CASE LOGS and REPORTS – Additional Instructions/Guidelines

- When indicated, if a pain score scale is not available, give a subjective pain score of mild, moderate, or severe.
- When a validated BCS scale is not available, give a subjective score. The 9 point scale is recommended.
  - Body condition assessment for PM
  - Beef Cattle BCS Reference: https://pubs.ext.vt.edu/content/dam/pubs_ext_vt_edu/400/400-795/400-795_pdf.pdf

AVTCP Production Medicine Skills List

*A minimum of 80% of the skills must be mastered.
**Mastery is defined as to be able to perform a task consistently and competently without being coached or directed no less than 4 times.
*Skills must be cross referenced in the case logs.
*Skills may not be claimed and will not be counted if performed on deceased/cadaver animals.
<table>
<thead>
<tr>
<th>Skill</th>
<th>Case Log Number(s)</th>
<th>Signature of Veterinarian or VTS</th>
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<tbody>
<tr>
<td><strong>General Nursing</strong></td>
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<tr>
<td>1. Perform a complete physical exam (assess peripheral pulses, i.d. abnormal heart/lung sounds, ruminations, body condition score)</td>
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<tr>
<td>2. Efficient and accurate calculation of drug dosages</td>
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<tr>
<td>3. Mastery of venipuncture in healthy and sick and/or debilitated animals</td>
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<td>4. Mastery of venipuncture via jugular and tail vein</td>
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<td>5. Mastery of urine sample collection</td>
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<td>6. Mastery of milk sample collection</td>
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<td>7. Proficiency in cattle restraint (running a chute, recognizing a choke situation, mastering knots for restraint such as a bowline, tomfools or halter)</td>
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<td>8. Mastery of IV catheter placement</td>
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<td>9. Proficient in proper placement of an esophageal feeder</td>
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<td>10. Advanced knowledge of fluid therapy in dehydrated animals</td>
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<tr>
<td>11. Mastery of proper wound management techniques and proper applications of bandages, splints and casts</td>
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<td>12. Advanced knowledge of grains and forages</td>
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<td>13. Proficiency in age determination by animal's teeth</td>
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<tr>
<td><strong>Pharmacology</strong></td>
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<tr>
<td>14. Extensive knowledge of groups of drugs, their mechanisms, clinically relevant side effects, and accurate evaluation of therapeutic responses</td>
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<td>15. Extensive knowledge of types of vaccines, their immunological mechanisms and adverse vaccine reactions</td>
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<td>16. Extensive knowledge of estrus synchronization products and their appropriate uses.</td>
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<tr>
<td>17. Proficiency in administration of enteral medications using a dose syringe, balling gun, and/or stomach tube</td>
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<td><strong>Practice Management</strong></td>
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<td>18. Supervise the creation and maintenance of all appropriate facility records and logs in compliance with regulatory guidelines (e.g., x-ray, surgery, anesthesia, laboratory, controlled substances)</td>
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<td>19. Instruct and supervise staff in the accurate recording of medical information</td>
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<td>20. Proficiency in the management of inventory control</td>
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<tr>
<td>21. Establish and supervise the maintenance of appropriate sanitation and nosocomial protocols for a veterinary facility including animal handling areas and necropsy areas</td>
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<td>22. Outstanding interpersonal and public relations skills</td>
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<tr>
<td><strong>Anesthesia/ Analgesia</strong></td>
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<tr>
<td>23. Proficient and efficient dose calculations of appropriate drugs</td>
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<tr>
<td>24. Mastery of endotracheal intubation and tube placement in routine and emergent situations</td>
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</table>
25. Monitor and evaluate patient status and anesthetic depth using established parameters such as outward involuntary physical responses (i.e., jaw tone, palpebral reflex, eye position), blood pressure, heart rate, and respiratory rate

26. Set up, maintain, and troubleshoot an anesthesia machine (oxygen tank, vaporizer, CO2 absorbent)

27. Perform a caudal epidural and a variety of local blocks for various surgeries

**Surgical Nursing**

28. Extensive knowledge of and ability to set up necessary equipment and supplies for a variety of surgeries

29. Advanced knowledge of proper care of surgical instruments and equipment

30. Proficiency in identification and advanced knowledge of appropriate and relevant suture material

31. Proficiency in the recognition of dystocia and identification of its stages

32. Proficiency in the recognition of prolapse emergencies (rectal vs. vaginal)

33. Supervise staff in proper surgical supply sterilization procedures (autoclave, ethylene oxide)

**Laboratory**

34. Mastery of all basic laboratory testing (CBC, fibrinogen, UA, fecal analysis, external parasite analysis, basic cytology, blood smear evaluation) and evaluation of results.

