

REPORT OF THE USAHA/AAVLD COMMITTEE ON ANIMAL HEALTH SURVEILLANCE AND INFORMATION SYSTEMS

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Vice Chair: Marie Gramer, MN

Bruce Akey, NY; Debbie Barr, CAN; Karen Beck, NC; Stan Bruntz, CO; Craig Carter, KY; Neville Clarke, TX; Anita Edmondson, CA; Francois Elvinger, VA; Tam Garland, TX; Dorothy Geale, CAN; Sue Goetz, WI; Xingnian Gu, NSW; William Hartmann, MN; John Huntley, WA; Brady James, TX; Annette Jones, CA; Jamie Jonker, VA; Elizabeth Lautner, IA; Donald Lein, NY; Francine Lord, CAN; Janet Maass, CO; Kevin Maher, IA; Rodger Main, IA; Michael Martin, SC; Michael McGrath, IRE; James McKean, IA; Roger Parker, TX; Andres Perez, CA; Barbara Porter-Spalding, NC; Tom Ray, NC; Emi Saito, CO; Mo Salman, CO; A. David Scarfe, IL; Irene Schiller, CHE; Jack Schlater, IA; Dan Sheesley, DC; David Smith, NY; Katie Steneroden, CO; John Stevenson, KY; Patricia Stonger, WI; Patrick Webb, IA; Steve Weber, CO; Nora Wineland, MO.

The Committee met on October 21, 2012 at the Greensboro Sheraton Hotel, Greensboro, North Carolina, from 3:00 - 6:00 p.m. There were 55 members and guests present.

Committee Business

Dr. Lisa Becton opened the meeting and welcomed attendees to the meeting. She first called for new business and new resolutions.

Editors Note: The USAHA Board of Directors approved the amendment of the report to strike "Resolution" and replace with "Recommendation" in regards to the establishment of an animal health data standards subcommittee, as noted by strikethrough and underlined insertion in this report.

Resolution Recommendation to discuss: "Establishment of a Standards Subcommittee" SOURCE: USAHA/AAVLD COMMITTEE ON ANIMAL HEALTH SURVEILLANCE AND INFORMATION SYSTEMS. SUBJECT MATTER: ESTABLISHMENT OF AN ANIMAL HEALTH DATA STANDARDS SUBCOMMITTEE. Introduction and explanation on this by Michael K. Martin, DVM, MPH, DACVPM from Clemson Livestock Poultry Health, PO Box 102406, Columbia, SC 29224-2406, email: mmarti5@clemson.edu, talking about the need for data standards that would go on Interstate Certificates of Veterinary Inspection (ICVI) and Electronic Certificates of Veterinary Inspections (eCVI). The resolution is requesting that a subcommittee must be established to establish data standards and that USDA should assign expert people on the committee. Francois Elvinger (Virginia-Maryland Regional College of Veterinary Medicine) made a motion to approve a subcommittee formation. Motion was seconded by Mo Salmon (Colorado State University). Discussion on whether it should be called a subcommittee vs. a Task Force. Task Force is short term (in general) and subcommittee is long lasting, perennial and continual. Michael K. Martin (Clemson University) thinks it should be a long standing subcommittee. NOTE that the Northeast District of the USAHA strongly supports this ~~resolution~~ recommendation as well. Motion was approved to form a subcommittee on Data Standards. Mo Salmon moved to accept the Resolution as Written and Francois Elvinger seconded. Motion was approved to accept the Resolution as Written. Vote was unanimous to accept the Data Standards Subcommittee ~~resolution~~ recommendation.

Resolution

State Animal Health Lab Messaging Service (SALMS). Introduction / explanation of this by Bruce Akey of Cornell. SALMS will be a router that will allow messaging electronically to connect laboratories to other laboratories, to National Animal Health Laboratory Network (NAHLN), National Veterinary Services Laboratories (NVSL), Southern Animal Health Organization (SAHO) and clients to transmit results and test requests. Moved to support this resolution by Michael Martin. Seconded by Francois Elvinger. It was noted that the program only costs \$100 per month to Cornell. The resolution was unanimously accepted.

