

Assessment of Veterinary Health Care Infrastructure Availability in Karnataka

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ABSTRACT

In pursuit to analyze the veterinary health care infrastructure availability, the study was conducted in two districts of Karnataka state viz., Bijapur and Dharawad by using the judicious mix of primary as well as secondary data. The primary data on availability of various facilities at work places was collected from 67 veterinarians in the study area and the secondary data regarding livestock population and distribution of veterinary institutes was collected from published reports. The results indicated almost one third (39.24% & 27.00%) shortage of institutes against the requirement as per livestock population for effective animal health service delivery in Bijapur and Dharawad districts respectively. Majority of veterinarians were having basic amenities for routine office work except the computer (85.07%) and latest A-V aids (82.08%) while protection cloths mainly masks (64.17%) were not available with majority of them. The transport as well staff quarters were not accessed to its staff apart from inadequate basic veterinary equipments for treatment. The study indicates that the gap existing in terms of institutes as well as facilities at work place needs to be improved for effective livestock service delivery and improved livestock sector performance.

Key words: *Infrastructure; Veterinary equipments; Work place; Veterinarians; Karnataka;*

The first veterinary clinics of human history were established by the great emperor Ashoka during the Mauryan era (*Somvanshi, 1993*). Aftermath of independence, like many other developing countries, in India also the public sector continues to be the main livestock service provider for free of cost or with heavy subsidies. As a result, today India is endowed with one of the highest veterinary health care infrastructure in the world comprising of 10,901 veterinary hospitals/ polyclinics, 22,402 veterinary dispensaries, 25,856 veterinary aid centers/ mobile clinics, 556 State and 6 central government labs for disease investigation support, 24 dedicated units for FMD surveillance, diagnosis & monitoring, 26 veterinary biological production institutes, 59,159 animal disease reporting units (excluding border check posts & vigilance units) manned by more than 86,000 Veterinary Personnel (Vets/ Para vets/ Veterinary Field Assistants etc) (*Suresh, 2016*).

Karnataka state is not an exception to this with a network of 4112 institutes of different kind (Veterinary dispensaries, hospitals, primary veterinary centers, Artificial Insemination Centers etc) delivering services to farmers across the state.

Lack of infrastructure is an important issue that comes in every discussion taken up on livestock service delivery. Many a times, lack of simple diagnostic kits severely hampers the use of veterinary technical skills. Under such circumstances, veterinarians in spite having higher skills will carry out treatment based on their best judgment in the absence of lab diagnosis and the quality of such services may be marginally better than that of paravets (*Punjabi, et al., 2005*). Livestock service delivery being the core responsibility of the state, requires the use of public funds for required infrastructure and human resource network to serve the needy farmers. At present, most of the governments do not have

considerable resources in terms of facilities, finance and trained manpower to support all the elements that are required to sustain the control of diseases. Due to the limited supply of resources, the livestock services could not be provided cost effectively to livestock keepers in the villages of the developing world (*Ellis and James, 1979*). *Chander et al., (2003)* revealed that the availability of sound veterinary services was very poor and veterinary hospitals were not well equipped with the required facilities in India. The secondary data on the budgetary situation of the State Animal Husbandry Department s (SAHD) revealed that major portion (90 %) of the budget was being spent on salaries and very little amount was being spent on medicines and other essentials. Further they concluded that the state run government veterinary services need a lot of improvement by improving the infrastructure facilities. This study based on primary as well as secondary data is an attempt to analyze the veterinary health care infrastructure available in Bijapur and Dharawad districts of Karnataka state.

METHODOLOGY

Exploratory research design was used to investigate the veterinary health care infrastructure availability in two districts of Karnataka state Viz., Bijapur and Dharawad by using the judicious mix of secondary as well as primary data. The secondary data regarding the institutes network and livestock population was collected from SAHD reports and the data regarding basic amenities, protection cloths, veterinary equipments and other physical facilities was collected from 67 veterinarians of Dharwad (37) and Bijapur districts (30) of Karnataka state through pre-tested inventory in their monthly meetings. Scoring pattern of herd size as given by *Singh (1998)* was used to calculate the cattle units from different types of livestock. The data were tabulated and analyzed with frequency and percentages.

