

2023-2024 TECHNICAL REPORT

INTRODUCTION

The International Council for Veterinary Assessment (ICVA®) and the National Board of Medical Examiners (NBME®) work together to produce and provide the North American Veterinary Licensing Examination (NAVLE®) to assist the State Boards of Veterinary Medicine, the Canadian National Examining Board, and the individual Provincial Boards of Veterinary Medicine in assessing the practice competence of candidates for licensure as veterinarians. The primary objectives of the NAVLE are as follows:

- To provide a comprehensive, objective examination to state or provincial boards charged with the licensing of veterinarians;
- To protect the public by ensuring that veterinarians demonstrate a specified level of knowledge and skills before entering veterinary practice;
- To assess the professional competency of veterinarians in terms of their qualifications to enter practice;
- To provide a common standard in the evaluation of candidates that will be comparable from jurisdiction to jurisdiction;
- To contribute to the veterinary profession through the development of improved definitions of the relationship between knowledge and professional practice; and
- To facilitate interstate and interprovincial licensing reciprocity for practicing veterinarians.

The NAVLE is administered as a computer-based examination and is the uniform licensing examination for veterinary medicine in North America. The NAVLE has been developed through the cooperation of the state boards of veterinary medicine and is uniformly administered and scored under policies and procedures developed and approved by ICVA. Subject matter expertise is provided by ICVA committee members and item writers. ICVA has worked with the NBME in developing and supporting the NAVLE since the test's development in the late 1990s. This report documents the development, administration, and psychometric analysis of the 2023-2024 NAVLE.

TEST DEVELOPMENT

The ICVA identified thirty veterinarians to write new items for NAVLE. All writers were trained and/or had written items previously. NBME staff prepared item-writing assignments based on species, organ system, and competency codes. Item-writing assignments, including instructional materials and information about electronic submission, were prepared and distributed to committee members in March 2022. A total of 768 items were submitted by item writers.

All new items were edited and reviewed for technical flaws by NBME staff. Each author received his/her edited items for review and approval before inclusion in the item review meeting draft. A draft of edited materials was sent to the committee members for use at the item review meeting.

At the item review meeting, on November 9-10, 2022, committee members met to review all new items to determine their appropriateness for NAVLE and to ensure that the content reflects the common best practices in the United States and Canada. After the meeting approved items were added to the pool of available items for pretesting. A list of item writers and reviewers is shown in Appendix A.

Multiple 300-item examination forms were generated using content and statistical constraints. Members of the ICVA's Assessment Development Committee (ADC), members of the American Association of Veterinary State Boards (AAVSB), and recent veterinary graduates met in Philadelphia on April 11-12, 2023, to review the forms. Small groups of the committee reviewed complete forms for quality and content overlap and to ensure content equivalence. Approximately 5% of the items in each form are usually replaced to accomplish this goal. Following the meeting, NBME staff then replaced the items and created updated forms. The list of participants for the form review meetings is shown in Appendix B.

After the forms were finalized, live and pretest items sufficient to prepare multiple French forms were then sent to the Canadian National Examining Board for translation and proofreading. Once the French forms were finalized, resource files for both the English and French versions of the examination were transmitted to Prometric for delivery. Quality control procedures were implemented at each stage of the test development process to ensure that standards are being met.

TEST ADMINISTRATION

Pre-Administration

Seat Blocking: The NBME worked with the ICVA and Prometric to block seats at selected testing centers domestically and internationally. Data from the previous year were used to forecast the number of seats required for candidates during the 2023-2024 NAVLE cycle.

Eligibility Processing: The ICVA and the NBME processed eligibilities of 6,511 candidates for the November-December NAVLE window and 2,652 for the April window. Special accommodations according to the requirements of the Americans with Disabilities Act (ADA) and non-standard testing conditions due to temporary medical situations were approved by ICVA and were processed by NBME for 570 individuals for the November-December NAVLE and 375 individuals for the April NAVLE.

