

Basic list of veterinary medical serials, third edition: using a decision matrix to update the core list of veterinary journals

Ana G. Ugaz, MLIS, AHIP; C. Trenton Boyd, MALS, AHIP; Vicki F. Croft, MSLS, AHIP; Esther E. Carrigan, MLS, AHIP; Katherine M. Anderson, MA, MLS

See end of article for authors' affiliations.

DOI: 10.3163/1536-5050.98.4.004

Objective: This paper presents the methods and results of a study designed to produce the third edition of the "Basic List of Veterinary Medical Serials," which was established by the Veterinary Medical Libraries Section in 1976 and last updated in 1986.

Methods: A set of 238 titles were evaluated using a decision matrix in order to systematically assign points for both objective and subjective criteria and determine an overall score for each journal. Criteria included: coverage in four major indexes, scholarly impact rank as tracked in two sources, identification as a recommended journal in preparing for specialty board examinations, and a veterinary librarian survey rating.

Results: Of the 238 titles considered, a minimum scoring threshold determined the 123 (52%) journals that constituted the final list. The 36 subject categories represented on the list include general and specialty disciplines in veterinary medicine. A ranked list of journals and a list by subject category were produced.

Conclusion: Serials appearing on the third edition of the "Basic List of Veterinary Medical Serials" met expanded objective measures of quality and impact as well as subjective perceptions of value by both librarians and veterinary practitioners.

INTRODUCTION

Core lists are often a key resource in library collection development and evaluation. For initial collection building, a core list can provide needed direction in identifying materials for first purchase. In the case of an existing collection, a core list can serve as a benchmark for evaluating a collection or as a guide during a weeding project. As the number of print and electronic serials continues to grow and as collection space diminishes in favor of user space, a core list can be a useful tool in prioritizing collection management decisions. One of the most notable core lists in the health sciences is the "Brandon/Hill Selected List of Print Books and Journals for the Small Medical Library," often considered a primary collection development tool despite the fact that updates were discontinued in 2003 [1]. Core journal lists in the health sciences cover many disciplines, such as dentistry, nursing, and pharmacy [2-4]. The comparable core journal list for veterinary medicine is the "Basic List of Veterinary Medical Serials."

HISTORY OF THE BASIC LIST OF VETERINARY MEDICAL SERIALS

The idea to establish the "Basic List of Veterinary Medical Serials" was first conceived in 1976 by members of the Veterinary Medical Libraries Section of the Medical Library Association (VMLS/MLA) [5]. Members of the section identified the need for a resource that would serve both veterinary and non-veterinary librarians in building serial collections in veterinary medicine. An ad hoc committee was formed and given two charges: (1) compile a basic list of veterinary medical journals that could serve as a guideline in establishing and maintaining a veterinary library and (2) promote the adoption of the "Basic

Highlights

- The 123 journals on the "Basic List of Veterinary Medical Serials" include 117 journals with a decision matrix score of 15 points or higher, with an additional 6 journals included for more complete subject representation.
- Subject categories with the greatest number of journals are internal medicine, food animal medicine, and research.
- Updates for the third edition of the "Basic List" include 59 new titles and 13 new subject categories.

Implications

- The third edition of the "Basic List" provides a useful collection development and assessment tool for veterinary libraries, as well as general libraries with a need to develop a core collection of veterinary resources.
- The decision matrix approach, using standard quantitative and focused qualitative measures, provides a useful methodology for creating core lists in other disciplines.

List" as a tool for assessing an adequate library collection during accreditation of veterinary medical schools. The committee adopted guiding principles to direct their efforts in compiling the "Basic List" with the central theme that "serial titles in this proposed list were screened for their usefulness to students, faculty, and research personnel in veterinary schools and by their inclusion in several indexing and abstracting services" [5]. The final list consisted of 193 serial titles, made up of roughly one-third

veterinary titles and two-thirds titles in fields peripheral to veterinary medicine. In 1978, the committee's completed list received approval from the VMLS/MLA. To promote adoption, the approved list was then distributed to representatives from the American Veterinary Medical Association (AVMA). The AVMA Council on Education "commended the effort of the committee in formulating this list of serials which should be a valuable guide for established and developing veterinary schools" [5]. The VMLS/MLA also determined that a veterinary serials committee should be established as a standing committee in recognition of the need for future updating of the "Basic List" and for monitoring and reporting new developments related to veterinary serials. As a founding member and chair of the VMLS/MLA Veterinary Serials Committee since its inception, C. Trenton Boyd, AHIP, has provided leadership and continuity in the development and evolution of the "Basic List."

The second edition of the "Basic List" was published in 1986 and included ninety-six veterinary serials [6]. While guidelines used for the first edition formed the foundation, they were expanded in preparing the second edition. The purpose of the list was further clarified to be that of "a core list from which a library could build upon, depending on the research activities of the institution" [6]. Although the first two editions of the list were created based in part on input gathered from other recognized serial lists, indexing services, and citation data, the committee of experienced veterinary librarians ultimately determined the final list. The committee preparing the second edition also created a separate adjunct core list of human medical and general science serials considered necessary to support the study of veterinary medicine. As with the first edition, the completed "Basic List" was presented at a business meeting of the VMLS/MLA for approval by the members.

