
Job Analysis Study for the American College of Veterinary Anesthesia and Analgesia (ACVAA) Certification Program

Conducted on behalf of



AMERICAN COLLEGE OF
VETERINARY ANESTHESIA
AND ANALGESIA

January 30, 2026

Prepared by:

PROMETRIC



Colvin Franklin
Assessment Services

ACKNOWLEDGEMENTS

We would like to thank the many individuals who provided invaluable assistance throughout the conduct of the American College of Veterinary Anesthesia and Analgesia (ACVAA) Job Analysis Study.

Above all, we thank the many dedicated professionals who generously contributed their time and expertise. Over 200 individuals participated in different phases of the job analysis including, Task Force members, survey respondents, and Test Specifications members.

For ACVAA, Rachel Reed and Doris Dyson provided excellent support throughout the project.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS	i
TABLE OF CONTENTS	ii
LIST OF FIGURES	iii
LIST OF TABLES	iv
LIST OF APPENDICES	v
EXECUTIVE SUMMARY	vi
INTRODUCTION	1
METHOD	1
1. CONDUCT OF A PLANNING MEETING	1
2. DEVELOPMENT OF THE SURVEY	1
3. DISSEMINATION OF THE SURVEY	4
4. ANALYSIS OF THE SURVEY DATA.....	4
5. DEVELOPMENT OF THE TEST SPECIFICATIONS	5
RESULTS	6
SURVEY RESPONSES.....	6
DEMOGRAPHIC CHARACTERISTICS OF SURVEY RESPONDENTS	6
TASK AND KNOWLEDGE OVERALL RATINGS.....	12
TASKS	12
KNOWLEDGE	13
SUBGROUP ANALYSIS OF TASK AND KNOWLEDGE RATINGS.....	13
CONTENT COVERAGE RATINGS.....	14
TEST CONTENT RECOMMENDATIONS	15
ADDITIONAL COMMENTS	15
DEVELOPMENT OF TEST SPECIFICATIONS FOR THE ACVAA EXAM	16
PRESENTATION OF THE JOB ANALYSIS PROJECT AND RESULTS.....	16
IDENTIFICATION OF THE TASK AND KNOWLEDGE STATEMENTS.....	16
TASKS RECOMMENDED FOR INCLUSION	16
KNOWLEDGE RECOMMENDED FOR INCLUSION.....	17
DEVELOPMENT OF TEST CONTENT WEIGHTS	17
ADDITIONAL CONTENT TARGETS.....	18
LINKAGE OF TASK AND KNOWLEDGE STATEMENTS.....	18
SUMMARY AND CONCLUSIONS	19

LIST OF FIGURES

Figure 1. <i>Demographic Question 1. What is your diplomate status?</i>	6
Figure 2. <i>Demographic Question 2. How long have you been a diplomate?</i>	7
Figure 3. <i>Demographic Question 3. What is (or was) your primary work setting?</i>	7
Figure 4. <i>Demographic Question 5. Do you currently train anesthesia residents?</i>	8
Figure 5. <i>Demographic Question 5a. How many anesthesia residents have you trained in the past 10 years?</i>	8
Figure 6. <i>Demographic Question 6. Have you, or do you currently have, administrative responsibilities?</i>	9
Figure 7. <i>Demographic Question 7. Are you boarded in another specialty?</i>	9
Figure 8. <i>Demographic Question 10. Where is your primary work location?</i>	10
Figure 9. <i>Demographic Question 10b. In which state, province, or territory is your primary work location?</i>	10
Figure 10. <i>Demographic Question 11. Estimate the percentage of time that you spend working with the following species groups?</i>	11
Figure 11. <i>Demographic Question 12. As a diplomate, on average, how many journal articles do you critically read per month?</i>	11

LIST OF TABLES

Table 1. Task Importance by Pass, Borderline, and Fail categories.....	12
Table 2. Knowledge Importance by Pass, Borderline, and Fail categories.....	13
Table 3. Survey Respondents' Test Content Recommendations by Mean Percentages and Standard Deviations	14
Table 4. Test Content Weights Recommended by the Test Specifications Committee	17
Table 5. Animal Type Distribution Recommended by the Test Specifications Committee	15
Table 6. Difficulty Level Distribution Recommended by the Test Specifications Committee	15

LIST OF APPENDICES

- Appendix A.** Participants and Pre-Meeting Information
- Appendix B.** Survey
- Appendix C.** Background and General Information Questions
- Appendix D.** Tasks
- Appendix E.** Knowledge
- Appendix F.** Indices of Agreement
- Appendix G.** Content Coverage
- Appendix H.** Content Coverage Write-In Comments
- Appendix I.** Additional Survey Questions
- Appendix J.** Test Specifications Approvals
- Appendix K.** Test Specifications
- Appendix L.** Linkage

EXECUTIVE SUMMARY

The American College of Veterinary Anesthesia and Analgesia (ACVAA) requested a Job Analysis Study from Prometric for their certification program. A job analysis study is designed to obtain descriptive information about the tasks performed on a job and the knowledge needed to adequately perform those tasks. The purpose of the job analysis study was to:

- validate the tasks and knowledge important for veterinarians specializing in the practice of veterinary anesthesiology and analgesia; and,
- update the test specifications for the ACVAA Certification Exam.

Conduct of the Job Analysis Study

The job analysis study consisted of several activities: background research; collaboration with subject matter experts; survey development; survey dissemination; compilation of survey results; and test specifications development. The successful outcome of the job analysis study depended on the information provided by subject matter experts throughout the project.

Survey Development

Survey research is an effective way to identify the tasks and knowledge that are important for ACVAA Diplomates. The task and knowledge statements included on the survey covered a total of 24 domains of practice. The development of the survey was based on previously validated task and knowledge statements that were updated and refined by subject matter experts.

Survey Content

The survey, disseminated in September 2025, consisted of five sections. ACVAA distributed the survey to ACVAA Diplomates.

Survey Sections
Section 1: Background and General Information
Section 2: Tasks
Section 3: Knowledge
Section 4: Recommendations for Test Content
Section 5: Comments

Results

Survey Response

A total of 147 ACVAA Diplomates submitted completed surveys. Based on the analysis of survey responses, a representative group of professionals completed the survey in sufficient numbers to meet the requirements for statistical analysis of the results. This is evidenced by review of the responses for each of the background and general information questions with confirmation by the Test Specifications Committee.

Survey Ratings

Participants were asked to rate the task statements in regard to their importance for job performance as a diplomate using a five-point scale (0 = Of no importance to 4 = Very Important). Participants were also asked to rate the knowledge statements in regard to their importance for job performance as a diplomate using a five-point scale (0 = Of no importance to 4 = Very Important).

Content Coverage

Evidence was provided for the comprehensiveness of the content covered within the domains. If the task and knowledge statements within a domain are adequately defined, then it should be judged as being well covered. Respondents indicated that the content within each task and knowledge domain was well covered, thus supporting the comprehensiveness of the defined domains.

Test Specifications Development

In December 2025, a Test Specifications Committee convened to review the results of the job analysis and to update the test content outline that will guide future development for the ACVAA Certification Exam.

Summary

In summary, this study used a multi-method approach to identify the tasks and knowledge important for competent performance as veterinarians specializing in the practice of veterinary anesthesiology and analgesia. The job analysis process allowed for input from a representative group of veterinary professionals and was conducted within the guidelines of professionally sound practice. The results of the job analysis can be used by ACVAA to guide future development of their certification program.