RESULTS AND DISCUSSION

Institutional Network for Veterinary Health Care in Study Area : Analysis of the data about the veterinary institute's network and their comparison with livestock population is given in Table 1. Mainly there are five types of institutes in study area viz., Veterinary Hospital, Veterinary Dispensary, Mobile Veterinary Clinics,

Table 1: Network of Veterinary institutes in study areas and distribution of cattle units among the institutes

Particulars	Bijapur	Dharawad	Overall
Veterinary Hospital	10	8	18
Veterinary Dispensary	59	46	105
Mobile Veterinary Clinics	5	4	9
Primary Veterinary centres	50	15	65
AI Centres	6	36	42
Sheep & Wool Extraction centres*	7	—	7
Total	130	109	239
Livestock Population (Cattle units)	1340582.10	800946	2141528.10
Per Institute Cattle Units	8229.58	6848.6	7599.76
Required no of institutes#	214	149	363
Gap or shortage**	84 (39.24)	40 (27.00)	124 (34.20)

* Not included in total number of institutes as S&WEC are only carrying out services regarding wool extraction and sheep co-operative activities# Calculated on the basis of 5,000 cattle units per veterinarian, as per the recommendations of the National Commission on Agriculture (NCA, 1976)**Figures in the parenthesis indicate the percentage of shortage

Primary Veterinary Centres and Artificial Insemination Centres. All together 130 and 109 institutes were existing in Bijapur and Dharawad districts respectively while seven Sheep and Wool Extraction Centres (S&WECs) were present only in Bijapur because of more sheep population in the district. The overall position indicated that, on an average every veterinary institution delivering livestock health services i.e., manned by veterinarian as well as para veterinary staff covered 8229.58 and 6848.6 Cattle units in Bijapur and Dharawad, respectively indicating nearly one third (39.24% & 27.00%, respectively) shortage in these districts against the NCA (1976) recommendations. Further as such diagnostic labs and training institutes of state government were not established in both the districts; but specialised veterinary hospital under University of Agriculture Sciences, Dharawad and training centre under Dharawad milk union are also addressing the farmers information and service needs in Dharawad while no such related institutes exist in Bijapur district. Similar results were also observed by *Chander et al., (2006)* and *Ravikumar (2007)*. Even the data on field veterinarians availability in five south Indian states including Karnataka revealed only 57.82% occupancy compared to the requirements as per recommendations of NCA (*Rao et al., 2015*).

Infrastructure Availability at Veterinarians Work Place : Office basic amenities: The data in Table 2 revealed that most of the veterinarians (92.5%) reported adequate availability of table / chairs with very small number (7.46%) reporting their inadequacy while majority were satisfied with respect to availability of other amenities like the stationary (88.05%), electricity (80.59%), fan (77.61%), technical literature (37.31%) while the facilities like type writer (77.61%), computer (85.07%) and audio visual equipments (82.08%) were not available in majority of the veterinarians' work places. The results indicate the availability of the office amenities required for staff comfort, sitting and routine office activities. Similar results have been reported by *Moola Ravikumar (2016)*.

Protection cloths: Veterinarians working under constant vicinity of animals are susceptible for many hazards during their work and has to wear protection cloths for physical as well as health safety. The major protection materials like apron (56.71%), gloves (61.19%) and gum boots (41.79%) were available to nearly half of veterinarians but masks (64.17%) were not available (Table-2).

