RE-IMAGINING TB CARE
Transforming *when*, *where*, and *how* healthcare services
are accessed and delivered

BACKGROUND PAPER

A. Introduction

The Re-imagining TB Care (RTC) initiative was originally conceptualized at the first TB Innovation Summit, which was co-organized by the Stop TB Partnership, Johnson & Johnson, United Nations Foundation, Global Fund to Fight AIDS, Tuberculosis and Malaria ("Global Fund"), and the World Economic Forum, in advance of the first United Nations High-Level Meeting (UNHLM) on tuberculosis (TB) in September 2018. Please see https://www.youtube.com/watch?v=7isfwwgfVFc and https://www.stoptb.org/news/global-health-and-business-leaders-pledge-major-commitments-to-end-tuberculosis for additional information.

A broad spectrum of in-country and global stakeholders and partners, including Ministries of Health, country programmes, care providers (i.e., public and private, community health workers, etc.), and TB affected people and communities, including TB survivors, came together to discuss the need to **modernize our thinking and approach in terms of how healthcare services are accessed and delivered in TB affected countries[1]** and the critical role that innovations, particularly digital health technologies (DTx), can play to catalyze integrated, differentiated, and people-centered care and bring services closer to where the TB affected people and communities are taking into consideration their behaviors, daily routines (i.e., live, work, etc.), and preferences.

Since then, four consultations and multiple bi-lateral discussions have been organized to further define, pressure test, and sharpen the RTC initiative's mission, goals, objectives, activities, outputs, and outcomes. The list of consultations can be found at the below table and, in total, over 150 attendees, have participated in these discussions.

RTC Initiative's Consultation List		
Date	**Event Name**	**Country**
January 2019	1st Consultation (Stop TB Partnership's 31st Board Meeting)	Switzerland
May 2019	2nd Consultation (73rd World Health Assembly)	Switzerland
October 2019	Human Centered Design Workshop/3rd Consultation (50th Union Conference on Lung Health)	India
September 2020	4th Consultation	Virtual

In addition to the above-mentioned consultations and bi-lateral discussions, while the Stop TB Partnership and its various teams and initiatives, including the Country & Community Support for Impact (CCS4I) team, TB REACH, Global Drug Facility (GDF), and the DHT Hub have been at the forefront of rolling-out (i.e., introduction, adoption, and scale-up) innovations, particularly DTx (some even prior to the COVID-19 pandemic), the External Affairs & Strategic Initiatives (EASI) team believed it was crucial for the organization to have a **clear understanding of the vibrant DTx ecosystem in global health across the public and private sector** to strengthen the RTC initiative's value proposition and increase its

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[1] https://www.stoptb.org/securing-quality-tb-care-all/high-burden-countries-tuberculosis

potential impact. The team, therefore, undertook a landscaping exercise of DTx initiatives and projects across various companies and organizations to:

- Assess the current status quo of global DTx initiatives and projects, including key actors, missions, objectives, activities, innovations, common trends, etc.;
- Establish whether the RTC initiative's mission, goal, objectives, activities, outputs, and outcomes are an unmet need; and
- Identify the most promising global partners, with complementary knowledge and expertise that could be engaged in the RTC initiative's activities.

The summary of this exercise can be found here.

B. Challenges and opportunities

Global funding for sector-wide approaches and health systems strengthening was approximately US$ 25.4 billion from 2016-2020.[2] Despite these investments, COVID-19 has shown that current health systems, including in low- and middle-income countries (LMICs) and emerging markets, many of which are TB affected countries, are:

- **Vulnerable** (disruption to essential services);
- **Outdated** (use of legacy approaches and innovations);
- **Inequitable** (not all people and communities, particularly the most marginalized, can access care); and
- **Unsustainable** (unable to meet the evolving needs of the population).

The Stop TB Partnership shared new data in March 2021 showing that nine of the countries with the most TB cases – representing 60% of the global TB burden – saw a drastic decline in diagnosis and treatment of TB infections in 2020, ranging from 16%-41% (with an average of 23%).[3] Essentially, the **drop brought the overall number of people diagnosed and treated for TB in those countries to 2008 levels, a setback of 12 years**.