An Update on the Status of the National List of Reportable Animal Diseases (NLRAD) and White Paper

Ellen Kasari

National Surveillance Unit (NSU), USDA-APHIS-VS

The National Animal Health Report System (NAHRS) is a reporting system used by USDA to communicate with stakeholders on OIE diseases and other important disease to animals in the USA. Ellen Kasari provided an overview of NAHRS activities for the year which included: 1) change in people on the NAHRS subcommittee; and 2) overview of the quarterly conference calls. There has been a slight decrease in the number of states that

contribute to the NAHRS. The NAHRS IT may contribute to the reason, as it needs to be updated and will be done. Also some turnover of people that used to report to the NAHRS who have previously been in charge of reporting to NAHRS contribute to this decrease.

Kasari also reported on the status of development of NLRAD development and the White Paper. The white paper was reviewed by the National Assembly, APHIS-VS, and this Committee prior to the meeting. The NLRAD is not meant to replace State lists of reportable diseases. The White Paper on the NLRAD contains an executive summary and List, the Standard Operating Procedures (SOPs) for adoption, maintenance, input, and modification of the list.

A historical overview of the NLRAD was given. This included a proposed list of diseases (mostly from the OIE), case definitions, and reporting mechanisms. The NLRAD White paper went out to many stakeholders (National Assembly, APHIS-VS, Committee members, etc.) and a lot of feedback and support was received. Some feedback suggested to include the tribal nations; questions on how to include wildlife diseases (or not to); questions on whether or not to include the exotic ticks and other vectors that may transmit diseases; questions on authorities that would implement the list or have regulatory implications of the list; questions on laboratory testing that is not done in the state of animal origin (and the authorities for that reporting), and recommendations to include other stakeholders. The case definitions for the NLRAD have been the most challenging to establish. References used to establish the case definitions include: www.fadprep.lim.org for Foreign Animal Diseases; Surveillance plans and their documents for the Regulatory Diseases, and NAHRS Uniform Methods and Rules (UM&R) on the NAHRS website; and public websites for endemic disease definitions. As diseases and host susceptibilities change, the case definitions will change, so NLRAD is a dynamic document. The NLRAD will hopefully be implemented in early 2013. To meet this timeline, these things must be done: the NAHRS UM&R must be incorporated; the reporting criteria need to be established; the web reporting tool has to be up to date; and the IT modifications that are being made need to include the NLRAD. Also, the development of web resources needs to be completed with case definitions available and also training. After the implementation of the NLRAD, the regulatory process will begin with putting or referencing the NLRAD in the Code of Federal Regulations.

Schmallenberg Virus in the EU

Francisco Javier Reviriego Godejo

European Commission (EC) Directorate General (DG) Health and Consumer Protection (SANCO)

Reported in cattle in Germany in August 2011; suspected bluetongue virus (BTV) new serotype coming in - because milk production decrease and cows have fever. Similar complaints were heard in the Netherlands. The Frederich-Loeffler Institute of Germany (FLI) ruled out all previously known viruses, but discovered a new virus – Schmallenberg (after the town that it was first discovered). It was not named after the lead discoverer of the virus because his name was Beer. Schmallenberg virus is a *Bunyaviridae* from *Orthobunyaviruses*, *Simbu* serogroup, Schmallenberg. Almost all EU countries have identified it (Belgium, Luxembourg, France, Netherlands, Germany, Spain, Italy, United Kingdom, and others). It is not known to be zoonotic. Mild transient illness in adults and severe congenital abnormalities in fetuses of sheep, cattle, and goats. The lesions to the fetuses are remarkable but the overall impact is very low. Very few flocks or herds were affected despite the virus being widespread geographically. It spread very quickly, typical of orthobunyaviruses that are spread by insect vectors. In Belgium, many registered calves are born in February, March, and April. In 2008 there was a decrease in calves born presumably due to a BTV outbreak and Schmallenberg, but when it came through in 2011, it did not cause a decrease. Both Germany and Belgium have done seroprevalence studies, the rates of positivity were 60 and 70% respectively. Schmallenberg Virus (SBV) is NOT a reportable disease in the EU so maps and prevalence may not be totally accurate. SBV does not have any trade impacts, not for live animals nor for semen and that is typical for other Orthobunyaviruses. Also it is not an OIE disease and it is NOT a zoonosis. Therefore, there are no trade restrictions. For more information go to <http://ec.europa.eu/food/sbv>. Questions from the audience on SBV – What's going on this year? EC still get reports when it is newly found (like in Finland) but the producers are not reporting any clinical disease. Are there any studies being done on banked sera? Probably. Is there any ongoing screening/testing? There may be a commercial ELISA available but it is not validated and there's really no reason to do that on a non-reportable disease.

