Post-operative trichiasis in Africa- Systematic review and survey

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Systematic review

Review question

- What is the prevalence of post-operative trichiasis and other poor outcomes of trichiasis surgery in Africa?

Objectives

- To determine the incidence of post-operative trichiasis and other poor outcomes of trichiasis surgery in Africa.
- To compare the incidence of post-operative trichiasis and other poor outcomes in interventional studies and observational studies in Africa.

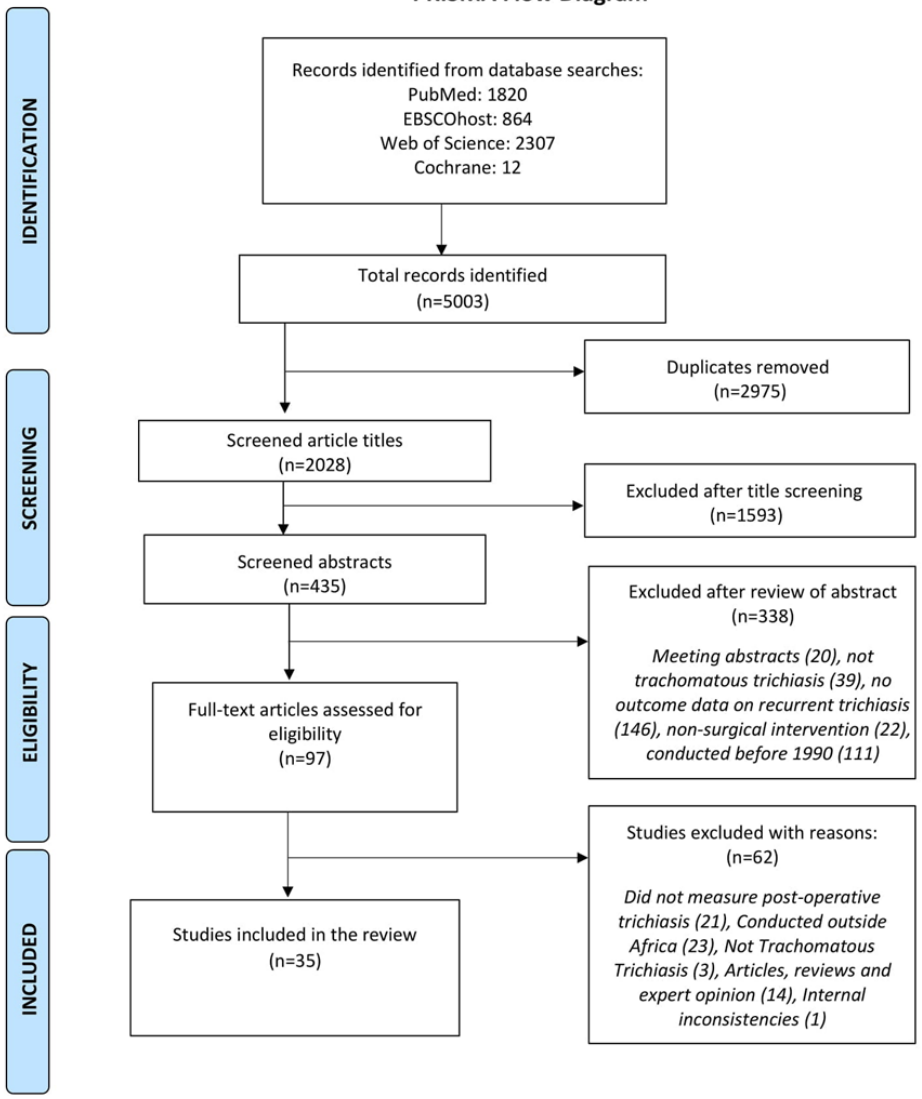
Methods

Electronic Databases: PubMed, Academic Search Premier, Africa-Wide Information, and Health Source Nursing through EBSCOhost, Web of Science [all databases], and Cochrane Central Register of Controlled Trials.

Google scholar® and other relevant websites, reference lists

Search terms: “trichiasis” OR “entropion”

PRISMA Flow Diagram



Search completed on 09 May 2018

Inclusion criteria:

- Conducted within Africa
- Outcome - post-operative trichiasis (presence of 1+ lashes or evidence of epilation or repeat surgery)
- Study designs – RCTs, cross-sectional, cohort, longitudinal etc