Although alternative core lists in veterinary medicine have emerged during the time since publication of the second edition, these efforts generally explored methodologies limited to one or two selection criteria [7, 8]. Regarding the update, the VMLS/MLA Veterinary Serials Committee believed that a process that considered a much broader range of journal measures would further improve the final core list. While researching the development of core lists, the committee noted a variety of methods: subjective judgment by experts, journal usage, coverage by abstracting and indexing services, overlapping library holdings or subscriptions, citation data, production of articles, local faculty publication data, and combination of multiple criteria methods [9]. Intending to strengthen a revised edition, the committee (comprising the authors) made a number of carefully considered changes to the decision-making process. The gathering of initial titles to be considered for the list was still determined based on the expertise of committee

members, but additional data elements were analyzed and a new scoring methodology was instituted to select the final list of serials.

The resulting core list contains substantive veterinary medical journals deemed essential to the veterinary medical library, providing a core collection that can then be augmented by other journals based on the research objectives and goals of the local institution. The needs of veterinary medical libraries of the United States and Canada are the primary focus; however, it is hoped that the list will also be useful to veterinary libraries in other countries.

METHODS

In preparing the third edition of the "Basic List," the committee first compiled an initial list of 238 veterinary serials, drawn primarily from the *List of Journals Indexed for MEDLINE* and *Focus On: Veterinary Science and Medicine* (a current awareness tool produced by ISI) [10, 11]. Due to the continual flux in publication circumstances, such as multiple title changes, new titles, mergers, and cessations, the title lists from previous editions of the "Basic List" could not be accurately referenced in preparing the third edition. Consistent with earlier editions was the focus on scholarly journals and the exclusion of extension publications; federal, state, and local publications; house organs; and newsletters, though the committee does encourage libraries to collect additional serials of this nature to better serve local needs and to provide regional archival collections. While human medical and general science journals were addressed in the second edition and serve as important adjuncts to any veterinary core collection, they were not analyzed for the updated "Basic List." The inclusion of foreign-language titles was also limited because the intended audience was libraries that primarily collect English-language materials.

The committee identified five criteria to be examined for each title, which could be compiled into a decision matrix to determine a final list (Table 1). The five criteria were indexing coverage, scholarly ranking from two sources, inclusion on a recommended reading list issued by a veterinary specialty board, and librarian rating. Each title could receive a maximum score of forty, based on the sum of the scores from these five criteria.

Survey

Librarian ratings of journals were collected using an online survey form. Recognizing that a survey was a significant undertaking and that the gathered ratings would represent the thoughtful input of other experienced veterinary librarians, the survey results received more weight (40%) than any other single factor. A designated librarian at each of the 42 institutions in North America, Europe, Australia, and New Zealand currently accredited by AVMA was invited to participate in the survey. An email

Table 1
Point scoring system applied to journal titles

	Criteria	Maximum points possible
40% of overall score	1. Librarian survey (average survey rating multiplied by 1.6*)	16
30% of overall score	2. Inclusion on a specialty board list of recommended reading (0.8 point for each appearance on any of 15 recommended reading lists)	12
30% of overall score	3. Indexing (1 point for each index: AGRICOLA, CAB, MEDLINE, Web of Science)	4
	4. Ranking in Journal Citation Reports for the subject "Veterinary Science" (4 points for top quarter, 3 points for second quarter, 2 points for third quarter, and 1 point for bottom quarter)	4
	5. Ranking in SCImago Journal Rank for the subject "Veterinary" (4 points for top quarter, 3 points for second quarter, 2 points for third quarter, and 1 point for bottom quarter)	4
Maximum score possible		40

* Average survey ratings were calculated with 10 as the maximum score, which required that each score be multiplied by 1.6 to determine how much of the 16 available points each journal would receive.

invitation providing the history and purpose of the "Basic List," a description of the guidelines used for updating the third edition, and instructions for completing the survey, posted online using SurveyMonkey, an automated survey tool, were sent to these institutional contacts. To assist respondents in assessing the titles, the International Standard Serial Number (ISSN); language; subject area (e.g., animal behavior, equine medicine, internal medicine, and pathology); indexing coverage; and the previous year's impact factor were given. For each listed title, respondents were asked to mark 1 of 4 choices: (1) a key title for the list, (2) a title to keep on the list, (3) a title to remove from the list, or (4) no opinion. Comment boxes were also included to allow ample space for suggesting titles to be added or providing general feedback. Participants were given 6 weeks to complete the survey.

At the close of the survey, an average score was calculated for each title by dividing the total ranking points from the survey by the number of responses collected for that title. If a respondent indicated a title was key to the list, 10 points were recorded; 5 points were recorded for titles marked worthy of keeping on the list but not key; and no points were recorded for a title that was rated as needing to be removed from the list. Average scores for each title were then calculated based only on the responses of those who rated that title. As 10 was the maximum average score achievable, averages were multiplied by 1.6 to determine how many of the 16 available points (based on 40% of the total 40 points available) each journal would receive.

