

Master of Public Health Field Experience Report

RABIES EXPOSURE PROTOCOL UPDATE, EMERGENCY SUPPORT FUNCTION 11 RESOURCE DETERMINATION, AND MASS TUBERCULOSIS SCREENING FOR JOHNSON COUNTY, KANSAS

by

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submitted in partial fulfillment of the requirements for the degree

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2015

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KEYWORDS: RABIES, RABIES EXPOSURE, EMERGENCY SUPPORT FUNCTION 11,
DISASTER RESOURCES, TUBERCULOSIS, TUBERCULOSIS MASS SCREENING

Abstract

The modernized world has been able to reduce the prevalence of rabies through increased vaccination of pets, public education, and bait vaccination programs targeting wild animals. Though not the public health issue it once was, human rabies infections are still a concern and possible exposures are monitored closely in Johnson County, Kansas. The Johnson County Department of Health and Environment determined there was a need to revise the current rabies exposure protocols to assist health officers during their investigations and to encourage the completion and proper submission of rabies exposure forms.

Protecting people after a man-made or natural disaster or emergency has always been a concern within the emergency management community, but the need to account for animals during these events has become a major focus. After recent instances of people losing their lives rather than leave their pets during a disaster, planning for humans *and* animals is now a requirement in emergency management. But before this planning can begin, the determination of available resources is critical in order to convey what must be procured. Johnson County officials found their resource database was outdated and were anxious to remedy that problem.

Tuberculosis is an infectious disease that, like rabies, is not prevalent in developed countries but is still closely monitored. Near the end of the Field Experience, a Johnson County high school student was diagnosed with active tuberculosis. The Johnson County Department of Health and Environment thoroughly investigated this incident, including a mass screening at the student's school; activities included planning, performance, and review of the screening event.

Activities applicable to the core and emphasis area competency requirements for the Master of Public Health Infectious Diseases/Zoonoses program are described. Challenges

encountered during the Field Experience are listed and described. The advantages and disadvantages of having a veterinarian conduct the Rabies and ESF 11 Projects is discussed. Key concepts of public health practices encountered during the Field Experience are also examined. Important documents produced or utilized during the Field Experience are included in appendices to the report.

Table of Contents

List of Figures	3
List of Tables	4
Definitions.....	5
Acronyms	7
Chapter 1 - Scope of Work	9
Scope of Work	9
Background on Johnson County Department of Health and Environment.....	11
Background on Rabies	13
Background on Emergency Support Function 11	19
Background on Tuberculosis	24
Chapter 2 - Learning Objectives	31
Learning Objectives	31
Activities Performed	32
Rabies Project	32
ESF 11 Project	38
Tuberculosis Screening.....	40
Products Developed	41
Rabies Project	41
ESF 11 Project	46
Tuberculosis Screening.....	46
Chapter 3 - Core Competencies and Emphasis Area Competencies	47
Core Competencies	47
Biostatistics	47
Environmental Health Sciences	47
Epidemiology	47
Health Services Administration	48
Social and Behavioral Sciences	48
Emphasis Area Competencies	49
Pathogens/Pathogenic Mechanisms	49

Host Response to Pathogens/Immunology	49
Environmental/Ecological Influences	50
Disease Surveillance/Quantitative Methods	50
Effective Communication	50
Chapter 4 – Observations and Conclusions	52
Challenges Encountered in Government-based Work.....	52
Advantages of Being a Veterinarian.....	54
Public Health Practices	56
References.....	59
Appendix 1 – Johnson County Animal Control Contact List	61
Appendix 2 – Compilation of Animal Codes	62
Appendix 3 – Johnson County Rabies Exposure Protocol	93
Appendix 4 – Rabies Exposure Forms.....	103
Appendix 5 – KDHE Rabies Exposure Assessment Algorithm	107
Appendix 6 – Provoked Animal Bites and Rabies Exposure	108
Appendix 7 – Rabies Risk Level Assessment.....	109
Appendix 8 – Rabies Brochure	110
Appendix 9 – ESF 11 Resource Survey.....	118
Appendix 10 – ESF 11 Contact List	122
Appendix 11 – Tuberculosis Mass Screening Briefing Materials	124

List of Figures

Figure 1.1 Confirmed Rabies Positive Animals in Kansas, 2014	Error! Bookmark not defined.	5
Figure 1.2 Estimated Tuberculosis Incidence Rates, 2010		25

List of Tables

Table 1.1 Laboratory Confirmed Rabid Animals in Johnson County, 2000-2014.....	Error!
Bookmark not defined.5	
Table 1.2 Johnson County ESF 11 Agencies.....	23

Definitions

Animal Control Officer – a government worker responsible for enforcing local ordinances regulating animal ownership and responding to incidents involving animals.

Community Service Officer – a government worker that provides support in crime prevention, investigation, and response where full police powers are unnecessary and assists police officers in upholding law and order.

Centers for Disease Control and Prevention – the United States federal agency dedicated to protecting public health and safety through the control and prevention of known and emerging diseases, injuries, and disabilities.

Johnson County Department of Health and Environment – Johnson County agency that manages various programs and activities to improve the health of residents and the environment.

Latent – lying dormant or hidden until circumstances are suitable for development or manifestation.

Rabies Exposure – introduction of rabies virus particles into a bite wound, open cuts in skin, or onto mucous membranes from saliva or other potentially infectious material such as neural tissue.

Reservoir – a population of animals which is chronically infested with the causative agent of a disease and can infect other populations.

Rabies Variant – a subtype of the rabies virus that is typically found in a specific animal (e.g., raccoon rabies virus variant, bat rabies virus variant).

Screening – a strategy used in a population to identify an unrecognized disease in individuals without signs or symptoms. This can include individuals with pre-symptomatic or unrecognized symptomatic disease.

Stafford Act – Robert T. Stafford Disaster Relief and Emergency Assistance Act, PL 100-707, Was signed into law November 23, 1988; it amended the Disaster Relief Act of 1974, PL 93-288. This Act constitutes the statutory authority for most Federal disaster response activities especially as they pertain to FEMA and FEMA programs.

Throughput – the number of people that enter and go through a system in a given amount of time.

Tuberculin – a sterile protein extract from cultures of tubercle bacillus, used in a test by

hypodermic injection for infection with or immunity to tuberculosis, and also formerly in the treatment of the disease.

Tuberculosis Disease – the presence of active TB bacteria; people with TB disease are sick and may be able to spread the bacteria to people they spend time with every day.

Tuberculosis Infection – the presence of TB bacteria in the body without active infection (latent); people with (latent) TB infection do not feel sick, do not have any symptoms, are not infectious, and cannot spread TB bacteria to others.

Acronyms

ACIP – Advisory Committee on Immunization Practices
ACO – Animal Control Officer
AVMA – American Veterinary Medical Association
CDC – Centers for Disease Control and Prevention
CHAP – Community Health Assessment Process
CSO – Community Service Officer
DVM – Doctor of Veterinary Medicine
ESF – Emergency Support Function
FAD – Foreign Animal Disease
FEMA – Federal Emergency Management Administration
ICS – Incident Command System
IGRA – Interferon Gamma Release Assay
JCDEM – Johnson County Department of Emergency Management
JCDHE – Johnson County Department of Health and Environment
JFO – Joint Field Office
JoCART – Johnson County Animal Response Team
KCVMA – Kansas City Veterinary Medical Association
KDA – Kansas Department of Agriculture
KDHE – Kansas Department of Health and Environment
KSVDL – Kansas State Veterinary Diagnostic Laboratory
LEED – Leadership in Energy and Environmental Design
NASPHV – National Association of State Public Health Veterinarians
NIMS – National Incident Management System
NRCC – National Response Coordination Center
NRF – National Response Framework
PEP – Post-Exposure Prophylaxis
RRCC – Regional Response Coordination Center
TB – Tuberculosis
TST – Tuberculin Skin Test

USDA – United States Department of Agriculture

WHO – World Health Organization

WIC – Women, Infants, and Children

Chapter 1 - Scope of Work

Scope of Work

This Master of Public Health Field Experience occurred between January 5, 2015 and March 26, 2015 and was, initially, divided into two projects that the Johnson County Department of Health and Environment had wanted addressed for some time. The first project was to review and, if needed, update current rabies statutes and procedures in Johnson County. The second was to develop a list of available resources in the event of an animal-related disaster or emergency within Johnson County. Near the end of the Field Experience, a student at a local high school was diagnosed with tuberculosis; this necessitated a mass tuberculosis screening of exposed students and staff. The opportunity arose to observe and participate in many of the activities associated with the screening.

The JCDHE Disease Containment Division wanted the rabies statutes and procedures reviewed because they did not feel they were receiving proper notification or complete information about possible rabies exposure cases. Upon meeting with members of the Disease Containment Division, it was determined that there was a need to make the rabies exposure investigation process easier to complete for all parties involved—including animal control officers, the JCDHE Environmental Division (who oversees specimen submittal for rabies testing), veterinarians, and hospital staff. Some agencies did not communicate well, or at all in some cases, with JCDHE Disease Containment staff causing concern that some cases may not be investigated or monitored properly. There was a need for documents and forms that contained all of the information necessary to properly document, monitor, and file exposure cases, but that were also easily understood and convenient to fill out by officers and/or agencies. Consistency was also a concern because three different report formats were received by the Disease

Containment Division from various agencies in the last year. Seeking input from area animal control officers, veterinarians, and associated agencies was desired in order to promote communication prior to and adaptation of changes after the project was completed.

Conversations with some animal control officers raised questions about how they should handle certain animal bite or rabies exposure cases. Deciding if an animal bite constituted a rabies exposure was the most common question. One animal control officer had concerns about a veterinarian using rabies titers to determine case management after an animal bit a person. Addressing these concerns would show officers their input was taken seriously.

An animal-related disaster or emergency is contained within the Emergency Support Function (ESF) 11 emergency management plan. The Johnson County Extension Office (in cooperation with the Johnson County Department of Emergency Management, Johnson County Animal Response Team, and Code 3 Associates) last surveyed available resources in 2010, so an update of resources was due. To facilitate an efficient communication of resources, a new fillable PDF survey to distribute to stakeholders was requested. An updated contact list for emergency management and emergency response personnel was also requested. Because of the ongoing nature of such a project, the expectation was that the project would be started and the managing agencies would continue the work.

After a high school student was diagnosed with active tuberculosis disease, the Johnson County Department of Health and Environment consulted with the Kansas Department of Health and Environment to determine the steps needed to evaluate the situation. The decision was made to conduct a mass screening event at the high school to evaluate exposed students and staff. The event was organized to minimize the disruption of daily school activities, process and test a large number of people in a short time period, and properly document the testing of each individual.

After receiving the surprising number of positive test results, both departments compiled and evaluated the data and began planning how to treat those infected and plan for another mass screening event to be held two months later.

Background on Johnson County Department of Health and Environment

This Master of Public Health Field Experience was completed at the Johnson County Department of Health and Environment, which is in the Kansas City, Kansas metropolitan area. According to the US Census Bureau (US Census Bureau 2015), in 2013 the population of Johnson County was 566,933 with age group distributions of 25.6% under 18 years old, 62.2% 18-65 years old, and 12.2% over 65 years old, median age was 36.5; the Kansas City metropolitan area population was approximately 2,035,000 in 2010. Johnson County is not a racially diverse county as 87.8% of residents were White alone, 7.4% Hispanic or Latino, 4.9% Black or African American alone, 4.6% Asian alone, 2.3% two or more races, and 0.4% American Indian and Alaskan Native alone. The median household income from 2009-2013 was \$74,717 and only 6.5% of persons were below the poverty level. During the same time period, 95.6% of persons over age 25 possessed an education level of a high school diploma or greater. In 2000, only 7% of the population did not have health insurance coverage, and only 6% of children under 18 were without coverage. According to the Johnson County Government website (jocogov.org), there are twenty cities inside 477 square miles of land, with six hospitals, 66 nursing homes, 340 parks, and 1522 restaurants operating.

