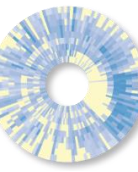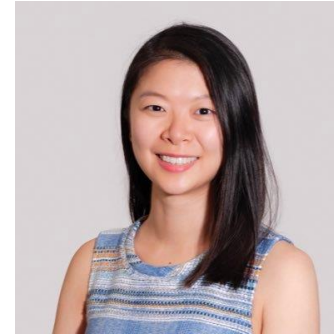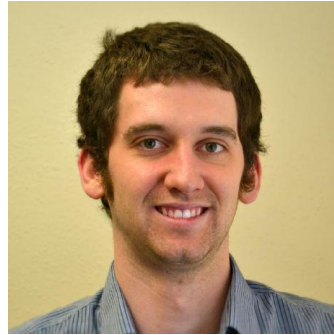# Cholera Updates from Johns Hopkins Groups
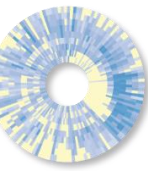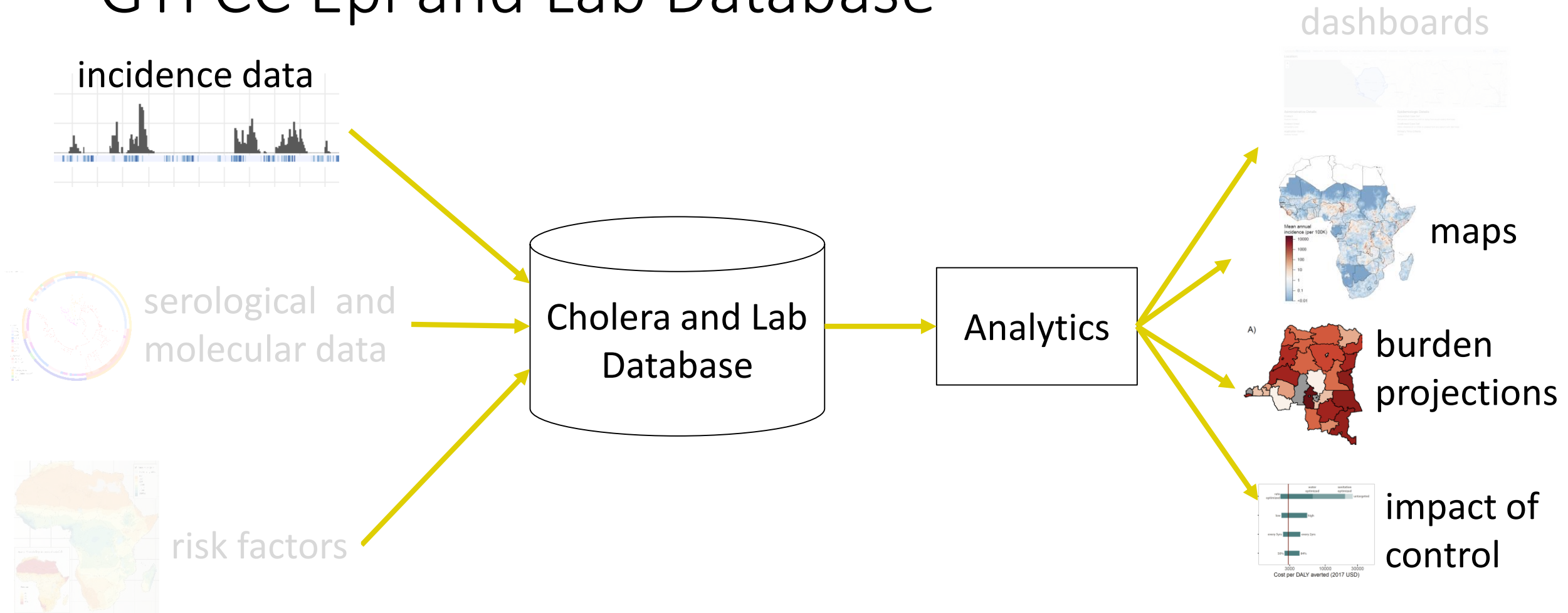
Andrew Azman

