

Neglected Tropical Disease in China: The Case of Neurocysticercosis in Tibetan Farming Communities

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Abstract

Affecting more than one billion people around the world, neglected tropical diseases are a group of diseases which mainly occur in poor populations living in tropical and subtropical environments. Although considered a middle-income country, neglected diseases persist in many rural areas of China. Neurocysticercosis (NCC), an infection caused when the larvae of the tapeworm *Taenia solium* (*T. solium*) enters the human brain, is a prime example of this. Infection can lead to seizures, severe headaches, decreased cognitive abilities and other debilitating neurologic symptoms. The overall goal of our study is to understand the nature of NCC in China as well as to identify possible interventions that might be useful for helping to control or eradicate the disease. To meet this goal, we use a mixed methods approach, combining quantitative survey data with observational and interview-based qualitative data. We find a significant prevalence of neurocysticercosis in Tibetan school age children in western Sichuan. We identify three interventions with high potential for stopping the spread of the disease: regular composting of human feces, installing sanitation stations outside of school bathrooms to encourage hand washing, and working through the local veterinary networks to administer the newly developed porcine *T. solium* vaccine.

Keywords: Neurocysticercosis (NCC), tapeworms, cognitive ability, parasites

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