

**A Qualitative Study on the Assessment of Co-Ordination Between
Major Stakeholders for Kala Azar Program in Begusarai District
of Bihar**

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at
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TO WHOMSOEVER IT MAY CONCERN

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The candidate has successfully carried out the study designated to his during dissertation and his approach to the study has been sincere, scientific and analytical.

The internship is in fulfilment of the course requirements.

I wish him all success in all his future endeavours.



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From 27th January, 2014 to 30th April, 2014

He comes across as a committed, sincere and diligent person who
has a strong drive and zeal for learning

We wish him all the best for future endeavors

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CERTIFICATE BY SCHOLAR

This is to certify that the dissertation titled **A QUALITATIVE STUDY ON THE ASSESMENT OF CO-ORDINATION BETWEEN MAJOR STAKEHOLDERS FOR KALA AZAR PROGRAM IN BEGUSARAI DISTRICT OF BIHAR**, and submitted by **Mr.Abbhishek Mishra** Enrollment No. **17-1282** under the supervision of **Professor P.R.Sodani** for award of Postgraduate Diploma in Hospital and Health Management of the Institute carried out during the period from **27th January 2014** to **30th April 2014** embodies my original work and has not formed the basis for the award of any degree, diploma associate ship, fellowship, titles in this or any other Institute or other similar institution of higher learning.


23/05/14
Signature

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List of Abbreviations

ASHA - ACCREDITED SOCIAL HEALTH ACTIVIST

AWC - ANGANWADI CENTRE

AWW - ANGANWADI WORKER

BCC - BEHAVIOR CHANGE COMMUNICATION

BHM - BLOCK HEALTH MANAGER

BTAST - BIHAR TECHNICAL ASSISTANCE AND SUPPORT TEAM

DDT - DICHLORO DIPHENENYL TRICHLOROETHANE

DH -DISTRICT HOSPITAL

DPO - DISTRICT PROGRAM OFFICER

EBC - EXTREMELY BACKWARD CLASS

FGD - FOCUS GROUP DISCUSSIONS

GOI - GOVERNMENT OF INDIA

HSC - HEALTH SUB CENTRE

ICDS - INTEGRATED CHILD DEVELOPMENT SERVICES

IDSP - INEGRATED DISEASE SURVELLIANCE PROJECT

IEC - INFORMATION EDUCATION COMMUNICATION

IFHI - INTERGRATED FAMILY HEALTH INITIATIVE

MI - MALARIA INSPECTOR

MOIC - MEDICAL OFFICER IN CHARGE

MOU - MEMORUNDUM OF UNDERSTANDING

NVBDCP - NATIONAL VECTOR BORNE DISEASE CONTROL PROGRAMME

OBC - OTHER BACKWARD CASTE

PHC - PRIMARY HEALTH CENTRE

PKDL - POST KALA AZAR DERMAL LIESHMANIASIS

RI - ROUTINE IMMUNIZATION

RMNCH+A - REPRODUCTIVE MATERNAL NEW BORN CHILD HEALTH + ADOLESCENTS

RPM - REGIONAL PROGRAM MANAGER

SAM - SEVERE ACUTE MALNOURISHED

SDH - SUB DIVISIONAL HOSPITAL

SKAEP - STRENGTHENING OF KALA AZAR ELIMINATION PROJECT

SPSS - STATISICAL PACKAGE FOR SOCIAL SCIENCES

VHSND - VILLAGE HEALTH SANITATION AND NUTRITION DAY

ABSTRACT

Inter sectoral convergence and together working of several community welfare organizations and government can generate clear understanding of the knowledge of a particular community about any disease, in our case kala-azar and can help in designing Behavior Change Communication (BCC) and Information Education Communication (IEC) campaigns to influence the disease cycle and will help in controlling the spread.. This study is an attempt to assess the co-ordination between various stakeholders for kala azar program in Begusarai district of Bihar.

DESIGN

The study design selected was qualitative cross-sectional study.

STUDY SITE

The study was conducted in Begusarai district of Bihar state in Northern India.

METHODS

In depth interview schedule was prepared separately for district staff and field workers including MOIC present in block levels The interviews were carried out with convince to the interviewee.

RESULT

It came out from the study that public sector requires continuous support from the private sector in order to achieve the goal of eliminating kala-azar from Begusarai district. There is an increase in coverage of IRS and reduction in prevalence rate of the disease and there is increase in number of cases being treated in the facility.

INTERPRETATION AND CONCLUSION

The support of private sector found to be critical in elimination program. Inter-sectoral convergence is vital for the success of the program and the part of private sector cannot be neglected.