Specialty board lists

There are currently 20 AVMA recognized veterinary specialty organizations, representing specializations in an organ system (e.g., ophthalmology, neurology, and dermatology); a discipline (e.g., internal medicine, surgery, and pathology); or a particular species [12]. The recommended reading lists promoted by veterinary specialty boards were examined to identify which titles veterinary practitioners considered key to

their profession. Journals identified by a veterinary specialty organization as recommended reading in preparation for their board exams provide an indicator of a journal's importance to the veterinary profession, and titles singled out in this way suggest content that is useful not only for the exam, but significant in day-to-day veterinary practice. These lists, representing the consensus of professionals in the field, were weighted slightly less than input from the librarian survey and assigned 30% (12) of the available points.

One committee member researched information from each of the veterinary specialty organizations to identify titles recommended for study in preparation for their board examinations. This was accomplished by searching their websites and contacting them directly to obtain a list of recommended journals. Originally, recommended reading lists from 12 veterinary specialty organizations were located, and a point was awarded each time a title appeared on one of these lists. During the course of the research, reading lists from 3 additional veterinary specialty organizations were obtained, and the points were adjusted to 0.8 points for each appearance on a recommended reading list. This adjustment was made to keep the maximum points for this criterion to 12 and thus maintain the 30% weighting.

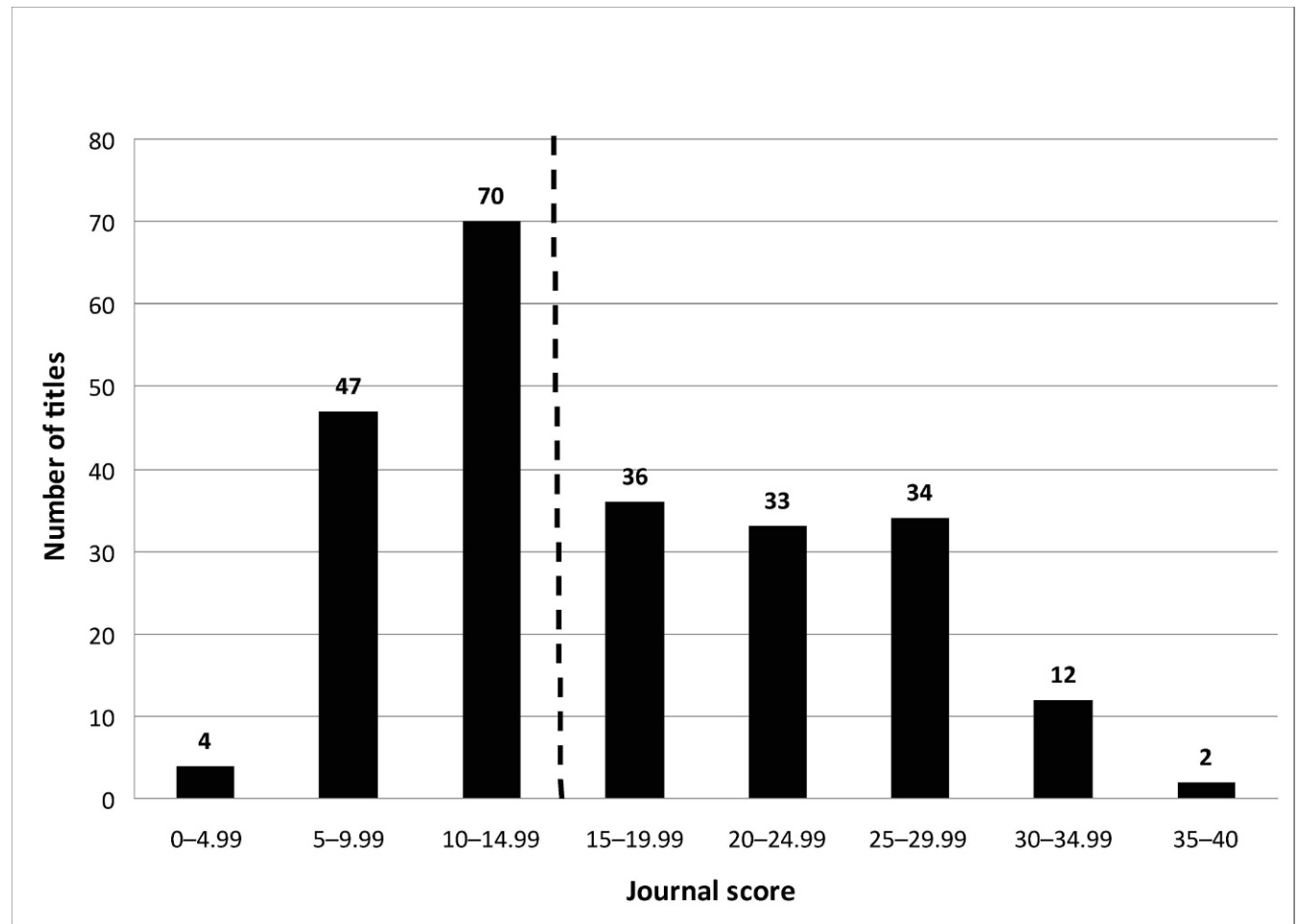
Indexing services

Inclusion by indexing services was seen as an indication not only of a journal's accessibility, but also its importance. Four major bibliographic indexes were selected as most relevant and frequently used when searching for veterinary literature: AGRICOLA, CAB Abstracts, MEDLINE, and Web of Science. Journals were given 1 point for inclusion in each index, for a maximum of 4 points in this category or 10% of the total 40 points possible.

