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The global Tuberculosis Sentinel Research Network (TB-SRN) of the International epidemiology Databases to Evaluate AIDS (IeDEA): protocol for a prospective multiregional cohort study

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ABSTRACT

Introduction: Tuberculosis (TB) is a leading infectious cause of death globally. It is the most common opportunistic infection in people living with HIV (PLHIV), and the most common cause of their morbidity and mortality. Following TB treatment, surviving individuals may be at risk for post-TB lung disease (PTLD). The Tuberculosis Sentinel Research Network (TB-SRN) provides a platform for coordinated observational TB research within the International epidemiology Databases to Evaluate AIDS (IeDEA) consortium.

Methods and Analysis: This prospective, observational cohort study will assess treatment and post-treatment outcomes of pulmonary TB (microbiologically confirmed or clinically diagnosed) among 2,600 people aged ≥15 years, with and without HIV co-infection, consecutively enrolled at 16 sites in 11 countries, across six of IeDEA's global regions. Data regarding clinical and sociodemographic factors, mental health, health-related quality of life, pulmonary function, and laboratory and radiographic findings will be collected using standardized questionnaires and data collection tools, beginning from the initiation of TB treatment and through 12 months after the end of treatment. Data will be aggregated for concept-driven analyses.

Ethics and Dissemination: Ethics approval has been obtained at all implementing study sites. Participants will provide informed consent; for minors, this includes both adolescent assent and the consent of their parent or primary caregiver. Protections for vulnerable groups are included, in alignment with local standards and considerations at sites. Procedures for requesting use and analysis of TB-SRN data are publicly available. Findings from TB-SRN analyses will be shared with national TB programs to inform TB programming and policy, and disseminated at regional and global conferences and other venues.

Strengths and limitations of this study

Strengths of this study include:

- Use of a diverse, global cohort of individuals with and without HIV to study pulmonary TB treatment and post-treatment outcomes, with harmonization of procedures and variables across 16 sites in 11 countries, across six global IeDEA regions.
- Comprehensive data collection, including sociodemographic, clinical, mental health, respiratory quality of life, spirometry, laboratory, and radiographic data, across the TB treatment and post-treatment time periods.
- Research follow-up through 12 months after the end of TB treatment, enabling investigations of longer-term outcomes after TB treatment, and correlation with factors ascertained at TB treatment initiation or during treatment.
- An inclusive approach informing real-world contexts of TB treatment. Specifically, this study includes both clinically diagnosed and microbiologically confirmed TB, and includes specific data collection and procedures for youth (ages 15-24) and for pregnant and post-partum participants.

Limitations of this study include:

- Some variations by region in TB management, available treatment support, and access to testing for diagnosis and monitoring (e.g., TB cultures). These will be noted and accounted for in planned analyses.

INTRODUCTION

Before the onset of the coronavirus disease (COVID-19) pandemic, tuberculosis (TB) was the leading infectious cause of death globally by a single pathogen.[1] The COVID-19 pandemic has disrupted TB and HIV services, with attendant challenges for optimal diagnosis, control, and care management.[1-4] In the years since the onset of the COVID-19 pandemic, global estimates of TB disease, drug-resistant TB, and TB deaths have increased for the first time in many years.[1-3] In 2021, an estimated 10.6 million people developed TB disease and 1.6 million people died from TB.[1] Further—despite increasing global access to antiretroviral treatment (ART) and to TB preventive therapy (TPT) among people living with HIV (PLHIV)—TB remains the leading cause of morbidity and mortality among PLHIV.[5-7] In this context, data are urgently needed to inform global strategies to address the dual TB and HIV epidemics.

Critical evidence gaps exist with regard to drivers of unfavorable TB treatment outcomes, such as mortality, TB recurrence, and post-treatment sequelae/complications, including among PLHIV.[5 8 9] Addressing these gaps is particularly critical in light of recent acceleration towards shorter TB treatment regimens for both drug-susceptible and drug-resistant TB, and given the prospect of possible individualized approaches to treat both TB and post-TB lung disease (PTLD).[10] Key areas of ongoing research gaps relate to TB-HIV co-infection, treatment, and associated complications; consequences of drug-resistant TB; pulmonary complications and post-treatment outcomes; the impacts of psychosocial and life course factors on TB outcomes; and mental health outcomes of TB. A global prospective cohort of individuals with TB and with TB-HIV coinfection enables harmonized data collection and procedures to inform questions in these key areas.

The International epidemiology Databases to Evaluate AIDS (IeDEA) global research consortium—established by the US National Institutes of Health in 2006—collects and analyzes observational data in a clinical cohort of over 2.2 million people living with or affected by HIV, in 44 countries.[11] Data are organized by seven geographic regions, and coordinated by regional data centers.[11] IeDEA provides diverse global data from HIV treatment programs, and the Tuberculosis Sentinel Research Network (TB-SRN) of IeDEA aims to provide a global platform for coordinated observational TB research within the IeDEA consortium. The TB-SRN working group of IeDEA developed an observational cohort study protocol. To facilitate possible pooled global analyses, protocol development was based in part on the framework and original protocol of the Regional Prospective Observational Research in Tuberculosis (RePORT) International

Consortium.[12-14] The TB-SRN uses a common set of standards and definitions for prospective observational TB research. These were developed in alignment with the study concepts and measurement timepoints defined by RePORT International.[12-14] The TB-SRN will facilitate the use of pooled data to study pulmonary TB treatment and post-treatment outcomes among people with and without HIV at TB-SRN sites in six of IeDEA's global regions. The resulting findings and study infrastructure may be used to inform policy and practice regarding TB treatment, and create a platform for additional regional and multiregional TB research within IeDEA.

METHODS AND ANALYSIS

Objectives of the IeDEA TB Sentinel Research Network

With its focus on HIV and associated co-infections and comorbidities, the global IeDEA research consortium is ideally positioned to study TB outcomes among people with and without HIV. To accomplish this, the TB-SRN will study outcomes of people diagnosed with pulmonary TB through a network of 16 sentinel sites (Table 1) located in 11 low- and middle-income countries (LMIC) in six IeDEA regions: Asia-Pacific, CCASAnet (Caribbean, Central and South America), Central Africa, East Africa, Southern Africa, and West Africa (Figure 1).

Table 1. Planned initial study sites in the Tuberculosis Sentinel Research Network (TB-SRN) of the International epidemiology Databases to Evaluate AIDS (IeDEA), by IeDEA region and target sample size.

IeDEA region	Site name	Sample size
Asia-Pacific	National Center for HIV, AIDS, Dermatology, and STDs, Cambodia	300
	HIV Netherlands-Australia-Thailand Research Collaboration (HIV-NAT), Thailand	
	Chiangrai Prachanukroh Hospital, Chiang Rai, Thailand	
CCASAnet	GHESKIO, Haiti	100
	Instituto Nacional de Infectologia, Fiocruz-RJ, Brazil	250
	Centro Municipal de Saude Duque de Caxias, Brazil	250
	Instituto Brasileiro de Investigação da Tuberculose / Fiocruz-BA, Brazil	250

	Fundação de Medicina Tropical, Brazil	250
Central Africa	Centre Hospitalier Kabinda, the Democratic Republic of the Congo	300
	Bondeko Health Center, Kinshasa, the Democratic Republic of the Congo	
East Africa	Academic Model Providing Access to Healthcare – Moi Teaching and Referral Hospital, Kenya	200
	Mbarara Regional Referral Hospital, Uganda	100
Southern Africa	Kanyama and Chawama at CIDRZ, Zambia	150
	Themba Lethu and Crosby Clinic, South Africa	150
West Africa	CePReF, Abidjan, Côte d'Ivoire	100
	Centre Hospitalier Universitaire Sourou Sanon, Bobo Dioulasso, Burkina Faso	200

Abbreviations: CCASAnet, the Caribbean, Central and South America network for HIV epidemiology; CePReF, Centre de Prise en charge, de Recherche, et de Formation; CIDRZ, Centre for Infectious Disease Research in Zambia; GHESKIO, Groupe Haïtien d'Étude du Sarcome de Kaposi et des Infections Opportunistes.

There are three specific objectives of the TB-SRN. First, the TB-SRN will collect and analyze clinical and treatment data among people treated for pulmonary TB with or without HIV co-infection, to improve our understanding of the prognosis of TB disease and its health-related outcomes, including quality of life and survival. Second, the TB-SRN will assess the individual-level effects of HIV and antiretroviral therapy (ART) on TB symptomatology, diagnosis, treatment response, and survival. As part of this aim, investigators will also explore the effect of site-level TB and HIV management and integration of TB and HIV services on pulmonary TB treatment and longer-term outcomes. Third, the TB-SRN will describe PTLD and associations with HIV infection, diabetes, chronic lung disease, mental health, and tobacco, alcohol and substance use, including measuring physiologic, structural, and functional impairment, health-related quality of life, and survival.

Study design

The TB-SRN is a prospective, observational study, with consecutive enrollment of PLHIV and HIV-negative individuals, ages 15 and above, with clinically diagnosed or microbiologically confirmed pulmonary TB disease. Microbiologic confirmation of pulmonary TB is defined on the basis of either positive molecular diagnostic test (e.g., GeneXpert), acid-fast bacilli smear, and/or TB culture from sputum or other respiratory specimen. Microbiologic confirmation of pulmonary TB may also be based on positive urine lipoarabinomannan assay in the presence of clinical signs, symptoms and/or radiographic findings of pulmonary TB. Clinically-diagnosed pulmonary TB is based on clinical diagnosis by medical providers through standard of care, in the absence of confirmatory testing. Individuals who consent to participate will provide clinical, laboratory, and radiographic data at study visits at specified timepoints from initiation of TB treatment through 12 months after the end of TB treatment (Table 2).

Table 2. Study procedures in the Tuberculosis Sentinel Research Network (TB-SRN) of the International epidemiology Databases to Evaluate AIDS (IeDEA).

	Treatment Phase[a]					Post-Treatment Phase		
Form / **Visit**	**SCREENING**	**BASELINE**	**MONTH 1** (Weeks 3-7)	**MONTH 2** (Weeks 8-12)	**End of TX** (-4 to +6 wks)	**6-M POST-TX** (-4 to +6 wks)	**12-M POST-TX** (-4 to +6 wks)	**TX F/R/W**
Informed consent (and assent, *if applicable*)[b]	X							
Demographics Including adolescent and young adult characteristics *(if applicable)*[c]		X						
Clinical history:								
• TB history and current diagnosis		X						X
• HIV and other medical history		X						
• Pregnancy and post-partum history *(female participants only)*		X			X	X	X	X
• Pregnancy and infant outcomes *(if applicable)*		X			X	X	X	X
Clinical evaluation Visit information, vital signs including pulse oximetry, respiratory symptoms, physical signs		X	X	X	X	X	X	X
Substance use ASSIST and smoking history		X			X		X	X
Respiratory symptoms and health-related quality of life SGRQ		X			X	X	X	X
Depression symptoms		X			X		X	X

PHQ-9 and suicide risk assessment								
Pulmonary testing:[d]								
• Spirometry				X	X	X		
• 1-minute sit-to-stand test		X		X	X	X		
Performed if not already done as part of care:								
• Chest X-ray[e]		X			X			
• CD4 count *(only for participants with HIV)*[f]		X						X
• HbA1c and random blood glucose		X			X			
Data collected from routine care, as available:								
• TB microbiology		X	X	X	X			X
• HIV testing and other lab results[g]		X	X	X	X	X	X	X
TB treatment Anti-TB regimen, adherence to medications, use and type of directly observed therapy		X	X	X	X			X
Antiretroviral treatment (*if applicable*) ARV regimen, adherence to medications		X	X	X	X	X	X	X
Adverse events			X	X	X			X
TB IRIS evaluation			X	X				
TB treatment outcome					X			X
Death form *(death during study, if applicable)*								

Abbreviations: ASSIST, Alcohol, Smoking and Substance Involvement Screening Test; IRIS, immune reconstitution inflammatory syndrome; PHQ-9, Patient Health Questionnaire; SGRQ, Saint George's Respiratory Questionnaire. a, Month 1 visit is optional, and not done at all sites. Tx F/R/W, Treatment Failure, Relapse, or Withdrawal. b, Adolescent minors who turn 18 years of age during the study will be re-consented on the first visit after turning age 18. c, For all youth participants ages 15-24 on enrollment. d, For 12 sites performing pulmonary testing. e, Digitized/digitizable chest X-ray (CXR) obtained, unless done within 4 weeks prior to the Baseline or End of Treatment as per standard of care. CXRs obtained at other time points through routine care will also be digitized/uploaded. Pregnant women are not required to have a CXR; regions may vary in approach in this population according to local standards. f, CD4 count will only be performed on participants who are HIV-positive and who have not had a CD4 count performed in the preceding 3 months. g, HIV testing of participants not known to be positive collected from routine data and not as part of the study. HIV viral load (if applicable), CBC, transaminases, and TB microbiology data to be abstracted if available.

Most participants, if completing a standard duration of six months of TB treatment for drug-susceptible TB, will consequently be followed for a total of 18 months from TB treatment initiation.

Time on study will be longer, however, if treatment duration is longer as determined by providers under standard of care. (Treatment duration may be longer than six months, for example, for some regimens for drug-resistant TB, or if treatment is interrupted, or if pulmonary disease coincides with infection at an extrapulmonary site warranting longer treatment duration.) In addition, some regions have longer follow-up periods after end of TB treatment, according to region-specific objectives. Some regions will also have data collection beyond this multiregional protocol, such as for laboratory biomarkers, pharmacokinetic data, or biological specimens. Data will be aggregated for concept-driven analyses.

Sample selection

TB-SRN Sites

Sixteen sites included in the TB-SRN are located in 11 countries: Brazil, Burkina Faso, Cambodia, Côte d'Ivoire, the Democratic Republic of the Congo, Haiti, Kenya, South Africa, Thailand, Uganda, and Zambia. These sites represent a range of contexts for the dual TB-HIV epidemics, including differing prevalence of TB and HIV, care models, and resources. Analyses in this study will include comparisons by site-level variables or by region.

Eligibility and exclusion criteria

The IeDEA TB-SRN will enroll participants ages 15 and older with clinically diagnosed or microbiologically confirmed active pulmonary TB who are initiating TB treatment at IeDEA TB-SRN sites. Participants must have either documentation of recent HIV testing or of HIV infection or willingness to be tested for HIV, as routinely indicated under TB treatment guidelines.[15] Informed consent will be required for all participants; including parental/caregiver consent and minor assent for individuals younger than age 18 (or the legal age of majority). There will be no restrictions based on sex, gender identity, HIV status, pregnancy, ethnicity, or nationality. Participants may be co-enrolled in other research with the exception of clinical trials of novel TB treatment regimens.

An individual will be excluded if they meet any of the following criteria: have received >7 days of TB treatment within the prior 30 days, excluding TB preventive therapy; have imminent plans to follow-up for TB care or relocate/return to a site distant from the enrollment site, which would interfere with the participant's ability to complete all study visits; have substantial cognitive impairment that may interfere with the ability to give reliable informed consent; are currently imprisoned.

Participant considerations

The inclusion of participants with and without HIV will facilitate analyses in which HIV status is evaluated as a factor potentially contributing to TB treatment or post-treatment outcomes. The proportion of participants with HIV co-infection is anticipated to vary across sites. The TB-SRN will target a proportion of 20-30% with TB-HIV co-infection across the global cohort.

The inclusion of participants ages 15 and above will allow for dedicated analyses of participants in the 15–24-year-old age group of youth with TB. While youth have specific needs that must be addressed in quality health services, TB programs globally have not adopted youth-centered care models.[16-19] Further, adolescents and youth have been neglected in TB research, either by failure to include individuals younger than age 18, or by not examining research data within stratified adolescent or young adult age groups.[18 19] Guidance from the WHO now advises that youth and their specific needs should be included in global TB research and care efforts.[20-22] This study will assess clinical characteristics, TB outcomes, and post-treatment outcomes in a sub-cohort of youth with TB across 5-year age strata (i.e., older adolescents aged 15-19 and young adults aged 20-24 years).

TB during pregnancy can cause poor outcomes for both the mother and for the developing fetus (or infant, after delivery), including maternal complications, miscarriage, preterm birth, low birthweight, or perinatal death.[23-26] Existing data regarding clinical features and outcomes of TB in pregnancy are very limited. Pregnant and post-partum individuals with TB (who have been pregnant within the last 12 months) will be included in TB-SRN. Data collection will include specific variables related to pregnancy, receipt of TB and HIV medications during pregnancy, and maternal and infant outcomes. These will be collected over the course of the study period, including for individuals who become pregnant or give birth during the study.

Patient and public involvement

Key research questions of this study were informed by previous participatory research and advocacy from individuals with TB; in particular, calling for research in PTLD and other post-treatment outcomes,[27] and for inclusion of adolescent minors in research.[22] Individuals with TB were not involved in the study's design. Draft case report forms (CRFs) were revised through iterative rounds of review and preliminary piloting at the study sites. In particular, clinical programs at the sites were involved in revisions at this stage to ensure the feasibility of CRFs and to minimize burdens on individuals with TB participating in the study. Clinical programs at the sites

were also consulted related to study planning. This included preparations for referral for immediate and urgent health needs, such as for symptoms of depression and suicidal thinking (assessed by PHQ-9 and suicide risk assessment). Findings from this research will be shared with national TB programs and HIV treatment programs at the study sites, and disseminated to individuals with TB.

Assessments and data collection

Data (e.g., chest X-rays, laboratory results, health-related outcome measures; Table 2) will be collected according to a common schedule and methodology across sites, so that they can be harmonized and aggregated for analysis.

Participants who consent to the study will be followed during TB treatment and for 12 months after the end of their primary treatment course (i.e., the treatment course initiated at study enrollment). For most participants, this will be approximately 18 months after provisional enrollment/treatment start if they have drug-susceptible TB and receive a 6-month TB treatment regimen, but it may be longer if they have drug-resistant TB or require a longer treatment regimen for other reasons (e.g., if there is associated extrapulmonary TB disease). At the time of this study, TB programs at the study sites are primarily using treatment regimens of 6 months' duration as routine standard for drug-susceptible pulmonary TB.

Participants will be requested to provide data during visits at key timepoints: at baseline (at initiation of TB treatment), month 1 (optional; performed at some but not all sites), month 2, end of TB treatment, 6 months post-treatment, 12 months post-treatment, and at the time of suspected or apparent treatment failure, TB recurrence, or study withdrawal if it occurs during treatment or the 12-month post-treatment follow-up phase. The baseline visit will include detailed clinical history, including course of TB symptoms and diagnosis, previous TB, HIV diagnosis and treatment (as applicable), history regarding recent or current pregnancy, and history regarding non-communicable co-morbidities and their treatment (e.g., diabetes mellitus, hypertension, pulmonary or cardiovascular disease, cancer, immune suppression, mental health diagnoses). Sociodemographic information will be collected including specific information relevant to youth ages 15-24 at enrollment. Data collected at multiple visits during the study will include TB symptoms; ascertainment of immune reconstitution inflammatory syndrome (IRIS), TB treatment failure, or TB recurrence; clinical, radiographic and microbiologic data related to TB; assessments for symptoms of depression (by the Patient Health Questionnaire; PHQ-9)[28] and substance use (by the Alcohol, Smoking, and Substance Involvement Screening Test; ASSIST);[29 30] and pulmonary investigations including repeated pulse oximetry, spirometry, functional test (1-minute

sit-to-stand test), and respiratory symptoms and health-related quality of life (by the Saint George's Respiratory Questionnaire; SGRQ).[31 32] These validated questionnaires have been used previously in the respective regions, with adaptations as appropriate (e.g., PHQ-9, ASSIST, SGRQ).

Data will be collected on paper or electronic CRFs according to local capacity and regulatory requirements. Paper forms will be subsequently entered into the electronic system by trained personnel. All sites will use the secure, web-based REDCap data collection platform and/or the REDCap Mobile App for data collection.[33 34] Common data management processes and procedures will be developed in collaboration with the Harmonist team at Vanderbilt University Medical Center, which provides informatics resources for IeDEA.[35 36] For sites using film-based chest X-rays, films will be scanned and digitized using standard procedures defined by the NIH TB Portals platform.[37]

Sites will work with the IeDEA regional data centers to enter, prepare, and clean data using either the Vanderbilt REDCap server or a regional REDCap server to adhere to country regulations on research data storage. All sites will use the same REDCap project template to ensure variables and study events use the same names and code lists to facilitate subsequent data merging. Research staff will administer questionnaires using relevant local translations (i.e., in French, Swahili, Runyankole) and adaptations as appropriate, implemented in paper CRFs and in the REDCap data collection platform. Regional data centers will conduct quality control or assurance activities for their sites based on guidance developed by the TB-SRN study team and the Harmonist team.[35 36]

Outcome measures

Multiple outcomes will be assessed in the TB-SRN (Table 3). These include TB treatment outcomes; TB recurrence; mortality; other pulmonary, health-related quality of life, and mental health outcomes.

Table 3. Select study outcomes in the Tuberculosis Sentinel Research Network (TB-SRN) of the International epidemiology Databases to Evaluate AIDS (IeDEA).

Outcome	Definition
TB treatment outcomes[38]	As defined by WHO:[38]

	• Treatment failed: A patient whose treatment regimen needed to be terminated or permanently changed to a new regimen or treatment strategy. • Cured: A pulmonary TB patient with bacteriologically confirmed TB at the beginning of treatment who completed treatment as recommended by the national policy, with evidence of bacteriological response and no evidence of failure. • Treatment completed: A patient who completed treatment as recommended by the national policy, whose outcome does not meet the definition for cure or treatment failure. • Died: A patient who died before starting treatment or during the course of treatment. • Lost to follow-up: A patient who did not start treatment or whose treatment was interrupted for 2 consecutive months or more. • Treatment success: The sum of cured and treatment completed.
TB recurrence	Any new TB diagnosis after the end of TB treatment
Post-TB Mortality	Death from any cause after end of TB treatment[a]
Sustained treatment success[38]	An individual assessed at 6 months (for DR-TB and DS-TB) and at 12 months (for DR-TB only) after successful TB treatment, who is alive and free of TB.[38]

PTLD	Characterized by any of the following, after completion of TB treatment and in the absence of TB recurrence:[39]
	• Symptoms (new / recurrent / persistent from end of treatment)
	  ○ Respiratory distress, cough, dyspnea/shortness of breath, hemoptysis, chest pain
	• Signs (new / recurrent / persistent from end of treatment)
	  ○ Crackles, wheezing, diminished breath sounds
	• Hypoxemia (SpO2 < 90%)
	• Pulmonary function impairment (e.g., FEV1 / FVC ratio < LLN, FEV1 < LLN, and/or FVC < LLN)

	• Chest X-ray abnormalities (e.g., residual scarring) at end of treatment
Functional status	One-minute sit-to-stand testing
Health-related quality of life	St. George's Respiratory Questionnaire (SGRQ)[31 32] score
Depression symptoms	Patient Health Questionnaire (PHQ-9)[28] scores for none or minimal (0-4), mild (5-9), moderate (10-14), moderately severe (15-19), or severe (20-27)

Abbreviations: DR-TB, drug-resistant tuberculosis; DS-TB, drug-susceptible tuberculosis; FEV1, forced expiratory volume in one second; FVC, forced vital capacity; LLN, lower limit of normal; PTLD, post-tuberculosis lung disease; TB, tuberculosis; WHO, World Health Organization. a, Information about cause of death will be recorded if available.

TB treatment outcomes for both drug-resistant and drug-susceptible TB will follow the current definitions set by the WHO and will be in alignment with RePORT International outcomes.[12 38] These include both clinical and biological criteria for TB treatment outcomes. TB recurrence (inclusive of TB relapse and new TB infection) will be defined as any new TB diagnosis after the end of TB treatment for the primary course. Mortality will include deaths from any cause, and will be assessed during the treatment and post-treatment periods. Information about cause of death will be recorded if available.

Post-treatment outcomes will be ascertained. PTLD will be defined by new, recurrent or persistent respiratory symptoms or signs post-treatment; hypoxemia (oxygen saturation <90%); or pulmonary function impairment (e.g., forced expiratory volume in one second (FEV1) / Forced vital capacity (FVC) ratio < lower limit of normal (LLN), FEV1 <LLN, and/or FVC <LLN) or chest X-ray abnormalities).[39] Symptoms of depression will be assessed (by PHQ-9).[28] Health-related quality of life will be assessed (by SGRQ).[31 32] Functional status will be assessed with one-minute sit-to-stand testing.

Data management and harmonization

TB-SRN data from multiple REDCap installations will be accessed via the secure REDCap Application Programming Interface (REDCap API) and automatically merged on a monthly basis to generate study enrollment and monitoring reports. These reports will allow tracking of study progress and ensure the distributed data collection remains aligned in variable formats and naming. Merged research datasets will be generated on demand for analyses associated with approved research concepts. Analyses will be conducted by the designated regional data center. Data-sharing agreements and management procedures will be overseen by the IeDEA Executive Committee.

The NIH, which funds both the IeDEA consortium and RePORT International, provides guidance for the coordination and linkage of these parallel streams of research. In addition, the Harmonist project, which supports IeDEA through development of data standards and software to support research operations, will coordinate with RePORT regions to streamline their existing data structures and identify points of data alignment with IeDEA to enable future cross-consortium data harmonization and research.

Data analysis plan

While data may be used by the individual TB-SRN sites or regions, they are primarily being collected and harmonized for multiregional research, following IeDEA's standard operating procedures governing research collaboration.[40] Analyses of global TB-SRN data will be proposed through concept sheets, for detailed review and feedback from collaborators in the TB-SRN and other IeDEA working groups relevant to the study, with subsequent final review and approval by the IeDEA Executive Committee. Concepts will center on major research questions in TB and HIV clinical epidemiology.[41] These will include analyses of TB severity, TB treatment and post-treatment outcomes including PTLD, health-related quality of life, and associated clinical, mental health, and life course factors (Box 1). Youth with TB (ages 15-24) will be assessed as a subset of this cohort, with attention to their clinical, psychosocial, and lung health findings. The subset of pregnant and post-partum participants will also be described, to include specific variables and outcomes in this group.

Box 1. Select priority areas for observational research in the Tuberculosis Sentinel Research Network (TB-SRN) of the International epidemiology Databases to Evaluate AIDS (IeDEA).

Areas of investigation
• Drivers of TB severity, treatment outcomes, and post-treatment outcomes – particularly the impacts of HIV infection and ART • TB severity • TB IRIS • Drug-resistant TB • Post-tuberculosis lung disease • Depression symptoms and reported suicidal ideation • Alcohol, tobacco, and substance use • Youth life stage (ages 15-24) • Maternal and infant outcomes of TB in pregnancy and in the post-partum period[a]

Abbreviations: ART, antiretroviral treatment; HIV, human immunodeficiency virus; IRIS, immune reconstitution inflammatory syndrome; TB, tuberculosis. a, Assessed in a limited number of anticipated participants with current or recent pregnancy during the study.