As indicated by the name, the Johnson County Department of Health and Environment is divided into two divisions, Health and Environment. These departments were separate entities in the past, but were combined in 2012 to form a single department when government budget cuts were common. Both divisions provide services related to the Rabies Project. The Health

Division has two locations: the Olathe Clinic Office, located at 11875 South Sunset Drive, Suite #300, Olathe, Kansas 66061 (Phone: 913-826-1200); and the Mission Clinic Office at 6000 Lamar Avenue, Suite #140, Mission, Kansas 66202 (Phone: 913-826-1200). The Environment Division Office is located at 11811 South Sunset Drive, Suite #2700, Olathe, Kansas 66061 (Phone: 913-715-6900) in a new LEED-Certified building.

For the Emergency Support Function 11 Project, the departments involved were the K-State Research and Extension Johnson County Office at 11811 South Sunset Drive, Suite #1500, Olathe, Kansas 66061 (Phone: 913-715-7000) and the Johnson County Department of Emergency Management located at 111 South Cherry, Suite #100, Olathe, Kansas 66061 (Phone: 913-782-3038).

The JCDHE Health Division offers 12 different services to residents of Johnson County. The two collaborative services for this project were Disease Reporting, which monitors and reports on diseases including influenza, pertussis, varicella, and rabies, and Public Health Emergency Preparedness (PHEP), which is responsible for planning and preparing for bioterrorism or public health threats, maintaining the Dispense Assist program for public health emergencies, and providing information and links to numerous resources to aid families in planning for disasters or emergencies. The remaining health services are Adolescent Health, Child Care Licensing, Community Health Assessment Process (CHAP), Family Planning, Immunizations, Influenza, Safe Kids Johnson County, Senior Services, Walk-In Services, and Women, Infants, and Children (WIC). The JCDHE Environment Division has 8 official services: Air Quality, Environmental Audits, Green Business Program, Hazardous Materials, Recycling, Septic Systems, Solid Waste, and Swimming Pools. The Environment Division was

consulted because they accept animal specimens from ACOs/CSOs, veterinarians, and the general public and submit the specimens to the KSVDL for rabies testing.

The Field Experience was initially planned with Liz Ticer as the mentor for the rabies and ESF 11 projects. Liz served as Public Health Emergency Preparedness Coordinator and Program Manager for Johnson County from 2005-2015. Prior to that, she was the Public Health Emergency Planner for Wyandotte County from 2003-2005. In those roles, she participated in 2 federal disaster deployments, 3 state disaster deployments, and 2 local emergency responses with full ICS activation. Liz accepted the role of Emergency Management Coordinator for Grapevine, Texas in February 2015, so her supervisor, Nancy Tausz, MPH, took over the responsibility of mentor for the remainder of the Field Experience. Nancy has been the JCDHE Disease Containment Division Director since 1999 and had roles as Immunization Program Manager and Immunization Program Staff Nurse prior to her appointment as Director. As Disease Containment Division Director, Nancy oversees 20 employees and 6 programs: Disease Containment (reporting and investigation), Outreach Nurse, Immunization, Public Health Emergency Preparedness, Tuberculosis, and Refugee Assessment.

Background on Rabies

Rabies is a single-stranded, bullet-shaped RNA virus from the family *Rhabdoviridae*, genus *Lyssavirus* that infects mammals and has multiple species-associated variants. Rabies was first described in 2300 BC Egypt and gradually spread across the world, reaching North America in the 1700's. The virus is considered endemic (present in low numbers in certain geographic locations) across the United States in a few species like raccoons, bats, skunks, and foxes. According to the World Health Organization (World Health Organization 2013), as many as 55,000 people die from rabies infections each year, but there are only 1-2 deaths per year in

the United States. Children under the age of 15 comprise 40% of all rabies exposures, most of which are from bites by rabid dogs. Though rabies is found around the world, more than 95% of deaths occur in Africa and Asia. The number of people actually exposed to rabies is difficult to assess, but an estimated 15 million people receive post-exposure prophylaxis around the world each year. Unfortunately, the case fatality rate for rabies is nearly 100% if an infection develops, making it the most deadly of all known viruses.

In Johnson County, animal control officers and veterinarians often submit suspected rabid animal specimens to the Kansas State Veterinary Diagnostic Laboratory (KSVDL) in Manhattan, Kansas for rabies testing. Specimens are also submitted by the general public and may be animals that were found in their yard or home, animals that their family or pets may have had contact, or even animals just found dead. The number of animals submitted for rabies testing varies from year to year, but usually ranges from 60 to 120 animals. The last confirmed rabid animals, in Johnson County, were 3 bats in 2012. Statistics for specimen submittals and positive rabies cases are shown in the following table and figure. The last confirmed case of rabies in a person in Kansas was a young boy that was bitten by an infected dog in 1968.

Table 1.1. Laboratory Confirmed Rabid Animals in Johnson County, 2000-2014

(From <http://www.jocogov.org/sites/default/files/documents/DHE/PBH/Rabies%20Brochure%20March15.pdf>)

Year	Specimens Submitted	Positive Results	Animal Species	Gardner	Leawood	Lenexa	Olathe	Overland Park	Prairie Village	Spring Hill
2000	69	3	Bat		2		1			
2001	66	1	Bat					1		
2002	89	3	Bat				1	2		
2003	63	1	Skunk	1						
2004	74	2	Bat		1			1		
2005	101	1	Bat			1				
		4	Skunk				3			1
2006	111	1	Bat			1				
2007	121	4	Bat		3	1				
2008	124	1	Bat					1		
2009	111	2	Bat		1			1		
2010	95	1	Bat					1		
2011	63	0								
2012	68	3	Bat					2	1	
2013	63	0								
2014	94	0								

Confirmed Positives in Kansas 2014

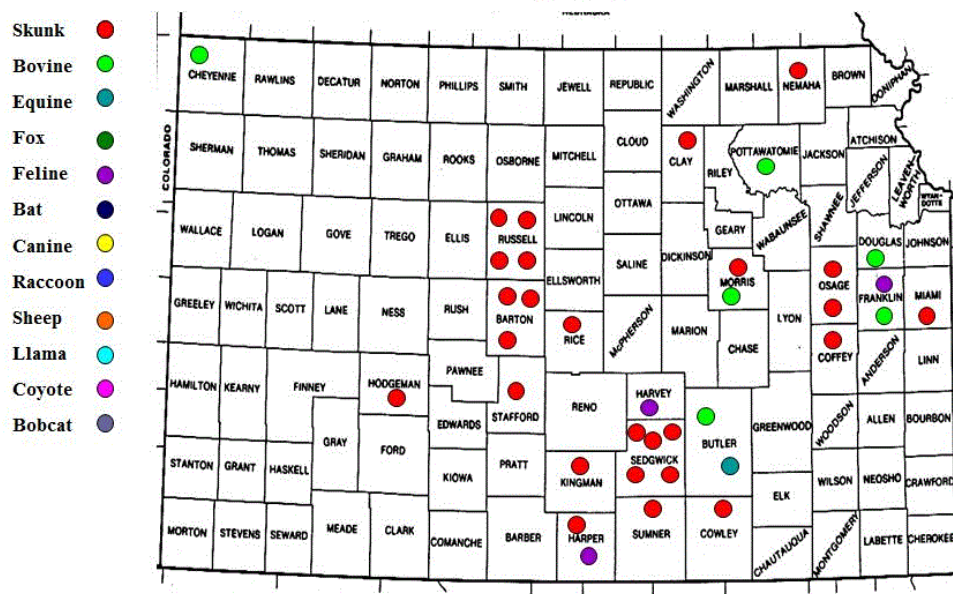


Figure 1.1. Confirmed Rabies Positive Animals in Kansas, 2014

(From http://www.ksvdl.org/images/rabies-maps/KS14_map.gif)

The rabies virus is, typically, introduced via the saliva of an infected mammal into a bite wound of the victim. Rarely, saliva or cerebrospinal fluid containing the virus can cross mucous membranes or broken skin to cause infection. The virus then replicates in local tissue, usually muscle, for several days to several months before traveling up nerves in the peripheral nervous system to reach the brain. The rapid replication of virus in the brain leads to inflammation and subsequent clinical signs. The virus then spreads to the salivary glands to complete the cycle of infection. In human rabies infections, the initial clinical signs are similar to the flu—weakness, fever, headache—then soon progress to neurologic signs including anxiety, confusion, hallucinations, and aggression. The classic signs of hypersalivation, hydrophobia (fear of water), and difficulty swallowing are results of the infection causing damage to the salivary glands. In the final stages of disease, the infection can cause the “furious” form associated with hyperexcitability that progresses to the “dumb” form of generalized paralysis before death (World Health Organization 2013).

There were many myths and theories about the transmission and treatment of rabies, but little was known until improved technology allowed better study of the disease. In 1804, the German scientist Zinke was able to prove the virus was spread through the saliva of infected animals (Jackson 2013). The first rabies vaccination in humans was successfully performed by Louis Pasteur in 1885. As described by Rino Rappuoli (Rappuoli 2014), Pasteur used segments of rabbit spinal cords that were inoculated with the rabies virus from rabid dogs and passed the virus from rabbit to rabbit 20-25 times to produce a consistently virulent strain of the rabies virus. These rabbit spinal cord segments were then exposed to increasing lengths of dry air to decrease the virulence of the rabies virus. The exposed individual was then inoculated each day

with dried spinal cord segments that were dried for shorter lengths of time. This process was used until modern vaccines were developed in the mid-20th century.

As knowledge of the rabies virus, and technology, improved in the early to mid-1900s, preventive actions also improved. In the U.S., vaccination programs and public education have been most effective and have shifted the primary rabies source from dogs in the mid-20th century to wildlife today. Currently, vaccination of pets is required by state and local laws across the United States. Techniques using vaccine-containing baits have allowed government agencies to vaccinate some of the reservoir species (animals in which the virus maintains an indefinite presence) like skunks and foxes. These programs have had varied success, but continue to improve. Public education has been promoted through organizations like the CDC, local health departments, and the American Veterinary Medical Association. People are informed about the disease and ways to help minimize exposure, such as: keep your pets vaccinated; avoid animals that are acting abnormally, especially nocturnal animals active during the day; avoid contact with bats under any circumstance; and, seek medical attention immediately if there is potential exposure.

Currently, when a person may have been exposed to rabies, they undergo various treatments depending on the circumstances of their exposure; these are outlined in the CDC Advisory Committee on Immunization Practices report *Human Rabies Prevention, United States 2008*. Thorough wound cleansing, preferably with virucidal povidone-iodine, is the first step to physically remove the virus from the tissue. A tetanus vaccine is often administered to prevent that bacteria from causing an infection. Rabies immunoglobulin is then injected into and around the wound(s) when anatomically possible, otherwise, it is injected intramuscularly at a distant site. Finally, a series of four rabies vaccinations are administered intramuscularly, in the deltoid

for adults and thigh for children, on Days 0, 3, 7, and 14 (Day 0 indicates the day that treatment is initiated). Previously vaccinated individuals receive only two vaccines on Days 0 and 3, and no immunoglobulin is administered. Immunocompromised individuals receive a fifth rabies vaccination on Day 28 and have their rabies titers monitored to evaluate their response.