RESULTS AT A GLANCE

WHO COMPLETED THE SURVEY

A total of 147 responses were used for analysis. The majority of respondents reported being active diplomates working in academia or private practice.

TASK IMPORTANCE RATINGS

60 out of 68 tasks included in the survey achieved high importance ratings for the overall group.

KNOWLEDGE IMPORTANCE RATINGS

130 out of the 138 knowledge statements included in the survey achieved high importance ratings for the overall group.

INTRODUCTION

“The American College of Veterinary Anesthesia and Analgesia [ACVAA] exists to promote the highest standards of clinical practice of veterinary anesthesia and analgesia and defines criteria for designating veterinarians with advanced training as specialists in the clinical practice of veterinary anesthesiology. The ACVAA issues certificates to those meeting these criteria, maintains a list of such veterinarians, and advances scientific research and education in veterinary anesthesiology and analgesia.”¹

In 2025, ACVAA requested a job analysis study from Prometric for their certification program. This study was further focused on identifying tasks and knowledge necessary for successful veterinary practice in order to update the ACVAA test blueprint. This report describes the job analysis study including the:

- rationale for conducting the job analysis study;
- methods used to define tasks and knowledge;
- types of data analyses conducted and their results; and
- results and conduct of the ACVAA test specifications meeting.

Job Analysis Study and Adherence to Professional Standards

A job analysis study refers to procedures designed to obtain descriptive information about the tasks performed on a job and the knowledge, skills, or abilities requisite to the performance of those tasks. The specific type of information collected during a job analysis study is determined by the purpose for which the information will be used.

For purposes of developing a credentialing examination, the job analysis study should identify tasks, knowledge, skills, or abilities deemed important for individuals practicing in that area.

The use of a job analysis study (also known as a practice analysis, role and function study, or role delineation) to define the content domain(s) is a critical component in establishing the content validity of a certification. Content validity refers to the extent to which the content covered by an examination is representative of a job or role.

A well-designed job analysis study should include the participation of a representative group of subject matter experts who reflect the diversity within the profession. Diversity refers to regional or job context factors and to factors such as experience, gender, and race/ethnicity. Demonstration of content validity is accomplished through the judgments of subject matter experts. The process is enhanced by the inclusion of large numbers of experts who represent the diversity of the relevant areas of expertise.

¹ <https://acvaa.org/about/about-the-acvaa/> retrieved January 20, 2026.

*The Standards for Educational and Psychological Testing*² (2014) (*The Standards*) is a comprehensive technical guide that provides criteria for the evaluation of tests, testing practices, and the effects of test use. It was developed jointly by the American Psychological Association (APA), the American Educational Research Association (AERA), and the National Council on Measurement in Education (NCME). The guidelines presented in *The Standards*, by professional consensus, have come to define the necessary components of quality testing. As a consequence, a testing program that adheres to *The Standards* is more likely to be judged to be valid and defensible than one that does not.

As stated in Standard 11.13,

“The content domain to be covered by a credentialing test should be defined clearly and justified in terms of the importance of the content for credential-worthy performance in an occupation or profession. A rationale and evidence should be provided to support the claim that the knowledge or skills being assessed are required for credential-worthy performance in that occupation and are consistent with the purpose for which the credentialing program was instituted.... Typically, some form of job or practice analysis provides the primary basis for defining the content domain...” (pp 181-182)

The job analysis study for the ACVAA certification program was designed to follow the guidelines presented in *The Standards* and to adhere to accepted professional practice.

² American Educational Research Association, American Psychological Association, National Council on Measurement in Education. (2014). *The Standards for Educational and Psychological Testing*. Washington, DC: American Psychological Association.

METHOD

The job analysis study for the ACVAA certification program involved a multi-method approach that included meetings with subject-matter experts and a survey. This section of the report describes the activities conducted for the job analysis study.

First, subject matter experts identified the tasks and knowledge they believed were important to ACVAA Diplomates. Then, a survey was developed and disseminated to ACVAA Diplomates. The purpose of the survey was to obtain verification (or refutation) that the tasks and knowledge identified by the experts are important to the work of veterinarians.

Survey research functions as a “check and balance” on the judgments of the experts and reduces the likelihood that unimportant areas will be considered in the development of the test specifications. The use of a survey is also an efficient and cost-effective method of obtaining input from large numbers of experts and makes it possible for analysis of ratings by appropriate subgroups of respondents.

The survey results provide information to guide the development of test specifications and content-valid examinations. What matters most is that a certification examination covers the important knowledge needed to perform job activities.

The steps of the job analysis study are described in detail below:

1. Conduct of a Planning Meeting

On March 17, 2025, ACVAA representatives and the Prometric staff responsible for the conduct of the job analysis held a planning meeting via web conference. During the planning meeting, the selection of the Task Force Committee members and Test Specifications Committee members, meeting dates and logistics, and survey delivery were topics of discussion.

2. Development of the Survey

Conduct of the Job Analysis Study Task Force Meeting

The Task Force Committee was comprised of a representative group of ACVAA Diplomates. In total, 18 subject matter experts comprised the committee. A list of the Task Force Committee members appears in Appendix A. The Task Force meeting was conducted virtually on June 5th, 12th, and 26th, 2025. The purpose of the meeting was to develop survey content. Prometric staff facilitated the meeting.

Prometric sent pre-meeting information to the Task Force that included a document consisting of the meeting agenda and what to expect during the meeting. This document is included in Appendix A.

STEPS OF THE JOB ANALYSIS STUDY

1. Conduct of a planning meeting
2. Development of the survey instrument
3. Dissemination of the survey
4. Analysis of the survey data
5. Development of the test specifications

Activities conducted during the meeting included reviewing and, as needed, revising the major domains, tasks, and knowledge necessary for competent performance as a veterinarian specializing in the practice of veterinary anesthesiology and analgesia. The draft list presented to the Task Force was developed using the results of the 2015 Job Analysis. Survey rating scales and background and general information questions were presented, discussed, and revised as needed.

Survey Construction and Review Activities

Survey Construction

Upon the completion of the Task Force Meeting, Prometric staff constructed the draft survey. The survey covered the following task and knowledge domains:

Tasks:

1. Physical Examination
2. Diagnostic Tests
3. Direct Animal Care/Case Management
4. Case Oversight/Personal Interactions
5. Peri anesthetic Animal Monitoring
6. Peri anesthetic Support
7. Cardiopulmonary Resuscitation
8. Consultation
9. Pain Management
10. Local and Regional Anesthesia/Analgesia
11. Equipment Management
12. Professional/Educational Topics and Issues
13. Anesthesia-Related Safety and Regulations

Knowledge:

1. Anatomy
2. Euthanasia
3. Pharmacology
4. Physics
5. Physiology/Pathophysiology
6. Research and Ethics
7. Public Safety and Regulations
8. Case Management
9. CPR
10. Equipment
11. Monitoring

Survey Review by Task Force Committee

Each Task Force member received a copy of the draft survey. The purpose of the review was to provide the Committee with an opportunity to view their work and recommend any revisions.

Comments provided by the Task Force Committee for the online survey were compiled by Prometric staff and refinements, as recommended by the Task Force, were incorporated into the online survey in preparation for final survey release.

