Report of the USAHA/AAVLD Committee on Diagnostic Laboratory and Veterinary Workforce Development
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Vice Chair: Valerie Ragan, MD

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The Committee met on October 24, 2015 at the Rhode Island Convention Center in Providence, Rhode Island from 3-7 pm. There were 9 members and 12 guests present. Attendees included M. Gilsdorf, G. Luke, E. Parker, V. Ragan, G. Riddell, D. Scarfe, M. Schwabenlander, K. Simmons, R. Davies, J. Rudd, T. Hanosh, D. Cox, K. Cain, S. Morris, J. Johnson, T. Sturgill, J. Garvin, G. Miller, S. Ellsworth, R. Rowland, and G. Anderson. Attendees were welcomed and general overview and housekeeping comments were made.

There were no time-specific presentations during the session.

AVMA/NAFV/CPCVM Task Force – Update and Proposed Actions
Dr. Valerie Ragan, Director, Center for Public and Corporate Veterinary Medicine and Dr. Michael Gilsdorf, National Association of Federal Veterinarians

Dr. Ragan provided an overview of how the veterinary profession has evolved in the US, including species of emphasis, gender of veterinary graduates, and societal needs. She referenced the AAVMC Foresight Report of 2007. Other surveys conducted in recent years and the CPCVM white paper also indicate that there are expanding opportunities in federal positions for veterinarians. Recommendations: 1) the classification standard for Veterinary Medical Officers (VMOs) should be expanded, 2) the DVM/VMD degree should qualify applicants for a broader range of positions, and in many cases should be preferred, and 3) PhD research positions should be open to DVM/VMDs with appropriate academic and research experience. The recommendations have been presented and discussed with USDA leadership in multiple meetings since Sept 2014 where the exchanges have been consistently positive.

There are many global issues in which veterinarians could contribute, such as Ebola and others; however, there is little external awareness of opportunities in the federal workforce. In addition, it is estimated that currently there are 800 retirement eligible VMOs at the USDA (50% of workforce). The 701 series position description for federal veterinarians is too narrow in scope relative to the skills veterinarians possess.

The need for improvement in veterinary workforce planning is significant and well documented in the 2013 National Research Council, the USDA FSIS recruitment plan and USDA Veterinary Services projections. An expansion of opportunities for the veterinary profession is necessary for the profession to step into the range of new areas needed by the world. It is suggested that each USDA program would identify mentors/adjunct faculty and develop standardized clerkships available to students from all North American veterinary colleges, as well as development of a shadowing or short-term internship for veterinarians interested in career transition. Offering a summer veterinary public practice institute for students from all veterinary colleges and interested veterinarians may be beneficial and effective.

Federal Workforce Initiatives – Recent GAO Report
Dr. Michael Gilsdorf, National Association of Federal Veterinarians

Dr. Gilsdorf provided highlights from the National Research Council/National Academies of Science report that pertain to veterinary public practice, including the GAO report, workforce management issues and emerging disease workforce, and collaborative initiative activities. Dr. Gilsdorf reiterated the need for improved planning for workforce development mentioned above.

The GAO report had three recommendations: 1) assess the veterinarian workforce needs under possible scenarios for an emergency response to a large-scale animal disease outbreak – number and type of veterinarians, resources required to have a sufficient workforce respond, and training needed to carry out their roles, 2) improve government-wide veterinarian workforce planning efforts by OPM, and 3) evaluate whether the need for government-wide direct-hire authority for veterinarians continues to exist and modify or terminate the authority as appropriate.

The September 2015 report on Drug Compounding for Animals determined that the FDA could improve oversight with better information and guidance in this area. The FDA does not currently have final guidance directing its regulatory approach on drug compounding for animals and has not consistently document the basis for the actions it has taken to regulate such compounding in the past.

The GAO report addressed the topic of rehiring annuitants. The federal government has faced challenges in hiring and retaining talented workers, which are exacerbated by increased retirements in the federal workforce, and to address these challenges agencies have sought to rehire retired federal employees. The 2010 National Defense Authorization Act (NDAA) provides authority for agencies to grant waivers to re-employed annuitants on a temporary basis to fulfill functions critical to the mission of the agency. The agencies reviewed made very little use of the NDAA waiver authority.