Because of the deadly nature of the virus, if an infection does develop treatment is usually palliative rather than curative. There have been a few instances of individuals recovering from an active rabies infection, but this is very rare and still not well understood. One patient survived after being placed in a medically-induced coma and treated with numerous anti-viral agents; this came to be known as the “Milwaukee Protocol” (Franka 2011) and is under debate about its usefulness in treating rabies infections. Other patients have survived without extravagant actions causing speculation that numerous factors (including the virulence of the rabies strain, the amount of virus introduced to the victim, and the ability of the victim’s immune system to mount an adequate response) determine the outcome of an infection.

The future of rabies research will focus on several poorly understood aspects of the virus. One is to identify what differences in the rabies variants determine the pathogenicity of the virus and how that relates to treatment. This would help guide the course of treatment for patients based on the specific characteristics of the virus rather than a “shotgun” approach to care. Another area of research is the development of inexpensive and effective vaccines for use in mass vaccination programs of reservoir species. Reducing the number of animals that harbor the virus would substantially reduce the number of human infections each year, especially in undeveloped countries. Finally, some theorize bats may have been the first mammal to carry the rabies virus and may be an underestimated reservoir for the virus. Therefore, gaining a better

understanding of the rabies virus in bats could be a key component in eradicating the disease once and for all.

Background on Emergency Support Function 11

In the years following the terrorist attacks on the World Trade Center in New York City on September 11, 2001, President George W. Bush issued the initial Presidential Policy Directive 8: National Preparedness (PPD-8) to guide all levels of government, as well as all citizens, to be prepared for various threats and hazards that pose a risk to US security. The latest National Preparedness Goal (Department of Homeland Security 2011) defines success as: “A secure and resilient Nation with the capabilities required across the whole community to prevent, protect against, mitigate, respond to, and recover from the threats and hazards that pose the greatest risk” (p. 1). The core capabilities (prevention, protection, mitigation, response, and recovery) are described within the document and serve as the foundation of the program and are dependent on one another.

As described in the National Preparedness Goal, a key component of success is preparation; this includes preparation by individual citizens, local communities, and national agencies. Initially included in this preparation was planning for “children, individuals with disabilities and others with access and functional needs, diverse communities, and people with limited English proficiency” (p. 3). But after a series of hurricanes devastated New Orleans and other communities in the South, emergency planners realized many people, especially elderly persons, chose not to follow evacuation orders because they did not want to leave their pets behind (Aldrich 2006). Many people are thought to have died because they stayed with their animals. The Pet Evacuation Transportation Standards Act (PETS Act) of 2006, the Post-Katrina Emergency Management Reform Act (PKEMRA) of 2006, and the National Response

Framework (NRF) of 2008 all work together to amend the previous Stafford Act and provide for inclusion of pets in emergency and disaster responses (American Veterinary Medical Association 2015).

The Public Health Emergency Department of the US Department of Health and Human Services (HHS) states, “Emergency Support Functions (ESFs) is the grouping of governmental and certain private sector capabilities into an organizational structure to provide support, resources, program implementation, and services that are most likely needed to save lives, protect property and the environment, restore essential services and critical infrastructure, and help victims and communities return to normal following domestic incidents” (US Department of Health and Human Services 2012). The fifteen Emergency Support Functions address a wide range of functions including Transportation (ESF 1), Emergency Management (ESF 5), Public Health and Medical Services (ESF 8), Energy (ESF 12), and Long-Term Community Recovery (ESF 14). Because each ESF relies on the cooperation of multiple government and private entities, coordinator agencies are identified for each function with primary and support agencies also listed. Pre-determined organizational structures are a necessity to allow efficient planning, performance, and recovery efforts during the chaos encountered during an emergency.

The Emergency Support Function 11 - Agriculture and Natural Resources Annex (Federal Emergency Management Administration 2013) is the national annex created to address five primary functions: provide nutrition assistance; respond to animal and plant disease and pests; ensure the safety and security of the commercial food supply; protect NCH resources (natural and cultural resources and historic properties); and provide for the safety and well-being of household pets. The coordinating agency is the Department of Agriculture, which is also a primary agency along with the Department of the Interior. Since the breadth of resources

covered by this annex is so large, there are eighteen other agencies that serve as support agencies.

The Johnson County ESF 11 - Agricultural, Animal Welfare, and Natural Resources plan (Johnson County Extension Office 2013) is coordinated by the Johnson County Extension Office. The supporting agencies are listed in Table 1.2 and many agencies have responsibilities in both the Foreign Animal Disease and the Animal Welfare functions. As stated in the document, “The purpose of the ESF-11 Agriculture, Animal Welfare and Natural Resources Annex is to establish how agriculture, animal welfare, and natural resource activities will be coordinated to meet the needs generated by disasters affecting Johnson County” (p. 2).

Activities within this mission pertaining to my project are: “Establish and maintain operational awareness of Animal Welfare through direct communications links with operational entities... in the field and/or their appropriate coordinating entities” (p. 5); “Establish and maintain operational awareness of Animal and Plant Disease response through direct communications links with operational units... in the field and/or their appropriate coordinating entities” (p. 5); “Conduct energy and utilities disaster impact and needs assessments, prioritize ESF-11 operational objectives in alignment with the EOC Action Plan, and coordinate ESF-11 county-wide response activities” (p. 5); “Collect and analyze information relevant to ESF-11 and report in WebEOC and EOC documents including EOC Action Plans and Situational Reports” (p. 5); “Receive, manage, & track resource requests for ESF-11” (p. 5); and, “Ensure full coordination of activities with other groups within the EOC to assist in the development and maintenance of a common operating picture” (p. 5).

These activities are further divided into the Animal Welfare Appendix and the Foreign Animal Disease Appendix. Again, the coordinating agency is the Johnson County Extension

Office and, as stated earlier, the support agencies are listed in Table 1.1 with many overlapping agencies. “The purpose of the ESF-11 Animal Welfare Appendix is to establish how animal welfare (household pets, unclaimed animals, service animals, and livestock) response activities will be coordinated to meet the needs generated by disasters affecting Johnson County” (p. 1). Similarly, “The purpose of the ESF-11 Foreign Animal Disease (FAD) Appendix is to establish how FAD response activities will be coordinated in Johnson County” (p. 1).

The Animal Welfare Appendix (Johnson County Extension Office 2013) not only addresses the full range of issues that may be needed during an emergency or disaster response, but also gives Household Animal Pet and Service Animal Support as directed in the Johnson County ESF-6 Mass Care Annex. Issues addressed include service animals, household pets and unclaimed animals (and more specifically, search and collections, emergency sheltering, feeding and care, medical treatment, and reclaiming and reunion), and livestock. The document further explains situations and assumptions, concept of operations, and thoroughly establishes the roles and responsibilities of each agency involved. A list of policies, authorities, and references is provided at the end of the document.

Table 1.2. List of Johnson County ESF 11 Agencies

Coordinating Agency	<u>Johnson County K-State Research and Extension Office</u>
Support Agencies	<u>Food Safety and Security/Natural Cultural and Historical</u> Johnson County Department of Health and Environment Johnson County Museums Johnson County Park and Recreation Johnson County Sheriff's Office <u>Foreign Animal Disease</u> Johnson County Appraiser Johnson County Legal Department Johnson County Park and Recreation Johnson County Planning and Development Johnson County Department of Health and Environment Johnson County Public Works Johnson County Sheriff's Office Jurisdictional Animal Control Officers Jurisdictional Fire Departments Jurisdictional HAZMAT Teams Jurisdictional Law Enforcement Kansas City Veterinary Medical Association Kansas Department of Agriculture Kansas Department of Health and Environment Kansas Department of Transportation Kansas Highway Patrol Johnson County Animal Response Team (JoCART) <u>Animal Welfare</u> Community Animal Shelter Facilities/Volunteer Groups Johnson County Park and Recreation Johnson County Public Works Jurisdictional Animal Control Officers Jurisdictional Fire Departments Jurisdictional Law Enforcement Kansas City Veterinary Medical Association Johnson County Animal Response Team (JoCART)

The Foreign Animal Disease Appendix (Johnson County Extension Office 2013) focuses on the support for animal welfare and natural resources during a foreign animal disease outbreak. The appendix addresses concepts relating to FAD identification and notification, halting of livestock transport, holding sites, and animal disposal measures. The additional sections of the

document (e.g., situations and assumptions, and roles and responsibilities) are similar to the Animal Welfare Appendix.

Background on Tuberculosis

Tuberculosis (TB) is a disease caused by *Mycobacterium tuberculosis* (a rod-shaped, non-motile, slow-growing, acid-fast bacterium) and has caused human illness and death for thousands of years. According to Thomas Daniel (Daniel 2006), modern strains of *M. tuberculosis* may have originated 15,000-20,000 years ago while differences between the six major lineages of the strains began 250-1000 years ago. Egyptian mummies from over 5000 years ago show evidence of skeletal abnormalities attributed to tuberculosis, with recent methods of DNA amplification confirming the findings of *M. tuberculosis*. Symptoms of tuberculosis have been described in ancient India and China, as well as classical Greece (when it was referred to as “phthisis”) and throughout Europe during the middle ages. As expected, understanding and knowledge of tuberculosis was lacking until advancements in science and technology allowed better study in the 1800’s.

The World Health Organization (World Health Organization 2015) indicates that tuberculosis is the second leading cause of death from a single infectious agent, trailing HIV/AIDS. In 2013, 9 million people developed TB disease, of which 1.5 million died. Over 95% of deaths occur in poor or middle income countries; Africa, Southeast Asia, and Western Pacific regions account for the majority of TB cases.

