

Tanzania



Widespread Schistosomiasis in Tanzania

Schistosomiasis has been described in Tanzania since the early 19th century. Both the urogenital and intestinal forms of the disease are endemic in all administrative regions in Tanzania. The urogenital parasite, *Schistosoma haematobium*, is widespread, and transmission tends to coincide with the rainy season in Tanzania. As the number and level of water bodies increase, female *Bulinus* snails lay large numbers of eggs that mature and start shedding cercariae shortly after the rainy season. The intestinal parasite, *S. mansoni*, is more focally endemic, and its transmission follows a similar pattern. Year-round transmission of both forms of schistosomiasis occurs in permanent waterbodies along the shores of Lake Victoria, in irrigation schemes, and near hydroelectric dams [1].

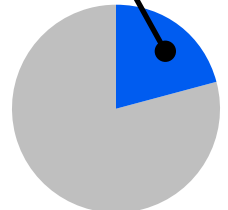
With the exception of snail control and praziquantel administration in focally directed projects, little sustained control efforts aimed at controlling transmission have been made. Disease prevalence has and continues to increase on a national scale. The most recent data estimates country-wide prevalence at 53.3% [2].

Schistosomiasis in Tanzania [9]

Tanzania's control programs **reach 27%** of those in need.

21% of the population requires drug treatment for schistosomiasis. More are at risk.

6 million children and 4 million adults need treatment for schistosomiasis every year.

