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Constraints in livestock service delivery through mobile veterinary units (MVUs): Evidence from Odisha

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ABSTRACT

India has enormous livestock resources, production and productivity of Indian livestock remains low due to several factors including poor livestock service delivery. Towards improving the delivery of livestock services, Mobile Veterinary Unit (MVU) appears an innovative way of animal health service delivery at farmers' doorstep. The MVUs set up with funding under *Rastriya Krishi Vikas Yojana* (RKVY), are currently operational in all the 314 blocks of Odisha. This study was undertaken in Kandhamal district of Odisha during 2016, to analyse the functioning of MVUs including the constraints faced by the farmers as well as the service providers (Veterinary Officers and Livestock Inspectors) in delivering the animal health services through MVUs. The study revealed that limited frequency of service, limited staff in the MVUs, lack of awareness towards importance of service among farmers, less number of awareness camps, short service delivery period and very less remuneration to MVU professionals were the major constraints reported by the farmers and service providers. This study, thus, suggests that the MVUs could be more successful in improving the animal health service delivery in rural Odisha, if these constraints are overcome.

Key words: Constraints, Livestock inspector, Livestock service delivery, RKVY, Veterinary surgeon

India boasts of huge livestock wealth (512 million and 729 million of livestock and poultry population, respectively), accounting for 11.6% of world livestock population. But when it comes to productivity, performance of India's livestock sector is one of the poorest in the World (Chander *et al.* 2010). The per animal milk, meat and egg productivity has been very low in India, and one of the reasons identified for poor livestock productivity is weak livestock technology transfer and extension mechanism including poor delivery of animal health services (Ahuja *et al.* 2003).

The exploitation of the opportunities offered by the livestock sector requires a vibrant Animal Health Delivery System (AHDS) as it plays a vital role in sustaining the productivity and viability of livestock sector (Bardhan 2010). Though State Department of Animal Husbandry (SDAH) has remained as the major livestock service provider all throughout India, the last mile delivery of such services effectively at the remote and marginal locations has always been an impeding feature. Several reforms have been proposed to strengthen the livestock service delivery system by extending it to the rural poor in developing countries including India, viz. collaboration between public health and veterinary services in Africa (Schelling *et al.* 2005); promotion of community based animal health workers (CBAHWs) in Africa, Afghanistan, and Kenya (Mugunieri *et al.* 2004) and training of local community people (Gopal Mitras) regarding artificial insemination (AI) practices and minor symptomatic treatment in India; provision of AI and veterinary first aid to cows and buffaloes at doorstep of farmers by JK trust under Gram Vikas Yojana and partnering with agencies, NGOs, Cooperatives, private entrepreneurs etc. in extending the outreach of services to the farmers (Ahuja *et al.* 2008).

One of the largest dairy cooperatives in India, Anand Milk Union Limited (AMUL) had initiated provision of livestock services to the farmers' doorstep through mobile veterinary dispensaries in 1950s. The concept of Mobile Veterinary Dispensary is now functional in many states of India like Karnataka, Tamil Nadu, Andhra Pradesh, Odisha, Arunachal Pradesh, Meghalaya, Rajasthan, Gujarat, Madhya Pradesh, and Chhattisgarh under different names like mobile veterinary clinic, ambulatory clinic, etc.

This study was focused on the Odisha government's initiative of an alternative doorstep livestock service delivery through Mobile Veterinary Unit (MVU) established under *Rastriya Krishi Vikas Yojana* (RKVY). The MVUs are operational in all the 314 blocks of Odisha since 10 July 2010. The concept of Mobile Veterinary Units (MVU) have been initiated as targeted service delivery mechanism aimed at provision of desired veterinary services at the

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farmers' doorstep, in interior pockets, according to the preferred time of the farmers. In MVU, a team of professionals comprising one Veterinary Surgeon (VS), one Livestock Inspector (LI) and one attendant, reach out to organize animal health camps in remotely located inaccessible areas. Total working days for a MVU in a month are 20 days. In each working day, the team organizes one camp, which caters to the livestock owners of a minimum of two villages. The camps are organized on normal working days i.e. Monday to Friday. The rest two days are for monthly report and meeting.

The specific objective of the study was to document the major constraints faced in delivery of livestock services by MVUs in Odisha, so as to give policy suggestions on how to effectively improve the functioning of the mobile livestock service delivery system.

