



SOP for Treatment of Farm Animals

Document Number	Effective Date	Review Date	Version No
NVH-P-U1-09	01/01/2019	31/12/2021	001

Document Approval

Prepared by:

National Veterinary Hospital

Signature

Designation.....

Date

Chief Veterinary Officer
National Animal Hospital
Department of Livestock
Ministry of Agriculture & Forest
Thimphu Bhutan

Reviewed by:

Review Committee

Signature

Designation.....

Date

Veterinary Officer
Animal Health Division
Department of Livestock
Ministry of Agriculture & Forests
Thimphu : Bhutan

Authorized by:

Department of Livestock

Signature

Designation.....

Date

Director General
Department of Livestock
Ministry of Agriculture & Forests
Thimphu : Bhutan

Revision History

Revision	Revision Date	Reason for Revision	Revised by

Prepared by NVH	Reviewed by Review Committee	Authorized by DoL
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1. Purpose

1.1 This SOP describes the procedure for carrying out treatment in farm animals.

2. Scope

2.1 This SOP covers restraining and administering medicine to animals.

3. Responsibilities

Sl. No.	Official Designation	Responsibilities
1.	Veterinarians/Para-veterinarians	Administering the medications as prescribed.
2.	Animal attendants	Assist the para-veterinarians with restraining of the animal and clean the table and room after every operation

4. Definitions

4.1 AHD: It refers to Animal Health Division under the Department of Livestock.

4.2 Animal attendants: It refers to a person who helps in restraining of animals and ensures the well being of the animals during the treatment procedures.

4.3 Body temperature: It refers to the degree or intensity of heat present in the body.

4.4 Capillary refill time (CRT): It reflects perfusion of peripheral tissues. Press on an area of mucous membrane. The gums will "blanch" white as they are pressed and become pink again when pressure is released. Normal: < 2 seconds.


4.5 Case Register: It refers to a register or database wherein the details of owners and patients are recorded.

4.6 Case Registration number: It is the number assigned for particular patient during case registration.

4.7 Consultation: It refers to the process of examination of patients and discussing with the owner about the patient.

4.8 DoL: It refers to Department of Livestock.

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4.9 **DRA:** It refers to Drug Regulatory Authority.

4.10 **Effective Date:** It is the date that a document becomes effective for use.

4.11 **Farm Animals:** It refers to animals, which are raised for home use or for profit. It includes cattle, yak, buffalo, sheep, goat, pig and horse.

4.12 **NVH:** It refers to National Veterinary Hospital, Thimphu.

4.13 **New case:** It refers to the sick animal brought to the hospital for the first time.

4.14 **Para-veterinarian:** It refers to a person with diploma in Animal Science and is authorized to provide treatment to the animals.

4.15 **Physiological Parameters:** It refers to the measurement of normal functions of living organisms and their parts.

4.16 **Prescription Form:** It refers to a form with details of the patient with instruction written by the veterinarians/para-veterinarian that authorized patient to be issued with a medicine or treatment.

4.17 **Restrain:** It refers to application of any procedure designed to restrict its movements in order to facilitate examination of patient.

4.18 **Repeat case:** It refers to the sick animal undergoing follow up treatment.

4.19 **SOP:** It refers to Standard Operating Procedure.

4.20 **Tentative Diagnosis:** It refers to provisional or unconfirmed diagnosis.

4.21 **Veterinarian:** It refers to a person holding a bachelors degree in Veterinary Science and Animal Husbandry and is authorized to practice veterinary medicine.

