

Outcomes of trachoma screening in the Torres Strait: lessons for trachoma control

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BACKGROUND

Trachoma is a disease caused by chlamydia infections of the eye. Overtime, repeated infections can lead to severe eye disease and blindness¹.

Trachoma generally occurs in dry and dusty environments where personal and community hygiene is difficult to maintain, and is associated with overcrowding and reduced access to or use of water^{1,2}.

Trachoma is spread by infected eye and nasal discharge that is passed between young kids. Maintenance of facial cleanliness is fundamental to preventing infection².

Prior to 2008 it was believed that trachoma had been eliminated from Queensland. However, since then, a limited number of screening exercises have found follicles consistent with a diagnosis of active trachoma in children residing in the Torres Strait Islands.

Despite these findings there is a lack of objective evidence to either prove or disprove that trachoma associated chlamydia are causing eye infections in the Torres Strait. Further, there is no evidence that this is causing visual impairment in the Torres Strait.

METHODS

In 2016 and 2017 Queensland Health undertook a trachoma mapping exercises in three communities in the Torres Strait Islands identified as being potentially at risk of trachoma.

This consisted of examining and classifying eyes according to the WHO simplified grading tool. The ophthalmologist performing the screen also conducted a more detailed eye examination which included checking each child for pannus and Herbert's pits.

Conjunctival swabs for chlamydia polymerase chain reaction testing were collected from each child found to have five or more follicles consistent with the WHO criteria for trachomatous inflammation – follicular.

Clean face prevalence was assessed in all three communities.

TRACHOMA GRADING CARD

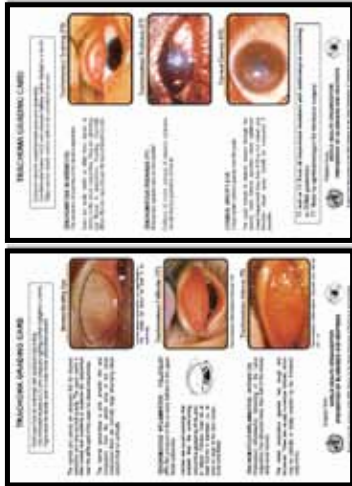


Figure 1. WHO simplified trachoma grading scheme³

RESULTS / DISCUSSION

Population coverage:

In 2016 and 2017, 93% (153/165) and 89% (135/151) of Aboriginal and Torres Strait Islander children aged 5-9 who were present in the community during the trachoma team's visit were screened for trachoma.

Active trachoma:

In 2016, 9% (14/153) and in 2017, 8% (11/135) of children who were screened were found to have signs consistent with a clinical diagnosis of active trachoma according to the WHO simplified grading system. No other features characteristic of trachoma (e.g. pannus or Herbert's pits) were identified in these children. No child was diagnosed as having active trachoma in 2016 or 2017.

PCR results:

All swabs were negative for *C. trachomatis*. Further testing for viral and bacterial causes of follicular eye disease was performed. The majority of these tests were negative and did not explain the clinical findings across the three communities.

Clean face prevalence:

100% of children screened for trachoma were also screened for clean face. In 2016, 92% (141/153) and in 2017 90% (121/135) of children had clean faces.

SAFE STRATEGY

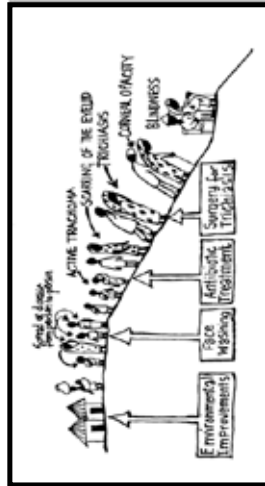


Figure 2. SAFE strategy for preventing blindness from trachoma⁴

CONCLUSIONS / IMPLICATIONS

- Trachoma is not considered to be a public health problem in Queensland
- Kids in the Torres Strait Islands are keeping their faces clean
- In the Torres Strait, believed to be a low prevalence setting for trachoma, detailed eye examinations by an ophthalmologist in children who met the definition for trachoma using the simplified grading tool, did not identify active trachoma
- In low prevalence settings, continued use of a simplified tool may lead to over diagnosis of trachoma, resulting in unnecessary individual or community treatment and drive unwarranted future screening exercises

References

1. World Health Organization. Trachoma. <https://www.who.int/news-room/fact-sheets/detail/trachoma>. 2018.
2. World Health Organization. Trachoma. <https://www.who.int/news-room/fact-sheets/detail/trachoma>. 2018.
3. World Health Organization. Trachoma. <https://www.who.int/news-room/fact-sheets/detail/trachoma>. 2018.
4. World Health Organization. Trachoma. <https://www.who.int/news-room/fact-sheets/detail/trachoma>. 2018.

Acknowledgments

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