2.2 INTRODUCTION

Visceral Leishmaniasis or more widely known as Kala-Azar is a slow progressing indigenous disease caused by a protozoan parasite of genus *Leishmania* (*L. Donovanii* in *India*). It is the second largest parasitic killer in the world, only after malaria. It is one of the World's most neglected and poverty-related diseases, affecting the poorest people in developing countries associated with malnutrition, weakness of the immune system, displacement, poor housing, illiteracy, gender discrimination, and lack of resources. *Kala azar* is spread over a large geographical area across the globe with estimated yearly incidence of *Kala azar* of 500,000 cases¹ which lead to loss of nearly 2.4 million disability-adjusted life years (DALYs) each year. Since the last century several outbreaks of *Kala azar* have affected South-East Asia. Various programmes to control the disease have failed despite considerable efforts being done for prevention and control of the disease.

More than 60% of the world's VL cases are reported from India, Nepal and Bangladesh alone². In India, out of the four states where Kala Azar is prevalent i.e, West Bengal, Jharkhand, Bihar and Uttar Pradesh³. Bihar contributes to more than 80% of the cases⁴, reason being its low economic status, thus increasing the vulnerability of poverty, which is one of the main factors responsible for the poor living conditions, leading to this deadly disease. Though the situation has improved over the years, still the poorest sections of the society e.g, the musahar tolas, BPL families, SC and ST populations and other marginalized populations are at a higher risk

Government of India had been able to lower the cases to a very less number in the 1950s owing to the IRS through Malaria Control Programme. However in the 1970s,

²
due to reduction in IRS, the number of cases surged up. Thus in 1992, due to high incidence rate, centrally sponsored Kala-azar Control Programme was launched which was merged with NRHM in 2005 under NVBDCP. Government of India in 2002 National Health Policy had set a goal to eliminate *Kala azar* by year 2010, which could not be attained. India, Bangladesh and Nepal have demonstrated strong political will and commitment towards elimination of *Kala azar* by signing a Memorandum of Understanding (MoU) during the World Health Assembly in Geneva in 2005. The goal of Tripartite MoU was to contribute for improving the health status of vulnerable groups and at-risk population living in *Kala azar* endemic areas of Bangladesh, India and Nepal by the elimination of *Kala azar* so that it would no longer be a public health problem. Presently the Tripartite MoU aims towards reducing the annual incidence of *Kala azar* and post *Kala azar* dermal Leishmaniasis (PKDL) to less than one per 10,000 population at the district (or sub-district) level by the end of the year 2015.

However, despite all such efforts by GoI, incidence of Kala-Azar is still high in most districts of Bihar and so Jharkhand. So GoI, has entrusted CARE, an international organization with the task of providing technical assistance and much needed human resource to help them achieve the goal of elimination of Kala-Azar by 2016. Thus

CARE India, has started a project **Strengthening Kala Azar Elimination Programme (SKAEP)**, under its Family Health Initiative project, funded by Bill and Melinda Gates Foundation, to help GoI achieve its goal of elimination

2.3 Review of literature

India's record of kala azar prevalence presents a stubborn challenge. Given the multiple determinants of disease and its spread, effective action to tackle this problem in India and globally requires a range of inputs across various sectors. Delivering kala azar specific care and various control sensitive interventions to entire populations requires that these various sectors come together at critical points and in meaningful ways to ensure delivery of key vector born disease related actions for communities and households and for society as a whole.

According to a study "Knowledge about sand flies in relation to public and domestic control activities of kala-azar in rural endemic areas of Bihar. (Kumar N et al, J Commun Dis, June 2009) majority respondents were neither aware about the vector of kala-azar, nor they had any idea about transmission of the disease. About 61% had wrong impression that mosquitoes were causing kala-azar. Regarding knowledge about breeding and resting sites of vectors, 20% reported cattle shed, 16% crevices in the household followed by 15% damp dark places.

Awareness About Kala Azar Disease and Related Preventive Attitudes and Practices in a Highly Endemic Rural Area of India (NA Siddiqui et al, Southeast Asian J Trop Med Public Health, Vol 41 no 1, Jan 2010) showed 4% had correct knowledge that sandfly bites caused kala-azar, 26% do not know any specific transmission agents for kala-azar. A majority (72%) of respondents were not able to recognize sandfly, 33% had no specific knowledge about the symptoms. Just over half (66%) of the respondents were not using any prevention measures to avoid contracting disease.

The study Knowledge, attitudes, and practices about kala-azar and its sandfly vector in rural communities of Nepal.(koirala et al, Bull wolrd Health Org, 1998) showed that The villagers had poor knowledge about the transmission of kala-azar, with most villagers perceiving that mosquitos, instead of sandflies, were responsible for transmission of the infection. Most also failed to recognize the common symptoms of kala-azar.

