Trachomatous Trichiasis Management in Tanzania: Investigation of the Productivity of Case Finding and Referral of Patients to Trichiasis Surgery Services

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A prolonged eye infection, known as trachoma, can lead to trachomatous trichiasis (TT). TT is the stage of trachoma where the eyelid turns inward, resulting in lashes rubbing against the cornea. TT can damage the cornea, leading to vision impairment or blindness. Treatment for TT includes epilation or surgery. Trachoma is targeted for elimination as a public health problem by the year 2020. One criteria of trachoma elimination is less than 0.2% prevalence of TT unknown to the health system in adults 15 years and older. There are several districts in Tanzania that have struggled to achieve this target. We conducted a study involving a data review and interviews to understand why this is the case and translated the findings into learnings and recommendations.

"I had severe pain but was identified and treated. Now I am fine!"
- TT surgery patient

Key findings

We conducted a desk review of data from six districts across three regions and interviewed key groups: people with TT who received surgery and did not receive surgery, TT case finders, TT surgeons, and district-level health officers. Our findings are as follows:

- A large portion of TT positive people are not being identified by case finders, and of those identified, many are lost along the continuum of care.
- Remote communities face barriers in being identified and accessing services.
- Case finders have competing priorities and sometimes face challenges with credibility.
- Lack of knowledge of TT and available services leads to misconceptions and fear of accessing treatment.
- Agricultural responsibilities during rainy season and lack of time to prepare for surgery is a major barrier.
- Many people require assistance after surgery in order to care for their families and themselves.

Continuum of care
Case finders identify a positive TT case
Eye health professionals screen the case
TT surgeons confirm the case
Treatment is provided
In this report, aimed at those who design or lead TT surgery outreach, we focus on barriers for remote communities, case finder challenges, links to services, and post-operative care.

Methods
We selected six districts across three regions for this study. These included Bahi and Chamwino in Dodoma region, Liwale and Ruangwa in Lindi region, and Newala and Tandahimba in Mtwara region.

Our approach included a retrospective review, analysis of program data, and implementation of key informant interviews (KII) and focus group discussions (FGD).

The desk review was conducted to collate data on district-level indicators and generate estimates around number and proportion of cases not identified by case finders and cases lost along the continuum of care. This dataset totaled 8,834 cases identified by case finders.

KII and FGD guides were structured to enlist responses around case finding techniques, linkage to services, and the surgery process. KIIIs were conducted among 64 TT positive people who received surgery and 59 positive people who did not receive surgery, stratified by gender and the six selected districts. Additionally, FGD were conducted among 56 TT case finders (one FGD per district), and KIIIs were conducted among six TT surgeons and six district-level health officers.

Findings
Barriers for remote communities
It is difficult for case finders to efficiently reach communities located far from central sites. These populations may not be identified and informed of treatment options at all. In situations where distant communities are reached, traveling far distances to receive treatment remains a challenge.

It is also common for these communities to receive limited notice about when surgical camps will take place. Along with the short duration of camps, many people miss the window for surgery.

Case finder challenges
Case finders have competing priorities and in some districts are only paid for positive cases identified.

Case finders are community members who have been trained to identify TT. However, we found that some people are uncomfortable with case finders providing advice on eye health because they are not known to be eye health professionals.

Linking to services
Our findings show the largest gap along the continuum of care is linking people identified by case finders to eye health professionals for screening. This gap is especially prevalent in Liwale and Tandahimba districts, where 48% and 46% of people identified were not screened. In nearly all cases, screenings are administered at the surgical camp sites and confirmation by surgeons and treatment happened immediately after screening.
Across the six districts, once confirmed as positive, 18% of people declined treatment. Positive people in Bahi were more likely to accept treatment, followed by Chamwino, Liwale, Newala and Tandahimba.

We found barriers to attending screenings and subsequently obtaining treatment. Many people do not attend the screenings because they know that surgery follows, and they are afraid of surgery. Additionally, offering surgery during rainy season means that those with agricultural responsibilities are often unable to attend. Finally, people were more likely to attend screenings in Bahi, Ruangwa and Newala districts. On average, these three districts allowed nearly three weeks for an identified person to prepare themselves to attend screening.

**Post-operative care**

Participants mentioned several instances where additional assistance to obtain surgery is needed, such as patients who live alone or who are the caregivers to others. Many TT positive people interviewed mentioned receiving transportation, medicine, and food immediately after surgery. This was most common in Bahi and Chamwino. However, not everyone received these assistances (particularly in Liwale, Ruangwa, and Newala). An additional assistance that was often mentioned was provision of food for several days after surgery.

**Recommendations**

**Transportation.** Providing transportation to case finders would facilitate reaching remote communities for both case finding and disseminating information on TT and available services. Additionally, providing transport from distant communities to the surgical camps would enable more people to seek treatment.

**Scheduling.** Giving more notice about surgical camps and extending the duration of the camps is important to enable remote populations to obtain services. An additional suggestion is to maintain an annual schedule so that communities can plan. Case finding and surgical camps should not be conducted during agricultural season. Staggering timing of case identification and screening may improve access to services by providing more time for people to plan for post-operative care.

**Incentives.** Case finders should be compensated fairly for the hard work they do. In addition, providing t-shirts or caps and magnifying loupes would help community members understand that case finders are trained to do this work and improve consent for examination.

**Assistance.** Providing information on assistance during case finding may encourage screening attendance and acceptance of surgery. In addition to food/drink immediately after surgery and transportation home, programs should consider...
providing food for several days after surgery.

**Educate.** Engaging with community leaders to share information about TT with their communities and advertising campaigns would encourage consent of examination by case finders. Other programs could be avenues for providing information on TT. Lymphatic Filariasis Mass Drug Administrations, mosquito net distributions, and family planning activities are opportunities to sensitize and distribute information. Also, people who have received surgery should serve as witnesses in their communities.

**Frequency.** After witnessing the positive effects of surgery in their communities, many interviewees who had previously declined surgery have changed their mind. Increasing the frequency of surgical camps would improve access to these populations.

**References**

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