NTD Data Innovation Incubator

Contents

Grand Challenges

That's the idea behind Grand Challenges—to focus bright scientists on the problems of the poorest, take some risks, and deliver results.
Bill Gates

Background

National Neglected Tropical Diseases (NTD) programs rely on timely, high-quality data to make important decisions. They use mapping data to determine where intervention is required, routine monitoring data to make programmatic adjustments during implementation, data from impact assessments to know when to stop an intervention, and surveillance data to inform elimination dossiers and monitor recrudescence. The quality of these data ultimately depends on the systems, tools, and processes at the points-of-collection, collation, and analysis at sub-national and national levels; however, the tools and systems currently available to country programs have limitations and gaps that hinder decision-making and implementation.

Strengthening NTD data systems and ensuring use of quality data for programmatic decision-making at the country, regional, and global levels are priorities for the Bill & Melinda Gates foundation. And, as such, we are launching a new Grand Challenge – an ***NTD Data Innovation Incubator*** – to identify and support innovative solutions (digital and non-digital[1]) aimed at solving these critical data-related challenges. This work seeks to improve the quality, completeness, and timeliness of routine NTD data and ensure programmatic decision-making is based on the best available data. Such outcomes will help target interventions to all at-risk populations and achieve high intervention coverage and maximal impact on infection and morbidity.

Objectives

The NTD Data Innovation Incubator (the "Incubator") will focus on eight priority problem areas, or "use cases." These use cases are aligned with the **four priority data sources** identified at a foundation-sponsored NTD Data Strategic Convening (London, March 2018) as most valued by NTD actors (e.g., donors, national NTD programs, pharmaceutical companies, and NTD implementers) for decision-making:

- Treatment Registers
- Census Data
- Drug Ledgers
- Monitoring & Evaluation (M&E) survey data (including routine mass drug administration (MDA) data monitoring and impact evaluation surveys)

Further discussion around these priority data sources generated a set of data-related challenges that currently present bottlenecks to ensuring quality, timeliness, availability, and, ultimately, programmatic use of data in MDA campaigns. Eight of these challenges were prioritized for this Grand Challenge and are detailed as eight priority use cases in the table below.

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[1] All solutions should align with the Principles for Digital Development: https://digitalprinciples.org/, though for non-digital solutions not all principles may be applicable.

The Incubator will support a series of pilot initiatives to test the ability of solutions to fully address these eight use cases, with the long-term goal of solution sustainability and scale in mind.

Approach

Through this Grand Challenge, we are looking for innovative solutions (digital or non-digital) capable of addressing one or more of the eight use cases. The proposed solutions could have been previously used in the context of NTD programs, used in other health program areas, or a new solution never before deployed or tested. The solutions must align with the solution profile(s) of the select use case(s), provided in the supporting material associated with this challenge. (Please see the document titled *Use Cases and Solution Profiles*.) The ideal solution will fully address the use case by addressing key challenges, supporting relevant actors, and improving the quality, access, and use of NTD data in the context of the use case. Sustainability is key to the NTD Incubator, with the long-term goal of scaling successful solutions for use by NTD country programs globally. Thus, solutions must be readily customizable for use in various country contexts, and readily deployable beyond the scope of the initial Incubator pilot.

We are looking for proposals that meet the following criteria:

- **Solution Applicability**: All proposed solutions should address <u>at least one</u> of the priority use cases (see table below); solutions that address multiple activities are particularly encouraged.

- **Impact**: Proposals should articulate a clear theory of change of how the proposed solution will impact program quality and/or performance by NTD actors and indicate how impact will be measured.

- **Efficiency**: Proposals should demonstrate how the solution builds upon and/or improves existing NTD data tools and approaches.

- **Country ownership and context**: All applicants should have an existing partnership or be willing to partner with Ministry of Health, country NTD programs, or other relevant country representatives to ensure the proposed solutions are fit for purpose in that country context. Maturity of NTD disease programs in the selected country should be considered.

- **Sustainability**: Issues of sustainability and scalability should be considered as part of the solution development, indicating how the solution would be scaled-up in a country. The country representative should signal willingness to implement (or bring to scale) the solution in country if proven successful in the pilot.

We will NOT consider funding for:

- Marginal improvements that do not lead to significant gains in data quality, access, and use

- Vendor- or party-led efforts to deploy and test a solution without participation or buy-in from NTD country program teams

- Solutions similar to existing efforts or tools already in use

Award

The Incubator funding will be structured in two rounds. <u>Round 1</u> funding will support proof-of-concept testing of the proposed solution over **3 to 6 months**. After this initial stage, we then expect to invite a

subset of the most successful Round 1 grantees to apply for Round 2 funding to test their solutions more broadly over **12-18 months**. As results from Round 2 would ultimately inform country scale-up, your proposal should identify the necessary conditions for its success.

- For Round 1, we are suggesting a maximum budget of **$200,000 USD** for up to **6 months** of work.

- For Round 2, we have decided not to specify funding limits or expectations. The number of awards and quantity of each award amount will depend upon the quality of the proposals received. Proposers are expected to develop a budget commensurate with the scope and scale of the work necessary to achieve their detailed objectives; however, the objectives should be achievable within **12-18 months** from onset of Round 2 funding.

- Please note, after Round 1 grants are made, the foundation will be organizing a 2-day planning workshop to kickstart the Data Innovation Incubator projects. The dates and location of the workshop are still being determined; however, grantees are expected to attend. The foundation will cover travel and accommodation.

Priority Use Cases

Data Source		Use Cases	Use Case Categories*
Treatment Registers		1. Drug distributor needs to be able to collect accurate, comprehensive, and timely data using data collection tools that include streamlined data indicators to ensure that all data collected are high-value and used by NTD stakeholders for decision-making.	Data Accuracy, Timeliness, and Drug Distributors Workload
		2. Supervisor (FLHW or District NTD officer) for drug distributors needs to be able to provide consistent and adequate training and support to drug distributors so that they can successfully complete their coverage targets.	Training and Supervision
Census Data		3. An NTD stakeholder needs accurate community-level population information for planning, implementation, and evaluation of MDAs.	Data Accuracy and Access (across health system levels)
Drug Ledgers		4. A district NTD officer needs to create an accurate inventory of PC drugs (both pre- and post-MDA) and needs to be able to share the inventory in a timely way with key actors at the regional and national level to inform their decision-making	Data Accuracy and Access (across health system levels)
M&E Survey Data	**Routine MDA Data**	5. A district NTD officer needs to determine how coverage across the district is going during an MDA so that drug administration can continue if treatment thresholds are not being met.	Data Analysis and Visualization
	Routine MDA Data and Results of MDA Monitoring	6. An FLHW supervisor or district NTD officer with oversight of health facilities or a district needs to share MDA results back with teams, understand how the performance of their catchment area compares with others, recognize how their efforts are contributing to the overall NTD program objective, and identify areas for improvement.	Feedback Loops
	Routine MDA Data and Results of MDA Monitoring	7. The NTD national team needs to share results back with teams at other levels of the health system, demonstrate district comparisons, share how their work contributes to the overall program objective, and how performance can be improved.	Feedback Loops
	NTD Program Data: Routine MDA Data, Morbidity Data, impact Survey Data	8. The NTD national team needs to easily conduct data analysis and visualization across multiple disparate data sets to support accurate program evaluation and effective decision-making. This must include access to NTD program data, as well as relevant data housed in other national HIS. NTD program data must be exposed to other data systems as appropriate to support NTD program management in both control and surveillance phases.	Integration and Interoperability to Support Data Analysis and Visualization, and Sustainability