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# UNDERSTANDING CAUSES OF TRACHOMA RECRUDESCENCE AND PERSISTENCE IN THE MAASAI CORRIDOR KENYA


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## BACKGROUND

Trachoma remains the leading infectious cause of blindness globally. Although Kenya has made substantial progress toward elimination, recent surveys indicate persistent or recrudescent trachomatous inflammation–follicular (TF) in parts of Kajiado and Narok counties. This study aimed to identify the key drivers of ongoing trachoma transmission in these settings providing evidence to accelerate elimination of trachoma as a public health problem.

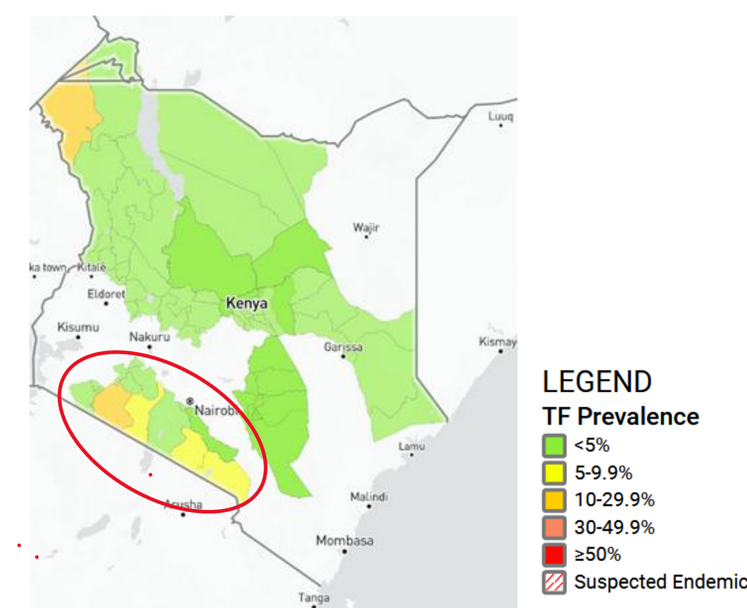
## OBJECTIVES

1. Can recrudescence or persistence of trachoma in Kajiado and Narok be confirmed through the use of alternative indicators (Ct infection and anti-Ct antibodies)?
2. What impact have programmatic adaptations been in addressing confirmed persistence and recrudescence in Kajiado and Narok

## METHODOLOGY: A MIXED-METHODS CROSS-SECTIONAL STUDY

## STUDY AREA: NAROK AND KAJIADO KENYA

The study was conducted in nine purposively selected villages (five in Kajiado County and four in Narok County) with TF prevalence >5%. Quantitative components included community censuses conducted in two rounds, coverage evaluation surveys, clinical grading for TF, testing for Chlamydia trachomatis (Ct) infection using nucleic acid amplification tests, serological assessment using anti-pgp3 antibodies, and an exploratory fly investigation involving fly counts and species identification. Qualitative data were collected through nine focus group discussions exploring socio-cultural, behavioral, and environmental factors related to trachoma transmission.

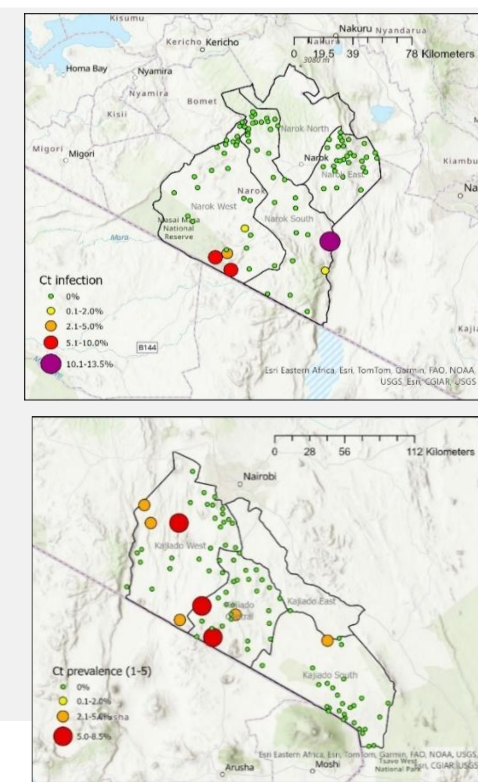



## RESULTS

Ct infection prevalence was very low across all evaluation units in Kajiado County (<1%), including 0.1% in Kajiado South, despite TF prevalence remaining above the elimination threshold. In contrast, Narok West showed higher TF prevalence accompanied by detectable Ct infection and elevated serological markers, indicating ongoing transmission. Marked population mobility was observed in Narok County, with population declines of up to 58% in some villages, suggesting that migration. Qualitative findings identified community acceptance of flies on children's faces, limited latrine ownership and use, poor animal waste management, infrequent face washing, and shared face-wiping cloths as key drivers of transmission.

**Results of alternative indicators collected under the TIS plus surveys in Kajiado and Narok**

| Survey Period | EU | Ct infection in 1-5Yr olds (95%CI) | Seroprevalance in 1-9yr olds (95%CI) | Seroprevalance in 1-5yr olds (95%CI) | SCR in 1-5yr olds (95%CI), per 100 children per year |
|---|---|---|---|---|---|
| January 2024 | Kajiado West | 0.75% (0.02-0.93) | 4.8 (4.0-5.9) | 12.5% (10.4-14.9) | 4.8 (4.0-5.9) |
| | Kajiado South | 0.13% (0.02-0.93) | 2.9 (2.4-3.7) | 8.2% (6.5-10.3) | 2.9 (2.4-3.7) |
| | Kajiado Central | 0.45% (0.11-1.86) | 4.8 (3.9-5.9) | 12.1% (10.0-14.5) | 4.8 (3.9-5.9) |
| May 2023 | Narok West | 2.3% (0.7-7.5) | 11.5% (6.7-16.9) | 10.3% (8.2-12.4) | 3.6 (3.2-4.0) |
| | Narok South | 1.9% (0.3-10.7) | 5.6% (2.0-10.7) | 8.7% (6.7-10.8) | 3.0 (2.6-3.4) |
| | Narok East | 0.0% | 4.6% (2.3-7.7) | 6.4% (4.7-8.0) | 2.1 (1.8-2.4) |
| | | | | | |



## DISCUSSION

The results reveal a clear contrast between Kajiado and Narok Counties. In Kajiado, Chlamydia trachomatis (Ct) infection prevalence is extremely low (<1%), despite trachomatous inflammation—follicular (TF) remaining above the elimination threshold, suggesting a disconnect between clinical signs and active transmission and indicating that transmission may have largely been interrupted. In contrast, Narok West shows concurrent high TF prevalence, detectable Ct infection, and elevated serological markers, pointing to ongoing transmission. High population mobility in Narok, with declines of up to 58% in some villages, likely contributes to reinfection and challenges intervention coverage. Additionally, persistent behavioral and environmental risk factors, such as poor facial hygiene, limited latrine use, improper waste management, and acceptance of flies on children's faces, continue to sustain transmission, highlighting the need for strengthened and targeted SAFE strategy interventions, particularly in Narok.

## CONCLUSIONS

Despite significant gains, persistent transmission remains in specific high-risk settings, particularly in Narok County. Population mobility, suboptimal WASH practices, and socio-cultural behaviors continue to undermine elimination efforts. Strengthened, targeted interventions focusing on facial cleanliness, sanitation, environmental hygiene, and surveillance in identified transmission hotspots are essential to sustain progress and achieve elimination.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