Title:
A Novel Community-Based Water Recreation Area for Schistosomiasis Control in Rural Ghana

Short Title:
Community-Based Water Recreation Area for Schistosomiasis Control in Rural Ghana

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ABSTRACT

Primary prevention of schistosome infection has received little attention to date. In this paper we describe a novel water recreation area (WRA) to reduce *Schistosoma haematobium* infection rates in Adasawase, Ghana. Urogenital schistosomiasis is a waterborne parasitic disease that affects over 100 million people worldwide, primarily children in the rural tropics. The disease is contracted via dermal contact with contaminated water. Mass chemotherapy is presently used to control morbidity, but chemotherapy does not confer immunity and reinfection has severe health impacts. In 2008, over 50% of boys and 36% of girls in Adasawase had *S. haematobium* eggs in their urine. Recreational contact with water was the primary transmission route. In collaboration with community members, a novel water recreation area (WRA) was constructed. The WRA is groundwater and rainwater fed and serves more than 100 children at any given time. It was constructed from local materials and labor, designed to last more than 30 years, and minimizes exposure to *S. haematobium*. One year after construction, the annual incidence of *S. haematobium* infection dropped from 17.4% (girls) and 26.9% (boys) in 2009 to 2.2% and 8.4% in 2010, respectively. These promising results suggest that WRAs may be useful for controlling schistosome transmission.