Sample size considerations

The IeDEA TB-SRN will enroll 2,600 participants across all study sites. As the TB-SRN is a descriptive study encompassing multiple planned outcomes and analyses, sample sizes will vary by concept. For example, estimates of TB recurrence among active TB cases were abstracted from the literature; it is estimated that between 5% and 10% of treated TB cases will result in TB recurrence. Thus, if 2,600 active TB participants are enrolled, it is expected that between 130 and 260 episodes of recurrence will occur, with 200 being an approximate midpoint estimate. Furthermore, based on previous research, the majority of recurrent episodes are estimated to occur within 6 months of treatment completion, and thus >90% of all such episodes are expected to be detected during the follow-up period. The expected proportion of individual participants with HIV is anticipated to be 20 to 30% across the global cohort, which will allow assessments of HIV co-infection as a potential major risk factor in multivariable analyses.

For analyses of youth with TB, this age group is estimated to make up 17% of new TB cases globally.[42] In a cohort of 2,600 individuals with TB, we anticipate including several hundred

in this age group; representing a valuable contribution to the evidence base for this group.[18 19] For pregnant/post-partum participants with TB, while low numbers are anticipated, relevant variables collected in this study for maternal and infant outcomes will be described. Given the very limited existing data on this population, these data will add to the existing literature.[23 24 26] Aggregation with data from other cohorts may be considered for pooled analyses of priority questions for TB in these sub-groups.[18 19 41]

ETHICS AND DISSEMINATION

Ethical and safety considerations

Ethical and regulatory approvals have been obtained at all implementing study sites. Overarching ethical considerations have included the general low risk of this observational study; assurances that the decision whether or not to participate will have no bearing on clinical care received at the sites; strict protocols to ensure privacy and confidentiality of participant data; adherence to infection prevention protocols at the study sites; compensation for time/travel to participate; and specific considerations for inclusion of minors and pregnant individuals (as described below).

Standardized procedures are in place to ensure appropriate linkage to care and further evaluation when study assessments identify a possible physical or mental health condition. This includes procedures for direct linkage to care when symptoms of depression or suicidal ideation are identified.

In terms of safety considerations, this study is intended to ascertain detailed data collection for individuals with pulmonary TB followed in routine TB care and management. The inclusion of minors and of individuals who are pregnant is to ensure that these groups are not excluded from TB research. This is particularly important given that these groups have largely been excluded from TB research, or specific data have not been collected that are relevant to their clinical or social factors or outcomes. Sites follow locally approved protocols with respect to use of chest X-ray in pregnancy.

While chest X-rays are recommended as part of routine TB care[15] and the amount of radiation exposure from an X-ray procedure is considered safe in pregnancy when clinically indicated,[43-45] chest X-rays are not required for pregnant participants with TB in this study. Further, ethical approvals followed local standards and approval processes for consideration of chest X-rays in this population.

Similarly, sites follow local standards and approvals for inclusion of minors. General approaches include requiring the consent of a parent or primary caregiver, along with assent of

minors. Procedures are in place in recruitment and study activities to avoid inadvertent HIV disclosure to youth who have perinatally acquired HIV or to caregivers who may not be aware of a youth's status.

Dissemination plan

Findings from TB-SRN analyses will be disseminated across the IeDEA consortium, and at site-level, regional, and global venues. Policy briefs will be developed summarizing key study findings. These will be provided in direct communication with national TB programs and with national HIV programs to share and disseminate findings across these systems. Findings will be disseminated to study participants, and to TB care providers and individuals affected by TB, following setting-specific approaches at respective study sites.

Research findings from global and regional analyses will be presented at national and international meetings, and published in international peer-reviewed journals for a wide audience of clinicians, researchers, and public health practitioners in the areas of TB and HIV care and lung health. Publications will be disseminated to global TB networks, including to World Health Organization Global TB Program working group leads as appropriate, and to relevant sections of the International Union Against Tuberculosis and Lung Disease.

TB-SRN data can be leveraged towards future research. Researchers from beyond the IeDEA research consortium may request IeDEA data for dedicated analyses. Procedures for requesting use of TB-SRN data are publicly available.[40]

CONCLUSION

The TB-SRN provides a unique platform for global observational research in TB and TB-HIV co-infection. Through harmonized procedures and comprehensive prospective data collection across TB treatment and post-treatment periods, the TB-SRN will generate key epidemiology data for drivers and correlates of TB treatment and post-treatment outcomes, across a diverse global cohort. Findings from this project will inform policy and practice regarding TB treatment, and further research efforts.

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Authors' contributions

LAE, OM, AHS, SND, AF, KWK, MY, and additional members of the IeDEA Executive Committee designed this study and drafted the study protocol. TRS, MCF, TC, and others contributed to revisions and refinements to the protocol. LAE, OM, SND, and LM led the development and refinement of data collection tools. TC, MB, LF, FM, KWK, and NN and others provided input on study procedures and data collection tools. SND and LM developed the REDCap database for data collection under the multiregional protocol. LAE drafted the manuscript. All authors participated in manuscript revisions. All authors have read and approved the final manuscript.

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Competing interests

AHS receives grants to her institution from ViiV Healthcare and Gilead Sciences.
All other authors declare no conflicts of interest.

Figure 1. Country locations of planned initial study sites in the Tuberculosis Sentinel Research Network (TB-SRN) of the International epidemiology Databases to Evaluate AIDS (IeDEA). Map created using MapChart.net.[46]

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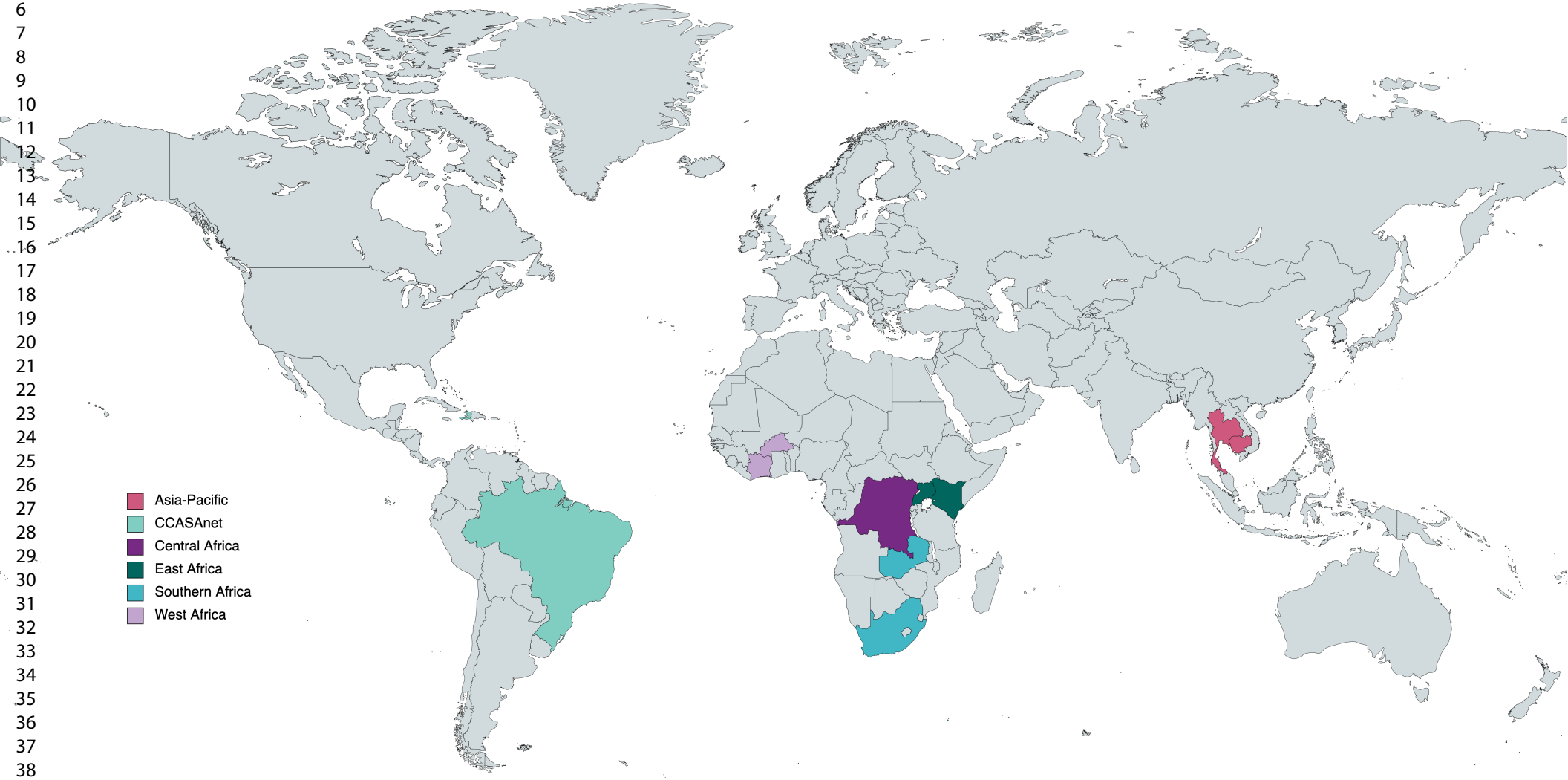

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The Tuberculosis Sentinel Research Network (TB-SRN) of the International epidemiology Databases to Evaluate AIDS (IeDEA): protocol for a prospective cohort study in Africa, Southeast Asia, and Latin America

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The Tuberculosis Sentinel Research Network (TB-SRN) of the International epidemiology Databases to Evaluate AIDS (IeDEA): protocol for a prospective cohort study in Africa, Southeast Asia, and Latin America

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Key words: tuberculosis; HIV/AIDS; treatment outcomes; post-TB lung disease; observational cohort.

ABSTRACT

Introduction: Tuberculosis (TB) is a leading infectious cause of death globally. It is the most common opportunistic infection in people living with HIV (PLHIV), and the most common cause of their morbidity and mortality. Following TB treatment, surviving individuals may be at risk for post-TB lung disease (PTLD). The Tuberculosis Sentinel Research Network (TB-SRN) provides a platform for coordinated observational TB research within the International epidemiology Databases to Evaluate AIDS (IeDEA) consortium.

Methods and Analysis: This prospective, observational cohort study will assess treatment and post-treatment outcomes of pulmonary TB (microbiologically confirmed or clinically diagnosed) among 2,600 people aged ≥15 years, with and without HIV co-infection, consecutively enrolled at 16 sites in 11 countries, across six of IeDEA's global regions. Data regarding clinical and sociodemographic factors, mental health, health-related quality of life, pulmonary function, and laboratory and radiographic findings will be collected using standardized questionnaires and data collection tools, beginning from the initiation of TB treatment and through 12 months after the end of treatment. Data will be aggregated for proposed analyses.

Ethics and Dissemination: Ethics approval was obtained at all implementing study sites, including the Vanderbilt University Medical Center Human Research Protections Program. Participants will provide informed consent; for minors, this includes both adolescent assent and the consent of their parent or primary caregiver. Protections for vulnerable groups are included, in alignment with local standards and considerations at sites. Procedures for requesting use and analysis of TB-SRN data are publicly available. Findings from TB-SRN analyses will be shared with national TB programs to inform TB programming and policy, and disseminated at regional and global conferences and other venues.

Strengths and limitations of this study

Strengths of this study include:

- Use of a diverse, global cohort of individuals with and without HIV to study pulmonary TB treatment and post-treatment outcomes, with harmonization of procedures and variables across 16 sites in 11 countries, across six global IeDEA regions.
- Comprehensive data collection, including sociodemographic, clinical, mental health, respiratory quality of life, spirometry, laboratory, and radiographic data, across the TB treatment and post-treatment time periods.
- Research follow-up through 12 months after the end of TB treatment, enabling investigations of longer-term outcomes after TB treatment, and correlation with factors ascertained at TB treatment initiation or during treatment.
- An inclusive approach informing real-world contexts of TB treatment. Specifically, this study includes both clinically diagnosed and microbiologically confirmed TB, and includes specific data collection and procedures for youth (ages 15-24) and for pregnant and post-partum participants.

Limitations of this study include:

- Some variations by region in TB management, available treatment support, and access to testing for diagnosis and monitoring (e.g., TB cultures). These will be noted and accounted for in planned analyses.

INTRODUCTION

Before the onset of the coronavirus disease (COVID-19) pandemic, tuberculosis (TB) was the leading infectious cause of death globally by a single pathogen.(1) The COVID-19 pandemic has disrupted TB and HIV services, with attendant challenges for optimal diagnosis, control, and care management.(1-4) In the years since the onset of the COVID-19 pandemic, global estimates of TB disease, drug-resistant TB, and TB deaths have increased for the first time in many years.(1-3) In 2021, an estimated 10.6 million people developed TB disease and 1.6 million people died from TB.(1) Further—despite increasing global access to antiretroviral treatment (ART) and to TB preventive therapy (TPT) among people living with HIV (PLHIV)—TB remains the leading cause of morbidity and mortality among PLHIV.(5-7) In this context, data are urgently needed to inform global strategies to address the dual TB and HIV epidemics.

Critical evidence gaps exist with regard to drivers of unfavorable TB treatment outcomes, such as mortality, TB recurrence, and post-treatment sequelae/complications, including among PLHIV.(5, 8, 9) Addressing these gaps is particularly critical in light of recent acceleration towards shorter TB treatment regimens for both drug-susceptible and drug-resistant TB, and given the prospect of possible individualized approaches to treat both TB and post-TB lung disease (PTLD).(10) Key areas of ongoing research gaps relate to TB-HIV co-infection, treatment, and associated complications; consequences of drug-resistant TB; pulmonary complications and post-treatment outcomes; the impacts of psychosocial and life course factors on TB outcomes; and mental health outcomes of TB. A global prospective cohort of individuals with TB and with TB-HIV coinfection enables harmonized data collection and procedures to inform questions in these key areas.

The International epidemiology Databases to Evaluate AIDS (IeDEA) global research consortium—established by the US National Institutes of Health in 2006—collects and analyzes observational data in a clinical cohort of over 2.2 million people living with or affected by HIV, in 44 countries.(11) Data are organized by seven geographic regions, and coordinated by regional data centers.(11) IeDEA provides diverse global data from HIV treatment programs. The Tuberculosis Sentinel Research Network (TB-SRN) is a global platform for coordinated observational TB research within the IeDEA consortium, which receives funding from multiple institutes and centers within the US National Institutes of Health (NIH). The TB-SRN working group of IeDEA developed an observational cohort study protocol. To facilitate possible pooled global analyses, protocol development was based in part on the framework and original protocol

of the Regional Prospective Observational Research in Tuberculosis (RePORT) International Consortium.(12-14) The TB-SRN uses a common set of standards and definitions for prospective observational TB research. These were developed in alignment with the study concepts and measurement timepoints defined by RePORT International.(12-14) The TB-SRN will facilitate the use of pooled data to study pulmonary TB treatment and post-treatment outcomes among people with and without HIV at TB-SRN sites in six of IeDEA's global regions. The resulting findings and study infrastructure may be used to inform policy and practice regarding TB treatment, and create a platform for additional regional and multiregional TB research within IeDEA.

METHODS AND ANALYSIS

Objectives of the IeDEA TB Sentinel Research Network

With its focus on HIV and associated co-infections and comorbidities, the global IeDEA research consortium is ideally positioned to study TB outcomes among people with and without HIV. To accomplish this, the TB-SRN will study outcomes of people diagnosed with pulmonary TB through a network of 16 sentinel sites (Table 1) located in 11 low- and middle-income countries (LMIC) in six IeDEA regions: Asia-Pacific, CCASAnet (Caribbean, Central and South America), Central Africa, East Africa, Southern Africa, and West Africa (Figure 1).(15)

Table 1. Planned initial study sites in the Tuberculosis Sentinel Research Network (TB-SRN) of the International epidemiology Databases to Evaluate AIDS (IeDEA), by IeDEA region and target sample size.

IeDEA region	Site name	Sample size
Asia-Pacific	National Center for HIV, AIDS, Dermatology, and STDs, Cambodia	300
	HIV Netherlands-Australia-Thailand Research Collaboration (HIV-NAT) and Chulalongkorn Hospital, Thailand	
	Chiangrai Prachanukroh Hospital, Chiang Rai, Thailand	
CCASAnet	GHESKIO, Haiti	100
	Instituto Nacional de Infectologia, Fiocruz-RJ, Brazil	250
	Centro Municipal de Saude Duque de Caxias, Brazil	250

	Instituto Brasileiro de Investigação da Tuberculose / Fiocruz-BA, Brazil	250
	Fundação de Medicina Tropical, Brazil	250
Central Africa	Centre Hospitalier Kabinda, the Democratic Republic of the Congo	300
	Bondeko Health Center, Kinshasa, the Democratic Republic of the Congo	
East Africa	Academic Model Providing Access to Healthcare – Moi Teaching and Referral Hospital, Kenya	200
	Mbarara Regional Referral Hospital, Uganda	100
Southern Africa	Kanyama and Chawama at CIDRZ, Lusaka, Zambia	150
	Themba Lethu, Johannesburg, South Africa	150
West Africa	CePReF, Abidjan, Côte d'Ivoire	100
	Centre Hospitalier Universitaire Sourou Sanon, Bobo Dioulasso, Burkina Faso	200

Abbreviations: CCASAnet, the Caribbean, Central and South America network for HIV epidemiology; CePReF, Centre de Prise en charge, de Recherche, et de Formation; CIDRZ, Centre for Infectious Disease Research in Zambia; GHESKIO, Groupe Haïtien d'Étude du Sarcome de Kaposi et des Infections Opportunistes.

There are three specific objectives of the TB-SRN. First, the TB-SRN will collect and analyze clinical and treatment data among people treated for pulmonary TB with or without HIV co-infection, to improve our understanding of the prognosis of TB disease and its health-related outcomes, including quality of life and survival. Second, the TB-SRN will assess the individual-level effects of HIV and antiretroviral therapy (ART) on TB symptomatology, diagnosis, treatment response, and survival. As part of this aim, investigators will also explore the effect of site-level TB and HIV management and integration of TB and HIV services on pulmonary TB treatment and longer-term outcomes. Third, the TB-SRN will describe post-TB lung disease and associations with HIV infection, diabetes, chronic lung disease, mental health, and tobacco, alcohol and substance use, including measuring physiologic, structural, and functional impairment, health-related quality of life, and survival.

Study design

The TB-SRN is a prospective, observational study, with consecutive enrollment of PLHIV and HIV-negative individuals, ages 15 and above, with clinically diagnosed or microbiologically confirmed pulmonary TB disease. Microbiologic confirmation of pulmonary TB is defined on the basis of either positive molecular diagnostic test (e.g., GeneXpert), acid-fast bacilli smear, and/or TB culture from sputum or other respiratory specimen. Microbiologic confirmation of pulmonary TB may also be based on positive urine lipoarabinomannan assay in the presence of clinical signs, symptoms and/or radiographic findings of pulmonary TB. Clinically diagnosed pulmonary TB is defined by clinical diagnosis by medical providers through standard of care, in the absence of confirmatory testing, prompting initiation of TB treatment. Specific eligibility criteria that must be met as part of clinical diagnosis include having either (1) *any* signs or symptoms of active TB (e.g., persistent cough, hemoptysis, fever, unintended weight loss, fatigue or lethargy, night sweats, pleuritic chest pain) together with chest X-ray findings consistent with pulmonary TB, or (2) presence of *respiratory* signs and symptoms (including chronic cough, hemoptysis, or pleuritic chest pain) regardless of chest X-ray findings. Individuals who consent to participate will provide clinical, laboratory, and radiographic data at study visits at specified timepoints from TB treatment initiation through 12 months after the end of treatment (Table 2).

Table 2. Study procedures in the Tuberculosis Sentinel Research Network (TB-SRN) of the International epidemiology Databases to Evaluate AIDS (IeDEA).

	Treatment Phase[a]					Post-Treatment Phase		
Form / **Visit**	**SCREENING**	**BASELINE**	**MONTH 1** (Weeks 3-7)	**MONTH 2** (Weeks 8-12)	**End of TX** (-4 to +6 wks)	**6-M POST-TX** (-4 to +6 wks)	**12-M POST-TX** (-4 to +6 wks)	**TX F/R/W**
Informed consent (and assent, *if applicable*)[b]	X							
Demographics Including adolescent and young adult characteristics *(if applicable)*[c]		X						
Clinical history:								
• TB history and current diagnosis		X						X
• HIV and other medical history		X						
• Pregnancy and post-partum history *(female participants only)*		X			X	X	X	X
• Pregnancy and infant outcomes *(if applicable)*		X			X	X	X	X

Clinical evaluation Visit information, vital signs including pulse oximetry, respiratory symptoms, physical signs		X	X	X	X	X	X	X
Substance use ASSIST and smoking history		X			X		X	X
Respiratory symptoms and health-related quality of life SGRQ		X			X	X	X	X
Depression symptoms PHQ-9 and suicide risk assessment		X			X		X	X
Pulmonary testing:[d]								
• Spirometry				X	X	X		
• 1-minute sit-to-stand test		X		X	X	X		
Performed if not already done as part of care:								
• Chest X-ray[e]		X			X			
• CD4 count *(only for participants with HIV)*[f]		X						X
• HbA1c and random blood glucose		X			X			
Data collected from routine care, as available:								
• TB microbiology		X	X	X	X			X
• HIV testing and other lab results[g]		X	X	X	X	X	X	X
TB treatment Anti-TB regimen, adherence to medications, use and type of directly observed therapy		X	X	X	X			X
Antiretroviral treatment (*if applicable*) ARV regimen, adherence to medications		X	X	X	X	X	X	X
Adverse events			X	X	X			X
TB IRIS evaluation			X	X				
TB treatment outcome					X			X
Death form *(death during study, if applicable)*								

Abbreviations: ASSIST, Alcohol, Smoking and Substance Involvement Screening Test; IRIS, immune reconstitution inflammatory syndrome; PHQ-9, Patient Health Questionnaire; SGRQ, Saint George's Respiratory Questionnaire. a, Month 1 visit is optional, and not done at all sites. Tx F/R/W, Treatment Failure, Relapse, or Withdrawal. b, Adolescent minors who turn 18 years of age during the study will be re-consented on the first visit after turning age 18. c, For all youth participants ages 15-24 on enrollment. d, For 12 sites performing pulmonary testing. e, Digitized/digitizable chest X-ray (CXR) obtained, unless done within 4 weeks prior to the Baseline or End of Treatment as per standard of care. CXRs obtained at other time points through routine care will also be digitized/uploaded. Pregnant women are not required to have a CXR; regions may vary in approach in this population according to local standards. f, CD4 count will only be performed on participants who are HIV-positive and who have not had a CD4

count performed in the preceding 3 months. g, HIV testing of participants not known to be positive collected from routine data and not as part of the study. HIV viral load (if applicable), CBC, transaminases, and TB microbiology data to be abstracted if available.

Most participants, if completing a standard duration of six months of TB treatment for drug-susceptible TB, will consequently be followed for a total of 18 months from TB treatment initiation. Time on study will be longer, however, if treatment duration is longer as determined by providers under standard of care. (Treatment duration may be longer than six months, for example, for some regimens for drug-resistant TB, or if treatment is interrupted, or if pulmonary disease coincides with infection at an extrapulmonary site warranting longer treatment duration.) In addition, some regions have longer follow-up periods after end of TB treatment, according to region-specific objectives. Some regions will also have data collection beyond this multiregional protocol, such as for laboratory biomarkers, pharmacokinetic data, or biological specimens. Data will be aggregated for concept-driven analyses.

Sample selection

TB-SRN Sites

Sixteen sites included in the TB-SRN are located in 11 countries: Brazil, Burkina Faso, Cambodia, Côte d'Ivoire, the Democratic Republic of the Congo, Haiti, Kenya, South Africa, Thailand, Uganda, and Zambia. These sites represent a range of contexts for the dual TB-HIV epidemics, including differing prevalence of TB and HIV, care models, and resources. Analyses in this study will include comparisons by site-level variables or by region.

Eligibility and exclusion criteria

The IeDEA TB-SRN will enroll participants ages 15 and older with clinically diagnosed or microbiologically confirmed active pulmonary TB who are initiating TB treatment at IeDEA TB-SRN sites. Participants must have either documentation of recent HIV testing or of HIV infection or willingness to be tested for HIV, as routinely indicated under TB treatment guidelines.(16) Informed consent will be required for all participants; including parental/caregiver consent and minor assent for individuals younger than age 18 (or the legal age of majority). There will be no restrictions based on sex, gender identity, HIV status, pregnancy, ethnicity, or nationality. Participants may be co-enrolled in other research with the exception of clinical trials of novel TB treatment regimens.

An individual will be excluded if they meet any of the following criteria: have received >7 days of TB treatment within the prior 30 days, excluding TB preventive therapy; have imminent plans to follow-up for TB care or relocate/return to a site distant from the enrollment site, which would interfere with the participant's ability to complete all study visits; have substantial cognitive impairment that may interfere with the ability to give reliable informed consent; are currently imprisoned.

Enrollment began in September 2022 and is projected to continue through October 2024. Data collection is ongoing with a projected end date of April 2026.

Participant considerations

The inclusion of participants with and without HIV will facilitate analyses in which HIV status is evaluated as a factor potentially contributing to TB treatment or post-treatment outcomes. The proportion of participants with HIV co-infection is anticipated to vary across sites.

The inclusion of participants ages 15 and above will allow for dedicated analyses of participants in the 15–24-year-old age group of youth with TB. While youth have specific needs that must be addressed in quality health services, TB programs globally have not adopted youth-centered care models.(17-20) Further, adolescents and youth have been neglected in TB research, either by failure to include individuals younger than age 18, or by not examining research data within stratified adolescent or young adult age groups.(19, 20) Guidance from the WHO now advises that youth and their specific needs should be included in global TB research and care efforts.(21-23) This study will assess clinical characteristics, TB outcomes, and post-treatment outcomes in a sub-cohort of youth with TB across 5-year age strata (i.e., older adolescents aged 15-19 and young adults aged 20-24 years).

TB during pregnancy can cause poor outcomes for both the mother and for the developing fetus (or infant, after delivery), including maternal complications, miscarriage, preterm birth, low birthweight, or perinatal death.(24-27) Existing data regarding clinical features and outcomes of TB in pregnancy are very limited. Pregnant and post-partum individuals with TB (who have been pregnant within the last 12 months) will be included in TB-SRN. Data collection will include specific variables related to pregnancy, receipt of TB and HIV medications during pregnancy, and maternal and infant outcomes. These will be collected over the course of the study period, including for individuals who become pregnant or give birth during the study.

Patient and public involvement

Key research questions of this study were informed by previous participatory research and advocacy from individuals with TB; in particular, calling for research in post-TB lung disease and other post-treatment outcomes,(28) and for inclusion of adolescent minors in research.(23) Individuals with TB were not involved in the study's design. Draft case report forms (CRFs) were revised through iterative rounds of review and preliminary piloting at the study sites. In particular, clinical programs at the sites were involved in revisions at this stage to ensure the feasibility of CRFs and to minimize burdens on individuals with TB participating in the study. Clinical programs at the sites were also consulted related to study planning. This included preparations for referral for immediate and urgent health needs, such as for symptoms of depression and suicidal thinking (assessed by PHQ-9 and suicide risk assessment). Findings from this research will be shared with national TB programs and HIV treatment programs at the study sites, and disseminated to individuals with TB.