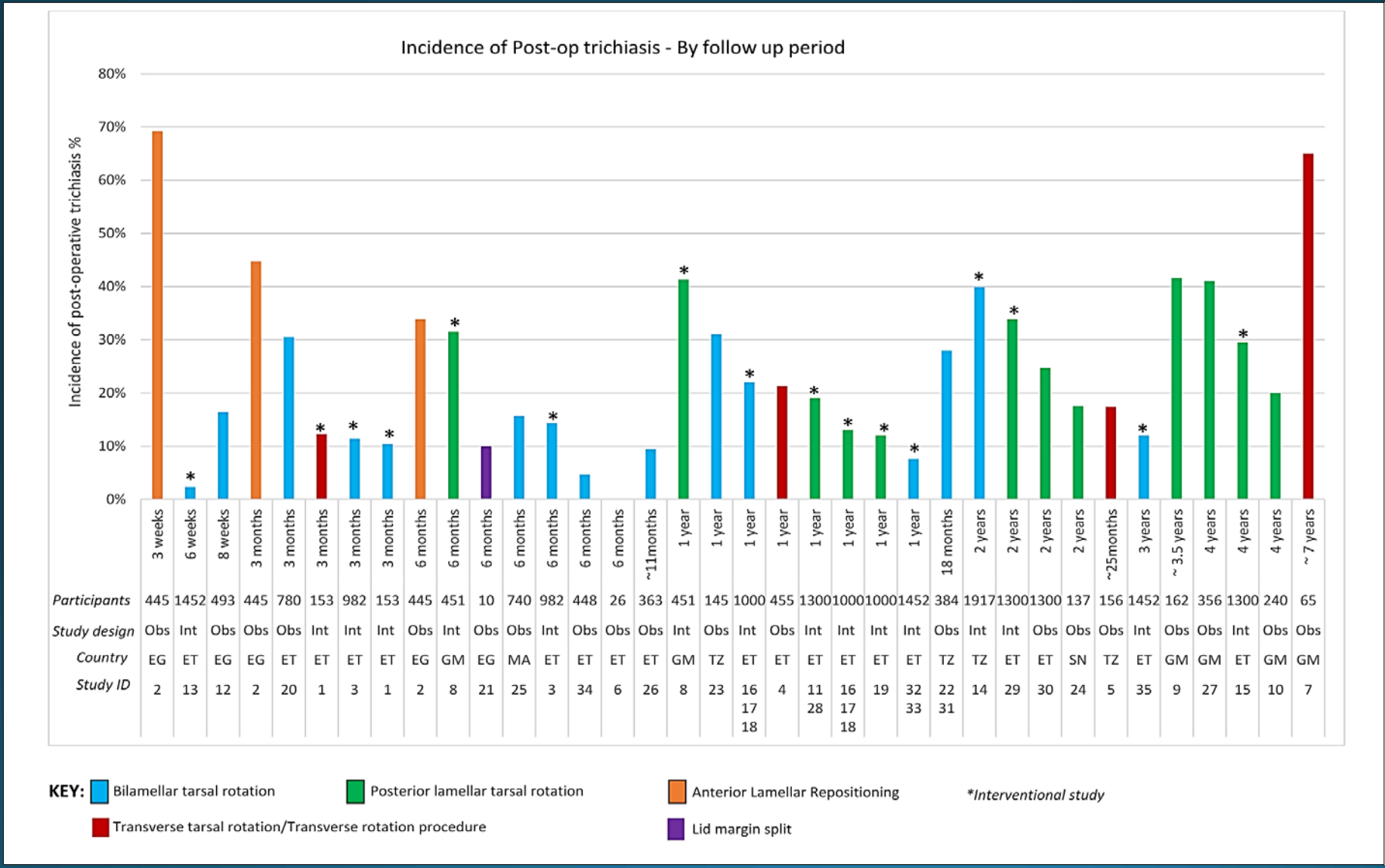
35 studies

16 interventional studies (RCTs)

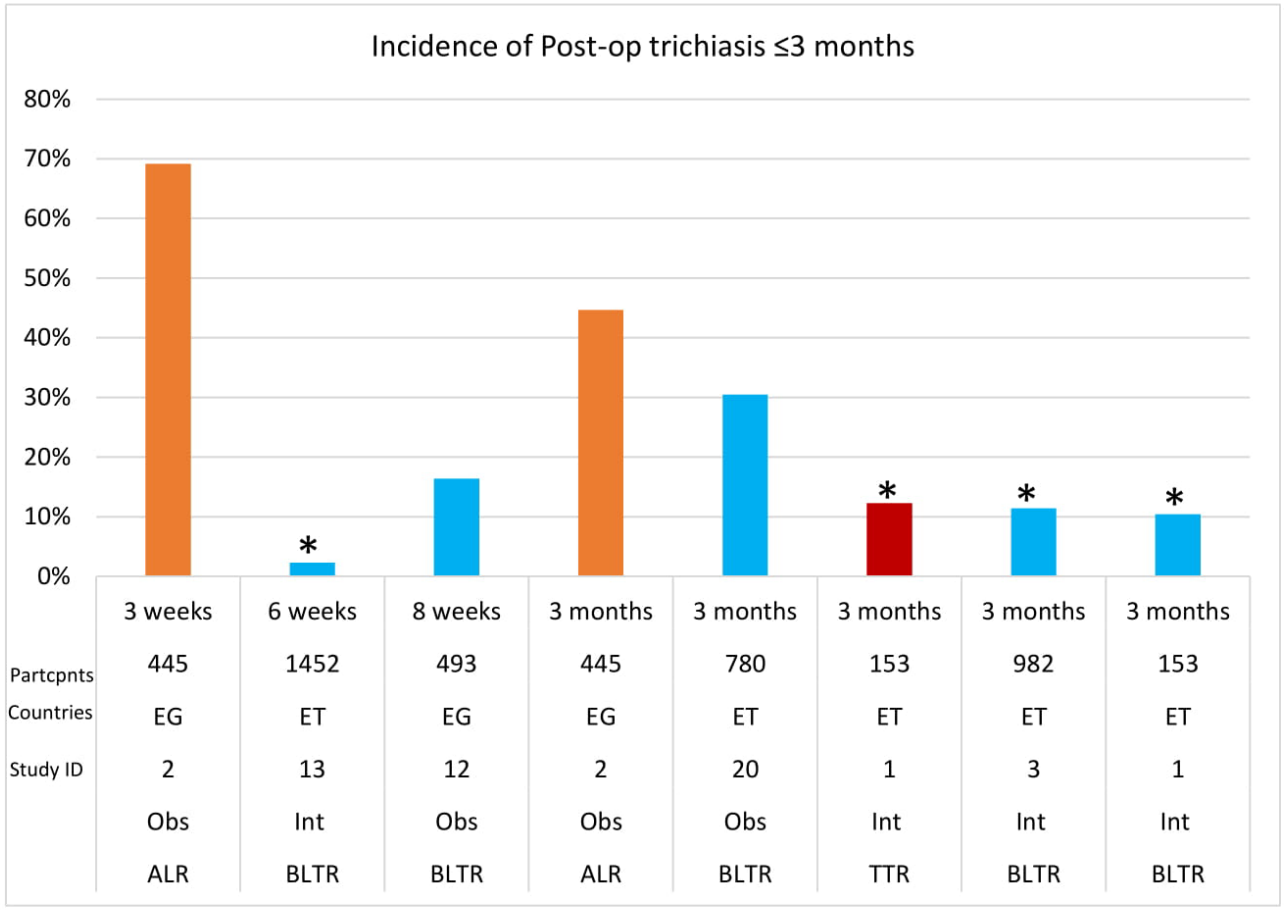
19 observational studies (cohort – retrospective and prospective, cross-sectional surveys, before-after studies)