MATERIALS AND METHODS

The study was carried out in Kandhamal district of Odisha, which is one of the rural districts of Odisha, lying in high altitude zone with inaccessible or less accessible transportation facility to remote areas. Inadequate transportation facility and remotely located veterinary institutions, make it an appropriate area for veterinary intervention through mobile veterinary services. In 12 administrative blocks in Kandhamal district, 12 MVUs were in operation.

Three blocks were selected randomly for this study. From each block, 3 villages, where MVUs had already provided services, were selected purposively. In the next stage, from the 9 selected villages, 10 farmers from each village, who had availed the services of MVU, were selected. As such, 90 farmers in total were selected for the study. Again from 12 MVUs of Kandhamal district, 12 veterinarians and 11 livestock inspectors, who were working in the 12 MVUs, were selected for the study to get the supply side perspective.

Data: Primary data were collected from the farmers and the service providers through a pre-tested interview schedule. A list of statements, each eliciting a particular constraint in accessing or delivering livestock services through MVUs, was administered separately to the farmers and service providers. The pre-tested questionnaires were distributed to all the veterinarians and livestock inspectors during the monthly meeting to get their response on functioning of MVUs.

Farmers and service providers (both LI's and VS's) were requested to give score for each constraint on a 4 point continuum as 'very serious constraint' (score of 3), 'serious constraint' (score of 2), 'less serious constraint' (score of 1) and 'not a constraint' (score of 0).

Analytical framework: Total score for each constraint was calculated. According to weighted mean score analysis, total weighted score (TWS) and total weighted mean score (TWMS) were calculated for each constraint. Total score for a particular constraint was calculated by adding each respondent's score, which is here denoted as Total Weighted Score (TWS). Again dividing Total Weighted Score (TWS) by the sample size, the Total Weighted Mean Square (TWMS) was calculated.

$$TWMS = TWS/N$$

Based upon the values of TWMS, the constraints were ranked which gave the final indications regarding the relative severity with which each constraint was perceived by the stakeholders (farmers and service providers).

RESULTS AND DISCUSSIONS

Constraints faced by farmers while availing services of MVU: Table 1 presents the ranking of constraints by farmers as per their perceived severity. 'Less service delivery time' was ranked as the top most constraint by the respondents. This was followed by 'less frequency of visits by MVU team' to a particular village. Other important constraints in accessing the services of MVUs, as perceived by the respondents, were 'very less number of staff' to deliver services effectively, 'less number of awareness camps' as organized by the MVU team to make people sensitized about its importance, 'services being delivered not as per the preferred time of the farmers', 'limited diagnostic facilities' in the MVUs and 'long waiting time required' to actually avail the service from MVUs because of long queues. 'Greater focus on preventive services' and 'poor quality of service provided' were ranked as the least important constraints.

Table 1. Ranking of constraints faced by the farmers while availing the services of MVU (N=90)

Constraint	TWS	TWMS	Rank
Less service delivery time	250	2.78	I
Rare frequency of visit	244	2.71	II
Less staff	242	2.69	III
Less number of awareness camps	237	2.63	IV
Services not delivered in preferred time of farmers	199	2.21	V
Limited diagnostic facility	172	1.91	VI
Long waiting time to avail services	165	1.83	VII
More focused towards provision of preventive services	27	0.30	VIII
Poor quality of service	9	0.10	IX

Constraints faced by MVU service providers' while delivering services: Table 2 elicits the ranks given by the MVU servicers providers (Veterinary Surgeons and Livestock Inspectors) to various constraints they face while delivering services through MVUs. As per severity of constraints faced, 'less frequency of visits by MVUs to particular villages' was given the first rank by the VS's and the same constraint was ranked second by the LI's. LI's perceived 'lesser remunerations' as the most severe constraint. This same constraint was ranked fourth by the VS's. 'Lesser number of staff' was perceived as the second most important constraint by the VS's. Other important constraints reported by the VS's were 'lack of awareness about MVUs'; 'more office work' which renders their

Table 2. Ranking of constraints perceived by service providers during service provision