As in the study 'working with existing systems: lessons from inhpa' by CARE INDIA, evidence from the rapid assessments, the evaluation research studies and the baseline-endline surveys, as presented in detail in other papers in this series, has been summarized here to provide a perspective of the overall achievements of the ICDS and RCH programs during INHP-II.

In a study, Addressing the social determinants of health through health system strengthening and inter-sectoral convergence: the case of the Indian National Rural Health Mission 'it came out that only with government sector alone will not be able to produce drastic effect but with other health welfare society oriented organization can be very much effective.

2.4 BACKGROUND

Inter-sectoral convergence is an important factor in reducing the cases of kala-azar and in achieving the goal of eliminating the disease. Although convergence between nutrition and health has long been recognized as a barrier to improving condition in India, actual convergence has been limited and somewhat ineffectual. Some factors underlying limited convergence include a range of multiple and diverse stakeholders; complexity of the technical issue; determinants of disease that lie outside technical domains; and the view, based on an experiential understanding among implementers, that convergent action is an almost insurmountable barrier.

Although the lack of convergence is well documented, there lingers a substantial gap in articulating what needs to be assessed to ensure that convergence is indeed happening, or not happening. In an effort to close this gap, in this paper we describe a possible framework to enable convergence across sectors for action on nutrition. Our framework notes that issues related to convergence must be resolved in relation to three major steps in the policy process: policy formulation, implementation, and monitoring and evaluation.

2.5 Rationale of the Study

Visceral Leishmaniasis (Kala-Azar) is a disease of the poorest of the poor. Though it is among the second largest parasitic killer in the world, only after malaria, still it continues to be a neglected disease. It is associated with poverty and malnutrition and is lethal if left untreated. Bihar bears the burden of more than 80 percent of the kala azar cases in the country. Since the last few years, government has been spreading awareness about kala-azar and its prevention and control. In addition to that, spraying of insecticide (DDT) is also being done in endemic areas. In spite of this, it has been noted from previous studies, that the awareness about kala-azar is very low even in the highly endemic areas.

Though the government is working in all the area still they require support in many fields like man power, finance, supervision, monitoring and IEC/BCC campaign.

Begusarai district has been a highly endemic area for kala-azar since a number of years. Although the number of cases is being reported each year is reducing, but even now, Begusarai district contributes to moderate number of case incidence of kala azar in Bihar. In 2013, 530 cases of kala-azar were reported from Begusarai district alone. The reduction of cases and increase in number of registered cases was attributed to other private sector working for the same cause.

Hence this study was conducted to evaluate the importance of intersectoral convergence and participation of private organization with government sector (major stakeholders).

2.6 Research Question

What is the effect of inter-sectoral convergence amongst major stakeholders for the eradication of Kala-azar disease in Begusarai District of Bihar?

2.7 Objectives

- 1) To analyze the inputs of major stakeholders working for Kala-Azar in the district.
- 2) To study the roles of major stakeholders in the project.
- 3) To understand the relationship and co-ordination between major stakeholders working for elimination of kala-azar

2.8 METHODOLOGY

Study Design

This was a descriptive cross sectional study.

Study Location

Study was conducted in 17 blocks of Begusarai District, Bihar.

STUDY DURTION

The study was conducted in a limited time frame of 3 months from 1 February 2014 to 30 April 2014.

Study Subjects

The study population comprised of senior district government staff Including CS, DPM, DMO and VBD CONSULTANT at district level. Total number of respondents from the district level was four.

And MOIC, BHM, MI, and KTS at block level were involved in the study leading to total number of participants tally to four.

S.no.	Respondents	No. of respondents
01.	CIVIL SURGEON	01
02.	DISTRICT PROGRAM MANAGER	01
03.	DISTRICT MALARIA OFFICER	01
04.	VBD CONSULTANT	01
05.	MEDICAL OFFICER IN-CHARGE	17
06.	BLOCK HEALTH MANAGER	17
07.	MALARIA INSPECTOR	02
08.	KALA AZAR TECHNICAL SUPERVISOR	05

A survey of 34 squads was done with the help of a questionnaire.

Sampling

Sampling type was simple random sampling.

Two squads from each block was selected from each block. Line listing of total teams present in the block was done and two teams were selected by chit methods. 50% of the squads were attached to a link worker as a external monitor and another 50% were without lw.

Instruments of Data Gathering

An in depth interview questionnaire for district level respondent was prepared and used as a data collection tool. A briefing was given about the nature of study, and the procedure of completing the questionnaire was explained along with ethical consideration.

A questionnaire was prepared to collect the information from the field workers.

2.10 Ethical Considerations

All the participants were ensured of confidentiality. Any person who did not wish to participate in the interview was excused.