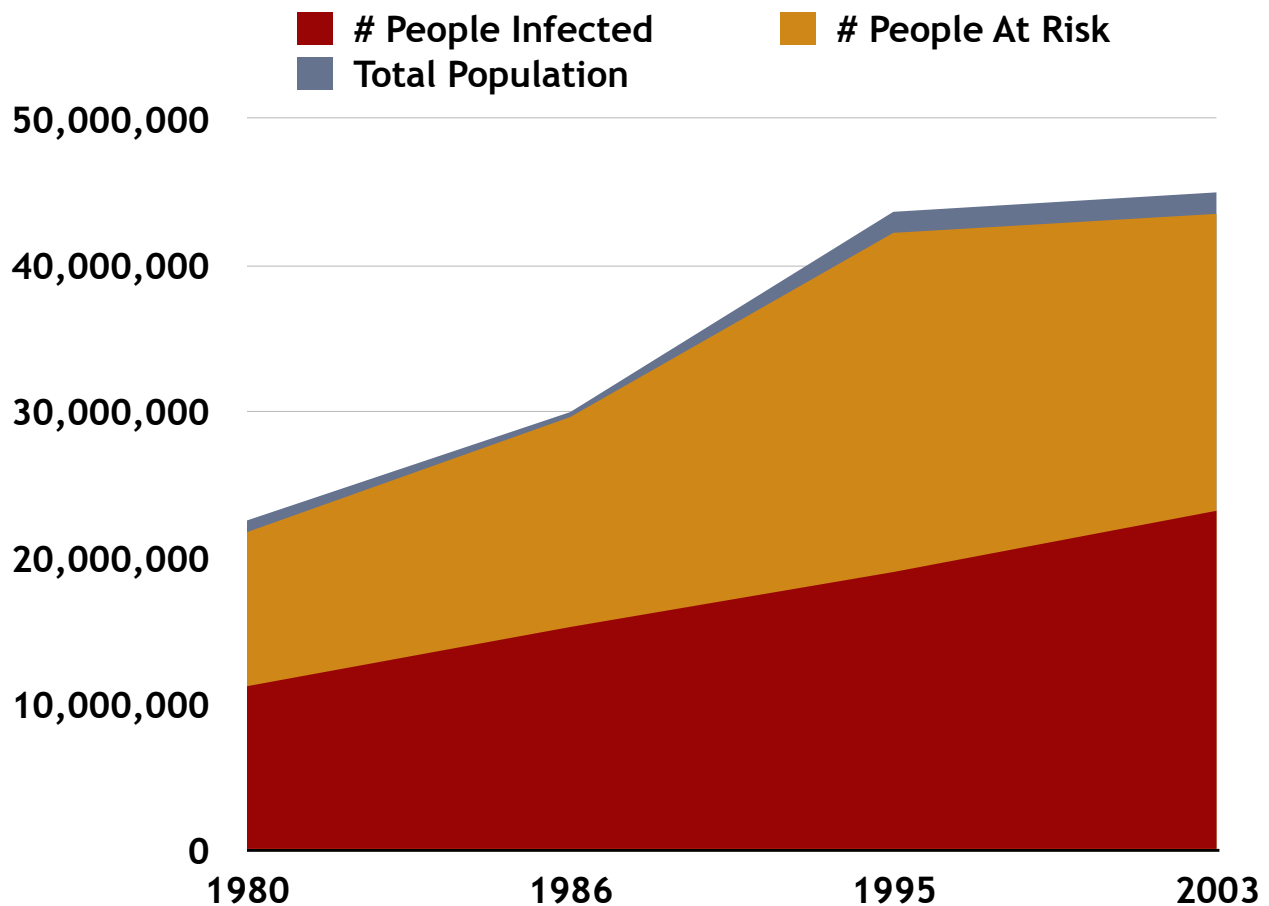


Overview of Tanzania [10]

- » Population in 2015: 51,045,882
- » Official Languages: Swahili and English
- » Capital: Dodoma
- » Republic
- » Percentage of Population with Access to Improved Drinking Water in 2015: 55.6%
- » Percentage of Population with Access to Improved Sanitation in 2015: 15.6%

Control Efforts

Control efforts on the mainland of Tanzania began in the 1950's. Through the mid-1970's, this program focused on snail control as the primary means of curbing the rising transmission and prevalence rates. Due to the perceived toxicity and danger associated with available drugs during the time, chemotherapy was not widespread but was rather used to treat individual cases [1]. Since such early efforts were described, there is no evidence of further control initiatives until the early 2000's. In 2004, the Schistosomiasis Control Initiative (SCI) and Tanzania's Ministry of Health initiated a mass drug administration (MDA) in primary schools in all 21 regions of mainland Tanzania. At least one round of treatment was proposed in selected schools in all regions, and to date 11 of those regions have successfully carried out two rounds of treatment and 6 additional regions have carried out a single round of treatment [3]. At the onset of control measures in 2004, the Tanzanian National Schistosomiasis and Soil-Transmitted Helminth Control Programme (NSSCP) conducted the first-ever national schistosomiasis questionnaire survey as part of planning activities, collecting data from over two and a half million school children in all 21 mainland regions, with the aims of using this data to identify the highest prevalence areas as initial targets for control [4].



Schistosomiasis Rates in Tanzania

In Tanzania, as the population increased, so did schistosomiasis rates. The population at risk of contracting the disease closely follows the total population -- meaning nearly every citizen of Tanzania is at risk of contracting schistosomiasis. Around 50% of Tanzania's population is infected with schistosomiasis, as indicated by the red block.

The Current Situation

The contemporary control measures established in Tanzania over the last decade rely on MDAs with school-aged children as the primary means for morbidity and transmission control. All seven of the most common NTDs are endemic in Tanzania, and organizations spearheading control for schistosomiasis in Tanzania, namely the SCI, promote use of a “rapid impact package” designed to include four drugs, including praziquantel, that in combination treat all seven NTDs. A baseline survey conducted in 2005 amongst about 3000 schoolchildren showed marked reductions in prevalence of schistosomiasis upon a one-year follow up study.³ Despite the development of directed strategies and initiation of control in a number of regions in Tanzania, estimates for the total number of people infected and the countrywide prevalence of schistosomiasis continue to rise.

