



Veterinary Research News

From the AVMA

AVMA sounds alarm at Senate hearing on veterinary shortage

A Government Accountability Office report is raising concerns that the federal government's veterinarian workforce isn't large enough to guarantee a safe food supply and effectively address zoonotic diseases.

The GAO found that the departments of Agriculture and Health and Human Services have not assessed the sufficiency of their veterinarian workforces despite the fact that agencies employing "mission-critical" veterinarians are currently experiencing shortages or anticipating future shortages.

As a result, USDA agencies such as the Animal and Plant Health Inspection Service and Food Safety and Inspection Service compete with one another for veterinarians instead of trying to balance the needs of the agencies, according to the report. Moreover, because the USDA and DHHS aren't fully aware of the status of the veterinarian workforces at their component agencies, neither department can strategically plan for future veterinarian needs.

The GAO report titled "Veterinarian workforce: Actions are needed to ensure sufficient capacity for protecting public health and animal health" was the focus of a Feb. 26 hearing before the Senate Subcommittee on Oversight of Government, the Federal Workforce, and the District of Columbia.

Subcommittee chairman Daniel K. Akaka of Hawaii requested the GAO review of the government's veterinarian workforce, which stands at approximately 3,000, out of concern for the nation's homeland security, public health, and food safety. "Unfortunately, GAO's report suggests that these concerns are well-founded," the senator said.

AVMA CEO W. Ron DeHaven told the subcommittee that the lack of veterinarians available to fill critical positions in the federal government

was dangerous. "It is alarming to see in black-and-white how ill-prepared our nation appears to be in the event of a major animal disease outbreak or, worse, a pandemic," he said.

To address the critical shortage of federal veterinarians, the AVMA has sought legislation to provide increased funding to expand capacity at the nation's 28 veterinary colleges. The AVMA is also working with Congress to change the compensation for federal veterinarians so it is on par with other federal health professionals', and to reduce student debt through loan repayment programs.

The National Veterinary Medical Service Act, which offers student loan debt relief for graduates who commit to serving in the field of food supply veterinary medicine, was signed into law by Congress in 2003, but no benefits have been realized because of limitations in funding and delays in implementation.

AVMA seeks GHLIT nominations

The AVMA Executive Board is accepting nominations for a vacancy on the AVMA Group Health and Life Insurance Trust. Dr. H. Theodore Trimmer resigned as a trustee after his recent election to the board. The nomination deadline is May 4.

The at-large position carries an unexpired term of June 2009-July 2011. The Executive Board will appoint Dr. Trimmer's successor in June.

The trustees report annually to the board and to the AVMA House of Delegates. Nominees will have an interest in the subject of insurance and should be willing to devote substantial amounts of time on occasion to projects undertaken by the GHLIT.

Trustees hold three annual meetings but may convene more frequently as necessary. Committees and subcommittees of the trust meet as needed and in such locations as are deemed necessary by the trust chair.

For more information, contact the AVMA Office of the Executive Vice

President via e-mail at OfficeEVP@avma.org or call AVMA headquarters at (800) 248-2862, Ext. 6605.

Council schedules site visits

The AVMA Council on Education has scheduled site visits to schools/colleges of veterinary medicine at six institutions for the remainder of 2009.

Comprehensive site visits are planned for the University of Pennsylvania School of Veterinary Medicine, Sept. 13-17; Murdoch University School of Veterinary and Biomedical Sciences, Perth, Western Australia, Sept. 27-Oct. 2; and Calgary University Faculty of Veterinary Medicine, Alberta, Canada, Oct. 25-29.

Consultative site visits are scheduled for the Universidad Autónoma de Baja California Instituto de Investigaciones en Ciencias Veterinarias, Baja California, Mexico, April 19-23; University of Liverpool Faculty of Veterinary Science, Liverpool, United Kingdom, May 3-7; and University of Copenhagen Faculty of Life Sciences, Copenhagen, Denmark, June 14-18.

The council welcomes written comments on these plans or the programs to be evaluated. Comments should be addressed to Dr. David E. Granstrom, Director, AVMA Education and Research Division, 1931 N. Meacham Road, Suite 100, Schaumburg, IL 60173-4360. Comments must be signed by the person submitting them to be considered.

AVMF scholarships available

This year, through its annual veterinary student scholarship program, the American Veterinary Medical Foundation will award 20 scholarships at \$1,000 each to Student AVMA members enrolled in their first, second, or third year at an AVMA-accredited veterinary college or school in the United States. Additional scholarships may be available.

Students are encouraged to consider traditional and nontraditional

careers as they move forward in their education, to understand the many options that the veterinary profession offers. In keeping with the mission of the AVMF, preference will be given to students interested in pursuing a career in certain areas. These include, but are not limited to animal health studies, shelter medicine, disaster preparedness and response, laboratory animal medicine, food animal medicine, or practicing in underserved communities.

