SPEAK

Surveillance

BHU: Shyam Sundar, Jaya Chakravarty, O.P. Singh, Paritosh Malaviya

ITM: Marleen Boelaert, Epco Hasker, Kristien Cloots

Two studies

- Monitoring transmission of *L.donovani*
- Improving VL surveillance at PHC level

Monitoring transmission of *L.donovani*

- **Main objective:**
  Determine whether sero surveys can be used as a tool to monitor (absence of) transmission of *L. donovani*
- **Methods:**
  - **Sero surveys in 6 clusters of ± 3,000 population**
    - **2 currently endemic, 2 previously endemic, 2 non-endemic**
  - **DAT and rK39 ELISA on filter paper samples, qPCR if positive**
- **Expected outcome**
  - **Sero survey as a tool to exclude ongoing transmission**
    - **Develop optimal sample size required**
    - **Optimal test algorithm (sensitivity and specificity)**
    - **Cost**

Improving VL surveillance at PHC level

- **Main objectives:**
  Develop and validate surveillance modalities for VL-HIV and PKDL at block PHC level

  Assess accuracy of diagnostic algorithm of VL under different epidemiological conditions

  Assess spatial clustering of VL cases and develop and validate a mapping tool to be used for microplanning by the block PHC.

Improving VL surveillance at PHC level

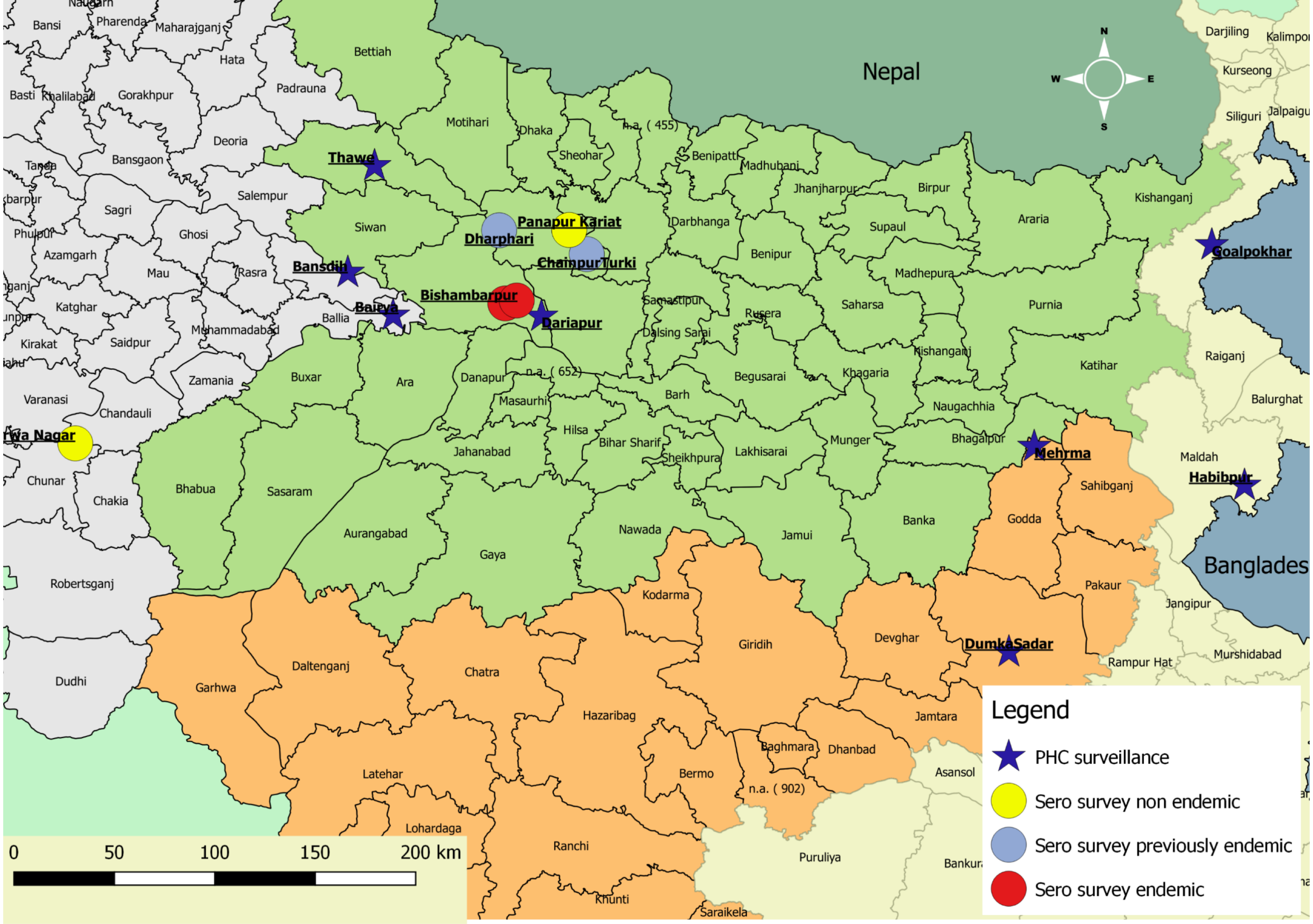
- **Methods:**
  - **4 x 2 Blocks in Bihar, Jharkhand, UP and West Bengal**
  - **All incident VL cases diagnosed at Block PHCs:**
    - **Collect blood sample and test with qPCR**
    - **Home visits for screening of contacts for VL and PKDL, recording geographic coordinates, interviewing patients**
    - **Refer to ICTC for HIV counselling and testing**
  - **All VL cases diagnosed in 2013, 2015 and 2017**
    - **Home visits for screening of (ex) patients and contacts for PKDL (and VL), Recording geographic coordinates, interviewing ex-patients**
  - **All registered PLWHA**
    - **Provide rK39 tests and ensure testing for VL infection through ICTC**