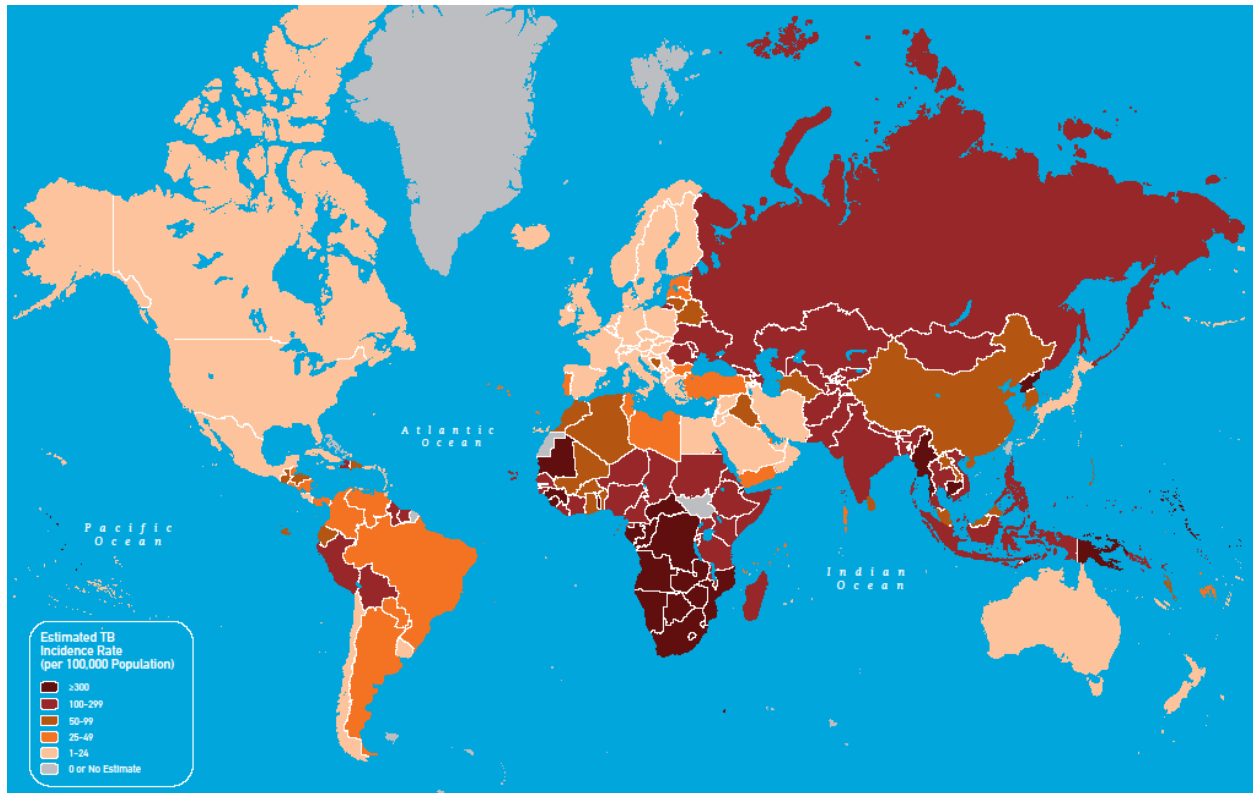


Figure 1.2 Estimated Tuberculosis Incidence Rates, 2010

(Figure from <http://wwwnc.cdc.gov/travel/yellowbook/2014/chapter-3-infectious-diseases-related-to-travel/tuberculosis>, data (as cited by CDC website) from WHO tuberculosis database)

In the United States, tuberculosis is a reportable disease and those infected are closely monitored. From information listed on the CDC TB Fact Sheet (Centers for Disease Control and Prevention 2014), in 2013 there were 9582 TB cases reported in the US with a case rate of 3.0 cases per 100,000 persons. There were 536 deaths attributed to TB in 2011. Kansas Department of Health and Environment (Kansas Department of Health and Environment 2015) statistics from 2012 showed 42 cases reported with a case rate of 1.46 per 100,000 persons. In Johnson County, from 2012-2014 the average number of TB cases was 7.6 confirmed active cases (1.4 per 100,000) and 109 confirmed and probable TB infections (19.2 per 100,000).

Tuberculosis is spread through the air when a person with active TB disease coughs, sneezes, talks, or sings and a person nearby breathes in the airborne bacteria. TB is not spread by sharing food or drink, kissing, toilet seats, or other common daily interactions. A tuberculosis infection can affect any organ in the body, but is found in the lungs in 70-80% of cases. Clinical signs of active tuberculosis pulmonary disease include a prolonged cough (often greater than 3 weeks), coughing up blood (hemoptysis), fever, appetite loss, severe night sweats, and weight loss. Infection can also occur in the lymph nodes, bones and joints, kidneys, bladder, brain and meninges, and the chest wall. According to the CDC (LoBue 2013), only 5-10% of people infected with TB develop active disease. This risk is higher in immunocompromised individuals or those with suppressed immune systems due to medication or stress. Active disease can develop weeks to decades after the initial exposure occurred.

Many scientists and physicians contributed to the advancement of understanding and treatment of tuberculosis. Daniel's article, *The history of tuberculosis*, chronicles many of these advances in a thorough and organized manner. French scientist René Théophile Hyacinthe Laennec was able to correctly explain the pathogenesis of tuberculosis, including both the pulmonary and extrapulmonary forms, and described the physical changes associated with pulmonary disease. Much of his knowledge was learned from performing autopsies on the large number of people that died from TB in Paris in the 1810's. Another Frenchman, Jean-Antoine Villemin, was able to demonstrate, in 1865, that tuberculosis was an infectious disease when he inoculated a rabbit with purulent material from a TB lung abscess and found changes to the rabbit's lungs expected with a TB infection.

One of the greatest advancements in the history of tuberculosis, and medicine in general, occurred on March 24, 1882 in Berlin, Germany. This is the day Hermann Heinrich Robert

Koch gave a presentation to the Berlin Physiological Society regarding the identification of a tubercle bacillus and, better known, his set of postulates defining the criteria for demonstrating an organism is infectious (now known as Koch's Postulates). Years later, Koch isolated tuberculin from tubercle bacilli and determined injections of this substance could serve as a diagnostic tool for tuberculosis. In 1905, Koch was awarded the Nobel Prize for Medicine or Physiology for his work in determining the etiology of tuberculosis.

Working from Koch's initial findings on tuberculin, Austrian pediatrician Clemens Freiherr von Pirquet used intracutaneous injections of diluted tuberculin to help test for TB infections. From 1907 to 1909, he was able to observe and determine that tuberculin reactions in healthy children indicated an inactive (latent is the term he introduced) form of tuberculosis. This use of tuberculin was augmented by the development of a cannulated needle to perform intracutaneous injections by Charles Mantoux in 1908. Tuberculin testing was further improved in the 1930's when Florence Seibert was able to create a purified protein derivative (PPD) from tuberculin that provided consistent levels of reactive material. In 1952, studies by Carroll Palmer and Leroy Bates helped establish normal tuberculin reaction sizes (17 mm) and, a few years later, studies by the World Health Organization, Palmer, and LB Edwards further demonstrated how common latent TB infections were within the United States and the world. Tuberculin skin tests (TST) are still utilized today to help evaluate an individual for latent tuberculosis infections.

Currently, TB infections are diagnosed by a positive tuberculin skin test or a positive TB blood test. A positive result indicates a person has been infected with *M. tuberculosis* but does not distinguish between latent infection and active disease. A positive tuberculin skin test is determined when a skin reaction (swelling or a raised, hard area) is measured 48-72 hours after tuberculin has been injected intradermally in the forearm. TB blood tests utilize interferon-

gamma release assays (IGRAs) to measure how an individual's immune system reacts to TB bacteria. A positive result indicates the individual is infected with TB bacteria. There are two approved IGRAs approved by the FDA in the United States, QuantiFERON®-TB Gold In-Tube test (QFT-GIT) and T-SPOT®.TB test (T-Spot). IGRAs are preferred if an individual may have received a bacilli-Calmette-Guérin (BCG) vaccine or may have difficulty returning for the follow evaluation after a TST injection (Centers for Disease Control and Prevention 2014).

Like most health conditions, the most important tools for making an accurate diagnosis are completion of a thorough medical history and a complete physical examination. If an individual tests positive for TB, again, this does not differentiate between a latent infection and active disease; further tests are needed to make this decision. Chest radiographs are used to evaluate for lesions within the lungs that may suggest TB disease, but are not definitive. Evaluating a sputum smear for acid-fast-bacilli is often performed because of its ease speed, but is not confirmatory because of other acid-fast-bacilli that may be present in a sample. A culture of sputum is performed on all samples from a TB-infected person, but it can take weeks to get a result. A positive result indicates *Mycobacterium tuberculosis* bacteria are alive in the sputum. (Johnson County Department of Health and Environment 2015).

Albert Calmette and Camille Guerin, two French scientists who researched TB for decades, developed a vaccine against tuberculosis in 1921. They used the principle of sub-culturing the *Mycobacterium bovis* bacteria (a close relative of the human *Mycobacterium tuberculosis*) every few weeks. Subsequent sub-cultures weakened the bacterial strains to the point that they could promote immunity without causing an infection. The BCG (Bacillus Calmette-Guerin) vaccine was used in infants whose mother or other close family members had active TB disease. Possible reversion to virulence was the biggest concern by those who

developed and distributed the vaccine. The original BCG strain has been developed into various sub-strains in different parts of the world in the decades since it was first introduced. Currently, the vaccine is used in infants to protect against disseminated forms of TB, especially those infected with HIV, but protection wanes within the first few years of life. Countries with high levels of TB infections use the BCG vaccine on almost all children, while countries with low levels, like the US, administer the vaccine to those with known risk (TB Facts.org 2015).

As stated in the CDC document *Treatment of Tuberculosis* (Centers for Disease Control and Prevention 2003), Tuberculosis treatment is a long process that requires patients and health department staff to be fully committed for an extended period of time. All infected persons can receive treatment including infants, children, women who are pregnant, and immunocompromised individuals. Typically, a combination of antibiotics are started while culture and sensitivity tests are being performed on submitted sputum samples, which can take weeks to receive. Multiple drugs are used because multi-drug resistant strains of TB are a concern and starting with multiple drugs should treat the infection, but drugs may be removed when sensitivity results are received. A combination of isoniazid, rifampin, ethambutol, and pyrazinamide are given for the first two months then reduced to the lowest number of medications that are effective against the bacteria tested. Streptomycin may be substituted for patients who cannot take ethambutol.

An active infection can take 6 months, or longer, of therapy to clear the *M. tuberculosis* from the body, but can take longer if doses of medication are missed or if the strain of bacteria does not respond as quickly to the chosen antibiotics. Latent TB infections can be treated with isoniazid as a single therapy for 6-12 months, but can also be treated with a combination of two antibiotics for 3 months. Patients must continue to meet with health care providers to evaluate

their response to therapy and to ensure the patient is taking the medication properly. In many cases, patients are monitored by health department staff to ensure they are taking the medication and to evaluate if the medications are working against the infection.

Patients infected with HIV and other immunocompromised individuals will have their treatment protocols adapted to fit their unique situation. Children and adolescents may also have therapies adjusted due to side effects of medication and the difficulty some children may have when taking medications. Pregnant women and persons with liver and/or kidney diseases may need adjustments in their protocols to minimize unwanted side effects of the medications. Extrapulmonary TB often requires extended lengths of treatment and may require the use of other drugs to treat clinical signs associated with the affected areas. There are not many clinical controlled studies that evaluate these special needs patients, so most protocol changes are made with the guidance of TB treatment experts.

Chapter 2 - Learning Objectives

Learning Objectives

As stated in the Field Experience Agreement, the objective for the Rabies Project was to learn about and describe the relationship between Kansas statutes related to public health and zoonotic disease issues (most notably, rabies) and local (i.e., municipal and county-level) ordinances related to public health and zoonotic disease issues (i.e., rabies). This was accomplished by comparing Kansas statutes pertaining to the management of rabid animals and rabies exposures to city animal codes of the same nature.

For the ESF 11 Project, the learning objective was to develop an understanding of emergency response procedures and how organization of available resources will improve the efficiency of those procedures. This goal was achieved by studying the ESF 11 functions for Johnson County and discussing the benefits of resource determination and organization with stakeholders.

Because of the unexpected nature of an infectious disease screening event, like the tuberculosis screening, there was no anticipation of learning from such an experience. It was conveyed by JCDHE staff that it is possible that an outbreak investigation or other worthwhile experience could occur, but one never wants these events to be necessary. As the mass screening for tuberculosis unfolded, it provided an opportunity to learn as much as possible from an unanticipated event.