Application forms can be found at www.avmf.org, under "Grant Seeking." Applications are due by May 15; recipients will be notified by Sept. 15. For more information, contact Monique Buonincontro, AVMF grants coordinator, at (800) 248-2862, Ext. 6691, or mbuonincontro@avma.org.

Regulatory Actions

First rDNA construct approved for human use

A human-use anticoagulant derived from milk of genetically engineered goats is the first approved pharmaceutical product of a genetically engineered animal.

The Feb. 6 approval for rhAT (trade name ATryn), which is used to prevent blood clots in patients with a rare hereditary condition, came 22 days after the Food and Drug Administration issued a guide for industry on the regulation of genetically engineered animals. The final guidance document asserted the FDA's authority in regulating such products.

The recently approved anticoagulant, which was developed by GTC Biotherapeutics, is approved for use in patients with hereditary antithrombin deficiency. About one in 5,000 people in the United States has the condition, and they are particularly at risk of life-threatening blood clots during surgery and childbirth, according to the FDA.

Prior to approval of the recombinant antithrombin, patients relied on antithrombin derived from human blood plasma.

A statement from GTC Biotherapeutics says the product was approved for use in the European Union in summer 2006.

The FDA final guidance document details the agency's view of its jurisdiction in regulations on genetically engineered animals and provides the framework for those products to reach consumers.

Also known as Guidance for Industry #187, the document includes nonbinding recommendations for industry and language that describes genetic modifications as "new animal drugs." It says existing regulations give the agency authority over "articles intended for use in the diagnosis, cure, mitigation, treatment or prevention of disease in man or other animals" and articles other than food "intended to affect the structure or any function of the body of man or other animals."

Genetically engineered animals have to be approved by the FDA prior to distribution, and the document includes recommendations on the types of information producers can supply to gain approval for sales.

About 28,000 of the nearly 29,000 comments received by the FDA by mid-December were form letters, most of which expressed opposition to genetic engineering of animals.

The FDA's responses to those comments, the guidance document, and additional information are available at www.fda.gov/cvm/geanimals.htm.

Funding Announced

Industry sponsors renew support for pathology training positions

Industry sponsors recently renewed funding for eight training positions in veterinary pathology, a field with continuing shortages.

To help meet the need, the American College of Veterinary Pathologists and Society of Toxicologic Pathology created the ACVP/STP Coalition for Veterinary Pathology Fellows in late 2004 to solicit financial support from the biopharmaceutical industry for training positions in academia.

Companies that funded the initial group of eight fellows, who will finish their training programs this summer, have renewed funding for another group of eight fellows.

Since its inception, the coalition has established a total of 22 training positions—15 residencies in anatomic pathology, three residencies in clinical pathology, and four PhD pathology research positions. Positions went to the veterinary schools/colleges in California at Davis, Colorado, Georgia, Illinois, Indiana, Iowa, Ohio, Ontario, Michigan, Minnesota, North Carolina, Pennsylvania, Texas, and Washington. The sponsors are Amgen, Bristol-Myers Squibb, Charles River Laborato-

ries, Eli Lilly, Genentech, GlaxoSmith-Kline, Merck, Pfizer, Sanofi-aventis, Schering-Plough, and Wyeth.

A 2002 survey documented the shortage of veterinary pathologists to fill positions in academia, industry, and government. The ACVP, STP, and American Society of Veterinary Clinical Pathology conducted a follow-up survey in 2007. That survey found a continuing shortage of pathologists but indicated progress on the training side.

Along with support for training positions, companies have provided contributions to the coalition. These contributors include Allergan, Aperio, Bristol-Myers Squibb, Burroughs-Wellcome Fund, Elsevier, Experimental Pathology Laboratories, Gempath, Histo-Research Scientific Labs, Integrated Lab Systems, The Leyden Group, Millennium-Takeda, and Wyeth. In all, the coalition has raised \$5.2 million in commitments.

Coalition information is at www.vetpathcoalition.org/index.cfm.

News of the Profession

Study: 22 percent of veterinarians screened had Q fever antibodies

More than one-fifth of veterinarians screened in a study on Q fever had antibodies against the causative *Coxiella burnetii*, according to a recent article.

The study, which appeared in the March 1 edition of *Clinical Infectious Diseases*, found that 113 of the 508 veterinarians tested at the 2006 AVMA Annual Convention in Honolulu carried antibodies against the bacteria.

Information from the Centers for Disease Control and Prevention indicates most human Q fever outbreaks in the U.S. relate to occupational exposure to farm animals or meat.

The *Clinical Infectious Diseases* article, "Seroepidemiologic and occupational risk survey for *Coxiella burnetii* antibodies among US veterinarians," suggests some veterinarians should consider undergoing routine serologic evaluation. It states early diagnosis of endocarditis attributable to *C. burnetii* can prevent complications in individuals with heart disease, those undergoing immunosuppressive therapy, and those who are pregnant.