One of the significant paradigm shifts due to COVID-19 has been the **increased need to access and deliver healthcare services near people's neighborhoods and homes** due to various restrictions, including lockdown measures, strained health systems and hospitals, quarantine requirements, etc. As such, particularly in TB affected countries, Ministries of Health, country programmes, care providers, and TB affected people and communities had to identify and rely on new and alternative ways, particularly by leveraging DTx, to safely and effectively access and deliver healthcare services. For example, digital adherence technologies (DATs) have allowed care providers the ability to deliver remote treatment support to TB affected people and communities in their homes during the pandemic.

This type of paradigm shift in terms of when, where, and how healthcare services are accessed and delivered has led to a growing consensus that the future of healthcare, including in TB and across communicable and non-communicable diseases, **need to go beyond the traditional "brick and mortar" infrastructure**, such as facility- and clinic-level and closer to people's neighborhoods and/or homes.

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[2]Institute for Health Metrics and Evaluation (IHME). **Financing Global Health Visualization**. Seattle, WA: IHME, University of Washington, 2021. Available from http://vizhub.healthdata.org/fgh/. (Accessed January 26, 2022)
[3]https://www.stoptb.org/news/12-months-of-covid-19-eliminated-12-years-of-progress-global-fight-against-tuberculosis

C. Guiding principles

In order to provide clear direction and effectively execute the RTC initiative's activities, including to make directionally appropriate decisions more quickly and with greater autonomy, five core values have been developed. They include:

- Driven by the **"hopes and dreams"** and **"needs and wants"** identified by key in-country stakeholders, partners, and end-users (i.e., they will select the appropriate interventions/applicable innovations from the beginning);
- Take a **multi-disease and a platform approach** in how healthcare services are accessed and delivered, particularly since many innovations, including DTx, will have applicability for TB, TB co-morbidities (i.e., HIV, diabetes, etc.) and other respiratory-based illnesses (i.e., COVID-19, lung cancer, etc.);
- Ensure processes and activities are **equitable, inclusive, and gender-responsive** and help to reduce critical barriers for TB affected people and communities, particularly the most marginalized;
- Facilitate **South-to-South collaboration** between key in-country stakeholders, partners, and end-users; and
- Coordinate and collaborate with a broad spectrum of key in-country and global stakeholders, partners, and end-users to **avoid duplications and maximize synergies**.

D. Mission, goals, and objectives

The RTC initiative aims to **transform *when*, *where*, and *how* healthcare services are accessed and delivered** for TB, TB co-morbidities, and other respiratory-based illnesses in TB affected countries. In short, how do we **make it as convenient and easy as possible** for TB affected people and communities to receive care? To achieve this mission, the three primary, interlinked goals and objectives will be to:

Goal 1: **Catalyze neighborhood-/home-based care** for TB, TB co-morbidities, and other respiratory based illnesses in a small co-hort of TB affected countries.
- Objective 1: Conduct iterative human centered design (HCD) workshops with a core group of key in-country stakeholders, partners, and end-users to:
  - Identify which appropriate healthcare services across the care model (from prevention to post-treatment care) can and should move from facility-/clinic-level to neighborhood/home-based care;
  - Prioritize which types of innovations, particularly DTx, can facilitate and augment appropriate healthcare services moving from facility-/clinic-level to neighborhood/home-based care; and
  - Identify how to increase the credibility for and awareness of the value of moving appropriate healthcare services from facility-/clinic-level to neighborhood-/home-based care.