4. RESULTS

1. Number of spray squads (with/without LW) which reached the spray site from the spray camp (PHC) on designated time.

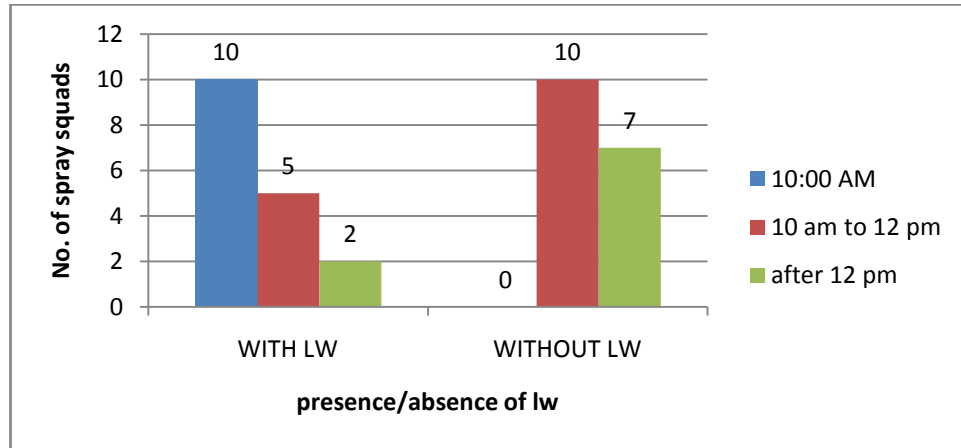


Fig 1 : Starting spray time by the squad with and without link worker

The above graph indicates that in the place where link workers (LW) were present, the no. Of spray squads reaching the spray site from spray camp were much higher in no. as compared to those where LW was not present.

2. Presence of the supervisor with the squads.

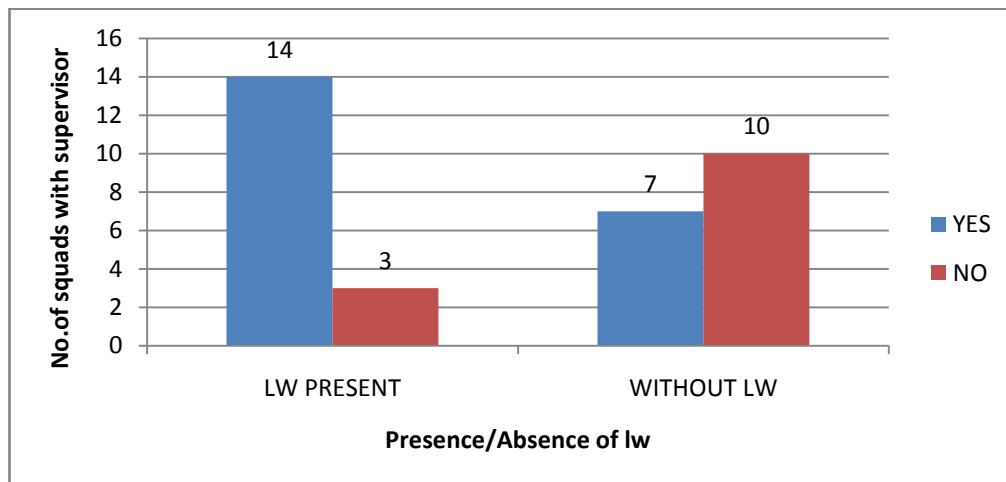


Fig 2 : Number of squads found with the supervisor

The above graphs indicates that the lw were acting as a motivator for the team, the squads were lw were present the attendance of supervisor was much more higher than the squads were lw were not present. The presence of supervisor alongside with the lw was much more important for increasing the quality of the spray.

