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# VETERINARY MEDICINE PRESCRIPTION SERVICE IN THE COASTAL REGIONS OF BANGLADESH

S.A. HOSSAIN[1], M.G.U.I. RAHMAN[2] AND M.A. ALI[3]

[1]Upazila Livestock Officer, Amtoli, Barguna, Bangladesh; [2]Upazila Livestock Officer, Matlab Uttor, Chandpur, Bangladesh; [3]Veterinary Surgeon, District Hospital, Patuakhali, Bangladesh.

Corresponding author & address: Syed Altaf Hossain; E-mail: altaf_dls@yahoo.com
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**ABSTRACT**

Hossain SA, Rahman MGUI, Ali MA (2013) Veterinary medicine prescription service in the coastal regions of Bangladesh. *J. Innov. Dev. Strategy.* 7(2), 29-33.

Studies were conducted on the Veterinary medicine prescription service in the coastal regions of Bangladesh with the objectives of identifying the dominant types of treatment need and to know the technical veterinary treatment administration as to prioritize the technical element needs required for prescription and follow up skill training requirements. The research included on-station and on-farm studies covering 5 Districts and 10 Upazila with a questionnaire for investigation for developing a technical model prescription service guideline. The major results obtained from the studies showed that the diagnosis of the problem/complain show that the perfection of the problem identification is 48% due to lack of detailing of the complains and analysis of other parameters. The analyzed data on the technical elements of diagnosis showed that only the skin/ fur conditions were noticed and responded by 27% as highest. Other l parameters were within the range of 8-25% indicating a serious stress in the service leaving a great scope of its improvement. The results on the Technical elements documented as per District base showed that the higher percentage is in Noakhali being lower in Barguna district due to their extreme rurality. The results on diagnosis of the coastal region poultry complains showed that analysis of clinical items at the on-farm level was only 30%. The problem identification standard was only 28% which indicate a quack type of treatment or giving treatments only in case of much known popular diseases and surgeries/dressings. The results obtained on the technical elements of diagnosis in case of poultry birds revealed that the clinical parameters such as temperature, pulse, respiration etc. are recorded but it was only within the range of 14-16%. Test of stool, urine blood, saliva were 16% but it was for visual features like color, consistency, fiber, looseness etc. The mean performance level was answered by only 19% respondents.

***Key words:*** *veterinary medicine, prescription service, disease diagnosis, coastal zone*

## INTRODUCTION

Dairying has a direct impact on income generation, poverty alleviation and availability of animal protein. Quantification of the contribution of livestock, including poultry, shows that dairying is the predominant source of income generation (GOBUN 2005). The per capital daily supplement of milk and meat is only 32.6 ml and 10.2 g against the requirement of 250 ml and 120 g respectively. On an average the people of Bangladesh face an acute shortage of milk and meat by 85% and 89% respectively. Livestock is the most important sub sector of agriculture with national GDP contribution of almost 3% and 17% to the agricultural GDP (MOA 2005; BBS 2008; and BBS-BEC 2011). Livestock also contributes significantly towards national export. The major constraints to dairy cattle production are the shortages of quality feeds and fodder, availability of better breeds of cattle, unscientific management practices and lack of institutional support, research and training, which would be beneficial to the farming environment. Although the nineteen districts in the coastal zone occupied 32% of the country's surface and have 28% of the population, the coasts are not fixed and static line between land and sea, but rather an area where interaction between land and sea takes place. This interaction takes many forms and timeframes, ranging for instance from daily tidal movements to long term land formation processes occurring in the Khulna, Barisal and Chittagong regions.

The majority of dairy farms in Bangladesh are privately owned and entrepreneurs are also getting involved in small-scale and commercial dairy farming in urban and peripheral urban areas through micro-credit programs (Ali 2000). The costal low land of Bangladesh has a large milk deficit area yet has considerable potential to meet the unsatisfied demand through peripheral urban milk production. If we resolve biological, social and economic feed constraints to the development (Saadullah 1989), adoption and productivity of sustainable household dairy system, it will be helpful to minimize the deficit of milk and meat for our consumption. Wide-ranging expansion of livestock farming is needed to remove the existing protein deficiency along with cutting the poverty rate in the costal belt of Bangladesh. The majority of dairy farms in Bangladesh are privately owned. Entrepreneurs are also getting involved in small-scale and commercial dairy farming in urban and peripheral urban areas through micro-credit programs.