Development of Surveillance Programs for Animal Diseases in the EU

Francisco Javier Reviriego Godejo

European Union (EU) Directorate General (DG) Health and Consumer Protection (SANCO)

The layers of the surveillance for animal diseases in EU are: 1) Compulsory (AI all MSs) vs. voluntary; 2) Surveillance. Surveillance is vaguely defined in general in the EU. Is surveillance an early detection system? Is it just monitoring? Is it passive vs. active? Is it a one-time survey or forever? Targeted or Random? Defining Surveillance in the EU is done by going from science to rules, getting the scientific advice and then getting agreement on the rules that especially consider cost-effectiveness and quality assurance. The European Food Safety Authority (EFSA) website has details. An example on how EU animal disease surveillance works is to look at EFSA replying on Bluetongue virus (BTV): 1) EFSA puts out very well detailed (scientific) data on BTV; 2) The Task Force on Animal Disease Surveillance (however) when replying to a BTV was more direct and simple but was able to establish some rules on how to test for BTV; 3) They then go from Rules to implementation and then from implementation to verification. Verification is done by the Reporting and Notification systems (Animal Disease Notification System) and Inspections by the Food and Veterinary Office. In the EU, they now are re-tooling the surveillance so that they can prevent disease (active surveillance) rather than cure disease (reactive surveillance). Prevention is less expensive than curing and eradication. The elements of the Animal Health Law (which is still in draft form) are: 1) early detection and notification; 2) Surveillance principles that are risk-based with caution. However the new concepts of surveillance in the EU have challenges such as: 1) establishment of interactive networks of veterinary services, laboratories, and agriculture sectors; 2) trying to incorporate One Health into the surveillance; 3) trying to deal with antimicrobial resistance information; 4) accommodation of emerging diseases and new threats; and 5) how to get buy in by all the stakeholders (large and small agriculture, pets, etc). Surveillance should be seen as a tool of veterinary services and intended for animal disease management. Surveillance should be appropriately designed so that the sampling can be harmonized, representative, able to address different diseases (endemic, vector borne, emerging), understandable, robust, and adapted for each type of disease. How to sustain surveillance? Establish the priorities and decide who sets those priorities; determine the affordability and decide who should bear the costs of surveillance; and communicate the surveillance system to not only laboratories, scientists and researchers, but also to trading partners and farmers. Additional challenges to surveillance are many. Example: was the surveillance for Avian Influenza (AI) in the EU worth it? No answer provided. Conclusions: Animal disease surveillance is a key element of veterinary policies. We should be aware of the challenges (purpose/objectives, technical/scientific issues, sustainability), and more. Question to Francisco – What is the disconnect between the farmers and the veterinary services on surveillance? Is it because that they have different expectations? Scientists want to prove they are the best researchers and the policy makers don't want to take advice from anyone. What networks are needed? You need to explain the roles and responsibilities to the parties involved. Perhaps if the Animal Health Law is finalized, the veterinarian can visit the farm annually and detect disease earlier. Does he think the EU will ever accept some kind of Avian Flu Surveillance that both US and EU will agree on so that trade will not be interrupted? Perhaps. Can countries in the EU design their own surveillance or will the countries be subjected to the EU Animal Health Law and all that it contains? It seems to vary country by country. EU wants to say that these are just guidelines. Some want to have just the minimum and some want to have very strict detailed rules. What is the vision of animal surveillance in EU regarding animal welfare? In the EU, it has to be less emotional, then perhaps certain events of concern need to be defined, and then you can look at those particular events. What is the EU doing about animal ID and traceability? EU is convinced registration of holdings and identification of animals is important to control disease. This is especially true in Foot and Mouth Disease (FMD) outbreaks because demonstration of freedom from FMD and tracebacks, etc., are impossible without animal identification (ID). EU has registration and ID of all animals in the entire EU either at the animal level, lot level, or premise level.