3. No. of members present during the spray with the spray squad.

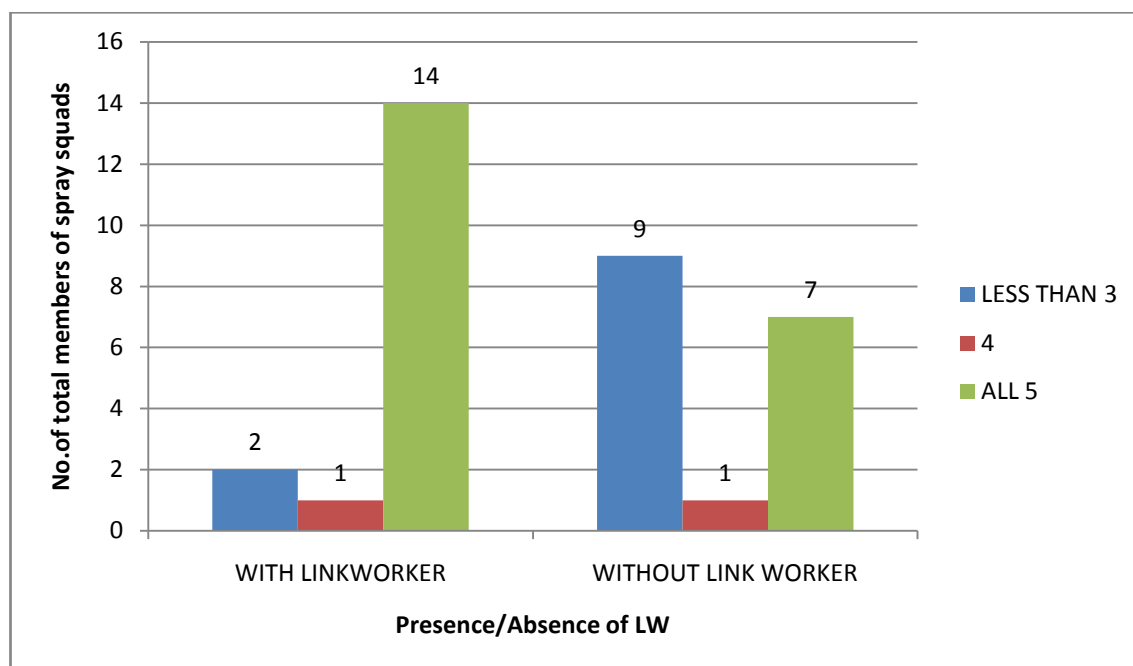


Fig 3 : Total no. of members of spray squad present during spray.

Note: Each squad consists of 5 members including one Supervisor and four spray workers.

The above graph indicates that in the presence of external supervision the no. of squads having complete members in their team were found to be higher than those squads where external supervision was not present.

4. Proper disposal of remaining DDT solution.

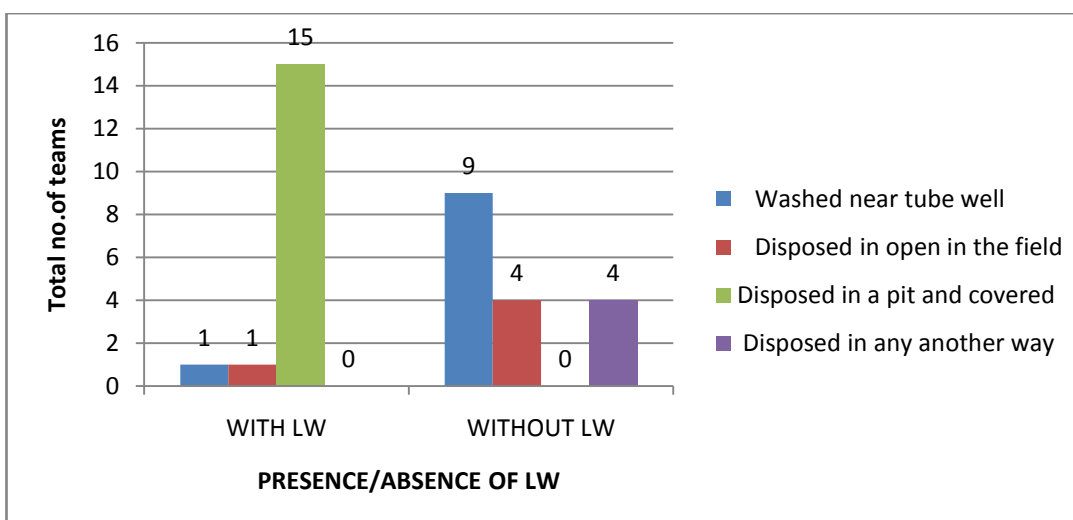


Fig 4 : Total no. of teams disposing the remaining amount of DDT solutions properly.

The above graph depicts that the teams with lw were disposing the remaining amount of DDT in proper way and under the governmental guidance, while the no. of teams without the lw were disposing it in wrong way.