Assessments and data collection

Data (e.g., chest X-rays, laboratory results, health-related outcome measures; Table 2) will be collected according to a common schedule and methodology across sites, so that they can be harmonized and aggregated for analysis.

Participants who consent to the study will be followed during TB treatment and for 12 months after the end of their primary treatment course (i.e., the treatment course initiated at study enrollment). For most participants, this will be approximately 18 months after provisional enrollment/treatment start if they have drug-susceptible TB and receive a 6-month TB treatment regimen, but it may be longer if they have drug-resistant TB or require a longer treatment regimen for other reasons (e.g., if there is associated extrapulmonary TB disease). At the time of this study, TB programs at the study sites are primarily using treatment regimens of 6 months' duration as routine standard for drug-susceptible pulmonary TB.

Participants will be requested to provide data during visits at key timepoints: at baseline (at initiation of TB treatment), month 1 (optional; performed at some but not all sites), month 2, end of TB treatment, 6 months post-treatment, 12 months post-treatment, and at the time of suspected or apparent treatment failure, TB recurrence, or study withdrawal if it occurs during treatment or the 12-month post-treatment follow-up phase. The baseline visit will include detailed clinical history, including course of TB symptoms and diagnosis, previous TB, HIV diagnosis and treatment (as applicable), history regarding recent or current pregnancy, and history regarding non-communicable co-morbidities and their treatment (e.g., diabetes mellitus, hypertension, pulmonary or cardiovascular disease, cancer, immune suppression, mental health diagnoses).

HIV and TB clinical data will be extracted from medical records and TB registers, while current symptoms, pregnancy history, and history of other conditions will be collected via patient interview. Sociodemographic information will be collected including specific information relevant to youth ages 15-24 at enrollment (e.g., orphan status, caregiver characteristics, school attendance). Data collected at multiple visits during the study will include TB symptoms; ascertainment of immune reconstitution inflammatory syndrome (IRIS), TB treatment failure, or TB recurrence; clinical, radiographic and microbiologic data related to TB; assessments for symptoms of depression (by the Patient Health Questionnaire; PHQ-9)(29) and substance use (by the Alcohol, Smoking, and Substance Involvement Screening Test; ASSIST);(30, 31) and pulmonary investigations including repeated pulse oximetry, spirometry, functional test (1-minute sit-to-stand test), and respiratory symptoms and health-related quality of life (by the Saint George's Respiratory Questionnaire; SGRQ).(32, 33) These validated questionnaires have been used previously in the respective regions, with adaptations as appropriate (e.g., PHQ-9, ASSIST, SGRQ).

Data will be collected on paper or electronic CRFs according to local capacity and regulatory requirements. A copy of the paper CRFs is provided (Supplementary Materials 1). Paper forms will be subsequently entered into the electronic system by trained personnel. All sites will use the secure, web-based REDCap data collection platform and/or the REDCap Mobile App for data collection.(34, 35) Common data management processes and procedures will be developed in collaboration with the Harmonist team at Vanderbilt University Medical Center, which provides informatics resources for IeDEA.(36, 37) For sites using film-based chest X-rays, films will be scanned and digitized using standard procedures defined by the NIH TB Portals platform.(38)

Sites will work with the IeDEA regional data centers to enter, prepare, and clean data using either the Vanderbilt REDCap server or a regional REDCap server to adhere to country regulations on research data storage. All sites will use the same REDCap project template to ensure variables and study events use the same names and code lists to facilitate subsequent data merging. Research staff will administer questionnaires using relevant local translations (in Bemba, French, Haitian Creole, Khmer, Lingala, Nyanja, Portuguese, Runyankole, Swahili, and Thai) and adaptations as appropriate, implemented in paper CRFs and in the REDCap data collection platform. Regional data centers will conduct quality control or assurance activities for their sites based on guidance developed by the TB-SRN study team and the Harmonist team.(36, 37)

Outcome measures

Multiple outcomes will be assessed in the TB-SRN (Table 3). These include TB treatment outcomes; TB recurrence; mortality; other pulmonary, health-related quality of life, and mental health outcomes.

Table 3. Select study outcomes in the Tuberculosis Sentinel Research Network (TB-SRN) of the International epidemiology Databases to Evaluate AIDS (IeDEA).

Outcome	Definition
TB treatment outcomes(39)	As defined by WHO:(39) • Treatment failed: A patient whose treatment regimen needed to be terminated or permanently changed to a new regimen or treatment strategy. • Cured: A pulmonary TB patient with bacteriologically confirmed TB at the beginning of treatment who completed treatment as recommended by the national policy, with evidence of bacteriological response and no evidence of failure. • Treatment completed: A patient who completed treatment as recommended by the national policy, whose outcome does not meet the definition for cure or treatment failure. • Died: A patient who died before starting treatment or during the course of treatment. • Lost to follow-up: A patient who did not start treatment or whose treatment was interrupted for 2 consecutive months or more. • Treatment success: The sum of cured and treatment completed.
TB recurrence(40)	Any new TB diagnosis after TB treatment completion or cure(40)
Post-TB Mortality	Death from any cause after end of TB treatment[a]
Sustained treatment success(39)	An individual assessed at 6 months (for DR-TB and DS-TB) and at 12 months (for DR-TB only) after successful TB treatment, who is alive and free of TB.(39)

Post-TB lung disease (PTLD)	Characterized by any of the following, after completion of TB treatment and in the absence of TB recurrence:(41)
	• Symptoms (new / recurrent / persistent from end of treatment)
	  ○ Respiratory distress, cough, dyspnea/shortness of breath, hemoptysis, chest pain
	• Signs (new / recurrent / persistent from end of treatment)
	  ○ Crackles, wheezing, diminished breath sounds
	• Hypoxemia (SpO2 < 90%)
	• Pulmonary function impairment (e.g., FEV1 / FVC ratio < LLN, FEV1 < LLN, and/or FVC < LLN, using GLI standard reference equations)(42, 43)
	• Chest X-ray abnormalities (e.g., residual scarring) at end of treatment

Functional status	One-minute sit-to-stand testing
Health-related quality of life	St. George's Respiratory Questionnaire (SGRQ)(32, 33) score
Depression symptoms	Patient Health Questionnaire (PHQ-9)(29) scores for none or minimal (0-4), mild (5-9), moderate (10-14), moderately severe (15-19), or severe (20-27)

Abbreviations: DR-TB, drug-resistant tuberculosis; DS-TB, drug-susceptible tuberculosis; FEV1, forced expiratory volume in one second; FVC, forced vital capacity; GLI, Global Lung Function Initiative; LLN, lower limit of normal; PTLD, post-tuberculosis lung disease; TB, tuberculosis; WHO, World Health Organization. a, Information about cause of death will be recorded if available.

TB treatment outcomes for both drug-resistant and drug-susceptible TB will follow the current definitions set by the WHO and will be in alignment with RePORT International outcomes.(12, 39) These include both clinical and biological criteria for TB treatment outcomes. TB recurrence (inclusive of TB relapse and new TB infection) will be defined as any new TB diagnosis after the end of TB treatment for the primary course. Mortality will include deaths from

any cause, and will be assessed during the treatment and post-treatment periods. Information about cause of death will be recorded if available.

Post-treatment outcomes to be ascertained are informed by emerging research surrounding post-TB sequelae.(28, 41, 44) Post-TB lung disease will be defined by new, recurrent or persistent respiratory symptoms or signs that occur post-treatment; hypoxemia (oxygen saturation <90%); pulmonary function impairment; or chest X-ray abnormalities.(41) Spirometry definitions for pulmonary function impairment include the following: forced expiratory volume in one second (FEV1) / Forced vital capacity (FVC) ratio < lower limit of normal (LLN), FEV1 <LLN, and/or FVC <LLN. Global Lung Function Initiative (GLI) standard reference equations will be used to calculate LLN (fifth centiles) for each participant; these will be compared with observed values.(42, 43) Functional status will be assessed with one-minute sit-to-stand testing. Further measures of well-being after TB treatment will include symptoms of depression (by PHQ-9)(29) and health-related quality of life (by SGRQ).(32, 33) The SGRQ has previously been validated(32) and applied in studies of individuals treated for pulmonary TB.(45-50) Both the PHQ-9 and SGRQ are among the assessments recommended by some experts for the evaluation of post-TB sequelae.(28)

Data management and harmonization

TB-SRN data from multiple REDCap installations will be accessed via the secure REDCap Application Programming Interface (REDCap API) and automatically merged on a monthly basis to generate study enrollment and monitoring reports. These reports will allow tracking of study progress and ensure the distributed data collection remains aligned in variable formats and naming. Merged research datasets will be generated on demand for analyses associated with approved research concepts. Study data procedures include methods for ensuring the privacy and confidentiality of participant data, including using codes in place of names, implementing password-protected and encrypted data collection systems, training of site personnel on data management best practices, and applying data pseudonymization where required for compliance with national data protection regulations. Analyses will be conducted by the designated regional data center. Data-sharing agreements and management procedures will be overseen by the IeDEA Executive Committee.

The NIH, which funds both the IeDEA consortium and RePORT International, provides guidance for the coordination and linkage of these parallel streams of research. In addition, the Harmonist project, which supports IeDEA through development of data standards and software

to support research operations, will coordinate with RePORT regions to streamline their existing data structures and identify points of data alignment with IeDEA to enable future cross-consortium data harmonization and research.

Data analysis plan

While data may be used by the individual TB-SRN sites or regions, they are primarily being collected and harmonized for multiregional research, following IeDEA's standard operating procedures governing research collaboration.(51) The TB-SRN observational cohort study is designed to inform multiple analyses. Analyses of global TB-SRN data will be proposed through concept sheets, for detailed review and feedback from collaborators in the TB-SRN and other IeDEA working groups relevant to the study, with subsequent final review and approval by the IeDEA Executive Committee.(51) Concepts will center on major research questions in TB and HIV clinical epidemiology.(52) These will include analyses of TB severity, TB treatment and post-treatment outcomes including post-TB lung disease, health-related quality of life, and associated clinical, mental health, and life course factors. Youth with TB (ages 15-24) will be assessed as a subset of this cohort, with attention to their clinical, psychosocial, and lung health findings. The subset of pregnant and post-partum participants will also be described, to include specific variables and outcomes in this group.

Current, initial TB-SRN concepts delineate analyses in the following areas: baseline TB severity and associated factors; baseline depressive symptoms and substance use; chronic hypoxemia and respiratory symptoms; and PTLD in youth.

Sample size considerations

The IeDEA TB-SRN will enroll 2,600 participants across all study sites, including 300 participants in each of five IeDEA regions (Asia-Pacific, Central Africa, East Africa, Southern Africa, and West Africa), and 1100 participants in CCASAnet. It is estimated that between 5% and 10% of treated TB cases will result in TB treatment failure or TB recurrence. Thus, if 2,600 participants with active TB are enrolled, it is expected that between 130 and 260 episodes of treatment failure or recurrence will occur, with 200 being an approximate midpoint estimate. Furthermore, the majority of recurrent episodes are estimated to occur within 6 months of treatment completion, and thus >90% of all such episodes are expected to be detected during the follow-up period. Pulmonary function impairment may be anticipated in approximately 50-60% of participants after completion of TB treatment.(53) The overall cohort sample size of 2,600 participants will enable precise

estimates of key treatment and post-treatment outcomes. Given the anticipated HIV prevalence of 20 to 30% across the global cohort, this sample size will also allow for multivariable analyses, including on HIV co-infection and treatment-related factors, in addition to sex, age, and additional demographic or clinical factors.

As the TB-SRN is a descriptive study encompassing multiple planned outcomes and analyses, statistical considerations and power will vary by the research question proposed within the concept process of IeDEA. For analyses of youth with TB, this age group is estimated to make up 17% of new TB cases globally.(54) In a cohort of 2,600 individuals with TB, we anticipate including several hundred in this age group; representing a valuable contribution to the evidence base for this group.(19, 20) For pregnant/post-partum participants with TB, while low numbers are anticipated, relevant variables collected in this study for maternal and infant outcomes will be described. Given the very limited existing data on this population, these data will add to the existing literature.(24, 25, 27) Aggregation with data from other cohorts may be considered for pooled analyses of priority questions for TB in these sub-groups.(19, 20, 52)

ETHICS AND DISSEMINATION

Ethical and safety considerations

Ethical and regulatory approvals have been obtained at all implementing study sites and affiliated institutions, from the following Ethics Committees or Institutional Review Boards, by IeDEA region:

- *CCASANet:*
    - Vanderbilt University Medical Center, Nashville, United States: Human Research Protections Program – Health Sciences Committee 3 IRB, #141049. (Site responsible for centralized forms development.)
    - GHESKIO, Haiti: Comité des Droites Humains des Centres GHESKIO - approval for "Nouveau Protocole - Complications après traitement TB - Cohorte Prospective." (No IRB number assigned)
    - Instituto Nacional de Infectologia, FIOCRUZ, Brazil: Instituto Nacional de Infectologia Evandro Chagas, INI /FIOCRUZ IRB, #5.955.761
    - Centro Municipal de Saúde (CMS) de Duque de Caxias, Brazil: Universidade do Grande Rio Professor José de Souza Herdy – UNIGRANRIO IRB, #6.063.843
    - Instituto Brasileiro para Investigação da Tuberculose (IBIT), Brazil: Maternidade Climério de Oliveira – UFBA IRB, #5.998.764

- Fundação de Medicina Tropical (FMT), Brazil: Fundação de Medicina Tropical "Doutor Heitor Vieira Dourado" IRB, #5.997.824

- *Asia-Pacific:*
  - TREAT Asia, Thailand, Advarra, Inc. IRB #1, IRB00000971, #Pro00060405
  - The Kirby Institute, University New South Wales, Australia, IRB #1, IRB00001145, #HC220713
  - NCHADS, Cambodia: National Ethics Committee Health Research (NECHR) IRB #1, IRB00003143, #321NECHR
  - Chulalongkorn University, Thailand, IRB #1, IRB00001607, #0491/66
  - Chiangrai Prachanukroh Hospital, Thailand, IRB #1, IRB00005481, #087/66 Ex
- *Central Africa:*
  - Albert Einstein College of Medicine Institutional Review Board, Bronx, United States, #2022-13862.
  - Kinshasa School of Public Health Ethic Committee Board, Kinshasa, the Democratic Republic of the Congo, #ESP/CE/050/2023
- *East Africa:*
  - Indiana University Institutional Review Board, Indianapolis, United States, #15525
  - Moi Teaching and Referral Hospital / Moi University Institutional Research and Ethics Committee (IREC), Eldoret, Kenya, #IREC/347/2022
  - National Commission for Science, Technology and Innovation, Kenya, #NACOSTI/P/23/23903
  - Mbarara University of Science and Technology Research Ethics Committee, Mbarara, Uganda, #MUST-2022-618
  - Uganda National Council of Science and Technology, #HS2619ES
- *Southern Africa:*
  - Cantonal Ethics Committee of Bern, Switzerland, #PB_2016-00273
  - Thembu Lethu and Crosby Clinic, Johannesburg, South Africa, #GP_202207_033
  - University of Zambia Biomedical Research Ethics Committee, Lusaka, Zambia, #2538-2022
  - University of the Witwatersrand, South Africa, Human Research Ethics Committee (Medical), ref. no. M220141
- *West Africa:*
  - CePReF, Côte d'Ivoire: National Ethics Committee for Life Sciences and Health, United States DHHS Registration #2: IRB00011917

- Centre Hospitalier Universitaire Sourou Sanon, Burkina Faso: Ethics Committee for Health Research (ECHR), #2022-01-009

Overarching ethical considerations have included the general low risk of this observational study; assurances that the decision whether or not to participate will have no bearing on clinical care received at the sites; protocols to ensure privacy and confidentiality of participant data; adherence to infection prevention protocols at the study sites; compensation for time/travel to participate; and specific considerations for inclusion of minors and pregnant individuals (as described below).

Standardized procedures are in place to ensure appropriate linkage to care and further evaluation when study assessments identify a possible physical or mental health condition. This includes procedures for direct linkage to care when symptoms of depression or suicidal ideation are identified.

In terms of safety considerations, this study is intended to ascertain detailed data collection for individuals with pulmonary TB followed in routine TB care and management. The inclusion of minors and of individuals who are pregnant is to ensure that these groups are not excluded from TB research. This is particularly important given that these groups have largely been excluded from TB research, or specific data have not been collected that are relevant to their clinical or social factors or outcomes. Sites follow locally approved protocols with respect to use of chest X-ray in pregnancy.

While chest X-rays are recommended as part of routine TB care(16) and the amount of radiation exposure from an X-ray procedure is considered safe in pregnancy when clinically indicated,(55-57) chest X-rays are not required for pregnant participants with TB in this study. Further, ethical approvals followed local standards and approval processes for consideration of chest X-rays in this population.

Similarly, sites follow local standards and approvals for inclusion of minors. General approaches include requiring the consent of a parent or primary caregiver, along with assent of minors. Procedures are in place in recruitment and study activities to avoid inadvertent HIV disclosure to youth who have perinatally acquired HIV or to caregivers who may not be aware of a youth's status.

Dissemination plan

Findings from TB-SRN analyses will be disseminated across the IeDEA consortium, and at site-level, regional, and global venues. Policy briefs will be developed summarizing key study findings.

These will be provided in direct communication with national TB programs and with national HIV programs to share and disseminate findings across these systems. Findings will be disseminated to study participants, and to TB care providers and individuals affected by TB, following setting-specific approaches at respective study sites.

Research findings from global and regional analyses will be presented at national and international meetings, and published in international peer-reviewed journals for a wide audience of clinicians, researchers, and public health practitioners in the areas of TB and HIV care and lung health. Publications will be disseminated to global TB networks, including to World Health Organization Global TB Program working group leads as appropriate, and to relevant sections of the International Union Against Tuberculosis and Lung Disease.

TB-SRN data can be leveraged towards future research. Researchers from beyond the IeDEA research consortium may request IeDEA data for dedicated analyses. Procedures for requesting use of TB-SRN data are publicly available.(51)

In conclusion, the TB-SRN provides a unique platform for global observational research in TB and TB-HIV co-infection. Through harmonized procedures and comprehensive prospective data collection across TB treatment and post-treatment periods, the TB-SRN will generate key epidemiology data for drivers and correlates of TB treatment and post-treatment outcomes, across a diverse global cohort. Findings from this project will inform policy and practice regarding TB treatment, and further research efforts.

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Authors' contributions

LAE, OM, AHS, SND, AF, KWK, and MY designed this study and drafted the study protocol. TRS, MCF, and TC contributed to revisions and refinements to the protocol. LAE, OM, SND, and LRM led the development and refinement of data collection tools. TC, MB, LF, FM, KWK, and NN and

others provided input on study procedures and data collection tools. SND and LRM developed the REDCap database for data collection under the multiregional protocol. LAE drafted the manuscript. All authors (LAE, SND, TC, CB, NN, EM, NM, LRM, MCF, JR, DE, LD, RA, NZ, AF, MFP, DR, MB, HB, NDC, MT, TRS, AHS, LF, KWK, AP, MY, RH, and OM) participated in manuscript revisions. All authors have read and approved the final manuscript.

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Competing interests

AHS receives grants to her institution from ViiV Healthcare and Gilead Sciences.
All other authors declare no conflicts of interest.

Figure 1. Country locations of planned initial study sites in the Tuberculosis Sentinel Research Network (TB-SRN) of the International epidemiology Databases to Evaluate AIDS (IeDEA). Map created using MapChart.net.

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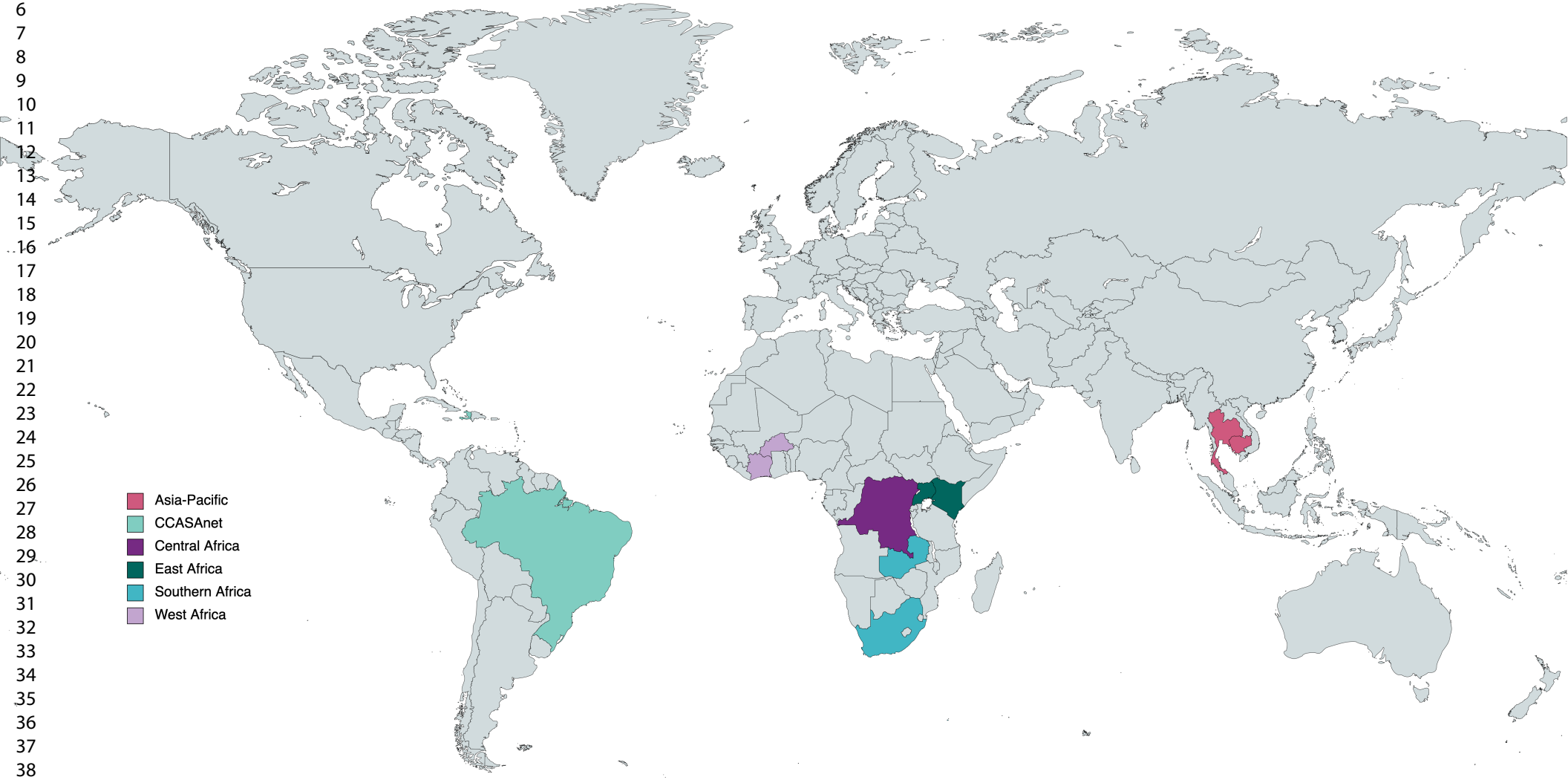
Asia-Pacific
CCASAnet
Central Africa
East Africa
Southern Africa
West Africa

IeDEA TB-SRN Case Report Forms (CRFs)

Following are the paper case report forms (CRFs) for the IeDEA TB-SRN Study. Some sites alternately use a digital version of the CRFs available in REDCap which include questions identical to the paper CRFs. A full REDCap version is available upon request. For questions regarding the CRFs or to request a REDCap file, please contact laquita.mcdade@vumc.org

[1] INCLUSION			
IeDEA/TB SRN ID			
Type of visit	☐ Baseline		
Visit date *(dd/mm/yyyy)*	|__|__|/|__|__|/|__|__|__|__|		
Inclusion criteria (*include if all items 1-3 are present*)	**Yes**	**No**	**Specify**
1. Age ≥15 years	☐	☐	
2. Diagnostic criteria – At least one of the diagnostic criteria 2a-2c is met	☐	☐	
2a. Clinically diagnosed pulmonary TB and plan to initiate TB treatment with: - Any signs or symptoms and CXR findings consistent with pulmonary TB, OR - Respiratory signs and symptoms			☐
2b. Microbiologically confirmed pulmonary TB based on sputum or other respiratory samples - Smear positive, OR - Positive rapid molecular TB tests (Xpert MTB/RIF Ultra), OR - Positive TB culture			☐
2c. Positive lipoarabinomannan (LAM) urine test and clinical diagnosis of pulmonary TB as defined above			☐
3. HIV test documented or willingness to be tested: - Documented HIV infection, OR - Any HIV test less than or equal to 90 days earlier, OR - Willingness to be tested for HIV (if no recent test available – *test to be done within 7 days for inclusion*)	☐	☐	
Exclusion criteria (*exclude if ≥1 of items 4-7 present*)	**Yes**	**No**	**Specify**
4. Has received TB treatment for more than 7 days within the prior 30 days, excluding TB preventive therapy	☐	☐	
5. Plans to move to a distant site that would interfere with ability to complete all study visits	☐	☐	
6. Substantial cognitive impairment that may interfere with the ability to give reliable informed consent	☐	☐	
7. Currently imprisoned	☐	☐	
Consent and enrolment			
8. Signed and dated informed consent or witnessed oral consent	☐	☐	
8a. *For minors (under age 18):* Signed and dated informed consent of a primary caregiver (and informed adolescent assent where required)	☐	☐	
9. Date of enrolment *(dd/mm/yyyy)*	|__|__|/|__|__|/|__|__|__|__|		
Additional questions			
10. Type of setting where enrolled	☐ Inpatient setting ☐ Outpatient setting		
11. Currently co-enrolled in other research study?	☐ Yes (fill **Other Research** form) ☐ No		

Investigator: _____ Signature: _____ Date |__|__| / |__|__| / |__|__|__|__|

ID Number _____

IeDEA/TB SRN

[2] DEMOGRAPHICS	
IeDEA/TB SRN ID	
Type of visit	☐ Baseline
Visit date *(dd/mm/yyyy)*	|___|___| / |___|___| / |___|___|___|___|
1. Sex at birth	☐ Male ☐ Female ☐ Other ☐ Unknown
2. Date of birth *(dd/mm/yyyy)* *(estimate if unknown)*	|___|___| / |___|___| / |___|___|___|___|
3. Current Marital status (*Check one option that best applies*)	☐ Single ☐ Married ☐ Widowed ☐ Separated ☐ Divorced ☐ Living with partner
4. Highest level of education completed (*Check one option that best applies*)	☐ None ☐ Primary education ☐ Lower secondary or end of basic education ☐ Upper secondary ☐ Post-secondary non-tertiary (e.g., post-secondary certificate or diploma) ☐ University ☐ Post-graduate ☐ Koranic school ☐ Other, only if none of the previous options applies ☐ Do not know / unknown
5. Current Profession (occupation) *(Check all that apply)*	☐ Cook ☐ Craftsman ☐ Employee, private sector ☐ Employee, public sector ☐ Farmer, pastoralist ☐ Homemaker (e.g., housewife, househusband) ☐ Housekeeper