Final Version of the Survey

The final version of the online survey consisted of five sections: Section 1: Background and General Information; Section 2: Tasks; Section 3: Knowledge; Section 4: Recommendations for Test Content; and, Section 5: Write in Comments.

In Section 1: Background and General Information, survey participants responded to general and background information about themselves and their professional activities.

In Section 2: Tasks, survey participants rated the statements using the importance scale shown below.

Tasks	
Importance: How important is the performance of this task for <u>you</u> as a diplomate?	
0	= Of no importance
1	= Of little importance
2	= Of moderate importance
3	= Important
4	= Very important

In Section 3: Knowledge, survey participants rated the statements using the importance scale shown below.

Knowledge	
Importance: How important is this knowledge for <u>your</u> job performance as a diplomate?	
0	= Of no importance
1	= Of little importance
2	= Of moderate importance
3	= Important
4	= Very important

Survey participants were also asked to provide a rating measuring the representativeness of each knowledge and task domain. Respondents made their judgments using the five-point rating scale shown below.

Content Coverage	
How well do the statements in Domain (#) cover important aspects of (the domain)?	
0	= Very Poorly
1	= Poorly
2	= Adequately
3	= Well
4	= Very Well

Respondents could note any topics that were not covered within a specific domain in an open response field.

In Section 4: Recommendation for Test Content, survey participants indicated the content weights that the knowledge areas below should receive on the exam:

1. Anatomy
2. Euthanasia
3. Pharmacology
4. Physics
5. Physiology/Pathophysiology
6. Research and Ethics
7. Public Safety and Regulations
8. Case Management
9. CPR
10. Equipment
11. Monitoring

This was accomplished by distributing 100 percentage points across the ten knowledge areas. These distributions represented the allocation of examination items survey participants believed should be devoted to each knowledge area.

In Section 5: Write-In Comments, survey respondents were given the opportunity to answer open-ended questions. Participants were asked, “What additional professional development and/or continuing education could you use to improve your performance in your current work role?” and “How do you expect your work role to change over the next few years? What tasks will be performed and what knowledge will be needed to meet changing job demands?”

3. Dissemination of the Survey

ACVAA distributed the survey to ACVAA members in September 2025. Appendix B contains the online survey.

4. Analysis of the Survey Data

As previously noted, the purpose of the survey was to validate the tasks and knowledge that relatively large numbers of veterinary professionals judged to be relevant (verified as important) to their work. This objective was accomplished through an analysis of the mean importance ratings for task and knowledge statements. The derivation of test specifications from those statements verified as important by the surveyed ACVAA members provides a substantial evidential basis for the content validity of credentialing examinations.

Based on information obtained from the survey, data analyses by respondent subgroups (e.g., practice setting) are possible when sample size permits. A subgroup category is required to have at least 30 respondents to be included in the mean analyses. This is a necessary condition to ensure that the mean value based upon the sample of respondents is an accurate estimate of the corresponding population mean value.

The following quantitative data analyses were produced:

- Means, standard deviations, and frequency (percentage) distributions for task and content coverage ratings
- Means, standard deviations, and frequency (percentage) distributions for knowledge statements and content coverage ratings

- Means and standard deviations for test content recommendations
- Index of agreement values for designated subgroups

Criterion for Interpretation of Mean Importance Ratings

Since a major purpose of the survey is to ensure that only validated task and knowledge statements are included in the development of test specifications, a criterion (cut point) for inclusion needs to be established.

A criterion used in similar studies is a mean importance rating that represents the midpoint between moderately important and important. For the importance rating scale used across many studies, the value of this criterion is 2.50.

<i>Definition of Pass, Borderline and Fail Categories for Task and Knowledge Importance Mean Ratings</i>	
	<u>Means</u>
Pass:	At or above 2.50
Borderline:	2.40 to 2.49
Fail:	Less than 2.40

This criterion is consistent with the intent of content validity. Therefore, for this job analysis, Prometric recommended the value of this criterion should be set at 2.50. Accordingly, the task and knowledge statements were grouped into one of three categories: Pass, Borderline, or Fail, as determined by their mean importance ratings.

- The Pass Category contains those statements whose mean ratings are at or above 2.50 and are eligible for inclusion in the development of test specifications.
- The Borderline Category contains those statements whose mean ratings are between 2.40 and 2.49. The Borderline Category is included to provide a point of discussion for the Test Specifications Committee to determine if the statement(s) warrant(s) inclusion in the test specifications.
- The Fail Category contains those statements whose mean ratings are less than 2.40. It is recommended that statements in the Fail Category be excluded from consideration in the test specifications.

5. Development of the Test Specifications

On December 18th and 19th, 2025, Prometric staff facilitated meetings to develop test specifications for the ACVAA exam based on the job analysis results. A total of 13 subject matter experts comprised the Test Specifications Committee. The meetings focused on:

- finalizing the task statements based on the survey results;
- finalizing the knowledge statements for test specifications inclusion based on the survey results;
- establishing the percentage test content weights for each area on the examination; and,
- creating a linkage between the tasks and knowledge.

These percentage test weights guide examination development activities.

RESULTS

Survey Responses

A total of 203 participants started the survey. Of those surveys 147 responses were considered complete enough for full analysis.

Based on the analysis of survey responses, a representative group of veterinary professionals completed the survey in sufficient numbers to meet the requirements to conduct statistical analysis. This was evidenced by the distribution of responses for each of the background information questions and was confirmed through discussion with the Test Specifications Committee.

Demographic Characteristics of Survey Respondents

The profile of survey respondents is below. All responses to the background and general information section of the survey are provided in Appendix C1. Write in responses to “please specify” options are provided in Appendices C2 through C4.

Figure 1. *Demographic Question 1. What is your diplomate status?*

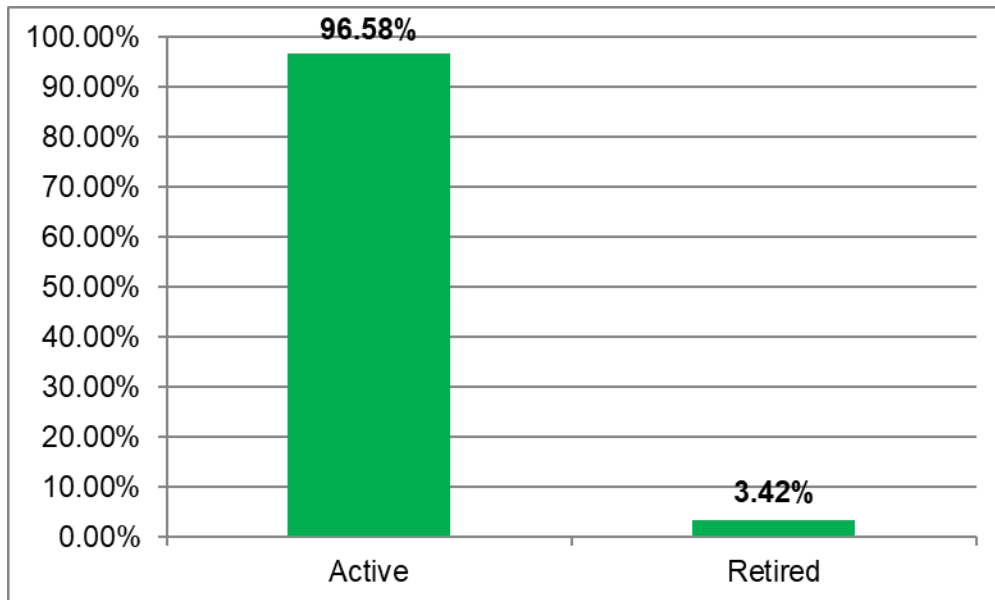


Figure 2. Demographic Question 2. How long have you been a diplomate?

