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Estimates of people infected with soil-transmitted-helminthiasis and drug requirements for preventive chemotherapy in Ogun, Nigeria

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Background: Soil transmitted helminthiasis (STH) are among the most common human infections worldwide with over 1 billion people affected. This study produced predictive risk maps of STH and estimated the number of people infected, and the amount of drug required for preventive chemotherapy in Ogun state, Nigeria.
Methods: Georeferenced STH infection data obtained from community cross-sectional survey, at 33 locations between July 2016-November 2018, together with remotely sensed environmental and socio-economic data were analyzed using Bayesian geostatistical models.
Result: An overall prevalence of 17.2% (95 % CI: 14.9, 19.5) was recorded for STH infection. *Ascaris lumbricoides* infections was the most predominant, 13.6% (95% CI: 11.5, 15.7), while Hookworm and *Trichuris trichiura* had 4.6 % (95% CI: 3.3, 5.9) and 1.7% (95 % CI: 0.9, 2.4), respectively. The predictive maps reveal a spatial pattern of high risk in the central, western and on the border connecting Republic of Benin. The model identified soil pH, soil moisture and elevation as important predictors of the STH infection. Approximately 1.1 million persons (preschoolers, school-aged children (SAC) and adults) are infected and requires 7.8 million doses. Also, 375,374 SAC were estimated to be infected, requiring 2.7 million doses for annual PC.
Conclusion: Our predictive risk maps and estimated PC needs provide useful information for the elimination of STH, by identifying priority areas for delivery of interventions in Ogun State, Nigeria.