



TRACHOMA: LAB TESTS REDUCE UNNEEDED SCREENING

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LABORATORY testing should be part of screening for trachoma in remote Queensland communities, to avoid unnecessary antibiotic treatment and further screening, according to research from the University of Queensland published today by the *Medical Journal of Australia*.

Trachoma is a bacterial eye infection that can cause irreversible blindness. Australia is the only high-income country in which endemic trachoma persists, primarily in remote Aboriginal and Torres Strait Islander communities. It is strongly associated with poverty, and its persistence in First Nations populations is “linked with social inequalities, the ongoing legacy of colonisation”, wrote the researchers, led by Ms Kathleen Lynch, a PhD candidate at the University of Queensland, and a clinical nurse consultant in Queensland Health’s Communicable Diseases Branch.

Lynch and colleagues conducted three cross-sectional screening surveys across 2019-2021, to compare the findings of standard clinical assessments and of complementary clinical and laboratory methods for determining whether community-wide treatment for trachoma was warranted in a remote Queensland community. Children aged 1-14 years were screened, and there was opportunistic screening of people aged 15 years or more.

“During the three surveys, 73 examinations of 58 children aged 1-4 years, 309 of 171 aged 5-9 years, and 142 of 105 aged 10-14 years for trachoma were undertaken, as were 171 examinations of 164 people aged 15 years or more; 691 of 695 examinations were of Aboriginal or Torres Strait Islander people (99%), 337 were of girls or young women (48%),” Lynch and colleagues reported.

“Clinical signs consistent with trachomatous inflammation-follicular were identified in 5-9-year-old children 23 times (7%), including in 11 with non-chlamydial infections and one with a *C. trachomatis* infection.

“One child (10-14 years) met the criteria for trachomatous scarring. Two of 272 conjunctival swab samples (all ages) were polymerase chain reaction-positive for *C. trachomatis* (0.7%). Two of 147 people aged 15 years or more examined in 2019 had trichiasis, both aged 40 years or more. Seven of 53 children aged 1-9 years in 2019 and seven of 103 in 2021 were seropositive for anti-Pgp3 antibodies.”

Lynch and colleagues wrote that their findings had implications for how trachoma screening was performed and how monitoring of the progress being made to eliminating trachoma could be adjusted.

“We found that while [trachoma] was probably once endemic in the remote Queensland community we surveyed, this is no longer the case,” they wrote.

“Based on these and similar findings elsewhere in north Queensland, the National Trachoma Surveillance and Control Group endorsed discontinuing routine screening in this community in 2022.

“Indeed, following our Torres Strait Islands investigation, routine public health screening for trachoma is no longer required in any Queensland community.

“Our findings have implications for how trachoma screening is performed, and how progress towards elimination is monitored in both Australia and other countries where clinical signs of trachoma persist despite repeated community-wide antibiotic treatment.

“Following current Australian guidelines, without the benefit of the data on infections and seropositivity we collected, this community would have undergone an unnecessary cycle of repeated screening and treatment.



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"We have shown the added benefit of detailed clinical examination, PCR testing, and assessment of anti-Pgp3 antibody seroprevalence alongside routine public health surveys," Lynch and colleagues concluded.

"As Australia approaches trachoma elimination, laboratory testing, including PCR testing and serology, should be incorporated into national guidelines."

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