Constraint	L.I. (11)			V.S. (12)		
	TWS	TWMS	Rank	TWS	TWMS	Rank
Less frequency	30	2.73	II	35	2.92	I
Time limitation	13	1.18	VII	9	0.75	XI
More village	18	1.64	VI	11	0.92	IX
More target	22	2.00	IV	15	1.25	VI
More office work	2	0.18	XIII	26	1.58	V
Limitation of vehicle	4	0.36	XII	2	0.17	XV
Distantly located village	12	1.09	VIII	12	1.00	VIII
Rush during service provision	7	0.64	XI	6	0.50	XII
Impatience of farmers	8	0.73	X	8	0.00	XVI
Vaccination and deworming more time	8	0.73	X	10	0.83	X
Less physical facility	7	0.64	XI	3	0.25	XIV
Less staff	21	1.91	V	34	2.83	II
Lack of awareness	29	2.64	III	30	2.50	III
Less interest among farmers	11	1.00	IX	13	1.08	VII
Practically not possible	8	0.73	X	5	0.42	XIII
Less remuneration	33	3.00	I	27	2.25	IV
Less diagnostic facility	18	1.64	VI	10	0.83	X

delivery of services to farmers through MVUs more cumbersome; 'greater target level' set for them; 'less interest shown by farmers' and 'distant location of villages'. Constraints which received lower rankings, as per perceived severity, were 'unavailability of vehicle' for delivering services at villages; 'rush during service provision', 'lack of physical facilities'. The VS's also did not consider 'practical improbability' of delivering such services as relatively important constraint.

The above results revealed that the constraints faced by both the sets of respondents, viz. farmers and service providers were mostly same. As one single MVU serves around 80 villages in a block, so frequency to a particular village is once in 2 month. This frequency is considered inadequate by the villagers. Again as they deliver services in two villages a day, delivery of services at the second village in the day gets often delayed. As farmers have to move to their fields with their animals as day progresses, they are unable to avail the services of the MVU's, when they actually arrive at their village. Thus, these farmers do not get to avail such services at their desired time. Verma (2012) had also reported that 'early morning & late evening services' as one of the important constraint felt by farmers.

The requirement that MVUs have to deliver services every day to two villages, often makes things difficult for the service providers to deliver different types of services, viz. curative, preventive, breeding, diagnostic and extension services effectively. So, most often the services provided get oriented towards preventive services, as other services, viz. breeding and curative services are relatively timely in nature. Diagnostic services needs time to perform and they also require necessary equipments at the field level which are often not in disposal of the service providers. The respondent farmers reported that they were in need of information on scientific animal husbandry practices as well as managing livestock health. As such, they sought for frequent organizations of awareness camps on such themes. The MVU professionals while rendering their services often provide the farmers information on animal husbandry practices along with providing them with free medicine. But, as reported by the farmers, there is need to organize animal welfare camps at reasonable intervals in the villages. Biradar (2009) had also reported that 'lack of proper advisory services' and 'awareness camp' were perceived as one of the most important by livestock owners.

As frequency to a particular village is less, long queue of farmers for receiving services is expected. MVU team comprises of only one VS, one LI and one attendant. Hence, waiting time of farmers become longer when they come to avail animal health services from the MVUs. Thus, manpower for MVUs need to enhanced to cater to the needs of huge number of farmers in a village. Moreover, VS's posted in MVUs are not solely attached to these mobile dispensaries. Most often, the block-level Veterinary Officer (BVO) or additional veterinary assistant surgeon (AVAS) have to manage the MVUs when these move out to distant villages. These BVO's and AVAS's are thus overstretched as they also have the responsibility of looking after their block-level veterinary dispensaries. This surely has adverse implications on the quality of services provided from the MVU's as well as from the veterinary dispensaries. Inadequate staff posted at each MVU makes it difficult to cater to the needs of their target villages under their ambit. Shortage of veterinary workforce in terms of number of cattle unit served by one single veterinarian has been reported in earlier studies (Sudeepkumar 1999 and Damodhiran 2004).

Lesser remuneration was perceived as severe constraints by the service providers of MVUs, especially the LI's. Monthly remuneration fixed for the LIs was even lesser than the wage rate prevailing in the study area for unskilled labourer. This lower payment is not in consonance with their workload at the MVUs and hence their motivation towards their services is often adversely affected. The situation was same with VS's. This finding is in contrast to that of Biradar (2009), who had reported that inadequate supply of medicine followed by lack of transport facility were the top most constraints faced by the service providers. Kumar and Rao (1999) observed that the reason for the poor utilization of veterinary services could be that the department has to cover large number of villages. So all these constraints if taken into consideration while formulating policies for MVUs will make MVU a more effective intervention in terms of government Livestock service delivery at farmers' doorstep.

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