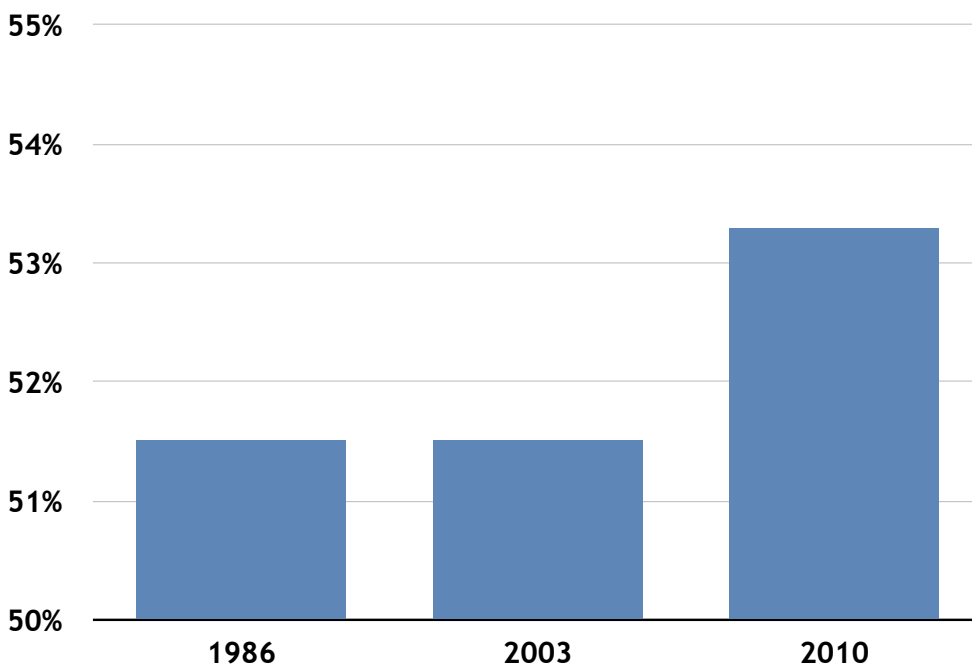
A Note on Zanzibar

Significant accomplishments have been made in reducing schistosomiasis transmission in Zanzibar. Because control on this semi-autonomous island has been primarily independent and differs considerably from mainland Tanzania in the scope and extent of control efforts, Zanzibar is assessed as a separate case study.

References

1. Mazigo, H. D. *et al.* Epidemiology and control of human schistosomiasis in Tanzania. *Parasit. Vectors* 5, 274 (2012).
2. Rollinson, D. *et al.* Time to set the agenda for schistosomiasis elimination. *Acta Trop.* 128, 423-440 (2013).
3. Schistosomiasis Control Initiative. at <<http://www3.imperial.ac.uk/schisto>>
4. Clements, a C. a, Brooker, S., Nyandindi, U., Fenwick, a & Blair, L. Bayesian spatial analysis of a national urinary schistosomiasis questionnaire to assist geographic targeting of schistosomiasis control in Tanzania, East Africa. *Int. J. Parasitol.* 38, 401-15 (2008).
5. Utroska, J.A., Chen, M.G., Dixon, H., Yoon, S., Helling-Borda, M., Hogerzeil, H.V., Mott, K. E. *An Estimate of Global Needs for Praziquantel within Schistosomiasis Control Programmes.* *whqlibdoc.who.int* at <http://whqlibdoc.who.int/HQ/1989/WHO_SCHISTO_89.102_Rev1.pdf>
6. Chitsulo, L., Engels, D., Montresor, a. & Savioli, L. The global status of schistosomiasis and its control. *Acta Trop.* 77, 41-51 (2000).
7. Iatroski, L.S. and Davis, A. The schistosomiasis problem in the world: results of a WHO questionnaire survey. *Bull. World Health Organ.* 59, 115-127 (1981).
8. WHO. Atlas of the global distribution of schistosomiasis - Tanzania. (1987).
9. WHO. PCT Databank for Schistosomiasis. at <http://www.who.int/neglected_diseases/preventive_chemotherapy/sch/en/>
10. Central Intelligence Agency. (2015). Tanzania. In *The World Factbook.* at <<https://www.cia.gov/library/publications/the-world-factbook/geos/tz.html>>

■ Prevalence



Prevalence Rates

Prevalence rates in Tanzania have hovered around 50%, but they are steadily increasing.