Activities Performed

Rabies Project

The anticipated activities for the Rabies Project included: 1) a review of current statutes and procedures regarding rabies exposure and prevention, 2) to consult with relevant stakeholders to determine if there were needs for recommendations or revisions, and 3) determine if any other statutes/procedures pertaining to animal/public health needed to be reevaluated. These were listed in the agreement based on initial conversations with the preceptor but served as a jumping off point for the actual activities performed. Additional activities were completed to help compile and organize information needed for these initial goals and some activities became necessary to allow for proper distribution, clarification, and implementation of changes that were created.

Meetings with JCDHE Disease Containment staff (primarily Tiffany Geiger, Disease Investigator for rabies exposures) identified multiple needs in addition to the anticipated activities. As explained, the Disease Containment personnel are to investigate and track rabies exposures, then report true rabies infections to the KDHE and CDC; this does not include animal bites where rabies transmission is not a possibility. The biggest concern was that Tiffany did not always receive rabies exposure reports on time (or at all in some cases) and needed information was often missing. Not all city agencies submitted reports while other agencies submitted reports on cases that were not true rabies exposures. Further complicating things, several different forms were submitted from different agencies, some of which were outdated by two or three revisions. The need to provide consistent and thorough forms and the provision of guidance for animal control officers and veterinarians were considered critical. An update of

animal control contact information was also needed to allow effective and efficient communication with relevant agencies and officers.

To prepare for the anticipated action of distributing any protocol changes and associated documents, an updated list of animal control departments and officers with jurisdiction inside Johnson County was created. A previous list of animal control departments and officers was presented by Tiffany Geiger to serve as a starting point for this activity. Most of the contact information for the departments were the same and, surprisingly, many of the officers were also still with the same office. Each department was contacted by phone to verify the address, phone number, fax number, and main e-mail for the department as well as a primary contact in order to request further information. A mass e-mail was sent to the known addresses and recipients were requested to update their officers' contact information. This was used to create a Johnson County Animal Control Contact List which was converted into a PDF for easier use and distribution.

Animal Codes from each Johnson County city/town were collected and used to create a PDF titled, "Compilation of Johnson County Animal Codes," so all codes were easily viewed. All codes were available from their city's website, although finding the codes was often difficult. (Appendix 2 provides the Compilation of Animal Codes for review.) Each of these codes was compared to the Kansas Statutes and comments recorded about the differences between the documents. These differences were summarized in a "Statute Comparisons" document to provide general knowledge of the codes and to elucidate how different the codes can be—from one paragraph in two smaller towns to two pages in the larger cities.

The next actions were to compile and review several documents relating to rabies exposures and suspect rabid animal management including current Kansas statutes regarding

rabies exposures (Kansas Department of Health and Environment 2011), papers regarding the management of possible rabies exposure cases from the KDHE (Kansas Department of Health and Environment 2014) and NASPHV (National Association of State Public Health Veterinarians 2011), and the AVMA Model Rabies Control Ordinance (American Veterinary Medical Association). These documents, along with the current Johnson County Animal Bite Procedure, were used to create a hybrid document titled “Johnson County Rabies Exposure Protocol.” This document gives guidance to animal control and community service officers, veterinarians, and Johnson County staff members on how to proceed when a rabies exposure may have occurred in all types of mammals, not just the dogs, cats, and ferrets found in the previous Johnson County Animal Bite Procedure. After several meetings with Disease Containment staff and after receiving approval by the JCDHE Health Officer, the protocol was finalized. A comprehensive Rabies Control Resolution was, also, created utilizing the previously mentioned compendia, but the Johnson County statute was last updated in 2013 and the JCDHE staff were not likely to suggest any changes in the near future. This resolution was included in the materials saved on the JCDHE server.

To address the concerns about the submittal of incomplete, outdated, or unnecessary forms, a set of standardized “Rabies Exposure” forms was created that contained all of the information requested by JCDHE, KDHE, and CDC. The four documents were designed to guide all parties involved in a rabies exposure case from start to finish and were distributed in a fillable PDF format to allow easier completion of the forms. A common layout and inclusion of an identical section to be completed by JCDHE staff were used to maintain continuity throughout the documents. These documents are explained further in the Products Developed section.

To better understand concerns that various departments and staff may have with changes to the rabies protocols and forms, face-to-face or phone meetings were convened with several key stakeholders. Dr. Ingrid Garrison, State Public Health Veterinarian at the Kansas Department of Health and Environment, spoke about any concerns she has regarding rabies protocols and statutes. She uses the same compendia and articles that were found when she has questions or concerns. She also mentioned a paper regarding rabies titers and rabies vaccines from the KSVDL (discussed shortly) and that it may adjust how rabies cases are handled in the future, but only if changes are made to the state statutes (Garrison 2015).

A meeting was held in Manhattan, Kansas to speak with Dr. Mike Moore, Project Manager at the Kansas State Veterinary Diagnostic Laboratory (KSVDL) Rabies Laboratory, about his concerns (Moore 2015). His main points were that not all animals that bite humans have to be immediately euthanized for testing, specimens sent for rabies testing should be collected and shipped properly (information is provided on their website at <http://www.ksvdl.org/rabies-laboratory/diagnostic-test/sample-collection.html>), and the KSVDL just published a paper in the *Journal of the American Veterinary Medical Association* (Moore 2015) that evaluated rabies titers and responses to rabies vaccines in dogs and cats. This paper may compel future changes in rabies protocols and statutes, these (anticipated) changes were included in “Future Changes to Johnson County Rabies Exposure Protocol” and “Future Changes to Johnson County Rabies Control Resolution” and provided to the Disease Containment staff.

Conversations with a few animal control officers revealed problems they encounter and concerns they have about rabies cases. Deciding which cases are rabies exposure cases was the biggest concern because of the possible ramifications of incorrect handling of a case. One officer had problems with a veterinarian that used rabies titers to decide if an animal that bit a

person should be placed in isolation for 10 days, which the officer (correctly) felt was not the proper way to manage the case. Most thought changes to the rabies protocol and forms were a good idea, but were worried about to what extent changes would be made and how it would affect their day-to-day tasks.

To address the officers' concerns about deciding which animal bite incidents constitute an exposure, information was located regarding rabies exposure decision-making, provoked animal bites, and risks of rabies exposures from common mammals. The Rabies Exposure Assessment Algorithm was found within the Kansas Department of Health and Environment's Rabies Disease Investigation Guidelines document. This algorithm provides valuable information on how to handle various animal bite situations. To complement the algorithm, a Provoked Animal Bites and Rabies Exposure handout was created to help define and provide examples of provoked bites and give guidance to animal control officers. A list of mammals and their risk of rabies exposure for humans was located in the North Carolina Rabies Control Manual (Haskell and North Carolina Department of Public Health 2013) and used as the basis for a Rabies Risk Level Assessment handout for officers. These documents should help reduce confusion for animal control officers, although one cannot foresee and define all rabies exposure situations.

Resources concerning the use of rabies titers in determining actions regarding a possible rabies exposure were found from a few sources. Statements from the NASPHV (National Association of State Public Health Veterinarians 2011) and ACIP (Advisory Committee on Immunization Practices 2008) declared the use of rabies titers in animals do not correlate with protection and should not be used to determine post-exposure prophylaxis for a person. (Some of this may change depending on how the results of the KSVDL rabies titers paper is utilized in

the future.) The following sentences were added to the Rabies Exposure Protocol to address these concerns: “Rabies virus antibody titers do not directly correlate with absolute protection against a rabies infection; there is no ‘protective’ titer against the rabies virus. Therefore, use of rabies virus antibody titers in animals that have bitten a person should not be used for decision-making about the disposition of such animal.”

The JCDHE website features a page that includes links to some outdated rabies information and documents. One of these documents was an informational brochure about rabies that was intended to provide information to the general public. The content and formatting of the brochure was updated and reorganized. A new page devoted to rabies was created in the Disease Reporting section and included links to downloadable Rabies Exposure forms, rabies brochure, and animal control department contact list. This page also had updated information about the new protocol and forms.

After preparing all of these documents, a group of documents was sent to animal control officers and Johnson County veterinarians (in separate e-mail blasts) for their review and comment. These documents were the Johnson County Rabies Exposure Protocol, all four Rabies Exposure Forms (Human Investigation Form (Animal Bite), Detailed Information Form, Animal Disposition Form, and Human Disposition Form), KDHE Rabies Exposure Algorithm, Provoked Animal Bites and Rabies Exposure, and Rabies Risk Level Assessment. The main questions received from animal control officers were about the new Rabies Exposure forms and which forms were filled out in each case. These were explained in the cover letter for the e-mail that was sent, but was either not well understood or not read. A new summary sheet was developed to better explain the forms and was sent with the final documents to ACOs/CSOs and

veterinarians at the end of the project. A brief podcast was also developed for the rabies webpage to describe the new documents that were posted.

ESF 11 Project

The anticipated activity for the ESF 11 Project was to contact relevant stakeholders in Johnson County to determine and list resources available in an emergency situation. This was a simple request when first discussed with Rick Miller (Agriculture Agent, Johnson County Extension Office) and Cary Gerst (Assistant Director of Planning, Johnson County Department of Emergency Management), but it was not an overly simple process. Similar to the Rabies Project, there were several more activities needed to achieve the goal of this project. But, at times, it was more difficult to receive feedback and responses from involved agencies and departments regarding this project than for the rabies project.

A list of emergency managers and emergency responders was provided by Cary Gerst and was combined with the Animal Control Contact List from the Rabies Project to form an ESF 11 Contact List (Appendix 10). E-mail or phone conversations were held with several other individuals that are significantly involved in ESF 11 events; these individuals were Sandy Johnson (Emergency Management Coordinator, Kansas Department of Agriculture), Brad Miller (Response Coordinator, JoCART), and Eric Thompson (Disaster Response Director, Code 3 Associates). They provided insight into their needs and expectations during an ESF 11 event and guidance on places to look for further support and resources.

Lists of resources were provided in three different documents: an inventory of items currently maintained in an ESF 11 emergency response trailer, a list of items needed to better stock the ESF 11 emergency response trailer, and a questionnaire sent in 2010 (the last time a resource determination was conducted). These documents were used to create an initial ESF 11

Resource Inventory List using Excel that could be sorted by categories including Inventory ID, Item Name, Item Description, Item Location, Item Origin, Quantity in Stock, and Unit Price. Page 1 included items currently in possession, Page 2 included needed items, Page 3 was a blank page for future use, and Page 4 was a list of ESF 11 contact information.

A newly created Word document titled “Emergency Response Function 11 Resource Survey” contained sections requesting information on each agency and its staff, facilities used to shelter animals, available supplies, vehicles and trailer access, and if various plans or Memoranda of Understanding (MOU) were established. This was used as a template for a new Excel document titled “ESF 11 Survey Resource List with PDFs” that recorded survey responses in one document and embedded the returned PDFs within the document. An e-mail with the ESF 11 Resource Survey attached was sent and a response requested. Even though only one e-mail address was incorrect (because that person no longer worked for the agency listed), responses were received from only one emergency director (recommending contact with animal control), and one agency that does not have these resources but was included due to previous interest in ESF 11 planning. This poor response from emergency managers was expected by project leaders but protocol dictates they are the first to be contacted. Next, the same e-mail and survey were sent to the Johnson County animal control offices. Their response was better, but still not in a timely manner. Some hesitation was expected from animal control officers because a meeting for ESF 11 stakeholders was going to be held 10 days later.