Improving VL surveillance at PHC level

- **Expected outcomes:**
  - **Positive predictive value of routine diagnostic algorithm under different VL prevalence levels**
  - **Tool for contact and PKDL screening validated**
  - **VL and PKDL cases mapped and patterns of clustering assessed**
  - **Proportion of VL patients progressing to PKDL assessed**
  - **VL-HIV coinfection incidence and prevalence assessed under different VL prevalence levels**

Study sites

- Monitoring transmission of *L.donovani*
  - Currently endemic: Bishambharpur and Rampur Jagdish, Saran, Bihar
  - Previously endemic: Chainpur Turki and Dharphari, Muzaffarpur, Bihar
  - Non-endemic: Pandit Ka Purwa Nagar, Chandauli, UP and Panapur Kasba, Muzaffarpur, Bihar
- Improving VL surveillance at PHC level
  - Bihar: Thawe (Gopalganj) and Dariapur (Saran)
  - Jharkhand: Mehrma (Godda) and Dumka Sadar (Dumka)
  - UP: Bairia (Ballia) and Bansdih (Ballia)
  - West Bengal: Goalpokhar (Uttar Dinajpur) and Habibpur(Malda)


Nepal
N
W
E
S
Banglades
Legend
PHC surveillance
Sero survey non endemic
Sero survey previously endemic
Sero survey endemic
0
50
100
150
200 km
Thawe
Bansdih
Baireya
Bishambarpur
Dariapur
Panapur Kariat
Dharphari
ChainpurTurki
Goalpokhar
Mehrma
Habibpur
DumkaSadar
Bettiah
Motihari
Dhaka
Sheohar
n.a. (455)
Benipatti
Madhubani
Jhanjharpur
Birpur
Kishanganj
Araria
Supaul
Darbhanga
Benipur
Madhepura
Saharsa
Purnia
Samastipur
Rusera
Dalsing Sarai
Kishanganj
Katihar
Begusarai
Khagaria
Naugachhia
Bhagalpur
Munger
Lakhisarai
Barh
Danapur
n.a. (652)
Masaurhi
Hilsa
Bihar Sharif
Sheikhpura
Jahanabad
Siwan
Buxar
Ara
Bhabua
Sasaram
Aurangabad
Gaya
Nawada
Jamui
Banka
Godda
Sahibganj
Pakaur
Kodarma
Giridih
Devghar
Jamtara
Dhanbad
Baghmara
n.a. (902)
Bermo
Hazaribag
Chatra
Daltenganj
Garhwa
Latehar
Lohardaga
Ranchi
Khunti
Saraikela
Puruliya
Asansol
Rampur Hat
Murshidabad
Jangipur
Maldah
Balurghat
Raiganj
Darjiling
Kurseong
Siliguri
Bansi
Pharenda
Maharajganj
Hata
Padrauna
Basti
Khalilabad
Gorakhpur
Deoria
Bansgaon
Salempur
Sagri
Ghosi
Azamgarh
Mau
Rasra
Ballia
Katghar
Muhammadabad
Kirakat
Saidpur
Zamania
Varanasi
Chandauli
Chunar
Chakia
Robertsganj
Dudhi