5. Coverage of of households in the presence of lw

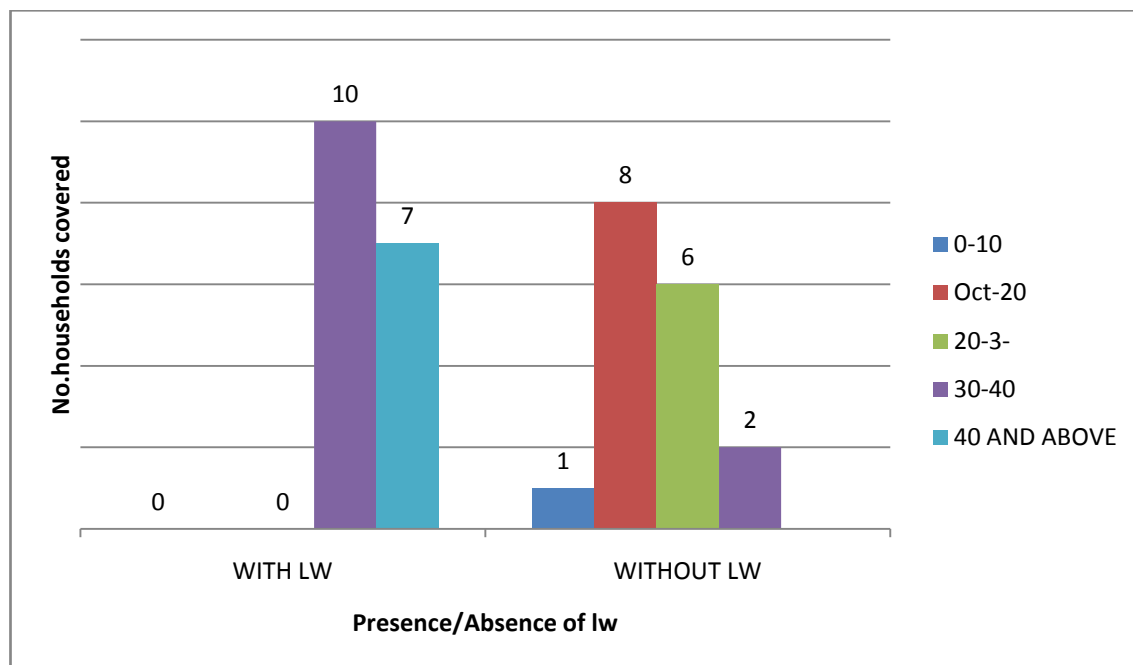


Fig 5 : Total no. of households covered in a day by the spray squads.

The above graph is a presentation of total no. of households covered in a day by spray squads, the squads with lw were able to do more houses in a single day in comparison to the squads where the lw were not present.

3. DISCUSSION

The results implicated that due to inter-sectoral convergence of major stakeholders the quality of health services in controlling incidence and prevalence of kala-azar diagnosis and treatment has increased from the past. It also came out that health care services related to diagnosis of kala-azar with rk39 kit (instant check) have also been on rise. Inter-sectoral convergence has also lead to increased availability of manpower, material various equipments and medicines which ultimately lead to increased and efficient work.

It was also seen that human resource required for proper monitoring and supportive supervision and hand holding in case detection (new cases) was also increased with incorporation of new identified affected villages in the spraying micro plan. With external supervision the quality of spraying and intensity of the spray has also been increased.

Inter sectoral convergence has provided a positive boost on the implication in the status of reduction of kala-azar cases, incidence and prevalence. This will ultimately help in controlling the disease and achieving the level of elimination.

An in depth interview schedule was used to conduct interviews of the relevant district level staff. The Civil Surgeon, District program Manager, District Malaria Officer, District Vector Borne Disease Control Program Consultant at the district level and all the Medical officer in charges (MOICs) of block PHCs were interviewed for their overall acceptance of the convergence of the NGO (CARE) in begusarai district.

Understanding of the situation of Kala Azar in the district

All the district level staff were of the opinion that he kala azar program had been running very slowly in the previous years, but with increasing interest being shown by the state government, and introduction of developing partners, in the form of an NGO, there is now a buzz of activities going on in the district to help in smooth functioning of the project. The CS and DPM had the best understanding of the situation, and were well aware of all he services, technical inputs to be given by the staff of the NGO. Some of the MOIC of the PHCs though were not fully aware about the activities going on in the

district as a whole. They had a view that the kala-azar program was running sufficiently well.

The staffs posted at the district level was well aware about CARE working as a development partner in helping the control and subsequent elimination of kala-azar from the district and the Bihar state as a whole. The CS and DPM had a complete idea of CARE providing technical support in the kala-azar control program as well as the RMNCH+A unit under the IFHI program. The District Malaria officer and the District NVBDCP consultant were more concerned with the Kala Azar Elimination project. Most of the MOICs in the block PHCs had enough information on CARE being in the district for technical support. Few MOICs were still of the view that the NGO and its staff were posted with the need to verify the activities of a block. Some even thought of CARE staff being a slight threat to their ways of functioning.

“I think the people from CARE are present to keep a check on the way we function and the various aspects of our duties” – MOIC – Bachwara Block

On a discussion about the satisfaction level of the staff working with the government, it came out that the work done by care is satisfactory and is an important step towards achieving the goal of kala azar elimination. Some important factors also came out from the discussion that there are certain fields where the expectation of the government with care was much more higher, regarding the close monitoring and supervision of the squads in the fields at the time of IRS. As IRS is a long activity in concerned with time and require more trained staff for supervision. And as it is now a known fact that there is huge lacking in number of government staff, for instance there are only two malaria inspector and only 5 kala azar technical supervisor for 17 block. In a district like Begusarai with such a broad geography it seems that these numbers are very lilltel. It

came out that a need from the side of government is sensed towards care providing trained and skilled man power for proper implementation of the elimination program.

