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**Anuj Mubayi\*** (anujmubayi@yahoo.com), 2201 Milton Road, Apt 306, University Heights, OH 44118. *Transmission Dynamics of Kala-azar in Bihar and Impact on Public Health Policies*. Preliminary report.

A mathematical model is used to study the transmission dynamics and spread of Kala-Azar (or Visceral Leishmaniasis or VL) in one of the world's major foci of the disease, the Indian state of Bihar. This research has been motivated by reported (clinical) incidence and mortality data that exclude cases treated in private health facilities who are not required to report cases by law. VL asymptomatic and post-kala-azar dermal leishmaniasis cases also acts as reservoirs of parasites. At present, the state health care funds are distributed based only on the reported clinical data. This study identifies high-risk districts based on adjusted clinical and asymptomatic incidence rates. It also explores the association between underreporting levels and some socioeconomic variables. Our results suggest that clinical underreporting in some districts of Bihar could be as high as 90%. The research findings may facilitate more effective allocation of public health funds for controlling Kala-azar in Bihar. (Received September 17, 2010)