Timelines

Obj.	Activity		2018												2019					
	Monitoring transmission of *L.donovani*	Lead Partner	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1	Monitoring transmission of L.donovani																			
	1. Draft study protocol	ITM	x																	
	2. Obtain ethics clearance	ITM	x	x	x															
	3. Select study clusters (6 x 3,000)	BHU	x																	
	4. Develop data collection tools (Android app)	BHU			x															
	5. Procure test kits and other supplies	BHU	x	x	x															
	6. (hire and) train (additional) field workers	BHU		x	x															
	7. Conduct six door-to-door surveys (n=18,000)	BHU				x	x	x	x	x	x	x	x	x						
	8. Process samples with DAT and rK39 ELISA	BHU					x	x	x	x	x	x	x	x	x					
	9. Monitoring study implementation	ITM		x	x	x	x	x	x	x	x	x	x	x	x	x	x			
	10. Costing of all survey procedures	ITM			x						x					x				
	11. Data analysis + reporting	ITM															x	x	x	
	12. Draft recommendations	BHU																		x

Timelines

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	3. Select study clusters (6 x 3,000)	BHU	x																	
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	5. Procure test kits and other supplies	BHU	x	x	x															
	6. (hire and) train (additional) field workers	BHU		x	x															
	7. Conduct six door-to-door surveys (n=18,000)	BHU				x	x	x	x	x	x	x	x	x						
	8. Process samples with DAT and rK39 ELISA	BHU					x	x	x	x	x	x	x	x	x					
	9. Monitoring study implementation	ITM		x	x	x	x	x	x	x	x	x	x	x	x	x	x			
	10. Costing of all survey procedures	ITM			x						x					x				
	11. Data analysis + reporting	ITM															x	x	x	
	12. Draft recommendations	BHU																		x

Timelines

Obj.	Activity		2018												2019					
	Improving VL surveillance at PHC level	Lead Partner	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
2a	Monitor accuracy of the diagnostic algorithm																			
	1. Select study Blocks	BHU	x																	
	2. Draft study protocol	ITM	x																	
	3. Obtain ethics clearance	ITM	x	x	x															
	4. Organize storage and transfer of samples	BHU		x	x															
	5. Procure supplies and equipment	BHU	x	x	x															
	6. Training of Block PHC and KAMRC staff	BHU			x															
	7. Data collection from 8 PHCs and KAMRC	BHU				x	x	x	x	x	x	x	x	x	x	x	x			
	8. Monitoring study implementation	ITM		x	x	x	x	x	x	x	x	x	x	x	x	x	x			
	9. Costing of all survey procedures	ITM			x						x					x				
	10. Evaluation + reporting	ITM																x	x	
	11. Draft recommendations	BHU																		x

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	1. Select study Blocks	BHU	x																	
	2. Draft study protocol	ITM	x																	
	3. Obtain ethics clearance	ITM	x	x	x															
	4. Organize storage and transfer of samples	BHU		x	x															
	5. Procure supplies and equipment	BHU	x	x	x															
	6. Training of Block PHC and KAMRC staff	BHU			x															
	7. Data collection from 8 PHCs and KAMRC	BHU				x	x	x	x	x	x	x	x	x	x	x	x			
	8. Monitoring study implementation	ITM		x	x	x	x	x	x	x	x	x	x	x	x	x	x			
	9. Costing of all survey procedures	ITM			x						x					x				
	10. Evaluation + reporting	ITM																x	x	
	11. Draft recommendations	BHU																		x

