

Study links high community sanitation coverage to lower risk of trachoma

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A diagnostic technician performs an eye exam on a woman in Burkina Faso, checking for trachoma. Credit: CDC

A global study of water and sanitation coverage has found that community access to sanitation facilities exceeding 80 percent reduces rates of trachoma, a blinding eye disease caused by repeated infection with *Chlamydia trachomatis*. The risk was lower even for people in the community without household access to sanitation.

Researchers at Emory University's Rollins School of Public Health collaborated with researchers at the World Health Organization (WHO) and the University of Nevada, Reno. The team used data from the Global Trachoma Mapping Project from 2012-2016 to analyze the associations between water and [sanitation](#) coverage and trachoma in 13 countries. The data included data from 884,850 children ages 1-9.

Matthew Freeman, MPH, Ph.D., associate professor of environmental health at Rollins, was senior author of the study.

The complete paper is published in *PLOS Neglected Tropical Diseases*.

"The data suggest that only when you reach those high levels of coverage do you actually get enough feces out of the environment to start seeing health gains," says Freeman. "I think this further underscores the fact that we can't be satisfied by marginally increasing people's use of sanitation. To achieve true health gains in a community, you have to reach total or near-total sanitation coverage and use."

Freeman adds, "The true [public health](#) benefit of sanitation is community-level coverage, not coverage of individual households. Toward that purpose, the typical promotion of sanitation as a household rather than community good isn't accurate and may undermine intervention effectiveness."

The Global Trachoma Mapping Project was funded by the U.K. Government, led by Sightsavers and co-funded by USAID. Conducted between 2012 and 2016, the project collected data from 2.6 million people in 29 countries. It is the largest infectious disease mapping effort ever completed.

More information: Joshua V. Garn et al. Sanitation and water supply coverage thresholds associated with active trachoma: Modeling cross-

sectional data from 13 countries, *PLOS Neglected Tropical Diseases* (2018). [DOI: 10.1371/journal.pntd.0006110](https://doi.org/10.1371/journal.pntd.0006110)

Provided by Emory University

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