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Kala-azar field research

The economic impact of kala-azar

Kala-azar, as visceral leishmaniasis is known on the Indian subcontinent, is a deadly parasitic disease transmitted through the bite of a sandfly. There are approximately 500,000 new cases of kala-azar worldwide each year. The disease primarily affects people living in South Asia, East Africa, and South America. The parasite invades the internal organs such as the liver, spleen, and bone marrow. Kala-azar is almost always fatal if left untreated.

To better understand the economic burden of kala-azar on rural Indian households, OneWorld Health (OWH) collaborated with Rajendra Memorial Research Institute of Medical Sciences, a leading kala-azar research institute in India. The research team conducted a series of field studies in the northeastern Indian state of Bihar, the epicenter of kala-azar in the region. The team interviewed the heads of more than 15,000 rural households in the district of East Champaran and identified 214 people who had suffered from kala-azar in 182 families. Researchers interviewed the household heads three times over 18 months to understand the economic impact of the disease. They found that kala-azar poses significant, long-term financial strains on families affected by the disease, particularly among the poorest households.

QUICK FACTS

- Two-thirds of kala-azar cases are among women and children.
- Income earners miss five months of work due to kala-azar illness.
- Nearly 20 percent of patients receive four or more treatments before receiving appropriate care.

ABOUT KALA-AZAR

Kala-azar is a poverty-driven disease that is **transmitted through the bite of a sandfly**.

Symptoms include chronic fever, weight loss, enlargement of the spleen and liver, and anemia.

Kala-azar is **endemic in 79 countries**, primarily in the developing world.

An estimated 200 million people are at risk of the disease. **20,000 to 40,000 deaths** result from kala-azar each year.

Kala-azar often strikes **people living in rural villages who are frequently poor** and may not be able to afford the treatments currently available.

Available therapies could cost from **US\$20 to \$250** and can be toxic or ineffective.

Study findings

The burden of kala-azar falls on households already living in poverty

The people in East Chamaparan affected by kala-azar are extremely poor. They live in thatched dwellings with mud floors, rely on gas rather than electricity for lighting, and get their water from community tubewells. Families depend on unreliable sources of income such as casual labor. Annual household expenses per family member average just US\$250, or less than 70 cents per day, well below the \$1.25 per day associated with extreme poverty.

The path to recovery is long and costly

Kala-azar patients often first seek treatment from rural practitioners who lack the training to correctly diagnose and treat the illness. As a result, the patients typically make several visits to different practitioners and receive multiple treatments before they begin to regain their health. Of those patients who are not correctly diagnosed during the first visit, 40 percent also do not receive appropriate treatment during

their second visit. Nearly 20 percent of patients receive four or more treatments before they receive appropriate care.

Three-quarters of the patients rely on the private sector for their care because of drug shortages in the public sector. This adds to the financial burden on the patient's household as the average cost of a kala-azar treatment is six times higher at a private doctor than at a public health center.

Kala-azar imposes a significant financial burden on households

The costs of kala-azar are very high in relation to rural households' total expenses. On average, a rural household in East Chamaparan spent \$134 to treat the family member suffering from kala-azar. This represents almost 50 percent of what is spent on a family member in an entire year.

Financial burdens deepen when kala-azar affects a household's breadwinners. As a result of illness, the income earners miss an average of five months of work.

The missed work days plus the treatment costs represent an average financial loss of \$186, or 75 percent of the total amount spent on an individual in a year.

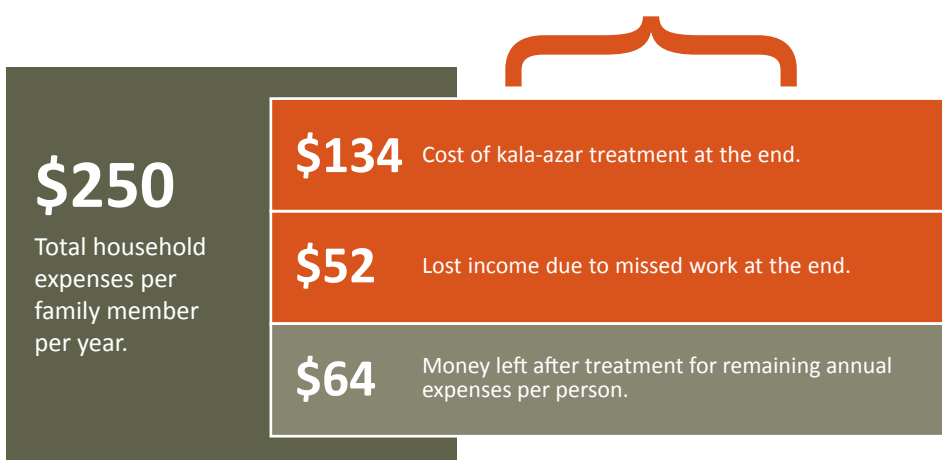
Kala-azar has a long-term economic impact on the household

Kala-azar increases the debt of already poor families. Eighty-seven percent of kala-azar patients take out loans to pay for treatment. To meet these treatment costs, households also reduce the money spent on food, thus making them more vulnerable to malnutrition and other diseases.

Kala-azar continued to pose a financial burden on households 18 months after they were affected by the illness. Affected households had 18 percent less money to spend per person, while unaffected households had 11 percent more money to spend per person.

The economic impact of kala-azar on a rural Indian household

A household's cost of treatment plus loss of income due to illness totals \$186, or 75 percent of the average spent on a family member in a year.



OneWorld Health is a nonprofit drug development program with a mission to discover, develop, and deliver safe, effective, and affordable new treatments for diseases disproportionately affecting people in the developing world.

OneWorld Health is an affiliate of PATH, an international nonprofit organization that transforms global health through innovation.

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