

# Community spread of trachoma could be stopped by treating all household members

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All members of the household need to be treated for trachoma in order to prevent rapid re-infection, according to a new study published in *PLoS Neglected Tropical Diseases*.

Trachoma is an infectious [eye disease](#), and the leading cause of the world's infectious [blindness](#). Globally, 84 million people suffer from active infection and nearly 8 million people are visually impaired as a result of this disease.

Community-wide administration of [antibiotics](#) is one arm of a four-pronged strategy in the global initiative to eliminate blindness due to trachoma. The potential impact of more efficient, targeted treatment of infected households depends on the relative contribution of community and household transmission of infection, which have not been previously estimated.

A research team which included a number of scientists from the London School of Hygiene & Tropical Medicine, together with colleagues from Imperial College London, Johns Hopkins (US) and the Wilmer Eye Institute, studied prevalence data from four endemic populations in The Gambia and Tanzania. They found the rate of transmission of trachoma within households to be higher than the rate in communities, leading to persistent transmission of the infection within households. In all populations, individuals in larger households contributed more to the incidence of infection than those in smaller households.

David Mabey, one of the authors of the paper, comments: 'We have known for many years that cases of trachoma tend to cluster within households. This paper is the first to compare rates of transmission within and between households. We have shown that within-household transmission is far more efficient, and accounts for almost three quarters of new infections across the four communities we studied. Failure to treat all infected members of a household during the mass administration of antibiotics is likely to lead to the rapid re-infection of that household, followed by a more gradual spread across the community. It is important to achieve high treatment coverage of infected households in mass treatment campaigns.'

Isobel Blake, the lead author of the study from Imperial College London, said: "Trachoma can be a very debilitating disease - it is difficult for people in the developing world to work and get on with their everyday lives if they lose their sight. Our research shows that the bacterial infection which causes trachoma can spread really easily within a household. This happens through contact with an infected person's hands, or with objects like towels and clothing that have picked up the bacteria, or with flies, which transfer the bacteria from person to person. If control programmes make sure they treat everyone who is living with an infected person, they can greatly reduce the spread of the infection."

Provided by London School of Hygiene & Tropical Medicine

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