Results

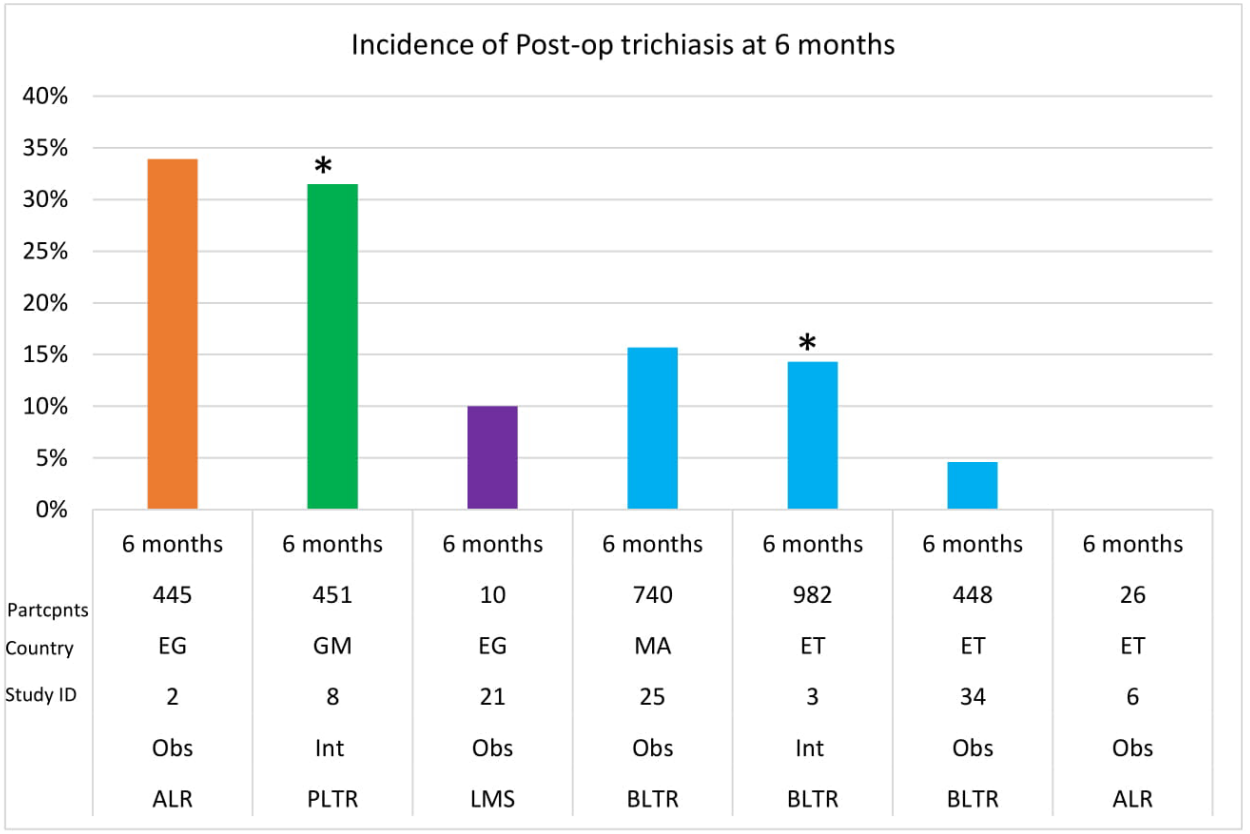
Incidence of Post-op TT



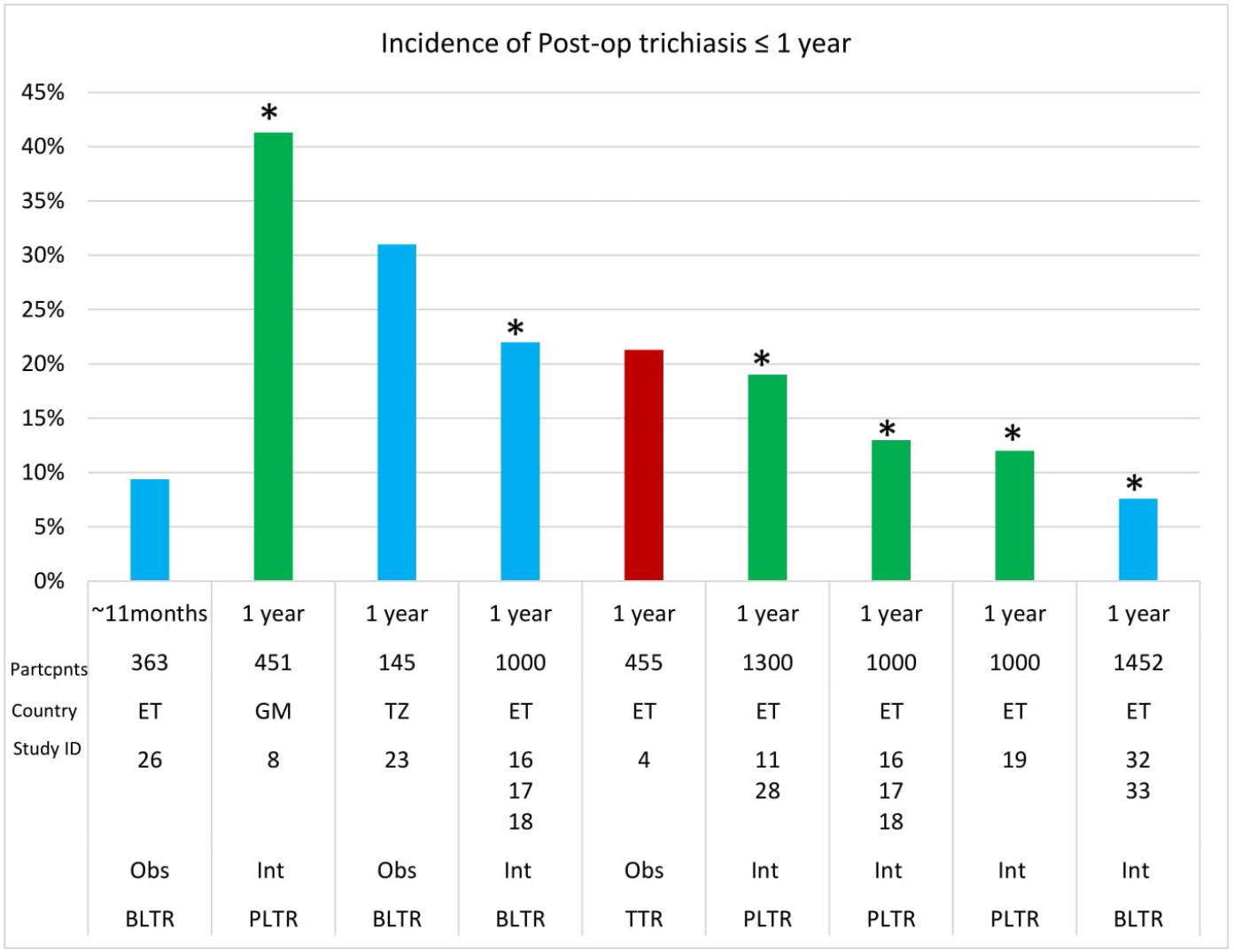
Incidence of Post-op TT ≤3 months



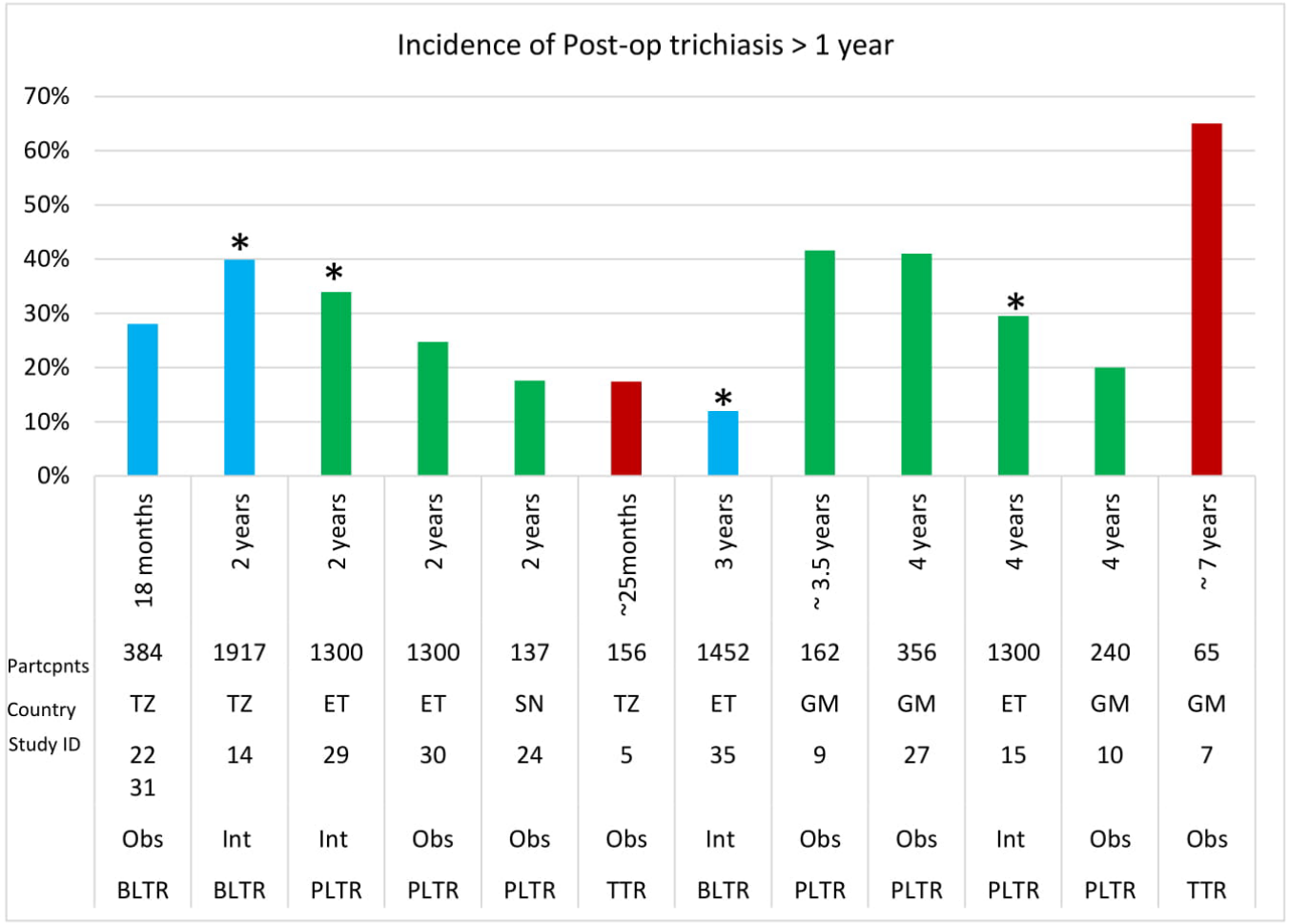
Incidence of Post-op TT at 6 months



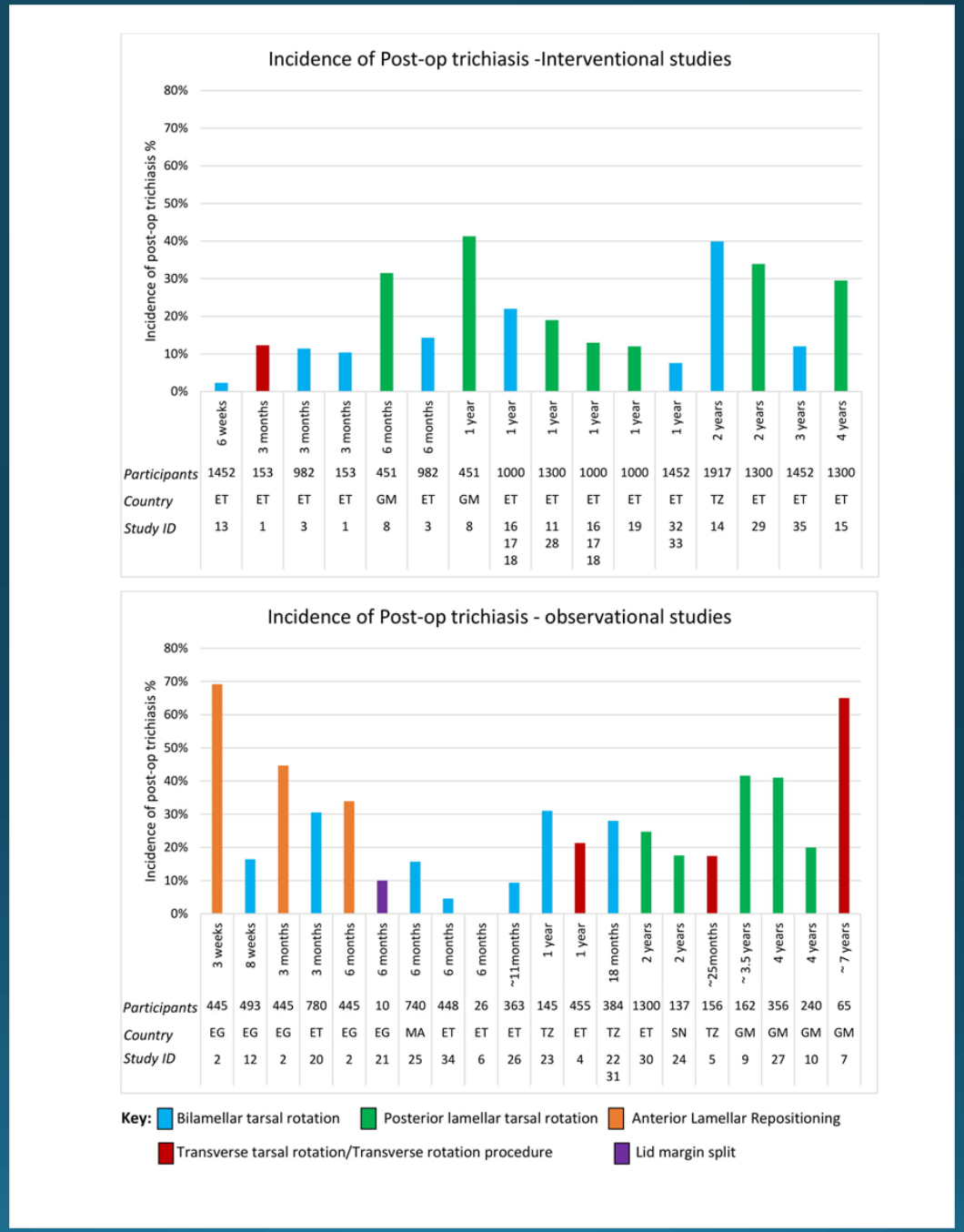
Incidence of Post-op TT ≤ 1 year



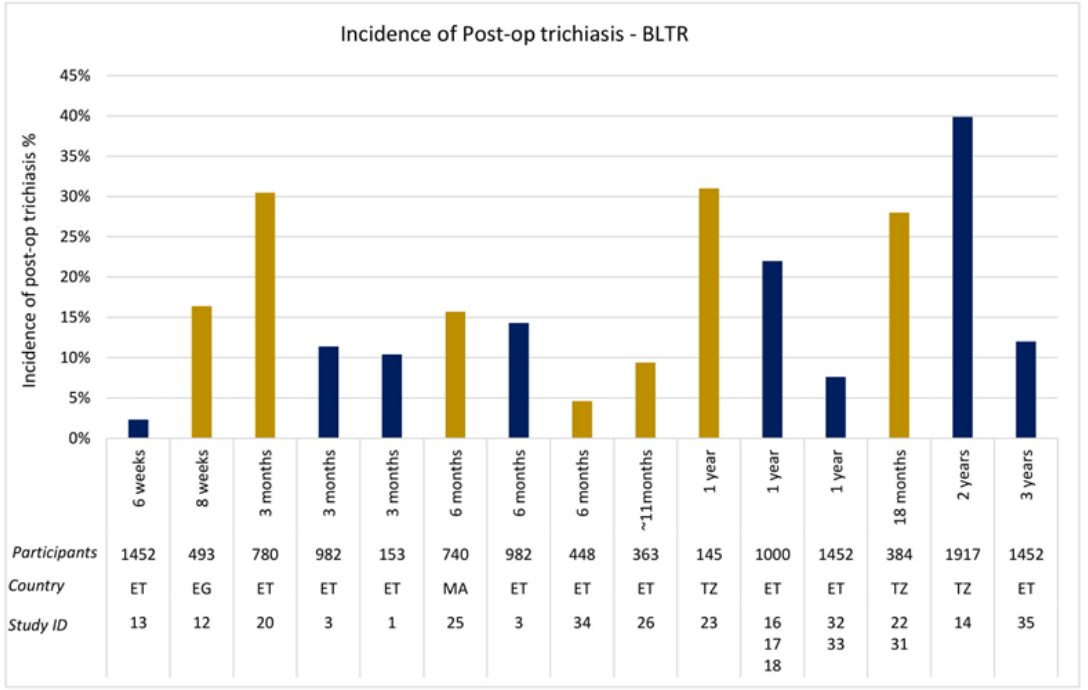