An ESF 11 Planning Meeting coordinated by Rick Miller, Cary Gerst, and Eric Thompson was convened on March 9, 2015. Attendees included mainly animal control and community service officers, but also a few emergency managers and emergency responders. There were also representatives from the KDA, JoCART, Great Plains SPCA, and the Olathe

Animal Shelter. The reasoning behind and goals of this project were provided and discussed. Those that had responded to the survey were thanked and those that had not done so were encouraged to respond. A few more surveys were received soon after the event. All responses were added to (and a PDF embedded into) the ESF 11 Survey Resource List spreadsheet.

The ESF 11 Resource Survey was then sent to the e-mail addresses of Johnson County veterinarians that were obtained from the Kansas City Veterinary Medical Association. As expected, response was slow and in low numbers. Responses were received from veterinarians saying they are willing to help, but did not include the survey and did not say how they would help. Follow-up e-mails and phone calls were completed to obtain the needed information. The list of interested veterinarians was given to Rick Miller, Cary Gerst, Eric Thompson, and Brad Miller for further communication.

Tuberculosis Screening

The tuberculosis screening was planned within 3 days of notification that a student was diagnosed with active tuberculosis disease and may have exposed many other students and school staff members over the previous 2 ½ months when he was infectious. The initial JCDHE planning meeting was held 2 days prior to the screening. The meeting was primarily logistical in nature—including determining the setup of blood-draw stations, establishing flow of patients, appointment of duties to staff and volunteers, and creating the ICS structure. There was concern that students may be stressed or nervous during the screening—many students had never had blood drawn and the circumstances were unsettling—so it was determined that having two cots and a wheelchair for weak students would be beneficial. It was also decided that having a group of MedACT paramedics on site would provide trained support in case more severe problems

were encountered. The KDHE staff would pre-print and alphabetize the blood tube labels to improve the efficiency of labeling process.

A forum to present information to parents of students was convened the evening before the screening. The TB Controller for the KDHE provided background information on tuberculosis, spending a lot of time on the differences between (inactive) tuberculosis infection and (active) tuberculosis disease. The screening protocol, which was based on CDC protocol, was explained to the audience. Because the student exposed others during an extended period of time, a second screening event will need to be conducted, on many of the same students, in early May to confidently rule out infection.

As Field Observer for the screening event, there were opportunities to participate in many activities during the event. Duties included assistance in the setup of blood-draw stations, tables, and chairs the day before and the morning of the event. Tasks also included taking pictures of the event (avoiding the students to maintain their privacy), recording observations, and providing assistance as needed. Information was relayed to and from the various groups of workers. Measurements of throughput times were taken several times during the event. After the screening was completed, all workers helped take down the equipment and the PHEP staff returned it to the JCDHE building.

Products Developed

Rabies Project

As a part of the rabies project, the initial plan was to develop revised statutes regarding rabies exposure and prevention, but several documents and forms were actually created to fulfill the needs of the Johnson County Department of Health and Environment. Many use a

combination of other agencies' or previous JCDHE documents to form documents that are in a more user friendly and fillable PDF form. These documents were reviewed and critiqued by Disease Containment staff at JCDHE, then distributed to local ACOs/CSOs and veterinarians for review and comment. Final revisions were then re-distributed to the same groups.

An updated Johnson County Animal Control Contact List was created by utilizing a previous word document list of Johnson County departments to call each department to verify the main contact person and their information. An e-mail was then sent to these contacts requesting a list of each agency/department member and their individual e-mail address and phone number, as applicable. This information was entered into a new Excel spreadsheet template and converted to a PDF after all information was verified. A version was created that only has the departments' information, not the individual officers' information, to be placed on the JCDHE website (Appendix 1).

A Compilation of Johnson County Animal Codes was assembled using Google Search to locate and download animal codes for cities within Johnson County. Cities that did not have readily accessible electronic animal codes were contacted by phone or e-mail and provided information about where to find their codes. All codes were copied and pasted into a Word document, a Table of Contents was created, then was converted into PDF format (Appendix 2).

Statute Comparisons, a Word document that compared each city's animal code to K.A.R. 28-1-13 and 28-1-14, was also created. This was done to determine the discrepancies that are present between city and state statutes. The range of discrepancies are minimal in some cases and significant in others. These differences will be further discussed in the Conclusions section.

An updated Johnson County Rabies Exposure Protocol was created using the previous Johnson County Animal Bite Procedure (last updated 08/2013), AVMA Model Rabies Control

Ordinance, CDC Human Rabies Prevention, KDHE Rabies Investigation Guideline, and NASPHV Compendium of Rabies Control and Prevention documents. Changes were made to help clarify the responsibilities of ACOs/CSOs; distinguish between isolation, observation, and quarantine; and integrate new Rabies Exposure Forms into the protocol (Appendix 3).

The Rabies Exposure – Human Investigation Form (Animal Bite) is a new document that was created to help guide ACOs/CSOs, veterinarians, and/or hospital staff as to whether an incident is a possible rabies exposure. If it is determined that a possible exposure did occur, the form instructs the investigator what the next steps are to continue the investigation. This document was created to address concerns from JCDHE staff that unnecessary bite incidents were being submitted, but also to minimize missing true exposures. This form was converted into a fillable PDF to allow electronic completion and submittal to JCDHE (Appendix 4).

<http://www.jocogov.org/sites/default/files/documents/DHE/PBH/Rabies%20Exposure%20-%20Human%20Investigation%20Form%20%28Animal%20Bite%29.pdf>

The previous Animal Bite Investigation Form that was used by JCDHE for many years was replaced by the Rabies Exposure – Detailed Information Form in order to gather all of the needed information for a rabies exposure investigation. This form added information that may be requested by the KDHE and/or the CDC in the event that a rabies infection developed in a person. Making the document a fillable PDF also allowed me to fit the significant amount of requested information onto a single page (Appendix 4).

<http://www.jocogov.org/sites/default/files/documents/DHE/PBH/Rabies%20Exposure%20-%20Detailed%20Information%20Form.pdf>

The Rabies Exposure – Animal Disposition Form provides ACOs/CSOs and veterinarians a single document that tracks the ways an animal may be managed after biting a person or after

the animal may have been exposed to rabies. Again, the fillable PDF allows the electronic completion and submittal of the form (Appendix 4).

<http://www.jocogov.org/sites/default/files/documents/DHE/PBH/Rabies%20Exposure%20-%20Animal%20Disposition%20Form.pdf>

To help hospital staff more easily follow a human case, the Rabies Exposure – Human Disposition Form was designed to include patient and treatment information in a single fillable PDF form. The requested data was derived from KDHE and CDC forms (Appendix 4).

<http://www.jocogov.org/sites/default/files/documents/DHE/PBH/Rabies%20Exposure%20-%20Human%20Disposition%20Form.pdf>

After speaking with several ACOs, many expressed concern about the difficulty in deciding if an animal bite was a provoked bite. A provoked bite will often change how an officer handles a bite incident. The Provoked Animal Bites and Rabies Exposure information sheet attempts to give officers some guidance about what may constitute a provoked bite (Appendix 6).

To further help ACOs and CSOs determine the likelihood of rabies exposure, information was found in the North Carolina Rabies Control Manual and adapted it into the Rabies Risk Level Assessment. It classifies an animal into High-Risk, Low-Risk, or No-Risk and gives examples of each (Appendix 7).

The JCDHE had an informational Rabies Brochure that the public can access from their website, but it has some outdated information and an older design. This now contains updated information for posting to the website and can be distributed to persons that submit a rabies specimen and anyone else who requests rabies facts (Appendix 8).

<http://www.jocogov.org/sites/default/files/documents/DHE/PBH/Rabies%20Brochure%20March15.pdf>

Because of the numerous changes to the rabies protocol and forms, the JCDHE website will have updated rabies information, downloadable PDFs of the Rabies Exposure Forms, and the updated Rabies Brochure for download.

<http://www.jocogov.org/dept/health-and-environment/health/disease-reporting/rabies>

A short (2 minute) podcast was recorded and, later, posted on the JCDHE Rabies webpage to provide a brief summary of the documents available for download from the page.

https://www.youtube.com/watch?feature=player_embedded&v=HjGSMQ5iMK0

The AVMA Model Rabies Control Ordinance served as the framework for a new Proposed Johnson County Rabies Control Resolution that covers the entire statute, not just the exposure protocol. The current Johnson County Rabies Control Resolution was last revised in 2013 and it addressed most of the key points in the proposed resolution, so the need for another revision was not worth the time and effort at this time.

After reading the study *Comparison of anamnestic responses to rabies vaccination in dogs and cats with current and out-of-date vaccination status* from the Kansas State Veterinary Diagnostic Laboratory, a set of documents (Future Changes to Johnson County Rabies Exposure Protocol and Future Changes to Johnson County Rabies Control Resolution) was developed to integrated the possible changes to rabies statutes based on the study's findings. These would not be implemented unless there were changes made to current statutes, therefore, these documents will be saved and retrieved if needed.

ESF 11 Project

For the ESF 11 Project, an existing list of emergency management and emergency response coordinators from Johnson County was combined with the Animal Control Contact List from the Rabies Project to form a comprehensive contact list for an ESF 11 event. It was also integrated into the ESF 11 Inventory Spreadsheet (Appendix 10).

The ESF 11 Resource Inventory List spreadsheet/database was based on previous lists of items already in possession of responders and items that are desired to better equip the responders. Tabs were included within the Excel spreadsheet to allow each column to be easily searched in an A-to-Z format.

A previous version of an ESF 11 questionnaire was used to create a new ESF 11 Resource Survey in a fillable PDF format to distribute to agencies and individuals that may be needed for an animal-related disaster or emergency within Johnson County. This group included emergency managers, ACOs/CSOs, and veterinarians. Mass e-mails were used to distribute the surveys and were entered into the spreadsheet as they were received from the responders. (Appendix 9)

The ESF 11 Survey Resource List with PDFs was based on the ESF 11 Resource Survey and was created using an Excel spreadsheet listing the information contained within the survey. The returned PDFs were embedded within the document to provide easy access to all information, in one document, for future reference.

Tuberculosis Screening

No documents were created by this author for the Tuberculosis Screening Project. Due to some initial discrepancies, data was still being compiled and analyzed when this paper was written. The Incident Briefing documents from the JCDHE are contained in Appendix 11.

Chapter 3 - Core Competencies and Emphasis Area Competencies

Core Competencies

Biostatistics

Basic statistical methods were used during the Field Experience, but there was not an opportunity to practice more advanced biostatistical methods. Basic informatics techniques were applied when evaluating data related to rabies testing and results during the Rabies Project and when tabulating responses to a resource survey during the ESF 11 project. The statistics courses completed during MPH program studies provided an excellent foundation for understanding how to use descriptive and inferential methodologies in future endeavors. Because of several discrepancies in received student data from the involved high school, the JCDHE and KDHE staff were still processing the results of the screening event to evaluate the extent of TB exposures and infections when the Field Experience was concluded.

Environmental Health Sciences

The projects in this Field Experience did not provide circumstances where environmental hazards and exposures could be investigated. An appreciation of the complex interactions between an environmental toxin and exposed individual(s) and how many factors affect the outcome of an exposure was gained through the MPH courses.

Epidemiology

Several epidemiologic principles were used during the rabies project by evaluating the risk of rabies exposure by certain animals and using this knowledge to create protocols and informational documents to guide those involved in a rabies exposure incident. JCDHE

epidemiologists were observed in their daily activities and learn how they handle multiple aspects of various diseases. Evaluation of the final statistics from the TB screening event was not possible due to data discrepancies that were being further investigated.