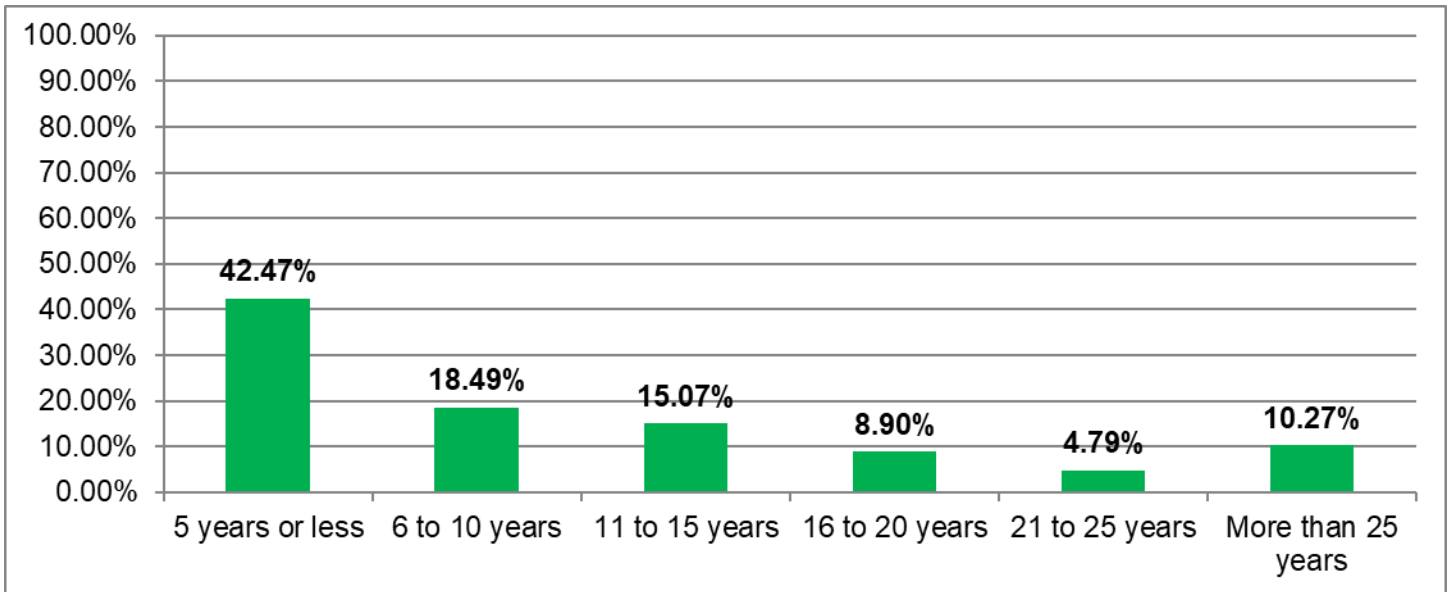


Figure 3. Demographic Question 3. What is (or was) your primary work setting?

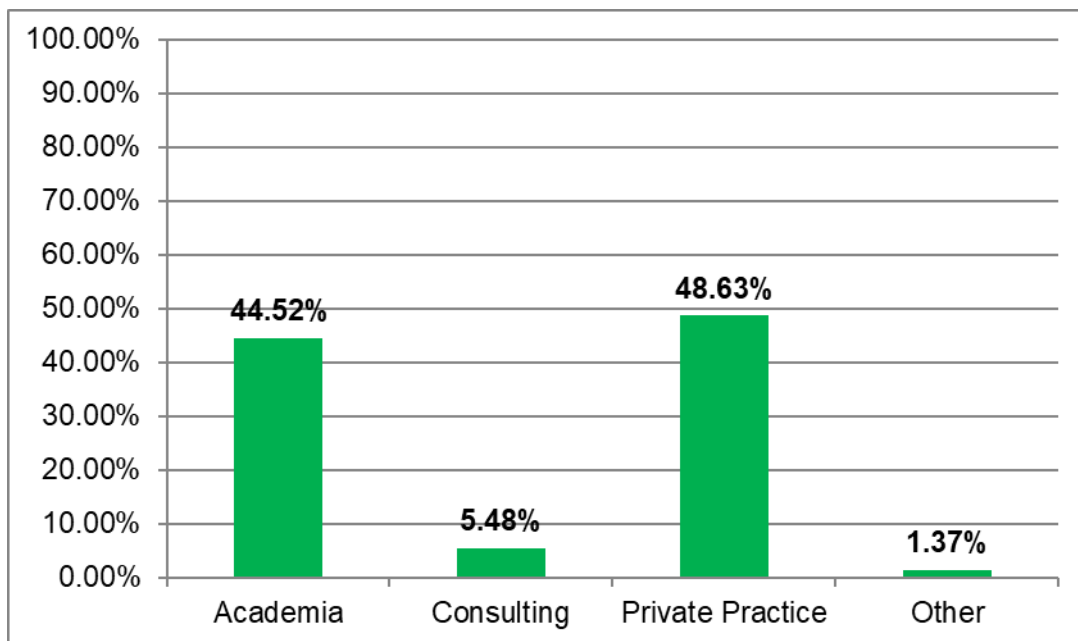


Figure 4. Demographic Question 5. Do you currently train anesthesia residents?

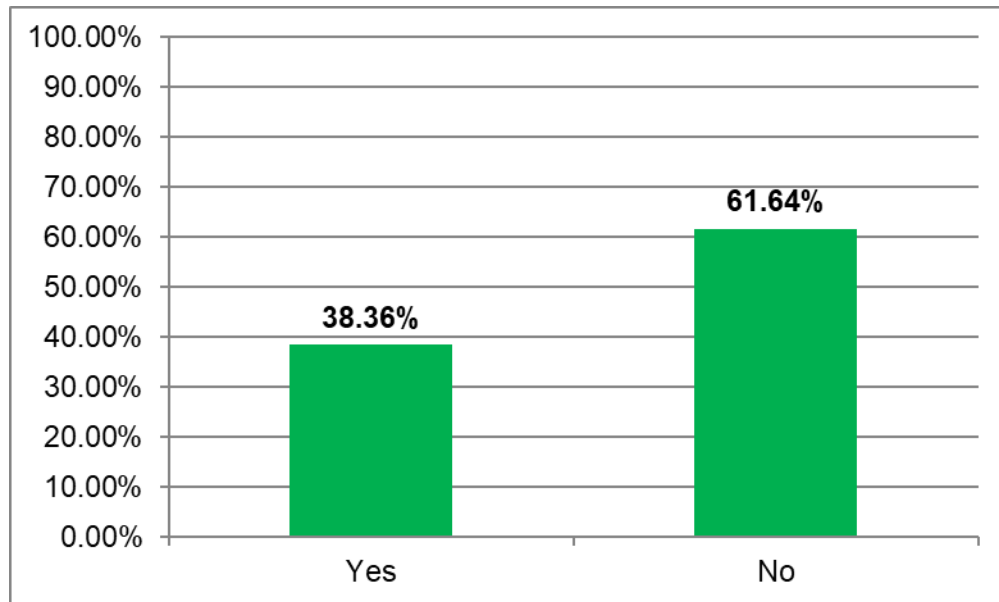


Figure 5. Demographic Question 5a. How many anesthesia residents have you trained in the past 10 years?