The article states that about 65 percent of those tested who had positive results for the antibodies were men, and a similar portion of those screened were older than 46 years.

Veterinarians in mixed animal practice or food animal practice were more likely to be seropositive than veterinarians in small animal practice. Veterinarians with mobile practices were also more likely to be seropositive.

Routine exposure to freshwater rivers, streams, lakes, and ponds, as well as ditch or sewage water, was associated with antibody presence.

Infection in humans is primarily related to inhalation of airborne bacteria, according to the AVMA backgrounder on Q fever. The bacteria can survive in dust contaminated with feces, birth fluids, and fetal membranes, and humans can also become infected by consuming contaminated, unpasteurized dairy products.

Vector transmission to humans via ticks and human-to-human transmission is rare, but domestic dogs and cats exposed to the bacteria can serve as potential sources of human infection through milk or urine, the AVMA backgrounder states. Cattle, sheep, and goats are the bacteria's primary reservoirs, but other livestock species and domesticated pets can become infected, according to the CDC.

To read the backgrounder or a Zoonosis Update on Q fever, go to www.avma.org, click on the orange "Public Health" heading on the right side of the page, and follow the Q fever link in the table of contents.

Donor doesn't want money going to veterinary college

A public rebuke by a wealthy donor to Oklahoma State University has put the Center for Veterinary Health Sciences' teaching practices under a microscope.

Madeleine Pickens, wife of Texas billionaire T. Boone Pickens, has accused the center of buying "distressed" dogs from class B breeders and then using the animals for multiple, "barbaric" surgical training procedures.

Her claims are based largely on what an anonymous Oklahoma State veterinary student allegedly told her last fall. As a result, Pickens has requested that the university not allow the veterinary college to benefit from a \$5 million donation she gave this past year. Although Pickens did not specify how the money should be

used, the college was proposed to be the beneficiary.

Pickens now says she wants the money "redirected" from the veterinary center to elsewhere at the university.

Dr. Michael Lorenz, dean of the Center for Veterinary Health Sciences, has since refuted her allegations.

In a Feb. 24 statement, Dr. Lorenz said animals used for surgery are acquired from brokers who purchase dogs from animal shelters and other approved sources. These dogs, already marked for euthanasia, are given proper anesthesia and care throughout the procedures, according to the statement.

Pickens also alleges that students perform surgery on a dog under anesthesia one day and perform the next day another surgery, "maybe break a leg, fix it, wake them up again, and then they kill them."

Dr. Lorenz countered that no more than two surgeries are ever performed on any one animal, and of these, only one involves recovery from anesthesia.

"The only organs that are removed include the uterus and ovaries in females and testicles in males. Both procedures are basic for learning proper spay and neuter surgeries," he said, adding that students who do not want to use live animals during their training have the option of training on cadavers.

Bones are broken in cadaver limbs and bone models, not in live animals as stated by Pickens, as part of OSU's elective course in advanced surgical procedures for fourth-year students, he said.

The college's facilities and protocols are reviewed regularly by its faculty and Institutional Animal Care and Use Committee, in accordance with the Animal Welfare Act, as well as by the Department of Agriculture, industrial partners, and the AVMA Council on Education.

The AVMA COE Standards of Accreditation require hands-on experience in therapeutic interventions, including surgery. With that, colleges must show that students at least have access to live animals for this purpose. The standards also dictate that the curriculum should encourage "humane stewardship of animals" and "contribute to improved understanding of animal needs."

Biosecurity

Homeland security program produces first graduates

Purdue University continues to invite applicants to its Veterinary Homeland Security Graduate Certificate Program, which just certified its first five veterinarians.

Purdue started the long-distance program in 2006. The program currently has 82 students from 30 U.S. states and from foreign countries such as Singapore and Bermuda.

Purdue tailored the program to training full-time veterinarians in emergency prevention and response relevant to animal health. Students enhance their understanding of natural and intentional threats to animal health, strengthen skills in management of animal health emergencies, and develop problem-solving expertise to be effective members of an animal emergency response team.

Lectures are available continually online and on CD. Students must take nine credit hours to complete the certificate.

Learn about Purdue's National Biosecurity Resource Center for Animal Health Emergencies at www.biosecuritycenter.org.

Resources

University Web site to educate about public health, agriculture

Johns Hopkins University has launched a Web site intended to aid research and provide information on links between public health and agriculture.

The site, the Agriculture & Public Health Gateway, was created through the university's Bloomberg School of Public Health. The site is also intended to increase access to reliable information and facilitate knowledge sharing and collaborative dialogue.

The site can be used to search for research articles, white papers, reports, fact sheets, brochures, databases, books, videos, consumer guides, news media articles, and other information sources, according to information on the site. It includes links to event listings, glossaries, newsletters, and photos and images. The site is <http://aphg.jhsph.edu>.