Incidence of Post-op TT > 1 year

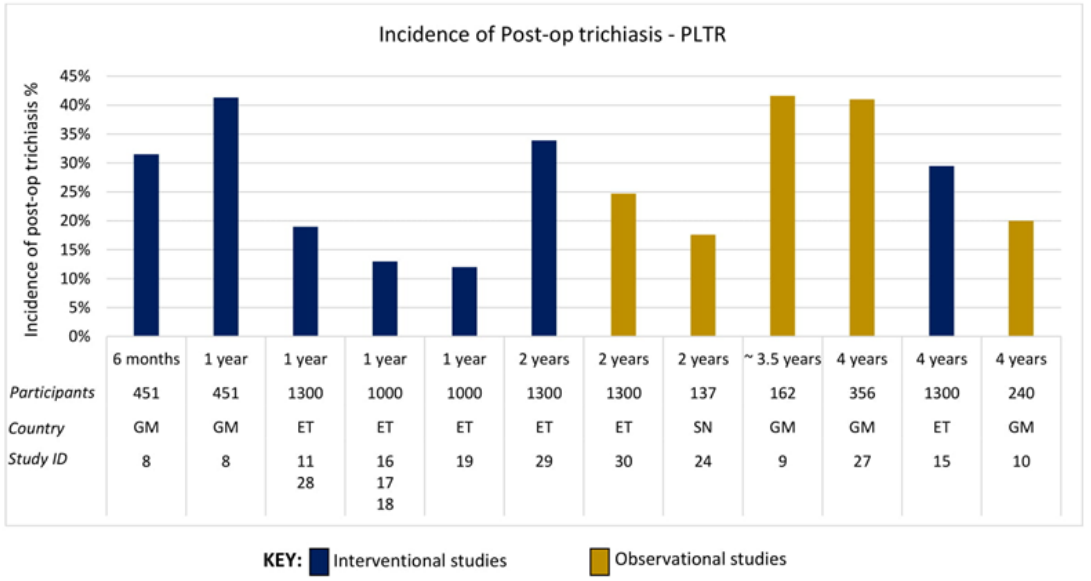


Interventional vs observational studies



BLTR vs PLTR


Incidence of Post-op trichiasis - BLTR
Incidence of post-op trichiasis %
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
6 weeks | 8 weeks | 3 months | 3 months | 3 months | 6 months | 6 months | 6 months | ~11months | 1 year | 1 year | 1 year | 18 months | 2 years | 3 years
Participants: 1452 | 493 | 780 | 982 | 153 | 740 | 982 | 448 | 363 | 145 | 1000 | 1452 | 384 | 1917 | 1452
Country: ET | EG | ET | ET | ET | MA | ET | ET | ET | TZ | ET | ET | TZ | TZ | ET
Study ID: 13 | 12 | 20 | 3 | 1 | 25 | 3 | 34 | 26 | 23 | 16 17 18 | 32 33 | 22 31 | 14 | 35