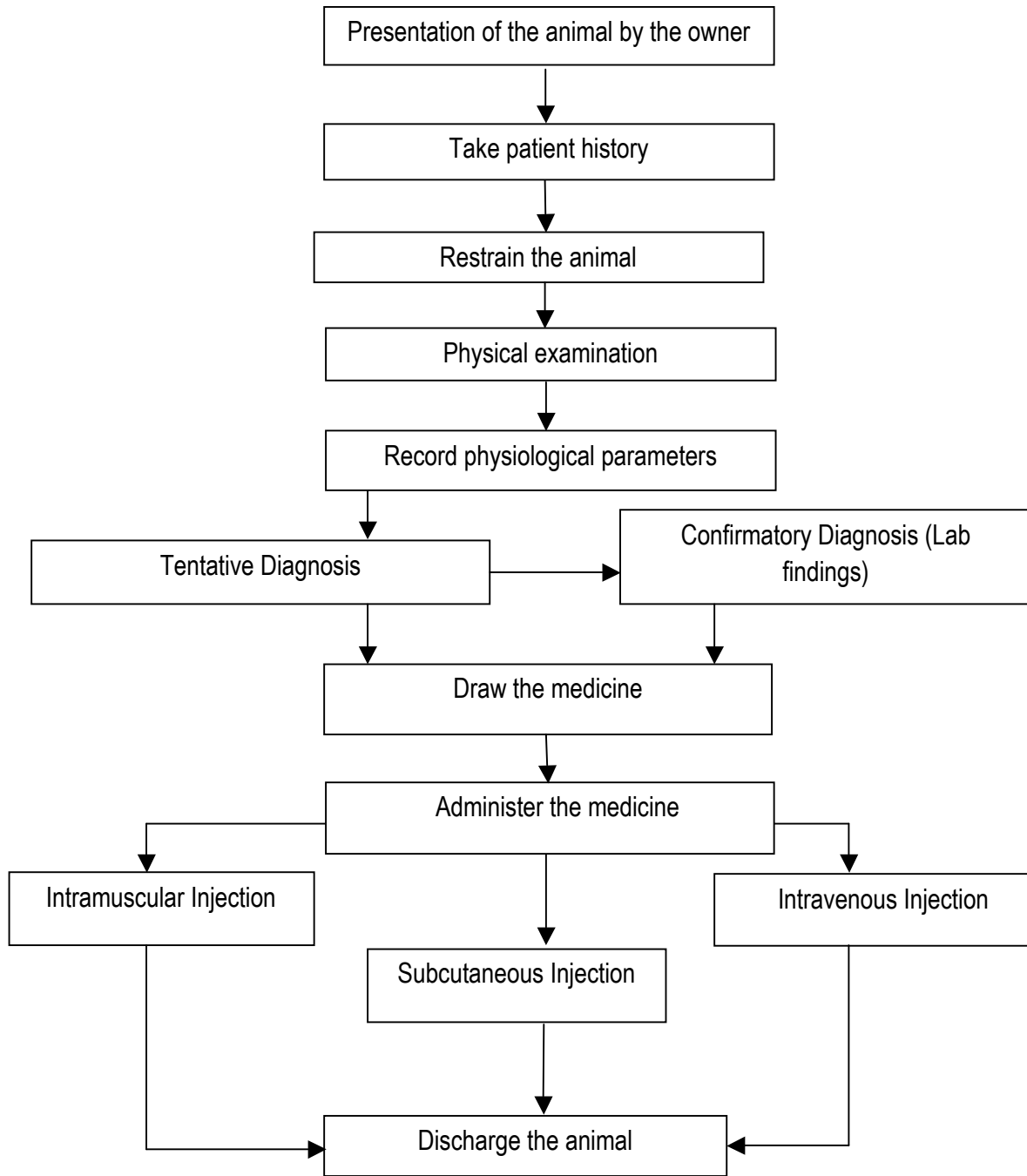
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5. Process Map in Flow Chart



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6. Procedure

- 6.1 Present the animal by the owner.
- 6.2 Take history of the patient from the owner - vaccination and deworming status, feed and water intake, defecation and urination, milk production and any other abnormalities.
- 6.3 Restrain the animal.
- 6.4 Perform physical examination of the patient – check visible mucus membranes, muzzle, palpate lymph nodes and muscles for swelling, rumen motility, auscultation with stethoscope for abnormal sounds, and degree of dehydration by pulling the skin.
- 6.5 Record physiological parameters - body temperature, pulse rate and respiration rate. Refer Standard Treatment Guideline 2017.
- 6.6 Record all the above findings in the prescription form.
- 6.7 Make tentative diagnosis.
- 6.8 Initiate treatment based on tentative diagnosis.
- 6.9 Choose the route of administration of medicine.
 - 6.9.1 Oral route (PO)
 - 6.9.2 Intramuscular route (IM)
 - 6.9.3 Subcutaneous route (SC)
 - 6.9.4 Intravenous route (IV)
- 6.10 Choose the site of injection. Refer Annexure 1 for injection sites for different species.
- 6.11 For oral administration
 - 6.11.1 Restrain the head of the animal.
 - 6.11.2 Open the animal's mouth. Position yourself so that your body is acting as an object to hold the animal's head in place and for easier grip on the animal's mouth. Place your butt up to the chute with the animal's head against your side, and use your legs as leverage and as a means to brace yourself. With your arm closest to the animal's head, wrap your arm over the top of the muzzle so that you can get the opposite lip, not the side of the lip that's closest to you, so you can safely get to the mouth and elevate the head. Push your hand under the lip and use the same hand to stroke the roof or palate of the mouth. This will encourage animal to open up wide. Be sure you are keeping the head elevated.
 - 6.11.3 Deposit the bolus into the very back of the animal's mouth. This projects the pill further down the back of the mouth into the esophagus.
 - 6.11.4 Keep the head elevated until the animal swallows the pills. You can also encourage this by stroking the throat, optional this may be.
- 6.12 For intramuscular injection.
 - 6.12.1 Using a syringe with 18G needle, insert the needle into the vial.
 - 6.12.2 Pull back the plunger slowly to draw the desired amount of medicine.
 - 6.12.3 Put the cap on the needle and place it in a kidney tray.
 - 6.12.4 Part the fur to expose the skin at the intended site of injection.
 - 6.12.5 Wipe the skin with cotton dipped in spirit.
 - 6.12.6 Before injecting the medicine, withdraw the plunger.

