WORLD HEALTH ORGANIZATION
STRATEGIC AND TECHNICAL ADVISORY GROUP
FOR NEGLECTED TROPICAL DISEASES

WORKING GROUP ON MONITORING AND EVALUATION

TRACHOMA ALTERNATIVE INDICATORS STUDY DATA REVIEW

31 AUGUST – 1 SEPTEMBER 2016
WORLD HEALTH ORGANIZATION, GENEVA, SWITZERLAND

World Health Organization

Trachoma Alternative Indicators Study

Data review

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World Health Organization, Geneva, Switzerland

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Abbreviations

CDC	United States Centers for Disease Control and Prevention
ELISA	enzyme-linked immunosorbent assay
PCR	polymerase chain reaction
Pgp	plasmid gene product 3
TF	trachomatous inflammation—follicular
ROC	receiver operating characteristic

1. Background

1.1 Trachoma causes blindness through repeated conjunctival infection with *Chlamydia trachomatis (1)*. To eliminate trachoma as a public health problem *(2)*, the World Health Organization (WHO) recommends use of the SAFE strategy (that is, **s**urgery for advanced disease; mass drug administration of **a**ntibiotics to clear *C. trachomatis* infection; and **f**acial cleanliness and **e**nvironmental improvement to reduce transmission) *(3)*. Current (2006) guidelines *(4)* on the implementation of the A, F and E components are based on the prevalence of the sign "trachomatous inflammation—follicular", or TF *(5)*, in children aged 1–9 years.

1.2 As the prevalence of TF in 1–9-year-olds declines towards the elimination threshold of 5%, so too does the positive predictive value of TF for conjunctival *C. trachomatis* infection at both the individual and community levels *(6–9)*. Consequently, implementation of interventions against trachoma (particularly mass drug administration of antibiotics[1]) could, in some contexts, continue for longer than necessary to meet trachoma-related public-health goals.

1.3 A further consequence of declines in the prevalence of TF in 1–9-year-olds is that it becomes progressively more difficult to train graders to recognize TF *(10, 11)*, and to prove that they can do so accurately through formal inter-grader agreement exercises *(12)*.

1.4 The Trachoma Alternative Indicators Study was initiated in 2014 to examine, in a variety of settings, the relationships between the district-level prevalence of TF and (i) the district-level prevalence of conjunctival *C. trachomatis* infection, and (ii) the district-level prevalence of antibodies to *C. trachomatis*-derived antigens, in order to determine whether one or both should be used as adjuncts or alternatives for deciding whether to stop mass drug administration of antibiotics in trachoma elimination programmes. The study responds, in part, to recommendations made at a 2014 Technical Consultation on Trachoma Surveillance *(13)*.

1.5 The purpose of this meeting was to undertake an objective, open review of data generated by the study to date, consider implications for global policy and plan further work. The meeting agenda is presented as Annex 1. Participants are listed in Annex 2.

2. Trachoma grading, tests for infection, and tests for antibodies

2.1 In discussions of the advantages and disadvantages of the potential programmatic