Letters to the Editor

Bile acids diagnostic test believed to contain limitations

We would like to comment on the recent report titled "Evaluation of urine sulfated and nonsulfated bile acids as a diagnostic test for liver disease in dogs" by Dr. C. Balkman et al (*JAVMA*, May 15, 2003, pp 1368–1375). The authors set out "to evaluate 3 methods for measuring urine bile acids (UBA) and compare their diagnostic performance with that of the serum bile acids (SBA) test…." The authors enrolled 126 dogs and should be commended for successfully completing such a large clinical trial. We believe, however, that the study has several important limitations.

To compare a new diagnostic test to an existing one, several principles should be followed.[1] Two of these principles are selection of an appropriate sample population and performance of all tests under standard clinical conditions.

Pre- and postprandial SBA concentrations are consistently high in dogs with hepatic or posthepatic icterus, and, thus, not routinely evaluated in dogs with hyperbilirubinemia.[2,3] Many of the dogs enrolled into this study were hyperbilirubinemic and, we believe, should have been excluded from analysis or compared separately from dogs with nonicteric hepatobiliary disease.

Also, both pre- and postprandial SBA concentrations were determined in only 55 dogs, whereas postprandial SBA concentration alone was measured in 71 dogs. We believe that comparison of SBA to UBA concentration requires measurement of pre- and postprandial SBA concentrations in all dogs.

As stated on page 1372, urine nonsulfated bile acid-to-creatinine ratio and urine sulfated and nonsulfated bile acid-to-creatinine ratio failed to help in diagnosis of portosystemic vascular anomalies in 33% and 26% of 27 dogs, respectively. However, the authors did not discuss the sensitivity of pre- and postprandial SBA concentrations for diagnosing portosystemic vascular anomalies in the same group of dogs. We feel that these data would have been crucial in comparing the overall clinical usefulness of these new diagnostic tests with that of SBA concentration.

We also point out that the specificity for SBA concentration stated in Table 4 is misleading. Although the upper limit of the reference range for postprandial SBA concentration is 25 µmol/L, a cutoff value for diagnosis of serious liver disease is likely higher than that. Even a slight adjustment of the cutoff value to 33 µmol/L would have resulted in a specificity for SBA concentration of 100%. In the Discussion, the authors speculate that the lower specificity for SBA concentration compared with previous studies by their own laboratory may be attributable to "differences in prevalence of hepatic disease in the studied populations." However, disease prevalence does not affect test specificity.[4] Rather, we would suggest that the low specificity of SBA concentration reflects the low cutoff value chosen.

For the reasons given, we believe that the current study does not provide sufficient evidence in support of the conclusion that "the UNSBA-to-creatinine ratio and USBA plus UNSBA-to-creatinine ratio identified dogs with hepatic disease nearly as well as the SBA test." Further studies answering our concerns are needed before we can recommend UBA testing as a replacement for SBA concentration measurement for routine diagnostic testing in dogs.

Jörg M. Steiner, DVM, PhD, DACVIM
David A. Williams, MA, Vet MB, PhD, DACVIM
College Station, Tex
Susan E. Bunch, DVM, PhD, DACVIM
Raleigh, NC

1. Cash BD, Schoenfeld P, Rex D. An evidence-based medicine approach to studies of diagnostic tests: assessing the validity of virtual colonoscopy. *Clin Gastroenterol Hepatol* 2003;1:136–144.

2. Center SA. Serum bile acids in companion animal medicine. *Vet Clin North Am Small Anim Pract* 1993;23:625–657.

3. Leveille-Webster C. Bile acids—what's new. *Semin Vet Med Surg (Small Anim)* 1997;12:2–9.

4. Lund EM, Klausner JS. Clinical epidemiology for the veterinary practitioner: the diagnostic process. In: Bonagura JD, ed. *Kirk's current veterinary therapy XIII*. Philadelphia: WB Saunders Co, 1995;7–11.

The authors respond:

We appreciate the interest in our large clinical study of urine bile acids (UBA) in dogs. This exploratory work confirms that in dogs, concentrations of UBA can be reliably measured, correlate with serum bile acids (SBA) concentration, and increase in many liver disorders.