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	Improving VL surveillance at PHC level	Lead Partner	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
2b	Develop contact tracing microplanning tool																			
	1. Draft study protocol	ITM	x																	
	2. Obtain ethics clearance	ITM	x	x	x															
	3. Training Block PHC staff (same as obj. 1b act. 6)	BHU			x															
	4. Conduct home visits	BHU				x	x	x	x	x	x	x	x	x	x	x	x			
	5. Conduct trainings at district level	BHU				x	x	x												
	6. Monitoring study implementation	ITM		x	x	x	x	x	x	x	x	x	x	x	x	x	x			
	7. Costing of all survey procedures	ITM			x						x					x				
	8. Evaluation + reporting	ITM																x	x	
	9. Draft recommendations	BHU																		x

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2b	Develop contact tracing microplanning tool																			
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	2. Obtain ethics clearance	ITM	x	x	x															
	3. Training Block PHC staff (same as obj. 1b act. 6)	BHU			x															
	4. Conduct home visits	BHU				x	x	x	x	x	x	x	x	x	x	x	x			
	5. Conduct trainings at district level	BHU				x	x	x												
	6. Monitoring study implementation	ITM		x	x	x	x	x	x	x	x	x	x	x	x	x	x			
	7. Costing of all survey procedures	ITM			x						x					x				
	8. Evaluation + reporting	ITM																x	x	
	9. Draft recommendations	BHU																		x

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2c	Monitoring of PKDL incidence																			
	1. Draft study protocol	ITM	x																	
	2. Obtain ethics clearance	ITM	x	x	x															
	3. Obtain line listing of VL cases 2013-2017	BHU	x	x																
	4. Develop an Android data collection app	BHU			x															
	5. Conduct training of Block PHC staff	BHU			x															
	6. Conduct home visits	BHU				x	x	x	x	x	x	x	x	x	x	x	x			
	7. Monitoring study implementation	ITM		x	x	x	x	x	x	x	x	x	x	x	x	x	x			
	8. Costing of all survey procedures	ITM			x						x					x				
	9. Data analysis + reporting	ITM																x	x	
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	4. Develop an Android data collection app	BHU			x															
	5. Conduct training of Block PHC staff	BHU			x															
	6. Conduct home visits	BHU				x	x	x	x	x	x	x	x	x	x	x	x			
	7. Monitoring study implementation	ITM		x	x	x	x	x	x	x	x	x	x	x	x	x	x			
	8. Costing of all survey procedures	ITM			x						x					x				
	9. Data analysis + reporting	ITM																x	x	
	10. Draft recommendations	BHU																		x

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2d	Monitoring of VL-HIV coinfection																			
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	2. Obtain ethics clearance	ITM	x	x	x															
	3. Obtain line listing of PLWHA	BHU	x	x																
	4. Procure test kits	BHU	x	x																
	5. Training Block PHC staff	BHU			x															
	6. Start implementation of HIV and VL testing	BHU				x	x	x	x	x	x	x	x	x	x	x	x			
	7. Monitoring study implementation	ITM		x	x	x	x	x	x	x	x	x	x	x	x	x	x			
	8. Costing of all survey procedures	ITM			x						x					x				
	9. Data analysis + reporting	ITM																x	x	
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	3. Obtain line listing of PLWHA	BHU	x	x																
	4. Procure test kits	BHU	x	x																
	5. Training Block PHC staff	BHU			x															
	6. Start implementation of HIV and VL testing	BHU				x	x	x	x	x	x	x	x	x	x	x	x			
	7. Monitoring study implementation	ITM		x	x	x	x	x	x	x	x	x	x	x	x	x	x			
	8. Costing of all survey procedures	ITM			x						x					x				
	9. Data analysis + reporting	ITM																x	x	
	10. Draft recommendations	BHU																		x

Thank you from Varanasi