The federal government is currently losing the battle of obtaining and retaining the best and brightest in the veterinary community. There is a collaborative working group (TMAC) that has been developed for a more proactive, government-wide approach to address VMO workforce issues: 1) assisting current state of the VMO workforce, 2) identifying key recruiting, hiring and retention issues, and 3) developing an action plan to prioritize and address specific workforce issues. The NAFV, VS, FSIS, DHS, AVMA and the VA are working together to address the VMO hiring needs by identifying gaps and resources needed to fill them. NAFV and AVMA will take those needs to Congress and request funding. Even though OPM recognizes the need for a viable federal veterinary workforce, they have not taken the lead in this effort because they feel the cyber security workforce is higher priority.

Public Health Veterinarian Careers

Dr. Janet McGinn, Office of Policy and Program Development, FSIS, USDA

Dr. McGinn provided an overview of the FSIS mission of protecting consumers by ensuring that meat, poultry and processed eggs are safe, wholesome and accurately labeled. There are approximately 1,000 public health veterinarians, 7,000 inspectors who inspect about 6,000 plants nationwide, over 9 billion poultry, 100 million swine, and 35 million cattle carcasses and 3.5 billion pounds of processed egg products per year. FSIS veterinarians ensure that the industry is preventing public health hazards and decreasing foodborne hazards in the food supply. Veterinarians and their inspection staff are the first line of defense for food security through knowledge and expertise in zoonotic diseases, microbiology, public health, treatment protocols, testing methodologies, and critical thinking. Employment opportunities exist and pathways via Internships, Recent-Graduate, Professional Management Fellows, FSIS Volunteer Student, and Third-Party programs all enhance the potential of meeting the needs. One to three percent of all new veterinary graduates are interested in public practice careers.

National Animal Health Emergency Response Corps – NAHERC

Dr. Jon Zack, Director, Preparedness and Incident Coordination Staff

Dr. Zack provided NAHERC vision, mission and history and then focused on the recent Avian Influenza situation. Veterinarians with a valid license and animal health/veterinary technicians with a diploma or equivalent experience are eligible to participate in NAHERC, and the program has recruited nearly 4,200 personnel (971 VMOs and over 3,000 AHTs) in all 50 states. Under NAHERC, animal health professionals are recruited, hired and activated as temporary Federal employees. The reasons to volunteer for NAHERC are to: defend US agriculture, help animals in need, expand career options, network within the veterinary community, learn emergency response procedures, and obtain professional development training. There is significant need to expand NAHERC, which also provides increased awareness and opportunity across the veterinary profession.

The Center for Animal Health in Appalachia – modeling and economic impact in rural areas

Dr. Jason Johnson, Executive Director (CAHA) and Medical Director, CVM, Lincoln Memorial University

Dr. Johnson provided an overview of Lincoln Memorial University's mission for veterinary medicine in the Appalachian region including that of CAHA, which is to improve animal and public health throughout

that region. The CAHA believed animals were important to Appalachia, veterinarians were living and thriving with Appalachia, and those veterinarians were contributing to their communities economically, socially and professionally. Thus, CAHA set out to determine (model) the distribution of veterinarians in Appalachia, the animal composition and distribution trends, the impact of veterinarians on rural communities based on a Mixed Animal Practice Model. The project was done in partnership with the National Center for the Analysis of Healthcare Data (NCAHD).

The following points were learned from the modeling: 1) 7,178 in-state practicing veterinarians are within the Appalachian footprint, 2) the veterinarians provide a total employment impact of approximately 8 people per practice and their practices serve as economic engines for their communities providing nearly $2.3 billion to the Appalachian economy, 3) the practices provide 57,424 jobs to the footprint, 4) of the 7,178 licensed veterinarians, approximately 11% are more than 60 years of age, 5) the veterinarians care for about 13.8M small animals and 13.7M large animals with an estimated herd size worth $14.2 billion. Based upon the modeling it may appear that Appalachia is well served with veterinarians; however, 75% of the rural counties within the footprint have an apparent veterinary shortage which translates into an estimated economic loss of $621M and 15,256 jobs.