Instructions for Writing a Letter to the Editor

Readers are invited to submit letters to the editor. Letters may not exceed 500 words and 6 references. All letters are subject to editing. Those pertaining to anything published in the *JAVMA* should be received within one month of the date of publication. Submission via e-mail (*JournalLetters@avma.org*) or fax (847-925-9329) is encouraged; authors should give their full contact information including address, daytime telephone number, fax number, and e-mail address if available.

Letters containing defamatory, libelous, or malicious statements will not be published, nor will letters representing attacks on or attempts to demean veterinary societies, their committees or agencies. Viewpoints expressed in published letters are those of the letter writers and do not necessarily represent the opinions or policies of the AVMA.

We are perplexed by the allegations that important principles for determining test utility were not followed. We used dogs presented consecutively over a specific time interval by our hospitals in which liver disease was suspected at initial evaluation. Assignment to diagnostic categories used well-described criteria that did not include SBA concentration.

True, we did not stratify on bilirubin concentrations—but 81% (83/102) with liver disease had a bilirubin concentration < 0.5 mg/dL. We included hyperbilirubinemic dogs to substantiate that UBA concentration increases in cholestasis—as we did in our foundation studies of canine SBA concentration.[1,2] If we consider only dogs with bilirubin concentration < 0.5 mg/dL, UBA (nonsulfated and combined tests) and SBA concentrations remain significantly increased, compared with the control group ($P < 0.001$).

While SBA concentration was measured in all dogs, paired sampling was completed in 55 dogs and only postprandial sampling was done for 71 dogs, because there was a decision to circumvent further testing in dogs with high concentrations. Since our goal was to compare the diagnostic utility of high UBA versus high SBA concentrations, no advantage would have been gained from additional SBA measurements in these dogs. Thus, the lack of paired SBA tests in some dogs does not compromise study findings nor change test performance.

We discussed in detail the implications of our findings in dogs with congenital portosystemic vascular anomalies, provided discrete data, and addressed possible practical application of our observation in the Discussion section.

We are dismayed that Dr. Steiner et al seem to suggest "tampering" with a vigorously tested SBA cutoff that distinguishes hepatic dysfunction from perfusion abnormalities. Increasing cutoff values would improve SBA specificity—but decrease sensitivity. Reinventing a receiver operating characteristic curve was not a study objective nor was it appropriate. We emphasize that it is important that clinicians realize that different spectra of disease in a studied population can influence both test variables.[3,4] We explicitly addressed discordance between histologic "normality" and liver dysfunction as recognized by the highly sensitive SBA test in the nonhepatic disease group. Functional differences in this group (which we call "liver disease") used to determine specificity undoubtedly existed between this and former studies in our hospital.

Finally, what is meant by "serious" liver disease in Dr. Steiner's commentary mystifies us. The SBA concentration cannot discriminate particular liver diseases or the relative severity of liver disease other than detection of occult function or perfusion abnormalities.

We stand behind our conclusion that the UBA test compares favorably with the diagnostic performance of SBA concentration and may be more convenient for identifying dogs with clinically serious liver disease. We affirm that we have no financial interest in the UBA test. We anticipate that further studies will more fully characterize UBA interpretation, particularly the potential utility in differentiating congenital shunting phenomena from acquired liver disease. This is only the beginning of what appears to be a very promising test.

Sharon A. Center, DVM, DACVIM
John F. Randolph, DVM, DACVIM
Cheryl E. Balkman, DVM
Hollis N. Erb, DVM, PhD
Ithaca, NY
Mary Ann Crawford, DVM, DACVIM
Paramus, NJ

1. Center SA, Baldwin BH, Erb HN, et al. Bile acid concentrations in the diagnosis of hepatobiliary disease in the dog. *J Am Vet Med Assoc* 1985;187:935–940.

2. Center SA, ManWarren T, Slater MR, et al. Evaluation of twelve-hour preprandial and two-hour postprandial serum bile acids concentrations for diagnosis of hepatobiliary disease in dogs. *J Am Vet Med Assoc* 1991;199:217–226.

3. Ransohoff DR, Feinstein AR. Problems of spectrum and bias in evaluating the efficacy of diagnostic tests. *N Engl J Med* 1978;299:926–930.

