

Abstract

High levels of environmental contamination, often associated with improper waste and excreta management, are widespread among informal settlements within urban areas in developing countries. We determined the level of faecal contamination in domestic water sources and evaluated the potential contribution of these water sources to intestinal helminthiases in seven informal settlements of Kisumu City, western Kenya. Membrane filtration technique was used for enumeration of total and faecal (*Escherichia coli*) coliform bacteria in water samples collected from dams, rivers, springs and wells. Out of the 80 water sources sampled, 76 (95%) were highly contaminated with *E. coli*. All water samples from unprotected wells (26) and 92.6% of samples from protected wells (25) were positive for *E. coli*. The highest and lowest *E. coli* densities were observed in samples from dams ($3,800 \pm 1,807$ coliforms per 100 ml) and boreholes (419 ± 223 coliforms per 100 ml), respectively ($p = 0.0321$). Distance from pit latrines was negatively associated with *E. coli* coliform density for wells ($r = -0.34$, $n = 53$, $p = 0.0142$). Untreated well-water may not be suitable for human consumption, and its continued use constitutes a major health risk for the inhabitants of these informal settlements.