Examination Summary

November-December 2023: The November-December testing window encompassed examinees testing November 1, 2023 through December 16, 2023 with extensions ending on December 22, 2023. A total of 6,366 examinees completed testing by December 22, 2023.

April 2024: The April testing window encompassed examinees testing April 1, 2024 through April 26, 2024. There were no extensions and 2,549 examinees completed testing by April 26, 2024.

Exit Survey Information

Examinees were asked to complete an optional post-test survey after completing the last block of examination items. Survey results for all examinees from the November-December and April NAVLE are presented in Appendix C.

SCORING AND ANALYSIS

Key Validation/Pool Review

Based on the results of an item analysis, live and pretest items were selected to be reviewed at the January 2023 pool review. After reviewing the items and their associated statistics, content experts had the opportunity to either keep/add to the NAVLE item bank, re-write items for future pre-testing, or delete items from the NAVLE item bank. Once the item bank was updated, forms for the November-December 2023 and April 2024 administrations were built using items with statistics that met the psychometric requirements for inclusion.

Scoring Procedures

Statistical targets were used to ensure that the test forms were as similar as possible in difficulty. Because test forms contain different items, it was necessary to estimate examinee proficiency on a common scale using equating methods. This included a calibration of responses given by senior students of accredited programs taking the examination for the first time, under standard testing conditions.

These proficiency estimates were then translated into the reported scale scores that ranged from 200 to 800. The proficiency estimate corresponding to a minimum passing score had a scale score value of 425. Some licensing boards still list a two-digit number as the examination passing score in their rules and laws. To assist the licensing boards, three-digit scores for candidates who applied through their agency were also translated into the applicable two-digit, locally derived score.

Summary Statistics

Summary statistics describing the performance of candidates on the November-December 2023 administration, the April 2024 administration, and the two NAVLE administrations combined are shown in Tables 1.1, 1.2, and 1.3. These tables present the mean three-digit scaled scores and standard deviations for three primary groups:

1. *Criterion Group: senior students of accredited veterinary schools who took the NAVLE for the first time under standard testing conditions;*
2. *Non-Criterion Group: senior students of accredited veterinary schools who had previously taken the NAVLE or took the NAVLE with test accommodations or graduate veterinarians from accredited schools; and*
3. *Non-Accredited Group: graduates or senior students of foreign veterinary schools that are not accredited by the American Veterinary Medical Association's Council on Education.*

Also presented in these tables is information about the number and percentage of failing candidates in each group.

Passing Standard

A best practice in assessment is to hold periodic standard setting exercises to ensure that the exam continues to be relevant, valid, and defensible. This exercise serves as a mechanism to generate evidence on item level performance that corresponds with minimum competency, which is then used in establishing an appropriate pass/fail cut score for the examination. Standard setting exercises for NAVLE have been held periodically in alignment with assessment best practices, with the most recent session in 2022.

The most recent NAVLE standard setting process included three standard setting exercises held virtually between July and September 2022. Twenty-five different panelists participated in these three activities, with each panel consisting of 5-15 Subject Matter Experts with diverse demographic characteristics, geological location of practice, years of experience, and veterinary medicine area of focus.

Failure rates resulting from applying this standard to the current administration are presented in Tables 1.1, 1.2, and 1.3.

SCORE REPORTING

Performance reports for candidates were generated by NBME and distributed to individual examinees, licensing boards, and ICVA. Score information was also distributed to the AAVSB for archival storage and use in official score transfer requests.

Table 1.1. Performance on November-December 2023 NAVLE by Examinee Group

	Mean Scale Score	SD Scale Score	Number of Examinees Failing	Percent of Examinees Failing	Total Examinees
Criterion Group	482	69	855	19.2	4461
Non-Criterion Group	427	65	534	47.1	1133
Non-Accredited Group	395	73	497	64.4	772
Total Group	462	76	1886	29.6	6366

Table 1.2. Performance on April 2024 NAVLE by Examinee Group

	Mean Scale Score	SD Scale Score	Number of Examinees Failing	Percent of Examinees Failing	Total Examinees
Criterion Group	448	66	119	33.8	352
Non-Criterion Group	423	53	684	48.4	1412
Non-Accredited Group	404	70	458	58.3	785
Total Group	420	62	1261	49.5	2549