4. Greiner M, Gardner IA. Epidemologic issues in the validation of veterinary diagnostic tests. *Prev Vet Med* 2000;45:3–22.

USDA comments on efficacy requirements for veterinary vaccines

The Center for Veterinary Biologics (CVB), United States Department of Agriculture, Animal and Plant Health Inspection Service, Veterinary Services, would like to express concern with the statement in the *JAVMA* News article that licensure of veterinary vaccines in the United States "requires only proof of safety, not proof of efficacy" (*JAVMA*, June 1, 2003, pp 1481–1482).

The CVB administers the Virus-Serum-Toxin Act, which requires that veterinary biologics marketed in the United States be pure, safe, potent, and effective. Inadequate vaccine efficacy is an adverse vaccine event and should be reported to the CVB and vaccine manufacturer or permittee.

All antigens in vaccines with full or normal licensure have efficacy data acceptable to the CVB. At this time, there are 138 vaccine antigens available singly or in combination in about 2,000 vaccines. Fully licensed vaccines accounted for 99.5% of all vaccine doses approved for marketing in the United States in 2002.

For full licensure, vaccine efficacy is almost always demonstrated by clinically relevant and statistically valid vaccination-challenge studies in the host animal. Occasionally, when meaningful vaccination-challenge studies are not relevant or possible, clinical or field efficacy studies have been required. Rarely, a correlate of host animal efficacy, such as host animal serology or laboratory animal vaccination-challenge, provides acceptable validation of product efficacy.

Some of the confusion regarding the need for vaccine manufacturers to demonstrate efficacy may be attributed to special "autogenous" and "conditional" licenses available for US biologics.

Autogenous vaccines may be used as a disease control measure on a herd or flock basis without prior demonstration of efficacy. Autogenous vaccines may only be used by or under the direction of a veterinarian or approved specialist in the herd or flock of origin as described in Title 9, Code of Federal Regulations, Part 113.113. These vaccines accounted for <

Continued on page 432.

0.4% of all vaccine doses approved for marketing in 2002. Labels for autogenous vaccines must include the statement, "Potency and efficacy of autogenous biologics have not been established."

Conditional licenses may be issued by the CVB to meet an emergency condition, limited market or local situation, or other special circumstances. Before approval, conditionally licensed vaccines must be demonstrated to be pure, sterile, and safe and to have a reasonable expectation of efficacy. A "reasonable expectation" must be supported by at least preliminary efficacy data acceptable to the CVB. Often, efficacy data are complete at the point of conditional licensure, and it is the serial release potency measure that requires final development, validation, and acceptance. In 2002, there were six vaccine antigens with conditional licenses. These vaccines accounted for < 0.1% of all doses marketed in 2002. Labels for conditionally licensed vaccines must include the statement, "This product license is conditional–efficacy (and/or) potency studies in progress."

Any apparent failure of a licensed vaccine to protect against disease should be reported as a possible adverse vaccine event. Adverse events may be submitted to the CVB at http://www.aphis.usda.gov/vs/cvb or (800) 752-6255.

Richard E. Hill Jr, DVM, MS, DACVPM
Steven A. Karli, BS
Ames, Iowa

Dr. Brian responds:

I thank Drs. Hill and Karli for nicely and succinctly summarizing the current USDA requirements for veterinary vaccine efficacy.

David Brian, DVM, PhD
Knoxville, Tenn

CAVM Commentary draws negative reactions

I was rather saddened by the Commentary titled "Regulatory aspects of complementary and alternative medicine" by Dr. David Ramey in the June 15, 2003, *JAVMA* (pp 1679–1682). I have always been proud of the open-minded approach of this profession to new therapies. I did my schooling at Cornell between 1968 and 1972 at a time when we were enthusiastically adapting human medical therapies. I can also remember the first tentative use of acupuncture in the large animal clinic and, in response to dismissive charges of placebo effect, Dr. Delahanty retorted that he had never yet been able to "hypnotize a horse."

