



Introduction to adaptations being made to Tropical Data to incorporate serology and infection data collection

Thanks to funding from USAID and the Bill and Melinda Gates Foundation (BMGF), Tropical Data is preparing its systems and processes to introduce a broader package of support for countries wishing to collect serology and/or infection data as part of routine trachoma prevalence surveys. This work aims to prepare the Tropical Data service to support a 'plus' survey through an end-to-end process. An important facet of this work is to promote standardisation in the survey process to ensure data from 'plus' surveys are of consistently high quality, and comparable across time and settings.

The reason for this change is that the clinical sign trachomatous inflammation– follicular (TF) isn't always associated with ocular *Chlamydia trachomatis* infection, especially following mass drug administration. Adding complementary indicators provides one way to triangulate data and better tailor interventions, which can be helpful for districts experiencing unusual epidemiology, such as persistent and recrudescing TF.

The World Health Organization (WHO) is convening a Guideline Development Group on the use of serology in trachoma elimination programmes, which is expected to make recommendations on how serology testing can be used to support trachoma elimination. Tropical Data aims to support countries to conform to these recommendations. Therefore, this work is aimed at ensuring the support Tropical Data offers countries remains up to date.

In determining what changes to introduce, Tropical Data has undertaken a scoping review and is supporting the six country recipients of a Coalition for Operational Research on NTDs (COR-NTD) grant (funded by BMGF and USAID), aimed at better understanding the underlying causes of persistent and/or recrudescing TF (<https://www.cor-ntd.org/news-stories/news-articles/research-solve-trachoma-elimination-challenges-begin>). The scoping review and COR-NTD grant have offered Tropical Data excellent opportunities for learning, and showing where standardisation is possible in the survey process as well as where it is not.

Some serology and infection-specific updates to Tropical Data include developing a standardised protocol and supplementary training materials to introduce the set elements involved in sample collection. These materials aim to support the new roles and responsibilities associated with collecting, storing and processing the specimens associated with serology and infection testing (dried blood spots and ocular swabs, respectively).

Tropical Data is also planning a major IT system update, which will introduce new data validation checks to improve data quality related to barcodes and sample collection, and new code to analyse serology and infection results as part of routine Tropical Data analysis outputs.

Serological and infection testing will likely have a limited number of use cases for trachoma: 1) post-MDA surveillance; 2) baseline surveys to confirm new trachoma-endemic districts; 3) unusual epidemiologies. Nevertheless, where serological testing in particular is used, it offers other disease programmes a means of piggy-backing on existing trachoma surveys to conduct integrated surveys (using multiplex testing).

Tropical Data will await the recommendations of the WHO Guideline Development Group on serology before implementing the planned changes.

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