Emergency Management Response System
Written by Sherrilyn Wainwright, DVM, MPH, CADIA

The Emergency Management Response System (EMRS) is a web-based Lotus Notes application designed to automate many of the tasks routinely associated with animal disease investigations as well as animal disease and disaster-related emergencies This system has a wide range of capabilities including routine reporting of foreign animal disease (FAD) investigations; state specific disease outbreaks; surveillance and control programs; classic national animal health emergency responses; and natural disasters involving animals. It is also structured for use in the Incident Command System. The EMRS was developed by the Center for Epidemiology and Animal Health (CEAH) in conjunction with Emergency Management (EM), Veterinary Services' (VS) laboratory officials, regional and area officials, epidemiologists and FAD diagnosticians (FADDs).

One use of the EMRS is for VS Federal and State FADDs, the laboratories, and animal health officials to document, manage, and communicate activities and findings while conducting routine foreign animal disease investigations. Data variables gathered during these investigations include the premises identification number, the referral control number, address of the premises under investigation, owner contact information, reason for initiating the investigation, primary species involved, type of operation, clinical and necropsy findings, quantity and types of samples collected, receiving laboratory, laboratory test results and interpretations, and a list of differential diagnoses identified by the FADD from the clinical and epidemiological assessment. The EMRS also documents the quarantine and case diagnosis status of the premises under investigation.

Secondly, the EMRS is used as a vital management tool for VS during an animal disease or natural disaster emergency response. The EMRS can be used for local emergencies involving small focused responses, targeted surveillance, local or national surveys, and documentation of movements of animals, animal products and people with potential disease exposure, including tracing these from one premises to the next. One of the primary functions of EMRS is to manage national emergency responses involving thousands of premises in multiple States and the Federal, State and contractual personnel required to respond to the emergency. Data variables collected, in addition to those collected for the routine FAD investigations, include the administrative information mentioned above and information of items and animals appraised, euthanasia and disposal methods and counts, cleaning and disinfection details, and movement permitting information. The Task database (one of the six database components within EMRS), is designed to track other tasks such as meetings and protocols. The Look-up, Help and Suggestions Databases operate 'behind the scenes' and include reference lists, drop down menus, links to instruction manuals, and opportunities to provide suggestions to the EMRS Team.

The primary function of the EMRS is to manage and document animal disease investigations and associated administrative and task activities through the use of specific inter-related forms. For example, in the Administrative database, specific forms include employee profiles that maintain home, work and field contact information; staff requests issued during an incident; personnel orders; tours of duty; and training and work assignments. The employee profile information is linked to tasks the employee has been assigned in the

investigation database. A time-saving feature of EMRS includes the capability to upload specifically-formatted spreadsheets containing lists, such as lists of equipment and vehicles, into the Administrative database. The equipment and vehicles would then be available in the database to select and assign to individual personnel, who are included in the database by their employee profile. Another operational component of EMRS is the Geographic Information Systems (GIS) Mapping module, using ESRI ArcIMS, that delivers dynamic maps and GIS data and services via the Web. The GIS Mapping Module is directly linked to the EMRS database which allows for decision-makers to create on-the-fly, dynamic maps of outbreak areas using real-time premises data entered into the Investigation database.

The EMRS system was first used to manage the 2002 low pathogenic avian influenza task force in Virginia. The EMRS has progressed significantly since then by supporting VS emergency responses for the 2002-2003 California exotic Newcastle disease (END) task force, the December 2003 Washington bovine spongiform encephalopathy incident, three avian influenza surveillance activities in 2004 (two in Texas and one in Washington State), and the 2004 Southwestern vesicular stomatitis outbreak. Since 2003, the financial unit in the EMRS Administrative Database has been used specifically to assist APHIS-International Services with the financial activities of the MUP (MedFly) Program in Mexico and is currently being used to track the national BSE surveillance program's financial activities.

 The EMRS was the first system to implement a unique Premises Identification (Prem ID) system that is now being integrated into other Veterinary Services database applications. This was initiated during the 2002-2003 California END task force. This year, the Prem ID system was moved from the EMRS into the National Animal Identification System (NAIS). A link is provided in EMRS, on the Investigations Database Welcome Page to NAIS, to validate premises addresses and retrieve a unique Prem ID. All VS Program database systems handling data from activities performed on premises are using the same Prem ID system in NAIS, including the Generic Data Base (GDB), BSE surveillance system, and chronic wasting disease (CWD) surveillance system.

The EMRS enables veterinarians, epidemiologists and emergency response management personnel to respond more quickly to changes in emergency response dynamics and deliver accurate and timely information to the decision makers, government institutions and the public. It continues to be a work in progress, but has come a long way since its inception. Many of the enhancements to EMRS have been made from suggestions provided by the users including those in the field, area and regional offices, State Departments of Agriculture, laboratories, APHIS headquarters and from other stakeholders who have identified their needs during use of the EMRS in routine animal disease investigations, as well as in emergency responses and surveillance activities. It is truly an integrated Veterinary Services effort.

Links for more information and to log into EMRS can be found at the following websites:
the public APHIS web page – http://emrs.aphis.usda.gov
or the Inside APHIS web page – http://inside.aphis.usda.gov/ep/emrs.html
Please feel free to email our Lotus Notes email address or call if you have questions.
Fred Bourgeois: 318-288-4083 and Sherri Wainwright: 970-494-7318
Co-Leaders for the Emergency Management Response System