Scholarly impact

Scholarly impact was examined using 2 different sources: ISI Journal Citation Reports (JCR) and the

Figure 1
Distribution of journal scores



Dotted line represents threshold for inclusion on the list.

SCImago Journal and Country Rank (SJR). Although many are familiar with the ISI impact factor, the committee sought to complement this rating with a second measure of scholarly impact. The SJR indicator uses a different formula than JCR, one that is based on the Google PageRank algorithm and uses data from Elsevier's SCOPUS citation database [13]. Both JCR and SJR calculate a score for a journal's scholarly impact and are capable of generating a ranked list for journals in a particular subject area. Journal reports created on the subject of veterinary science were selected from each database, and the ranked lists were divided into quartiles in order to assign points. The 2007 JCR "Veterinary Sciences" category included 133 serials, and the 2007 SJR "Veterinary" category included 151 serials. The SJR data collected in August 2008 reflect ranking available at the time; updates have occurred since that time changing rankings slightly. As with indexes, titles could receive a maximum of 4 points in this category, or 10% of the total 40 points possible. Journals in the top quartile were given 4 points, those in the second quartile

received 3 points, titles in the third quartile received 2 points, and 1 point was given for a journal that fell into the bottom quartile.

RESULTS

Librarians from 24 of the 42 AVMA-accredited institutions fully completed the survey, a 57% response rate. Respondents to the survey unanimously rated 14 titles as "key title for the list" and another 22 titles as valuable to the core list.

Total scores for all 238 journals ranged from 2.40 to a full 40 points (Figure 1). A minimum overall score of 15 out of 40 possible points was identified as a logical threshold for inclusion on the list. Journals included in the third edition of the "Basic List" had an average score of 23.19, a median score of 23.12, and a standard deviation of 5.40 points. Only 1 journal, the *Journal of the American Veterinary Medical Association*, garnered the maximum 40 points. Table 2 lists the journals ranked in order of their overall score.

Table 2
Ranked list of journals

Rank	Journal	Overall score
1	<i>Journal of the American Veterinary Medical Association</i>	40.00
2	<i>American Journal of Veterinary Research</i>	38.40
3	<i>Journal of Veterinary Internal Medicine</i>	34.40
4	<i>Veterinary Pathology</i>	34.08
5	<i>Veterinary Clinics of North America: Small Animal Practice</i>	33.80
6	<i>Equine Veterinary Journal with supplements</i>	33.60
6	<i>Veterinary Clinics of North America: Equine Practice</i>	33.60
8	<i>Veterinary Clinics of North America: Food Animal Practice</i>	32.80
9	<i>Journal of the American Animal Hospital Association</i>	32.40
10	<i>Veterinary Surgery</i>	31.80
11	<i>Compendium: Continuing Education for Veterinarians</i>	31.68
12	<i>Veterinary Record</i>	31.60
13	<i>Veterinary Immunology and Immunopathology</i>	30.40
14	<i>Journal of Veterinary Diagnostic Investigation</i>	30.20
15	<i>Journal of Wildlife Diseases</i>	29.56
16	<i>Avian Diseases</i>	29.40
17	<i>Veterinary Journal</i> (formerly, <i>British Vet Journal</i>)	29.28
18	<i>Journal of Veterinary Pharmacology and Therapeutics</i>	29.08
19	<i>Theriogenology</i>	28.96
19	<i>Research in Veterinary Science</i>	28.96
21	<i>Veterinary Parasitology</i>	28.80
22	<i>Avian Pathology</i>	28.64
23	<i>Veterinary Microbiology</i>	28.48
24	<i>Veterinary Dermatology</i>	28.44
25	<i>Canadian Journal of Veterinary Research</i>	28.28
26	<i>Journal of Small Animal Practice</i>	28.20
27	<i>Veterinary Anaesthesia and Analgesia</i>	28.08
28	<i>Canadian Veterinary Journal</i>	27.76
28	<i>Topics in Companion Animal Medicine</i> (formerly, <i>Clinical Techniques in Small Animal Practice</i>)	27.76
30	<i>Preventive Veterinary Medicine</i>	27.68
31	<i>Veterinary Radiology and Ultrasound</i>	27.60
32	<i>Veterinary Ophthalmology</i>	27.48
33	<i>Journal of Feline Medicine and Surgery</i>	27.16
34	<i>Zoonoses and Public Health</i> (formerly, <i>Journal of Veterinary Medicine B</i>)	26.88
35	<i>Veterinary Clinical Pathology</i>	26.48
36	<i>Veterinary Clinics of North America: Exotic Animal Practice</i>	26.40
37	<i>Veterinary Therapeutics</i>	26.36
37	<i>Veterinary Research</i>	26.36
39	<i>Journal of Fish Diseases</i>	26.04
40	<i>Journal of Zoo and Wildlife Medicine</i>	25.88
41	<i>Medical and Veterinary Entomology</i>	25.60
42	<i>Laboratory Animals</i>	25.56
42	<i>Journal of Veterinary Emergency and Critical Care</i>	25.56
44	<i>Vaccine</i>	25.40
45	<i>Reproduction in Domestic Animals</i> =Zuchthygiene	25.24
46	<i>Journal of the American Association for Laboratory Animal Science: JAALAS</i> (formerly, <i>Contemporary Topics in Laboratory Animal Science</i>)	25.20
47	<i>Veterinary Research Communications</i>	25.00
47	<i>Veterinary and Comparative Orthopaedics and Traumatology: VCOT</i>	25.00
49	<i>Applied Animal Behaviour Science</i>	24.72
50	<i>Veterinary Quarterly</i>	24.68
51	<i>Journal of Dairy Science</i>	24.64
52	<i>Transboundary and Emerging Diseases</i> (formerly, <i>Journal of Veterinary Medicine Series A</i>)	24.56
53	<i>Journal of Comparative Pathology</i>	24.48
54	<i>Australian Veterinary Journal</i>	24.20
55	<i>Veterinary Medicine</i>	23.72
56	<i>Journal of Avian Medicine and Surgery</i>	23.64
57	<i>ATLA Alternatives to Laboratory Animals</i>	23.48
58	<i>Revue Scientifique et Technique</i>	23.44
59	<i>Medical Mycology</i>	23.32
60	<i>Journal of Animal Science</i>	23.20
61	<i>Animal Welfare</i>	23.12
61	<i>Comparative Immunology, Microbiology, and Infectious Diseases</i>	23.12
63	<i>Journal of Medical Primatology</i>	22.80
63	<i>Journal of Veterinary Medical Science</i> (the Japanese Society of Veterinary Science)	22.80
65	<i>Journal of Animal Physiology and Animal Nutrition</i>	22.76
66	<i>Domestic Animal Endocrinology</i>	22.72
67	<i>Comparative Medicine</i>	22.68
68	<i>New Zealand Veterinary Journal</i>	22.64
69	<i>Journal of Aquatic Animal Health</i>	22.60
70	<i>Equine Veterinary Education</i>	22.48
71	<i>Journal of Veterinary Dentistry</i>	22.36
71	<i>Journal of Veterinary Medical Education</i>	22.36
73	<i>Acta Veterinaria Scandinavica with supplements</i>	22.12
74	<i>Journal of Medical Entomology</i>	21.84
75	<i>Lab Animal</i>	21.80
76	<i>Onderstepoort Journal of Veterinary Research</i>	21.12
77	<i>Journal of Swine Health and Production</i>	21.08
78	<i>Experimental Animals</i>	20.84