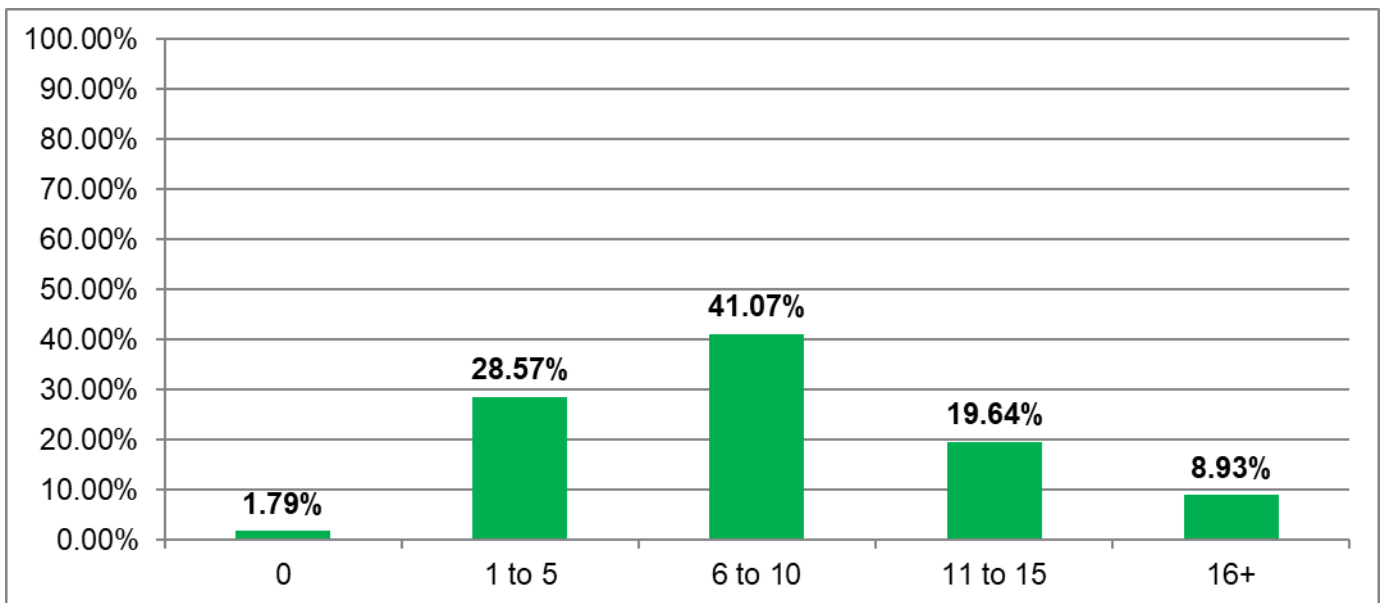


Figure 6. Demographic Question 6. Have you, or do you currently have, administrative responsibilities?

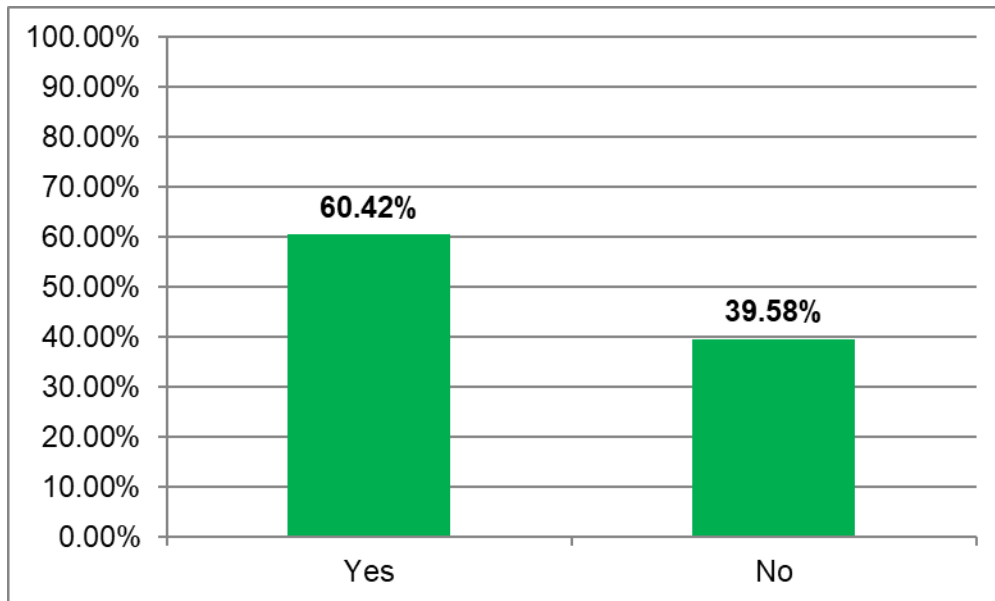


Figure 7. Demographic Question 7. Are you boarded in another specialty?

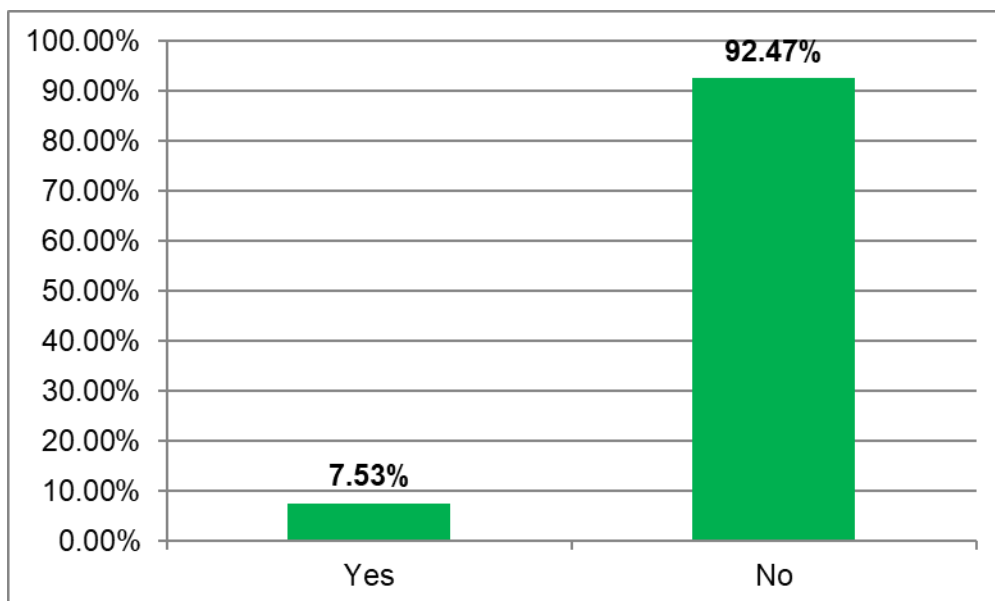


Figure 8. Demographic Question 10. Where is your primary work location?

