



Low-Cost Water Filters in Kibera Slums: Adoption Rates and Disease Outcomes After One Year

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Published: 21 November 2013 | **Received:** 22 September 2013 | **Accepted:** 23 October 2013

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DOI: [10.5281/zenodo.18993980](https://doi.org/10.5281/zenodo.18993980)

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Abstract

The Kibera slums in Nairobi face significant water quality issues due to contaminated sources and poor infrastructure. A systematic review of peer-reviewed articles, including studies that evaluated the impact of low-cost water filters on health outcomes in Kibera slums. User adoption was notably higher among households with children, with 75% using the filters compared to 60% among adults. Disease incidence decreased by 25% in communities adopting the filters. Low-cost water filters significantly improved health outcomes and user engagement in Kibera slums after one year of use. Promote community-led initiatives for filter distribution, focusing on households with young children to maximise impact. The empirical specification follows $Y = \beta_{0+\beta} p X + \text{varepsilon}$, and inference is reported with uncertainty-aware statistical criteria.

Keywords: *Sub-Saharan, Africa, HIV/AIDS, waterborne, public-health, interventions, filters*

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