Table 2
Continued

Rank	Journal	Overall score
79	<i>Zoo Biology</i>	20.44
80	<i>Berliner und Münchener Tierärztliche Wochenschrift</i>	20.36
81	<i>Anatomia, Histologia, Embryologia</i>	20.16
82	<i>Poultry Science</i>	19.84
83	<i>Diseases of Aquatic Organisms</i>	19.76
84	<i>Japanese Journal of Veterinary Research</i>	19.72
85	<i>Journal of Applied Animal Welfare Science: JAAWS</i>	19.60
85	<i>In Practice</i>	19.60
87	<i>Tropical Animal Health and Production</i>	19.48
87	<i>Journal of the South African Veterinary Association</i>	19.48
89	<i>Animal Reproduction Science</i>	19.36
90	<i>Anthrozoos</i>	19.16
90	<i>Veterinary and Comparative Oncology</i>	19.16
92	<i>Animal</i>	19.00
93	<i>Journal of Equine Veterinary Science</i>	18.96
94	<i>Journal of Veterinary Cardiology</i>	18.92
95	<i>ILAR Journal</i>	18.48
96	<i>Journal of Exotic Pet Medicine (formerly, Seminars in Avian and Exotic Pet Medicine)</i>	18.40
97	<i>Schweizer Archiv für Tierheilkunde</i>	18.36
98	<i>Small Ruminant Research</i>	18.28
99	<i>Reproduction</i>	18.04
100	<i>DTW: Deutsche Tierärztliche Wochenschrift</i>	17.84
101	<i>BMC Veterinary Research</i>	17.68
102	<i>Scandinavian Journal of Laboratory Animal Science</i>	17.56
103	<i>Fish Pathology (formerly, Gyobyu Kenkyu)</i>	17.36
104	<i>Fish and Shellfish Immunology</i>	17.24
105	<i>Journal of Dairy Research</i>	16.96
106	<i>Biology of Reproduction</i>	16.92
107	<i>British Poultry Science</i>	16.64
108	<i>Animal Research</i>	16.36
109	<i>Acta Veterinaria Hungarica</i>	16.28
109	<i>Polish Journal of Veterinary Sciences</i>	16.28
111	<i>Archives of Animal Nutrition</i>	16.24
112	<i>Animal Science Journal=Nihon Chikusan Gakkaiho</i>	16.00
113	<i>Animal Genetics</i>	15.32
114	<i>Revue de Medecine Veterinaire</i>	15.24
115	<i>Australian Veterinary Practitioner</i>	15.04
116	<i>Veterinary Economics</i>	15.00
116	<i>Canadian Journal of Animal Science</i>	15.00
119	<i>Veterinary Technician*</i>	14.84
161	<i>Historia Medicinae Veterinariae*</i>	12.24
161	<i>Veterinary Heritage*</i>	12.24
170	<i>Animal Biotechnology*</i>	11.76
198	<i>Animal Law*</i>	8.96
212	<i>Journal of the American Holistic Veterinary Medical Association*</i>	8.00

* Journals that scored below the threshold but were added to provide more complete subject coverage.