Goal 2 (Accelerator for Impact (a4i)): **Accelerate the sustainable roll-out of innovations, particularly DTx, that will facilitate and augment neighborhood-/home-based case** for TB, TB co-morbidities, and other respiratory based illnesses in a small co-hort of TB affected countries.
- Objective 1: Support a core group of key in-country stakeholders, partners, and end-users with the sourcing, screening, selection, and/or prioritization of potential and relevant innovations.
- Objective 2: Support a core group of key in-country stakeholders, partners, and end-users the development of and/or update to country-specific, structured innovation roll-out pathways (i.e., critical stages, activities, in-country and global actors, including costs and timeline, etc.) that is

mapped, endorsed, and published.
- Objective 3: Support a core group of key in-country stakeholders, partners, and end-users roll-out country selected and prioritized innovations.
- Objective 4: Integrate a blended-finance, venture capital approach and financing model to unlock new funding and investment from the public and private sector to support additional TB affected countries and future innovations.

Goal 3: **Enhance and optimize existing electronic health records (EHR) and information management systems** for TB, TB co-morbidities, and other respiratory based illnesses in a small co-hort of TB affected countries.
- Objective 1: Automate, connect (i.e., integrate and make interoperable), and link RTC/a4i supported innovations, particularly DTx, into a country's EHR and other information management systems.

E. Current achievements

In partnership with the [McGill International TB Centre](#), **four "re-imagined", people-centered TB care models were conceptualized**, including for active TB, latent TB, childhood TB, and TB/HIV, against currently available TB innovations, particularly DTx, to **identify barriers and gaps in services and innovations.** Please see https://www.reimaginingtbcare.org/re-imagined-tb-care/.

A **high-level HCD workshop**, in partnership with https://www.ideo.org/, was organized in advance of the 50th Union Conference on Lung Health in October 2019 in Hyderabad, India to **build empathy for TB affected people's and communities' perspectives and experiences in accessing services across the TB care model**.

In partnership with [The Arcady Group](#), a **landscape analysis of currently available TB innovations, particularly DTx**, and ones coming down the pipeline across the TB care model were conducted. Please see https://www.reimaginingtbcare.org/digital-health-tool-kit/.

In partnership with the Bamenda Center for Health Promotion and Research in Cameroon and TB REACH, the "**Sandbox Network**" was launched. This network will consist of a diverse range of in-country partners, including non-governmental organizations (NGOs), research organizations, etc., to **conduct a rapid evaluation of innovations, particularly DTx,** for TB, TB co-morbidities, and other respiratory-based illnesses within a three to six month period to preliminarily assess these solutions on their accuracy, ease of use, and other characteristics.

The Stop TB Partnership signed a **partnership agreement** with [Bamboo Capital Partners](#) to **deploy blended finance investments** in TB affected countries. Please see https://www.stoptb.org/news/stop-tb-partnership-and-bamboo-capital-partners-to-re-imagine-tb-care-deploying-blended-finance.

F. Future activities

With initial support from the United States Center for Disease Control and Prevention (US CDC) and additional funding from the Korea International Cooperation Agency (KOICA), the EASI team will further implement the RTC initiative's activities in **Uganda** and **Vietnam** in 2022. All activities will be implemented with the **agreement and support of the Ministries of Health and country programmes**.

The RTC initiative will be partnering with additional **commercial private equity firms and impact investment funds** to **provide fit-for-purpose capital** to innovators developing innovations, particularly

DTx, for TB, TB co-morbidities, and other respiratory-based illnesses for TB affected countries.

As part of the RTC initiative, the EASI team will convene an informal **RTC Design Group**, which will be primarily composed of key in-country and global stakeholders, partners, and end-users that have and/or are participating or invested in the initiative by Quarter 3/2022. This group will **provide overall, independent strategic guidance** on the RTC initiative and its implementation. The RTC Design Group will meet bi-annually.

G. Acknowledgments

In addition to highlighting how the conceptualization and implementation of the RTC initiative has been a collaborative effort with key in-country and global stakeholders, partners, and end-users and across the various constituencies, teams, and initiatives at the Stop TB Partnership, the EASI team would like to acknowledge **USAID**'s overall funding to the organization and catalytic funding from **US CDC**, which contributed to the development and initial implementation of the initiative. The team would also like to recognize the additional funding from **KOICA**, particularly related to a4i and its goal and objectives.