35. Utilize, maintain, and troubleshoot in-house hematology and clinical chemistry analyzers and evaluate results

36. Knowledge of and properly perform a variety of IgG tests

37. Properly collect, handle, and perform basic microbiology procedures (Perform biochemical tests to identify bacteria and perform a sensitivity)

38. Knowledge of a BSE according to the Society of Theriogenology standards (collecting a semen sample, preparing, and examining a slide for motility and morphology and thorough knowledge of normal sperm cells and their defects)

39. Properly perform a CMT

**Diagnostic Imaging**

40. Mastery of basic radiology procedures and implementing and observing all safety rules.

41. Demonstrate accuracy and efficiency in positioning patients for a variety of radiographic studies (thorax, abdomen, spine, skull, extremity, shoulder, pelvis)

42. Accurate and consistent evaluation and modification of radiographic technique
AVTCP Production Medicine Knowledge List

**Beef Cattle Knowledge List**

**Pharmacology:**
- Controlled Drugs
- Anthelmintics
- Vaccines
  - Knowledge/reasons of vaccine failures

**Reproduction:**
- Breeding Soundness Exam
  - Following the Therio Society guidelines for a BSE, passing criteria
- Calvings/Dystocias
  - Calving-Related Conditions
  - Prolapsed Uterus
  - Retained Placenta
- Estrus Synchronization Programs

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<thead>
<tr>
<th>Necropsy Procedures</th>
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<tr>
<td>44. Properly perform a correct necropsy for rendering</td>
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<tr>
<td>45. Properly collect and/or handle and submit necropsy samples for histopathology</td>
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<tr>
<td>46. Knowledge of correct euthanasia procedures for rendering</td>
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</tbody>
</table>
Biosecurity:
   Zoonotic Diseases/Biosecurity Procedures
       Foot and Mouth Disease
       Rabies
       BSE
       Anthrax

Clinical Skills:
   BCS
   Cattle Handling
   Knot Tying
   Recognition of Equipment
       Balling gun
       OB Equipment
       Dehorning Equipment

Digestive Conditions:
   Bloat
   Abomasal Ulcers
   Grain Overload
   Grass Tetany
   Salmonella
   Clostridium

Ocular Conditions:
   Bovine Keratoconjunctivitis
   Ocular Squamous Cell Carcinoma

Viral Diseases:
   BVD
   Johnes

Urogenital Disorders:
   Pyelonephritis
Urolithiasis
Freemartin
Cryptorchidism
Fibropapilloma
Deviation of the penis or fracture
Prolapsed prepuce
Scrotal hernia
Orchitis/frostbite

Bacterial Diseases:
Tetanus
Botulism
Black Leg

Respiratory Diseases:
IBR
Pasteurella
Aspiration Pneumonia
Atypical interstitial pneumonia (Bovine Emphysema)

Musculoskeletal Diseases:
Bovine Lameness/arthritis
Downer Cow
Foot Rot
Fractures
Stifle injuries

Parasites:
Internal and External
Sheep Knowledge List

Necropsy Procedures:
Sheep rendering procedures
Collect samples and shipping procedures
  -samples for scrapie surveillance

Nutrition:
Feeding Problems
  Urolithiasis, Hypocalcemia, Hypomagnesemia, Copper Toxicity, Nutritional Myodegeneration

Clinical Skills:
Ages for permanent teeth

Zoonotic Diseases/Biosecurity:
  Contagious Ecthyma
  Blue Tongue (not zoonotic)
  Contagious lymphadenitis
  Ringworm
  Toxoplasmosis
  Q Fever
  Scrapie

Internal Parasites:
Treatment & Control Programs
FAMACHA Guidelines
  Anthelmintic Resistance
  Alternative Control Methods (nutrition, pasture rotation etc.)
Diagnostics
  Fecal Exam Methods (McMasters, Modified Wisconsin)

