

USAHA/AAVLD COMMITTEE ON ANIMAL HEALTH SURVEILLANCE AND INFORMATION SYSTEMS

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The joint Committee on Animal Health Surveillance and Information Systems (AHSIS) met on October 2nd, 2011 at the Adam's Mark Hotel in Buffalo, NY, from 3:00 – 6:00pm. Ten members and 42 guests signed in; 9 guests requested to be added to the committee.

The co-chairs, Dr. François Elvinger, Virginia Tech, and Dr. Lisa Becton, National Pork Board, introduced the agenda and committee mission statement, and reviewed 2010 committee resolutions and responses on the establishment of a United States National List of Reportable Animal Diseases and on NAHLN IT development.

There were no time-specific papers.

Two subcommittees are appointed within the AHSIS committee, the National Animal Health Surveillance System (NAHSS) subcommittee, and the National Animal Health Reporting System (NAHRS) Steering Committee. Dr. Aaron Scott and Dr. Stan Bruntz, VS:CEAH:National Surveillance Unit (NSU) presented the annual updates on the NAHSS and the NAHRS.

In his presentation entitled "The State of the National Animal Health Surveillance System," Dr. Scott reviewed the current state of the national surveillance system in the United States and needs emerging from the USDA VS 2015 Vision statement and the VS Management Team 18 implementation priorities for FY 2011-12, of which four related in particular to surveillance. These are priority 13, Implement a comprehensive, integrated surveillance plan for swine health; priority 14, prioritize commodity specific surveillance plans and develop a timeline to address them; priority 15, develop policies and standards to address surveillance data confidentiality and information sharing; and priority 16 on integrated, crossfunctional IT infrastructure. Veterinary Services is continuing to look at novel ways to collect and evaluate surveillance data especially in light of the current budget challenges in order to still maintain the overview of US animal health. Dr. Scott reviewed the concept of stream-based surveillance and how it fits in the national surveillance plan. The new format is the umbrella for comprehensive integrated (CI) surveillance systems for both disease specific and diseases non-specific (syndromic) surveillance. CI-NAHSS currently is being reviewed for both swine and cattle. It will utilize information from slaughter plants, on-farm through accredited veterinarian observations, livestock markets and laboratory submissions. Texas has signed a cooperative agreement with NSU for a pilot project to work with livestock market veterinarians to determine if there is an anomalous event that could require follow-up for animal health investigation, working cooperatively with Texas Veterinary Diagnostic Laboratories for testing needs and Texas Swine Extension on syndromic submissions from sentinel practitioners. This effort should provide a new spectrum of surveillance information by next year. Another project, the New Mexico alert system, is comprised of 18 veterinary practices that participate in a surveillance system reporting on 'syndromes' observed in client populations. Dr. Scott commented on one case example in which an increase in reproductive issues in sheep could be traced back to toxins in plants. A new project is a voluntary surveillance certified program in which producers voluntarily provide info for program diseases, herd management, continuity of business, export trade support and trade certification, with samples collected at slaughter upon producer request. When a farm has submitted all required information which is evaluated for various characteristics in biosecurity and animal health, then that farm could receive certification for a specific disease status. Dr. Scott added that NSU welcomes input and ideas on how to implement.

The budget for surveillance is getting tighter so novel approaches for more efficient surveillance are being sought out. Such approaches include targeted sampling, use of historical data for targets and future surveillance sampling, combining surveillance streams and considering additional testing of samples collected for different purposes. NSU has strengthened its ability to use historical data to accomplish new surveillance goals with fewer samples and tests and thus more efficient use of funds. Risk-based sampling will increase in utilization when evaluating surveillance goals and targets for disease detection.

The National Surveillance Unit is further evaluating and developing African swine fever surveillance; looking at the increase in *M. avium* condemnments for granulomatous lymph nodes and providing service and assistance to practitioners dealing with this issue; implementing a cattle granuloma submission program to evaluate if there is an increase in lesions for granuloma detection in fed cattle; working with the SCS implementation for surveillance; evaluating sampling strategies and reductions of sample numbers for PRV testing in swine. The NSU is further evaluating programmatic revisions for Brucellosis and PRV sampling reduction, TB predictive modeling. NSU is looking at the impact this will have on ability to detect and address infections and the level of confidence for detection at current levels of support.

Dr. Scott further reported that the National Surveillance Unit is working with the appropriate groups on harmonizing international standards, in particular with Canadian, Australian and New Zealand animal health authorities. NSU has been working closely with Canada on harmonizing approaches, especially the outbreak surveillance program and aquatic surveillance plans. NSU participated in an international meeting on surveillance and working on the surveillance terminology across participating countries. NSU has also participated with OIE on the guide book for the development of surveillance plans. The outcome is that the surveillance standards may become more harmonized across countries and trade routes. Dr. Scott gave kudos to Dr. Elvinger for his assistance with surveillance efforts and development for the betterment of US animal health.

Dr. Stan Bruntz, VS:CEAH:NSU presented the "NAHRS Update and National List of Reportable Animal Disease Overview". Dr. Bruntz reviewed and provided background information on the NAHRS, its steering committee and the leadership coming from this committee. Dr. Bruntz reviewed the organizational structure of the NAHRS group. He showed the map of 2010 participation in the program and will make the push to have all states participate in the program in 2012. Dr. Bruntz reviewed all of the activities for the Committee for 2010-2011 and presented the 2010 NAHRS Annual Report.