Sudden and insidious outbreak of many diseases is the major constraint to cattle production in Bangladesh. The extent of losses due to disease is very high. The major diseases are anthrax, hemorrhagic septicemia (HS), foot-and-mouth disease (FMD), black quarter (BQ), diseases caused by infestation with liver flukes and calf diarrhea (Ali 2000). Incidence of some cattle disease differs between the seasons and locations. There are eight Field Disease Investigation Laboratories (FDIL) located in different parts of the country but none of them are situated in the costal belt of Bangladesh and are not closely concerned with diagnoses and treatment of livestock diseases especially, during the naturally hazardous periods, when the extent of losses are at the highest level.

In view of the above background and importance the present piece of research was formulated with the objectives such as i. to identify the dominant types of treatment need for different animals; ii. know the technical veterinary treatment administration in Bangladesh rural areas; and iii. to prioritize the technical element needs required for prescription.

## MATERIALS AND METHODS

The Approach Methodology followed in the studies were i. on-station studies with a check list for investigation as per objectives; ii. on-farm studies with a questionnaire for investigation; iii. synthesizing the findings towards developing a formulation of model and technical prescription service guideline.

### Population sampling coverage:

Livestock service departments and agencies of 5 Districts and 10 Upazila.

### Questionnaire guideline

A. Characteristics of the study site

1. District…. 2. Upazila… 3. Name of the Office… 4. Designation of the Head of Office… 5. Status of the clinic…. 6. Total no. of staff…

B. Characteristics of the patient animal

1. Species of the patient animal: 2. Breed name… 3. Health status… 4. Age-
5. Complain…. 6. Problem identified…… 7. Status of the patient animal:

C. Technical elements of prescription

1. Patient animal health parameter records: 2. Temperature----$^0$F, 3. Pulse rate/per min
4. Respiration rate/min. 5. Skin/hair condition 6. Characteristics of stool, urine, blood, saliva, 7. Diagnosis of the problem/complain……

The Acts identified related to the Veterinary Services consulted in the studies were: i) Veterinary Practitioner Act 1982; ii) Animal Medicinal Drug Use Classification Act (AMDUCA) 1994; iii) Animal Disease Act 2005; iv) Animal Disease Rules 2008; v) Pesticide Act 2002; vi) Water conservation Act 2003; vii) Essential community Act 2005; viii) Other Acts: Animal quarantine act, Animal Slaughter Act, Animal cruelty Act, Cattle trespass Act, Wild life Act, and Environmental Act.

## RESULTS AND DISCUSSION

### Diagnosis of the Complains

The results obtained from the studies are sequentially presented here in graphs and tables with necessary interpretations. The results given in the table on diagnosis of the problem/complain show that the perfection of the problem identification is 48% due to lack of detailing of the complains and analysis of other parameters.

**Patient animal health parameter records:** The results obtained on the patient animal health records are given in the Table 1 and Figs. 1 and 2. The results apparently show less scientific veterinary service at the client level.

Table 1. Percent positive response for patient animal health parameter records–Cattle

| | Patuakhali | Barguna | Pirojpur | Chittagong | Noakhali | Mean |
|---|---|---|---|---|---|---|
| Breed name | 32 | 19 | 26 | 25 | 36 | 28 |
| Health status | 36 | 15 | 34 | 41 | 33 | 32 |
| Age | 51 | 35 | 42 | 45 | 32 | 41 |
| Complain detailing | 22 | 31 | 27 | 29 | 38 | 28 |
| Problem identification | 61 | 52 | 28 | 54 | 43 | 48 |
| Mean | 40 | 30 | 31 | 39 | 37 | |

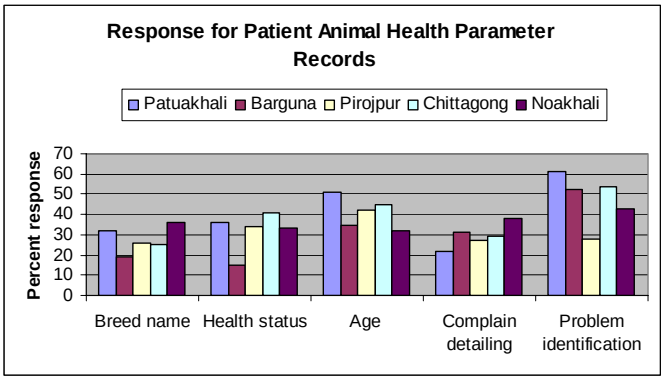


Fig. 1. Response of the clients on the patient animal health parameters

The results also revealed indicate that the perfection of the problem identification is 48% due to lack of detailing of the complains.

