

## Swine Health Management RVS Exam Study Guide - 2023

This guide will help you prepare for your ABVP Recognized Veterinary Specialty (RVS) examination. Swine Health Management (SHM) has a two-part testing requirement. One to enter the credentialing phase and the other is the Diplomate exam. Both exams follow the same blueprint.

The AVMA best practices is that the examination items align with a Job Task Analysis (JTA) of current RVS Diplomates. The 2018 JTA identified tasks, diseases, etc. that Diplomates either saw frequently or expected a Specialist to have immediate knowledge of the subject.

Additionally, it has been decided that some exam items can come from current journals and a small percentage can be at your Exam Committee's discretion.

Please note that items drawn from current journals (with a 5 year look back period) are 1) from a journal on the RVS Reading List, 2) the question is drawn from the abstract only, and 3) the journal abstract must be inexpensively obtained. The exception to this is Veterinary Clinics of North America (if applicable), where the exam taker is responsible for the whole article.

### Entrance Exam Blueprint (100 questions)

For topics that are systems (such as Cardiovascular, etc. ), questions can include anatomy, physiology, pathophysiology, diseases (Including neoplasia), etiologies, diagnosis, and therapy.

|                                      |          |
|--------------------------------------|----------|
| Behavioral B                         | up to 1% |
| Cardiovascular CV                    | up to 1% |
| Endocrine E                          | up to 1% |
| Gastrointestinal GI                  | 12%      |
| Genetic G                            | up to 1% |
| Hemolymphatic HL                     | up to 1% |
| Immunologic I                        | up to 1% |
| Infectious IN                        | 31%      |
| Integument/Mammary IM                | 8%       |
| Management/Environment ME            | 16%      |
| Metabolic M                          | 1%       |
| Musculoskeletal MS                   | 2%       |
| Nervous NV                           | 1%       |
| Nutritional N                        | 4%       |
| Oral/Dentition/Beak O                | up to 1% |
| Neoplasia - concepts, multisystem NP | up to 1% |
| Pharmacologic RX                     | 2%       |
| Regulatory RG                        | 1%       |
| Reproductive RP                      | 9%       |
| Respiratory RS                       | 8%       |



|                   |          |
|-------------------|----------|
| Special senses SS | 1%       |
| Toxicologic T     | 2%       |
| Urogenital UG     | 2%       |
| Zoonotic Z        | up to 1% |
|                   |          |
|                   | 100.00%  |

## Specific conditions

Certain conditions were identified as important to Diplomates in your RVS. This list is meant to help guide your study and not meant to be an all-inclusive list. Conditions not on this list may be present on the exam.

|  |
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| Abortions  |
| Abscesses  |
| Actinobacillosis pleuropneumoniae/suis   |
| Animal Welfare-associated health impacts   |
| Atrophic rhinitis - Bordetella or Pasteurella  |
| aural hematoma   |
| Bacterial pneumonia  |
| Breeding program evaluation - e.g. NPD, heat detection, AI, estrus management assessment |
| Clostridium species  |
| Dystocia   |
| E. coli - enteritis  |
| early embryonic death  |
| Erysipelas   |
| Farm employee training   |
| Haemophilus parasuis   |
| health certificates  |
| Husbandry error diagnostics, correction - e.g. castration or tail docking errors         |
| Influenza A of Swine   |
| Iron deficiency anemia   |
| Lameness assessment, treatment, and diagnosis  |
| Mycoplasma hyopneumoniae   |
| Necropsy   |
| PEDv   |
| peripheral vascular disease  |
| Pharmacology - pharmaceutical treatment  |
| porcine respiratory & reproductive syndrome  |

|   |
|---|
| Proliferative enteropathy - ileitis, Lawsonia intracellularis |
| Rectal prolapse   |
| Regulatory functions - VFD, health certificates, etc          |
| Rotavirus A and C   |
| Septicemia  |
| Standard Operating Procedures                                 |
| Streptococcus suis  |
| toxic gases   |
| transmissible gastroenteritis                                 |
| Vaccinations  |
| Viral pneumonia   |
| Vitamin E/selenium deficiency                                 |

### **An ABVP certified swine practitioner should:**

1. Demonstrate a thorough understanding of production and economic parameters, and their interactions in swine production units.
2. Be familiar with abnormal and normal disease levels and their effect on production. This includes current knowledge concerning etiology, epidemiology, pathogenesis, pathology, diagnosis, treatment, prevention, and control measures.
3. Be familiar with various swine production systems (e.g. All In / All Out, Segregated Early Weaning, Batch Farrowing, Parity Segregation, etc) and factors affecting productivity and profitability of swine herds in those systems.
4. Be familiar with various record systems that allow practitioners to collect and analyze data on herd performance, and the economics connected with such performance when compared to a database. Be able to establish, implement, and evaluate herd health and production performance programs to promote improvements for the farm being evaluated by benchmarking. Be familiar with targets and intervention points on various performance monitors.
5. Be familiar with all aspects of swine welfare audits, such as the Common Swine Industry Audit (CSIA) and Pork Quality Assurance program, and the pig welfare parameters that are expected (e.g., pen space, feed and water access, environment, physical and behavioral assessment, etc.).
6. Be familiar with various components of herd health and production programs that would include but not be limited to:
  - a. Herd reproductive performance and parameters
  - b. Breeding management including estrus detection and manipulation, artificial insemination, semen collection and evaluation, and reproductive health.
  - c. Herd economic production performance and parameters
  - d. Principles of nutrition
  - e. Principles of ventilation (design, operation, troubleshooting, etc.)
  - f. Principles of immunology (cellular, antibody, innate, etc.)