	☐ Policeman, serviceman/military, customs officer ☐ Storekeeper ☐ Street / market seller ☐ Student ☐ Truck driver, taxi driver ☐ Retired ☐ Unemployed ☐ Other ☐ Do not know / unknown
6. Currently working or living in a health care setting, institutional setting, or other high TB-risk setting	☐ No / not applicable ☐ Yes
7. If yes, specify. (*Check all that apply*)	☐ Hospital or clinic ☐ Nursing home or long-term care facility ☐ Orphanage, shelter, or another residential center ☐ Dormitory (school) ☐ Military ☐ Prison ☐ Refugee camp ☐ Other ☐ Do not know / unknown
8. Number of people residing in the household *(including full-time and part-time residents)*	|___|___|
9. Number of children <5 years residing in the household *(full-time or part-time)*	|___|___|
10. Total household monthly income *(Including all sources of household / family monthly income*; *check one option that best applies*)	☐ < 40 USD or local currency equivalent ☐ ≥ 40 AND < 80 USD ☐ ≥ 80 AND < 200 USD ☐ ≥ 200 AND <400 USD ☐ ≥ 400 USD ☐ Do not know

11. Current dwelling location	☐ City/urban area (specify type below) ☐ Peri-urban area ☐ Rural area
12. City/urban area type	☐ Formal housing ☐ Slum/shantytown/favela
13. Type of dwelling (*Check one option that best applies or applies most of the time*)	☐ Free-standing house ☐ Apartment, condominium, or other residential building ☐ Boarding school or college ☐ Institution ☐ Homeless / street living ☐ Other
14. Distance from residence to clinic *(km)*	|___|___|___|___| km
15. Transportation mode to TB clinic (*Check all that apply*)	☐ Foot ☐ Bicycle ☐ Motorcycle ☐ Personal automobile (car, truck) ☐ Public transportation (bus, train, etc.) ☐ Taxi or rideshare service (including hired car, mini-van, motorbike) ☐ Medical vehicle ☐ Other
16. Typical transportation cost *to and from* TB clinic (both ways, local currency)	_____ (local currency)

Investigator: _____ Signature: _____ Date |__|__|/|__|__|/|__|__|__|__|

ID Number _____

[3] Adolescent and Young Adult Characteristics for All Participants under Age 25	
leDEA/TB SRN ID	
Visit	☐ Baseline
Visit date *(dd/mm/yyyy)*	|__|__|/|__|__|/|__|__|__|__|
Adolescent and Young Adult questions	
1. Biological mother alive?	☐ Yes ☐ No ☐ Unknown ☐ Refused
2. Biological father alive?	☐ Yes ☐ No ☐ Unknown ☐ Refused
3. Currently in a relationship with someone? *(May be a spouse, a partner, a girlfriend, a boyfriend, …).*	☐ Yes ☐ No ☐ Unknown ☐ Refused
4. Has the participant had any biological children? *(Biological children may or may not be living.)*	☐ Yes ☐ No ☐ Unknown ☐ Refused
5. With whom does the participant live? *(If multiple places on a regular basis, check all that apply.)*	☐ Immediate family members ☐ Extended family members (family members other than biological parents and siblings) ☐ With a peer or partner ☐ With school ☐ In children's home or institution ☐ Living independently (includes those living on the street) ☐ Other: _____ ☐ Unknown ☐ Refused
6. Main caregiver (*Check the option that best applies*.)	☐ Self (SKIP to #9) ☐ Mother ☐ Father ☐ Aunt/Uncle ☐ Grandparent ☐ Sibling ☐ Spouse/partner ☐ Other relative ☐ Guardian, non-relative ☐ Unknown ☐ Refused
7. Do the participant and the main caregiver currently live in the same place?	☐ Yes ☐ No, adolescent at boarding school or college ☐ No, adolescent living on the street ☐ No, other circumstance ☐ Unknown

(Are both spending most nights at the same residence in a given week?)	☐ Refused
8. Role(s), if any, of main caregiver in participant medical care *(Examples might include bringing participant to clinic visits or to the hospital when sick or picking up medications. Choose all that apply.)*	☐ None / not involved in medical care ☐ Bringing the adolescent to clinic visits ☐ Bringing the adolescent to the hospital when sick ☐ Supervising the adolescent taking medications ☐ Picking up prescribed medications for the adolescent ☐ Providing transportation fare for the adolescent to attend clinic ☐ Other: _____ ☐ Unknown ☐ Refused
9. Is participant currently attending school (including college or other higher learning)?	☐ Yes (SKIP to #12) ☐ No ☐ Unknown ☐ Refused
10. Main reason for not attending school (or college or other higher learning)	☐ Sick ☐ Doesn't like school ☐ Has to look after family members ☐ Not enough money ☐ School too far away ☐ Have to work ☐ Have completed school ☐ Other: _____ ☐ Unknown ☐ Refused
11. If attending school (or college or other higher learning), does the participant reside at school? (*e.g., in boarding school, dormitory, or residential housing?*)	☐ Yes ☐ No ☐ Unknown ☐ Refused
12. Main source of income	☐ Self (money earned as employee, self-employment, interest/dividends, loans or bursaries or welfare payments/ grants) ☐ Dependent on someone else's income (parents, caregiver, partner, other relatives) ☐ Unknown ☐ Refused
Disclosure Screening questions: *Only for adolescents and young adults with HIV,* to assess adolescent's awareness of their status.	
13. Why do you come for visits at this clinic (or at another site)?	**DO NOT READ OPTIONS, THIS IS AN OPEN-ENDED QUESTION** ☐ HIV ☐ Other: _____ ☐ Unknown
14. Do you have any health conditions (other than tuberculosis or TB)?	**DO NOT READ OPTIONS, THIS IS AN OPEN-ENDED QUESTION** ☐ HIV ☐ Other: _____ ☐ Unknown

Investigator: _____ Signature: _____ Date |__|__| / |__|__| / |__|__|__|__|

15. For what conditions do you take medications (other than for tuberculosis or TB)?	**DO NOT READ OPTIONS, THIS IS AN OPEN-ENDED QUESTION** ☐ HIV ☐ Other: _____ ☐ Unknown
16. Do you have questions about why you need to take medications?	☐ Yes ☐ No ☐ Unknown
17. If yes, what questions do you have? *(Refer to clinical care providers.)*	_____ _____ _____
If the answers to all of questions 13-15 were "Unknown" or "Other," may need to consider the adolescent NOT DISCLOSED. Please refer to procedures for avoiding accidental disclosure of status.	

Investigator: _____ Signature: _____ Date |__|__| / |__|__| / |__|__|__|__|

[4] TB History and Current TB Diagnosis	
IeDEA/TB SRN ID	
Type of visit	☐ Baseline ☐ Tx F/R/W (for TB recurrence only)
Visit date *(dd/mm/yyyy)*	|__|__|/|__|__|/|__|__|__|__|
For the items below, choose the best single option unless otherwise indicated.	
Previous TB history (*fill only at baseline visit*)	
1. Previous TB preventive therapy (TPT) received	☐ Yes ☐ No ☐ Unknown
2. TPT regimen previously prescribed +++ *(Most recent TPT course, if multiple previous TPT regimens)*	☐ 6 to 9 months daily isoniazid (6H or 9H) ☐ 4 months daily rifampicin (4R) ☐ 3 months weekly rifapentine plus isoniazid (3HP) ☐ 3 months daily isoniazid plus rifampicin (3HR) ☐ 1 month daily rifapentine plus isoniazid (1HP) ☐ Other, please specify: _____ ☐ Unknown
3. TPT completion *(Most recent TPT course)*	☐ Yes ☐ No ☐ Unknown
4. Date of TPT completion/interruption *(dd/mm/yyyy; most recent TPT course)*	|__|__|/|__|__|/|__|__|__|__|
5. Previous TB disease treated	☐ Yes ☐ No (if no go to section "current TB episode")
6. Type of TB during previous TB episode (*Check one*; *most recent TB episode, if multiple previous TB episodes)*	☐ Pulmonary ☐ Extrapulmonary (specify below) ☐ Pulmonary and extrapulmonary (specify below) ☐ Unknown
7. Resistance pattern for previous TB episode *(Most recent TB episode, if multiple previous TB episodes)*	☐ Drug-susceptible (DS-TB) ☐ Drug-resistant (DR-TB) – *if resistance to one or more agents* ☐ Unknown
8. Extrapulmonary location for previous TB episode *(Check all that apply; most recent TB episode, if multiple previous TB episodes)*	☐ Lymph node ☐ Pleural ☐ Bone / joint ☐ Genitourinary ☐ Gastrointestinal ☐ Miliary ☐ Meningeal / CNS

	☐ Other, please specify: _____ ☐ Unknown
9. End of previous TB treatment date *(dd/mm/yyyy; if multiple, most recent TB episode)*	|__|__|/|__|__|/|__|__|__|__|
10. TB treatment outcome *(Most recent previous TB episode; WHO/IUATLD outcomes)*	☐ Cured ☐ Treatment completed ☐ Treatment failed ☐ Lost to follow-up ☐ Transferred out ☐ Not evaluated ☐ Unknown
11. Source of TB history (*Check all that apply*)	☐ TB register ☐ Medical record ☐ Participant report
Current TB episode (*baseline + recurrence*)	
12. History of known contact with TB	☐ Yes ☐ No (SKIP to #15) ☐ Unknown
13. Time since most recent contact with TB	☐ < 1 year ☐ ≥ 1 year & <2 years ☐ ≥ 2 years ☐ Unknown
14. Place of contact (*Check one*)	☐ Household ☐ Occupational ☐ School or college ☐ Other institutional setting (not school, work, or housing/residential contact) ☐ Other ☐ Unknown
15. Approximate date of start of symptoms *(dd/mm/yyyy)*	|__|__|/|__|__|/|__|__|__|__| ☐ Unknown
16. Locations of care-seeking for this TB episode *(Exclude current facility; check all that apply)*	☐ Primary health care clinic (primary-level) ☐ Public district/provincial hospital (secondary-level) ☐ Public teaching/referral hospital (tertiary-level) ☐ Private practice ☐ Private hospital ☐ Pharmacy / dispensary ☐ Self-management / self-medication ☐ Traditional healer ☐ Other

	☐ Unknown
17. Date of first consultation at any facility (clinic or hospital) for the current TB episode *(dd/mm/yyyy)*	|__|__|/|__|__|/|__|__|__|__| ☐ Unknown
18. Number of visits to any health facility (clinic or hospital) during illness course prior to TB diagnosis	|__|__| ☐ Unknown
19. Inpatient hospital admission during current TB illness	☐ Yes ☐ No (SKIP to #21) ☐ Unknown
20. If yes, duration of hospitalization *(days)*	|__|__| days ☐ Ongoing (return to form to complete duration after discharge) ☐ Unknown
21. Date of TB diagnosis *(dd/mm/yyyy)*	|__|__|/|__|__|/|__|__|__|__|
22. Patient TB category (WHO/IUATLD)	☐ New case ☐ Relapse ☐ Treatment after failure ☐ Treatment after loss to follow-up ☐ Transfer in ☐ Other ☐ Unknown
23. TB diagnosis (type of TB)	☐ Pulmonary ☐ Pulmonary and extrapulmonary (specify) ☐ Unknown
24. Extrapulmonary location *(Check all that apply)*	☐ Lymph node ☐ Pleural ☐ Bone / joint ☐ Genitourinary ☐ Gastrointestinal ☐ Miliary ☐ Meningeal / CNS ☐ Other, please specify: _____ ☐ Unknown
25. TB-SRN pulmonary TB diagnostic criteria (*Check all that apply*)	☐ Respiratory symptoms ☐ CXR feature suggestive of PTB ☐ Positive MTB tests on respiratory samples
26. Microbiological status (*Fill detailed test results in **TB Lab** form)*	☐ No samples collected ☐ Negative MTB testing only (e.g., smear, Xpert, culture, or LAM; specify results in **TB Lab** form)

	☐ Any Positive MTB test result(s) (e.g., smear, Xpert, culture, or LAM; specify results in **TB Lab** form) ☐ Pending
27. Resistance pattern at diagnosis (*Fill detailed tests results in **TB Lab** form*)	☐ Drug-susceptible (DS-TB) ☐ Drug-resistant (DR-TB) – *if presumed or known resistance to one or more agents* ☐ Unknown
28. TB treatment initiation	☐ Yes (already initiated) ☐ Planned (within 7 days)
29. Date of TB treatment initiation *(dd/mm/yyyy)*	|__|__|/|__|__|/|__|__|__|__|
30. Type of TB treatment initiated *(Enter regimen details in **TB treatment** form)*	☐ 1st line regimen (DS-TB) ☐ 2nd line regimen (DR-TB) ☐ Other, specify: _____

Investigator: _____ Signature: _____ Date |__|__|/|__|__|/|__|__|__|__|

[5] MEDICAL HISTORY FORM	
IeDEA/TB SRN ID	
Visit	☐ Baseline
Visit date (dd/mm/yyyy)	|__|__|/|__|__|/|__|__|__|__|
For each of the conditions below, indicate if there is any history of each condition (current or past)	
1. Asthma	☐ Yes ☐ No ☐ Unknown
2. Chronic obstructive pulmonary disease (COPD) or emphysema	☐ Yes ☐ No ☐ Unknown
3. Pulmonary fibrosis or interstitial lung disease	☐ Yes ☐ No ☐ Unknown
4. History of COVID-19	☐ Yes (complete COVID-19 test data in **Other Lab** form) ☐ No (SKIP to #5) ☐ Unknown (SKIP to #5)
4a. Number of COVID-19 diagnosed episodes?	|__|__| episodes
4b. Date of most recent COVID-19 diagnosis *(dd/mm/yyyy)*	|__|__|/|__|__|/|__|__|__|__| ☐ Unknown
5. Other lung disease	☐ Yes ☐ No (SKIP to #6) ☐ Unknown (SKIP to #6)
5a. If yes, specify lung disease	_____
6. Hypertension	☐ Yes ☐ No (SKIP to #7) ☐ Unknown (SKIP to #7)

6a. Current treatment for hypertension	☐ Yes ☐ No ☐ Unknown
6b. If yes, specify anti-hypertensive medications	☐ ACE inhibitors (e.g., enalapril) ☐ Calcium channel blockers (e.g., amlodipine, nifedipine) ☐ Diuretics (e.g., lasix, aldactone, hydrochlorothazide) ☐ Angiotensin receptor blockers (e.g., losartan) ☐ Beta blockers (e.g., atenolol) ☐ Other
7. Coronary heart disease	☐ Yes ☐ No ☐ Unknown
8. Heart failure	☐ Yes ☐ No ☐ Unknown
9. Pulmonary hypertension	☐ Yes ☐ No ☐ Unknown
10. Diabetes	☐ Yes ☐ No (SKIP to #11) ☐ Unknown (SKIP to #11)
10a. Current anti-diabetes treatment	☐ Yes ☐ No (SKIP to #11) ☐ Unknown (SKIP to #11)
10b. If yes, specify anti-diabetes medications	☐ Metformin ☐ Glibenclamide ☐ Gliclazide ☐ Insulin ☐ Unknown ☐ Other (specify): _____

10c. If yes, specify route	☐ Oral ☐ Injection ☐ Other ☐ Unknown
11. Kidney disease	☐ Yes ☐ No (SKIP to #12) ☐ Unknown (SKIP to #12)
11a. If yes, currently on dialysis	☐ Yes ☐ No ☐ Unknown
12. Liver disease	☐ Yes ☐ No (SKIP to #13) ☐ Unknown (SKIP to #13)
12a. If yes, type of liver disease. *Check all that apply*	☐ Cirrhosis ☐ Alcohol related liver disease ☐ Non-alcoholic fatty liver disease ☐ Hepatitis B ☐ Hepatitis C ☐ Other (specify): _____
13. Cancer	☐ Yes ☐ No(SKIP to #14) ☐ Unknown (SKIP to #14)
13a. If yes, specify type of cancer	☐ Anal ☐ Breast ☐ Colon ☐ Invasive cervical ☐ Kaposi's Sarcoma ☐ Lung ☐ Non-Hodgkin lymphoma ☐ Prostate

	☐ Skin: melanoma ☐ Skin: non-melanoma ☐ Unknown ☐ Other _____
14. Immunosuppressor history	☐ Yes ☐ No (SKIP to #15) ☐ Unknown (SKIP to #15)
14a. If yes, specify ongoing immunosuppressor treatment	☐ None ☐ Steroid (e.g., prednisone, hydrocortisone) ☐ Biologic (e.g., infliximab, adalimumab, etanercept) ☐ Chemotherapy ☐ Other: _____ ☐ Unknown
15. Disorder of the brain or spinal cord	☐ Yes ☐ No ☐ Unknown
16. Mental health diagnosis	☐ Yes ☐ No (SKIP to #17) ☐ Unknown (SKIP to #17)
16a. If yes, Specify mental health diagnoses *(Check all that apply)*	☐ Depression ☐ Post-Traumatic Stress Disorder (PTSD) ☐ Anxiety ☐ Substance dependence ☐ Other: _____ ☐ Unknown
16b. Receiving counseling for mental health diagnos(es)	☐ Yes ☐ No ☐ Unknown

16c. Receiving medication for mental health diagnos(es)	☐ Yes ☐ No ☐ Unknown
17. Other health condition	☐ Yes ☐ No (SKIP to #18) ☐ Unknown (SKIP to #18)
17a. Specify health condition(s).	_____ _____ _____
18. Notes on medical history *(Optional free text notes)*	_____ _____ _____ _____ _____

Investigator: _____ Signature: _____ Date |__|__| / |__|__| / |__|__|__|__|

IeDEA TB SRN

[6] HIV History	
IeDEA/TB SRN ID	
Type of visit	☐ Baseline
Visit date *(dd/mm/yyyy)*	|__|__|/|__|__|/|__|__|__|__|
HIV testing	
1. Date of most recent HIV test *(dd/mm/yyyy)*	|__|__|/|__|__|/|__|__|__|__| or ☐ Not yet done
2. HIV status	☐ Positive (enter result in **Other Lab** form) ☐ HIV testing planned (results to report in **Other Lab** form; if found to be positive, return to complete HIV care section below) ☐ Negative within 90 days (if negative, SKIP to END)
HIV care (if HIV positive)	
3. Date of HIV diagnosis *(dd/mm/yyyy)*	|__|__|/|__|__|/|__|__|__|__|
4. Enrolment into HIV care	☐ Yes ☐ No (SKIP to #6) ☐ Unknown
5. Date of enrolment in HIV care *(dd/mm/yyyy)*	|__|__|/|__|__|/|__|__|__|__|
6. Previous hospitalizations for HIV complications	☐ Yes ☐ No (SKIP to #8) ☐ Unknown
7. Date of most recent hospital discharge *(dd/mm/yyyy)*	|__|__|/|__|__|/|__|__|__|__|
8. WHO stage (highest, *prior to TB)*	☐ 1 (SKIP to #14) ☐ 2 ☐ 3 ☐ 4 ☐ Not applicable (using CDC staging) ☐ Unknown
9. CDC stage (highest, *prior to TB*)	☐ 1 (SKIP to #14) ☐ 2 ☐ 3 ☐ Not applicable (using WHO staging) ☐ Unknown
10. CDC/WHO stage defining illness #1 *(other than current TB)*	…… ☐ Past/resolved ☐ Ongoing ☐ Unknown

IeDEA TB SRN

11. CDC/WHO stage defining illness #2 *(other than current TB)*	…… ☐ Past/resolved ☐ Ongoing ☐ Unknown
12. CDC/WHO stage defining illness #3 *(other than current TB)*	…… ☐ Past/resolved ☐ Ongoing ☐ Unknown
13. CDC/WHO stage defining illness #4 (other than current TB)	…… ☐ Past/resolved ☐ Ongoing ☐ Unknown
14. Currently on cotrimoxazole	☐ Yes ☐ No ☐ Unknown
15. ART initiated	☐ Yes ☐ No (SKIP to END) ☐ Unknown
16. ART initiation date *(dd/mm/yyyy)*	|__|__|/|__|__|/|__|__|__|__|
17. Currently on ART (fill **ART form**)	☐ Yes ☐ No

Reminder to complete the **Other Lab Results** form (for HIV-related labs) and **ART** form!

Investigator: _____ Signature: _____ Date |__|__| / |__|__| / |__|__|__|__|

[7] PREGNANCY / POST-PARTUM HISTORY and UPDATES	
IeDEA/TB SRN ID	
Visit	☐ Baseline ☐ End of Tx ☐ 6-M Post-Tx ☐ 12-M Post-Tx ☐ Tx F/R/W
Visit date *(dd/mm/yyyy)*	|__|__|/|__|__|/|__|__|__|__|
Baseline Questions (If NOT Baseline, SKIP to #4)	
1. Ever pregnant, currently or in the past (baseline)	☐ Yes ☐ No (SKIP to #6) ☐ Unknown
2. If yes, number of pregnancies (including current pregnancy if pregnant) (baseline)	|__|__|
3. If yes, number of live born infants (baseline)	|__|__|
Pregnancy Status	
4. Currently pregnant	☐ Yes (complete **Pregnancy and Infant Outcomes** form, or update existing form) ☐ No ☐ Unknown
5. Recent pregnancy or delivery (*For pregnancy ending in the **12 months prior to study** enrolment, or any time thereafter.*)	☐ Yes (complete a separate **Pregnancy and Infant Outcomes** form for each pregnancy in this time period, or update existing form) ☐ No ☐ Unknown
6. Able to be pregnant in the future?	☐ Yes ☐ No (e.g., hysterectomy, tubal ligation, menopause) → Do not need to ask pregnancy questions at future visits. ***At future visits, update infant outcomes for recent pregnancies if applicable.*** ☐ Unknown
For each recent or ongoing pregnancy, complete a separate Pregnancy and Infant Outcomes form, which will be updated at subsequent study visits	

Investigator: _____ Signature: _____ Date |__|__| / |__|__| / |__|__|__|__|

ID Number _____

IeDEA TB SRN

[8] PREGNANCY and INFANT OUTCOMES	
IeDEA/TB SRN ID	

Visit	Date (dd/mm/yyyy)	Visit	Date (dd/mm/yyyy)
☐ Baseline	|__|__| / |__|__| / |__|__|__|__|	☐ End of Tx	|__|__| / |__|__| / |__|__|__|__|
☐ 6-M Post-Tx	|__|__| / |__|__| / |__|__|__|__|	☐ Tx F/R/W	|__|__| / |__|__| / |__|__|__|__|

Recent or Ongoing Pregnancy History and Outcomes

- Time period: begin with any pregnancy ending <12 months before enrollment, and continue recording any pregnancy thereafter during the study.
- If **multiple pregnancies,** complete a **separate form for each pregnancy** and associated infant outcomes for all infants.
- **Revisit and update details**, including for new pregnancies, during subsequent study visits.

