

## **E. COMMITTEE BUSINESS**

### **REPORT OF THE USAHA/AAVLD COMMITTEE ON ANIMAL HEALTH INFORMATION SYSTEMS**

Co-Chairs: Dr. Bruce L. Akey, Albany, NY  
Dr. François Elvinger, Blacksburg, VA

Mr. John B. Adams, VA; Dr. J. Lee Alley, AL; Dr. Charles W. Beard, GA; Dr. Stan D. Bruntz, CO; Dr. James T. Case, CA; Dr. Max E. Coats, Jr., TX; Dr. Robert J. Eckroade, PA; Dr. Mark Engle, CO; Dr. Peter J. Fernandez, DC; Dr. Robert Fourdraine, WI; Dr. Jerome E. Freier, CO; Mr. Bob Frost, CA; Dr. Jorge Hernandez, FL; Dr. John P. Honstead, CO; Dr. Richard D. Hull, IL; Dr. Robert F. Kahrs, FL; Dr. David R. Kinker, IA; Dr. Stanley H. Kleven, GA; Dr. Elizabeth A. Lautner, NY; Dr. Donald H. Lein, NY; Ms. Jodi A. Luttrupp, VT; Ms. Janet Maass, CO; Mr. Kevin D. Maher, IA; Mr. Larry D. Mark, VA; Dr. Charles E. Massengill, MO; Mrs. Phyllis Menden, WI; Dr. John R. Ragan, MD; Dr. Leon H. Russell, Jr., TX; Dr. Mo D. Salman, CO; Dr. Jack L. Schlater, IA; Dr. John A. Schmitz, NE; Dr. David Thain, NV; Dr. Mark C. Thurmond, CA; Dr. Jon C. Van Berkomp, ND; Dr. Stephen E. Weber, CO; Dr. Richard D. Willer, AZ; Dr. Saul T. Wilson, Jr., AL; Dr. Nora E. Wineland, CO.

The Committee met on Monday, October 25, 2004 from 12:30 pm to 5:30 pm. There were 58 people in attendance, including 15 committee members, although at times there were in excess of 80 people in the room. Twenty attendees requested to be added to the committee roster. Drs. Akey and Elvinger presided. Minutes of the meeting are as follows:

Dr. Akey welcomed the participants and laid out the agenda for the session.

Dr. Stanley Bruntz, United States Department of Agriculture (USDA), Animal Plant Health Inspection Service (APHIS), Veterinary Services (VS), Center Epidemiology and Animal Health (CEAH), National Surveillance Unit (NSU), Fort Collins, Colorado presented an annual update on the National Animal Health Reporting System (NAHRS), now integrated with the newly created NSU at CEAH. In 2003, 40 states participated in the NAHRS, with 36 states reporting each of 12 months. As of September 2004, all but nine states were participating, with 5 of those slated to participate by the end of this year 2004. Recruitment of the last remaining non-participants is now directly supported by the APHIS administrator and the VS deputy administrator. Reporting is to be facilitated in the near future through a newly developed Web-based reporting tool, to be piloted in November 2004 and made available to

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all states by February 2005. Dr. Bruntz presented a set of changes to the NAHRS Uniform Methods and Rules (UM&R), proposed at the NAHRS Steering Committee meeting, September 13-14, 2004, in Fort Collins, Colorado. The proposed changes and their dispositions are presented in the report of the business section at the end of this report.

Co-chair François Elvinger presented the outcome of the resolution submitted by this Committee, the USAHA Committee on Foreign and Emerging Diseases, and the Epidemiology Committee of the American Association of Veterinary Laboratory Diagnosticians at the 2003 Annual Meeting on Strategic Planning and Development of a National Animal Health Surveillance System (NAHSS). The resolution requested that USDA-APHIS-VS establish a working group to develop a strategic plan for animal disease surveillance. VS, under the leadership of Dr. Valerie Ragan, Assistant Deputy Administrator, put in place a NAHSS Steering Committee that participated and oversaw the drafting of such a strategic plan by and with the NSU, led by Dr. Brian McCluskey. The draft of the plan has been reviewed by the VS Management Team and has been posted for general review on the NSU website at: [http://www.aphis.usda.gov/vs/ceah/ncahs/nsu/nahss\\_strategic\\_plan\\_draft.pdf](http://www.aphis.usda.gov/vs/ceah/ncahs/nsu/nahss_strategic_plan_draft.pdf).