- g. Basic pharmacology, antibiotic resistance, antimicrobial benchmarking
- h. Analgesia and pain management
- i. Swine genetic programs, breeding programs, culling procedures, evaluations (EBVs, molecular selection techniques etc.)
- j. Carcass evaluation — packer kill/cut-out sheets
- k. Herd immunization and infectious disease control programs
- l. Environment with relationship to health and productivity (buildings, manure handling systems, ventilation)
- m. Epidemiology and disease outbreak investigation
- n. Principles of animal well-being
- o. pre-and post-harvest food safety issues (e.g., antimicrobial residues, broken needles, etc.) as addressed in industry or commercial training and auditing programs such as Pork Quality Assurance.
- p. Regulations and regulating authorities as pertain to swine production:
  - i. Examples include FDA, USDA, EPA, OSHA
- q. Secondary nutrient management (e.g., manure management)
- r. Biosecurity systems and the effects of risk management
- s. Farm economics, financial planning, partial budgets, and decision analysis
- t. Evaluation of experimental data, studies, critical reading of scientific literature

Today, scientific knowledge is advancing at an incredible pace, and is available just as quickly at your fingertips. We encourage Applicants to establish automated searches on web-based literature engines such as PubMed or Web of Science. Search based upon topics of importance in your daily practice. Also include topics listed in our SHM Exam Study Guide. Dedicate a few minutes every day to scan the titles your searches yield. If a title suggests relevance, scan the abstract. If this summary is of interest, then download the entire article for in-depth study. Additional information may then be accessed through the resources listed below:

## **Suggested Reading Examples:**

### **Texts:**

- Aspects of Swine Ecology - David Hollier
- Color Atlas of Diseases and Disorders of the Pig. Smith, Taylor, Penny. ISU press, 1998
- Diagnosis of Swine Diseases - Straw and Wilson
- Diseases of Swine, 11th Edition - JJ Zimmerman, et al 2019
- Essentials of Pig Anatomy - Sack Veterinary Textbooks, Ithaca, NY 1982
- Managing Pig Health and the Treatment of Disease - Muirhead & Alexander 1999
- Multisite Pig Production - D.L. Harris (2000) ISU Press
- Pathology of the pig : a diagnostic guide- L D Sims; J R W Glastonbury; Pig Research and Development Corporation (Australia); Agriculture Victoria.
- Pig Diseases – DJ Taylor
- Swine Disease Manual, 5th Edition. Editor: EJ Neumann, Copyright AASV, 2020
- Veterinary Pathophysiology, 1<sup>st</sup> Edition. Editors: Dunlop and Malbert, 2004



**Publications, Journals, and On-line References: Applicants are encouraged to learn and effectively utilize literature search engines to focus their studies on current medical and industry information and issues. The following is not an all-inclusive list.**

- American Journal of Veterinary Research
- Canadian Veterinary Journal
- FACETS
- Journal of Animal Science
- Journal of Applied Animal Welfare Science
- Journal of Porcine Health Management
- Journal of Swine Health and Production
- Journal of Veterinary Diagnostic Investigation
- Livestock Production Science
- PLoS ONE
- thepigsite.com
- Theriogenology
- Transboundary and Emerging Diseases
- Veterinary Clinical Pathology
- Veterinary Microbiology
- Preventive Veterinary Medicine
- Frontiers in Veterinary Science

**Continuing Education Programs – not limited to:**

- Executive Veterinary Program - University of Illinois
- Iowa State University practice - based Master of Science degree in Swine Prod. Med.
- University of Minnesota Swine Health Management Certificate Seminar Series
  
- Numerous other universities globally offer high caliber, relevant swine training
- USDA Veterinary Accreditation courses (FADs, Diagnostic sampling, etc.)

**Meetings/Proceedings**

- American Association of Swine Veterinarians (AASV) Annual Meeting
- American Board of Veterinary Practitioners' Symposium – Food Animal Session
- Allen D. Lemman Conference (University of Minnesota)
- Central Veterinary Conference - Swine Sessions
- European Symposium of Porcine Health Management
- James D. McKean Swine Disease Conference (Iowa State University)
- International Pig Veterinary Society (IPVS)
- Midwest Swine Nutrition Conference
- North American Veterinary Conference - Swine Session
- Seminars at World Pork Expo.



- Western States Veterinary Conference - Swine Seminar
- Banff Pork Seminar
- The Pig Welfare Symposium

***Questions on the examination may be taken from sources other than this list.***