Pharmacology:
  Administer enteral medications (stomach tube)
  Fluid Therapy
Anti-inflammatory
Antibiotics
Controlled Drugs
Disinfectants

Reproduction:
Estrus Cycle
Estrus Synchronization Protocols/ AI
Lambing Complications/ Ring Womb/ Pregnancy Toxemia

Urogenital Conditions:
Uroliths
Types and prognosis

Gastrointestinal Disorders:
Grass Tetany
Bloat
Clostridium perfringens
Acidosis
Johnes

Bacterial Infections:
Caseous Lymphadenitis
Tetanus

Swine Knowledge Lists

Biosecurity:
Pig flow: all in, all out vs continuous flow
Limiting visitors – shower in, shower out when possible
Have farm specific livestock
Proper feed storage
Environment:
- Temperature for various stages of production
- Water flow rates for various stages of production
- Acceptable ammonia levels and knowledge of testing equipment

Vaccination and Deworming:
- Proper administration technique
- Institute a proper vaccine protocol

Diseases:
- PRRS
- E. Coli
- Clostridium
- Bordetella
- Mycoplasma
- Strep Suis
- Greasy pig disease
- Erysipelas
- Salmonellosis
- Circovirus
- Parvovirus
- Pseudorabies
- Transmissible gastroenteritis
- Porcine Stress Syndrome
- Swine pox
- PED Virus
- Brucellosis
- African Swine Fever
Laboratory Procedures:
   Sample Collection
   Venipuncture
   Necropsy – both procedure and samples to be collected
   Fecal floatation

Piglet Processing:
   Iron supplementation
   Tails docking
   Knowledge of appropriate ear notching techniques
   Castration
   Clipping needle teeth

PQA:
   Extra-label drug use
   Animal Treatment Record
   Proper antibiotic use with published withdrawal times
   Knowledge of humane euthanasia protocols
   VFD

Dairy Cattle Knowledge Lists

Biosecurity:
   Knowledge of closed vs open systems
   Knowledge of information needed from source herds
   Knowledge of testing/isolation procedures for new purchases

Calf Management:
   Neonatal care – colostrum, naval care, total proteins
Colostrum management – quality, pasteurization, shelf life
Vaccine protocols
Dehorning
Supernumerary teat removal
Neonatal diseases –
  o Septicemia – E. Coli, Salmonella
  o Diarrhea - GI - Rotavirus, Coronavirus, Salmonella, Coccidia, E. Coli, Clostridium
  o Pneumonia - Respiratory – BRD, Pasteurella, Mycoplasma

Production/Nutritional Diseases:
  Acidosis
  Laminitis
  Ketosis
  Displaced Abomasum
  Fatty Liver

Infectious Diseases:
  Anaplasmosis
  Bovine Viral Diarrhea
  Brucellosis
  Leptospirosis
  Vibriosis
  Tuberculosis
  Rabies
  Bovine Spongiform Encephalopathy
  Bovine Leukemia Virus
  Mycoplasma
  Neospora
  Johnes' Disease
Respiratory Diseases:
- Bovine Respiratory Disease Syndrome
- Parainfluenza
- Pasteurella
- Bovine Syncytial Virus

Gastrointestinal Conditions:
- Bloat
- Salmonella
- Clostridium
- HGE
- Hardware Disease
- Obstructions
- Cecal Torsions

Milk Quality:
- Antibiotic Residues
- Subclinical Mastitis and Somatic Cell Counts
- Effect of mastitis on milk production
- CMT (California Mastitis Test)
- Understanding the lactation curve
- Bacterial Pathogens found in milk
- Milk Culturing Procedures
- Bulk Tank Cultures/ Pasteurizer Cultures

Reproduction:
- Metritis
- Retained Placenta
- Milk Fever (Parturient Hypocalcemia)
- Knowledge of various Estrus Synchronization protocols
Management:
- Common antibiotics and associated withdrawals
- Knowledge of extra label drug use regulations
- VFD
- BCS
- Dry Cow Care
- Transitional cow management
- Knowledge of fresh cow monitoring

**Production Medicine Suggested Reading List**