Table 1.3. Performance on Both Administrations by Examinee Group

	Mean Scale Score	SD Scale Score	Number of Examinees Failing	Percent of Examinees Failing	Total Examinees
Criterion Group	480	69	974	20.2	4813
Non-Criterion Group	425	58	1218	47.9	2545
Non-Accredited Group	400	72	955	61.3	1557
Total Group	450	74	3147	35.3	8915

1. The Criterion group consists of senior students in accredited veterinary schools who took the NAVLE for the first time under standard testing conditions.
2. The Non-Criterion group consists of senior students of accredited veterinary schools who had previously taken the NAVLE or who took the NAVLE with test accommodations, or graduate veterinarians from accredited veterinary schools.
3. The Non-Accredited group graduates or senior students of foreign veterinary schools that are not accredited by the American Veterinary Medical Association's Council on Education.

APPENDIX A

North American Veterinary Licensing Examination 2023 Item Review Meeting November 9-19, 2022

Dr. Rose Baker – Communications
Dr. Rose Baker – Equine
Dr. Christine Calder – Canine/Feline Behavior
Dr. Serge Chalhoub – Feline
Dr. Alice Chapman – Public Health Coordinator
Dr. Allan Corber – Feline
Dr. Ryane Englar – Feline
Dr. Julie Fixman – Canine
Dr. Brad Heins – Bovine/Beef
Dr. Chelsea Holschbach – Bovine/Dairy
Dr. Jared Janke – Equine
Dr. Lester Khoo – Aquatics
Dr. Matthew Kornya – Feline
Dr. Gregory Lewbart – Aquatics/Reptile
Dr. Wesley Lyons – Porcine
Dr. Kathleen MacMillan – Equine
Dr. Amanda F. Marino – Pet Bird
Dr. Fernando Marqués – Equine
Dr. Teresa Morishita – Poultry
Dr. Jeffrey Musser – Bovine/Dairy
Dr. Victoria Neff – Communications/Practice Management
Dr. Gilbert Patterson – Porcine
Dr. Maria Prado – Bovine/Beef
Dr. Christine Savidge – Canine
Dr. Gretchen Schoeffler – Canine
Dr. Clare Scully – Ovine/Caprine/Cervidae
Dr. Amy Snyder – Professional Behavior/Practice Management
Dr. Tamara Swor – Equine
Dr. Karen Tefft – Canine
Dr. Helen Tuzio – Feline
Dr. Bianca Zaffarano – Other Small Mammal

APPENDIX B

North American Veterinary Licensing Examination 2023 Form Review Meeting Participants April 11- 12, 2023

Dr. Rose Baker
Dr. Stacy Byers
Dr. Christine Calder
Dr. Alice Chapman
Dr. Cheryl Dhein
Dr. Rhaysa Feliciano
Dr. Chelsea Holschbach
Dr. Jared Janke
Dr. Danielle Mayr
Dr. Teresa Morishita
Dr. Jeffrey Musser
Dr. Elizabeth Pearlman
Dr. Maria Prado
Dr. Clare Scully
Dr. Tamara Swor
Dr. Danielle Teehan
Dr. Lily Thorson
Dr. Helen Tuzio
Dr. Douglas Whiteside
Dr. Jonathan Yardley

APPENDIX C

Test Administration Statistics	Nov-Dec 2023	April 2024
Eligible examinees (permits sent)	6,491	2,641
Examinees tested	6,366	2,549
Examinees with test accommodations	545	354
Number in Criterion Group	4,461	352
Percent in Criterion Group	70%	14%
Examinee Responses to Post-Test Survey (Criterion candidates)	Nov-Dec 2023	April 2024
Received first choice of test site	89%	87%
Received first choice of test date	80%	75%
No computer difficulties were encountered	95%	94%
No distractions in testing area, site, or outside site	46%	47%
Not enough time for test	30%	29%