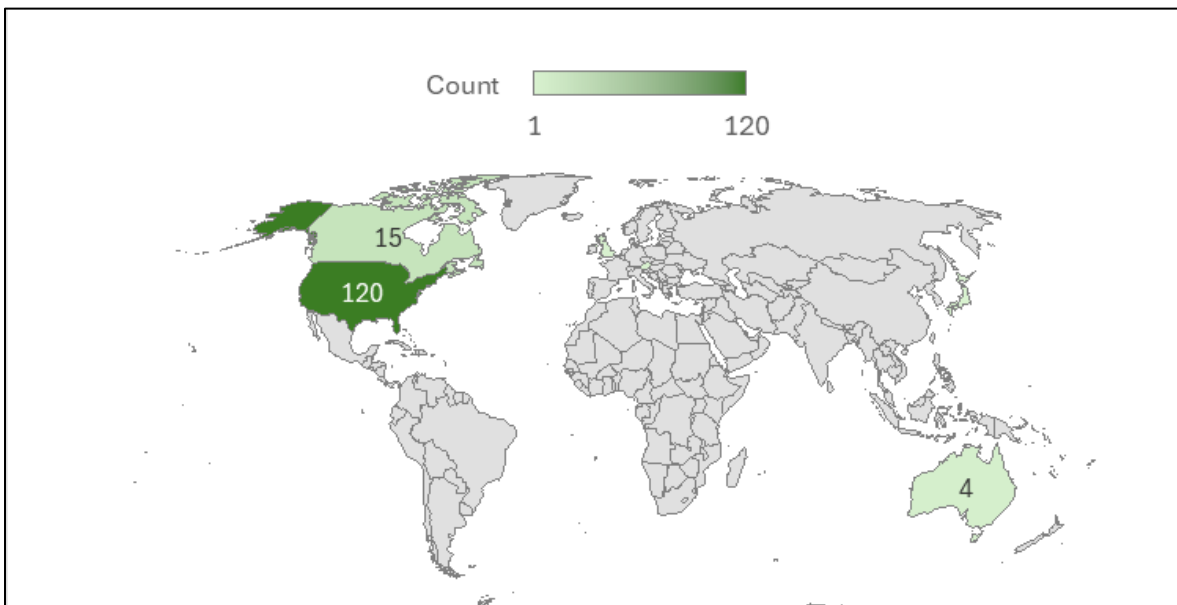


Figure 9. Demographic Question 10b. In which state, province, or territory is your primary work location?

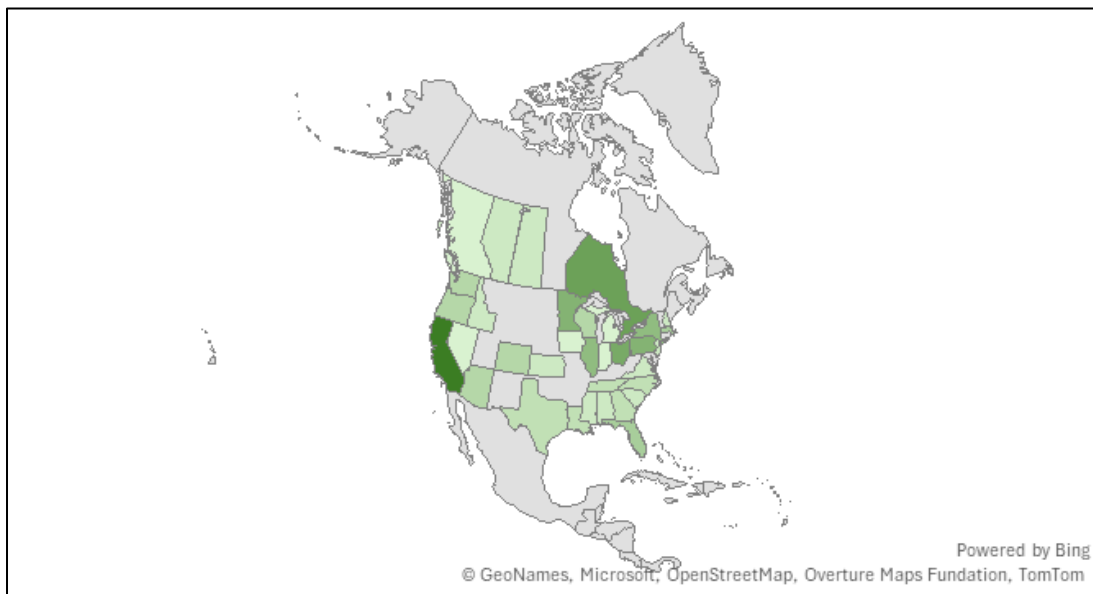


Figure 10. Demographic Question 11. Estimate the percentage of time that you spend working with the following species groups?

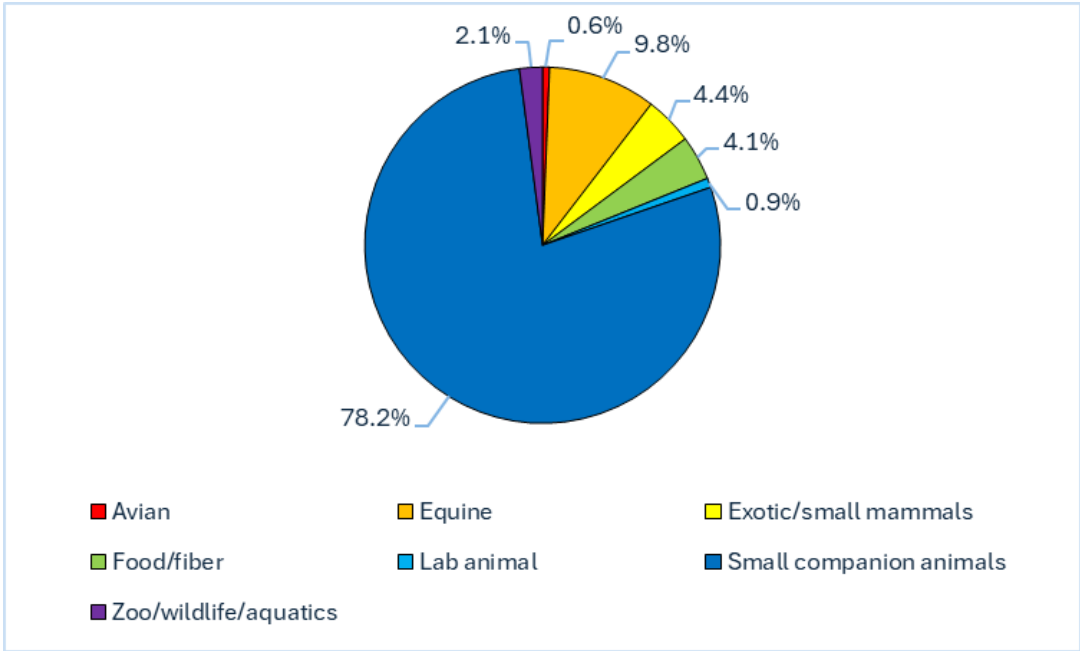
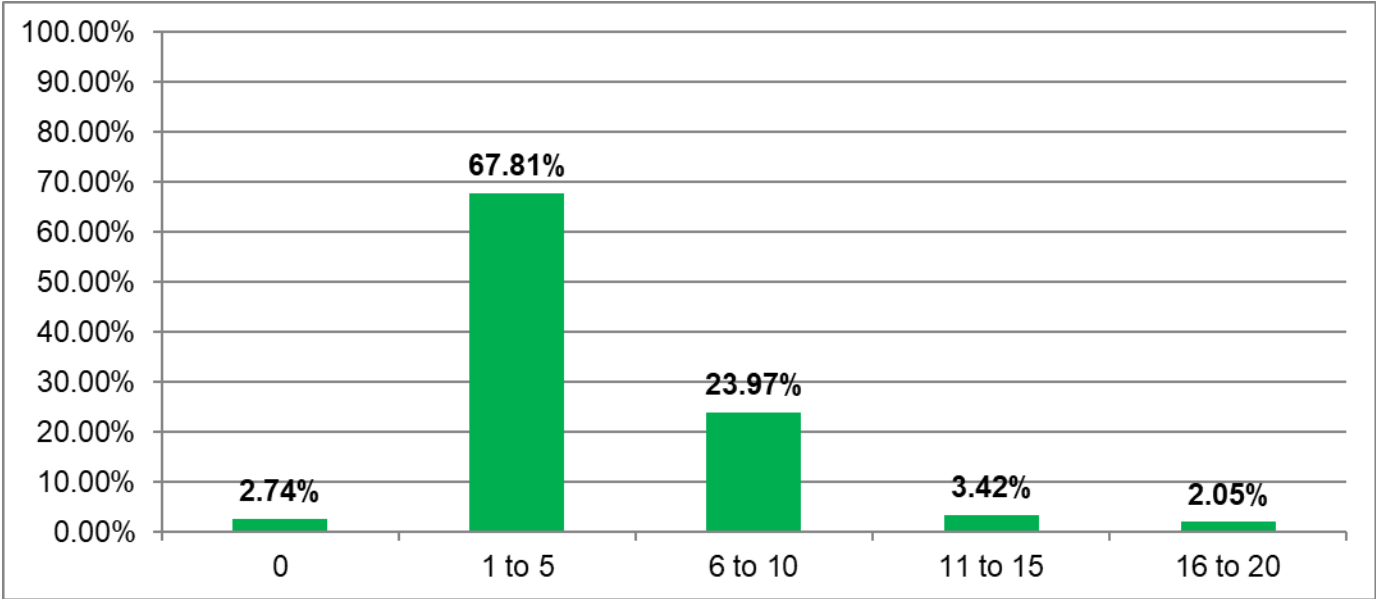