The third edition of the "Basic List" includes the 117 titles with scores of 15 or higher, and to provide more complete subject representation, 6 additional titles with fewer points were included when a subject category did not have a journal that garnered at least 15 points, for a total of 123 titles. During the May 2009 business meeting of the VMLS/MLA, the final list was presented to the members and approved. The final list of serials was organized by subject category, and journals were listed in rank order within each subject category (Appendix).

Of the thirty-eight foreign language titles on the initial list of journals to be considered, five scored high enough to be included in the final list. An attempt was made to assign subjects that closely matched Medical Subject Headings (MeSH) terminology; however, more specific categories had to be added to adequately encompass the field of veterinary medicine (e.g., equine medicine, food animal medicine, and zoo and exotic animal medicine). Initial subject representation on the list covered thirty-two of

thirty-six different subject areas. The top three subject areas represented on the list are: internal medicine with twenty-two titles, food animal medicine with ten titles, and research with nine titles. Five subject areas had no titles score above the minimum threshold of fifteen points: alternative and complementary medicine, animal technician, biotechnology, history, and law. To improve the breadth of coverage by providing at least one title for all of the thirty-six subject areas, the top-scoring titles were included for those five subjects that had been unrepresented. Table 3 lists the number of journal titles by subject category.

DISCUSSION

The selection process enabled inclusion of newly available data and metrics, combined with direct input via an electronic survey tool, to produce an updated core list that uniquely reflects the foundation and diversity of modern veterinary medicine. Expanding the opportunity to provide input on title

Table 3
Number of journals by subject category

Subject category	Number of titles considered	Number of titles included in 3rd edition
Alternative and Complementary Medicine*	1	1
Anatomy	2	1
Animal Behavior	3	1
Animal Technician*	2	1
Animal Welfare	5	4
Aquatic Medicine	8	4
Avian Medicine	6	4
Biotechnology*	1	1
Business	6	1
Cardiology	2	1
Dentistry	1	1
Dermatology	1	1
Education	1	1
Emergency Medicine and Critical Care	1	1
Endocrinology	1	1
Equine Medicine	12	4
Food Animal Medicine	22	10
Genetics	3	1
History*	4	2 [†]
Internal Medicine	70	22
Laboratory Animal Medicine	9	7
Law*	2	1
Microbiology and Immunology	8	6
Nutrition	2	2
Oncology	1	1
Ophthalmology	1	1
Parasitology	4	3
Pathology	7	5
Pharmacology and Therapeutics	2	2
Public Health	3	3
Radiology	1	1
Reproduction	7	5
Research	11	9
Small Animal Medicine	8	5
Surgery and Anesthesiology	4	3
Zoo and Exotic Animal Medicine	16	6
Total	238	123

* Journals in this subject category scored below the threshold, but the highest scoring journal was added to provide more complete subject coverage.

† A tie existed among the highest scoring journals in this subject category, resulting in two being added instead of one.

selection from a five-person committee to twenty-four veterinary medical librarians was a significant change in process for the third edition. Committee members also considered several other new elements in creating the updated "Basic List." Indexing coverage and impact factors were elements that had been considered with the second edition, but the relative importance of these factors was not defined until this revision. The authors contend that, in addition to being more readily accessible to users, journals covered by any of the four major indexing databases selected reflect on the merits of a journal. The inclusion of a new, second scholarly impact measure, the SJR, in the analysis was another result of the committee's meticulous rethinking of the title selection process.

Both the initial list of journals for consideration and the final list are weighted heavily toward English-language publications. Although thirty-six of the

thirty-eight foreign language journals initially considered were identified due to coverage in CAB Abstracts, many received few, if any, points for inclusion on a recommended reading list or scholarly impact rank. Most also received a low score in the survey of veterinary medical librarians.

The committee added two completely new criteria to the list: (1) an analysis of available reading lists from fifteen AVMA recognized veterinary specialty organizations in order to identify journals recommended when preparing for board examinations and (2) a web-based survey of veterinary librarians to obtain their ratings of journals. Through the reading lists of the veterinary specialty boards, the committee gained input from a nonacademic channel that offered a snapshot of resources considered most relevant to current veterinary practice. The survey provided the opportunity to expand experiential input beyond the five committee members. Newly available polling technology made it possible to easily create an online survey that presented the list of potential titles and directly engaged veterinary medical librarians from around the world in the process of ranking essential titles. Factors in the decision model were weighted in such a way as to achieve a balance between the objective quantitative elements and more subjective practitioner expertise from both librarians and veterinary professionals.

Because a considerable amount of time was invested devising a methodology for creating the updated "Basic List," the committee firmly believes that the numerous data elements collected on each title, especially the inclusion of wider librarian opinion, improved the resulting list. No direct analysis was performed to determine the impact of each of the newly added criteria. This is a reasonable and important issue worth exploring and could further demonstrate applicability of the methodology to creating other core lists.

