te, Nigeria; Centers for Disease Control and Prevention, Coordinating Center for Infectious Diseases, National Center for Zoonotic, Vectorborne and Enteric Diseases, Parasitic Diseases Branch, Atlanta, Georgia; Emory University Rollins School of Public Health, Atlanta, Georgia

Abstract.

We determined whether the school-based "disease mapping" methodology used to assess urinary schistosomiasis (SCH) is useful for determining trachoma interventions and whether the district-based approach recommended for trachoma is useful for SCH control programs. We conducted two separate integrated surveys in eight districts of central Nigeria: school based and district based. A total of 17,189 children were examined for trachoma and 16,238 children were examined for hematuria from 363 schools and 2,149 households. School surveys identified 67 communities warranting praziquantel drug treatment of SCH and 142 trachoma-endemic communities warranting trachoma control activities. In district-level estimates, we identified 24 communities for praziquantel treatment and 0 for trachoma intervention. Integrating trachoma into SCH school-based surveys, and SCH into trachoma surveys, was quick and easy, but in this setting, school-based surveys were more useful for identifying communities where intervention is warranted.

Trachoma mapping surveys are household surveys that use a cluster randomized sample design and yield a district-wide estimate of the prevalence of the disease.[2] The current threshold for intervention with the SAFE strategy at district level (which includes surgery, mass administration of antibiotics, health education with face washing, and promotion of water and sanitation) is a prevalence of trachomatous inflammation follicular (Grade TF) in children 1–9 years of age of ≥ 10%. A community-by-community approach to assessment and intervention is recommended for district-level prevalence < 10%.[3] The target prevalence by which mass antibiotic interventions to control trachoma can be ceased inta [(T)-9(he)-2( )-22(t)-5(a79)-2

Indicators for SCH.

Hematuria (blood in the urine) is the most common manifestation of urinary SCH and serves as a useful and rapid assessment proxy for parasitologic testing.[7–9]

EA population size. EAs were the smallest geographic unit for which population data was available and, according to the census bureau, have an approximate population of 300–500. EAs were typically smaller

The median school population for children 10–14 years of age was 60 students (inter-quartile range [IQR], 39–107; range, 16–745). For children under 10 years of age, the median population in schools was 61 (IQR, 39–103 students; range, 17–583).

A total of 13,045 children (52.5% boys) < 10 years of age were examined for trachoma from a total of 363 schools in the eight LGAs. The median age of children examined for trachoma in the schools was 7 years (IQR, 6–8 years; range, 3–9 years). The overall prevalence of TF in school children under 10 years

In a new window

TABLE 2

Integrated district-based survey results by LGA using the trachoma protocol

A total of 11,192 persons were examined for trachoma for an overall response of 76.8%. The main reason for non-response was not being present at the time of the household visit. Among 4,754 children in the survey 1–9 years of age, 4,144 (87.2%) were examined for trachoma. Overall prevalence of TF, in children 1–9 years of age, was 3.4% (95% CI, 2.7–4.2%; LGA range, 1.7–5.2%; Table 2). In children 1–5 years of age, T o o= alen e was 3. π) (% CI, 29 ٦

–

Table 4 shows the theoretical programmatic decisions made to target areas for intervention based on

methodology were not useful given current community-based thresholds for intervention. In contrast, community-level estimates of trachoma obtained using the SCH mapping method identified a remarkable number of communities warranting trachoma intervention that were missed with the standard district-based trachoma design. Given that NTD interventions cannot start without baseline mapping data, the benefits of including more than one disease indicator warrant further study.

Received May 5, 2009.
Accepted July 14, 2009.

Acknowledgments

Acknowledgments: The authors 8l 0 12 186-beho9.085 612 nts08 Tf11.041G 8l 0 q010 8W [illegible]

5. Chitsulo L, Lengeler C, Jenkins J, 1995. The Schistosomiasis Manual. Geneva: World Health Organization.

6. World Health Organization, 2006. Preventive Chemotherapy in Human Helminthiasis: Coordinated Use of Anthelminthic Drugs in Control Interventions. Geneva: World Health Organization.

7. Lengeler C, Mshinda H, Morona D, deSavigny D, 1993. Urinary schistosomiasis: testing with urine