GTFCC OCV Working Group Meeting, Geneva

4 December 2019
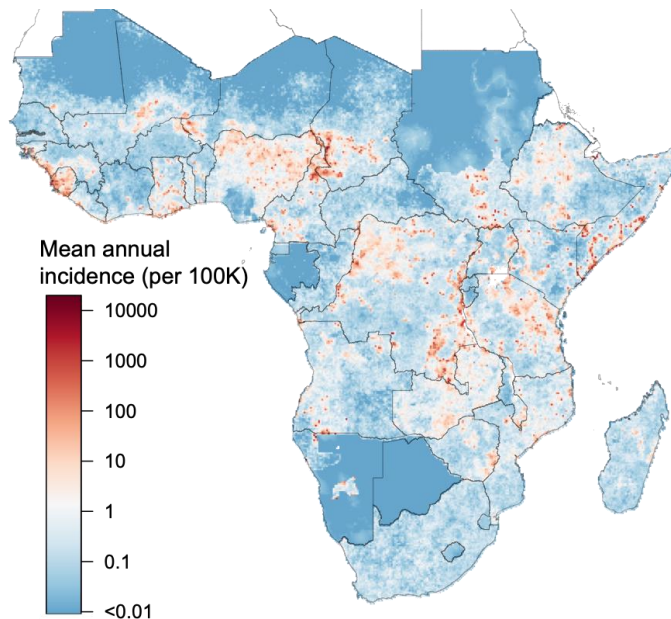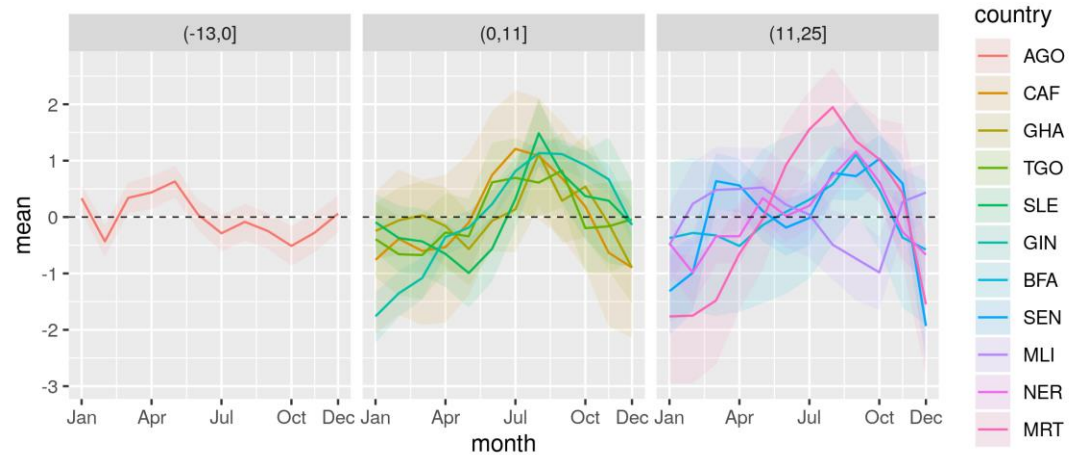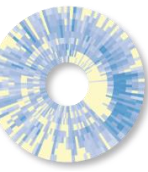
One University, Many "Cholera People"
