

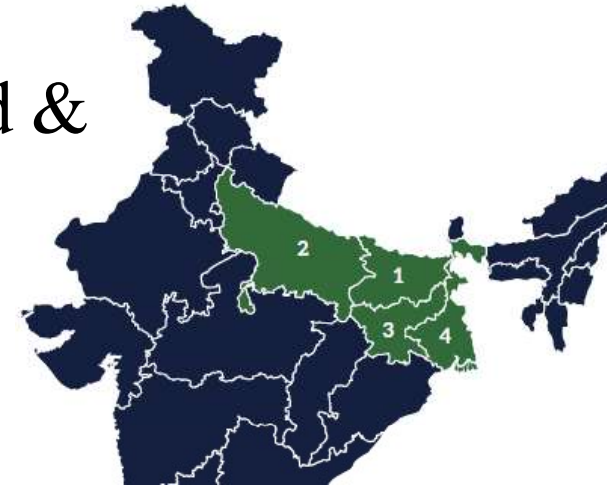
Visceral leishmaniasis transmission in India: xenomonitoring in the post-elimination setting

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Context

- Four states in India: Bihar, Uttar Pradesh, Jharkhand & West Bengal
- 83% reduction in incidence between 2011 and 2017 (provisional data)
- Elimination target = <1 case/10,000 population at block level
 - May be insufficient to prevent resurgence
- An improved understanding of visceral leishmaniasis (VL) transmission dynamics needs to be developed in order to meet the elimination target and break transmission



Xenomonitoring

- Xenomonitoring = assessing parasite DNA or RNA levels through PCR in the vector population, rather than the host population
- Potential for use as a passive surveillance system for VL
 - Non-invasive = fewer ethical implications than screening human populations
 - Potentially more cost effective than active case detection and more sensitive than traditional passive case detection systems
 - Indicates circulating parasite levels
- Shed light on the role of asymptomatics and post-kala azar dermal leishmaniasis (PKDL) patients in maintaining transmission



Actions

Generate *Phlebotomus argentipes* sampling framework and standard operating procedures



- Collect and analyse *P. argentipes* from sites across blocks with no, low, and high VL transmission in Bihar
- Use data to develop transmission endpoint assessment guidelines for India's VL control program

Utilise xenomonitoring and sero-surveillance data collected in the same place, at the same time, to improve transmission models





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