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Animal Healthcare Service Delivery System in Uttar Pradesh State of India: Perception of Government Veterinary Officers

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Abstract

The present study was carried out to ascertain the perception of government veterinary officers (GVO's) towards present status of animal healthcare services (AHS) in the Indian state of Uttar Pradesh. A total of 22 GVO's were surveyed from all the nine agro-climatic regions of the state. Findings revealed that most limiting supporting factors in AHS are laboratory support, availability of refrigeration facilities and training in post mortem. Most important constraints in delivering of AHS are posting in distant/ marginal areas, lack of infrastructure, and poor pay and incentives. Major factors hindering provision of AHS at farmers' doorsteps are cases being reported late, farmers' unwillingness to pay and other administrative and reporting tasks. The findings of the study have provided crucial information to the policy makers regarding the potential of improving AHS in the state.

Introduction

Animal Health Delivery System (AHDS) plays a crucial role in sustaining the productivity and viability of the livestock sector. India has one of the largest animal health infrastructure and technical expertise in the world with a vast network of over 50,000 veterinary dispensaries and centres, which together employ over 1,00,000 veterinarians and para-veterinary staff. This vast AHDS network however, cannot be equated with high quality of animal health supplies (Ahuja *et al.*, 2003a). However, future growth of the livestock sector will depend crucially on the availability of good quality health services – both preventive and curative. Various reforms are now being advocated as a means of overcoming the inherent problems associated with the state AHDS and of improving the overall efficiency. Several studies in the Indian context are available which have analyzed the demand-side perspective, i.e. perception of livestock producers, regarding potential impact of some of such reforms in AHDS (Bardhan, 2010; Pratap *et al.,* 2012 and Bardhan *et al.,* 2014). Although few studies are available in the developing country context on supply-side perspective, i.e. perception of the

Veterinarians on the present status of AHDS and scope for its improvement (Turkson, 2003 and 2004), scanty literature is available on this aspect in the Indian context. The present study attempts to bridge this information gap by documenting the perception of Government Veterinary Officers (GVO's) on constraints faced in delivery of AHS to farmers' doorsteps in potential impact of reforms in AHDS.

Materials and Method

Sampling

Purposive sampling design was adopted to select the Government Veterinary Officers (GVO's) which were the ultimate sampling units for this study. Uttar Pradesh has nine agro-climatic regions. All the nine regions were covered in the study. One district each from every region was selected. Two blocks from each district and GVO's posted in Government Veterinary Polyclinics/hospitals/aid centres in each of the selected blocks were selected for the study. In addition four other GVO's were randomly identified from the districts covered in the study. The sample comprised of 22 GVO's from the state of Uttar Pradesh. Given the number of veterinarians engaged in the public sector in the state, this number is small. However, the main aim of the study was to have a representative sample from all the agro-climatic regions of the state. The approach of the study is thus exploratory in nature and the findings also provide an overview of the qualitative indicators towards GVOs' perception towards provision of AHS in the state.

Data

Primary data were collected by personally interviewing the GVO's with the help of a well-structured and pre-tested questionnaire. Data were collected - inter-alia - on their perception towards status of various supporting factors in delivery of AHS; constraints faced in effective delivery of AHS; factors hindering provision of AHS at farmers' doorsteps and potential impact of various possible reforms in AHDS.

Analytical framework

Likert scale was used to ascertain the perception of GVO's towards supporting factors; the constraints in rendering AHS and factors hindering delivery of AHS at farmers' doorsteps. Average scores given by the surveyed doctors on various supporting factors related to AHS were measured on a 3-point continuum (Good = 3, Fair = 2 and Poor = 1). The average scores were then used to obtain the indices (by dividing the average score of each factor by the maximum attainable score) of the various supporting factors and these factors were then ranked on the basis of these indices. In regard to constraints faced by GVO's and their perception towards factors hindering provision of AHS at farmers' doorsteps, the respondents' ratings on a 5-point continuum (most severe = 5 and least severe = 1) were obtained. Based upon the indices obtained (by dividing the average rating by the maximum attainable rating) the constraints and factors hindering provision of AHS were ranked.

Results and Discussion

All the doctors interviewed reported that, on an average, they treat cattle & buffalo and goats in any given week. The next major species which are treated by significant proportion of the doctors surveyed - in any week - are pet animals (mainly dogs) (86%), followed by poultry (82%). Relatively smaller proportions of the doctors reported that they get cases related to horses, pigs and sheep, on an average in a week, 59%, 50% and 45% respectively. The least number of cases that arrive at AHS centre, in any week, is related to mules, reported by only 23% of the doctors.

On an average, the respondents surveyed reported that they spend the highest share of their official duty time on provision of curative services (43.25%) in any given month (Table 1). With regard to various supporting factors towards provision of AHS, the first three ranks were occupied by factors like availability of drugs, availability of equipments and training in disease diagnosis (Table 2). This implies that the doctors were happy in regard to these supporting factors. Pay and incentives occupied the fourth rank, implying that almost equal proportions of the doctors surveyed were satisfied and dissatisfied with the present pay & incentive structure. Training in postmortem, availability of refrigeration facilities and laboratory support occupied the last three ranks, respectively, implying that these three are the most limited supporting factors as per the perceptions of the doctors surveyed.