The third edition of the "Basic List" reflects changes in the veterinary medical literature since the second edition was published in 1986. While two-thirds of the titles in the second edition are included in the third edition, thirteen titles ceased publication. Of the fifty-nine titles unique to the third edition of the "Basic List," twenty-four titles began publication after 1985. Thirteen subject categories are completely new to the third edition: alternative and complementary medicine, animal technician, animal welfare, biotechnology, cardiology, dentistry, dermatology, emergency medicine and critical care, endocrinology, law, nutrition, oncology, and ophthalmology. These subject categories reflect the increasing importance of specialty areas in the field of veterinary medicine. The top twenty journals on the "Basic List" appear to reflect what many librarians consider "major" journals of the veterinary field. These journals are broad in their coverage of veterinary medicine and would certainly be useful to anyone preparing for a

career in small animal, equine, or food animal medicine.

Limitations of the study

Limitations of the methodology included incomplete responses to the online survey. The SurveyMonkey data indicated that twenty-seven individuals started the survey, but only twenty-four actually completed a substantial portion. Whether a respondent rated every title or skipped a large portion, the scoring methodology sought to calculate an average that accounted for the total number of individuals registering an opinion on a title. On the surveys that were started but not registered as "complete," two individuals appear to have logged in but never rated any journals and one individual rated just the first forty-nine journals. Thus, twenty-five rather than twenty-four survey responses were collected for some of the journals. Several respondents acknowledged rating the proposed list from the perspective of titles they valued in their own collections. While this bias could be perceived as problematic, given that the survey was sent to libraries currently accredited by the AVMA, this input provided information from actual working collections that directly support veterinary education, research, and clinical practice.

Another limitation was the adopted subject vocabulary. Because the subject categories were devised by the committee, others compiling a similar list might use slightly different schemes. Additionally, seventeen subject areas were represented by only one journal due to the limited number of veterinary publications in these areas (Table 3).

CONCLUSION

Since its inception in 1976, the "Basic List of Veterinary Medical Serials" has served as a valuable collection management tool for veterinary medical librarians around the world. The expectation of the current VMLS/MLA Veterinary Serials Committee is that the third edition will be as useful to the veterinary medical community as earlier editions, if not more so. Librarians can build their veterinary science collections based on overall rank or by rank within subject category to best match the research and educational needs of their local institutions. Just as the nature of serials has changed dramatically since the second edition of the "Basic List" in 1986, so too have ways to evaluate those serials. The third edition incorporates new qualitative and quantitative measurements and tools. The use of online survey technology permitted a much larger portion of the veterinary medical library community to be collectively engaged in the title selection process. Combining and balancing the subjective element of survey feedback with objective journal quality measures through the decision matrix bring together these divergent approaches to create the updated and enhanced third edition of the "Basic List of Veterinary Medical Serials."

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AUTHORS' AFFILIATIONS

Ana G. Ugaz, MLIS, AHIP, augaz@medlib.tamu.edu, Resources Management Librarian, Medical Sciences Library, Texas A&M University, 4462 TAMU, College Station, TX 77843-4462; **C. Trenton Boyd, MALS, AHIP**, BoydT@missouri.edu, Head Librarian, Zalk Veterinary Medical Library, University of Missouri, W218 Veterinary Medicine Building, Columbia, MO 65211-5120; **Vicki F. Croft, MSLS, AHIP**, croft@vetmed.wsu.edu, Head Librarian, Animal Health Library, Washington State University, 170 Wegner Hall, Pullman, WA 99164-6512; **Esther E. Carrigan, MLS, AHIP**, ecarriga@medlib.tamu.edu, Associate

Dean and Director, Medical Sciences Library, Texas A&M University, 4462 TAMU, College Station, TX 77843-4462; **Katherine M. Anderson, MA, MLS**, AndersonKat@health.missouri.edu, Specialized Services Librarian, Zalk Veterinary Medical Library, W218 Veterinary Medicine Building, University of Missouri, Columbia, MO 65211-5120

Received December 2009; accepted March 2010

APPENDIX

Basic List of Veterinary Serials

Journals are listed in rank order within each subject category. The number in parentheses indicates the titles' rank in the 238 titles rated for this study.

Alternative and Complementary Medicine*

Journal of the American Holistic Veterinary Medical Association (212)

Anatomy

Anatomia, Histologia, Embryologia (81)

Animal Behavior

Applied Animal Behaviour Science (49)

Animal Technician*

Veterinary Technician (119)

Animal Welfare

ATLA Alternatives to Laboratory Animals (57)

Animal Welfare (61)

Journal of Applied Animal Welfare Science (JAAWS) (85)

Anthrozoos (90)

Aquatic Medicine

Journal of Fish Diseases (39)

Journal of Aquatic Animal Health (69)

Diseases of Aquatic Organisms (83)

Fish Pathology (formerly, *Gyobyo Kenkyu*) (103)

Avian Medicine

Avian Diseases (16)

Journal of Avian Medicine and Surgery (56)

Poultry Science (82)

British Poultry Science (107)

Biotechnology*

Animal Biotechnology (170)

Business

Veterinary Economics (116)

Cardiology

Journal of Veterinary Cardiology (94)