Dr. Brian McCluskey, USDA-APHIS-VS-CEAH-NSU introduced the NAHSS Strategic Plan and the NSU. The NSU was established in late 2003 and currently is in the process of hiring the necessary staff to fulfill its mission as laid out in part in the NAHSS Strategic Plan. The Strategic Plan is to provide the framework to set priorities and create a roadmap for the transformation of current and design of future surveillance activities into the NAHSS to support greater protection of animal populations from endemic, emerging and foreign animal diseases. Surveillance is to be comprehensive, coordinated, and integrated, and needs to mobilize and rely on partnerships with all federal, state, and industry stakeholders. The Strategic Plan defines 4 major goals: 1. early detection and global risk surveillance of foreign animal diseases, and 2. of emerging diseases; 3. enhanced surveillance for current “program diseases”; and 4. monitoring and surveillance for diseases of major impact on production and marketing. Twelve objectives were defined and matched as appropriate to the 4 goals, with the addition of action items and target dates for those action items listed for all objectives. The NSU, which was recently combined with the National Animal Health Monitoring System (NAHMS) into the Center for National Animal Health Surveillance (CNAHS), is to assume the leadership role in design and implementation of the NAHSS.

Dr. James Case, California Animal Health and Food Safety Laboratory System, University of California, Davis, presented the status and future developments of the National Animal Health Laboratory Network (NAHLN) Information Technology (IT) component. The key goals of the NAHLN are the expansion of detection and response measures and

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capabilities for pathogens that threaten animal agriculture. Therefore the NAHLN is to bolster laboratory capability for select agents, which requires sufficient and well-trained personnel, appropriate equipment and testing. Standard diagnostic approaches for identification of select agents have to be deployed, data sharing among animal health agencies has to be bolstered, a secure, two-way communications network and a national repository for animal health data needs to be created. This requires the bolstering of cooperation and communication amongst animal health officials, and with maintenance of the confidentiality of source data has to provide alerts at appropriate response level. Four major areas for development of the NAHLN IT infrastructure have been recognized, including the development of a laboratory registry repository to capture standardized result data, a laboratory registry of capabilities and capacity, and a registry of validated methods to support NAHLN labs, which are all linked by secure communications. Of the 12 laboratories identified for the first phase of NAHLN, 5 laboratories (California, Colorado, Iowa, National Veterinary Services Laboratory (NVSL), Washington) have been selected for the NAHLN IT pilot project to develop message profiles (using HL7 standards), and terminology subsets for tests (LOINC), for species/breeds and results (SNOMED), and unique identifiers (NAIS, ISO). Secure communication processes were established using cURL and digital certificates. Future developments include the expansion of the IT infrastructure to all NAHLN laboratories, which now number 44 laboratories in 37 States. This will require the development and distribution of detailed system requirements specification, the production of a comprehensive messaging implementation guide for laboratories, continued enhancement of terminologies to support the NAHLN (secure communications and visualization), training and resources for new laboratories, expansion of coverage of important diseases as resources become available and cooperation with other entities. Obstacles to full development and implementation of the NAHLN are the limited funding to support all activities, the limited resources in health information standards, the limited personnel time to dedicate to NAHLN activities, which leads to the establishment of interim solutions that do not conform to NAHLN standards.

Dr. Wayne Cunningham, Colorado State Veterinarian with the Department of Agriculture, Denver, Colorado, introduced the Tri-National Consortium National Animal Identification System Project. This project covers multiple species including cattle (beef and dairy), sheep and goats, horses, elk, and swine (premises only). The main questions addressed in multiple pilot projects are to determine if Radio-Frequency Identification (RFID) tags are practical as to their retention, readability and economic impact, and if a private company would be able to distribute the premises ID, and the animal ID and ID devices, to manage

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the associated database, and to maintain confidentiality in a consortium including several Indian Nations, the States of Colorado, Arizona and New Mexico, and the adjacent Mexican States of Sonora and Chihuahua. The pilot projects are capitalizing on already available resources, personnel (including ~ 60 brand inspectors) and marketing channels, as well as taking advantage of existing databases (i.e. brand database) and are to determine what and when to ID, which could be either at change of ownership, at shipping time, branding time or calving time (birth), or eventually at heifer *Brucella* vaccination time. The projects contain educational components at the local, state and regional level. The pilot projects are to establish if interstate and international traceability within defined guidelines can be assured.

Mr. Charles Anderson, Computer Aid, Inc., provided the Committee with a succinct overview of the concept and uses of Data Warehouses and Data Marts. A Data Warehouse contains data from multiple databases or other sources and includes tools for selectively extracting and analyzing information. Because it pulls together information from multiple sources, queries and analysis can generate knowledge not attainable from any single source. Data Marts are considered a subset or smaller version of a Data Warehouse and generally are focused on one specific subject matter area. Perhaps the single most important process involved in the Data Warehouse is the Extract, Transform and Load (ETL) procedure which applies user defined rules for validating data and translating data from different sources into formats that are compatible and cross linked. A Data Warehouse can provide many types of functionality including data consolidation, multi-source analysis, trend analysis, disease surveillance and monitoring and data layers of Geographic Information Systems (GIS) viewing and analysis. In addition, it can serve as the nexus for harmonizing and formatting data to be passed on to other information systems such as the federal Generic Data Base (GDB) thus avoiding time-consuming double entry of data into multiple systems. Part of the implementation of a Data Warehouse includes the development of meta-data and history tables to track the source of information and any alterations to the data over time. Maintenance of Data Warehouse systems has become less onerous with the development of self-regulated database software capable of automatically conducting internal checks and corrections, reducing the cost of overall database administration. Successful development, implementation and use of a Data Warehouse depends on many factors including support from the highest administrative levels, defining realistic expectations, avoiding loading data just because it's available, choosing a financially stable vendor, not missing out on adding non-traditional data types (pictures, recordings, etc.) and, perhaps most importantly, choosing a project leader that is firmly grounded in the needs of the end-user.