In regard to the constraints faced by the GVO's in rendering AHS to the livestock owners effectively, posting in distant and marginal areas occupied the first rank, followed by lack of infrastructure and poor pay and incentives, implying that these three are the major constraints

faced by the doctors (Table 3). Lack of adequate training in post mortem and lack of clear cut promotion criteria were cited as the next major constraints. Lack of adequate transport facilities was cited as the least important constraint in delivery of AHS.

Table 1: % of working time spent by Veterinarians on various official activities in any month

SN	Activity	% Time
1.	**Preventive activities**	
a.	Vaccination	22.10
b.	Deworming	14.85
2.	**Curative activities**	
a.	Treatment (At home)	6.55
b.	Treatment (In-centre)	25.55
c.	Surgery	3.60
d.	Animal Health Camps	7.55
3.	**Diagnostic services**	
a.	Laboratory diagnosis	1.30
b.	Post mortem	2.95
4.	**Administrative & others**	15.6

The respondents surveyed were also asked about the major factors that hinder their provision of AHS at farmers' doorsteps. 'Cases being reported late' and 'other administrative and reporting tasks leaving them with little time to make home visits' were cited as the most important constraints that adversely affect their provision of AHS at farmers' home (Table 4).

Table 5 presents the perceptions of the doctors surveyed on the potential impact of specific reforms in AHDS. Almost 91% of the doctors stated that cost recovery for treatment/ curative services and establishing a strong veterinary association will improve AHDS. Majority (59%) of the doctors reported that liberalization of drug distribution/sale will result in improvement of AHDS. Majority of the doctors (54.5%) were

Table 2: Status of various supporting factors related to animal healthcare service

SN	Supporting factors	Average score*	Support factor Index**	Rank
1	Availability of drugs/vaccines	2.14	0.71	1
2	Availability of refrigeration facility	1.50	0.50	6
3	Availability of equipment	1.95	0.65	2
4	Laboratory support	1.27	0.42	7
5	Training in disease diagnosis	1.82	0.61	3
6	Training in post mortem	1.55	0.52	5
7	Pay and incentives	1.59	0.53	4

* Average score calculated as per 3-point continuum, viz. Good = 3; Fair = 2 and Poor = 1

** Index for each support factor obtained by dividing the average score for that factor with the maximum obtanaible score

Table 3: Constraints faced by GVO's to rendering animal healthcare services (Rating on a 5-point continuum, viz. Most severe = 5 and least severe = 1)

SN	Constraints	Average rating*	Constraint Index**	Rank
1	Lack of transport facilities	2.09	0.42	6
2	Lack of infrastructure	2.59	0.52	2
3	Posting in distant/marginal areas	3.00	0.60	1
4	Lack of adequate training in disease diagnosis/post mortem	2.14	0.43	4
5	Lack of clear cut promotion criteria	2.14	0.43	4
6	Poor pay and incentives	2.36	0.47	3

** Index for each constraint obtained by dividing the average rating for that constraint with the maximum obtanaible rating

of the opinion that private sector delivery of curative services will reduce the effectiveness of AHDS.

Conclusion

The study has provided the supply side perspective regarding the status of AHS in the state of Uttar Pradesh and the potential impact of reforms in AHDS. The critical areas for reforms in AHDS are improving infrastructure like providing adequate laboratory support & refrigeration facilities, provision of training in post mortem, streamlining the workload of the GVO's by reducing other administrative and reporting tasks and recruitment of staff in the AHDS. Potential reforms which will improve AHDS are cost recovery for curative services and establishment of strong Veterinary Association.

Table 4: Factors hindering provision of AHS at farmers' doorsteps (Rating on a 5-point continuum, viz. Most severe = 5 and least severe = 1)

SN	Constraints	Average rating*	Constraint Index**	Rank
1	Farmers' unwillingness to pay	2.45	0.49	3
2	Lack of transport facilities	1.82	0.36	8
3	Lack of fuel for vehicles	2.05	0.41	7
4	Cases being reported late	2.59	0.52	1
5	Poor roads / inaccessible places	2.45	0.49	3
6	Lack of staff	2.45	0.49	3
7	Service design discourages home visits	2.23	0.45	6
8	Other administrative and reporting tasks which leave little time to make home visits	2.50	0.50	2

** Index for each hindrance obtained by dividing the average rating for that hindrance with the maximum obtanaible rating

Table 5: Perception of GVO's on potential impact of reforms in AHDS

SN	Reforms	% of GVO's reporting their perception		
		Improve	No change	Detoriate
1	Cost recovery for treatment/curative services	90.91	9.09	-
2	Cost recovery for vaccination services	54.55	45.45	-
3	Liberalization of drug distibution/sale	59.09	27.27	13.64
4	Private sector delivery of curative services	27.27	18.18	54.55
5	Establishment of strong Veterinary Associations	90.91	9.09	-

Private sector delivery of curative services was considered to adversely affect provision of AHS.

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