Health Services Administration

The Kansas City metropolitan area has numerous organizations focused on evaluating, discussing, and tending to the healthcare needs of the general public. Regular conference calls between local and regional health departments as well as meetings between competing health service providers demonstrates the value that all organizations place on working together to achieve the common goal of improved health. It was clear that different programs within the JCDHE work with residents to provide needed care and how these needs were tailored to the targeted demographic. Several of the departments within the JCDHE worked closely together to plan and conduct a mass TB screening and how that teamwork resulted in a well-run event. It was repeatedly stressed how important it is to balance an individual's right to privacy with the need to protect and inform the public, especially during the TB screening event where most of the patients were minors.

Social and Behavioral Sciences

Programs developed by the JCDHE are intended to improve the health of all residents, but many programs are aimed at populations that are underserved. Understanding social and behavioral differences between these populations allows the employees to approach each group differently. They can then focus on educating these population subsets (e.g., new mothers, families, the elderly) about why their needs are different and how to meet these needs.

This empathy for the patient was expressed by the concern and preparation the JCDHE staff showed to the young patients during the TB screening event. The students were not only stressed and worried about the blood sample being taken but also the possibility of having a disease like tuberculosis. The behavior of the initial student (not speaking to his parents about his symptoms) and delayed diagnosis of TB infection put numerous other people at risk, but the true number of those he infected are yet to be determined.

Emphasis Area Competencies

Pathogens/Pathogenic Mechanisms

Understanding how an infectious agent is transmitted and how it behaves within an infected individual was an integral part of the rabies project. The protocols and other materials produced during the project depended on this knowledge and understanding. Familiarity with tuberculosis was beneficial through the entirety of the TB screening event, especially considering the difficulty of diagnosing an inactive infection, how the coughing associated with active TB disease can be confused with a cold or the flu during winter months, and how transmission of TB can occur during normal, everyday activities.

Host Response to Pathogens/Immunology

Although there is a lot to learn about how different rabies virus variants behave in an infected mammal, the importance of vaccinating against rabies is well understood. Countries capable of implementing rabies control programs have significantly reduced the number of human (and animal) deaths due to rabies, mainly through the use of vaccines. Unfortunately, there is not a vaccine that is effective in preventing tuberculosis; understanding how the immune

system influences the different stages of infection is imperative to understanding how one tests for and treats tuberculosis.

Environmental/Ecological Influences

The knowledge that rabies is maintained in reservoir species (skunks and bats) in Kansas means public health officials have to continue monitoring and planning for rabies exposures. The expansion of cities into wildlife habitats further increases chances for rabid animals to interact with people and their pets. The nature of the tuberculosis bacterium makes understanding its seemingly easy aerosol spread from talking or coughing but, also, that its instability in the environment is important for deciding which people may have been exposed and, therefore, those that need tested for infection.

Disease Surveillance/Quantitative Methods

The use of the EpiTrax system allows JCDHE epidemiologists to monitor diseases and provides statistical analysis of such diseases. The large amount of data entered for each patient also allows staff to develop numerous comparative and descriptive statistics for review. Final data from the TB screening event was not available for review when the Field Experience was completed.

Effective Communication

Communication was critical in all phases of the Field Experience. Creating a list of needs based on conversations with JCDHE staff, gathering input from stakeholders about each project, and distributing new protocols and other documents all relied on clear and effective communication with a wide range of people. Communication with students, parents, teachers, and health department staffs was critical to the success of the TB screening event. It was clear

that health department officials were careful in how they discussed the disease with the general public and media so they were able to inform without causing unnecessary fear. Completion of the DMP 815 Multidisciplinary Thought and Presentation course provided a thorough overview of many forms of communication and helped instill confidence when creating and disseminating the numerous e-mails and documents.

Chapter 4 – Observations and Conclusions

Challenges Encountered in Government-based Work

This Field Experience allowed the opportunity to work with several agencies within the Johnson County government, which provided an understanding of the functions of each agency and how interagency cooperation and support is critical to the success of these functions. Differences between work in a government setting and that in the private sector were evident. This was not only because of the large size of the Johnson County government but also because of the tiered command structure that governments utilize. This structure had a dramatic contrast to the decade of experience the author had within a small veterinary clinic setting.

There was a surprising lack of interagency cooperation in certain situations. Within the JCDHE, some push-back was encountered when trying to change the rabies protocols and documents; some of this was because the division involved did not want to continue performing the duties they were assigned years ago when budget cuts caused restructuring of departments and their duties. Lack of cooperation was also seen between some cities and the county. Some city officials did not seem to want the county to get involved in their operations and also seemed hesitant to cooperate with the other cities in Johnson County. Responses to requests sometimes took repeated attempts and often seemed delayed. Competition for funding and resources may be part of the reason for this animosity.

Disconnect between city, county, state, and federal agencies is not uncommon in the United States. Reports of bickering between various levels of government provides fodder for many political articles and television shows. This is not surprising when you consider that each city acts as its own entity but is contained within a county within a state within a nation. The need to be a self-sufficient and self-supporting city (or county or state) but also follow the laws

of higher government, naturally, causes some strife. That being said, unnecessary inflation of this conflict is detrimental to all agencies and can put the citizens' needs at risk (Crnic 2010).

Another sentiment—common to almost every field of work, not just government—was why make changes when things have been functioning fine for years. Resistance to change is human nature but can slow or even prevent progress. Whether the result of an improvement in technology, a new operating principle, or a new management structure, change is an inevitable and necessary tool for growth. Employees that resist change can put the progress of the entire organization in jeopardy.

Budget cuts and subsequent changes to employee responsibilities created some problems for many people contacted during the Field Experience. Several cities had to reduce their budgets which caused reductions in staff numbers and increased duties for those that remained. Some animal control officers were reclassified as community service officers whose added duties may have included issuing parking tickets, investigating noise complaints, and/or providing traffic control. Consolidation of multiple jurisdictions into a single entity was also performed. The added responsibilities and/or jurisdictional areas can reduce the ability of officers and staff to perform their duties as thoroughly and effectively as before.

One of the more frustrating aspects of the Field Experience was the waiting for responses to questions and/or correspondences and waiting for approval of actions that were needed in order to proceed with my projects. Such requests in a small veterinary clinic were approved very quickly and authority was previously granted to make many changes without approval of superiors. During the Field Experience, the authority (and knowledge) to make changes without superiors' approval was not granted (nor should it have been). Supervisors had multiple programs and projects (most of which were unplanned and critical in nature) that they

were also working on, so tending to requests for these projects were often lower on the priority list; the same was true with the officers and veterinarians contacted for these projects. The old adage “Hurry up and wait” felt all too true in many situations.

During the tuberculosis screening event, the disconnect between the county and state agencies created some undesired outcomes. Much of the initial planning done by the JCDHE was rendered a waste of time and effort after the KDHE showed up and indicated their plans were to be followed. Communicating these plans sooner than the afternoon before (or morning of) the screening event would have allowed for more efficient use of personnel resources. Some animosity was also created by this action, as well as by the initial indication that the JCDHE would be in charge of the event but KDHE took over when they arrived. This lack of communication and cooperation between county and state agencies (or other levels of government) is a common occurrence according to many with experience in government agencies. But, the cooperation of agencies within the JCDHE was very evident by the number of volunteers willing to help during the TB screening event and the efficiency of those workers during the event.

Advantages of Being a Veterinarian

The projects that were planned were ones that the JCDHE had wanted addressed for some time and they felt that a veterinarian’s skill set (which the author possessed) would prove to be an asset. Training and experience as a veterinarian provided a valuable understanding of the theoretical and practical implications of a rabies exposure to animals and people. Veterinarians possess a familiarity with the pathogenicity of the virus, the expected course of disease, and the principles behind the vaccination and public education programs that have helped reduce human

rabies infections in the United States. A knowledge of which organizations and individuals one could turn to for additional information and guidance was helpful to completing each project.

There seemed to be more cooperation from animal control officers and government officials with a veterinarian leading the project compared to an intern without such a degree. In a few instances, there was a noticeable change in the level of cooperation and interest after it was disclosed the project leader was a veterinarian; a veterinarian's involvement gave these projects greater credibility and could not be as easily dismissed by the parties involved. Veterinarians are held in higher regard than human physicians by many Americans, but this does not always hold true in government agencies. Human physicians often have less respect for veterinarians in the public health domain, although I did not see this during my projects. During a conversation regarding this subject with Dr. Kastner, he mentioned an article by Fisher in which it was noted that this view has been present since the field of veterinary medicine struggled to gain acceptance in the mid 1800's (Fisher 1993).

Membership in the Kansas City Veterinary Medical Association allowed access to information that, otherwise, would have been much more difficult to compile. The presentation of these projects to the KCVMA Board allowed for a request to access a list of member veterinarians within Johnson County, including their contact information. The Board did have stipulations on how the acquired information could be used and required that the files be destroyed after the projects were completed. It may have been possible to compile some of this information without assistance, but the time and effort saved allowed for better focus on other aspects of the projects.

The courses completed in veterinary school and during the MPH curriculum (including DMP 705 Veterinary Immunology, DMP 712 Veterinary Bacteriology and Mycology, and MPH

754 Introduction to Epidemiology) have provided an understanding of tuberculosis that those in the general public do not possess. There was an understanding of the consequences of an outbreak for the patients infected and the difficulties for the agencies tasked with identifying and treating those infected. A patient's fear of infection and intensity of treatment coupled with the stigma of "TB" can lead one to avoid discussing symptoms with their physician or hesitate undergoing testing. Medical professionals know that the disease can be treated with simple medication (usually), but it is taken for a long period of time. There is also knowledge that the disease is much more common and often has worse outcomes in other parts of the world that do not have access to the medical care that we enjoy in the United States.

Considering the number of students and staff that were tested, how scared some of the students were, and the pressure on the health departments' staff, it was impressive how well the actual screening event was managed. The number of students that felt faint or weak from the stress or scare of have a blood sample taken was surprising, but the composure of the staff and paramedics that were present provided compassionate care when needed. The phlebotomy staff were efficient and empathetic to the young students that were put into a scary situation; drawing blood from dogs and cats that are scared and moving about can be stressful, but drawing blood from a teenager that is shaking and crying must be very stressful.

Public Health Practices

During the course of the Field Experience, there were many reminders of how important it is to communicate with all stakeholders during all phases of the projects. Discussing the needs of the JCDHE for the Rabies Project and the needs of the agencies involved for the ESF 11 Project provided a plan of action for each project that was closely followed. Input from involved parties for each project ensured that their experiences and concerns could be integrated into the

final products. Explaining the final products and disseminating them to stakeholders was critical so that the time and effort spent to make needed changes might actually be utilized.

After the recent measles outbreak at Disneyland in California, the debate about vaccines and disease control has reignited. Although measles was virtually eradicated in the United States, it has resurfaced as a result of reduced percentages of vaccinated children causing a reduction in “herd immunity.” Herd immunity refers to the principle that when a critical portion of a community is immunized against a contagious disease, most members of the community are protected against that disease because there is little opportunity for an outbreak (National Institute of Allergy and Infectious Diseases 2013). The general public often loses concern if a disease has not been prevalent for decades, so compliance with recommended precautions often wanes. This loss of concern, along with allowing parents the opportunity to opt out of vaccinating their children against measles, has created a situation where measles can develop and spread in vulnerable populations.

