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TECHNICAL CONSULTATION ON TRACHOMA SURVEILLANCE

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This report contains the collective views of an international group of experts, and does not necessarily represent the decisions or the stated policy of the World Health Organization.

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List of acronyms

TF	Trachomatous inflammation-follicular
TT	Trachomatous trichiasis
WHO	World Health Organization

1. Introduction

1. 1 Based on disease prevalence, several national trachoma programmes have now discontinued one or more components of the intervention strategy against trachoma[1] and are ready to initiate trachoma surveillance. **The role for surveillance in this context is to provide some level of certainty that elimination prevalence targets have been sustainably achieved, following the first assessment that demonstrates their attainment, by revealing disease re-emergence if (and only if) re-emergence is occurring.**

1.2 The trachoma surveillance guidance previously provided by the World Health Organization (WHO), presented in the 2008 report on the "Meeting on Post-Endemic Surveillance for Blinding Trachoma"[1], is excerpted in Annex A. Unfortunately, as noted at an informal meeting on trachoma surveillance held in conjunction with the 13th International Symposium on Human Chlamydial Infections in June 2014, that guidance is perceived both to be difficult to implement in a standardized way, and to lack an evidence base that might promote confidence in its sensitivity and specificity for detecting disease re-emergence. The brief for the present consultation, held in September 2014, was **to revise, where indicated, the WHO guidance on the nature and frequency of surveillance data that programmes should collect and compile in order to successfully declare elimination of blinding trachoma as a public health problem.** Participants are listed in Annex B.

1.3 To achieve this, the consultation reviewed previous efforts to conduct trachoma surveillance and existing knowledge about the natural history and epidemiology of trachoma, and identified priority questions for which further data gathering or analysis of existing datasets might be important to inform surveillance guidance. Interim trachoma surveillance standard operating procedures were developed, and are presented as Annex C of this report. **Those standard operating procedures need ratification by WHO's Strategic and Technical Advisory Group on Neglected Tropical Diseases before they can be considered formal guidance to trachoma elimination programs**.

1.4 Before and during the actual discussions, the consultation was labelled the "Technical Consultation on Post-Mass-Drug-Administration Surveillance for Trachoma". However, it was acknowledged during the consultation that surveillance may on occasions be needed in areas where mass drug administration has not taken place. The more generic term, "**trachoma surveillance**", is therefore used instead of "post-mass-drug-administration surveillance" in this report (including its title), and in the interim standard operating procedures[2].

1.5 For the purposes of the consultation, trachoma surveillance was defined as **monitoring and evaluation activities that assess the outcome of a trachoma elimination programme, conducted**

[1] The intervention strategy for trachoma is encapsulated by the acronym "SAFE", which represents **S**urgery for in-turned eyelashes ("trachomatous trichiasis"), **A**ntibiotics to clear conjunctival *Chlamydia trachomatis* infection, and **F**acial cleanliness and **E**nvironmental improvement to reduce transmission of conjunctival *C. trachomatis*.

[2] The term "post-endemic surveillance" used for the 2008 WHO meeting (see paragraph 1.2) is also imperfect because elimination of blinding trachoma as a public health problem from a particular population does not mean that trachoma is no longer an endemic disease in that population.

after elimination prevalence targets appear to have been achieved, in a defined trachoma endemic area.

1.6 Trachoma surveillance activities include (a) those that occur up to the time that preparation of a dossier for validation of elimination (of trachoma as a public health problem) is justified ("**pre-validation trachoma surveillance**"), and (b) those that occur after the time that preparation of a dossier is justified ("**post-validation trachoma surveillance**"). This consultation focused on drafting guidance (as interim standard operating procedures) for pre-validation trachoma surveillance.

1.7 The optimal approaches for pre-validation trachoma surveillance depend in part on the methodology employed for undertaking impact assessments, because when such assessments show that elimination prevalence targets have been achieved, they provide the starting point for surveillance. WHO has not previously produced any formal guidance on impact assessments. Informally, programmes have been advised to conduct impact assessments in the same way as baseline surveys, i.e., cluster random-sample surveys of 20-30 clusters, powered to estimate an expected prevalence of the sign "trachomatous inflammation-follicular" (TF) in children [2]. Work to examine the geo-statistical considerations of sampling in trachoma impact assessments is now being commissioned by WHO. In the meantime, interim standard operating procedures for trachoma impact assessments are presented here as Annex D to this report. (A modification to the current programmatic decision-making algorithm in response to impact assessment data has been included, in order to remove uncertainty for districts in which the TF prevalence in 1-9 year-olds is 5-9.9% by codifying the previous (variable) practice of undertaking one further year of implementation of elimination activities before repeating an impact assessment.)

1.8 The 1998 World Health Assembly Resolution 51.11 on "Global Elimination of Blinding Trachoma" [3] did not include definitions for the elimination of blinding trachoma [4], which were eventually established in 2003 [5]and have since been slightly modified [6]. In principle, there is no impediment to further modifying elimination targets or changing related guidance to programmes, but generally this should be done only where the evidence base mandates change.

1.9 The consultation reviewed both published and unpublished data that might help answer questions relevant to trachoma surveillance. Unpublished data were discussed with the understanding that this would be done "off the record", and participants signed non-disclosure agreements in relation to those parts of the conversation. In this report, therefore, sample