Dentistry

Journal of Veterinary Dentistry (71)

Dermatology

Veterinary Dermatology (24)

Education

Journal of Veterinary Medical Education (71)

Emergency Medicine and Critical Care

Journal of Veterinary Emergency and Critical Care (42)

Endocrinology

Domestic Animal Endocrinology (66)

Equine Medicine

Equine Veterinary Journal (6)

Veterinary Clinics of North America: Equine Practice (6)

Equine Veterinary Education (70)

Journal of Equine Veterinary Science (93)

Food Animal Medicine

Veterinary Clinics of North America: Food Animal Practice (8)

Journal of Dairy Science (51)

Journal of Animal Science (60)

Journal of Swine Health and Production (77)

Tropical Animal Health and Production (87)

Animal (92)

Small Ruminant Research (98)

Journal of Dairy Research (105)

Animal Science Journal=Nihon Chikusan Gakkaiho (112)

Canadian Journal of Animal Science (116)

Genetics

Animal Genetics (113)

History*

Historia Medicinae Veterinariae (161)

Veterinary Heritage (161)

* Journals in this subject category scored below the threshold, but the highest scoring journal was added to provide more complete subject coverage.

Internal Medicine

- Journal of the American Veterinary Medical Association* (1)
Journal of Veterinary Internal Medicine (3)
Compendium: Continuing Education for the Practicing Veterinarian (11)
Veterinary Record (12)
Veterinary Journal (17)
Canadian Veterinary Journal (28)
Veterinary Quarterly (50)
Transboundary and Emerging Diseases (52)
Australian Veterinary Journal (54)
Veterinary Medicine (55)
Journal of Veterinary Medical Science (Japanese Society of Veterinary Science) (63)
New Zealand Veterinary Journal (68)
Acta Veterinaria Scandinavica (73)
Berliner und Münchener Tierärztliche Wochenschrift (80)
In Practice (85)
Journal of the South African Veterinary Medical Association (87)
Schweizer Archiv für Tierheilkunde (97)
DTW: Deutsche Tierärztliche Wochenschrift (100)
Acta Veterinaria Hungarica (109)
Polish Journal of Veterinary Sciences (109)
Revue de Medecine Veterinaire (114)
Australian Veterinary Practitioner (115)

Laboratory Animal Medicine

- Laboratory Animals* (42)
Journal of the American Association for Laboratory Animal Science: JAALAS (46)
Comparative Medicine (67)
Lab Animal (75)
Experimental Animals (78)
ILAR Journal (95)
Scandinavian Journal of Laboratory Animal Science (102)

Law*

- Animal Law* (198)

Microbiology and Immunology

- Veterinary Immunology and Immunopathology* (13)
Veterinary Microbiology (23)
Vaccine (44)
Medical Mycology (59)
Comparative Immunology, Microbiology, and Infectious Diseases (61)
Fish and Shellfish Immunology (104)

Nutrition

- Journal of Animal Physiology and Animal Nutrition* (65)
Archives of Animal Nutrition (111)

Oncology

- Veterinary and Comparative Oncology* (90)

Ophthalmology

- Veterinary Ophthalmology* (32)

Parasitology

- Veterinary Parasitology* (21)
Medical and Veterinary Entomology (41)
Journal of Medical Entomology (74)

Pathology

- Veterinary Pathology* (4)
Journal of Veterinary Diagnostic Investigation (14)
Avian Pathology (22)
Veterinary Clinical Pathology (35)
Journal of Comparative Pathology (53)

Pharmacology and Therapeutics

- Journal of Veterinary Pharmacology and Therapeutics* (18)
Veterinary Therapeutics (37)

Public Health

- Preventive Veterinary Medicine* (30)
Zoonoses and Public Health (34)
Revue Scientifique et Technique (58)

Radiology

- Veterinary Radiology and Ultrasound* (31)

Reproduction

- Theriogenology* (19)
Reproduction in Domestic Animals=Zuchthygiene (45)
Animal Reproduction Science (89)
Reproduction (99)
Biology of Reproduction (106)

Research

- American Journal of Veterinary Research* (2)
Research in Veterinary Science (19)
Canadian Journal of Veterinary Research (25)
Veterinary Research (37)
Veterinary Research Communications (47)
Onderstepoort Journal of Veterinary Research (76)
Japanese Journal of Veterinary Research (84)
BMC Veterinary Research (101)
Animal Research (108)

Small Animal Medicine

- Veterinary Clinics of North America: Small Animal Practice* (5)
Journal of the American Animal Hospital Association (9)
Journal of Small Animal Practice (26)

Topics in Companion Animal Medicine (28)
Journal of Feline Medicine and Surgery (33)

Surgery and Anesthesiology

Veterinary Surgery (10)
Veterinary Anaesthesia and Analgesia (27)
Veterinary and Comparative Orthopaedics and Traumatology: VCOT (47)

Zoo and Exotic Animal Medicine

Journal of Wildlife Diseases (15)
Veterinary Clinics of North America: Exotic Animal Practice (36)
Journal of Zoo and Wildlife Medicine (40)
Journal of Medical Primatology (63)
Zoo Biology (79)
Journal of Exotic Pet Medicine (96)