During my career, I have slowly and carefully integrated alternative therapies, especially in degenerative chronic conditions for which conventional medicine has the least to offer. I have hundreds of articles and abstracts in my files, mostly from the mainstream peer-reviewed human medical literature, describing in vitro, laboratory animal, and human clinical studies. And this is a mere fraction of what is in the worldwide literature (especially from Europe and Japan). I have taken a course in human homotoxicology (an updated version of homeopathy). At the 2002 Cornell conference, I attended lectures on how chiropractic and acupuncture have been integrated into the therapies there. Finally, I am newly returned from an eight-day course on herbal medicine at Tufts University School of Veterinary Medicine. The ruling paradigm seems always to have been: let's go with what works and which has the least amount of adverse effects.

By contrast, the human medical establishment (the American Medical Association and the multinational pharmaceutical cartel) has long sponsored its clandestine cadre of "quack busters." The resulting climate of fear and acrimony led to the 1987 conviction of the AMA under Sherman antitrust laws.

So which vision does our profession wish to embrace? Make no mistake about one thing, as more people and their pets are helped by alternative therapy, the public will seek out these modalities, and they will perceive very clearly which course we have chosen.

Basil P. Tangredi, DVM
Greenlawn, NY

Dr. Ramey's proposals regarding the regulation of unproven therapies (*JAVMA*, June 15, 2003, pp 1679–1682) were interesting to ponder, but omissions of critical facts marred his conclusions.

The basic premise that complementary and alternative veterinary medicine (CAVM) can be addressed in any uniform manner by regulatory bodies is flawed, as Dr. Ramey notes in his first sentence where he defines CAVM as "a diverse and unrelated group of treatment modalities…." For instance, acupuncture for human pain and nausea is viewed as nearly mainstream by National Institutes of Health experts and has understandable proposed mechanisms of action, whereas reiki and flower remedy therapy operate on different mechanistic principles that are open to debate and enjoy no supporting evidence. Each specialty will have to be evaluated, on its merits, and as evidence accumulates.

Dr. Ramey goes on to suggest that since nonmedical and nonveterinary practitioners offer and are trained in such diverse therapies as acupuncture, herbal medicine, chiropractic, and homeopathy, these systems must not constitute the practice of veterinary medicine. One argument is that these systems are not based in science as veterinary medicine is. It is incorrect to call them unscientific; unproved therapies are simply not supported by evidence—yet. But most worrisome is the omission of this critical fact—training programs for alternative systems of therapy are based on therapy of humans. There are no concepts of animal physiology taught in these programs. It is imperative that veterinarians realize the limitations of nonveterinary practitioner knowledge and training and protect animal health by insisting that veterinary professionals remain gatekeepers of animal care and ensuring that their state veterinary practice acts specifically say so.

Dr. Ramey states that complementary therapies challenge standards of care; this is true only to the extent that other unproved therapeutics do so as well. Standards of care are not determined by regulatory boards but by

Continued on page 434.

the professionals who practice that kind of care. Specialists in acupuncture or herbal medicine (or dentistry or behavior, in the past), for instance, are the only practitioners competent to determine standards of care or certification requirements in those specialties.

Finally, Dr. Ramey suggests that an unproven therapy should not be offered where an effective conventional therapy exists. Other concerns are equally important to veterinarians and the pet-owning public, such as the safety of the conventional treatment, the beliefs of the caretaker, and the ability of the caretaker to administer the treatment. The medical profession has recently begun to reassess the traditional role of physicians; paternalism is frowned on, and the doctor is more of an advisor and partner in health care. We would do well to heed these developments if we are to maintain any relationship at all with the recently recognized majority[1,2] of the public that is interested in complementary therapies.

Susan G. Wynn, DVM
Marietta, Ga

1. Kessler RC, Davis RB, Foster DF, et al. Long-term trends in the use of complementary and alternative medical therapies in the United States. *Ann Intern Med* 2001;135:262–268.
2. Kaboli PJ, Doebbeling BN, Saag KG, et al. Use of complementary and alternative medicine by older patients with arthritis: a population-based study. *Arthritis Rheum* 2001;45:398–403.

Since animals so often improve quickly using chiropractic, acupuncture, herbs, and homeopathy after clients have been shuffled from one veterinary specialist to another, a tacit mistrust of all conventional medicine often results. Holistic medicine is here to stay.

