Letters to the Editor

Veterinarian-client communication

I read the article by Grand et al[1] on measures of and predictors for trust in the veterinarian-client relationship, but would be much more interested in results of follow-up studies on the specific facets of communication valuable for veterinarians in clinical practice and on the specific communication skills of benefit to veterinary students interested in clinical practice.

It appears to me that the conclusions and relevance of the study by Grand et al[1] are quite limited, in that there likely are substantial difference in clients' perceptions of trust with students and their perceptions of trust with veterinarians outside of a university setting. In addition, I would suggest that factors other than professionalism and technical candor are as important if not more important to the clients of veterinarians in private or corporate clinical practice.

Nevertheless, the ongoing interest in veterinarian-client communication, as evidenced by this study, is encouraging. I do not recall hearing more than a lecture or two dedicated to client communications when I was in veterinary school at Michigan State University, and it took me a number of years after graduation to begin to understand the importance of client communication. Even those of us in clinical practice for many years could benefit from honing our communication techniques.

I guess that's why clinical experience is so valuable; communication skills can be learned but are only improved and perfected with practice. Dr. Jason Coe from the University of Guelph Ontario Veterinary College gave a series of encouraging lectures on client communication at the American Animal Hospital Association's annual conference in Phoenix earlier this year and described the efforts the college is taking to educate students on the value of and techniques for good client communication. I would like to see more of this type of instruction offered to veterinary students.

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1. Grand JA, Lloyd JW, Ilgen DR, et al. A measure of and predictors for veterinarian trust developed with veterinary students in a simulated companion animal practice. *J Am Vet Med Assoc* 2013;242:322–334.

The authors respond:

On behalf of my coauthors, I want to thank Dr. Parker for his response to our study[1] and to reply to the important points he raises. We second Dr. Parker's sentiment that the development of effective communication skills is a critical and valuable component of a veterinarian's repertoire, but one which has received comparatively less attention, both from a research and from a didactic viewpoint, relative to the development of technical skills. Consequently, the specific aims of our study were threefold: to empirically explore facets of the veterinarian-client relationship that contribute to trust development, to expose interested readers to concepts relevant to this emerging area of interest, and to devise a convenient and easily administered measurement tool that educators and practicing veterinarians could use to evaluate trust-based communications in other contexts and situations.

To this end, we do not necessarily disagree with the intuition that there may be other factors that contribute to the development of trust besides professionalism and technical candor. As we emphasized in numerous places in the article, trust is a complex and multifaceted construction whose development may change as a result of many factors.[2] Nevertheless, we believe that our findings and the theory on which they are based support professionalism and technical candor as two of the important factors involved in the development of trust in the veterinarian-client relationship. That being said, we hope that our work stimulates further study in this important area.

Of final note, we would like to highlight another point that was touched on both in our manuscript and in Dr. Parker's letter, pertaining to the use of students and simulated veterinary practices. Although such methodologic choices sacrifice a degree of generalizability, they do provide greater experimental control and standardization, which are critical to validating measurement tools and testing hypotheses. Importantly, such contexts also serve as excellent environments for training students and providing feedback on communication skills relevant to trust building in a context that is safe for the students. As these simulation spaces and techniques become more accessible, we suspect and hope that future researchers and educators will seek to leverage the unique advantages they

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provide to study and teach veterinarian communication skills.

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Inefficiencies of industrial agriculture

To meet the demands of the growing human population for animal protein, Kelly et al[1] call for greater efficiency in food animal production systems worldwide and increased involvement of veterinarians in food policy. While efficiency implies the wise use of resource materials and labor, it is an imprecise term, and I believe that inherent contradictions make it unlikely that increased efficiency in food animal production systems can, over the long term, solve the many challenges of food insecurity.

Because of the efficiencies that can be achieved through economies of scale, industrial agriculture is often promoted as the most desirable means of food production. However, expectations that the predicted exponential hikes in food demands can be met through limitless gains in industrial agriculture efficiency are unrealistic because resources are ultimately restrictive. Further, efficiencies become an illusion when they are attained by socializing or externalizing operating costs.

A poultry production company, for example, can achieve greater in-house efficiency by forcing the costs of manure disposal onto the contract grower, but the social costs of managing this waste still exist. Similarly, taxpayer subsidies of feed and fuel costs allow the appearance of production efficiencies in industrial agriculture, but externalize harmful production costs onto society in the form of climate change, environmental degradation, chronic health care costs, and escalating insurance premiums.

Couching agricultural efficiency solely in monetary terms can make it easy to forget the other societal values in which a sustained food production system must be anchored. Considerations related to environmental protection, resource conservation, quality of community life, optimum nutrition, public health, human dignity, responsible animal husbandry, and welfare should be factored into any agricultural policy that seeks to remain viable over generations.[2,3]

Finally, it is questionable whether the veterinary profession can ethically satisfy the call for greater production of animal protein without questioning the wisdom of excessive demand. Notwithstanding protein conversion inefficiencies, environmental harm, and compromises to animal welfare associated with intensive animal production operations, we are obligated to consider the increase in rates of obesity and associated chronic diseases linked to overconsumption of readily available, cheap, processed foods.[4]

Rather than concern ourselves with diets of affluence, with their attendant nutritional and ecological penalties, we might do better to direct our efforts to the more than one billion in the current global population, including children in 10% of US households, who lack food security despite the current efficiencies of industrial agriculture.[5,6] Given our professed commitments to public health, animal health, and animal welfare, we should perhaps take a more informed role in helping to reformulate ultimately unsustainable agricultural practices in favor of policies that better serve core societal food production values and that empower our profession to meet its role in achieving them.

