

Eradicating Trachoma by 2030?

Session Date & Time:	Monday, November 18; 1:00 PM to 4:00 PM
Session Location:	MGM Grand Ballroom – Salon C
Session Description:	The current programmatic goal for trachoma is control (“elimination as a public health problem”) by the year 2020, but eradication may be a more sustainable goal than control. This session will review the evidence in support of eradication compared to control, including the pros and cons and strategies required for each goal.
Session Chairs:	Dr. Catherine Oldenburg, University of California, San Francisco Dr. Anthony Solomon, Department of Control of Neglected Tropical Diseases, World Health Organization
Session Rapporteur:	Laura Cane, RTI International

KEY DISCUSSION POINTS

The current programmatic goal for trachoma is elimination as a public health problem, which presents concerns of recrudescence. Eradication may be a more sustainable goal than control.

The case for eradication – Tom Lietman

- Eradication refers to the elimination of transmission of ocular *Chlamydia trachomatis* strains (reduction to zero transmission globally).
- There is currently no vaccine and the sub-clinical nature of trachoma means remaining cases may not rise to the level of the health system. This presents challenges for surveillance and leaves room for recrudescence.
- Nepal, Gambia, and Ghana show very low levels of infection, at or around the false positivity rate for available *C. trachomatis* assays. These are case studies potentially demonstrating the feasibility of eradication.
- Trachoma is already disappearing globally, with hygiene, clean water, and antibiotic treatment likely to be the key drivers.
- Additional MDA has been shown in randomized controlled trials (RCTs) to reduce infection prevalence faster – biannual or quarterly mass drug administration (MDA) could be used to accelerate progress.

- High levels of recrudescence in Ethiopia and other places demonstrates the need for elimination of transmission.

What can global evaluation unit-level data tell us about the need for a trachoma eradication strategy - Jeremiah Ngondi

- Global trachoma data analyzed from the GET2020 database indicate that 34% of districts have trachomatous inflammation – follicular (TF) less than 5% in the first trachoma impact survey (TIS).
- Nearly 9% of districts have TF>5% after the first trachoma surveillance survey (TSS), and are required to restart MDA.
- Many countries are making good progress and have been able to achieve TF prevalences <5% in most districts very quickly. However, evidence suggests attaining TF<5% will take longer than hoped to achieve worldwide.
- Baseline prevalence is a strong predictor of the pace and ease with which a district will achieve prevalence below 5%. Districts with high baseline prevalence are requiring more rounds of MDA to drive TF to <5% or are yet to do so (though this relationship is not necessarily causal).
- Recrudescence is a concern, which underscores the need for facial cleanliness and environment (F&E) interventions, and post-validation surveillance.
- Eradication could be a way to ensure sustained success.

Challenges on the road to eradication: Lessons from a mature trachoma program - Scott Nash

- The Carter Center has been supporting the Federal Ministry of Health in trachoma elimination efforts in Amhara, Ethiopia.
- After many years of surgery, antibiotics, facial cleanliness, and environment (SAFE), there are some persistently high-TF areas which show reduction in the prevalence of infection and disease but still have TF prevalence estimates of $\geq 5\%$.
- Recrudescence has been observed in some districts. Of 26 TSS conducted in the region, 14 with baseline below 10% have remained TF<5%, but 12 districts with baseline above 10% were found to be TF>5% during TSS.
- The Carter Center is leading some trials to assess the effectiveness of increased WASH or more frequent MDA.

The promise and pitfalls of WASH for trachoma - Solomon Aragie

- Guidelines and toolkits are available to include WASH components as part of the SAFE strategy. However, there is limited evidence on the impact of WASH interventions on trachoma.
- In 2016, the Sanitation, Water, and Instruction on Face-washing (SWIFT) study began in Wag Hemra, Amhara Ethiopia, which aims to confirm if water, sanitation and hygiene (WASH) is effective to control trachoma.
- The scale-up and integration of WASH for trachoma is not straightforward. Questions remain regarding effectiveness and implementation:
 - o Are WASH interventions effective for trachoma elimination?

- Which WASH interventions? How intensive? How integrated? Which epidemiological settings?
- Coverage: what level of WASH uptake is sufficient to help drive elimination?
- How do we achieve level of access and use of WASH interventions that could affect sustained behavior change?
- Which sanitation intervention impacts coverage?
- How do we achieve and monitor the level or use and intervention uptake? Do we need a household survey on face-washing?
- Additional questions remain on water access, facilities maintenance

KNOWLEDGE GAPS IDENTIFIED

- How do we reach targets and targeted populations amidst insecurity, migration? How do we ensure we are getting consistent coverage and surveys are accurately determining prevalence?
- What existing or new tests of infection would be needed if we moved to eradication of trachoma as the global goal? What are the required target product profiles of tests to support monitoring of progress towards and attainment of interruption of transmission?
- How do we better understand communities that remain hyperendemic? Do we need to look into other social determinants of health, co-morbidities and their impact on SAFE effectiveness?
- What new strategies or targeted interventions might be required for districts with persistent TF prevalence above 5%?
- How can we better inform decision-making around districts that stop treatment and are around 4.99%? Or those neighboring areas of high infection?
- What does eradication look like as not everyone has symptoms or signs? How will we know it is truly gone?
- Are there alternative indicators that should be incorporated into surveys?
- How do we better understand countries where progress is slow and protracted?
- Would an eradication goal require changes to the SAFE strategy?
- Would an eradication goal require a vaccine effective against *C. trachomatis* infection?
- What messaging would be required to donors and global partners to convey the change in targets?

RECOMMENDED NEXT STEPS

What operational research and other actions need to be taken to address the knowledge gaps identified by the group?

- Identify learnings from the Stronger SAFE and SWIFT trials around WASH interventions and adherents to WASH
- Conduct operational research on districts-in-waiting – those that have passed impact surveys but are near districts that still require interventions. What's the risk of re-introduction of infection with subsequent recrudescence of disease?
- Conduct operational research on routes of transmission

- Conduct cost modelling for eradication, what would it take to move from control to eradication financially?
- Conduct OR on hot spots or “islands of supercriticality” – areas of high disease prevalence where trachoma appears to be refractory to interventions
- Support efforts to develop a vaccine effective against *C. trachomatis* infection