Incidence of Post-op trichiasis - PLTR
Incidence of post-op trichiasis %
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
6 months | 1 year | 1 year | 1 year | 1 year | 2 years | 2 years | 2 years | ~ 3.5 years | 4 years | 4 years | 4 years
Participants: 451 | 451 | 1300 | 1000 | 1000 | 1300 | 1300 | 137 | 162 | 356 | 1300 | 240
Country: GM | GM | ET | ET | ET | ET | ET | SN | GM | GM | ET | GM
Study ID: 8 | 8 | 11 28 | 16 17 18 | 19 | 29 | 30 | 24 | 9 | 27 | 15 | 10
KEY: Interventional studies
Observational studies

Discussion

- High incidence of post-op TT (>20%)
- Interventional versus observational (44% vs 57% reported >20%)
- Inconsistent follow up period
- Surgery technique – PLTR versus BLTR
- Azithromycin – to use (Gower '11, West '06 & '07) or not to use (Burton '05)
- Better results reported in Ethiopia compared to other regions
- Interventions – Training, standardisation
- Hyperendemic versus Hypondermic
- Should the 10% recommendation be reviewed?

Online survey

Objectives

To identify national targets for good surgical outcome (% of patients with no post-operative trichiasis).

To identify and document the national policies and strategies to monitor surgical outcomes and conduct surgical audits.

To identify national strategies for addressing poor surgical quality among surgeons.

Study setting

- The survey was conducted in the 29 trachoma-endemic countries in the WHO African Region where trachoma is still considered a public health problem
- All national trachoma programme coordinators or their equivalents in these countries were involved in the survey.
- All the 29 selected participants consented and participated in the survey.
- Conducted between May and July 2018

Methods

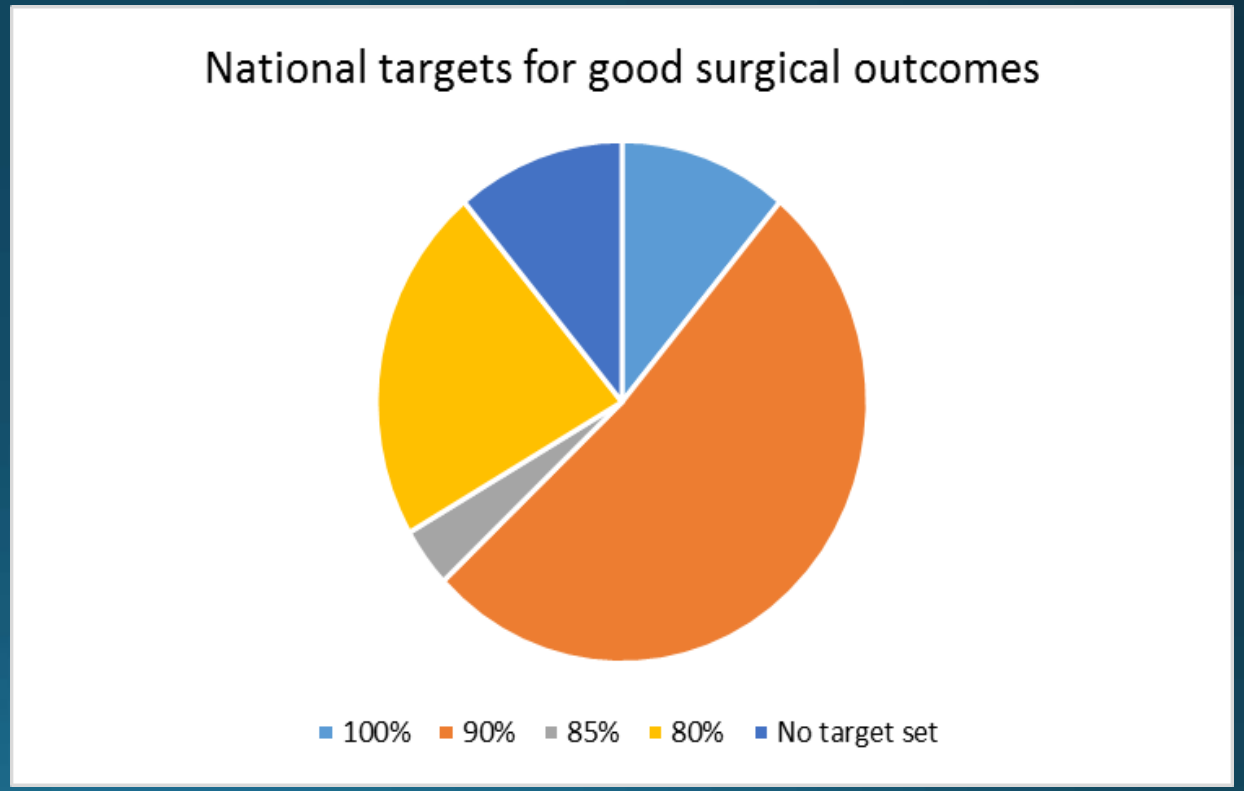
- Cross-sectional
- Survey questionnaire administered via email
  - 8 questions (6 closed and 2 opened-ended)
- Questionnaire was translated into French and Portuguese for non-English speaking countries
- Data was analyzed using Advanced Excel

Results

- Two of the 29 trachoma-endemic countries in WHO African region were excluded from data analysis as they had not started implementing the “surgery” part of the SAFE strategy and did not have policies or systems in place for surgical follow up, outcome assessment and audit of trichiasis surgeon.