Figure 11. Demographic Question 12. As a diplomate, on average, how many journal articles do you critically read per month?



Task and Knowledge Overall Ratings

The following provides a summary of survey respondents' ratings of the tasks and knowledge. The survey respondents passed 190 of the 206 task and knowledge statements.

Tasks

Means and standard deviations for the tasks included on the survey are in Appendix D. Of the 68 tasks, 60 achieved high importance means. Table 1 shows the delineation of tasks in Pass, Borderline, and Fail categories by domain.

Table 1. Task Importance by Pass, Borderline, and Fail categories

Task Domains	Number of Task Statements	Pass (Mean 2.50 or Above)	Borderline (Mean 2.40 to 2.49)	Fail (Mean Less than 2.40)
1. Physical Examination	2	2	0	0
2. Diagnostic Tests	3	2	0	1
3. Direct Animal Care/Case Management	6	6	0	0
4. Case Oversight/Personal Interactions	7	5	2	0
5. Peri anesthetic Animal Monitoring	4	4	0	0
6. Peri anesthetic Support	2	2	0	0
7. Cardiopulmonary Resuscitation	6	6	0	0
8. Consultation	6	5	0	1
9. Pain Management	3	3	0	0
10. Local and Regional Anesthesia/Analgesia	3	3	0	0
11. Equipment Management	13	9	0	4
12. Professional/Educational Topics and Issues	6	6	0	0
13. Anesthesia-Related Safety and Regulations	7	7	0	0
Total	68	60	2	6
Percentage		88.24%	2.94%	8.82%

Knowledge

Analysis of the knowledge statements included on the survey are in Appendix E. A total of 130 of the 138 knowledge statements included on the survey achieved high importance means.

Table 2 shows the knowledge statements placed in Pass, Borderline, and Fail categories.

Table 2. Knowledge Importance by Pass, Borderline, and Fail categories

Knowledge Domains	Number of Knowledge Statements	Pass (Mean 2.50 or Above)	Borderline (Mean 2.40 to 2.49)	Fail (Mean Less than 2.40)
I. Anatomy	3	3	0	0
II. Euthanasia	2	2	0	0
III. Pharmacology	30	28	0	2
IV. Physics	5	4	1	0
V. Physiology/Pathophysiology	19	19	0	0
VI. Research and Ethics	2	1	1	0
VII. Public Safety and Regulations	6	5	0	1
VIII. Case Management	32	32	0	0
IX. CPR	1	1	0	0
X. Equipment	16	15	0	1
XI. Monitoring	22	20	0	2
Total	138	130	2	6
Percentage		94.20%	1.45%	4.35%

Subgroup Analysis of Task and Knowledge Ratings

The index of agreement (IOA) is a measure of the extent to which subgroups of respondents agree on which tasks and knowledge are important. Using the mean importance ratings for tasks and knowledge, indices of agreement were computed:

- If the subgroup means are above the critical importance value (mean ratings at or above 2.50), then they agree that the content is important.
- If the subgroup means are below the critical importance value (mean ratings less than 2.50), then the subgroups agree that the content is considered less important.
- By contrast, if one subgroup's (for example, female) mean ratings are above the critical importance value and another subgroup's (for example, male) means are below the critical importance value then the subgroups are in disagreement as to whether the content is important.

The index of agreement provides a method of computing the similarity in judgments between groups and is tailored to the purpose of a job analysis study more than a correlation coefficient. The agreement index focuses on whether two groups agree that the content should (or should not) be included in an examination.

As one of the major purposes of this job analysis study is to identify appropriate test content, the agreement index provides a statistical method to address this question at the subgroup level. Furthermore, the agreement index requires only 30 respondents per subgroup for computation.

An illustrative example for two groups on a survey with 100 knowledge areas shows how to compute the index. If two groups passed the same 96 knowledge areas and failed the same 2 knowledge areas (out of the 100 total knowledge areas in the survey), the consistency index would be computed as $Agreement = (96 + 2)/100 = 0.98$. Values of 0.80 or less show less than optimal agreement and therefore additional mean analyses are required.

The index of agreement coefficients for task and knowledge are in Appendix F. Agreement coefficients were produced on the following background questions:

- How long have you been a diplomate?
- What is (or was) your primary work setting?

Agreement coefficients for tasks ranged from 0.90 to 0.94. Agreement coefficients for knowledge ranged from 0.89 to 0.98. Since the agreement coefficients for all questions were greater than 0.80, no additional mean analysis was required.

Content Coverage Ratings

The survey participants indicated how well the statements within each of the task and knowledge domains covered important aspects of that area. These responses provide an indication of the comprehensiveness of the survey content.

The five-point rating scale included 1=Very Poorly, 2=Poorly, 3=Adequately, 4=Well, and 5=Very Well. The means and standard deviations for the task and knowledge ratings are provided in Appendix G. For the task domains, the means ranged from 3.98 to 4.38 and for knowledge ranged from 3.94 to 4.26. These means provide evidence that tasks and knowledge were well covered on the survey.