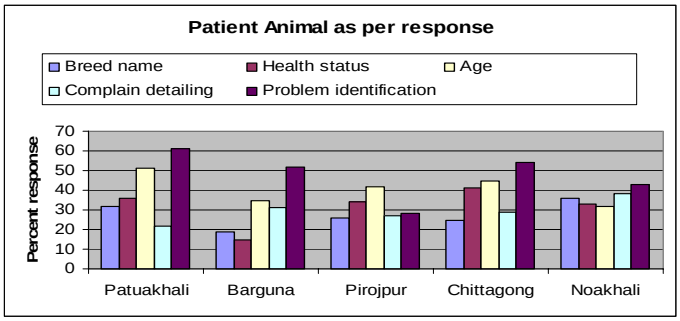


Fig. 2. Response on the health parameters as per technical documentation elements

The results also comparatively show that the higher percentage is in the Patuakhali district and the lower being the Barguna district. The pie chart show the perfection level of the complain identification as per Districts (Fig. 3). Similar findings were also apprehended and recognized by many workers including (Hossain 1996) and gave recommendations for improvement of the situation.

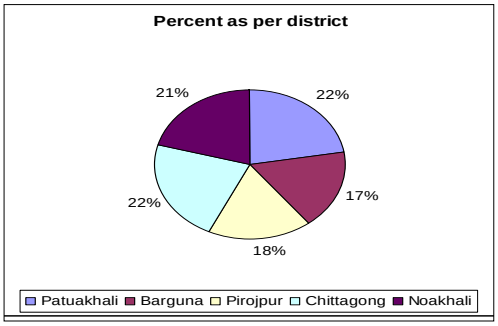


Fig. 3. Percent response on the health parameters as per Different district

**Technical elements of diagnosis- Cattle:**

The analyzed data on the technical elements of diagnosis in animals show that only the skin/ fur conditions were noticed and responded by 27% as highest. The other essential parameters were in the range of 8-25% indicating a serious stress in the service leaving a great scope of its improvement. The graphs given in the Figs. 4 and 5 indicate that only the skin/fur conditions were noticed and responded by 27% as highest and other essential parameters were in the range of 8-25%.

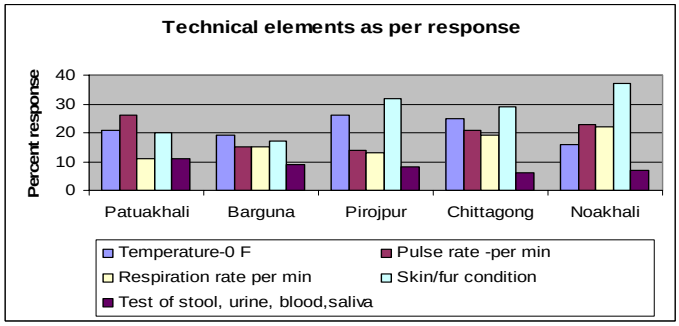


Fig. 4. Technical elements of diagnosis in cattle as per parameters

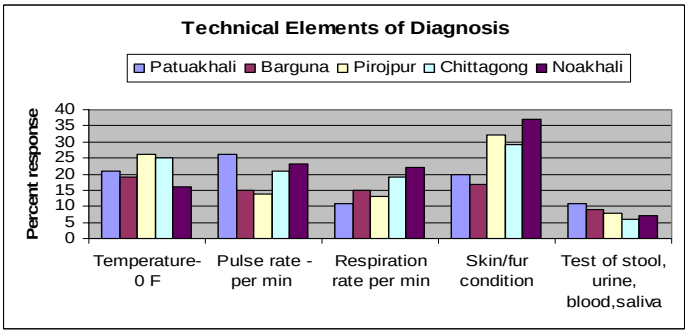


Fig. 5. Technical elements of diagnosis in masticating animals-Cattle

**Technical elements as per District base percent**

The results given here comparatively show that the higher percentage is in Noakhali district and the lower being in Barguna and Pirojpur district. The figure (Fig. 6) indicates districts wise technical elements as per percent.