Premise ID Number (PIN) Tag Pilot

Dr. Patrick Webb
National Pork Board

Pillars of the swine health infrastructure are: 1) pre-harvest traceability; and 2) comprehensive surveillance. A swine health infrastructure is beneficial and is proven by the \$55 per head profit occurring currently because the U.S. is able to export pork. There are multiple streams to a national surveillance program. The Premises Identification Number (PIN) Tag pilot program is key for that. So, the program takes sows from the breeding farms that are going into the market for harvest, and identifies the sows. This is being done in Iowa, Illinois, Indiana, Texas and Minnesota. The Objectives of PIN are: 1) test the components of a risk-based targeted surveillance approach in the harvest stream; 2) update premises repositories; and 3) present the findings at the 2012 USAHA Meeting. A PIN is assigned by the USDA and is the US assigned number for that premise of hogs. So, there are official tags now designed for sows going into harvest channels and the tag includes a barcode with

the PIN but room on the front of the tag for state and animal IDs. The PINs are kept in the USDA and State Repositories. The project works like this ---- the sow goes to harvest with her PIN tag in. The sample from her and her tag go to the lab. The tag is scanned. If she is from a county where there are feral hogs, then the sample would be then disease tested. So, a decision is made there on whether to test or not and the feedback to the state level is not only on the disease testing but also on what farms are active in your state and are breeding pigs. This allows more conservation of resources so that you are only working with active farms. Challenges – the cost is a little more for the tag because of that bar code. Sometimes it is difficult to get premises location information. There's debate on whether to go with a local ID (LID) or a premise identification number (PIN). The future intent is to do this on the growing pig side, so that when there is an outbreak, all the at-risk sites show up accurately. Then are those sites part of secure pork supply? Do they have traceability and biosecurity, and is there a negative disease status that can be established so that all those things can happen and pigs can move? Questions to Webb: Are the tags durable? Yes. Is the readability of barcodes long lasting? Yes, about 93% of the time and that will be improved by changing tag color to white, orange, or yellow. Is the PIN linked to Global Positioning Systems (GPS) coordinates? Yes. How do we propose to deal with feral swine? Increase hunting, keep market domestic commercial swine indoors.

USDA-Animal and Plant Health Inspection Service (APHIS) National Surveillance Unit (NSU) overall surveillance update: Status of database and implementation

Ellen Kasari

USDA-APHIS-VS-NSU

What has NSU been doing this past year? Key initiatives include NLRAD; Comprehensive and Integrated Surveillance (e.g. Sow PIN Tag Pilot Project); National Animal Health Surveillances System (NAHSS) Business Process Improvement (an APHIS-wide initiative to make it faster and cheaper to deliver products and services to agency customers. As a part of this, NSU used a six-sigma approach and bovine brucellosis surveillance was the case study to learn those concepts); Enhanced Passive Surveillance (EPS) Swine Slaughter condemnation monitoring expanded; Erysipelas collaboration with swine industry; EPS Pilot Project (a collaboration with Texas, New Mexico, and Arizona); Development of EPS plans and processes (for example in cattle); Clinical practitioner observational data; Slaughter condemnation monitoring; Data management, how to use that; Pilot Project implementation; Market monitoring; Revised surveillance plans (Notifiable avian Flu); and New Surveillance Plans (Bovine Tuberculosis). NSU also released several surveillance activities and reports. Routine reports include: Cattle - bovine spongiform encephalopathy; Sheep - scrapie, Avian - Flu; Swine - classical swine fever, pseudorabies virus, influenza; Equine - arbovirus activity, equine infectious anemia, and more. National Animal Health Reporting System (NAHRS) Management Reports include Steering committee communications, Annual Report, OIE reporting and more. A Swine surveillance meeting was held August 2012 and resulted in 35 action items. Disease case definitions were developed for NLRAD and Schmallenberg virus. National Surveillance Unit (NSU) Published a manuscript "National Animal Health Surveillance Return on Investment." Preventative Veterinary Medicine 105 (2012), 265-270. NSU did an analysis of caudal fold test (CFT) performance standards for TB. NSU assisted with the Development of Surveillance Information Technology. NSU developed business processes for useful surveillance data and information management. This included data standards and much more. Questions for Ellen Kasari on NSU activities. Did NSU look at this committee's paper from years ago and look at cattle brucellosis with USAHA/AAVLD Committee on Animal Health Surveillance and Information Systems (CAHSIS) recommendations on cattle *brucella*? Probably, but details were not available. Did the CFT evaluations include the EU findings? No, but the USA findings will be shared.