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Cause of spinal cord compression in a dog

We read with interest the recent case report on spinal cord compression in a dog.[1] In the report, the authors describe identifying 2 compressive, extradural masses in a dog evaluated because of progressive paraparesis and report that results of histologic examination of the masses were consistent with extramedullary hematopoiesis.

We disagree with the authors' diagnosis and suggest, instead, that the dog had a condition known as dural metaplastic ossification. This entity has also been referred to as dural ectopic ossification, osseous metaplasia of the dura, and ossifying pachymeningitis, although the latter term is considered archaic.

Dural metaplastic ossification is characterized macroscopically by focal or multifocal, red, plaque-like masses expanding and overlying the dura mater, with or without spinal nerve root compression.[2–4] Microscopically, it is characterized by the formation of well-differentiated lamellae, trabeculae, or spicules of bone that may encompass medullary spaces with or without typical bone marrow elements.[2–4] At necropsy, we have examined numerous dogs with this condition, many of which had variable microscopic findings, including some that had bone marrow elements within or outside, but adjacent to, the medullary cavities of the ectopic bone, as described in the recent case report. Figure 2 in the article clearly demonstrates lamellar bone contain-

ing marrow spaces filled with an admixture of adipose tissue and hematopoietic elements.

According to most references, dural metaplastic ossification is regarded as a common, incidental, clinically unimportant aging change that is most commonly observed in large-breed dogs. Typically, this condition affects the ventral or ventrolateral aspect of the dura in the region of the cervical and lumbar intumescences.[2–4] However, we have seen cases in which all aspects of the dura were involved, including the dorsal aspect of the dura. Although clinical signs are uncommonly reported in association with dural metaplastic ossification, progressive paraparesis clearly was associated with this lesion in the reported case.

Although extramedullary hematopoiesis may occur in the spinal and paraspinal regions in dogs, this diagnosis should be reserved for those cases in which the typical marrow elements are observed in locations completely outside or not contiguous with the medullary cavity of bone, whether the bone is preexisting or ectopic.

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The authors respond:

Thank you for your letter regarding our report of extramedullary hematopoiesis causing spinal cord compression and paraparesis in a dog.[1] However, we respectfully disagree with your assertion that dural metaplastic ossification was the cause of progressive paraparesis in this dog.

As mentioned, dural metaplastic ossification is an incidental finding in many dogs without neurologic abnormalities or corresponding histologic spinal cord lesions.[2,3] While there is a single reported case of dural metaplastic ossification causing neurologic signs in a dog,[4] other potential causes of spinal cord compression were not excluded, making the association between dural metaplastic ossification and clinical signs questionable.

Furthermore, dural metaplastic ossification is characterized by deposition of bony plaques containing bone marrow on the inner surface of the dura mater.[2,3] You state that these plaques can expand and overlie the dura mater, but in reviewing the references cited in your letter, we did not find evidence to support the claim that the bony plaques associated with dural metaplastic ossification can be located in the epidural space. The masses surgically removed from the spinal canal of the dog described in our report were clearly epidural (extradural) in location, both on MRI images obtained prior to surgery and grossly at the time of surgery. We are unaware of any reports of epidural metaplastic ossification, but there are several reports[5,6] of human patients with epidural extramedullary hematopoietic masses resulting in neurologic abnormalities.

In the dog described in our report, durectomy was performed because the masses had small areas of focal attachment to the dura. The bulk of each mass was in the epidural space and not attached to or contiguous with the dura mater. As noted in the report, there were areas of dural metaplastic ossification in the biopsy specimen because the specimen contained excised dura mater.[1] These areas were distinct and different from the primary lesion, which was epidural. The dural metaplastic ossification observed in the dog of our report was likely an incidental finding that was a separate entity from the primary lesion.

You suggest that a diagnosis of extramedullary hematopoiesis should be reserved for those cases where marrow elements are observed apart from the medullary cavity of bone. As stated in the report, the masses were not an extension of the dorsal laminae, nor were they strongly associated with the dura mater. Therefore, this case seems to fit your criteria for a diagnosis of extramedullary hematopoiesis. In addition, the hematopoiesis observed histologically was characterized as both hypercellular and extensive, which seems beyond the scope of the normal bone marrow that dural metaplastic ossification reportedly contains.[2,3]

Given the location of the masses, the extensiveness of the hematopoiesis, and the severity of associated neurologic signs, extramedullary hematopoiesis seems to be a more appropriate diagnosis for this case than incidental dural metaplastic ossification.