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6.12.7 If blood is aspirated, pull out, refill the syringe with fresh medicine and insert again.

6.12.8 If no blood is aspirated, give the injection, withdraw the needle and massage the muscle.

6.12.9 Dispose the syringe and needle separately as per the SOP for Disposal of Pharmaceutical and Biological Wastes.

6.13 For subcutaneous injection.

6.13.1 Lift the skin up and form a pocket with your finger.

6.13.2 Press the needle into the skin.

6.13.3 If blood is aspirated, pull out, refill the syringe with fresh medicine and insert again. If no blood is aspirated, give the injection, withdraw the needle and massage the muscle.

6.13.4 Dispose the syringe and needle separately as per the SOP for disposal of waste.

6.14 For intravenous injection.

6.14.1 Locate the vein.

6.14.2 Clip the hairs or shave the area if necessary.

6.14.3 Occlude the vein 3-6inches below where you plan to place your needle.

6.14.4 Watch for the rise of the vein.

6.14.5 Wipe the site with cotton dipped in spirit.

6.14.6 Insert the needle (size: 16-20G) into the vein and when blood begins to flow into the hub of the needle connect it to the syringe with medicine or IV fluid.

6.14.7 Once the medicine or IV fluid administration is completed, disconnect it and remove the needle.

6.14.8 Apply pressure to arrest the blood from the vein with a piece of cotton.

6.14.9 Discharge the patient.

6.14.10 Dispose the syringe and needle separately as per the SOP for Disposal of Pharmaceutical and Biological waste.

16.15 If further test is required:

16.15.1 Collect samples for laboratory diagnosis- blood, serum, feces, urine etc.

16.15.2 Carry out diagnostic test like X-rays, ultrasound, endoscopy etc if deemed necessary.

16.15.3 Make final diagnosis after obtaining all the test results.

16.15.4 Review and initiate final line of treatment.

16.15.5 If the patient is not responding to the treatment initiated, patient has to undergo further physical examinations and other diagnostic test.

7. Related Forms or Work Instructions

7.1 Prescription form

7.2 SOP for Disposal of Pharmaceutical and Biological waste.

8. References

8.1 SOP on SOP format – Drug Regulatory Authority, Thimphu.

8.2 Equine intramuscular injections – WillametteValleyEquine.com

8.3 Standard Operating Procedure Simpson Beef Cattle Farm Clemson University

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8.4 Injections to sheep and goats - Ethiopia Sheep and Goat Productivity Improvement Program (ESGPIP).

Annexure 1: Injection sites for different species.

Species	IM sites	SC sites	IV sites
Cattle/Yak	Neck (The triangular area on either side of the neck). Gluteal or Hip Region (The proper location of this injection site is the intersection of a line between the tail head and point of hip and a line between the top of the croup and the point of the buttocks).	Neck (The triangular area on either side of the neck).	Jugular vein.
Horse	Lateral neck (The triangular area on either side of the neck). Hamstrings (This area is located below the tuber ischium bones and above the achilles tendon in either hind leg). Gluteal or Hip Region (The proper location of this injection site is the intersection of a line between the tail head and point of hip and a line between the top of the croup and the point of the buttocks).	Neck (The triangular area on either side of the neck).	Jugular vein.
Sheep & Goat	Neck (The triangular area on either side of the neck).	Skin just behind the elbow. Neck (The triangular area on either side of the neck).	Jugular vein.
Pig	The common preferred site in weaners, growers, finishers and adults is up to 70mm behind the base of the ear. Small piglets are often injected into the ham of the hind leg.	Inside the thigh beneath the fold of the skin or, beneath the skin behind the shoulder.	Ear vein. Jugular vein.

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