In my opinion, critics within the profession, like Dr. Ramey (*JAVMA*, June 15, 2003, pp 1679–1682), only weaken the whole profession, which increases the likelihood that the public will turn to nonveterinarians for help. This fragmentation and lack of understanding can be avoided, but we need to become educated. Holistic veterinarians are just like other veterinarians. We graduated from veterinary school and passed board examinations, and many of us practiced conventional medicine before realizing that animals do not always improve from chronic diseases like arthritis and allergies. Through the use of conventional drugs, they can even suffer adverse effects. If there is a way to heal these animals without administering potentially harsh pharmaceuticals, what doctor who believes the dictum "Above all do no harm" would not try those methods if they are safe?

I think Dr. Ramey and others feel the public wave of support for complementary medicines and are threatened by it. But there is no need for that. We holistic veterinarians will always need diagnostic tests, some pharmaceuticals, great surgeons and eye specialists, and superb, experienced, wise veterinarians as our allies. But conventional veterinarians also need us. We are the veterinarians who help epileptics when conventional drugs fail. We heal the open sores on the allergic dogs when prednisone has caused adverse effects.

Let me address the first two paragraphs of Dr. Ramey's commentary. Holistic medicine does not use "unrelated modalities." Chiropractic and acupuncture work together as well as fluid therapy and potassium for renal disease. Actually, I never speak of "the whole patient," as I too have little knowledge of what that means. But if I palpate a vertebral chiropractic subluxation, as I was taught by the American Veterinary Chiropractic Association, I fix it.

Dr. Ramey complains that holistic veterinarians "challenge established veterinary practices," but isn't that what science is supposed to do? Isn't medicine supposed to evolve? If not, we would still have cats dying of taurine deficiency, and we would not know the benefits of tibial plateau leveling osteotomy.

I have been practicing 100% holistic medicine for eight years. There is such a lack of holistic veterinarians that many of us cannot take new clients for weeks. I have never had a lawsuit or official complaint about my care. I do not want to be regulated as Dr. Ramey suggests any more than would a conventional veterinarian using off-label drugs. I maintain my license and continuing education requirements just like any other veterinarian, so why should I be a victim of discrimination among our profession? And more important, who will the clients turn to if I am? I guarantee it won't be a conventional veterinarian if we don't learn to work together.

Donna Kelleher, DVM
Seattle, Wash

Dr. Ramey responds:

Dr. Wynn appears to concede my article's main point that complementary and alternative veterinary medicine (CAVM) is difficult to address in any uniform manner by regulatory bodies. However, while acknowledging such difficulties, Dr. Wynn avers that CAVM "specialists" are the only ones competent to judge their own practices, which seems self-serving to me and reinforces the perception that CAVM practitioners are uninterested in operating within the boundaries of the veterinary profession.

Although CAVM indirectly challenges the notion of standards of care, CAVM practitioners directly challenge and criticize mainstream veterinary medicine. For example, "Many holistic practitioners feel that conventional medicine treats disease in an emergency fashion—wait for something to go very wrong, then fix it," or, "By contrast [to CAVM], many conventional drug treatments are employed simply to make the symptoms disappear."[1] Given such attacks, it is no wonder that, as Dr. Kelleher notes, mistrust of all conventional medicine often results and clients become confused and upset. Pointing out that such statements have been made does not weaken the profession; the fact that they demean most veterinarians who rely on veterinary science does.

Nonmedical and nonveterinary practitioners not only offer but also teach veterinarians CAVM practices, presumably while lacking the requisite knowledge about animal

Continued on page 436.

physiology. Are these instructors unqualified to apply the therapies that they teach? Regardless, knowledge of animal physiology was irrelevant in the development of virtually all of the unrelated and diverse CAVM modalities (unrelated in that CAVM approaches have different philosophies and not that they can't be employed concurrently). Having been developed either before the advent of or without the benefit of science, they are inherently unscientific. Furthermore, when CAVM proponents explicitly state that they are not practicing veterinary medicine, why should mainstream veterinary medicine disagree?