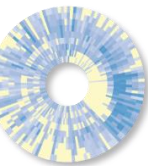
GTFCC Epi and Lab Database
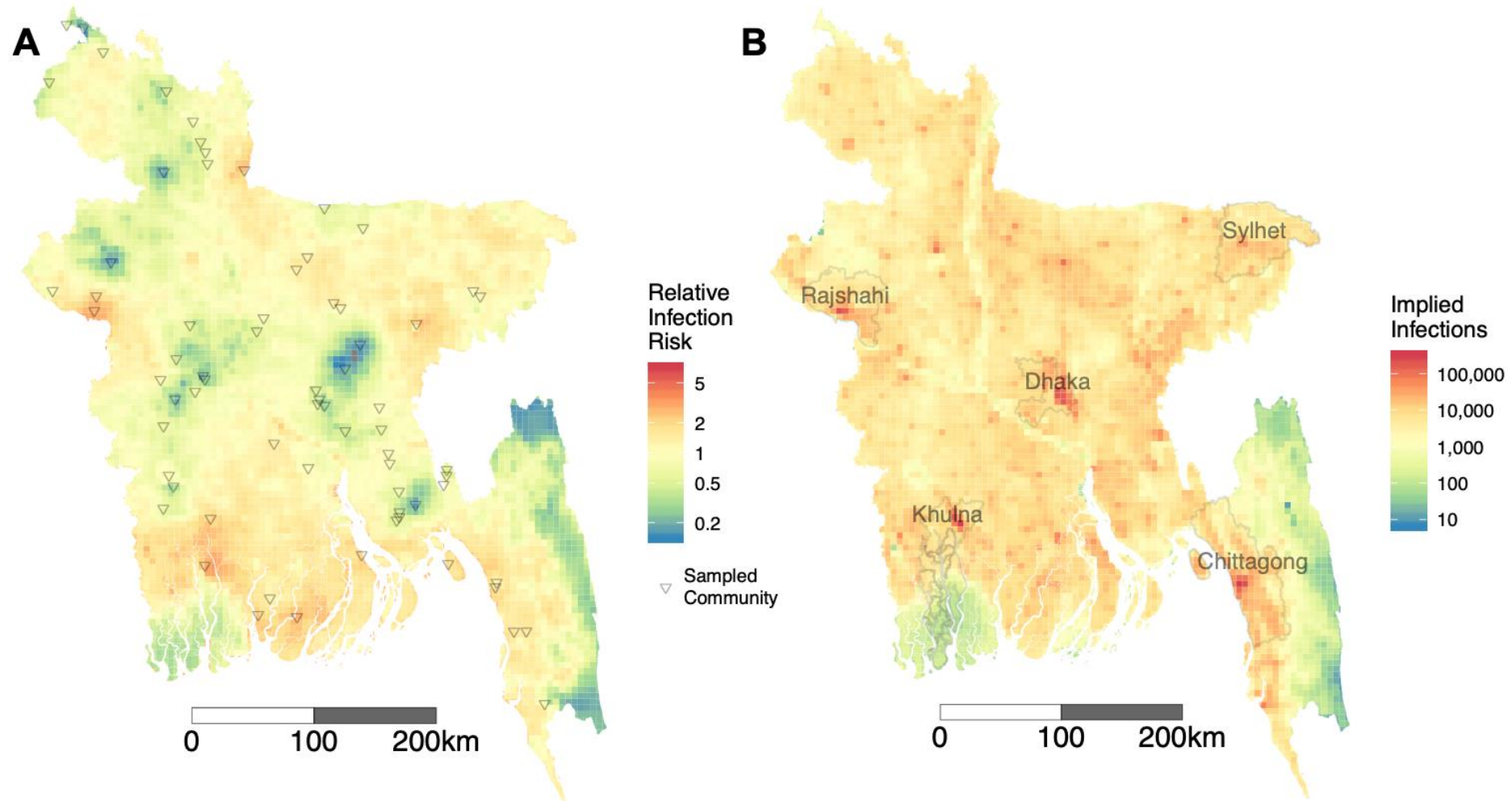
Global cholera epidemiology and burden
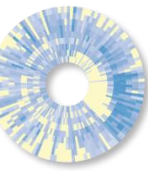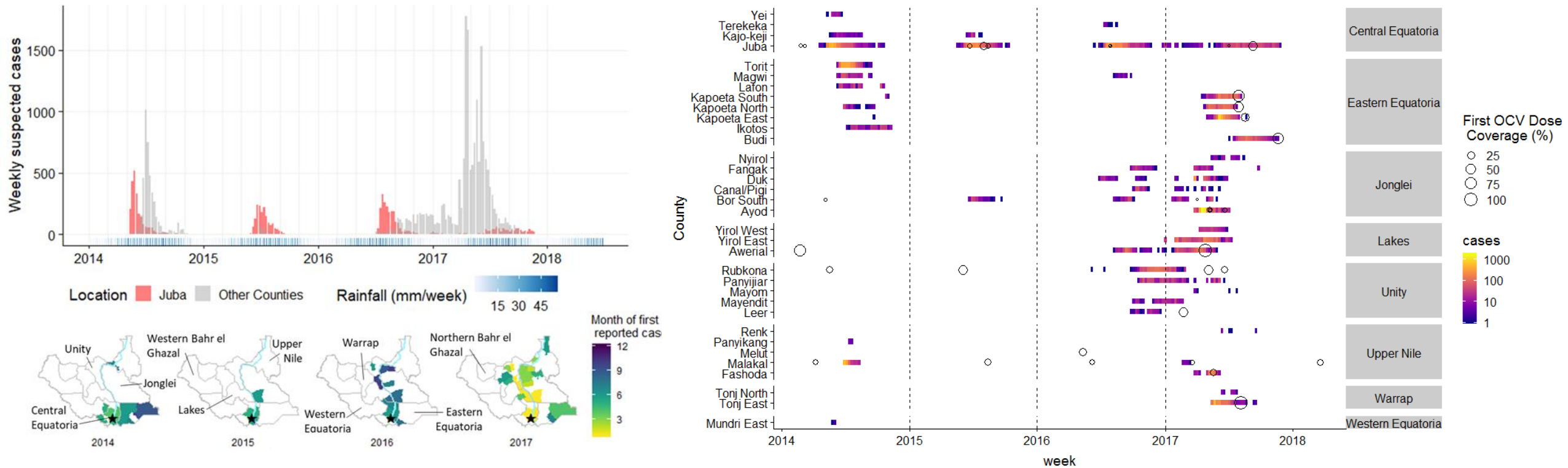