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Dr. Steve Weber, USDA-APHIS-VS-CEAH Center for Animal Disease Information Analysis, Ft. Collins, Colorado, gave an update on the activities of the Information Technology Issues Group (ITIG) which was organized as a result of the USDA Animal Health Safeguarding Review. Recommendations from this review concerning Information Technology (IT) have been grouped into issues areas including electronic commerce, updated technology identification and implementation, leadership in setting information technology standards, development of interfaces with other databases and systems, confidentiality of data, the increasingly important role of GIS in animal health programs and the identification of changes needed in the IT infrastructure of VS. Progress has been made on one of the key action areas - Confidentiality. As a result of the acceptance of the action plan recommended by the ITIG, the VS Management Team agreed to the formulation of a task force to identify issues related to the confidentiality, privacy and security of information that is requested and maintained by VS. That task force met once in 2004 and expects to develop specific recommendations during FY 2005. Action plans for all of the other issue areas will be completed and presented to the VS Management Team in January 2005, for prioritization. Notable advances made by VS and its collaborators during FY 2005 that support the Safeguarding Review Recommendations include completion of a Veterinary Accreditation System, completion of the NAHLN pilot system, expansion of the use of the Interstate Certificate of Veterinary Inspection (ICVI) to 6 states and the implementation of the National Premises Allocator component of the National Animal Identification System (NAIS).

During the business section of the agenda, the previously mentioned changes to the NAHRS UM&R, proposed and approved during the NAHRS Steering Committee meeting held September 13-14, 2004, were submitted for approval by the membership of the Committee. These changes were: 1. (Page 20) add the definition for 'confirmed disease' to read as follows: "Disease confirmed by Chief, State Animal Health Official utilizing NAHRS reporting criteria for the disease, which may include references to compatible clinical signs, the specified standard of laboratory testing, and any additional epidemiologic information; in the remainder of the UM&R, replace the word 'clinical' with the term 'confirmed disease' where indicated; 2. (Page 21 last paragraph) remove the word 'only' in the sentence "The contents of the report will be distributed ~~only~~ to the Chief Animal Health Official of each participating State and select APHIS personnel." The sentence refers to the Annual Summary Report with no reference to individual States or farms; 3. B101 Bovine Anaplasmosis - remove the complement fixation test as an approved test from the reporting criteria and to follow the World Organisation for Animal Health (OIE) manual; 4. B201 contagious equine metritis - state in the reporting criteria that "This disease is a

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foreign animal disease for the United States of America ...” in order to be consistent with the wording in the reporting criteria of all other foreign animal diseases; 5. B205 equine infectious anemia - word the first sentence of the reporting criteria to read as follows: “Presumptive diagnosis may be based on serology using a USDA-approved test (SA-ELISA II, CELISA, Vira-CHEK™ ELISA or AGID) as outlined in the Equine Infectious Anemia (EIA) UM&R”; 6. B206 equine influenza - change the reporting criteria to read as follows: “Presumptive diagnosis may be based on compatible clinical signs plus serology (HI). Definitive diagnosis is based on demonstration of the agent (virus isolation);” 7. B211 equine viral arteritis (EVA) - change the reporting criteria to read as follows: “Presumptive diagnosis may be based on compatible clinical signs plus serology (SN titer of 1:4 or greater) as outlined in the EVA UM&R. Definitive diagnosis requires demonstration of the agent (virus isolation), an epidemiologic investigation by a State or Federal Veterinarian and the concurrence of the State Chief Animal Health Official and the Federal Area-Veterinarian-in-Charge.”

Motions for acceptance of these changes were submitted and seconded for each of the listed changes. Discussions followed on anticipated approval by State Veterinarians (change 2.), approval of the change on bovine anaplasmosis by the bovine commodity working group (change 3.), flexibility provided to the State Veterinarian for determination of presumptive or definitive diagnosis (changes 5. and 6), especially given the possibility of vaccine induced antibodies (change 6.). All proposed changes were unanimously approved by the committee and forwarded to the USAHA President as a recommendation.

A resolution on Federal Funding for the NAHLN was unanimously approved by the members of the Committee and forwarded to the Committee on Nominations and Resolutions for approval by the general membership.