My article did not discuss the evidence for any CAVM modality; however, a disconnect exists between the anecdotal evidence presented by veterinary practitioners, such as Drs. Kelleher and Tangredi, and the results from well-conducted clinical trials. For example, acupuncture may be recommended for the treatment of canine epilepsy, but no controlled veterinary trials appear to exist, and acupuncture fails to show a clinical effect[2] or an effect on health-related quality of life[3] in humans with epilepsy.

In my opinion, attempting to gather evidence for many CAVM modalities is pointless. Unless decades of accumulated scientific evidence is incorrect, the prescientific concepts underlying homeopathy, "energy therapies" such as reiki, and acupuncture's "qi" can be discounted. Regardless, no CAVM modality has achieved the status of "nearly mainstream" in the same way that no female has ever become "nearly pregnant."

Medical paternalism is frowned on (except, curiously, in Chinese medicine[4]). I agree that clients should be actively involved in the veterinary-client-patient relationship. Other medical-ethical considerations are important, too. Among the foremost of those is to tell the truth. Here, too, CAVM proponents diverge from veterinary medicine, as, for instance, with the oft touted, but false, claim that acupuncture has been used to treat animals for many thousands of years.

I heartily agree that veterinarians should be the gatekeepers of animal health. However, that does not mean that they have unfettered discretion to do whatever they choose. As such, it is not only my opinion but also that of the AVMA that proven-effective therapies must be discussed when presenting treatment options.[5] Nevertheless, whatever the current level of use of alternative therapies (there is much dispute about that, with one large survey concluding that their use in human medicine is far less than suggested by smaller surveys conducted by proponents[6]), neither owner interest in nor practitioner curiosity about faddish therapies outweighs the veterinarian's primary obligation to ensure animal health and well-being. Better therapies and rigorous scrutiny of old ones are always welcome when accompanied by sound research.

The example of extralabel antimicrobial use in food animals and subsequent attempts at government regulation should be instructive. Unless veterinarians are willing to submit their practices to scientific scrutiny and objective regulation, ultimately, the decision as to who will be the gatekeeper of animal health will not be for the veterinary profession to make. This, not any threat posed by unconventional therapies, is the hazard that the veterinary profession faces as a result of CAVM.

David W. Ramey, DVM
Glendale, Calif

1. Alt Ved Med. Complementary and alternative veterinary medicine. Available at: http://www.altvetmed.com/intro.html. Accessed July 4, 2003.

2. Kloster R, Larsson PG, Lossius R, et al. The effect of acupuncture in chronic intractable epilepsy. *Seizure* 1999;8:170–174.

3. Stavem K, Kloster R, Rossberg E, et al. Acupuncture in intractable epilepsy: lack of effect on health-related quality of life. *Seizure* 2000;9:422–426.

4. Tsai DF. Ancient Chinese medical ethics and the four principles of biomedical ethics. *J Med Ethics* 1999;25:315–321.

5. AVMA Guidelines for Complementary and Alternative Veterinary Medicine. *J Am Vet Med Assoc* 2001;218:1731.

6. Ni H, Simile C, Hardy AM. Utilization of complementary and alternative medicine by United States adults: results from the 1999 national health interview survey. *Med Care* 2002;40:353–358.

Personality test believed to be a mistake

I got chills down my spine when I read the following words in Drs. Lewis and Klausner's article (*JAVMA*, June 15, 2003, pp 1690–1696) on Perspectives in Professional Education: "Personality testing tools can help admissions committees select incoming classes with a profile more consistent with that of successful veterinarians." The authors also state that "students may be admitted to a veterinary school or college and trained without having the foundational nontechnical characteristics that lead to success." These "nontechnical characteristics" are accurately defined by the authors to include personality traits. But, Isabel Briggs Myers[1] stated in "Gifts Differing" that people of every personality type can attain success in any professional field. Indeed, people of any personality type can attain success in the veterinary profession. If admissions committees use the valuable insights provided by tests like the Strong Interest Inventory (the Consulting Psychologist Press Inc) and the Myers-Briggs Type Indicator[2] to discriminate in favor of only certain personality types in the veterinary profession, they will greatly inhibit the growth of diversity already so desperately lacking in our profession.