In context to man power and trained personal it also came out that most of the field workers are of very old age and are working since 1974 and have not received proper training about proper spraying since then. As refreshment training is always organised by government before every IRS round, it came out that all these trainings are only formality and no such new information is provided to them nor proper method is shown to them. Apart from this they receive very less amount in the form of salary and that is also most of the time delayed for a long time. This leads to demotivation of the field workers. One important fact that came out from the discussion with SFW that most of the squads working have no interest in what so ever in maintaining the quality, they are working in a dilemma of getting permanent.

It was suggested by DMO that it will be a very good initiative if care could take an effective part in the training provided to the SFW as well as squad so that the proper method of spraying and maintain quality can be assured.

Awareness and IEC activities were a major part of discussion as both the government and care feels that a proper IEC campaign not only during the IRS but also before IRS activity and round the year will generate a greater impression on increasing the coverage of IRS and in providing proper medical care and medication for the patients.

Awareness of the disease and vector is an important part which has to be answered as most of the people are unaware of the disease life cycle and its habitat. Another common problem which was stated by most of the field workers was that there is a tendency of covering the household walls with cow dung. As in most of these places cow dung is not only considered sacred but also an integral part of their life and there is practice of washing walls, both indoor and outdoor with water and then applying cow

dung, and the challenge faced was that the people are not easily ready to leave this practice. As in words of a senior SFW, working since 1974,

“For last 30 years, two times a year, during IRS I go to the same village, same house, same family and most of the time same person, and every year they ask a good reason for not doing cow dung plaster.”

Another one said:-

“They simply don’t like the smell of the DDT.”

The impact of DDT is said to be reduced significantly after plastering cow dung.

In question, how they see the relationship between government and care most of the MoIC and district staff (CS, DMO, consultant) said that as both are the stakeholder in kala azar elimination program and the ultimate goal of is controlling and eliminating kala azar, they see care as an important partner and stakeholder in the program. While the government machinery with all of its power and human resource is equipped with all the weapons for fighting kala azar, it came out that there is less will power and funds for performing this act. As an example can be quoted here that Second round of IRS which was scheduled to happen at the end of 2013 took place in April 2014 and against the central government norms of 60 days was performed for 40 days only with problems of fund. As it was known later that there was no fund left and the activity was over in 40 days leaving around 40% villages uncovered. The villages left and the villages covered were based on the IRS micro plan prepared by DHS without any weightage on case prevalence or endemicity, leading to anonymously leaving few villages with high prevalence rate.

On the question of giving more authority and responsibility to care in case of surveillance and monitoring it was suggested that there should be a proper channel for flow of information from care to malaria office for prompt action against any irregularities. Absenteeism of SFW and Field works from the fields during IRS and un

availability of medicines or rk39 kit in phc should be reported direct to malaria office through care so that it can be handled properly. As in words of DMO:-

“If the field workers of care can report this types of issues direct to malaria office it will be a good example of both the stakeholder working together and these issues can be resolved as soon as possible.”

4. CONCLUSION

The study aimed to understand the inter-sectoral convergence and its effect on the beneficiaries and interaction between the public and private sector. As is evident from the results and the discussions, that private sector and its support is essential for the success of the program. It is also clear that private sector plays a pivot role in identifying new cases and registering them in government facility for proper treatment. It is true that government machinery cannot follow each and every patient so the role of private sector and Ngo becomes more critical in tracking those cases.

Around all the respondents agreed to the point that to maintain the quality of the IRS, monitoring from external agency, and is also important for proper surveillances. It was also found that IEC and BCC, being an important part should be catered by both the partners for increase in awareness about the disease and the program.

SUGGESTIONS:

- ▶ Convergence in Policy Formulation and Planning Policy.
 - In preparing micro plan
 - Searching new patients
 - Preparation of IEC/BCC material
 - Supply chain in medicines and rk39 kit
- ▶ Convergence in Implementation.
 - Participation in sfw/lw training
 - Participation in spraying
 - Providing proper equipments/pumps/spare parts and training for repairing.
 - Awareness campaign
- ▶ Convergence in Monitoring and Evaluation
 - joint supervision
 - Shearing of data
 - Concurrent monitoring and backcheck .

All the above points are the main stream of convergence for proper improvement and for increasing the efficiency and effectiveness of the disease programs.

5. LIMITATIONS OF THE STUDY

Noting that there is no research without limitations, this study has its own limitations too. The limitations arise from the methodologies that were adopted for this study and the nature of the setting. These limitations play an important role in interpreting study findings and making suggestions for future research.