Veterinary equipments: The available veterinary equipments required for effective service provision with most of veterinarians were refrigerator (80.89%), microscope (59.70%), microscopic slides (47.17%), stethoscope (68.56%), sterilizer (79.10%), hoof cutter (47.76%), large size burdizzo castrator (98.50%), drench gun (44.77%), post mortem set (41.79%), trevis (92.53) and ropes (85.07%). On the other hand, the advanced items like automatic syringe (88.05%), surgical instrument set (38.80%), hoof trimmer knife (41.79%), small size burdizzo castrator (53.73%), pet nail clipper (77.61%) and leather muzzle (53.73%) were reported to be not available with majority of veterinarians (Table-2). Majority of equipments required for minimum diagnosis and treatment along with restraining equipments were available, however the instruments required for pet/small animals were less available which might obviously due to more importance given to large ruminants in rural areas.

Other physical facilities: Further, data in Table-2 also revealed that majority (85.07%) of the field veterinarians were not having the official jeep for transportation in the rural areas excepting meager 8.95 percent of them. The staff quarter facilities were not available with any of the veterinarians and majority (52.23%) of them

Table 2: Infrastructure availability at veterinarians' work place

Facilities	Adequate No.(%)	Not adequate No.(%)	Not available No.(%)
<i>Basic Amenities</i>			
Table/ Chairs	62(92.5)	5(7.46)	0(0.0)
Stationary	59(88.05)	7(10.44)	1(1.49)
Electricity	54(80.59)	7(10.44)	6(8.95)
Fan	52(77.61)	7(10.44)	8(11.94)
Type writer	9(13.43)	6(8.95)	52(77.61)
Computer	10(14.92)	0(0.0)	57(85.07)
AVEquipments	8(11.94)	4(5.97)	55(82.08)
Tech. literature	25(37.31)	22(32.83)	20(29.85)
<i>Protection cloths</i>			
Apron	38(56.71)	23(34.32)	6(8.95)
Gloves	41(61.19)	18(26.86)	8(11.94)
Masks	11(16.41)	13(19.40)	43(64.17)
Gum Boots	28(41.79)	23(34.32)	16(23.88)
<i>Vet. equipment</i>			
Refrigerator	54(80.59)	7(10.44)	6(8.95)
Microscope	40(59.70)	13(19.40)	14(20.89)
Microscope slide	32(47.17)	20(29.85)	15(22.38)
Stethoscope	46(68.56)	11(16.41)	10(14.92)
Automatic syringe	5(7.46)	3(4.47)	59(88.05)
Surgical inst. set	19(28.35)	22(32.83)	26(38.80)
Sterilizer	53(79.10)	12(17.91)	2(2.98)
Hoof trimmer/ knife	26(38.80)	13(19.40)	28(41.79)
Hoofcutter (large size)	32(47.76)	13(19.40)	22(32.83)
Burdizzo (small size)	20(29.85)	11(16.41)	36(53.73)
Burdizzo (large size)	66(98.50)	0	1(1.49)
Drench gun	30(44.77)	13(19.40)	24(35.82)
Post mortem set	28(41.79)	16(23.88)	23(34.32)
Pet nail clipper	10(14.92)	5(7.42)	52(77.61)
Muzzle (leather)	16(23.88)	15(22.38)	36(53.73)
Travis	62(92.53)	5(7.46)	0
Ropes	57(85.07)	8(11.94)	2(2.98)
<i>Other facilities</i>			
Transport (Jeep)	6(8.95)	4(5.97)	57(85.07)
Residence (Staff)	0(0.0)	0(0.0)	67(100)
Human medical	13(19.40)	19(28.35)	35(52.23)

revealed that even the human medical facilities were also not available.

Sariput (2008) also observed similar findings in Maharashtra. In a similar study conducted in Rajasthan, *Rajput (2006)* also reported that only 17 per cent hospitals were equipped with refrigerator. He further revealed that all the hospitals were well equipped with the basic instrument like the needle, scissors, scalpel, burdizzo castrator in sufficient quantities but majority

of these (75%) were not having essential equipments such as autoclave, sleeves, microscope, X-ray machine and sprayers. Trevis however, was available in all hospitals. Rajput (2006) also reported that only one hospital with telephone facility and none of them had vehicle facility. Jeyaretnam *et al.*, (2000) studied 160 registered veterinary practices in Western Australia and reported that types of cooling used in veterinary practices were evaporative air conditioners (39.1%), refrigerated air conditioners (33.3%) and fans only (12.7%). Of the 13 veterinary clinics without any cooling system, 10 were in rural areas.

