Predictors of *E. coli* contamination at rural water points in Kenya, Malawi, Mozambique, Uganda, and Zambia

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Little quantitative information is available on how institutional factors affect drinking water quality in rural sub-Saharan Africa. We collected data on *E. coli* concentrations and management practices at 549 rural water points in Kenya, Malawi, Mozambique, Uganda, and Zambia. As expected, piped water had much lower odds of contamination than public taps, boreholes, dug wells, and springs. The presence of a trained technician marginally decreased the odds of contamination (*OR*=0.28, *p*=0.07). Among water points testing positive for *E. coli*, nearby technical support and fee collection systems were associated with significant decreases in concentrations. Surprisingly, the sanitary inspection score, previously recommended as a surrogate for water quality analysis, was uncorrelated with *E. coli* concentrations (*r*=0.02, *p*=0.67). These results provide further evidence of the need for financial and institutional support to maintain water points, to aim for piped water as the gold standard, and to monitor water quality in lieu of using proxy measures.

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