It is known that certain personality traits correlate to greater job satisfaction in our profession. I also know that our profession needs people of every personality type. For example, after graduating from veterinary school, an introverted-type student turns out to be the most highly skilled surgeon and succeeds in saving the lives of many animals that would have died in another veterinarian's hands. Yet, his partners at his clinic see clearly that he lacks the nontechnical competencies of business acumen, people management, and "good bedside manners." As a team, they find a way to make the different personality types of the partner work in their practice for an overall benefit to their patients. Yet, according to this "set of recommendations for veterinary schools and colleges on how to select for and develop the nontechnical competencies most needed in members of the veterinary profession," this wonderful surgeon would never have been admitted.

It has been a characteristic of our democratic nation to allow freedom of choice of a profession to all types of people. Providing students with information about job preferences and personality type is the role of the undergraduate career advisor. This information about personality type, if used by undergraduates, is an extremely valuable tool that will allow them to make the best choice of future profession for themselves. But recommending that veterinary school admissions committees select students on the basis of personality type is recommending that a disturbing form of stereotyping be inculcated into the professional programs of our state-sponsored universities. Instigating this dangerous practice might do irreparable harm to a whole generation of veterinary professionals before the terrible mistake is realized.

Jennifer R. Jetton, DVM
Hazel Green, Ala

1. Myers IB. *Gifts differing*. Palo Alto, Calif: Consulting Psychologists Press Inc, 1980.

2. Myers IB, Kirby LK, Myers KD. *Introduction to type: a guide to understanding your results on the Myers-Briggs type indicator*. 6th ed. Palo Alto, Calif: Consulting Psychologists Press Inc, 1998.

Questions the lack of pain management in large animal practices

I agree with Dr. Ronnie G. Elmore (*JAVMA*, June 15, 2003, pp 1697–1699) that "there probably is an adequate number of students interested in becoming food animal practitioners admitted to veterinary schools to fill current practice needs" and would like to expound on some of the reasons why initially interested veterinary students are avoiding entering food animal practice. I was one of these interested students. I entered veterinary college intending to practice large animal medicine and was soon disappointed and disheartened to learn that inherent in large animal practice is the placid acceptance and facilitation of cruelty. One of the more intolerable aspects of large animal practice is the performance of routine surgical procedures without anesthesia. Even when sedatives, analgesics, or local anesthetics are given in certain situations (albeit rarely), the degree of pain control achieved would often be considered inadequate if used in companion animals. If companion animals were neutered without anesthesia (or even under mild sedation), those involved would be charged with cruelty.

Unable to reconcile inflicting suffering on sentient beings as a doctor, I was, in essence, forced to give up my dream. I found that many of my colleagues felt similarly. People enter veterinary medicine because they care about animals, and condoning inhumane animal husbandry practices and inflicting pain goes against their ethical makeup and sensibilities.

Pain management and the elimination of unnecessary painful procedures, as well as practicing animal husbandry that promotes animal comfort and well-being, are currently at the forefront of small animal medicine. Why should it be any different for large animals? The current attention given to pain control and animal welfare in companion animal practice should also be applied in large animals, thereby making large animal medicine and surgery more attractive to prospective veterinarians.

Farm animal practice is additionally frustrating to veterinarians because the cost of treating a sick or injured animal often exceeds the price it may bring at slaughter. Therefore, economics often dictate that the farmer allow it to suffer rather than treat or euthanatize it.

The root cause of the inferior attention paid to agricultural animal welfare is economic, of course, but what kind of health profession is it that supports inflicting cruelty as an economic shortcut? The veterinary profession needs to listen to its conscience and demand humane treatment for all animals.

Anastasia C. Ferrante, DVM
Ithaca, NY

Some thoughts on FMD vaccine, outbreaks

My compliments on the *JAVMA* News article "Vaccines may be key to controlling FMD" (*JAVMA*, July 1, 2003, p 11), which brings an important and timely topic to our attention. Having been deployed to two eradication efforts, foot and mouth disease (FMD) in England and exotic Newcastle disease in California, I agree that preemptive slaughter is expensive. Because of my deployment, I have developed a personal interest in following the results of the inquiries into the 2001 FMD epidemic in England and believe that lessons learned from that historic disaster might apply on US soil should we face an outbreak here.