CONCLUSION

The availability of veterinary health care infrastructure in the SAHD is governed by the policies of the state government. Accordingly, minimum basic facilities are usually provided for the veterinarians. Lack of proper financial support to livestock sector is the precursor for shortcomings in infrastructure. In the

present study, veterinarians were having basic amenities for routine office work except latest A-V aids while the non availability of mask to majority of them is a serious concern as absence of such protection measures would expose the veterinarians to various zoonotic health hazards. Further, the items like syringe, sterilizer, otoscope, distillation unit and pet nail clipper, computer, type writer, duplicating machine, audio visual equipments etc might be either unavailable or inadequate with rural hospitals which need to be addressed in order to improve the livestock service delivery. Presence of elaborate accommodation facilities, transport facilities and a well supported human hospital catering the housing and health care requirement of the veterinarians working in the rural areas will motivate them to work hard for the cause of rural farmers. The study recommends that the gap existing in terms of institutes as well as facilities at work place needs to be improved for effective livestock service delivery and improved livestock sector performance.

REFERENCES

- Chander, M., Singh, B. P. and Harya, H. P. S. (2003). A study on livestock health services delivery system in Bareilly district. *Annual report, IVRI, Izatnagar*: Pp- 70
- Chander, M., Singh, B. P., Arya, H. P. S., Mandape, M. K. and Ravikumar, S. (2006). Status of Government run veterinary services in Uttar Pradesh: A case of Bareilly district. *Indian Journal of Field Veterinarians.*, **2** (1): 61-65.
- Ellis, P. R. and James, A. D. (1979). The economics of animal health: major disease control programmes. *Veterinary record.*, **105** : 504-505.
- Jeyaretnam, J. and Jones, H. (2000). Physical, chemical and biological hazards in veterinary practice. *Australian Veterinary Journal.*, **78**:751-758.
- Moola Ravikumar (2016), Dynamics of livestock development in Andhra Pradesh: A Multi- stakeholders analysis, PhD Thesis (Unpub.), IGNOU, New Delhi, India.
- NCA(1976) National Commission on Agriculture in India. Part III, *Ministry of Agriculture and Irrigation, GOI, New Delhi.*, pp. 439.
- Punjabi, M., Kumar, P., Sreeramulu, P. and Ahuja, V. (2005). Livestock service delivery in Andhra Pradesh: Veterinarians perspective. *Research report, Pro-poor Livestock Policy Initiative- A living from livestock.*
- Rajput, D. S. (2006) Animal health delivery system among pastoralists in arid zone of Rajasthan. PhD Thesis (Unpub.), IVRI, Izatnagar, India.
- Rao, S. V. N., Rasheed Sulaiman, V., Natchimuthu, K., Ramakumar, S., and Sasidhar, P.V.K. (2015). Improving the delivery of veterinary services in India. *Rev. Sci. Tech. Off. Int. Epiz.*, 2015, **34** (3)- 767-777
- Ravikumar, S. (2007). Livestock service delivery by State department of Animal Husbandry in Andhra Pradesh – A Critical Analysis. PhD Thesis (Unpub.), IVRI, Izatnagar, India.
- Sariput, L. (2008). A study of occupational health hazards among veterinarians. PhD Thesis (Unpub.), IVRI, Izatnagar, India.
- Singh, R. (1998). Essentials of animal production and management. Kalyani Publishers, Ludhiana (India) p.453
- Somvanshi, R. (1993). Prachin Bharat me pashupalan evam pashu-chikitsa vigyan. A bulletin Pub.by Director, IVRI, Izatnagar, U.P.
- Suresh, S. H. (2016). Convocation address, *18th convocation of the Tamilnadu University of Veterinary and Animal Sciences, 05th February, Chennai.*

