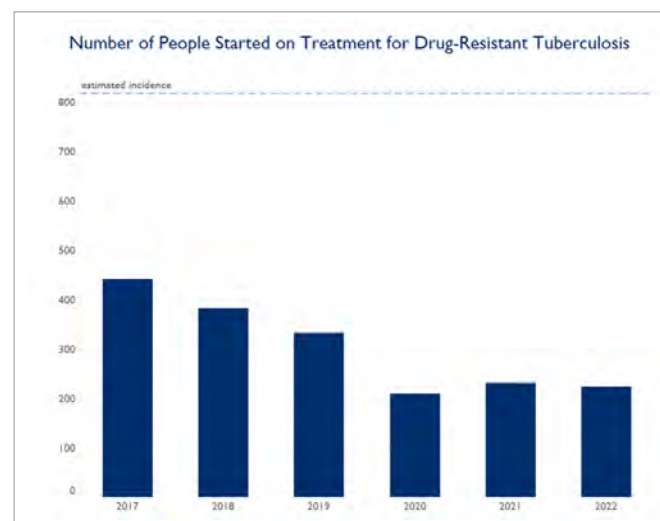
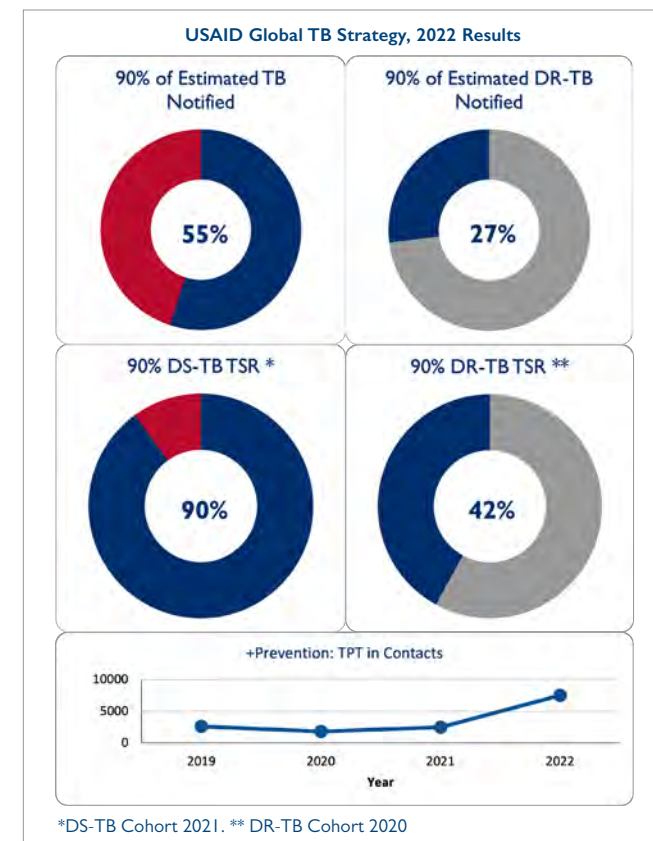
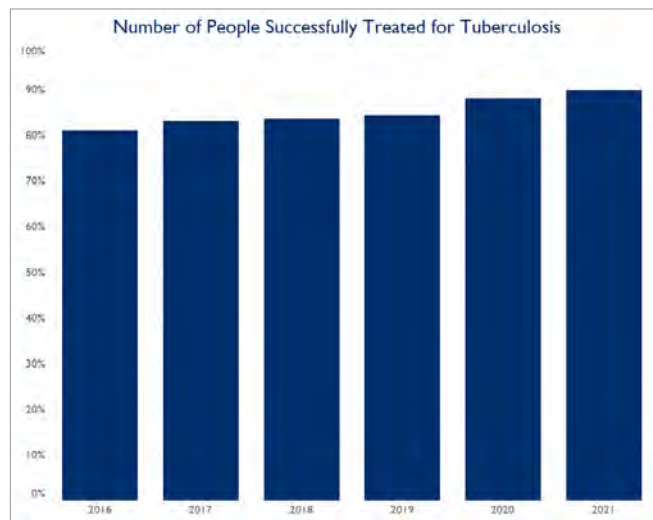
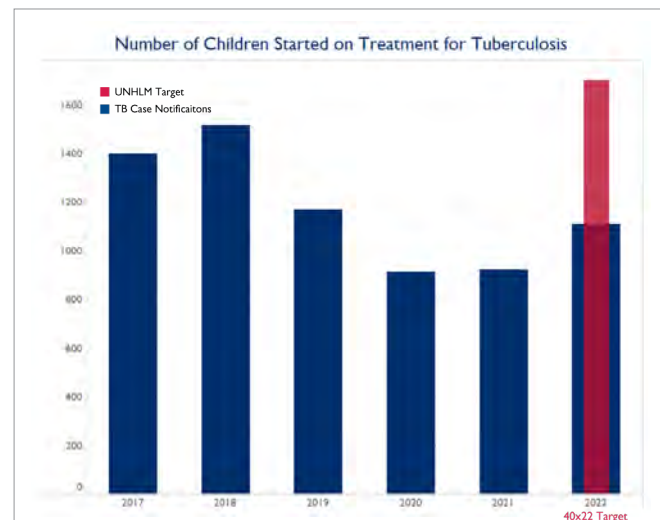
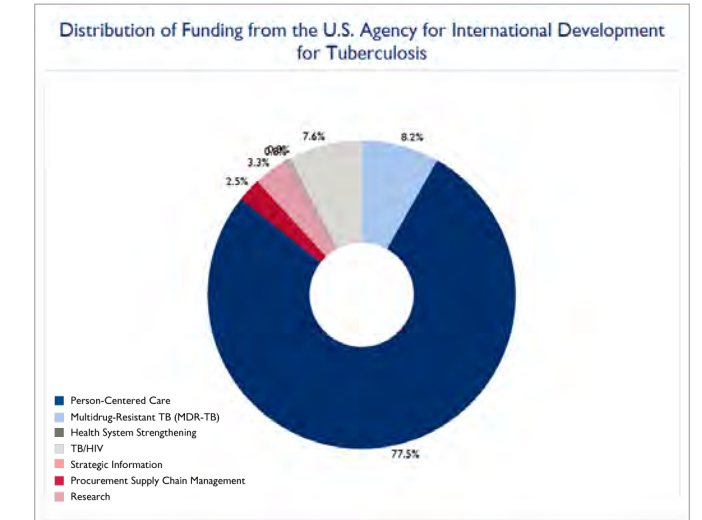
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TB screening results using computer-aided detection
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