The limitations are due to the exploratory nature of the research, respondents were not asked specifically about their relationships with local authorities and health centre staff or how their sense of civic duty had impacted on their acceptance of IRS. Furthermore, it was not planned in this study to discuss with the fieldworkers who conducted IRS to ascertain some of the concerns presented by the respondents in this study.

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Annexure

Annexure 1

English Questionnaire

A qualitative study on the assessment of co-ordination between major stakeholders for kala-azar program in Begusarai district of Bihar.

Interview Schedule

Informed consent : I would like to thank you for taking the time to meet me. My name is Mr.Abhishek Mishra. I would like to talk to you about your knowledge on Kala Azar. There are no direct benefits for you a part of this research, However your contribution will help the kala azar control program and the department of health to to design and develop appropriate information resources to help communities effectively recognize signs and symptoms of kala azar and take appropriate action when suspecting infection. The interview should take about 10 minutes. The responses will be kept confidential. This means that the interview responses will be shared only with the research team and we will ensure that any information that we include in our report does not identify you as the respondent. Remember, you don't have to talk about anything that you don't want to and you can end the interview at any time.

Do you have any questions about what I just explained?

Are you willing to participate in the interview?

Block	
Sub center	
Panchayat/Village	
Date of Interview	
Duration of interview (in minutes)	

A questionnaire to assess the quality of the spray where link workers were present/were not present.

The present study is being carried out to assess your knowledge regarding the quality of the spray and availability of the squad members. The information gathered from you will be kept confidential and will not be shared with anyone. Keeping the above information in mind, do you consent to participate in the interview?

I, _____ hereby declare that the information provided by me is accurate as per my knowledge. I have been informed about the study and its purpose and I give my consent to participate in the study.

Date:-

Sign:-

Note: - 1-Question 1 to 14 to be asked for a single household

2- Question 15 to 20 to be asked for the team as whole

3- all the questions to be asked by the link works attached to the team

If Yes, proceed with interview.

If No, end the interview.

Q.No.	Questions	Options	Skip/End
1.	Link worker Name		
2.	Squad number		
3.	SFW Name		
4.	Village		
5.	At what time the team started spraying	1-10 am 2- 10 am-12 pm 3- after 12 pm	
6.	Is the supervisor present with the team?	1- Yes 2- No	
7.	How many members are present with the team?(total-5)	1-less than 3 2-4 3-all 5	
8.	Do the team have two stirrup pump?(1 per team)	1-yes 2-no	
9.	Does the team have all the equipments required for	A-spare nozzle tip B-spare washer	

	spraying?	C-less than 3 buckets D-four buckets E-standard mug for measurements F-cloth G-all of the above H-none of the above	
10.	Does the team have 3x3 plastic sheets?	1. Yes 2. No	
11.	Does the team have 2x2 plastic sheet?	1. Yes 2. No	
12.	Does the team have register	1. Yes 2. No	
13.	Does the team have stenciling material (geru,brush).	1.Yes 2.No	
14.	How the remaining (left over) DDT was disposed?	1. Washed near tube well 2. Disposed in open in the field 3. Disposed in a pit and covered 4. Disposed in any another way	
15.	Is the stenciling done in the household	1- Yes 2- No 3- UNCLEAR	
16.	How many households were visited by the team	1-less than 40 2-40 – 60 3- More than 60	
17.	How many families were aware of the spraying?	1 – 0 – 10 2 – 10- 20 3 – 20 -30 4 – 30 – 40 5 – 40 and above	

18.	How many households covered food and eatables during sprayed?	1 – 0 – 10 2 – 10- 20 3 – 20 -30 4 – 30 – 40 5 – 40 and above	
19.	How many households removed furniture and tables from the rooms for spraying?	1 – 0 – 10 2 – 10- 20 3 – 20 -30 4 – 30 – 40 5 – 40 and above	
20.	How many households were having cattle shed?	1 – 0 – 10 2 – 10- 20 3 – 20 -30 4 – 30 – 40 5 – 40 and above	
21.	Where the cattel shed sprayed?	1- Yes 2- No	

Thank you for your time and valuable contribution. Do you have any question for me?

Sign of Interviewer

Annexure 2

Focus group Discussion Guideline

Dt : - -

1)Block: _____ 2) Subcentre _____ 3)Panchayat/Village
: _____

S.No	Name of Participants	Age	Education level	
1.				
2.				
3.				
4.				
5.				
6.				
7.				

Name of the facilitator and designation:

Name of the Note recorder and designation:
.....

FGD Guidelines

Knowledge about Kala Azar

Signs and Symptoms

About the Vector

Transmission of disease

Curability

Health seeking behavior

Involvement of other organization

Importance of different stakeholders

Expectation from different stake holders

Kala azar khoj camp

Treatment facilities/delays