It is believed that the modeling done in the Appalachian region can be used to advocate for the VMLRP, VPSG, and other initiatives. It appears that the mixed animal practice model provides conservative estimates of what a veterinary practice would bring into any/most rural communities. Additional information can be found in the 2015 State of Animal Health in Appalachian Report, http://vetmed.lmunet.edu/caha/ and CAHA@lmunet.edu.

Paraprofessionals in Veterinary Diagnostics

Marc Schwabenlander, Parapathologist, College of Veterinary Medicine, University of Minnesota

Mr. Schwabenlander provided an overview of a variety of examples where paraprofessionals are utilized in other medical fields and the benefits to both the medical practitioner and the paraprofessional, such as paramedics, nurse practitioners, physician assistants, dental therapists, etc. Currently there are non-veterinarians certified in veterinary medicine at the Associate's or Bachelor's degree, and Veterinary Technicians have a national examination and a professional society (National Assn of Veterinary Technicians in America). Lab Animal Technician/Technologist certification occurs by the American Assn of Laboratory Animal Science (AALAS), there are a few online Master's degree options in Biomedical Sciences with an emphasis in Veterinary Medicine and Surgery geared toward certified Veterinary Technicians, and also a Master's degree in Veterinary Forensics for shelter medicine operations, animal control officers, etc.

Development of a parapathologist track requires a recognized need along with funding, faculty buy-in and appropriate workload, which becomes an opportunity for the right personnel. The parapathologist can become a trusted professional who is an extension of the pathologist so there may be better utilization of the pathologist, ie, may be a cost-effective way of producing high-level results in a reference laboratory setting. One would expect that training to be effective for a wide variety of applications in veterinary medicine ranging from high-volume production animal practices where postmortem exams are performed routinely in the field to clinical research facilities/projects and finally in diagnostic laboratories. Mr. Schwabenlander would be interested in hearing what other laboratories are doing in this paraprofessional arena. His contact is schwa239@umn.edu.

NBAF Workforce Development – Kansas State University

Dr. Raymond Roberts (Bob) Rowland, Professor, Diagnostic Medicine and Pathobiology

The National Bio and Agro-Defense Facility (NBAF) is targeted for completion in 2022 and will be the replacement for the Plum Island Animal Disease Center. The personnel/scientific resources that will be required to fulfill the vision, mission and routine operations of the NBAF will be significant and will require a culture change regarding stakeholder connectivity and workforce development. NBAF will be the pivot point for many Kansas State departments/units (College of Veterinary Medicine, Biosecurity Research Institute, K-State Veterinary Diagnostic Laboratory, etc), private companies, other universities, and many state and federal agencies.

A major focus at K-State is to assist in preparing a workforce ready to function within NBAF, and the first –level goal is a dual DVM/PhD program. The strategy is to introduce and engage students as early as possible in the educational process and to selectively commit to the highest quality individuals for the DVM/PhD program. The cost per student is estimated to be at least $250K and a timeframe of

approximately nine years for completion. There is considerable flexibility in the program regarding where research is done, including departments on campus, high-containment facilities (including PIADC), and international laboratories. The focus for workforce development is laboratory expertise and project leaders where there is understanding and unique hands-on experience in funding and coordinating high-consequence disease research. Diversity and new approaches to development of personnel capable of working and establishing flourishing careers in the NBAF and associated agencies and facilities across the globe are critical targets for this educational/training effort.