1. Pregnancy number *(Complete a separate form for each pregnancy ending <12 months prior to enrollment or any time thereafter.)*	|__|__|
2. Outcome of recent pregnancy	☐ Ongoing ☐ Born alive ☐ Stillborn ☐ Spontaneous abortion (miscarriage) ☐ Induced abortion ☐ Unknown
3. If ongoing, Date of last menstrual period (LMP)	|__|__|/|__|__|/|__|__|__|__| ☐ Unknown
4. If ongoing pregnancy, estimated date of delivery (EDD)	|__|__|/|__|__|/|__|__|__|__| ☐ Unknown
5. If pregnancy ended, date of delivery or other outcome	|__|__|/|__|__|/|__|__|__|__| ☐ Unknown
6. If born alive, term at delivery	☐ Full term (37 to 41 weeks) ☐ Post-term (≥42 weeks) ☐ Pre-term 34 to 36 weeks ☐ Pre-term < 34 weeks ☐ Unknown
7. Did you receive any of these during pregnancy? (Check all that apply.)	☐ TB preventive therapy ☐ TB treatment ☐ ART (HIV treatment, if applicable) ☐ None ☐ Unsure/Unknown
8. Conditions or complications during pregnancy	☐ Anemia, or having lower than the normal number of red blood cells ☐ High blood pressure, swelling, or protein in the urine ☐ Diabetes, or elevated blood sugar ☐ Urinary tract infection(s) ☐ Other infection(s): _____ _____

IeDEA TB SRN

	☐ Symptoms of depression (low or sad mood; lost interest in activities; changes in appetite, sleep, and energy; feelings of worthlessness, shame or guilt; thoughts that life is not worth living) ☐ Other medical problem for the mother: _____ ☐ Problem with the baby noted during pregnancy: _____ _____ ☐ Preterm (early) labor ☐ Bleeding ☐ Other: _____ _____ ☐ None ☐ Unsure/Unknown
9. Conditions or complications for the infant after delivery	☐ Pre-term birth (<37 weeks) ☐ Low birth weight (<2500 g) ☐ Low blood sugar ☐ Jaundice ☐ Birth defects ☐ Birth injuries ☐ Breathing problems ☐ Slow growth / failure to thrive ☐ Developmental delay ☐ Neurologic problems ☐ Other medical problems: _____ _____ ☐ Other: _____ ☐ None ☐ Unsure/Unknown
Infant Live Status and TB treatment/TPT	
10. Number of infants born alive for this pregnancy *(Infants from different pregnancies should be recorded on separate form.)*	|__|
11. TB treatment for infant 1	☐ Yes ☐ No ☐ Unknown
12. TB prevention therapy for infant 1	☐ Yes ☐ No ☐ Unknown
13. Infant 1 status at 12 months of life or by 12Mo Post-Tx visits	☐ Alive at ≥12 months of age ☐ Alive, not yet 12 months of age (update at future visit) ☐ Deceased ☐ Unknown
14. Cause of infant 1 death, if known	☐ Diagnosed TB ☐ Pneumonia / lung infection ☐ Other infectious cause: _____ _____ ☐ Other non-infectious cause: _____ _____ ☐ Decline to answer ☐ Unknown
15. TB treatment for infant 2	☐ Yes ☐ No

IeDEA TB SRN

	☐ Unknown
16. TB prevention therapy for infant 2	☐ Yes ☐ No ☐ Unknown
17. Infant 2 status at 12 months of life or by 12Mo Post-Tx visits	☐ Alive at ≥12 months of age ☐ Alive, not yet 12 months of age (update at future visit) ☐ Deceased ☐ Unknown
18. Cause of infant 2 death, if known	☐ Diagnosed TB ☐ Pneumonia / lung infection ☐ Other infectious cause: _____ _____ ☐ Other non-infectious cause: _____ _____ ☐ Decline to answer ☐ Unknown
19. TB treatment for infant 3	☐ Yes ☐ No ☐ Unknown
20. TB prevention therapy for infant 3	☐ Yes ☐ No ☐ Unknown
21. Infant 3 status at 12 months of life or by 12Mo Post-Tx visits	☐ Alive at ≥12 months of age ☐ Alive, not yet 12 months of age (update at future visit) ☐ Deceased ☐ Unknown
22. Cause of infant 3 death, if known	☐ Diagnosed TB ☐ Pneumonia / lung infection ☐ Other infectious cause: _____ _____ ☐ Other non-infectious cause: _____ _____ ☐ Decline to answer ☐ Unknown

Investigator: _____ Signature: _____ Date |__|__| / |__|__| / |__|__|__|__|

[9] VISIT AND CLINICAL EVALUATION	
IeDEA/TB SRN ID	
Visit	☐ Baseline ☐ Month 1 ☐ Month 2 ☐ End of Tx ☐ 6-M Post-Tx ☐ 12-M Post-Tx ☐ Tx F/R/W
Visit Date *(dd/mm/yyyy)*	|__|__| / |__|__| / |__|__|__|__|
Details on type of visit	
1. Visit type	☐ In-person visit ☐ Phone visit ☐ Data abstraction without patient contact ☐ Not performed
2. Reasons for visit not performed	☐ Lost to follow up (from study) ☐ Withdrawn ☐ Transferred out ☐ Death ☐ Missed visit ☐ Other ☐ Unknown
3. If missed visit, provide details	…… …… ……
4. If patient is lost to follow up from study, provide details if known	…… ……
5. Any adverse event to report since last visit or today	☐ Yes ☐ No
Tx F/R/W visit only	
6. Reason for Tx F/R/W study visit	☐ TB Tx failure ☐ TB recurrence assessment (SKIP TO #8) ☐ Withdrawal requested by patient (SKIP TO #9)
7. TB Tx failure	☐ Confirmed (fill a **Treatment Outcomes** form) ☐ Suspected, not confirmed ☐ Alternative diagnosis (specify) ……
8. TB recurrence	☐ Confirmed (fill a **TB History and Current TB Diagnosis** form and a **Treatment Outcomes** form) ☐ Suspected, not confirmed ☐ Alternative diagnosis (specify) ……

9. Reason for withdrawal *(collected only if patient agrees)*	……
Baseline TB symptoms (*within the past 4 weeks*) – *at Baseline visit only*	
10. Cough	☐ Yes ☐ No ☐ Unknown
10a. If yes, cough duration (weeks)	|__|__|
10b. If yes, presence of blood (haemoptysis)	☐ Yes ☐ No ☐ Unknown
11. Fever	☐ Yes ☐ No ☐ Unknown
11a. If yes, fever duration (weeks)	|__|__|
12. Night sweats	☐ Yes ☐ No ☐ Unknown
13. Weight loss	☐ Yes ☐ No ☐ Unknown
14. Chest pain	☐ Yes ☐ No ☐ Unknown
15. Dyspnea / shortness of breath	☐ Yes ☐ No ☐ Unknown
16. Tiredness or fatigue	☐ Yes ☐ No ☐ Unknown
17. Loss of appetite	☐ Yes ☐ No ☐ Unknown
18. Abdominal pain	☐ Yes ☐ No ☐ Unknown
Symptoms experienced at <u>current visit – *at all visits AFTER the baseline visit*</u>	
19. Cough	☐ Yes ☐ No
19a. If yes, change since previous visit	☐ Improved ☐ Worsened or new ☐ No change
19b. If yes, presence of blood (haemoptysis)	☐ Yes ☐ No ☐ Unknown
20. Fever	☐ Yes

	☐ No
20a. If yes, change since previous visit	☐ Improved ☐ Worsened or new ☐ No change
21. Night sweats	☐ Yes ☐ No
21a. If yes, change since previous visit	☐ Improved ☐ Worsened or new ☐ No change
22. Weight loss	☐ Yes ☐ No
22a. If yes, change since previous visit	☐ Improved ☐ Worsened or new ☐ No change
23. Chest pain	☐ Yes ☐ No
23a. If yes, change since previous visit	☐ Improved ☐ Worsened or new ☐ No change
24. Dyspnea/shortness of breath	☐ Yes ☐ No
24a. If yes, change since previous visit	☐ Improved ☐ Worsened or new ☐ No change
25. Tiredness or fatigue	☐ Yes ☐ No
25a. If yes, change since previous visit	☐ Improved ☐ Worsened or new ☐ No change
26. Loss of appetite	☐ Yes ☐ No
26a. If yes, change since previous visit	☐ Improved ☐ Worsened or new ☐ No change
27. Abdominal pain	☐ Yes ☐ No
27a. If yes, change since previous visit	☐ Improved ☐ Worsened or new ☐ No change
Vital signs	
28. Temperature (°Celsius)	|__|__|.|__|
29. Height (m) (for adults at baseline only)	|__|.|__|__| m
30. Weight (kgs)	|__|__|__|.|__| kg
31. Systolic blood pressure (mmHg)	|__|__|__|

32. Diastolic blood pressure (mmHg)	|__|__|__|
33. Heart rate (beats/min)	|__|__|__|
34. Respiratory rate (breaths/min)	|__|__|
35. SpO2 (%)	|__|__|
35a. On oxygen when SpO2 measured	☐ Yes ☐ No
Physical signs	
36. Respiratory distress (grunting, nose flaring, chest indrawing, sweating, cyanosis)	☐ Yes ☐ No
37. Crackles on pulmonary auscultation	☐ Yes ☐ No
38. Wheezing on pulmonary auscultation	☐ Yes ☐ No
39. Decreased lung sounds on auscultation	☐ Yes ☐ No
40. Skin rash	☐ Yes (complete **Adverse Event** form) ☐ No
41. Hepatomegaly	☐ Yes (complete **Adverse Event** form) ☐ No
41a. If yes, measurement below the costal margin (cm)	|__|__| cm
42. Cervical or supra-clavicular lymphadenopathy	☐ No ☐ Single ☐ Multiple ☐ Unknown
43. Neurological symptoms	☐ Yes ☐ No ☐ Unknown
43a. If yes, detail symptoms	…… …… …… ……

Investigator: _____ Signature: _____ Date |__|__| / |__|__| / |__|__|__|__|

CRF [10] ASSIST

The **A**lcohol, **S**moking and **S**ubstance **I**nvolvement **S**creening **T**est is a validated assessment of substance use. Due to copyright restrictions, this CRF is not included in this packet.

IeDEA TB SRN

[11] ADDITIONAL SMOKING HISTORY	
IeDEA/TB SRN ID	
Visit	☐ Baseline ☐ End of Tx ☐ 12-M Post-Tx ☐ Tx F/R/W
Visit date (dd/mm/yyyy)	|__|__|/|__|__|/|__|__|__|__|
1. Do you currently smoke tobacco? (This and the following questions also include *vaping* as a form of smoking.)	☐ Yes → SKIP to #4 ☐ No → SKIP to #2
2. If no, have you ever smoked tobacco in the past?	☐ Yes → SKIP to #3 ☐ No / Never-smoker → END of Form
3. If you stopped smoking, how long ago did you last smoke tobacco?	|__|__| Days |__|__| Months |__|__| Years ☐ Unknown
4. For approximately how many years have you (did you) smoke?	|__|__| Years ☐ Unknown
5. If you smoke(d) cigarettes, how many cigarettes do you (did you) smoke during a typical day?	☐ <1 ☐ 1-4 ☐ 5-10 ☐ 11-20 ☐ 21-30 ☐ 31-40 ☐ More than 40 ☐ Have taken other forms of tobacco, but not cigarettes ☐ Unknown

Investigator: _____ Signature: _____ Date |__|__| / |__|__| / |__|__|__|__|

CRF [12] SGRQ

The **S**aint **G**eorge **R**espiratory **Q**uestionnaire is a validated measure of the perceived impact of respiratory symptoms on the patient's daily quality of life. Due to copyright restrictions, this CRF is not included in this packet.

CRF [13] PHQ-9

The **P**atient **H**ealth **Q**uestionnaire – **9** is a validated measure which accesses presence and severity of depression symptoms as well as presence and degree of suicide risk. Due to copyright restrictions, this CRF is not included in this packet.

[14] SPIROMETRY	
IeDEA/TB SRN ID	
Visit	☐ Month 2 ☐ End of Tx ☐ 6-M Post-Tx
Visit date *(dd/mm/yyyy)*	|__|__|/|__|__|/|__|__|__|__|
1. Is the patient able to perform/complete spirometry?	☐ Yes ☐ No ☐ Not done/not applicable
2. If no, why not?	☐ Too Sick ☐ Delirious/Demented/Confused ☐ Has contraindication such as recent MI, surgery, PE, hemoptysis ☐ Attempted, but unable to get good quality test ☐ Other, please specify _____
Pre bronchodilator measured values	
3. FVC *(Liters)*	|__|.|__|__|__|
4. FEV1 *(Liters)*	|__|.|__|__|__|
5. FEF 25-75 *(Liters)*	|__|.|__|__|__|
6. Peak Flow (PEF) *(Liters/second)*	|__|__|__|
7. Spirometry grade/quality	☐ A ☐ B ☐ C ☐ D ☐ F
Post bronchodilator measured values	
8. FVC value *(Liters)*	|__|.|__|__|__|
9. FEV1 value *(Liters)*	|__|.|__|__|__|
10. FEF 25-75 value *(Liters)*	|__|.|__|__|__|
11. Peak Flow (PEF) *(Liters/second)*	|__|__|__|
12. Spirometry grade/quality	☐ A ☐ B ☐ C ☐ D ☐ F
Final Interpretation	
13. Interpretation done by	☐ Spirometry technician ☐ Pneumologist ☐ Spirometer itself ☐ Other

	☐ Unknown
14. Obstructive pattern detected	☐ Yes (FEV1/FVC < LLN) if yes fill below ☐ No ☐ Unknown
15. FEV1 (severity) % of predicted value	☐ 80%-100% ☐ 50-80% ☐ 30-50% ☐ <30%
16. Bronchodilator Response	☐ No change (FVC <12% & 200ml or FEV1 <12% & 200ml over baseline) ☐ Improved (FVC 12% AND 200ml or FEV1 12% AND 200ml over baseline) ☐ Normalized (FEV1/FVC ratio after bronchodilator normalized) ☐ Unknown
17. Restrictive pattern detected	☐ Yes (FVC<LLN) ☐ No ☐ Unknown

Investigator: _____ Signature: _____ Date |__|__| / |__|__| / |__|__|__|__|

[15] FUNCTIONAL ASSESSMENT 1 MINUTE SIT TO STAND TEST	
IeDEA/TB SRN ID	
Visit	☐ Baseline ☐ Month 2 ☐ End of Tx ☐ 6-M Post-Tx ☐ 12-M Post-Tx
Visit date *(dd/mm/yyyy)*	|__|__|/|__|__|/|__|__|__|__|
1. Patient able to complete the sit-to-stand test	☐ Yes ☐ No ☐ Not done / not applicable
2. Reasons why unable	☐ Too Sick ☐ Delirious / Demented / Confused ☐ Has lower extremity injury that prevents standing ☐ Other
At Rest	
3. SpO2 *(%)*	|__|__|
4. Heart rate *(beats per minute)*	|__|__|__|
5. Modified Borg Dyspnea Scale *"This is a scale that asks you to rate the difficulty of your breathing. It starts at number 0, where your breathing is causing you no difficulty at all, and progresses through to number 10, where your breathing difficulty is maximal.* ***How much difficulty is your breathing causing you right now?"***	☐ 0 Nothing at all ☐ 0.5 Very, very slight (just noticeable) ☐ 1 Very slight ☐ 2 Slight ☐ 3 Moderate ☐ 4 Somewhat severe ☐ 5 Severe ☐ 6 ☐ 7 Very severe ☐ 8 ☐ 9 Very, very severe (almost maximal) ☐ 10 Maximal
Post sit-to-stand test	
6. SpO2 *(%)*	|__|__|
7. Heart rate *(beats per minute)*	|__|__|__|
8. Modified Borg Dyspnea Scale *"This is a scale that asks you to rate the difficulty of your breathing. It starts at number 0, where your breathing is causing you no difficulty at all, and progresses through to number 10, where your breathing difficulty is maximal.* ***How much difficulty is your breathing causing you right now?"***	☐ 0 Nothing at all ☐ 0.5 Very, very slight (just noticeable) ☐ 1 Very slight ☐ 2 Slight ☐ 3 Moderate ☐ 4 Somewhat severe ☐ 5 Severe ☐ 6 ☐ 7 Very severe ☐ 8 ☐ 9 Very, very severe (almost maximal) ☐ 10 Maximal
9. Number of sit-to-stands completed in 1 min	|__|__|

Investigator: _____ Signature: _____ Date |__|__| / |__|__| / |__|__|__|__|

[16] TB MICROBIOLOGY	
IeDEA/TB SRN ID	
Visit	☐ Baseline ☐ Month 1 ☐ Month 2 ☐ End of Tx ☐ TX F/R/W
Visit date (dd/mm/yyyy)	|__|__|/|__|__|/|__|__|__|__|
Instructions: *Enter all available test results which may have been performed or which may have resulted since the last study visit. If this is the baseline visit, enter all available results to date for this TB illness course.*	
Smear microscopy	
1. Number of smears done *(If none, enter '0')*	☐ 0 (SKIP TO #5) ☐ 1 ☐ 2 ☐ 3 or more ☐ Unknown
2. Smear 1 date *(dd/mm/yyyy)*	|__|__|/|__|__|/|__|__|__|__|
2a. Smear 1 type of sample	☐ Expectorated sputum ☐ Other: _____ ☐ Unknown
2b. Smear 1 result	☐ Negative ☐ Scanty ☐ 1+ ☐ 2+ (++) ☐ 3+ (+++) ☐ 4+ (++++) ☐ Unknown
3. Smear 2 date *(dd/mm/yyyy)*	|__|__|/|__|__|/|__|__|__|__|
3a. Smear 2 type of sample	☐ Expectorated sputum ☐ Other: _____ ☐ Unknown
3b. Smear 2 result	☐ Negative ☐ Scanty ☐ 1+ ☐ 2+ (++) ☐ 3+ (+++) ☐ 4+ (++++) ☐ Unknown
4. Smear 3 date *(dd/mm/yyyy)*	|__|__|/|__|__|/|__|__|__|__|
4a. Smear 3 type of sample	☐ Expectorated sputum ☐ Other: _____ ☐ Unknown
4b. Smear 3 result	☐ Negative ☐ Scanty ☐ 1+ ☐ 2+ (++)

	☐ 3+ (+++) ☐ 4+ (++++) ☐ Unknown
Xpert MTB/RIF or Ultra	
5. Number of Xpert tests done *(If none, enter '0')*	☐ 0 (SKIP TO #10) ☐ 1 ☐ 2 ☐ 3 or more ☐ Unknown
6. Xpert TB type of test	☐ Xpert MTB/RIF ☐ Xpert MTB/RIF Ultra ☐ Other ☐ Unknown
7. Xpert TB test 1 date *(dd/mm/yyyy)*	|__|__|/|__|__|/|__|__|__|__|
7a. Xpert TB test 1 type of sample	☐ Expectorated sputum ☐ Other: _____ ☐ Unknown
7b. Xpert TB test 1 MTB result	☐ Detected (MTB+) ☐ Not detected (MTB-) ☐ Indeterminate/error ☐ Unknown
7c. Xpert TB test 1 result category	☐ Trace ☐ Very low ☐ Low ☐ Medium ☐ High
7d. Xpert TB test 1 RIF resistance	☐ Detected ☐ Not detected ☐ Indeterminate ☐ Unknown
8. Xpert TB test 2 date *(dd/mm/yyyy)*	|__|__|/|__|__|/|__|__|__|__|
8a. Xpert TB test 2 type of sample	☐ Expectorated sputum ☐ Other: _____ ☐ Unknown
8b. Xpert TB test 2 MTB result	☐ Detected (MTB+) ☐ Not detected (MTB-) ☐ Indeterminate/error ☐ Unknown
8c. Xpert TB test 2 result category	☐ Trace ☐ Very low ☐ Low ☐ Medium ☐ High
8d. Xpert TB test 2 RIF resistance	☐ Detected ☐ Not detected ☐ Indeterminate ☐ Unknown
9. Xpert TB test 3 date *(dd/mm/yyyy)*	|__|__|/|__|__|/|__|__|__|__|

9a. Xpert TB test 3 type of sample	☐ Expectorated sputum ☐ Other: _____ ☐ Unknown
9b. Xpert TB test 3 MTB result	☐ Detected (MTB+) ☐ Not detected (MTB-) ☐ Indeterminate/error ☐ Unknown
9c. Xpert TB test 3 result category	☐ Trace ☐ Very low ☐ Low ☐ Medium ☐ High
9d. Xpert TB test 3 RIF resistance	☐ Detected ☐ Not detected ☐ Indeterminate ☐ Unknown
TB Culture	
10. Number of cultures done *(If none, enter '0')*	☐ 0 (SKIP TO #15) ☐ 1 ☐ 2 ☐ 3 or more ☐ Unknown
11. Type of TB culture	☐ Lowenstein Jensen (LJ) ☐ MGIT ☐ LJ and MGIT ☐ Unknown
12. TB Culture 1 start date *(dd/mm/yyyy)*	|__|__|/|__|__|/|__|__|__|__|
12a. TB Culture 1 type of sample	☐ Expectorated sputum ☐ Other: _____ ☐ Unknown
12b. TB Culture 1 result date (positivity or sterile)	|__|__|/|__|__|/|__|__|__|__|
12c. TB Culture 1 result	☐ Pending (mark form as **Incomplete** and update result if/when available) ☐ Positive MTB ☐ Positive NTM ☐ Contaminated ☐ Negative (sterile) ☐ Unknown
13. TB Culture 2 start date *(dd/mm/yyyy)*	|__|__|/|__|__|/|__|__|__|__|
13a. TB Culture 2 type of sample	☐ Expectorated sputum ☐ Other: _____ ☐ Unknown
13b. TB Culture 2 result date (positivity or sterile)	|__|__|/|__|__|/|__|__|__|__|
13c. TB Culture 2 result	☐ Pending (mark form as **Incomplete** and update result if/when available) ☐ Positive MTB ☐ Positive NTM

	☐ Contaminated ☐ Negative (sterile) ☐ Unknown			
14. TB Culture 3 start date *(dd/mm/yyyy)*	|__|__|/|__|__|/|__|__|__|__|			
14a. TB Culture 3 type of sample	☐ Expectorated sputum ☐ Other: _____ ☐ Unknown			
14b. TB Culture 3 result date (positivity or sterile)	|__|__|/|__|__|/|__|__|__|__|			
14c. TB Culture 3 result	☐ Pending (mark form as **Incomplete** and update result if/when available) ☐ Positive MTB ☐ Positive NTM ☐ Contaminated ☐ Negative (sterile) ☐ Unknown			
Drug susceptibility testing				
15. 1st line TB drug-susceptibility testing done	☐ Yes (fill below) ☐ No (SKIP TO #20) ☐ Unknown			
16. Type(s) of 1st line TB-drug susceptibility testing *(Check all that apply)*	☐ Culture-based DST ☐ Genotypic DST (MTBDRplus / LPA-1) ☐ Xpert Ultra ☐ Other: _____ ☐ Unknown			
17. Date of sample, 1st line DST	|__|__|/|__|__|/|__|__|__|__|			
17a. Type of sample, 1st line DST	☐ Expectorated sputum ☐ Other: _____ ☐ Unknown			
17b. For each first-line drug, indicate results of DST.	Isoniazid (INH)	☐ S	☐ R	☐ Unk
	Rifampin (RIF)	☐ S	☐ R	☐ Unk
	Pyrazinamide (PZA)	☐ S	☐ R	☐ Unk
	Ethambutol (EMB)	☐ S	☐ R	☐ Unk
	Streptomycin (SM)	☐ S	☐ R	☐ Unk
18. 2nd line TB drug-susceptibility testing done	☐ Yes (if yes fill below) ☐ No ☐ Unknown			
18a. Type(s) of 2nd line TB-drug susceptibility testing *(Check all that apply)*	☐ Culture-based DST ☐ Genotypic DST (MTBDRsl / LPA-2) ☐ Xpert MTB-XDR ☐ Other: _____ ☐ Unknown			
18b. For each second-line drug, indicate results of DST.	Bedaquiline	☐ S	☐ R	☐ Unk
	Moxifloxacin	☐ S	☐ R	☐ Unk
	Levofloxacin	☐ S	☐ R	☐ Unk
	Ciprofloxacin	☐ S	☐ R	☐ Unk
	Linezolid	☐ S	☐ R	☐ Unk
	Clofazimine	☐ S	☐ R	☐ Unk
	Cycloserine	☐ S	☐ R	☐ Unk

	Amikacin	☐ S	☐ R	☐ Unk
	Carbapenems	☐ S	☐ R	☐ Unk
	Delaminid	☐ S	☐ R	☐ Unk
	Ethionamide	☐ S	☐ R	☐ Unk
	Prothionamide	☐ S	☐ R	☐ Unk
	Kanamycin	☐ S	☐ R	☐ Unk
	P-aminosalicylic acid	☐ S	☐ R	☐ Unk
	Capreomycin	☐ S	☐ R	☐ Unk
	Azithromycin	☐ S	☐ R	☐ Unk
	Clarithromycin	☐ S	☐ R	☐ Unk
	Amoxicillin-clavulanate	☐ S	☐ R	☐ Unk
	Other (specify)_____	☐ S	☐ R	☐ Unk
	Other (specify)_____	☐ S	☐ R	☐ Unk
Urine LAM test				
20. Urine LAM test done	☐ Yes ☐ No ☐ Unknown			
20a. Type of urine LAM test done	☐ Alere LAM ☐ Fujifilm LAM ☐ Unknown			
20b. Date urine LAM test done *(dd/mm/yyyy)*	|__|__|/|__|__|/|__|__|__|__|			
20c. Results of urine LAM test	☐ Positive ☐ Negative ☐ Unknown			

Investigator: _____ Signature: _____ Date |__|__| / |__|__| / |__|__|__|__|

[17] OTHER LABORATORY RESULTS	
IeDEA/TB SRN ID	
Visit	☐ Baseline ☐ Month 1 ☐ Month 2 ☐ End of Tx ☐ 6-M Post-Tx ☐ 12-M Post-Tx ☐ Tx F/R/W
Visit date (dd/mm/yyyy)	|__|__|/|__|__|/|__|__|__|__|
Instructions: *Enter results for any new lab results since last study visit. If multiple tests were done for a given item, use the most recent. Exception: If a positive HIV diagnostic test, positive COVID diagnostic test, or unsuppressed HIV viral load, enter the first positive/abnormal result.*	
HIV related tests	
1. HIV test done	☐ Yes ☐ No ☐ Unknown
2. HIV test date *(dd/mm/yyyy)*	|__|__|/|__|__|/|__|__|__|__|
3. HIV test result	☐ Positive ☐ Negative ☐ Unknown
4. CD4 T-cell count	☐ └┴┴┴┴┘ /mm³ ☐ └┴┴┘ . └┴┴┘ % ☐ Not done ☐ Not applicable Date (dd/mm/yyyy): |__|__|/|__|__|/|__|__|__|__|
5. HIV viral load	☐ └┴┴┴┴┴┴┴┴┴┘ cp/ml ☐ Undetectable ☐ Not done ☐ Not applicable Date (dd/mm/yyyy): |__|__|/|__|__|/|__|__|__|__|
COVID-19 tests	
6. COVID test	☐ Done ☐ Not done
If a COVID test was done, specify details below. If there was a positive test, record the results for the positive test. (If multiple positive tests, record the details for the first positive test.)	
7. COVID test date	Date (dd/mm/yyyy): |__|__|/|__|__|/|__|__|__|__|

8. COVID-19 test type	☐ Molecular test / PCR ☐ Antigen test (e.g., rapid test) ☐ Unknown
9. COVID-19 test result	☐ Positive ☐ Negative ☐ Indeterminate
Complete blood count (CBC)	
10. CBC	☐ Done ☐ Not done ☐ Not applicable
11. CBC Date	Date (dd/mm/yyyy): |__|__|/|__|__|/|__|__|__|__|
11a. Hemoglobin	└┴┴┘. └┴┘ ❑ g/dl ❑ g/L
11b. White blood cells	└┴┴┴┴┴┴┘. └┴┘ ❑ /mm^3 ❑ x10^3/µL ❑ giga (10^9)/L
11c. Monocytes (absolute)	└┴┴┴┴┴┴┘. └┴┘ ❑ /mm^3 ❑ x10^3/µL ❑ giga (10^9)/L
11d. Neutrophils (absolute)	└┴┴┴┴┴┴┘. └┴┘ ❑ /mm^3 ❑ x10^3/µL ❑ giga (10^9)/L
11e. Eosinophils (absolute)	└┴┴┴┴┴┴┘. └┴┘ ❑ /mm^3 ❑ x10^3/µL ❑ giga (10^9)/L
11f. Lymphocytes (absolute)	└┴┴┴┴┴┴┘. └┴┘ ❑ /mm^3 ❑ x10^3/µL ❑ giga (10^9)/L
11g. Platelets	└┴┴┴┴┴┴┘. └┴┘ ❑ x10^3/mm^3 ❑ /µL
Biochemistry	
12. Hemoglobin A1c (HbA1c)	└┴┘. └┴┘ % ☐ Not done Date (dd/mm/yyyy): |__|__|/|__|__|/|__|__|__|__|
13. Random blood glucose	└┴┴┴┘. └┴┴┘ ❑ mmol/L ❑ mg/L ❑ g/L ☐ Not done Date (dd/mm/yyyy): |__|__|/|__|__|/|__|__|__|__|
14. C-reactive protein (CRP)	└┴┴┴┘ mg/L ☐ Not done Date (dd/mm/yyyy): |__|__|/|__|__|/|__|__|__|__|
15. Procalcitonin	└┴┴┴┘. └┴┴┘ µg/L ☐ Not done Date (dd/mm/yyyy): |__|__|/|__|__|/|__|__|__|__|
Biochemistry: Metabolic Panel	
16. Metabolic Panel	☐ Done ☐ Not done ☐ Not applicable
17. Metabolic Panel Date	Date (dd/mm/yyyy): |__|__|/|__|__|/|__|__|__|__|

17a. ALT (SGPT)	└┴┴┴┴┴┘ ❑ mg/L ❑ mg/dL ❑ UI/L
17b. AST (SGOT)	└┴┴┴┴┴┘ ❑ mg/L ❑ mg/dL ❑ UI/L
17c. Creatinine	└┴┴┴┴┘ . └┴┘ ❑ µmol/L ❑ mg/L ❑ mg/dL
17d. Alkaline phosphatase	└┴┴┴┴┘ UI/L
17e.Total bilirubin	└┴┘ mg/L
17f. Conjugated bilirubin	└┴┘ mg/L
17g. Sodium	└┴┴┴┘ mmol/L
17h. Potassium	└┴┘ . └┴┘ mmol/L