Mean annual incidence (per 100K)

- Updates to cholera incidence maps to include <u>global data through 2019</u>

- Time-space maps in Africa

- Estimating the seasonality of cholera in Sub-Saharan Africa

Mapping cholera with cross-sectional serology

Azman AS, Lauer S, Qadri F et al, *in prep*

Case studies to inform future interventions

Jones F, Wamala JF et al, *in prep*

Modeling the potential impact of OCV

Can OCV be used to eliminate cholera?

Achieving coordinated national immunity and cholera elimination in Haiti through vaccination
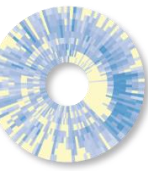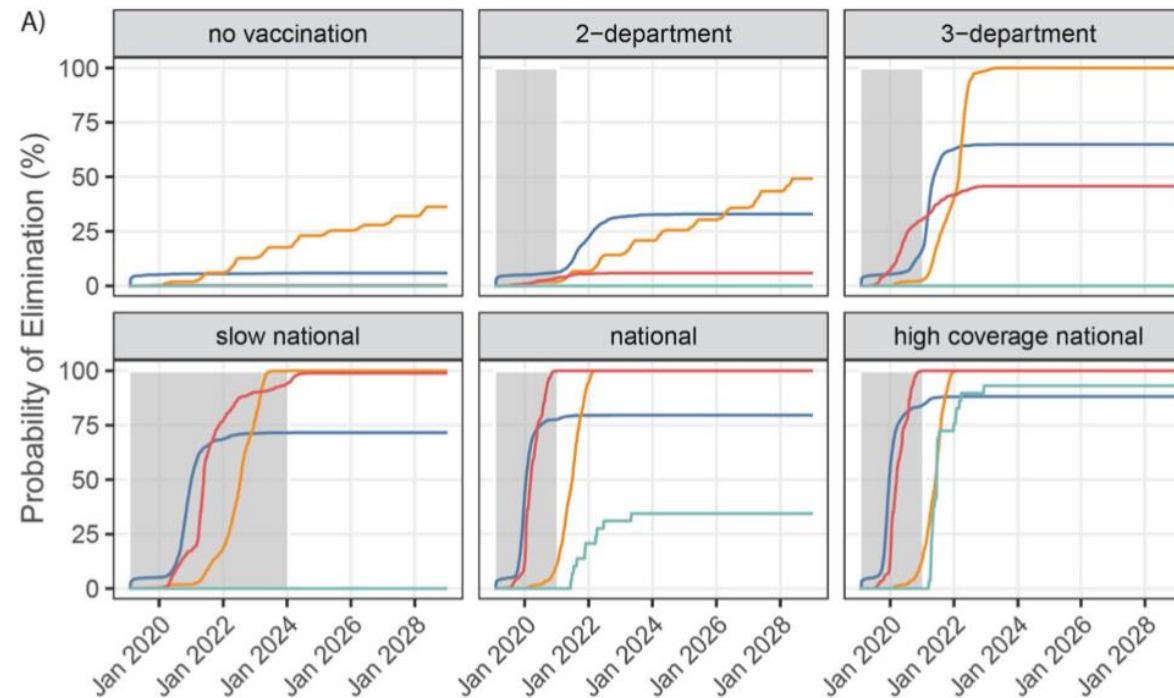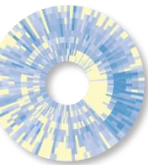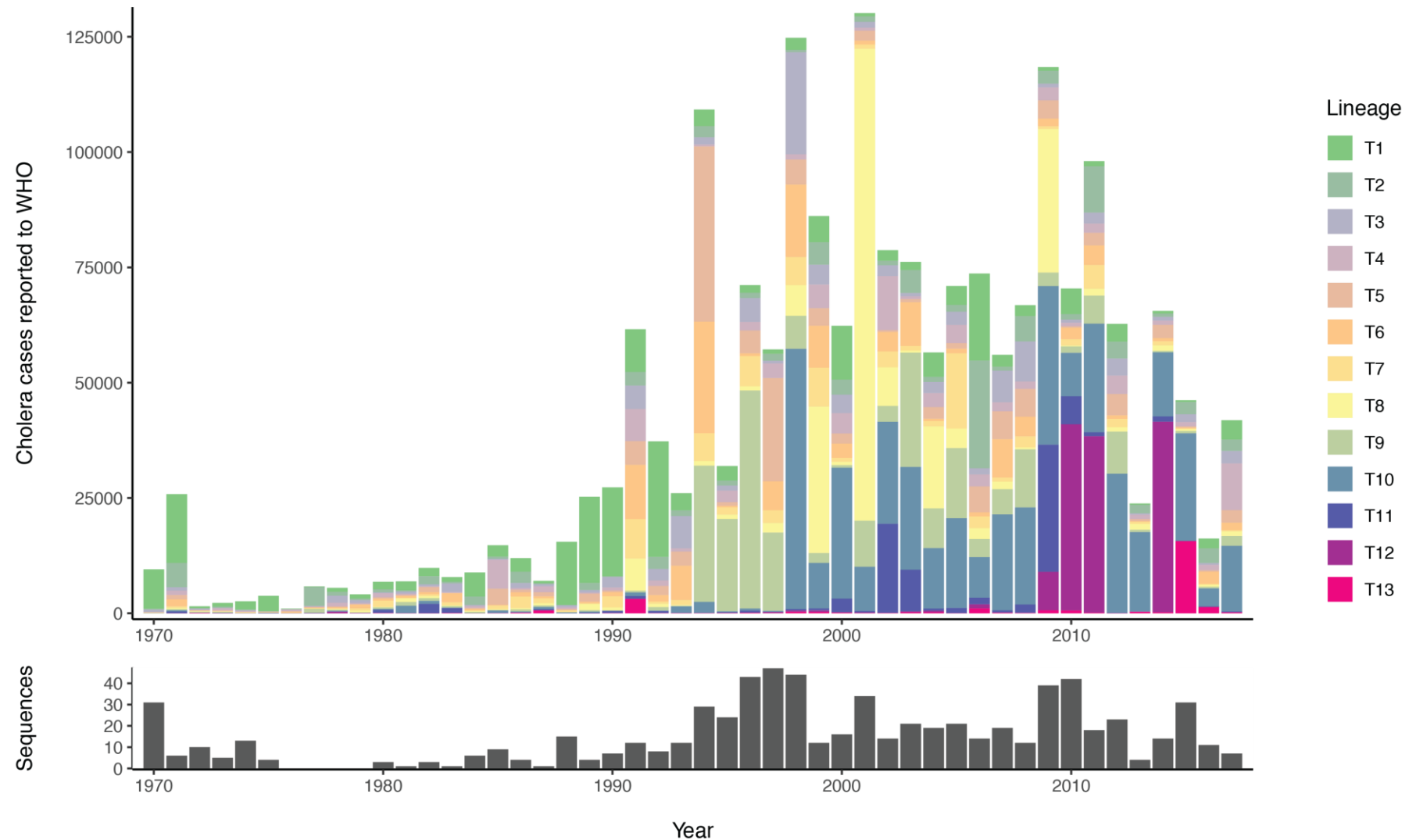
Elizabeth C. Lee*[1], Dennis L. Chao*[2], Joseph Lemaitre*[3], Laura Matrajt*[4], Damiano Pasetto[3], Javier Perez-Saez[3], Flavio Finger[5,6], Andrea Rinaldo[3], Jonathan D. Sugimoto[4], M. Elizabeth Halloran[4,7], Ira M. Longini Jr.[8,9], Ralph Ternier[10], Kenia Vissieres[10], Andrew S. Azman[‡1], Justin Lessler[‡1], and Louise C. Ivers[‡11,12]