Survey respondents could write in tasks or knowledge that they believe should be included in the listing of important tasks and knowledge. See Appendix H for the content coverage write-in comments. The Test Specifications Committee reviewed the comments to determine whether there were important statements not covered on the survey that should be included in the test specifications.

Test Content Recommendations

In survey Section 4: Recommendations for Test Content, participants were asked to assign a percentage weight to each knowledge domain. The sum of percentage weights was required to equal 100. This information guided the Test Specifications Committee in making decisions about how much emphasis the domains should receive on the ACVAA test content outline. The mean weights across all survey respondents are in Table 3.

Table 3. Survey Respondents' Test Content Recommendations by Mean Percentages and Standard Deviations

Domain	Mean	SD	Range	
			Minimum	Maximum
I. Anatomy	7.4%	3.27%	2%	15%
II. Euthanasia	2.2%	1.48%	0%	5%
III. Pharmacology	16.0%	3.79%	5%	30%
IV. Physics	5.7%	3.31%	0%	20%
V. Physiology/Pathophysiology	16.9%	4.31%	10%	35%
VI. Research and Ethics	2.9%	1.84%	0%	10%
VII. Public Safety and Regulations	2.4%	1.66%	0%	10%
VIII. Case Management	18.9%	7.17%	6%	50%
IX. CPR	4.3%	2.36%	1%	15%
X. Equipment	11.1%	3.57%	2%	20%
XI. Monitoring	12.2%	3.56%	0%	20%

Additional Comments

Many survey respondents provided responses to the open-ended questions in Section 5: Comments. See Appendix I for write-in comments about expected changes to job roles over the next few years.

DEVELOPMENT OF TEST SPECIFICATIONS FOR THE ACVAA CERTIFICATION EXAM

The test specification meeting for the ACVAA exam occurred virtually on December 18th and 19th, 2025. The steps involved in the development of the test specifications included the following:

- presentation of the job analysis project and results to the Test Specifications Committee;
- identification of the knowledge statements to be included in the ACVAA test specifications;
- development of the test content weights for the exam; and,
- linkage of task and knowledge statements.

Presentation of the Job Analysis Project and Results to the Test Specifications Committee

The first activity involved in the test specification development was to provide the Test Specifications Committee an overview of the job analysis activities that were conducted and to present the results of the study.

Identification of the Task and Knowledge Statements to be Included on the ACVAA Certification Exam

The Test Specifications Committee reviewed the task and knowledge results to make final recommendations about the areas that should be included on the exam.

The survey results served as the primary source of information used by the Test Specifications Committee members to make test content decisions. Recommendations were based on the following criteria:

- the mean task and knowledge ratings for all respondents;
- the frequency distribution of ratings for all respondents; and,
- the appropriateness of the content for the examination.

Appendix J outlines the task and knowledge approval decisions.

Tasks Recommended for Inclusion

- A total of 60 out of 68 tasks achieved mean ratings at or above 2.50 (pass category) and were confirmed by the Test Specifications Committee.
- Two tasks achieved mean ratings from 2.40 to 2.49 (borderline category) and were confirmed by the Test Specifications Committee.
- Six tasks achieved mean ratings less than 2.40 (fail category). Of those six tasks, three were confirmed by the Test Specifications Committee.
- One additional task was added and approved by the Test Specifications Committee.

Knowledge Recommended for Inclusion

- A total of 130 out of 138 knowledge statements achieved mean ratings at or above 2.50 (pass category) and were approved for inclusion on the ACVAA test specifications by the Test Specifications Committee.
- Two knowledge statements achieved mean ratings from 2.40 to 2.49 (borderline category) and were included on the ACVAA test specifications by the Test Specifications Committee.
- Six knowledge statements achieved mean ratings less than 2.40 (fail category). Of those six knowledge statements only one was modified and included on the ACVAA test specifications by the Test Specifications Committee.

Development of Test Content Weights

The Test Specifications Committee participated in an exercise that required each member to assign a percentage weight to each of the knowledge domains. Weights were then entered into a spreadsheet and shown to the committee. The committee members were able to compare the test content weights derived from the survey responses to their own estimates. This resulted in a productive discussion among the committee members regarding the optimal percentages for the exam.

Table 4 shows the test specifications recommendations. The complete test specifications are in Appendix K.

Table 4. *Test Content Weights Recommended by the Test Specifications Committee*

Domains	Number of Statements	Weight
I. Anatomy	3	7%
II. Euthanasia	2	2%
III. Pharmacology	28	17%
IV. Physics	5	5%
V. Physiology/Pathophysiology	19	18%
VI. Research and Ethics	2	2%
VII. Public Safety and Regulations	6	2%
VIII. Case Management	32	22%
IX. CPR	1	3%
X. Equipment	15	10%
XI. Monitoring	20	12%

Additional Content Targets

In addition to recommending test content weights for the ACVAA exam, the Test Specifications Committee provided additional recommendations for the distribution of test content by animal type and difficulty level. These recommendations, found in Table 5 and Table 6, were developed based on current ACVAA exam objectives and will serve as additional goals when constructing future ACVAA test forms.

Table 5. *Animal Type Distribution Recommended by the Test Specifications Committee*

Species	Approximate Percentage of Exam
Equine	20%
Food/fiber	11%
Lab/research animal	4%
Small companion animals/small mammals	54%
Zoo/wildlife/aquatics/exotic/avian	11%

Table 6. *Difficulty Level Distribution Recommended by the Test Specifications Committee*

Difficulty Level	Approximate Percentage of Exam
Level 1	30%
Level 2	40%
Level 3	30%

The committee also recommended that approximately 20% of the exam questions focus on analgesia and that 5-8% of the questions should be based on recent research literature.

Linkage of Task and Knowledge Statements

Task and knowledge linking verifies that each knowledge area included on an examination relates to the competent performance of important tasks. As such, linking supports the content validity of the knowledge included in the test specifications. Linking does not require the production of an exhaustive listing; rather, task-knowledge links are developed to ensure that each knowledge is identified as being related to the performance of at least one, or in most cases several, important tasks.

Linking also provides guidance for item-writing activities. When item writers develop questions for specific knowledge areas, they have a listing of tasks that relate to the knowledge. This provides context for developing examination questions and assists the item writers in question design. The linkage of knowledge to tasks is in Appendix L.

SUMMARY AND CONCLUSIONS

This job analysis study for the ACVAA certification program identified tasks and knowledge statements that are important to the work performed by ACVAA Diplomates. The results of the study can be used to guide further development work for the ACVAA Certification Exam.

The task and knowledge statements were developed through an iterative process involving the combined efforts of ACVAA, subject matter experts, and Prometric staff. These statements were entered into a survey format and subjected to verification/refutation through the dissemination of a survey to ACVAA veterinary professionals. The survey participants were asked to rate the importance of task and knowledge statements.

The results of the study support the following:

- All of the task and knowledge statements that were verified as important through the survey provide the foundation of empirically derived information from which to develop test specifications for the ACVAA exam.
- Evidence was provided in this study that the comprehensiveness of the content within the task and knowledge domains was well covered.
- The process utilized as well as the information that resulted from the analysis supported the development of updated ACVAA test specifications.

In summary, the study used a multi-method approach to identify the tasks and knowledge that are important to the work performed by veterinarians specializing in the practice of veterinary anesthesiology and analgesia. The results of the study were used to develop updated test specifications for the ACVAA Certification Exam.