Investigator: _____ Signature: _____ Date |__|__| / |__|__| / |__|__|__|__|

[18] CHEST X-RAY RESULTS	
IeDEA/TB SRN ID	
Visit	☐ Baseline ☐ Month 1 ☐ Month 2 ☐ End of Tx ☐ 6-M Post-Tx ☐ 12-M Post-Tx ☐ Tx F/R/W
Visit date (dd/mm/yyyy)	|__|__|/|__|__|/|__|__|__|__|
1. Was an x-ray performed (at any time since last visit)?	☐ Yes ☐ No (End of form)
2. Date of chest x-ray	|__|__|/|__|__|/|__|__|__|__|
3. Interpreter	☐ Clinician ☐ Research assistant ☐ Radiologist ☐ Other
4. Quality of chest X-ray	Patient identification: ☐ Appropriate ☐ Not acceptable Rotation: ☐ Absence or minimal ☐ Not acceptable Penetration: ☐ Good (vertebra visible behind heart) ☐ Not acceptable Inspiration: ☐ Good (8th or 9th posterior rib visible) ☐ Not acceptable Defective lung fields: ☐ No ☐ Yes
4a. Result:	☐ Normal (in both lungs) ☐ Abnormal
5. Cavitation	☐ Yes (present) ☐ No (absent) ☐ Not possible to determine based on test
5a. If yes,	☐ Unilateral ☐ Bilateral
6. Miliary Lesions	☐ Yes ☐ No ☐ Not possible to determine based on test
7. Alveolar opacity(ies) (infiltrate)	☐ Yes ☐ No ☐ Not possible to determine based on test
7a. If yes,	☐ Unilateral ☐ Bilateral
8. Interstitial opacities	☐ Yes ☐ No ☐ Not possible to determine based on test
8a. If yes,	☐ Unilateral ☐ Bilateral
9. Pleural effusion	☐ Yes ☐ No

	☐ Not possible to determine based on test
10. Calcification	☐ Yes ☐ No ☐ Not possible to determine based on test
11. Mediastinal lymphadenopathy/adenopathy	☐ Yes ☐ No ☐ Not possible to determine based on test
12. Enlarged Cardiac Silhouette (>50% of thoracic diameter)	☐ Yes ☐ No ☐ Not possible to determine based on test
13. Nodules or Masses	☐ Yes ☐ No ☐ Not possible to determine based on test
13a. If yes,	☐ Single ☐ Multiple
13b. If yes, size of largest lesion	☐ < 1 cm ☐ 1-5 cm ☐ >5 cm
14. Percentage of lung fields affected by any kind of lesion (alveolar or interstitial opacities)	|__|__|__| %
15. Are any of these other findings seen based on chest x-ray?	☐ Bronchiectasis ☐ Emphysema ☐ Lung fibrosis ☐ Signs of pulmonary hypertension ☐ Signs of right heart failure ☐ Other
16. Evolution since last CXR *(If applicable)*	☐ Worsened ☐ Unchanged ☐ Improved ☐ Complete resolution of lesions
Image Files	
17. Number of x-ray films	|__|__|
18. Original x-ray format	☐ Digital (DICOM) ☐ Film ☐ Unknown
19. X-ray digitization date	|__|__|/|__|__|/|__|__|__|__|
20. Image upload status	☐ Complete ☐ Incomplete/partial

Investigator: _____ Signature: _____ Date |__|__| / |__|__| / |__|__|__|__|

[19] TB Treatment (REDCap Flowchart Form)	
IeDEA/TB SRN ID	

Visit	Date (dd/mm/yyyy)	Visit	Date (dd/mm/yyyy)
☐ Baseline	|__|__| / |__|__| / |__|__|__|__|	☐ End of Tx	|__|__| / |__|__| / |__|__|__|__|
☐ Month 1	|__|__| / |__|__| / |__|__|__|__|	☐ Tx F/R/W	|__|__| / |__|__| / |__|__|__|__|
☐ Month 2	|__|__| / |__|__| / |__|__|__|__|		

TB Drug 1	
1. TB Drug 1 *(Select one)*	☐ RHZE ☐ RH ☐ Rifampicin ☐ Pyrazinamide ☐ Isoniazid ☐ Ethambutol ☐ Streptomycin ☐ Rifabutin ☐ Amikacin ☐ Kanamycin ☐ Capreomycin ☐ Ofloxacin ☐ Levofloxacin ☐ Moxifloxacin ☐ Terizidone ☐ Cycloserine ☐ Ethionamide ☐ Protionamide ☐ Para-aminosalicylic acid (PAS) ☐ Clofazimine ☐ Linezolid ☐ Imipenem ☐ Bedaquiline ☐ Other: _____
1a. If RHZE, combination:	☐ RHZE 150/75/400/275 - 2 tablets ☐ RHZE 150/75/400/275 - 3 tablets ☐ RHZE 150/75/400/275 - 4 tablets ☐ RHZE 150/75/400/275 - 5 tablets
1b. If RH, combination:	☐ RH 150/75 - 2 tablets ☐ RH 150/75 - 3 tablets ☐ RH 150/75 - 4 tablets ☐ RH 150/75 - 5 tablets ☐ RH 300/200 - 1 tablet or capsule ☐ RH 300/200 - 2 tablets or capsules ☐ RH 300/200 - 1 tablet or capsule + RH 150/100 - 1 tablet ☐ RH 300/200 - 2 tablets or capsules + RH 150/100 - 1 tablet
1c. Other drugs - Dose (mg)	|__|__|__|__|
1d. How many times a day is this medication prescribed?	|__|__|__|
1e. How many days a week is this medication prescribed?	|__|__|__|
1f. Start Date *(dd/mm/yyyy)*	|__|__|/|__|__|/|__|__|__|__|
1g. Stop Date	

(dd/mm/yyyy)	|__|__|/|__|__|/|__|__|__|__| ☐ Treatment Ongoing *(Return to update the status at next visit. Update stop date and reason once medication is stopped.)* ☐ Unknown
1h. Reason for change, interruption or completion	☐ Completed intensive phase ☐ Completed continuation phase ☐ TB treatment failure ☐ Drug resistance ☐ Pregnancy ☐ Side effects or toxicity ☐ Incompatibility with ART (antiretroviral treatment) ☐ Drug interaction ☐ Participant stopped taking the meds ☐ Lost to follow up ☐ Dose adjustment (e.g. for weight change) ☐ Death ☐ Other _____ ☐ Unknown
TB Drug 2	
2. TB Drug 2 *(Select one)*	☐ RHZE ☐ RH ☐ Rifampicin ☐ Pyrazinamide ☐ Isoniazid ☐ Ethambutol ☐ Streptomycin ☐ Rifabutin ☐ Amikacin ☐ Kanamycin ☐ Capreomycin ☐ Ofloxacin ☐ Levofloxacin ☐ Moxifloxacin ☐ Terizidone ☐ Cycloserine ☐ Ethionamide ☐ Protionamide ☐ Para-aminosalicylic acid (PAS) ☐ Clofazimine ☐ Linezolid ☐ Imipenem ☐ Bedaquiline ☐ Other: _____
2a. If RHZE, combination:	☐ RHZE 150/75/400/275 - 2 tablets ☐ RHZE 150/75/400/275 - 3 tablets ☐ RHZE 150/75/400/275 - 4 tablets ☐ RHZE 150/75/400/275 - 5 tablets
2b. If RH, combination:	☐ RH 150/75 - 2 tablets ☐ RH 150/75 - 3 tablets ☐ RH 150/75 - 4 tablets ☐ RH 150/75 - 5 tablets ☐ RH 300/200 - 1 tablet or capsule ☐ RH 300/200 - 2 tablets or capsules ☐ RH 300/200 - 1 tablet or capsule + RH 150/100 - 1 tablet ☐ RH 300/200 - 2 tablets or capsules + RH 150/100 - 1 tablet
2c. Other drugs - Dose (mg)	|__|__|__|__|
2d. How many times a day is this medication prescribed?	|__|__|__|

2e. How many days a week is this medication prescribed?	|__|__|__|
2f. Start Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy)
2g. Stop Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy) ☐ Treatment Ongoing *(Return to update the status at next visit. Update stop date and reason once medication is stopped.)* ☐ Unknown
2h. Reason for change, interruption or completion	☐ Completed intensive phase ☐ Completed continuation phase ☐ TB treatment failure ☐ Drug resistance ☐ Pregnancy ☐ Side effects or toxicity ☐ Incompatibility with ART (antiretroviral treatment) ☐ Drug interaction ☐ Participant stopped taking the meds ☐ Lost to follow up ☐ Dose adjustment (e.g. for weight change) ☐ Death ☐ Other _____ ☐ Unknown
TB Drug 3	
3. TB Drug 3 *(Select one)*	☐ RHZE ☐ RH ☐ Rifampicin ☐ Pyrazinamide ☐ Isoniazid ☐ Ethambutol ☐ Streptomycin ☐ Rifabutin ☐ Amikacin ☐ Kanamycin ☐ Capreomycin ☐ Ofloxacin ☐ Levofloxacin ☐ Moxifloxacin ☐ Terizidone ☐ Cycloserine ☐ Ethionamide ☐ Protionamide ☐ Para-aminosalicylic acid (PAS) ☐ Clofazimine ☐ Linezolid ☐ Imipenem ☐ Bedaquiline ☐ Other: _____
3a. If RHZE, combination:	☐ RHZE 150/75/400/275 - 2 tablets ☐ RHZE 150/75/400/275 - 3 tablets ☐ RHZE 150/75/400/275 - 4 tablets ☐ RHZE 150/75/400/275 - 5 tablets
3b. If RH, combination:	☐ RH 150/75 - 2 tablets ☐ RH 150/75 - 3 tablets ☐ RH 150/75 - 4 tablets

	☐ RH 150/75 - 5 tablets ☐ RH 300/200 - 1 tablet or capsule ☐ RH 300/200 - 2 tablets or capsules ☐ RH 300/200 - 1 tablet or capsule + RH 150/100 - 1 tablet ☐ RH 300/200 - 2 tablets or capsules + RH 150/100 - 1 tablet
3c.Other drugs - Dose (mg)	|__|__|__|__|
3d. How many times a day is this medication prescribed?	|__|__|__|
3e. How many days a week is this medication prescribed?	|__|__|__|
3f. Start Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy)
3g. Stop Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy) ☐ Treatment Ongoing *(Return to update the status at next visit. Update stop date and reason once medication is stopped.)* ☐ Unknown
3h. Reason for change, interruption or completion	☐ Completed intensive phase ☐ Completed continuation phase ☐ TB treatment failure ☐ Drug resistance ☐ Pregnancy ☐ Side effects or toxicity ☐ Incompatibility with ART (antiretroviral treatment) ☐ Drug interaction ☐ Participant stopped taking the meds ☐ Lost to follow up ☐ Dose adjustment (e.g. for weight change) ☐ Death ☐ Other _____ ☐ Unknown
TB Drug 4	

4. TB Drug 4 *(Select one)*	☐ RHZE ☐ RH ☐ Rifampicin ☐ Pyrazinamide ☐ Isoniazid ☐ Ethambutol ☐ Streptomycin ☐ Rifabutin ☐ Amikacin ☐ Kanamycin ☐ Capreomycin ☐ Ofloxacin ☐ Levofloxacin ☐ Moxifloxacin ☐ Terizidone ☐ Cycloserine ☐ Ethionamide ☐ Protionamide ☐ Para-aminosalicylic acid (PAS) ☐ Clofazimine ☐ Linezolid ☐ Imipenem ☐ Bedaquiline ☐ Other: _____
4a. If RHZE, combination:	☐ RHZE 150/75/400/275 - 2 tablets ☐ RHZE 150/75/400/275 - 3 tablets ☐ RHZE 150/75/400/275 - 4 tablets ☐ RHZE 150/75/400/275 - 5 tablets
4b. If RH, combination:	☐ RH 150/75 - 2 tablets ☐ RH 150/75 - 3 tablets ☐ RH 150/75 - 4 tablets ☐ RH 150/75 - 5 tablets ☐ RH 300/200 - 1 tablet or capsule ☐ RH 300/200 - 2 tablets or capsules ☐ RH 300/200 - 1 tablet or capsule + RH 150/100 - 1 tablet ☐ RH 300/200 - 2 tablets or capsules + RH 150/100 - 1 tablet
4c. Other drugs - Dose (mg)	|__|__|__|__|
4d. How many times a day is this medication prescribed?	|__|__|__|
4e. How many days a week is this medication prescribed?	|__|__|__|
4f. Start Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy)
4g. Stop Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy) ☐ Treatment Ongoing *(Return to update the status at next visit. Update stop date and reason once medication is stopped.)* ☐ Unknown
4h. Reason for change, interruption or completion	☐ Completed intensive phase ☐ Completed continuation phase ☐ TB treatment failure ☐ Drug resistance ☐ Pregnancy ☐ Side effects or toxicity

	☐ Incompatibility with ART (antiretroviral treatment) ☐ Drug interaction ☐ Participant stopped taking the meds ☐ Lost to follow up ☐ Dose adjustment (e.g. for weight change) ☐ Death ☐ Other _____ ☐ Unknown
TB Drug 5	
5. TB Drug 5 *(Select one)*	☐ RHZE ☐ RH ☐ Rifampicin ☐ Pyrazinamide ☐ Isoniazid ☐ Ethambutol ☐ Streptomycin ☐ Rifabutin ☐ Amikacin ☐ Kanamycin ☐ Capreomycin ☐ Ofloxacin ☐ Levofloxacin ☐ Moxifloxacin ☐ Terizidone ☐ Cycloserine ☐ Ethionamide ☐ Protionamide ☐ Para-aminosalicylic acid (PAS) ☐ Clofazimine ☐ Linezolid ☐ Imipenem ☐ Bedaquiline ☐ Other: _____
5a. If RHZE, combination:	☐ RHZE 150/75/400/275 - 2 tablets ☐ RHZE 150/75/400/275 - 3 tablets ☐ RHZE 150/75/400/275 - 4 tablets ☐ RHZE 150/75/400/275 - 5 tablets
5b. If RH, combination:	☐ RH 150/75 - 2 tablets ☐ RH 150/75 - 3 tablets ☐ RH 150/75 - 4 tablets ☐ RH 150/75 - 5 tablets ☐ RH 300/200 - 1 tablet or capsule ☐ RH 300/200 - 2 tablets or capsules ☐ RH 300/200 - 1 tablet or capsule + RH 150/100 - 1 tablet ☐ RH 300/200 - 2 tablets or capsules + RH 150/100 - 1 tablet
5c. Other drugs - Dose (mg)	|__|__|__|__|
5d. How many times a day is this medication prescribed?	|__|__|__|
5e. How many days a week is this medication prescribed?	|__|__|__|
5f. Start Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy)
5g. Stop Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy) ☐ Treatment Ongoing *(Return to update the status at next visit. Update stop date and reason once medication is stopped.)* ☐ Unknown

5h. Reason for change, interruption or completion	☐ Completed intensive phase ☐ Completed continuation phase ☐ TB treatment failure ☐ Drug resistance ☐ Pregnancy ☐ Side effects or toxicity ☐ Incompatibility with ART (antiretroviral treatment) ☐ Drug interaction ☐ Participant stopped taking the meds ☐ Lost to follow up ☐ Dose adjustment (e.g. for weight change) ☐ Death ☐ Other _____ ☐ Unknown
TB Drug 6	
6. TB Drug 6 *(Select one)*	☐ RHZE ☐ RH ☐ Rifampicin ☐ Pyrazinamide ☐ Isoniazid ☐ Ethambutol ☐ Streptomycin ☐ Rifabutin ☐ Amikacin ☐ Kanamycin ☐ Capreomycin ☐ Ofloxacin ☐ Levofloxacin ☐ Moxifloxacin ☐ Terizidone ☐ Cycloserine ☐ Ethionamide ☐ Protionamide ☐ Para-aminosalicylic acid (PAS) ☐ Clofazimine ☐ Linezolid ☐ Imipenem ☐ Bedaquiline ☐ Other: _____
6a. If RHZE, combination:	☐ RHZE 150/75/400/275 - 2 tablets ☐ RHZE 150/75/400/275 - 3 tablets ☐ RHZE 150/75/400/275 - 4 tablets ☐ RHZE 150/75/400/275 - 5 tablets
6b. If RH, combination:	☐ RH 150/75 - 2 tablets ☐ RH 150/75 - 3 tablets ☐ RH 150/75 - 4 tablets ☐ RH 150/75 - 5 tablets ☐ RH 300/200 - 1 tablet or capsule ☐ RH 300/200 - 2 tablets or capsules ☐ RH 300/200 - 1 tablet or capsule + RH 150/100 - 1 tablet ☐ RH 300/200 - 2 tablets or capsules + RH 150/100 - 1 tablet
6c. Other drugs – Dose (mg)	|__|__|__|__|
6d. How many times a day is this medication prescribed?	|__|__|__|
6e. How many days a week is this medication prescribed?	|__|__|__|
6f. Start Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy)

6g. Stop Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy) ☐ Treatment Ongoing *(Return to update the status at next visit. Update stop date and reason once medication is stopped.)* ☐ Unknown
6h. Reason for change, interruption or completion	☐ Completed intensive phase ☐ Completed continuation phase ☐ TB treatment failure ☐ Drug resistance ☐ Pregnancy ☐ Side effects or toxicity ☐ Incompatibility with ART (antiretroviral treatment) ☐ Drug interaction ☐ Participant stopped taking the meds ☐ Lost to follow up ☐ Dose adjustment (e.g. for weight change) ☐ Death ☐ Other _____ ☐ Unknown
TB Drug 7	
7. TB Drug 7 *(Select one)*	☐ RHZE ☐ RH ☐ Rifampicin ☐ Pyrazinamide ☐ Isoniazid ☐ Ethambutol ☐ Streptomycin ☐ Rifabutin ☐ Amikacin ☐ Kanamycin ☐ Capreomycin ☐ Ofloxacin ☐ Levofloxacin ☐ Moxifloxacin ☐ Terizidone ☐ Cycloserine ☐ Ethionamide ☐ Protionamide ☐ Para-aminosalicylic acid (PAS) ☐ Clofazimine ☐ Linezolid ☐ Imipenem ☐ Bedaquiline ☐ Other: _____
7a. If RHZE, combination:	☐ RHZE 150/75/400/275 - 2 tablets ☐ RHZE 150/75/400/275 - 3 tablets ☐ RHZE 150/75/400/275 - 4 tablets ☐ RHZE 150/75/400/275 - 5 tablets
7b. If RH, combination:	☐ RH 150/75 - 2 tablets ☐ RH 150/75 - 3 tablets ☐ RH 150/75 - 4 tablets ☐ RH 150/75 - 5 tablets ☐ RH 300/200 - 1 tablet or capsule ☐ RH 300/200 - 2 tablets or capsules ☐ RH 300/200 - 1 tablet or capsule + RH 150/100 - 1 tablet ☐ RH 300/200 - 2 tablets or capsules + RH 150/100 - 1 tablet

7c. Other drugs - Dose (mg)	|__|__|__|__|
7d. How many times a day is this medication prescribed?	|__|__|__|
7e. How many days a week is this medication prescribed?	|__|__|__|
7f. Start Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy)
7g. Stop Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy) ☐ Treatment Ongoing *(Return to update the status at next visit. Update stop date and reason once medication is stopped.)* ☐ Unknown
7h. Reason for change, interruption or completion	☐ Completed intensive phase ☐ Completed continuation phase ☐ TB treatment failure ☐ Drug resistance ☐ Pregnancy ☐ Side effects or toxicity ☐ Incompatibility with ART (antiretroviral treatment) ☐ Drug interaction ☐ Participant stopped taking the meds ☐ Lost to follow up ☐ Dose adjustment (e.g. for weight change) ☐ Death ☐ Other _____ ☐ Unknown
TB Drug 8	
8. TB Drug 8 *(Select one)*	☐ RHZE ☐ RH ☐ Rifampicin ☐ Pyrazinamide ☐ Isoniazid ☐ Ethambutol ☐ Streptomycin ☐ Rifabutin ☐ Amikacin ☐ Kanamycin ☐ Capreomycin ☐ Ofloxacin ☐ Levofloxacin ☐ Moxifloxacin ☐ Terizidone ☐ Cycloserine ☐ Ethionamide ☐ Protionamide ☐ Para-aminosalicylic acid (PAS) ☐ Clofazimine ☐ Linezolid ☐ Imipenem ☐ Bedaquiline ☐ Other: _____
8a. If RHZE, combination:	☐ RHZE 150/75/400/275 - 2 tablets ☐ RHZE 150/75/400/275 - 3 tablets ☐ RHZE 150/75/400/275 - 4 tablets ☐ RHZE 150/75/400/275 - 5 tablets
8b. If RH, combination:	☐ RH 150/75 - 2 tablets ☐ RH 150/75 - 3 tablets

	☐ RH 150/75 - 4 tablets ☐ RH 150/75 - 5 tablets ☐ RH 300/200 - 1 tablet or capsule ☐ RH 300/200 - 2 tablets or capsules ☐ RH 300/200 - 1 tablet or capsule + RH 150/100 - 1 tablet ☐ RH 300/200 - 2 tablets or capsules + RH 150/100 - 1 tablet
8c. Other drugs - Dose (mg)	|__|__|__|__|
8d. How many times a day is this medication prescribed?	|__|__|__|
8e. How many days a week is this medication prescribed?	|__|__|__|
8f. Start Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy)
8g. Stop Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy) ☐ Treatment Ongoing *(Return to update the status at next visit. Update stop date and reason once medication is stopped.)* ☐ Unknown
8h. Reason for change, interruption or completion	☐ Completed intensive phase ☐ Completed continuation phase ☐ TB treatment failure ☐ Drug resistance ☐ Pregnancy ☐ Side effects or toxicity ☐ Incompatibility with ART (antiretroviral treatment) ☐ Drug interaction ☐ Participant stopped taking the meds ☐ Lost to follow up ☐ Dose adjustment (e.g. for weight change) ☐ Death ☐ Other _____ ☐ Unknown
TB Drug 9	

IeDEA TB SRN

9. TB Drug 9 *(Select one)*	☐ RHZE ☐ RH ☐ Rifampicin ☐ Pyrazinamide ☐ Isoniazid ☐ Ethambutol ☐ Streptomycin ☐ Rifabutin ☐ Amikacin ☐ Kanamycin ☐ Capreomycin ☐ Ofloxacin ☐ Levofloxacin ☐ Moxifloxacin ☐ Terizidone ☐ Cycloserine ☐ Ethionamide ☐ Protionamide ☐ Para-aminosalicylic acid (PAS) ☐ Clofazimine ☐ Linezolid ☐ Imipenem ☐ Bedaquiline ☐ Other: _____
9a. If RHZE, combination:	☐ RHZE 150/75/400/275 - 2 tablets ☐ RHZE 150/75/400/275 - 3 tablets ☐ RHZE 150/75/400/275 - 4 tablets ☐ RHZE 150/75/400/275 - 5 tablets
9b. If RH, combination:	☐ RH 150/75 - 2 tablets ☐ RH 150/75 - 3 tablets ☐ RH 150/75 - 4 tablets ☐ RH 150/75 - 5 tablets ☐ RH 300/200 - 1 tablet or capsule ☐ RH 300/200 - 2 tablets or capsules ☐ RH 300/200 - 1 tablet or capsule + RH 150/100 - 1 tablet ☐ RH 300/200 - 2 tablets or capsules + RH 150/100 - 1 tablet
9c. Other drugs - Dose (mg)	|__|__|__|__|
9d. How many times a day is this medication prescribed?	|__|__|__|
9e. How many days a week is this medication prescribed?	|__|__|__|
9f. Start Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy)
9g. Stop Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy) ☐ Treatment Ongoing *(Return to update the status at next visit. Update stop date and reason once medication is stopped.)* ☐ Unknown
9h. Reason for change, interruption or completion	☐ Completed intensive phase ☐ Completed continuation phase ☐ TB treatment failure ☐ Drug resistance ☐ Pregnancy ☐ Side effects or toxicity ☐ Incompatibility with ART (antiretroviral treatment)

	☐ Drug interaction ☐ Participant stopped taking the meds ☐ Lost to follow up ☐ Dose adjustment (e.g. for weight change) ☐ Death ☐ Other _____ ☐ Unknown
TB Drug 10	
10. TB Drug 10 *(Select one)*	☐ RHZE ☐ RH ☐ Rifampicin ☐ Pyrazinamide ☐ Isoniazid ☐ Ethambutol ☐ Streptomycin ☐ Rifabutin ☐ Amikacin ☐ Kanamycin ☐ Capreomycin ☐ Ofloxacin ☐ Levofloxacin ☐ Moxifloxacin ☐ Terizidone ☐ Cycloserine ☐ Ethionamide ☐ Protionamide ☐ Para-aminosalicylic acid (PAS) ☐ Clofazimine ☐ Linezolid ☐ Imipenem ☐ Bedaquiline ☐ Other: _____
10a. If RHZE, combination:	☐ RHZE 150/75/400/275 - 2 tablets ☐ RHZE 150/75/400/275 - 3 tablets ☐ RHZE 150/75/400/275 - 4 tablets ☐ RHZE 150/75/400/275 - 5 tablets
10b. If RH, combination:	☐ RH 150/75 - 2 tablets ☐ RH 150/75 - 3 tablets ☐ RH 150/75 - 4 tablets ☐ RH 150/75 - 5 tablets ☐ RH 300/200 - 1 tablet or capsule ☐ RH 300/200 - 2 tablets or capsules ☐ RH 300/200 - 1 tablet or capsule + RH 150/100 - 1 tablet ☐ RH 300/200 - 2 tablets or capsules + RH 150/100 - 1 tablet
10c. Other drugs - Dose (mg)	|__|__|__|__|
10d. How many times a day is this medication prescribed?	|__|__|__|
10e. How many days a week is this medication prescribed?	|__|__|__|
10f. Start Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy)
10g. Stop Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy)

	☐ Treatment Ongoing *(Return to update the status at next visit. Update stop date and reason once medication is stopped.)* ☐ Unknown
10h. Reason for change, interruption or completion	☐ Completed intensive phase ☐ Completed continuation phase ☐ TB treatment failure ☐ Drug resistance ☐ Pregnancy ☐ Side effects or toxicity ☐ Incompatibility with ART (antiretroviral treatment) ☐ Drug interaction ☐ Participant stopped taking the meds ☐ Lost to follow up ☐ Dose adjustment (e.g. for weight change) ☐ Death ☐ Other _____ ☐ Unknown
TB Drug 11	
11. TB Drug 11 *(Select one)*	☐ RHZE ☐ RH ☐ Rifampicin ☐ Pyrazinamide ☐ Isoniazid ☐ Ethambutol ☐ Streptomycin ☐ Rifabutin ☐ Amikacin ☐ Kanamycin ☐ Capreomycin ☐ Ofloxacin ☐ Levofloxacin ☐ Moxifloxacin ☐ Terizidone ☐ Cycloserine ☐ Ethionamide ☐ Protionamide ☐ Para-aminosalicylic acid (PAS) ☐ Clofazimine ☐ Linezolid ☐ Imipenem ☐ Bedaquiline ☐ Other: _____
11a. If RHZE, combination:	☐ RHZE 150/75/400/275 - 2 tablets ☐ RHZE 150/75/400/275 - 3 tablets ☐ RHZE 150/75/400/275 - 4 tablets ☐ RHZE 150/75/400/275 - 5 tablets
11b. If RH, combination:	☐ RH 150/75 - 2 tablets ☐ RH 150/75 - 3 tablets ☐ RH 150/75 - 4 tablets ☐ RH 150/75 - 5 tablets ☐ RH 300/200 - 1 tablet or capsule ☐ RH 300/200 - 2 tablets or capsules ☐ RH 300/200 - 1 tablet or capsule + RH 150/100 - 1 tablet ☐ RH 300/200 - 2 tablets or capsules + RH 150/100 - 1 tablet
11c. Other drugs - Dose (mg)	|__|__|__|__|
11d. How many times a day is this medication prescribed?	|__|__|__|
11e. How many days a week is this medication prescribed?	|__|__|__|