Combining genomic and epidemiologic data
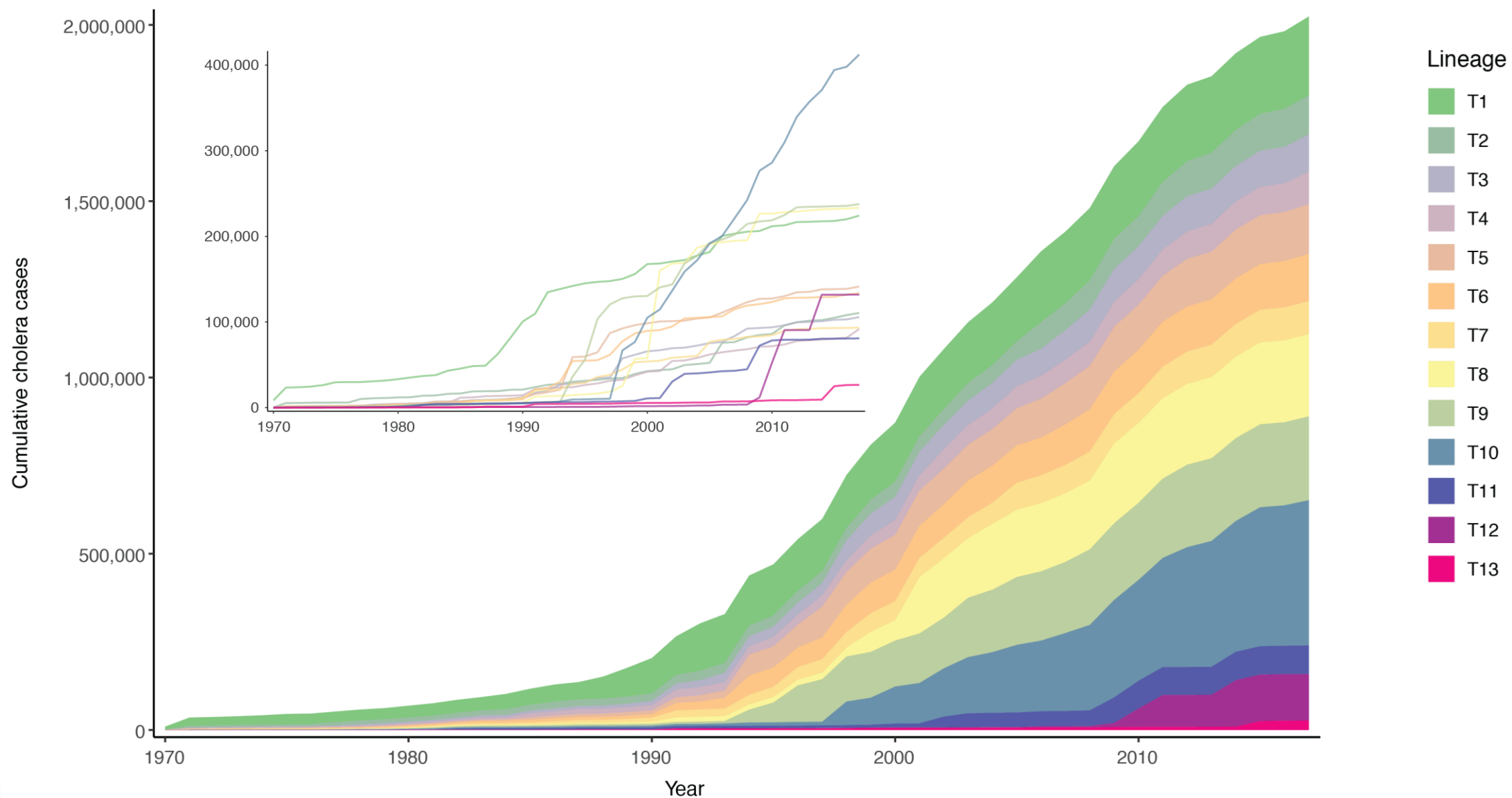
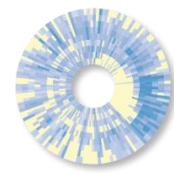