BSL-3 Training/Transboundary Animal Disease Summer Program

Dr. Steve Ellsworth, Associate Director, Center of Excellence for Emerging and Zoonotic Animal Diseases

Dr. Ellsworth provided an overview of the DHS funded Center of Excellence for Emerging and Zoonotic Animal Diseases (CEEZAD), and then highlighted the summer training program in high containment and for veterinary students. CEEZAD has four areas of emphasis regarding high-threat disease (foreign, emerging, zoonotic) and they are vaccines, detection, epidemiology/modeling and education and outreach. There is a wide range of activities encompassed in CEEZAD's education and outreach, including web-based courses, fellowships in infectious disease and pathology, minority serving institution support, DHS summer research for federal service academies, USDA Borlaug fellowship program, traditional undergraduate and graduate students, career development programs, ABSL-3 lab animal medicine residency training, and the summer program emphasized here.

The purpose of the BSL-3 Training/Transboundary Animal Disease Summer Program is to provide BSL-3 training to graduate students (MS, PhD, CVM/post-docs) interested in research and careers in the field of high-consequence transboundary animal diseases and to increase awareness of activities to be conducted at the future NBAF. The program is structured with a week of hands-on BSL-3 training at the Biosecurity Research Institute and a week where nationally and internationally recognized experts interacted with the students, as well as in-depth visits to companies located in the Kansas City Animal Health Corridor. The program objectives were to increase awareness of general biosecurity practices when dealing with select agents, expose students to the BSL-3/Ag research environment/careers, expose students to animal health industry activities, needs and opportunities, increase awareness of current practical and scientific aspects of select transboundary emerging and zoonotic diseases, and provide networking opportunities with peers and subject-matter experts in the field of high-containment research and transboundary diseases of animals.

Eligibility for the program is based on US citizenship, a GPA of at least 3.4/4.0 and currently enrolled as a full-time graduate student or post-doc at a CEEZAD-affiliated institution. The class size is limited to 10 students, applications are competitive and evaluated to an outside committee, and travel stipends may be available. More information and application are available at www.ceezad.org.

Diagnostic Medicine Internship Program – Kansas State University

Dr. Gregg Hanzlicek, Director, Outreach and Field Investigation, K-State Veterinary Diagnostic Laboratory

Dr. Hanzlicek was not able to present due to time, but his presentation is included. The Kansas State Veterinary Diagnostic Laboratory (KSVDL) initiated a diagnostic medicine/sciences intern program three years ago with a goal of introducing veterinarians to the variety of disciplines involved in diagnostic medicine and laboratory sciences so the trainees might be prepared (and accepted) into programs of further training such as pathology or microbiology residency or graduate programs. The program is open to any veterinarian, but the first-choice applicant is targeted to be a practicing veterinarian who has a desire for a career change.

There is a recognized workforce need for veterinary diagnosticians throughout North America, and the bias/experience at KSVDL is that there is tremendous need for technical personnel and diagnosticians who can understand clinical medicine and the nuances/issues of everyday practice. Thus, the objective of targeting former practitioners for the internship program whenever possible. Currently the challenge is providing adequate compensation to the intern who enters the program after practicing.

AAVLD Director Qualifications – "survey"

Dr. Gary Anderson, Director/Professor, Kansas State Veterinary Diagnostic Laboratory, KSU

A survey/questionnaire was conducted among current directors of American Assn of Veterinary Laboratory Diagnosticians (AAVLD) laboratories in an attempt to determine potential guidelines for young

professionals interested in laboratory/diagnostic medicine and possible leadership roles. Dr. Anderson was not able to present due to time constraints, but the presentation is included.

All respondents to the survey indicated that the DVM degree should be required for the laboratory director position, with nearly all indicating that a PhD and/or board certification should be preferred for applicants. Considerable emphasis was placed on business experience and/or MBA and supervisory experience/management, as well as clinical practice experience, professional pubic manager/HR, leadership training, and a thorough understanding of quality management systems. Experience post-DVM recommended ranged from 2-15 years with the majority of respondents preferring greater than 5 years after veterinary school and other training.

Committee Business:

The committee developed and passed the resolution entitled “The federal classification standard of the Veterinary Medical Officer (VMO) -0701 series should be updated to reflect the expanded skills and abilities of veterinarians”.

Addendums to the committee report:

Presentations: Ragan, Gilsdorf, McGinn, Zack, Johnson, Schwabenlander, Rowland, Ellsworth, Hanzlicek and Anderson