11f. Start Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy)
11g. Stop Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy) ☐ Treatment Ongoing *(Return to update the status at next visit. Update stop date and reason once medication is stopped.)* ☐ Unknown
11h. Reason for change, interruption or completion	☐ Completed intensive phase ☐ Completed continuation phase ☐ TB treatment failure ☐ Drug resistance ☐ Pregnancy ☐ Side effects or toxicity ☐ Incompatibility with ART (antiretroviral treatment) ☐ Drug interaction ☐ Participant stopped taking the meds ☐ Lost to follow up ☐ Dose adjustment (e.g. for weight change) ☐ Death ☐ Other _____ ☐ Unknown
TB Drug 12	
12. Drug 12 *(Select one)*	☐ RHZE ☐ RH ☐ Rifampicin ☐ Pyrazinamide ☐ Isoniazid ☐ Ethambutol ☐ Streptomycin ☐ Rifabutin ☐ Amikacin ☐ Kanamycin ☐ Capreomycin ☐ Ofloxacin ☐ Levofloxacin ☐ Moxifloxacin ☐ Terizidone ☐ Cycloserine ☐ Ethionamide ☐ Protionamide ☐ Para-aminosalicylic acid (PAS) ☐ Clofazimine ☐ Linezolid ☐ Imipenem ☐ Bedaquiline ☐ Other: _____
12a. If RHZE, combination:	☐ RHZE 150/75/400/275 - 2 tablets ☐ RHZE 150/75/400/275 - 3 tablets ☐ RHZE 150/75/400/275 - 4 tablets ☐ RHZE 150/75/400/275 - 5 tablets
12b. If RH, combination:	☐ RH 150/75 - 2 tablets ☐ RH 150/75 - 3 tablets ☐ RH 150/75 - 4 tablets ☐ RH 150/75 - 5 tablets ☐ RH 300/200 - 1 tablet or capsule ☐ RH 300/200 - 2 tablets or capsules

	☐ RH 300/200 - 1 tablet or capsule + RH 150/100 - 1 tablet ☐ RH 300/200 - 2 tablets or capsules + RH 150/100 - 1 tablet
12c. Other drugs - Dose (mg)	|__|__|__|__|
12d. How many times a day is this medication prescribed?	|__|__|__|
12e. How many days a week is this medication prescribed?	|__|__|__|
12f. Start Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy)
12g. Stop Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy) ☐ Treatment Ongoing *(Return to update the status at next visit. Update stop date and reason once medication is stopped.)* ☐ Unknown
12h. Reason for change, interruption or completion	☐ Completed intensive phase ☐ Completed continuation phase ☐ TB treatment failure ☐ Drug resistance ☐ Pregnancy ☐ Side effects or toxicity ☐ Incompatibility with ART (antiretroviral treatment) ☐ Drug interaction ☐ Participant stopped taking the meds ☐ Lost to follow up ☐ Dose adjustment (e.g. for weight change) ☐ Death ☐ Other _____ ☐ Unknown
TB Drug 13	
13. TB Drug 13 *(Select one)*	☐ RHZE ☐ RH ☐ Rifampicin ☐ Pyrazinamide ☐ Isoniazid ☐ Ethambutol ☐ Streptomycin ☐ Rifabutin ☐ Amikacin ☐ Kanamycin ☐ Capreomycin ☐ Ofloxacin ☐ Levofloxacin ☐ Moxifloxacin ☐ Terizidone ☐ Cycloserine ☐ Ethionamide ☐ Protionamide ☐ Para-aminosalicylic acid (PAS) ☐ Clofazimine ☐ Linezolid ☐ Imipenem ☐ Bedaquiline ☐ Other: _____

13a. If RHZE, combination:	☐ RHZE 150/75/400/275 - 2 tablets ☐ RHZE 150/75/400/275 - 3 tablets ☐ RHZE 150/75/400/275 - 4 tablets ☐ RHZE 150/75/400/275 - 5 tablets
13b. If RH, combination:	☐ RH 150/75 - 2 tablets ☐ RH 150/75 - 3 tablets ☐ RH 150/75 - 4 tablets ☐ RH 150/75 - 5 tablets ☐ RH 300/200 - 1 tablet or capsule ☐ RH 300/200 - 2 tablets or capsules ☐ RH 300/200 - 1 tablet or capsule + RH 150/100 - 1 tablet ☐ RH 300/200 - 2 tablets or capsules + RH 150/100 - 1 tablet
13c. Other drugs – Dose (mg)	|__|__|__|__|
13d. How many times a day is this medication prescribed?	|__|__|__|
13e. How many days a week is this medication prescribed?	|__|__|__|
13f. Start Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy)
13g. Stop Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy) ☐ Treatment Ongoing *(Return to update the status at next visit. Update stop date and reason once medication is stopped.)* ☐ Unknown
13h. Reason for change, interruption or completion	☐ Completed intensive phase ☐ Completed continuation phase ☐ TB treatment failure ☐ Drug resistance ☐ Pregnancy ☐ Side effects or toxicity ☐ Incompatibility with ART (antiretroviral treatment) ☐ Drug interaction ☐ Participant stopped taking the meds ☐ Lost to follow up ☐ Dose adjustment (e.g. for weight change) ☐ Death ☐ Other _____ ☐ Unknown
TB Drug 14	

14. TB Drug 14 *(Select one)*	☐ RHZE ☐ RH ☐ Rifampicin ☐ Pyrazinamide ☐ Isoniazid ☐ Ethambutol ☐ Streptomycin ☐ Rifabutin ☐ Amikacin ☐ Kanamycin ☐ Capreomycin ☐ Ofloxacin ☐ Levofloxacin ☐ Moxifloxacin ☐ Terizidone ☐ Cycloserine ☐ Ethionamide ☐ Protionamide ☐ Para-aminosalicylic acid (PAS) ☐ Clofazimine ☐ Linezolid ☐ Imipenem ☐ Bedaquiline ☐ Other: _____
14a. If RHZE, combination:	☐ RHZE 150/75/400/275 - 2 tablets ☐ RHZE 150/75/400/275 - 3 tablets ☐ RHZE 150/75/400/275 - 4 tablets ☐ RHZE 150/75/400/275 - 5 tablets
14b. f RH, combination:	☐ RH 150/75 - 2 tablets ☐ RH 150/75 - 3 tablets ☐ RH 150/75 - 4 tablets ☐ RH 150/75 - 5 tablets ☐ RH 300/200 - 1 tablet or capsule ☐ RH 300/200 - 2 tablets or capsules ☐ RH 300/200 - 1 tablet or capsule + RH 150/100 - 1 tablet ☐ RH 300/200 - 2 tablets or capsules + RH 150/100 - 1 tablet
14c. Other drugs – Dose (mg)	|__|__|__|__|
14d. How many times a day is this medication prescribed?	|__|__|__|
14e. How many days a week is this medication prescribed?	|__|__|__|
14f. 1Start Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy)
14g. Stop Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy) ☐ Treatment Ongoing *(Return to update the status at next visit. Update stop date and reason once medication is stopped.)* ☐ Unknown
14h. Reason for change, interruption or completion	☐ Completed intensive phase ☐ Completed continuation phase ☐ TB treatment failure ☐ Drug resistance ☐ Pregnancy ☐ Side effects or toxicity

	☐ Incompatibility with ART (antiretroviral treatment) ☐ Drug interaction ☐ Participant stopped taking the meds ☐ Lost to follow up ☐ Dose adjustment (e.g. for weight change) ☐ Death ☐ Other _____ ☐ Unknown
TB Drug 15	
15. TB Drug 15 *(Select one)*	☐ RHZE ☐ RH ☐ Rifampicin ☐ Pyrazinamide ☐ Isoniazid ☐ Ethambutol ☐ Streptomycin ☐ Rifabutin ☐ Amikacin ☐ Kanamycin ☐ Capreomycin ☐ Ofloxacin ☐ Levofloxacin ☐ Moxifloxacin ☐ Terizidone ☐ Cycloserine ☐ Ethionamide ☐ Protionamide ☐ Para-aminosalicylic acid (PAS) ☐ Clofazimine ☐ Linezolid ☐ Imipenem ☐ Bedaquiline ☐ Other: _____
15a. If RHZE, combination:	☐ RHZE 150/75/400/275 - 2 tablets ☐ RHZE 150/75/400/275 - 3 tablets ☐ RHZE 150/75/400/275 - 4 tablets ☐ RHZE 150/75/400/275 - 5 tablets
15b. If RH, combination:	☐ RH 150/75 - 2 tablets ☐ RH 150/75 - 3 tablets ☐ RH 150/75 - 4 tablets ☐ RH 150/75 - 5 tablets ☐ RH 300/200 - 1 tablet or capsule ☐ RH 300/200 - 2 tablets or capsules ☐ RH 300/200 - 1 tablet or capsule + RH 150/100 - 1 tablet ☐ RH 300/200 - 2 tablets or capsules + RH 150/100 - 1 tablet
15c. Other drugs – Dose (mg)	|__|__|__|__|
15d. How many times a day is this medication prescribed?	|__|__|__|
15e. How many days a week is this medication prescribed?	|__|__|__|
15f. Start Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy)
15g. Stop Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy)

	☐ Treatment Ongoing *(Return to update the status at next visit. Update stop date and reason once medication is stopped.)* ☐ Unknown
15h. Reason for change, interruption or completion	☐ Completed intensive phase ☐ Completed continuation phase ☐ TB treatment failure ☐ Drug resistance ☐ Pregnancy ☐ Side effects or toxicity ☐ Incompatibility with ART (antiretroviral treatment) ☐ Drug interaction ☐ Participant stopped taking the meds ☐ Lost to follow up ☐ Dose adjustment (e.g. for weight change) ☐ Death ☐ Other _____ ☐ Unknown
TB Drug 16	
16. TB Drug 16 (select one)	☐ RHZE ☐ RH ☐ Rifampicin ☐ Pyrazinamide ☐ Isoniazid ☐ Ethambutol ☐ Streptomycin ☐ Rifabutin ☐ Amikacin ☐ Kanamycin ☐ Capreomycin ☐ Ofloxacin ☐ Levofloxacin ☐ Moxifloxacin ☐ Terizidone ☐ Cycloserine ☐ Ethionamide ☐ Protionamide ☐ Para-aminosalicylic acid (PAS) ☐ Clofazimine ☐ Linezolid ☐ Imipenem ☐ Bedaquiline ☐ Other: _____
16a. If RHZE, combination:	☐ RHZE 150/75/400/275 - 2 tablets ☐ RHZE 150/75/400/275 - 3 tablets ☐ RHZE 150/75/400/275 - 4 tablets ☐ RHZE 150/75/400/275 - 5 tablets
16b. If RH, combination:	☐ RH 150/75 - 2 tablets ☐ RH 150/75 - 3 tablets ☐ RH 150/75 - 4 tablets ☐ RH 150/75 - 5 tablets ☐ RH 300/200 - 1 tablet or capsule ☐ RH 300/200 - 2 tablets or capsules ☐ RH 300/200 - 1 tablet or capsule + RH 150/100 - 1 tablet ☐ RH 300/200 - 2 tablets or capsules + RH 150/100 - 1 tablet
16c. Other drugs - Dose (mg)	|__|__|__|__|
16d. How many times a day is this medication prescribed?	|__|__|__|

16e. How many days a week is this medication prescribed?	|__|__|__|
16f. Start Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy)
16g. Stop Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy) ☐ Treatment Ongoing *(Return to update the status at next visit. Update stop date and reason once medication is stopped.)* ☐ Unknown
16h. Reason for change, interruption or completion	☐ Completed intensive phase ☐ Completed continuation phase ☐ TB treatment failure ☐ Drug resistance ☐ Pregnancy ☐ Side effects or toxicity ☐ Incompatibility with ART (antiretroviral treatment) ☐ Drug interaction ☐ Participant stopped taking the meds ☐ Lost to follow up ☐ Dose adjustment (e.g. for weight change) ☐ Death ☐ Other _____ ☐ Unknown
TB Drug 17	
17. TB Drug 17 *(Select one)*	☐ RHZE ☐ RH ☐ Rifampicin ☐ Pyrazinamide ☐ Isoniazid ☐ Ethambutol ☐ Streptomycin ☐ Rifabutin ☐ Amikacin ☐ Kanamycin ☐ Capreomycin ☐ Ofloxacin ☐ Levofloxacin ☐ Moxifloxacin ☐ Terizidone ☐ Cycloserine ☐ Ethionamide ☐ Protionamide ☐ Para-aminosalicylic acid (PAS) ☐ Clofazimine ☐ Linezolid ☐ Imipenem ☐ Bedaquiline ☐ Other: _____
17a. If RHZE, combination:	☐ RHZE 150/75/400/275 - 2 tablets ☐ RHZE 150/75/400/275 - 3 tablets ☐ RHZE 150/75/400/275 - 4 tablets ☐ RHZE 150/75/400/275 - 5 tablets
17b. If RH, combination:	☐ RH 150/75 - 2 tablets ☐ RH 150/75 - 3 tablets ☐ RH 150/75 - 4 tablets ☐ RH 150/75 - 5 tablets ☐ RH 300/200 - 1 tablet or capsule ☐ RH 300/200 - 2 tablets or capsules ☐ RH 300/200 - 1 tablet or capsule + RH 150/100 - 1 tablet

	☐ RH 300/200 - 2 tablets or capsules + RH 150/100 - 1 tablet
17c. Other drugs - Dose (mg)	|__|__|__|__|
17d. How many times a day is this medication prescribed?	|__|__|__|
17e. How many days a week is this medication prescribed?	|__|__|__|
17f. Start Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy)
17g. Stop Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy) ☐ Treatment Ongoing *(Return to update the status at next visit. Update stop date and reason once medication is stopped.)* ☐ Unknown
17h. Reason for change, interruption or completion	☐ Completed intensive phase ☐ Completed continuation phase ☐ TB treatment failure ☐ Drug resistance ☐ Pregnancy ☐ Side effects or toxicity ☐ Incompatibility with ART (antiretroviral treatment) ☐ Drug interaction ☐ Participant stopped taking the meds ☐ Lost to follow up ☐ Dose adjustment (e.g. for weight change) ☐ Death ☐ Other _____ ☐ Unknown
TB Drug 18	
18. TB Drug 18 *(Select one)*	☐ RHZE ☐ RH ☐ Rifampicin ☐ Pyrazinamide ☐ Isoniazid ☐ Ethambutol ☐ Streptomycin ☐ Rifabutin ☐ Amikacin ☐ Kanamycin ☐ Capreomycin ☐ Ofloxacin ☐ Levofloxacin ☐ Moxifloxacin ☐ Terizidone ☐ Cycloserine ☐ Ethionamide ☐ Protionamide ☐ Para-aminosalicylic acid (PAS) ☐ Clofazimine ☐ Linezolid ☐ Imipenem ☐ Bedaquiline ☐ Other: _____
18a. If RHZE, combination:	☐ RHZE 150/75/400/275 - 2 tablets ☐ RHZE 150/75/400/275 - 3 tablets

	☐ RHZE 150/75/400/275 - 4 tablets ☐ RHZE 150/75/400/275 - 5 tablets
18b. If RH, combination:	☐ RH 150/75 - 2 tablets ☐ RH 150/75 - 3 tablets ☐ RH 150/75 - 4 tablets ☐ RH 150/75 - 5 tablets ☐ RH 300/200 - 1 tablet or capsule ☐ RH 300/200 - 2 tablets or capsules ☐ RH 300/200 - 1 tablet or capsule + RH 150/100 - 1 tablet ☐ RH 300/200 - 2 tablets or capsules + RH 150/100 - 1 tablet
18c. Other drugs - Dose (mg)	|__|__|__|__|
18d. How many times a day is this medication prescribed?	|__|__|__|
18e. How many days a week is this medication prescribed?	|__|__|__|
18f. Start Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy)
18g. Stop Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy) ☐ Treatment Ongoing *(return to update the status at next visit. Update stop date and reason once medication is stopped.)* ☐ Unknown
18h. Reason for change, interruption or completion	☐ Completed intensive phase ☐ Completed continuation phase ☐ TB treatment failure ☐ Drug resistance ☐ Pregnancy ☐ Side effects or toxicity ☐ Incompatibility with ART (antiretroviral treatment) ☐ Drug interaction ☐ Participant stopped taking the meds ☐ Lost to follow up ☐ Dose adjustment (e.g. for weight change) ☐ Death ☐ Other _____ ☐ Unknown
TB Drug 19	
19. TB Drug 19 (select one)	☐ RHZE ☐ RH ☐ Rifampicin ☐ Pyrazinamide ☐ Isoniazid ☐ Ethambutol ☐ Streptomycin ☐ Rifabutin ☐ Levofloxacin ☐ Moxifloxacin ☐ Terizidone ☐ Cycloserine ☐ Ethionamide ☐ Protionamide ☐ Para-aminosalicylic acid (PAS) ☐ Clofazimine

	☐ Amikacin ☐ Kanamycin ☐ Capreomycin ☐ Ofloxacin ☐ Linezolid ☐ Imipenem ☐ Bedaquiline ☐ Other: _____
19a. If RHZE, combination:	☐ RHZE 150/75/400/275 - 2 tablets ☐ RHZE 150/75/400/275 - 3 tablets ☐ RHZE 150/75/400/275 - 4 tablets ☐ RHZE 150/75/400/275 - 5 tablets
19b. If RH, combination:	☐ RH 150/75 - 2 tablets ☐ RH 150/75 - 3 tablets ☐ RH 150/75 - 4 tablets ☐ RH 150/75 - 5 tablets ☐ RH 300/200 - 1 tablet or capsule ☐ RH 300/200 - 2 tablets or capsules ☐ RH 300/200 - 1 tablet or capsule + RH 150/100 - 1 tablet ☐ RH 300/200 - 2 tablets or capsules + RH 150/100 - 1 tablet
19c. Other drugs - Dose (mg)	|__|__|__|__|
19d. How many times a day is this medication prescribed?	|__|__|__|
19e. How many days a week is this medication prescribed?	|__|__|__|
19f. Start Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy)
19g. Stop Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy) ☐ Treatment Ongoing *(return to update the status at next visit. Update stop date and reason once medication is stopped.)* ☐ Unknown
19h. Reason for change, interruption or completion	☐ Completed intensive phase ☐ Completed continuation phase ☐ TB treatment failure ☐ Drug resistance ☐ Pregnancy ☐ Side effects or toxicity ☐ Incompatibility with ART (antiretroviral treatment) ☐ Drug interaction ☐ Participant stopped taking the meds ☐ Lost to follow up ☐ Dose adjustment (e.g. for weight change) ☐ Death ☐ Other _____ ☐ Unknown
TB Drug 20	

20. TB Drug 20 *(Select one)*	☐ RHZE ☐ RH ☐ Rifampicin ☐ Pyrazinamide ☐ Isoniazid ☐ Ethambutol ☐ Streptomycin ☐ Rifabutin ☐ Amikacin ☐ Kanamycin ☐ Capreomycin ☐ Ofloxacin ☐ Levofloxacin ☐ Moxifloxacin ☐ Terizidone ☐ Cycloserine ☐ Ethionamide ☐ Protionamide ☐ Para-aminosalicylic acid (PAS) ☐ Clofazimine ☐ Linezolid ☐ Imipenem ☐ Bedaquiline ☐ Other: _____
20a. If RHZE, combination:	☐ RHZE 150/75/400/275 - 2 tablets ☐ RHZE 150/75/400/275 - 3 tablets ☐ RHZE 150/75/400/275 - 4 tablets ☐ RHZE 150/75/400/275 - 5 tablets
20b. If RH, combination:	☐ RH 150/75 - 2 tablets ☐ RH 150/75 - 3 tablets ☐ RH 150/75 - 4 tablets ☐ RH 150/75 - 5 tablets ☐ RH 300/200 - 1 tablet or capsule ☐ RH 300/200 - 2 tablets or capsules ☐ RH 300/200 - 1 tablet or capsule + RH 150/100 - 1 tablet ☐ RH 300/200 - 2 tablets or capsules + RH 150/100 - 1 tablet
20c. Other drugs - Dose (mg)	|__|__|__|__|
20d. How many times a day is this medication prescribed?	|__|__|__|
20e. How many days a week is this medication prescribed?	|__|__|__|
20f. Start Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy)
20g. Stop Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy) ☐ Treatment Ongoing *(Return to update the status at next visit. Update stop date and reason once medication is stopped.)* ☐ Unknown
20h. Reason for change, interruption or completion	☐ Completed intensive phase ☐ Completed continuation phase ☐ TB treatment failure ☐ Drug resistance ☐ Pregnancy ☐ Side effects or toxicity ☐ Incompatibility with ART (antiretroviral treatment) ☐ Drug interaction ☐ Participant stopped taking the meds ☐ Lost to follow up

	☐ Dose adjustment (e.g. for weight change) ☐ Death ☐ Other _____ ☐ Unknown
Treatment End Summary	
21. Has this participant finished the prescribed TB treatment?	☐ Yes (complete the **TB Treatment Outcomes** form) ☐ No ☐ Not applicable ☐ Still on treatment
24. Notes (optional)	

Investigator: _____ Signature: _____ Date |__|__| / |__|__| / |__|__|__|__|

IeDEA TB SRN

[20] TB TREATMENT ADHERENCE	
IeDEA/TB SRN ID	
Visit	☐ Month 1 ☐ Month 2 ☐ End of Tx ☐ Tx F/R/W
Visit date *(dd/mm/yyyy)*	|__|__|/|__|__|/|__|__|__|__|
Adherence questions	
1. Any dose of TB drugs missed in the last 4 days	☐ Yes ☐ No ☐ Unknown
1a. If yes, number of TB drugs doses missed in the last 4 days	|__|__| doses
2. Any dose of TB drugs missed in the last 30 days?	☐ Yes ☐ No ☐ Unknown
Pill count for TB drugs	
3. Date of last TB treatment refill *(dd/mm/yyyy)*	|__|__|/|__|__|/|__|__|__|__| ☐ Unknown
4. Expected number of tablets for TB treatment taken daily (since last refill)	|__|__| ☐ Unknown
5. Number of tablets at last refill (tablets given + tablets patient already had)	|__|__|__| ☐ Unknown
6. Number of tablets brought back	|__|__|__| ☐ Unknown
7. Description of any adherence challenges for TB drugs *(Check all that apply)*	☐ Forgetting dose(s) ☐ Difficulty tolerating medication(s) / side effects ☐ Unable to take medication(s) while feeling ill or unwell ☐ Unable to take medication(s) due to not having food ☐ Did not have privacy / unable to take medication(s) while around others ☐ Not willing to take medication(s) ☐ Did not have medication(s) with me at the time for dose ☐ Did not have a sufficient supply of medication(s) ☐ Medication(s) have not been available from pharmacy (e.g., stock-out) ☐ Other (specify) _____ ☐ Unknown ☐ Decline to answer

Investigator: _____ Signature: _____ Date |__|__| / |__|__| / |__|__|__|__|

ID Number _____ TB Treatment Adherence Page 1 of 1

v1.0 26Jul2022

IeDEA TB-SRN

[21] Directly Observed Therapy (DOT) for TB	
IeDEA/TB SRN ID	
Visit	☐ Month 1 ☐ Month 2 ☐ End of Tx ☐ Tx F/R/W
Visit date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy)
1. Is this participant under <u>any form</u> of Directly Observed Therapy (DOT)?	☐ Yes (complete form below) ☐ No ☐ Unknown
Intensive Phase	
2. Which types of DOTs, according to the study protocol definitions, are currently being or will be done for this participant during the intensive phase? *(Check all that apply)*	☐ In person - with healthcare worker ☐ In person - with community health worker ☐ In person - with family member or another trusted person ☐ Virtual - through smartphone via text message, photo or video ☐ Telephone - by telephone calls
3. Start Date of DOT	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy)
4. Intensive phase ongoing or completed?	☐ Ongoing → SKIP to #8 ☐ Completed (fill below)
5. End Date of DOT (if applicable)	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy)
6. **Intensive phase: how many doses did the patient take by…**	
a. In-Person DOT with a healthcare worker?	|__|__|__| doses
b. In-Person DOT with a community health worker?	|__|__|__| doses
c. In-Person DOT with a family member or other trusted person?	|__|__|__| doses
d. Virtual DOT?	|__|__|__| doses
e. Telephone DOT?	|__|__|__| doses
f. without being observed? *(e.g., doses administered without DOT, for example weekends, holidays and or treatment days before recruitment in the study)*	|__|__|__| doses

7. How many doses has the participant missed in the intensive phase?	|__|__|__| doses
8. Has the participant interrupted the intensive phase of TB treatment for any reason, and for any duration?	☐ Yes (report on **TB Treatment** form) ☐ No
Continuation Phase	
9. Continuation phase ongoing or completed?	☐ Not yet started → END form ☐ Ongoing (fill below) ☐ Completed (fill below)
10. Which types of DOTs, according to the study protocol definitions, are currently being or will be done for this participant during the continuation phase? *(Check all that apply)*	☐ In person - with healthcare worker ☐ In person - with community health worker ☐ In person - with family member or another trusted person ☐ Virtual - through smartphone via text message, photo or video ☐ Telephone - by daily telephone calls
11. Start Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy)
12. Continuation phase	☐ Ongoing → SKIP to #16 ☐ Completed (fill below)
13. End Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy)
14. **Continuation phase: how many doses did the patient take by…**	
a. In-Person DOT with a healthcare worker?	|__|__|__| doses
b. In-Person DOT with a community health worker?	|__|__|__| doses
c. In-Person DOT with a family member or other trusted person?	|__|__|__| doses
d. Virtual DOT?	|__|__|__| doses
e. Telephone DOT?	|__|__|__| doses
f. without being observed? *(e.g., doses administered without DOT, for example weekends, holidays and or treatment days before recruitment in the study)*	|__|__|__| doses
15. How many doses has the participant missed in the continuation phase?	|__|__|__| doses
16. Has the participant interrupted the continuation phase of TB treatment by any reason?	☐ Yes (report on **TB Treatment** form) ☐ No

Investigator: _____ Signature: _____ Date |__|__| / |__|__| / |__|__|__|__|

ID Number _____

[22] Antiretroviral Therapy (ART) for HIV
(REDCap Flowchart Form)