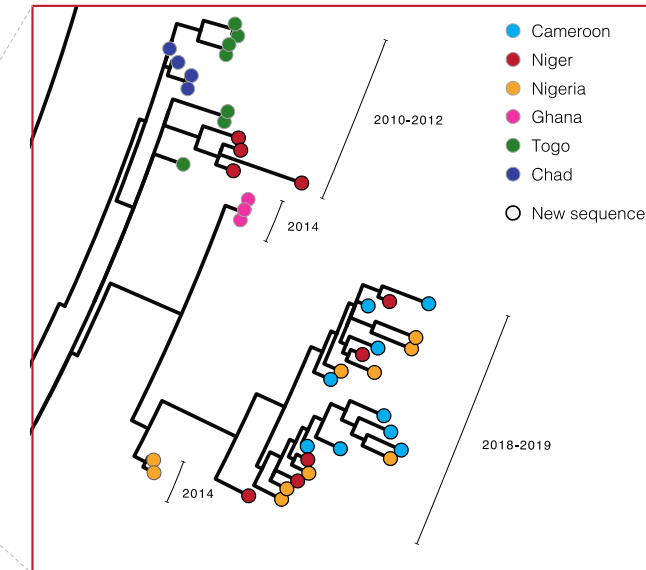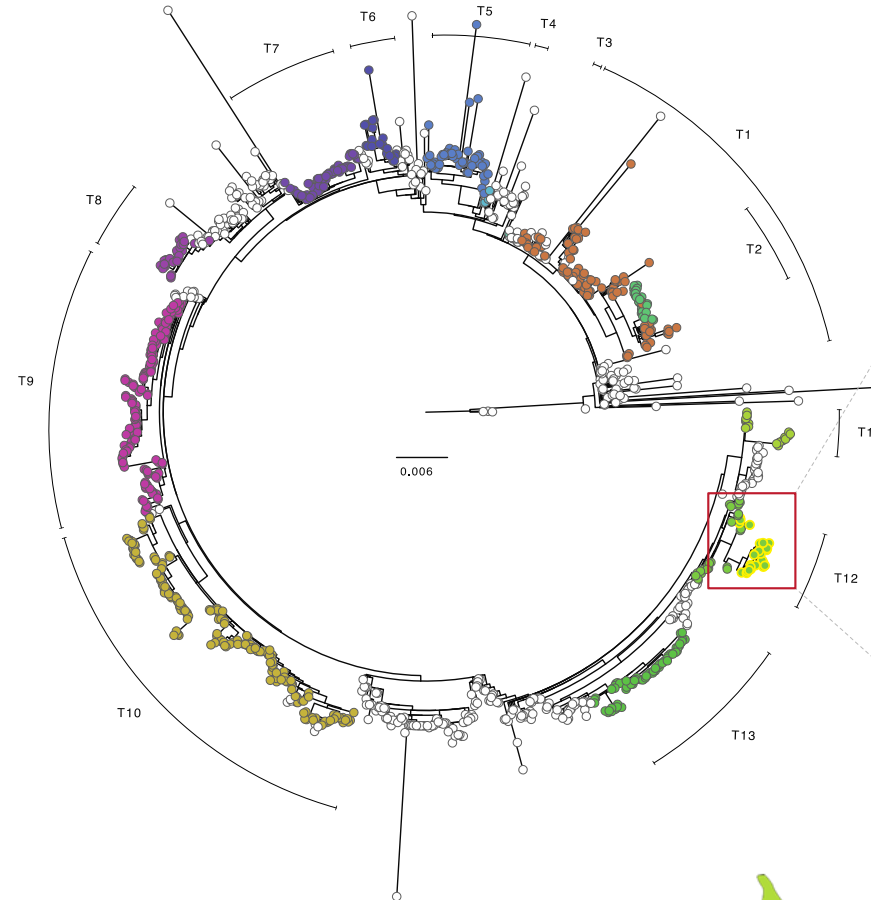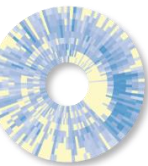*Very Preliminary*

