



Kala-Azar Field Research

The Economic Impact of Kala-Azar

Kala-azar, as visceral leishmaniasis (VL) is known on the Indian sub-continent, is a deadly parasitic disease transmitted through the bite of a sandfly. There are approximately 500,000 new cases of VL 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. VL is almost always fatal if left untreated.

To better understand the economic burden of kala-azar on rural Indian households the Institute for OneWorld Health (iOWH) collaborated with Rajendra Memorial Research Institute of Medical Sciences (RMRI-ICMR), 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. They interviewed the heads of over 15,000 rural households in the district of East Champaran and identified 214 individuals who had suffered from kala-azar in 182 of these families. The household heads were interviewed three times over 18 months to understand the economic impact of the disease.

KALA-AZAR FACTS

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 65 countries**, primarily in the developing world, and the population at risk is estimated at 200 million.

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 cost from **US\$30 to US\$300** and can be toxic or ineffective.

The Institute for OneWorld Health is a global health non-profit that develops safe, effective, and affordable new medicines for people with infectious diseases in the developing world. OneWorld Health is currently developing medicines to treat diarrheal diseases, visceral leishmaniasis (VL), malaria and soil-transmitted helminthes. We also have an Access program that works to ensure that the treatments OneWorld Health develops are available and acceptable to at-risk patients at an affordable cost via private and public sector markets. The organization is headquartered in South San Francisco, California with offices in Delhi and Bihar, India.

Study Findings

THE BURDEN OF KALA-AZAR FALLS ON HOUSEHOLDS ALREADY LIVING IN POVERTY

Those affected by kala-azar are extremely poor, living in thatched dwellings with mud floors, gas rather than electricity for lighting and community tubewells for water. Families depend on unreliable sources of income such as casual labor. Each year, the households spend a total of just \$250* per person, 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% also do not receive appropriate treatment during their second visit. Nearly 20% 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 household as the average cost of a kala-azar treatment is six times higher at a private doctor compared with a public health center.

KALA-AZAR IMPOSES A SIGNIFICANT FINANCIAL BURDEN ON HOUSEHOLDS

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

Financial burden deepens further when kala-azar affects the household's breadwinners. As a result of illness, the income earners miss an average of over five months of work. The missed work days plus the treatment costs represent an average financial loss of \$186 or 75% 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 indebtedness of already poor families. Eighty-seven percent of the kala-azar patients take out loans to pay for treatment. To meet the treatment costs, the households also reduce the money spent on food, thus making them more vulnerable to malnutrition and other diseases.

When we compare households affected by kala-azar eighteen months after the illness with similar households that did not suffer from the disease, we find that the well-being of the households diverge. In those households affected by kala-azar, the average amount spent per person fell 18%, while per capita expenditures in the comparison households rose by 11%.

QUICK FACTS

- **2/3 of Kala-azar cases are women and children.**
- **Among income earners, 5 months of work is lost due to illness.**
- **59% of those with kala-azar seek treatment 3 or more times for one episode of illness.**

*All figures represent averages for the population studied.

The Economic Impact of Kala-Azar on a Household

