

Febrile illnesses in children most often due to viral infections

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Most children ill with fever in Tanzania suffer from a viral infection, a new study published in the *New England Journal of Medicine* shows. A research team led by Dr. Valérie D'Acremont from the Swiss Tropical and Public Health Institute in Basel and the Policlinique Médicale Universitaire in Lausanne systematically assessed the causes of febrile illnesses in Tanzanian children. According to the results, in most cases a treatment with antimalarials or antibiotics is not required. The finding has the potential to improve the rational use of antimicrobials, and thus reduce costs and drug resistance.

In many African countries, sick children with fever are still believed to suffer from malaria. Fortunately, rapid and reliable diagnostic tools make malaria relatively easy to diagnose today. This is less true for other febrile illnesses that are potentially severe and for which a specific treatment is required.

For the first time, scientists from the Swiss Tropical and Public Health Institute (Swiss TPH) in Basel and the Policlinique Médicale Universitaire in Lausanne, in collaboration with the Geneva University Hospitals, the Faculty of Medicine of the University of Geneva and the Tanzanian Ministry of Health attempted a comprehensive screening of Tanzanian children diagnosed with fever. The team led by Dr. Valérie D'Acremont analysed clinical field-data and the results of over 25'000 laboratory tests, using a complex algorithm. This allowed differentiating the bacterial, parasitic or viral causes for the children's fever episode.

The results show that in half of the cases children suffered from acute respiratory infections mostly due to viruses, in particular influenza. For the other [children](#), malaria and bacterial infections were rare and most of them had also a viral infection. Neither an antimalarial nor an antibiotic treatment is required in these cases.

Antibiotic resistance as a major public health concern

These results are highly relevant for patient management and [public health](#) measures. Treatments with antibiotics and the development of resistance against them is one of the major public health problems not only in Africa, but worldwide. In Europe, i.e., resistance against antibiotics is a growing threat.

"When a child has a febrile illness, antibiotic should thus only be used in limited and specific situations that can be identified by a health professional" underscores Valérie D'Acremont. The study represents a milestone in helping health personnel in resource-limited countries to better gauge these specific situations and provide the best possible treatment for their feverish patients.

Provided by Swiss Tropical and Public Health Institute

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