IeDEA/TB SRN ID	

Visit	Date (dd/mm/yyyy)	Visit	Date (dd/mm/yyyy)
☐ Baseline	|__|__| / |__|__| / |__|__|__|__|	☐ 6-M Post-Tx	|__|__| / |__|__| / |__|__|__|__|
☐ Month 1	|__|__| / |__|__| / |__|__|__|__|	☐ 12-M Post-Tx	|__|__| / |__|__| / |__|__|__|__|
☐ Month 2	|__|__| / |__|__| / |__|__|__|__|	☐ Tx F/R/W	|__|__| / |__|__| / |__|__|__|__|
☐ End of Tx	|__|__| / |__|__| / |__|__|__|__|		

HIV Drug 1	
1. Antiretroviral (ARV) 1 *(Select one)*	☐ abacavir (ABC) ☐ atazanavir (ATV) ☐ darunavir (DRV) ☐ didanosine (ddI) ☐ dolutegravir (DTG) ☐ efavirenz (EFV) ☐ enfuvirtide (ENF) ☐ emtricitabine (FTC) ☐ etravirine (ETR) ☐ lamivudine (3TC) ☐ lopinavir/ritonavir (LPV/r) ☐ maraviroc (MVC) ☐ nevirapine (NVP) ☐ raltegravir (RAL) ☐ ritonavir (RTV) ☐ stavudine (d4T) ☐ tenofovir alafenamide (TAF) ☐ tenofovir disoproxil fumarate (TDF) ☐ tipranavir (TPV) ☐ zidovudine (AZT/ZDV) ☐ Other: _____
1a. Drug is part of a fixed-dose combination	☐ Yes ☐ No
1b. How many times a day is this medication prescribed?	|__|__|__|
1c. How many days a week is this medication prescribed?	|__|__|__|
1d. Start Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy) ☐ Unknown
1e. Stop Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy) ☐ Ongoing *(Return to update stop date if changed)* ☐ Unknown
1f. Reason for change or interruption	☐ Drug resistance

	☐ Drug interaction ☐ Pregnancy ☐ Side effects or toxicity ☐ Compatibility with TB drugs ☐ Participant stopped taking meds ☐ Lost to follow up ☐ Death ☐ Other _____ ☐ Unknown
HIV Drug 2	
2. ARV 2 *(Select one)*	☐ abacavir (ABC) ☐ atazanavir (ATV) ☐ darunavir (DRV) ☐ didanosine (ddI) ☐ dolutegravir (DTG) ☐ efavirenz (EFV) ☐ enfuvirtide (ENF) ☐ emtricitabine (FTC) ☐ etravirine (ETR) ☐ lamivudine (3TC) ☐ lopinavir/ritonavir (LPV/r) ☐ maraviroc (MVC) ☐ nevirapine (NVP) ☐ raltegravir (RAL) ☐ ritonavir (RTV) ☐ stavudine (d4T) ☐ tenofovir alafenamide (TAF) ☐ tenofovir disoproxil fumarate (TDF) ☐ tipranavir (TPV) ☐ zidovudine (AZT/ZDV) ☐ Other: _____
2a. Drug is part of a fixed-dose combination	☐ Yes ☐ No
2b. How many times a day is this medication prescribed?	|__|__|__|
2c. How many days a week is this medication prescribed?	|__|__|__|
2d. Start Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy) ☐ Unknown
2e. Stop Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy) ☐ Ongoing *(Return to update stop date if changed)* ☐ Unknown
2f. Reason for change or interruption	☐ Drug resistance ☐ Drug interaction ☐ Pregnancy ☐ Side effects or toxicity ☐ Compatibility with TB drugs ☐ Participant stopped taking meds ☐ Lost to follow up ☐ Death

	☐ Participant removed from study ☐ Other _____ ☐ Unknown
HIV Drug 3	
3. ARV 3 *(Select one)*	☐ abacavir (ABC) ☐ atazanavir (ATV) ☐ darunavir (DRV) ☐ didanosine (ddI) ☐ dolutegravir (DTG) ☐ efavirenz (EFV) ☐ enfuvirtide (ENF) ☐ emtricitabine (FTC) ☐ etravirine (ETR) ☐ lamivudine (3TC) ☐ lopinavir/ritonavir (LPV/r) ☐ maraviroc (MVC) ☐ nevirapine (NVP) ☐ raltegravir (RAL) ☐ ritonavir (RTV) ☐ stavudine (d4T) ☐ tenofovir alafenamide (TAF) ☐ tenofovir disoproxil fumarate (TDF) ☐ tipranavir (TPV) ☐ zidovudine (AZT/ZDV) ☐ Other: _____
3a. Drug is part of a fixed-dose combination	☐ Yes ☐ No
3b. How many times a day is this medication prescribed?	|__|__|__|
3c. How many days a week is this medication prescribed?	|__|__|__|
3d. Start Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy) ☐ Unknown
3e. Stop Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy) ☐ Ongoing *(Return to update stop date if changed)* ☐ Unknown
3f. Reason for change or interruption	☐ Drug resistance ☐ Drug interaction ☐ Pregnancy ☐ Side effects or toxicity ☐ Compatibility with TB drugs ☐ Participant stopped taking meds ☐ Lost to follow up ☐ Death ☐ Participant removed from study ☐ Other _____ ☐ Unknown

HIV Drug 4	
4. ARV 4 *(Select one)*	☐ abacavir (ABC) ☐ atazanavir (ATV) ☐ darunavir (DRV) ☐ didanosine (ddI) ☐ dolutegravir (DTG) ☐ efavirenz (EFV) ☐ enfuvirtide (ENF) ☐ emtricitabine (FTC) ☐ etravirine (ETR) ☐ lamivudine (3TC) ☐ lopinavir/ritonavir (LPV/r) ☐ maraviroc (MVC) ☐ nevirapine (NVP) ☐ raltegravir (RAL) ☐ ritonavir (RTV) ☐ stavudine (d4T) ☐ tenofovir alafenamide (TAF) ☐ tenofovir disoproxil fumarate (TDF) ☐ tipranavir (TPV) ☐ zidovudine (AZT/ZDV) ☐ Other: _____
4a. Drug is part of a fixed-dose combination	☐ Yes ☐ No
4b. How many times a day is this medication prescribed?	|__|__|__|
4c. How many days a week is this medication prescribed?	|__|__|__|
4d. Start Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy) ☐ Unknown
4e. Stop Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy) ☐ Ongoing *(Return to update stop date if changed)* ☐ Unknown
4f. Reason for change or interruption	☐ Drug resistance ☐ Drug interaction ☐ Pregnancy ☐ Side effects or toxicity ☐ Compatibility with TB drugs ☐ Participant stopped taking meds ☐ Lost to follow up ☐ Death ☐ Participant removed from study ☐ Other _____ ☐ Unknown

HIV Drug 5	
5. ARV 5 *(Select one)*	☐ abacavir (ABC) ☐ atazanavir (ATV) ☐ darunavir (DRV) ☐ didanosine (ddI) ☐ dolutegravir (DTG) ☐ efavirenz (EFV) ☐ enfuvirtide (ENF) ☐ emtricitabine (FTC) ☐ etravirine (ETR) ☐ lamivudine (3TC) ☐ lopinavir/ritonavir (LPV/r) ☐ maraviroc (MVC) ☐ nevirapine (NVP) ☐ raltegravir (RAL) ☐ ritonavir (RTV) ☐ stavudine (d4T) ☐ tenofovir alafenamide (TAF) ☐ tenofovir disoproxil fumarate (TDF) ☐ tipranavir (TPV) ☐ zidovudine (AZT/ZDV) ☐ Other: _____
5a. Drug is part of a fixed-dose combination	☐ Yes ☐ No
5b. How many times a day is this medication prescribed?	|__|__|__|
5c. How many days a week is this medication prescribed?	|__|__|__|
5d. Start Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy) ☐ Unknown
5e. Stop Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy) ☐ Ongoing *(Return to update stop date if changed)* ☐ Unknown
5f. Reason for change or interruption	☐ Drug resistance ☐ Drug interaction ☐ Pregnancy ☐ Side effects or toxicity ☐ Compatibility with TB drugs ☐ Participant stopped taking meds ☐ Lost to follow up ☐ Death ☐ Participant removed from study ☐ Other _____ ☐ Unknown

HIV Drug 6	
6. ARV 6 *(Select one)*	☐ abacavir (ABC) ☐ atazanavir (ATV) ☐ darunavir (DRV) ☐ didanosine (ddI) ☐ dolutegravir (DTG) ☐ efavirenz (EFV) ☐ enfuvirtide (ENF) ☐ emtricitabine (FTC) ☐ etravirine (ETR) ☐ lamivudine (3TC) ☐ lopinavir/ritonavir (LPV/r) ☐ maraviroc (MVC) ☐ nevirapine (NVP) ☐ raltegravir (RAL) ☐ ritonavir (RTV) ☐ stavudine (d4T) ☐ tenofovir alafenamide (TAF) ☐ tenofovir disoproxil fumarate (TDF) ☐ tipranavir (TPV) ☐ zidovudine (AZT/ZDV) ☐ Other: _____
6a. Drug is part of a fixed-dose combination	☐ Yes ☐ No
6b. How many times a day is this medication prescribed?	|__|__|__|
6c. How many days a week is this medication prescribed?	|__|__|__|
6d. Start Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy) ☐ Unknown
6e. Stop Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy) ☐ Ongoing *(Return to update stop date if changed)* ☐ Unknown
6f. Reason for change or interruption	☐ Drug resistance ☐ Drug interaction ☐ Pregnancy ☐ Side effects or toxicity ☐ Compatibility with TB drugs ☐ Participant stopped taking meds ☐ Lost to follow up ☐ Death ☐ Participant removed from study ☐ Other _____ ☐ Unknown

HIV Drug 7	
7. ARV 7 *(Select one)*	☐ abacavir (ABC) ☐ atazanavir (ATV) ☐ darunavir (DRV) ☐ didanosine (ddI) ☐ dolutegravir (DTG) ☐ efavirenz (EFV) ☐ enfuvirtide (ENF) ☐ emtricitabine (FTC) ☐ etravirine (ETR) ☐ lamivudine (3TC) ☐ lopinavir/ritonavir (LPV/r) ☐ maraviroc (MVC) ☐ nevirapine (NVP) ☐ raltegravir (RAL) ☐ ritonavir (RTV) ☐ stavudine (d4T) ☐ tenofovir alafenamide (TAF) ☐ tenofovir disoproxil fumarate (TDF) ☐ tipranavir (TPV) ☐ zidovudine (AZT/ZDV) ☐ Other: _____
7a. Drug is part of a fixed-dose combination	☐ Yes ☐ No
7b. How many times a day is this medication prescribed?	|__|__|__|
7c. How many days a week is this medication prescribed?	|__|__|__|
7d. Start Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy) ☐ Unknown
7e. Stop Date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy) ☐ Ongoing *(Return to update stop date if changed)* ☐ Unknown
7f. Reason for change or interruption	☐ Drug resistance ☐ Drug interaction ☐ Pregnancy ☐ Side effects or toxicity ☐ Compatibility with TB drugs ☐ Participant stopped taking meds ☐ Lost to follow up ☐ Death ☐ Participant removed from study ☐ Other _____ ☐ Unknown

Investigator: _____ Signature: _____ Date |__|__| / |__|__| / |__|__|__|__|

Note – in the case of adolescents younger than age 18: assess adolescent disclosure status before proceeding. Follow procedures for avoiding accidental disclosure to adolescents.

[23] ANTIRETROVIRAL TREATMENT ADHERENCE	
IeDEA/TB SRN ID	
Visit	☐ Baseline ☐ Month 1 ☐ Month 2 ☐ End of Tx ☐ 6-M Post-Tx ☐ 12-M Post-Tx ☐ Tx F/R/W
Visit date (dd/mm/yyyy)	|__|__|/|__|__|/|__|__|__|__|
Adherence questions	
1. Any dose of ART missed in the last 4 days	☐ Yes ☐ No ☐ Unknown
2. If yes, number of ART doses missed in the last 4 days	|__|__|
3. Any dose of ART missed in the last 30 days?	☐ Yes ☐ No ☐ Unknown
Pill count for ART drugs	
4. Date of last ART refill *(dd/mm/yyyy)*	|__|__|/|__|__|/|__|__|__|__| ☐ Unknown
5. Expected number of tablets taken daily for ART since last refill	|__|__| ☐ Unknown
6. Number of tablets at last refill (tablets given + tablets patient already had)	|__|__|__| ☐ Unknown
7. Number of tablets brought back	|__|__|__| ☐ Unknown
8. Description of any adherence challenges for ART regimen *(Check all that apply)*	☐ Forgetting dose(s) ☐ Difficulty tolerating medication(s) / side effects ☐ Unable to take medication(s) while feeling ill or unwell ☐ Unable to take medication(s) due to not having food ☐ Did not have privacy / unable to take medication(s) while around others ☐ Not willing to take medication(s) ☐ Did not have medication(s) with me at the time for dose ☐ Did not have a sufficient supply of medication(s) ☐ Medication(s) have not been available from pharmacy (e.g., stock-out) ☐ Other (specify) _____ ☐ Unknown ☐ Decline to answer

Investigator: _____ Signature: _____ Date: |__|__| / |__|__| / |__|__|__|__|

ID Number: _____

[24] OTHER RESEARCH	
IeDEA/TB SRN ID	
Type of visit	☐ Baseline
Visit date *(dd/mm/yyyy)*	|__|__|/|__|__|/|__|__|__|__|
Complete only for participants enrolled in other research:	
1. Name or short description of the other study	…… …… ……
2. Does the other research include a medical intervention?	☐ Yes ☐ No ☐ Unknown
2a. If yes, specify medical interventions in each research study for which the individual is co-enrolled.	…… …… …… ……
3. Does the other research include a care support intervention?	☐ Yes ☐ No ☐ Unknown
3a. If yes, specify care support interventions in each research study for which the individual is co-enrolled.	…… …… …… …… ……
4. Any other support or service provided by the other research?	☐ Yes ☐ No ☐ Unknown
4a. If yes, specify other support or service provided in each research study for which the individual is co-enrolled.	…… …… …… …… ……

Investigator: _____ Signature: _____ Date |__|__|/|__|__|/|__|__|__|__|

ID Number _____ Other Research Page 1 of 1
v1.0 26Jul2022

[25] Adverse Event Form Complete one form for each adverse event (AE)	
IeDEA/TB SRN ID	
Visit	☐ Month 1 ☐ Month 2 ☐ End of Tx ☐ Tx F/R/W
1. Has an Adverse Event been noted for this participant?	☐ Yes (if yes, fill below) ☐ No ☐ Unknown
2. Form completion date	|__|__|/|__|__|/|__|__|__|__| (dd/mm/yyyy)
3. Event brief description (signs, symptoms, syndrome)	
4. Start date *(dd/mm/yyyy)*	|__|__|/|__|__|/|__|__|__|__|
5. Resolved	☐ Yes ☐ No, ongoing ☐ No, deceased or lost-to-follow up before resolution
5a. If yes, end date / resolution *(dd/mm/yyyy)*	|__|__|/|__|__|/|__|__|__|__|
6. Type of AE *(check all that apply)*	☐ Dermatologic system (e.g., rash) ☐ Hepatic system (e.g., Drug Induced Liver Injury) ☐ Nervous system ☐ Other: _____
7. Summary of this AE	
8. Severity grading (DAIDS)	☐ 1 (mild) ☐ 2 (moderate) ☐ 3 (severe) ☐ 4 (life-threatening)
9. Adverse drug reaction related to TB Tx	☐ Related / Defined ☐ Unlikely / Doubtful ☐ Likely ☐ Not related ☐ Possible ☐ Not applicable
10. Adverse drug reaction related to ARVs (if positive for HIV)	☐ Related / Defined ☐ Unlikely / Doubtful ☐ Likely ☐ Not related ☐ Possible ☐ Not applicable
11. Final diagnosis	
Notes (optional)	

Investigator: _____ Signature: _____ Date |__|__| / |__|__| / |__|__|__|__|

ID Number _____

[26] TB IRIS	
leDEA/TB SRN ID	
Visit	☐ Month 1 ☐ Month 2
Form completion date *(dd/mm/yyyy)*	|__|__|/|__|__|/|__|__|__|__|
IRIS/paradoxical reaction	
1. Suspicion of IRIS/paradoxical reaction *(New/worsened lymphadenopathy, or respiratory, abdominal, or neurological TB symptoms)*	☐ Yes (if yes, fill IRIS section below) ☐ No (END of form)
2. Date of IRIS suspicion *(dd/mm/yyyy)*	|__|__|/|__|__|/|__|__|__|__|
3. Fever (as of date of IRIS suspicion)	☐ Yes new (since previous visit) ☐ Yes worsened (from previous visit) ☐ Yes unchanged (from previous visit) ☐ No
4. Peripheral lymphadenopathies (as of date of IRIS suspicion)	☐ Yes new (since previous visit) ☐ Yes worsened (from previous visit) ☐ Yes unchanged (from previous visit) ☐ No (SKIP to #5)
4a. If yes, clinical aspect *(Check one)*	☐ Swollen ☐ Inflammatory ☐ Suppurative ☐ Necrotic
4b. If yes, location *(Check all that apply)*	☐ Cervical ☐ Axillary ☐ Inguinal ☐ Other
5. Abdominal pain *(as of date of IRIS suspicion)*	☐ Yes new (since previous visit) ☐ Yes worsened (from previous visit) ☐ Yes unchanged (from previous visit) ☐ No
6. Central nervous system disorders *(as of date of IRIS suspicion)*	☐ Yes new (since previous visit) ☐ Yes worsened (from previous visit) ☐ Yes unchanged (from previous visit) ☐ No (SKIP to #7)
6a. If yes, type of symptoms	☐ Coma ☐ Meningitis ☐ Hemiplegia

	☐ Hemiparesis ☐ Other: ……..
7. Respiratory symptoms (e.g., cough, dyspnea, stridor) *(as of date of IRIS suspicion)*	☐ Yes new (since previous visit) ☐ Yes worsened (from previous visit) ☐ Yes unchanged (from previous visit) ☐ No
8. Chest X-ray abnormalities *(If chest x-ray done, fill **CXR Form**)*	☐ Yes new (since previous visit) ☐ Yes worsened (from previous visit) ☐ Yes unchanged (from previous visit) ☐ No ☐ CXR not performed
9. Abdominal Ultrasound abnormalities	☐ Yes ☐ No ☐ Ultrasound not performed (SKIP to #10)
9a. Date of abdominal ultrasound *(dd/mm/yyyy)*	|__|__|/|__|__|/|__|__|__|__|
9b. If yes to abnormalities, abdominal ultrasound findings *(Check all that apply)*	☐ Abdominal adenopathy ☐ Pleural effusion ☐ Peritoneal effusion ☐ Other ……
10. CT scan abnormalities	☐ Yes ☐ No ☐ CT scan not performed (SKIP to #11)
10a. Type of CT scan *(Check all that apply)*	☐ Abdominal ☐ Cerebral ☐ Thoracic
10b. Date of CT scan *(dd/mm/yyyy)*	|__|__|/|__|__|/|__|__|__|__|
10c. If yes to abnormalities, CT abnormalities *(Check all that apply)*	☐ Abdominal adenopathy ☐ Mediastinal adenopathy ☐ Pulmonary infiltrates ☐ Pleural effusion ☐ Peritoneal effusion ☐ Brain mass ☐ Other ……
11. Treatment for IRIS initiated	☐ NSAID ☐ Steroids ☐ None
12. Date of initiation of treatment for IRIS *(dd/mm/yyyy)*	|__|__|/|__|__|/|__|__|__|__|

Investigator: _____ Signature: _____ Date |__|__| / |__|__| / |__|__|__|__|

ID Number: _____

[27] TREATMENT OUTCOMES	
IeDEA/TB SRN ID	
Visit	☐ End of Tx ☐ Tx F/R/W
TB treatment outcome	
1. Duration of intensive phase *(Report dates and Tx received in TB Tx form)*	☐ 2 months (standard intensive phase for DS-TB) ☐ Other duration, specify: |__|__|.|__| months
2. Duration of maintenance phase *(Report dates and Tx received in TB Tx form)*	☐ 4 months (standard maintenance phase for DS-TB) ☐ Other duration, specify: |__|__|.|__| months
3. Suspicion of treatment failure	☐ Yes → Complete **Tx F/R/W Visit** (and associated forms) ☐ No (SKIP TO #7)
4. Date of clinical suspicion *(dd/mm/yyyy; as documented in TB clinic record)*	|__|__|/|__|__|/|__|__|__|__|
5. Additional microbiological testing requested by clinician	☐ Yes (report results in **TB Microbiology** form) ☐ No
6. Additional chest X-ray requested	☐ Yes (report results in **Chest X-ray** form) ☐ No
TB Tx Outcome at Study Site	
7. TB treatment outcomes *(based on WHO/IUATLD definitions)*	☐ Cured ☐ Treatment completed ☐ Treatment failed ☐ Died (any cause) ☐ Lost to follow-up ☐ Transferred out from study site → *Complete **Outcome from transfer site**, below* ☐ Not known
8. Date of TB treatment outcome *from study site*	|__|__|/|__|__|/|__|__|__|__| *(dd/mm/yyyy)*
TB Tx Outcome obtained from transfer site	***ONLY to be completed for participants who transferred out from the study site – outcome based on follow-up with transfer site***
9. Name of site where transferred out	……..
10. Outcome of treatment after transfer-out *(reported by outside facility; based on WHO/IUATLD definitions)*	☐ Never in care at other site / did not complete transfer ☐ Unable to obtain outcome from other site ☐ Cured ☐ Treatment completed ☐ Treatment failed ☐ Died (any cause) ☐ Lost to follow-up ☐ Transferred out to additional site ☐ Not known (unknown to other site)
11. Date of outcome after transfer	|__|__|/|__|__|/|__|__|__|__| *(dd/mm/yyyy)*

Investigator: _____ Signature: _____ Date |__|__| / |__|__| / |__|__|__|__|

ID Number _____

[28] DEATH	
IeDEA/TB SRN ID	
1. Date of death *(dd/mm/yyyy)*	|__|__| / |__|__| / |__|__|__|__|
2. Place of death	☐ Home ☐ Hospital ☐ Other, specify …… ☐ Unknown
3. Sudden death	☐ Yes ☐ No ☐ Unknown
4. Death unexpected	☐ Yes ☐ No ☐ Unknown
5. Brief narrative description of the sequence of events leading to death (please include means of diagnosis of illnesses):	…… …… …… …… …… …… ……
Cause of death (Summary of the causal relation between the conditions leading to death)	
6. Condition that directly caused death (immediate cause):	……
6a. Due to or as a consequence of	……
6b. Due to or as a consequence of	……
7. Condition that initiated the train of morbid events (the underlying condition)	……
8. Death considered to be related to TB as a contributing factor to the death	☐ Related/Defined ☐ Likely ☐ Possible ☐ Unlikely/Doubtful ☐ Not related ☐ Not applicable
9. Death considered to be related to a medical treatment	☐ Related/Defined ☐ Likely ☐ Possible ☐ Unlikely/Doubtful ☐ Not related ☐ Not applicable

9a. If yes, suspicion of relation to	☐ Antiretroviral treatment ☐ Antituberculosis treatment ☐ Other medical treatment, specify……
9b. Brief narrative of the suspected association including the name of the medication	…… …… ……
10. Information on circumstance of death collected from *(Check all that apply)*	☐ Family member ☐ Clinician ☐ Hospital medical record ☐ Outpatient medical record ☐ Death register ☐ Autopsy report ☐ Other, specify …… ☐ Unknown
11. Date death reported to/known to study *(dd/mm/yyyy)*	|__|__| / |__|__| / |__|__|__|__|
12. Notes (optional)	…… …… …… …… …… ……

Investigator: _____ Signature: _____ Date |__|__| / |__|__| / |__|__|__|__|

IeDEA/TB SRN Form Event Grid

Form / Visit	Treatment Phase				Follow-up Phase			
	SCREENING	BASELINE	MONTH 1 (Weeks 3-7)	MONTH 2 (Weeks 8-12)	End of TX (-4 to +6 wks)	6-M POST-TX (-4 to +6 wks)	12-M POST-TX (-4 to +6 wks)	TX F/R/W
Informed consent form[a]	X							
Assent form *(if applicable)*	X							
1. Inclusion *(eligibility assessment)*		X						
2. Demographics		X						
3. Adolescent and young adult characteristics[b] *(if applicable)*		X						
4. TB history and current diagnosis		X						X
5. Medical history		X						
6. HIV history[c]		X						
7. Pregnancy and post-partum history[d] *(female participants only)*		X			X	X	X	X
8. Pregnancy and Infant outcomes *(multiple copies, flowsheet, if applicable)*		X			X	X	X	X
9. Visit and clinical evaluation		X	X	X	X	X	X	X
10. ASSIST		X			X		X	X
11. Additional smoking history		X			X		X	X
12. SGRQ		X			X	X	X	X
13. PHQ-9		X			X		X	X
14. Spirometry				X	X	X		
15. 1-minute sit-to-stand test[e]		X		X	X	X	X	
16. TB microbiology[f]		X	X	X	X			X
17. Other labs[f,g,h,i]		X	X	X	X	X	X	X
18. Chest x-ray results[j] *(baseline and End of TX for study. Other forms are data collection only.)*		X	X	X	X	X	X	X
19. TB treatment *(flowsheet)*		X	X	X	X			X
20. TB treatment adherence			X	X	X			X
21. TB directly observed therapy			X	X	X			X
22. Antiretroviral treatment[c] *(flowsheet)*		X	X	X	X	X	X	X
23. ART adherence[c]		X	X	X	X	X	X	X
24. Other research		X						
25. Adverse event form *(repeatable)*			X	X	X			X
26. TB IRIS			X	X				
27. Treatment outcome					X			X
28. Death form[k] *(if applicable, once)*								

Screening and Baseline visits may be combined. Month 1 visit is optional. Tx F/R/W: Treatment Failure, Relapse, or Withdrawal.

[a] Adolescent minors who turn 18 years of age during the study will be re-consented on the first visit after turning age 18.
[b] For all adolescent and young adult participants ages 15-24 on enrollment.
[c] For participants with documented HIV infection.
[d] For all female participants.
[e] Performed if site is participating in the PTLD study aim.
[f] HIV viral load (if applicable), CBC, transaminases, TB testing and microbiology data to be collected if available from routine data and not as part of the study.
[g] HIV testing of participants not known to be positive collected from routine data and not as part of the study.
[h] CD4 count will only be performed on participants who are HIV-positive and who have not had a CD4 count performed in the preceding 3 months.
[I] HbA1C and random blood glucose collected if not available from routine data as part of the study.
[j] Digitized/digitizable CXR at baseline, unless done within 4 weeks prior to the Baseline Visit as part of standard of care. If a CXR is not available at the End of Treatment, it will be obtained as part of the study. CXRs from Month 2 and TX F/R/W Visits will be collected if obtained as part of standard of care. Pregnant women are not required to have a CXR.
[k] To be completed for any participants who die after study enrollment, from any cause.