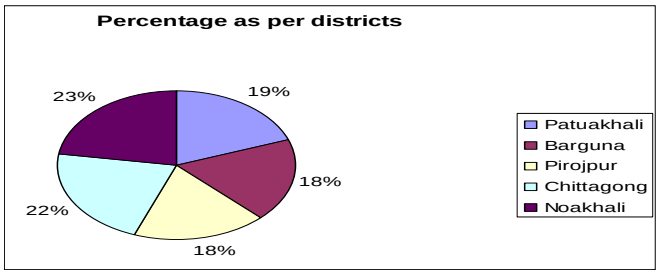


Fig. 6. Pie-chart showing the diagnosis as varied by different Districts

**Diagnosis of the problem for Poultry**

The results presented here (Table 2) on the patient animal health parameter records of poultry Birds of coastal region show that analysis of clinical items at the on-farm level was only 30%. The problem identification standard was only 28% which indicate a quack type of treatment or giving treatments only in case of much known popular diseases and surgeries/dressings. The results also comparatively show that the higher percentage is in Patuakhali district and the lower being in Noakhali district.

Table 2. Percent positive response for Patient animal health parameter records –Poultry

| | Patuakhali | Barguna | Pirojpur | Chittagong | Noakhali | Mean |
|---|---|---|---|---|---|---|
| Breed name | 31 | 19 | 26 | 25 | 13 | 20 |
| Health status | 36 | 17 | 32 | 38 | 33 | 31 |
| Age | 31 | 35 | 41 | 35 | 32 | 35 |
| Complain detailing | 54 | 31 | 27 | 29 | 32 | 34 |
| Problem identification | 41 | 14 | 28 | 33 | 23 | 28 |
| Mean | 40 | 23 | 31 | 32 | 27 | 30 |

**Technical elements of diagnosis for poultry**

The results obtained on the technical elements of diagnosis in case of poultry birds including local chicken and ducks show (Table 3) that the essential elements of clinics namely temperature, pulse, respiration etc are recorded but it was only within the range of 14-16%. Test of stool, urine blood, saliva were 16% but it was for visual features like color, consistency, fiber, looseness etc. The mean performance level was answered by only 19% respondents.

Table 3. Technical elements of diagnosis in case of poultry birds

| | Patuakhali | Barguna | Pirojpur | Chittagong | Noakhali | Mean |
|---|---|---|---|---|---|---|
| Temperature- $^0$F, | 16 | 15 | 14 | 9 | 17 | 14 |
| Pulse rate- per min | 11 | 15 | 13 | 19 | 12 | 14 |
| Respiration rate….per min | 12 | 17 | 22 | 19 | 7 | 16 |
| Skin/fur condition | 35 | 37 | 38 | 46 | 27 | 37 |
| Test of stool, urine, blood, saliva | 10 | 19 | 16 | 15 | 19 | 16 |
| Mean | 23 | 21 | 21 | 22 | 16 | 19 |

The results showed comparatively higher percentage is in Patuakhali district and the lower being in Noakhali district.

**CONCLUSION**

In light of the research findings the conclusions may be made which will improve the existing critical situation of Livestock Veterinary Service. To improve the diagnosis of the complains every registered veterinarian must check the symptoms and complains clinically in the hardcore coastal regions of Bangladesh. Showed that analysis of clinical items at the on-farm level was only 30%. The problem identification standard was only 28% which indicate a quack type of treatment or giving treatments only in case of very known popular diseases and surgeries/dressings. The results obtained on the technical elements of diagnosis in case of poultry birds revealed that the clinical parameters such as temperature, pulse, respiration etc are recorded but it was only within the range of 14-16%. Test of stool, urine blood, saliva were 16% but it was for visual features like color, consistency, fiber, looseness etc. The mean performance level was answered by only 19% respondents. There should be a standard prescription data requirement to be followed by the concerned. The skill development for

the professional should remain as a continuous process. There must be provision for indoor patient admission system in the Upazila level facilities so that the serious patient animals can overnight in the clinic. On-farm level research should be initiated and strengthened in the coastal regions of Bangladesh where the disaster incidences are increasing than the present rate of treatments.

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