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Trap-neuter-vaccinate-return programs

As veterinarians, we were dismayed by the findings of the study by Loss et al[1] described in the recent *JAVMA* News story[2] about

cats and wildlife and have been particularly concerned by the resulting attacks on trap-neuter-vaccinate-return (TNVR) programs we have seen in recent weeks.

Each of us has worked with TNVR programs in our communities, and we have experienced the benefits of such programs firsthand. Trap-neuter-vaccinate-return is a proven approach, and our professional support for it remains strong. More than 330 local governments agree, through government ordinances or other decrees that allow or even endorse the use of TNVR programs to reduce feral cat populations. Nationwide, increasing numbers of veterinarians are treating feral cats in their practices or working with high-quality, high-volume, spay-neuter clinics in recognition of the fact that discontinuing the breeding cycle is the only effective and humane approach to reducing feral cat populations.

Thanks to the introduction of TNVR programs, we have seen long-established colonies of cats eventually fade away—peacefully and healthfully—over time. For instance, in Newburyport, Mass, more than 300 stray and feral cats were living along the Merrimack River until the Merrimack River Feline Rescue Society began a TNVR program in 1992. In 2009, the last feral cat from this colony passed away.

In Washington, DC, a colony of cats in the Adams Morgan neighborhood was eventually reduced to zero after a TNVR program was implemented in 1990. The last cat from that colony died at age 19. The success of that and other programs in Washington, DC, along with widespread community support, eventually convinced the city to adopt a TNVR ordinance in 2008.

Trap-neuter-vaccinate-return programs don't just help stabilize feral cat populations. A previous study[3] found that increasing accessibility of low-cost, high-quality, high-volume spay-neuter programs was key to increasing the neuter rate among pet cats in low-income homes. Attempts to roll back TNVR programs would likely also decrease the accessibility of spay-neuter programs, decreasing neuter rates for both feral and owned cats.

We care equally about cats, birds, and other animals, but we question the conclusions of the Loss et al[1] study because we believe other factors play a role in wildlife declines. We also stand behind the fact that TNVR programs have been successful in each of the communities in which we practice.

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Saving rare breeds

The embryo and semen conservation program at the Swiss Village Farm is compelling and important.[1] One detail that was not emphasized in the *JAVMA* News story is that the farm's work is based on the previous work done to describe, define, and rescue these breed resources. Without that earlier work, there would not be any defined populations to target for conservation.

The description, definition, and rescue of these breed resources have been undertaken for nearly 40 years by the American Livestock Breeds Conservancy. Their Conservation Priority List drives both Swiss Village Farm and USDA decisions on what rare breeds should be targeted for preservation.

Veterinarians have long contributed at many levels to this important work and have been essential to the success of the American Livestock Breeds Conservancy and its programs. An important continuing opportunity for involvement by rural practitioners is to keep an eye out for previously overlooked pockets of various livestock breeds that are no longer common. Veterinarians, along with extension agents and sales-yard personnel, have brought to light several important genetic resources even in the past few years. Each one of these discoveries greatly contributes to the genetic diversity available both today and in the future to secure agriculture on a broad and viable genetic base.

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Veterinary homeopathy

As current president of the Academy of Veterinary Homeopathy (AVH) and a 26-year member of the AVMA, I was grateful for the respectful reception I and my colleagues received during this year's regular winter session of the AVMA House of Delegates, which featured discussions regarding adoption of a resolution identifying homeopathy as ineffective. While I agree with the statements in two recent letters to the editor[1,2] that all treatments should be subjected to critical evaluation, I believe that Drs. Ramey and McKenzie overlooked much of the substance of the opposition to the resolution.

Most delegates admitted to having no knowledge of the principles of homeopathy, and we encountered many of the same issues that cloud the public's perception of homeopathy, such as incorrect use

of the terms holistic and homeopathy. Most delegates were not aware of newer studies that I believe may offer a possible mechanism of action for homeopathic remedies, and most did not know that the *Journal of the American Animal Hospital Association* published 2 reports[3,4] on homeopathy in 2011. The AVH in conjunction with the American Holistic Veterinary Medical Association is working to fund more veterinary studies in homeopathy, but this is a daunting task without the backing of pharmaceutical companies.

During the discussion about the resolution, delegates expressed concern that because of the public demand for homeopathic treatments, discouraging veterinarians from providing these treatments would simply drive clients to lay individuals who would provide them. In my experience, this has indeed happened in areas underserved by qualified veterinary homeopaths, and this concern is partly responsible for the founding of the AVH in 1995.

Meanwhile, many delegates told us that they or their colleagues practiced modalities that fall within the area of complementary or alternative veterinary medicine or referred their clients to practitioners who provided these modalities. In addition, we were surprised to discover delegates who opposed the resolution because they themselves used controversial treatments such as laser therapy and stem cell therapy. The thought that an AVMA resolution would be used to identify a particular therapy as ineffective was objectionable to some delegates.

I strongly agree with Dr. McKenzie[2] that the resolution initiated an important conversation. We at the AVH look forward to continued respectful discussions of homeopathy.

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