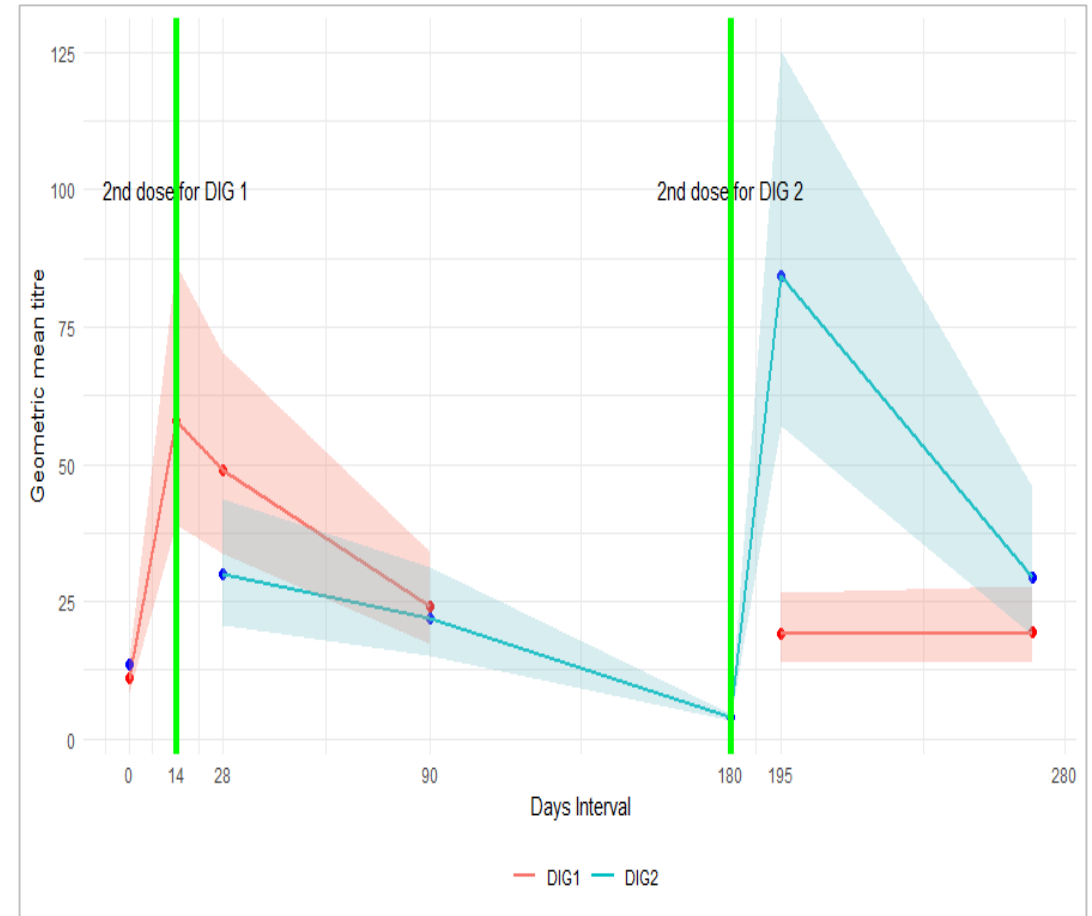# Bringing sequencing closer to the source
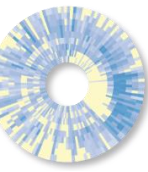

Tree by Shirlee Wohl

Dose-Interval studies

- Zambia
  - 2 week or 6-month interval
  - Endpoint:
  - Preliminary Results Available

- Cameroon
  - 2 week, 6-month and 11.5-month intervals
  - Endpoint:
  - Final blood draw in February-2020

Mwamba et al, *in prep*

Diagnostic evaluations

- Lamp PCR field evaluation(s)

- O1-only Crystal VC evaluation in Kenya

- CholKit evaluation in Malawi

Control line

Test line

Negative   Positive