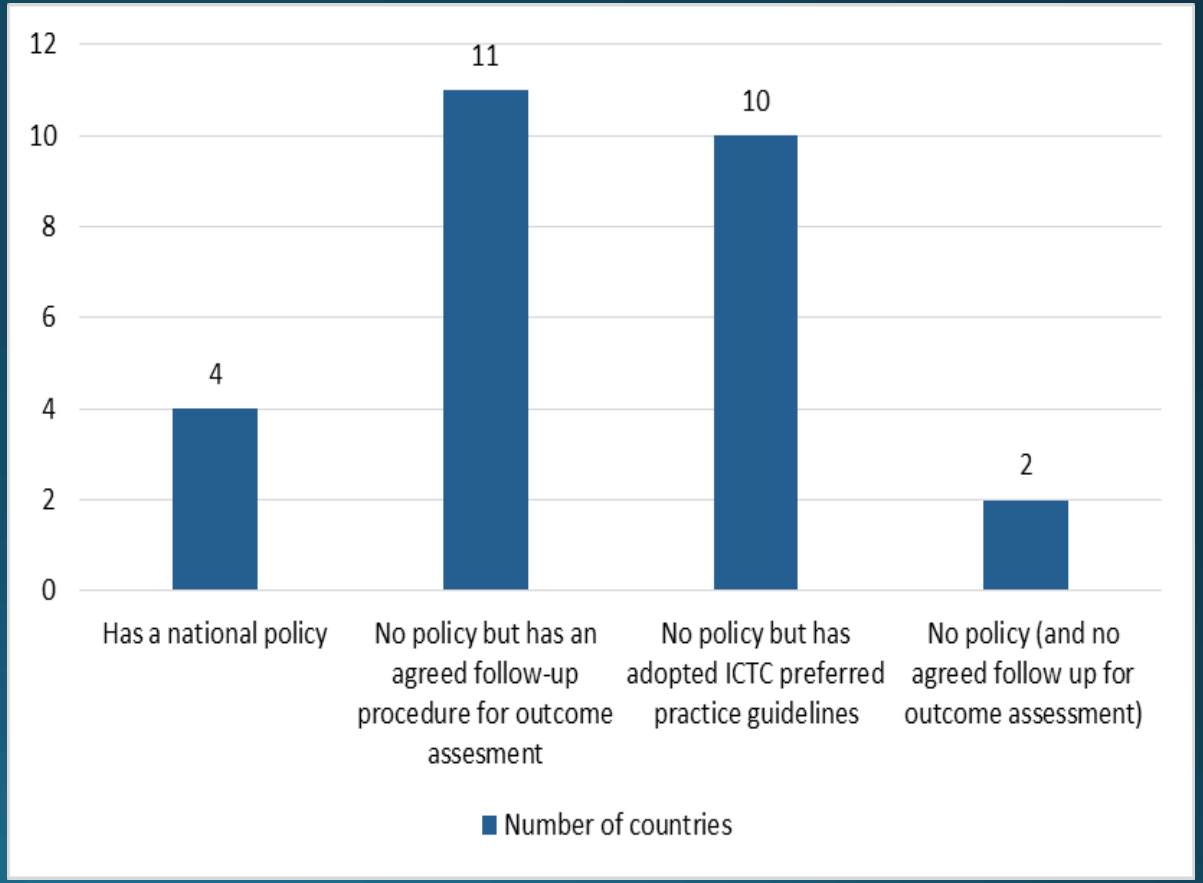
Current national targets for good surgical outcome

- 89% (24 of 27 countries) reported having a set national target for good surgical outcomes at 3-6 months or the last routine time that follow up is scheduled.
- Out of the 24:
  - 3 countries had a target of 100% good outcomes
  - 14 countries had a target of 90% success rate
  - 6 countries had a target of 80% good outcomes
  - 1 country had a target of 85% success rate.
- 3 countries had not set any national targets for good outcomes.



Availability of national policies for post-TT surgery follow-up

- Only 4 countries (14.8%) reported having a national policy for follow-up of trichiasis patients after surgery
- 11 countries did not have national policies or guidelines but have put in place systems and structures for follow up of patients trichiasis after surgery
- 10 countries have adopted the ICTC preferred practice guidelines
- 2 countries had no policy and no agreed follow up procedure for outcome assessment.

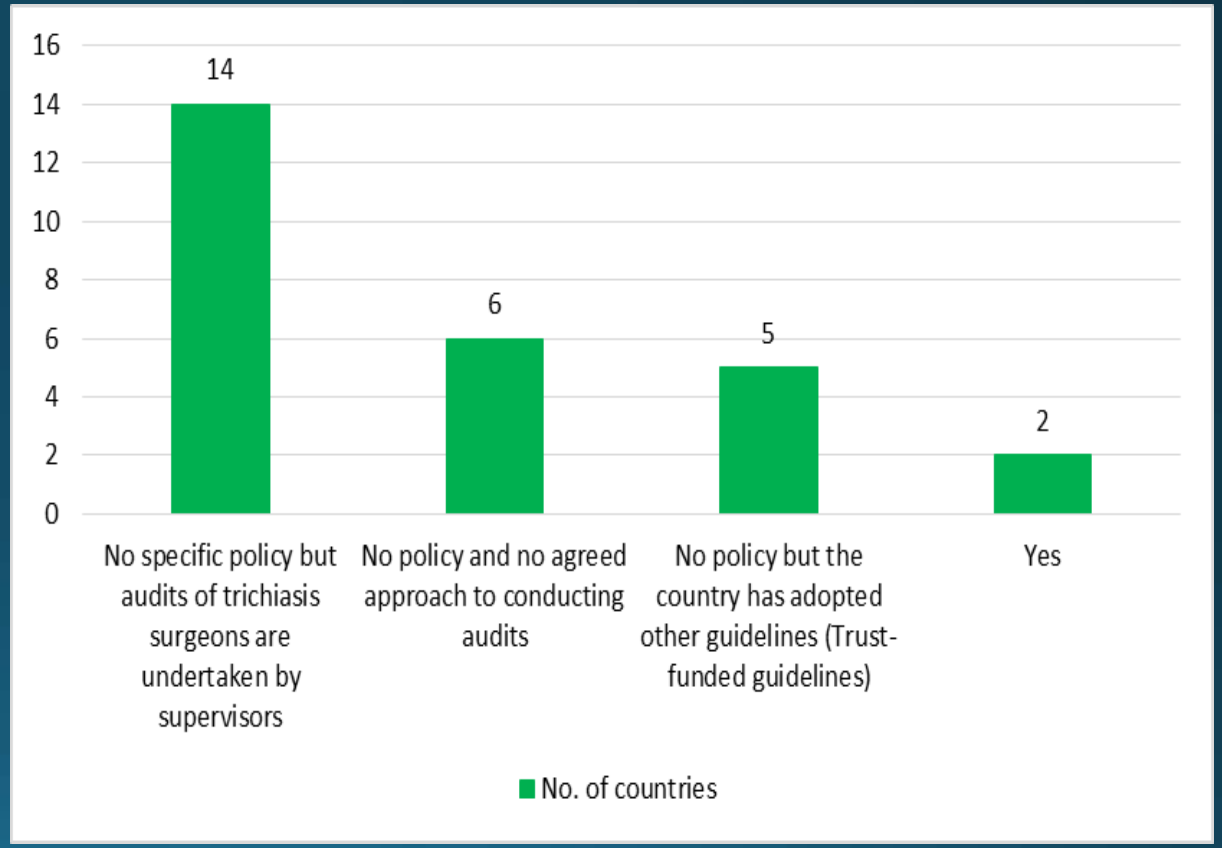


Recommended follow-up period

- 16 countries had three recommended follow up periods as part of their national policy or guidelines: 1-day post-operative follow-up, at 1-2 weeks to remove sutures and last follow up either at 3-6 months or 1 year after surgery.
- 4 countries had at least two follow up periods ranging from 1-day post-operatively to 1-year after surgery
- 6 countries had only one recommended follow up period either at 1-2 weeks or at 3-6 months
- 1 country did not have any recommended follow up period for patient re-examination after surgery.
- Overall, all but 3 countries reported having a scheduled follow up at 3-6 months after surgery.

