## Abstract

Although accurate assessment of the prevalence of Schistosoma mansoni is important for the design and evaluation of control programs, the most widely used tools for diagnosis are limited by suboptimal sensitivity, slow turn-around-time, or inability to distinguish current from former infections. Recently, two tests that detect circulating cathodic antigen (CCA) in urine of patients with schistosomiasis became commercially available. As part of a larger study on schistosomiasis prevalence in young children, we evaluated the performance and diagnostic accuracy of these tests--the carbon test strip designed for use in the laboratory and the cassette format test intended for field use. In comparison to 6 Kato-Katz exams, the carbon and cassette CCA tests had sensitivities of 88.4% and 94.2% and specificities of 70.9% and 59.4%, respectively. However, because of the known limitations of the Kato-Katz assay, we also utilized latent class analysis (LCA) incorporating the CCA, Kato-Katz, and schistosome-specific antibody results to determine their sensitivities and specificities. The laboratory-based CCA test had a sensitivity of 91.7% and a specificity of 89.4% by LCA while the cassette test had a sensitivity of 96.3% and a specificity of 74.7%. The intensity of the reaction in both urine CCA tests reflected stool egg burden and their performance was not affected by the presence of soil transmitted helminth infections. Our results suggest that urine-based assays for CCA may be valuable in screening for S. mansoni infections.