I have observed (and history suggests) that isolated exotic disease outbreaks may be effectively contained by eradication efforts; however, once disease has spread, silently and venomously as it did in England, cost and emotion can and do get out of hand. In their review of mistakes made and lessons learned, British authorities admitted that emergency vaccination should be part of a massive outbreak. Dr. Mark Thurmond, author of the University of California-Davis study, suggests that preemptive slaughter is not cost effective, and that vaccinations could be an important tool to control FMD provided that adverse economic impact on trade is mitigated by tests that differentiate vaccinated from naturally exposed animals.

Therein lie the challenges. Because vaccinated animals can be carriers of natural disease, these tests must be accurate. (According to a report by The Royal Society,[1] such tests already exist.) They must be so good that the United States, as an import country, could trust that the tests worked in an FMD-vaccinated country that shipped meat here. Finally, international health/trade organizations must approve these tests so that the minimum waiting period for disease-free status for export would not be extended because of emergency vaccination.

During previous FMD outbreaks, other countries have successfully established infected and noninfected zones via ring vaccination with slaughter of vaccinated animals. However, we could vaccinate to live by using accurate tests to distinguish naturally infected from vaccinated animals and quality vaccines for emergency vaccination.

Another problem in previous FMD outbreaks has been the lack of a field test to reliably confirm disease. During the 2001 outbreak in England, all cloven-hoofed animals on a farm were slaughtered when there was one suspicious case of FMD. The decision was made on the basis of clinical signs…no confirmation. Consider how you would feel if you were faced with the decision to cull the animals on a farm on the basis of an educated guess and were wrong, bearing in mind that dangerous contacts (nearby farms with animals with nose-to-nose contact) are subject to slaughter as well. This happened to a British temporary veterinary inspector who told me she was responsible for slaughter of all cloven-hoofed animals on every farm in a village because they had potential contact with one suspect…her clinical judgment had been wrong.

In my opinion, our tax dollars put toward FMD should be spent to develop reliable field tests, single serotype vaccines for emergency use during an outbreak, and multiple serotype vaccines for routine use if warranted. Finally, on the political side, we must be active in convincing international animal health organizations to accept these tests before an outbreak of FMD wreaks economic havoc in the United States.

Stacey Bonner Gerhart, DVM
Ocala, Fla

1. *Infectious diseases in livestock*. London: The Royal Society, 2002;4.

Feedback on Consumer Reports, AVMA response

On June 28, I received a copy of a letter to the executive editor of Consumer Reports in which AVMA President Joe Howell expressed "concern and indignation" over the "negative picture of the profession" portrayed in an article in the July issue of Consumer Reports.

I was embarrassed. Why? Because Dr. Howell represented my interests in less-than-convincing fashion? No. That was not the case at all. I was embarrassed because of the emotional and defensive slant of the letter. In my humble opinion, although I believe Dr. Howell was factually correct in all points made (as, incidentally, I believe was the Consumer Reports article), the decision to create a confrontation with Consumer Reports certainly was not a credit to a profession that does not need to defend its worthy contributions to the health and welfare of all animals in society, including human beings who place high priority on their expenditures to cement the human-animal bond through utilization of state-of-the-art clinical medicine and surgery.

Sensing, as I do, that an overwhelming proportion of companion animal owners understand and appreciate the considerable financial burden of private capitalization of animal hospitals and the considerable overhead expense of operation attendant thereto, I cannot believe that many readers of the Consumer Reports article would question the value of a veterinary service they have received for the benefit of the human-animal bond. But if I am wrong, and if Consumer Reports chooses to give advice on cost-cutting measures, what is the harm in that?

As a trailing footnote, I wonder about the genesis of this tempest in a teapot. Is there a sizable contingent of private practitioners in our profession who feel so insecure about their professional image that they felt constrained to lobby President Howell to write such an unnecessary letter? If so, I respectfully suggest to them, "Get over it already! Just continue doing what you do so well and your good service will speak for itself."

Albert J. Koltveit, DVM, MS
Port Ludlow, Wash