Current issues at hand include IT security, continued participation of all states, reporting of EIA testing by state, work on the NAHRS Operation Manual & reporting criteria for case definitions, and meeting the 2012 reporting needs to OIE and other stakeholders.

Dr. Bruntz then addressed the APHIS:VS response to the 2010 Resolution # 6 on the National List of Reportable Animal Diseases (NLRAD). He explained the need to have one national standard for consistent disease reporting. The list and associated case definitions and reporting criteria will provide guidance to state animal health officials, demonstrate to trading partners that the US has a uniform list and assist in meeting international reporting obligations. The list further will help improve zoonotic and endemic animal disease reporting in the United States. This will provide a mechanism for the development and implementation for case criteria and can have procedures for approval, updating those criteria. The NLRAD is designed to complement and supplement existing state and federal lists. Dr. Bruntz reviewed the timeline of action for the NLRAD development and its promotion at USAHA. He reviewed the resolution from 2010 and the VS response. Dr. Bruntz also reviewed some initial feedback from stakeholders which included 'completeness' of reporting, given that specimens might be tested out of state; the need for tribal leader involvement; inclusion of some species like cervids etc. The current target is to get approval for the NLRAD and implementation by 2012.

Dr. Brian McCluskey, VS:CEAH, in his presentation "Epidemiology in Veterinary Services", gave a review of epidemiology delivery systems and relevance for VS today, considering needs within VS and general budget constraints. He is reviewing the historical basis of epidemiology services within VS for both internal and external customers and how those services are to be delivered. This will be reviewed by Dr. Clifford and senior VS management team for final acceptance.

The Chief Epidemiology position within VS is a senior science position and is formatted to assist VS on epidemiology issues with a focus on standardizing outbreak investigations and associated tasks. This is expected to be a collaborative position within VS as well as outside of VS to include States and other stakeholders.

Two topics were addressed in an hour long discussion moderated by co-chair Dr. François Elvinger, Virginia Tech, engaging the memberships of both AAVLD (about 1/3 of participants) and USAHA (remaining 2/3) on questions of diagnostic laboratory data capture and the use of data from validated diagnostic tests.

The first topic “Changes Needed in Diagnostic Laboratory Information Systems and Data Collection to Facilitate Surveillance” first led to a discussion on the capture of peripheral epidemiology data that needs to be captured and flow out in a data stream. The questions centered on the value of such data and its utility in outbreak investigation and surveillance at the local, regional level to national level. The use of such data is difficult because of the various formats that it is entered into a lab information system that is built to support case flow and invoicing, as well as inventory management, but not to support answers on population health status, be it a the individual client, i.e. veterinarian or producer, or at a local/regional or state level. The discussion further led to distinguishing national needs for data, as for participation in NAHLN on currently 9 diseases, from other mostly endemic disease data of importance to producers or individual states only for specific requests, and the potential to assemble data from more than one laboratory. Therefore standards for case definitions, tests definitions, disease ‘designation’, reporting criteria, that would facilitate aggregation of data from multiple cases, premises, and even laboratories. In a comment on Canadian processes, in which a national list of reportable animal diseases has been established a pilot project is ongoing in the Canadian Animal Health Surveillance Network is aggregating data on pre-specified fields with the data being fed daily into the system with owner identification omitted in ‘peace’ times, however available in case of need as in an outbreak. Another approach used by some laboratories is the use of test requests and variations exceeding a baseline as proxy for presence of an outbreak. Concerns were voiced about the associated ‘noise’ as not all requests for particular tests are related to presence of disease or a disease outbreak. It is critical to determine appropriate identifiers for each case and determine which information is necessary for proper analysis. Multiple data entry as to generate different spreadsheets was discouraged.

The second topic “Adapting sampling strategies to diagnostic test characteristics and outcome interpretation based on sampling strategy” first led to discussion on validation and validation methods, as well as the standardization of testing. OIE has produced guidelines for validation of molecular based tests. The issue next is to use that validation information for sample size calculation, and following testing, for test result interpretation, either on the individual animal, herd or regional population level. AAVLD and USAHA have organized workshops in the past on test validation as well as sampling strategies, and the possibility of a workshop in the future on sampling strategies and result interpretation was discussed, with the aim at foremost satisfying customer needs.

In the business section the committee membership presented, seconded and voted on a motion to sunset the National Animal Health Surveillance System subcommittee of the AHSIS committee. The committee had reviewed VS and others’ achievements in implementing the principles and recommendations on surveillance in the 2001 National Animal Health Safeguarding Review and had presented a report at the 2010 annual AAVLD / USAHA meeting. As no further activity was requested from the subcommittee the membership voted to sunset the NAHSS subcommittee. The committee membership further introduced, seconded and accepted by voice vote a resolution on the NLRAD.

The meeting concluded and was adjourned at 5:45 pm.

Respectfully submitted: Buffalo, NY, October 3, 2011
François Elvinger, Lisa Becton, co-chairs