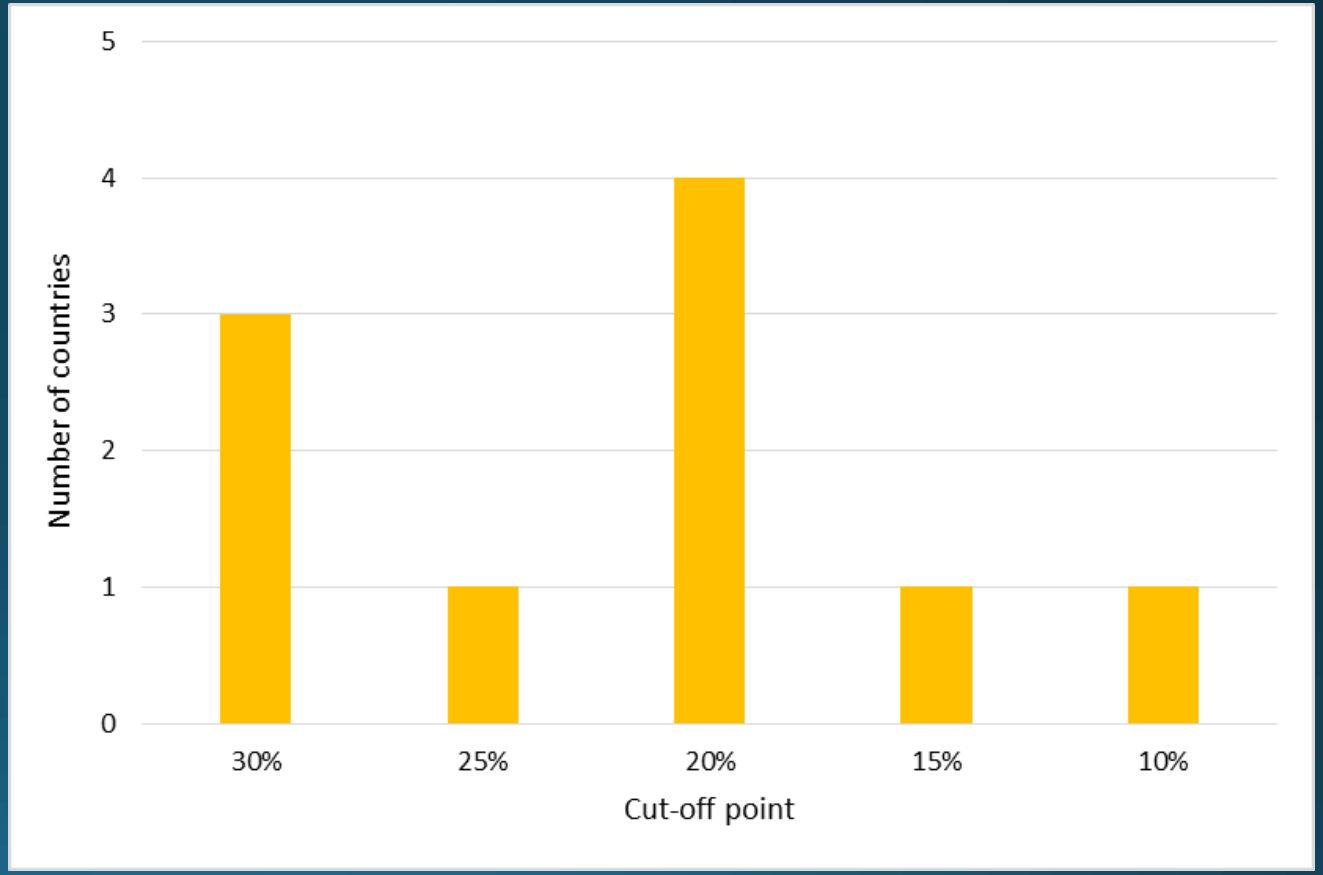
Availability of national policies for conducting audit of trichiasis surgeons

- only 2 countries reported having a national policy to guide the assessment of surgical outcomes of their surgeons.
- 14 countries had no specific government policy but reported that audits of trichiasis surgeons were undertaken by supervisors (n=14)
- 5 countries had adopted other guidelines, such as the Queen Elizabeth Diamond Jubilee Trust funded surgical
- 6 countries had no policy and no agreed approach to conducting audits



National accepted cut-off point (percentage of post-operative trichiasis by a surgeon) that is used to recommend that a surgeon should discontinue surgery

- Only 10 countries had a nationally accepted cut-off point at which a surgeon should discontinue surgery until retraining or other interventions have been undertaken.
  - 30% poor outcomes (3 countries)
  - 25% (1 country)
  - 20% (4 countries)
  - 15% (1 country)
  - 10% (1 country).



Current approaches for managing post-op trichiasis

- By another trichiasis surgeon who is more experienced (n=13)
- By a specially trained ophthalmologist (n=6 countries)
- By the same surgeon who performed the first procedure (n=7)
- One country did not specify its current approach for managing post-operative trichiasis.
- Other approaches used to manage post-operative trichiasis include:
  - Referral to secondary eye units;
  - managed by the surgeon that identifies them during a surgical outreaches where the patient may be returning for a second surgery.

Challenges faced in managing post-operative trichiasis

1. **Lack of funds to support trichiasis surgery** and related activities such as training of new trichiasis surgeons, refresher training for existing surgeons, follow up of patients and monitoring of surgical outcomes
2. **Shortage of trained human resources to manage post-operative trichiasis** – i.e. there are not enough trichiasis surgeons to clear the existing backlog of trichiasis cases and at the same time provide post-operative care
3. **Refusal by patients to undergo repeat surgery**

Cont'd….

4. **Lack of proper follow-up systems for trichiasis patients after surgery** which makes it difficult to monitor outcomes and provide post-operative care to the patients who need it
5. **Limited national data on the magnitude of trichiasis to inform planning**
6. **Weak referral systems** and limited number of secondary eye care units for post-operative care management.

Discussion/Questions/Comments?