A similar increase in rabies cases could happen if pet owners became complacent about vaccinating their pets. Similar to measles, rabies has been virtually eradicated as a result of vaccination requirements and public information programs. Decades of work has relegated rabies to a disease almost completely found in wildlife. Laws currently require owners to vaccinate their pets against rabies. In the past, parents were required to vaccinate their children against measles before the children could attend school but many were able to find ways around these requirements. Thankfully, it is much less likely for pet owners to circumvent rabies laws than parents can circumvent measles requirements. This is, partly, because owners cannot claim religious or other rights when it comes to declining vaccinations for animals, and failure to vaccinate your pet against rabies can lead to fines for an owner. Hopefully the lessons learned

from the recent measles outbreak will serve as a wake-up call to the general public and support the efforts of public health proponents.

The reduction of TB cases in the United States draws parallels to the reduction of rabies cases. Both are diseases that were more prominent before technology and education helped reduce the number of cases and deaths to a very low level, although under-developed countries around the world still struggle with each disease. These diseases are different in how their number of deaths have been reduced; rabies has been reduced by preventing disease through vaccinating animals and treating those exposed with vaccines and immunoglobulins, and tuberculosis has been reduced by diagnosing active and inactive infections and treating with effective antibiotics (for months) to clear the bacteria from the body.


Several situations during the mass tuberculosis screening provided a reminder about how important it is to be honest and open when dealing with the general public. Providing information to students and their parents and encouraging dialogue between all parties helped put some of their fears at ease. But, there was a balance that had to be maintained between informing the public and scaring the public; too much information without proper context could lead to incorrect assumptions and/or fear for some people.

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Appendix 1 – Johnson County Animal Control Contact List

<div> <div>  </div> <div>Johnson County Animal Control Offices and Related Services</div> </div>						
updated 02/15						
Department Name	Contact Title	Phone Number	Address	City	State	ZIP Code
Bonner Springs	Animal Control	913-422-7800	130 N Nettleton Avenue	Bonner Springs	KS	66012
DeSoto Animal Control	Johnson County Sheriff	913-782-0720	PO Box C	DeSoto	KS	66018
Edgerton Animal Control	Animal Control Dispatch	913-893-6801	404 E Nelson	Edgerton	KS	66021
Gardner Police Department	Animal Control	913-856-7312	440 E Main Street	Gardner	KS	66030
Johnson County Disease Containment		913-826-1303	6000 Lamar Avenue, Suite 140	Mission	KS	66202
Johnson County Environmental		913-715-6900	11811 S Sunset Drive, Suite 2700	Olathe	KS	66061
Johnson County Park Police	Animal Control Dispatch	913-782-0720	7900 Renner Road	Shawnee Mission	KS	66219
Johnson County Sheriff's Department	Animal Control Dispatch	913-782-0720	27747 W 159th Street	New Century	KS	66031
Leawood Police Department Animal Control	Animal Control Dispatch	913-642-7700	4201 Town Center Drive	Leawood	KS	66211
Lenexa Animal Control	Animal Control Dispatch	913-477-7301	12500 W 87th Street	Lenexa	KS	66215
Merriam Police Department Animal Control	Animal Control Dispatch	913-782-0720	9010 W 62nd Street	Merriam	KS	66202
Northeast Animal Control (patrols Fairway, Mission, Mission Woods, Roeland Park, Westwood, Westwood Hills)	Animal Control Dispatch	913-782-0720	6090 Woodson Road	Mission	KS	66202
Olathe Animal Control	Animal Control Dispatch	913-782-0720	505 E Sunvale Drive	Olathe	KS	66061
Overland Park Animal	Animal Control Dispatch	913-895-6300	8500 Antioch Road	Overland Park	KS	66213
Prairie Village Animal Control (patrols Mission Hills)	Animal Control Dispatch	913-642-5151	7710 Mission Road	Prairie Village	KS	66208
Shawnee Animal Control	Animal Control Dispatch	913-631-2150	5850 Renner Road	Shawnee	KS	66217
Spring Hill Animal Control	Animal Control Dispatch	913-592-2700	418 E Nichols	Spring Hill	KS	66083

Appendix 2 – Compilation of Animal Codes

Current Codes for Animal Bites in Johnson County, Kansas

As of 01/21/15

(formatting kept similar to posted codes)

Table of Contents

<u>KANSAS STATUTES</u>	63
<u>BONNER SPRINGS</u>	66
<u>DESOTO</u>	68
<u>EDGERTON</u>	69
<u>FAIRWAY</u>	71
<u>GARDNER</u>	73
<u>LEAWOOD</u>	74
<u>LENEXA</u>	76
<u>MERRIAM</u>	77
<u>MISSION</u>	78
<u>MISSION HILLS</u>	80
<u>MISSION WOODS</u>	81
<u>OLATHE</u>	82
<u>OVERLAND PARK</u>	83
<u>PRAIRIE VILLAGE</u>	85
<u>ROELAND PARK</u>	87
<u>SHAWNEE</u>	88
<u>SPRING HILL</u>	89
<u>WESTWOOD</u>	91
<u>WESTWOOD HILLS</u>	92

KANSAS STATUTES

K.A.R. 28-1-13 and 28-1-14

28-1-13. Rabies control; isolation of mammals causing exposure to rabies for observation and examination; quarantine of mammals exposed to rabies.

(a) In conjunction with investigation of the exposure to rabies of a human or other mammal by another non-human mammal, the isolation of the mammal causing exposure to rabies shall be as follows.

(1) An owned or wanted dog, cat, or ferret shall be isolated for 10 days as determined by the local health officer or the local health officer's designee at one of the following locations:

(A) the residence of the owner of the dog, cat, or ferret;

(B) in a veterinary hospital; or

(C) at a facility holding a current state pound and shelter license. During this time the local health officer or the local health officer's designee shall determine whether or not the dog, cat, or ferret is suffering from rabies, and if not, the local health officer or the local health officer's designee shall authorize the release of the dog, cat, or ferret upon payment by the owner of the boarding fee.

(2) Stray, unclaimed, or unwanted dogs, cats, or ferrets shall be sacrificed immediately and the head submitted for laboratory examination for evidence of rabies infection.

(3) The management of horses, cattle, and sheep shall be determined by the local health officer or the local health officer's designee.

(4) Mammals, other than dogs, cats, ferrets, horses, cattle, or sheep, including the offspring of wild species cross-bred with domestic dogs and cats, skunks, foxes, raccoons, coyotes, bats, and other species known to be involved in the transmission of rabies, whether owned or unowned, shall be sacrificed immediately and the head submitted for laboratory examination for evidence of rabies infection. Any mammal which has been vaccinated may be sacrificed and tested if the period of virus shedding is unknown for that species.

(5) Mammals, including rabbits, hares, gerbils, guinea pigs, hamsters, mice, rats, squirrels, chipmunks and other species not known to be involved in the transmission of rabies, need not be sacrificed and submitted for laboratory examination for evidence of rabies infection, unless the circumstances of the potential exposure to rabies incident, in the judgment of the local health officer or the local health officer's designee, indicate otherwise.

(6) The disposition of mammals which are not known to be involved in the transmission of rabies, and which are maintained in zoological parks, shall be in accordance with the judgment of the local health officer or the local health officer's designee.

(b) Quarantine of mammals exposed to rabies by a known or suspected rabid mammal shall be as follows:

(1) Stray, unclaimed, or unwanted dogs, cats, or ferrets shall be sacrificed immediately.

(2) Dogs, cats, or ferrets which have an owner, are wanted by that owner, and are not immunized against rabies shall be quarantined for six months at one of the following locations as determined by the local health officer or the local health officer's designee:

- (A) the residence of the owner of the dog, cat, or ferret;
- (B) in a veterinary hospital; or
- (C) at a facility holding a current state pound and shelter license.

These dogs, cats, or ferrets shall be immunized against rabies one month before release from quarantine. The local health officer or the local health officer's designee shall authorize the release of the dog, cat, or ferret upon payment of the boarding fee.

(3) Dogs, cats, ferrets, horses, cattle, and sheep which have an owner, are wanted by that owner, and for which the owner produces rabies vaccination certificates containing the following shall be immediately re-vaccinated and kept under the owner's control and observed for 45 days:

- (A) the expiration date of the rabies vaccination; and
- (B) positive identification for each of these mammals showing that the mammals are currently vaccinated by a licensed veterinarian with an approved vaccine for that species.

(4) Horses, cattle, and sheep not vaccinated with an approved vaccine for that species shall be sacrificed immediately, or quarantined for six months under conditions satisfactory to the local health officer or the local health officer's designee. The local health officer or the local health officer's designee shall authorize the release of the horse, cow or sheep upon payment of any boarding fees.

(5) Other mammals shall be sacrificed immediately, except for those mammals currently vaccinated with an approved vaccine for that species. Mammals which have been appropriately vaccinated may be immediately re-vaccinated and quarantined for at least 90 days under conditions satisfactory to the local health officer or the local health officer's designee.

(Authorized by K.S.A. 65-128, K.S.A.65-101; implementing K.S.A. 65-101; effective May 1, 1982; amended May 1, 1986; amended July 5, 1996; amended April 24, 1998)

28-1-14. Rabies control in wildlife mammals.

- (a) The possession or sale of skunks, raccoons, foxes and coyotes for keeping of these mammals as pets shall be prohibited.
- (b) Removal of musk glands of skunks for purposes of attempted domestication shall be prohibited.
- (c) Except as permitted by the secretary, attempts to immunize skunks, coyotes, raccoons, foxes, and other wildlife mammals known to be involved in the transmission of rabies shall be prohibited.
- (d) Subsections (a) and (b) of this regulation shall not apply to bona fide zoological parks or research institutions.

(Authorized by and implementing K.S.A. 65-101; effective May 1, 1982; amended May 1, 1983; amended July 5, 1996.)

K.S.A. 75-5661

Statute 75-5661: Management of mammal exposed to rabies.

(a) As used in this section, "exposed to rabies" means a bite, scratch or abrasion by a known or suspected rabid mammal, or open wound or mucous membrane contact with the saliva or brain tissue from a known or suspected rabid mammal.

(b) Any law enforcement officer or local health officer, upon private or public property, may take up any mammal which has exposed to rabies a person or other mammal.

(c) The mammal shall be managed in a manner as described in rules and regulations adopted by the secretary of health and environment.

(History: L. 1996, ch. 26, § 1; July 1.)

BONNER SPRINGS

CHAPTER II. ANIMAL CONTROL AND REGULATION

ARTICLE 1. GENERAL PROVISIONS

2-117. Impoundment of Rabies Suspects.

(a) When any animal subject to rabies has bitten or attacked any person, or when an animal is suspected of having rabies, it shall be the duty of any person having a knowledge of the facts to report the same immediately to the Police Department.

(b) Licensed dog or cat.

(1) The owner or harbinger of a properly vaccinated biter dog or cat shall have the dog or cat examined by a licensed veterinarian, of their choice, who shall submit a report to the Animal Control Officer within 24 hours of the incident.

(2) The biter dog or cat may be impounded upon the licensed premises by the owner or harbinger. Impoundment shall mean within a structure or secure enclosure or upon a leash only upon the premises of the owner or harbinger. The period of impoundment shall be 10 days.

(3) The owner or harbinger of a properly vaccinated biter dog or cat shall have the dog or cat examined by a licensed veterinarian again on the 10th day of impoundment. A written report by the veterinarian that the biter dog or cat is not affected by rabies, filed with Animal Control Officer, shall terminate impoundment.

(c) Unvaccinated dog or cat.

(1) The owner or harbinger of a biter dog or cat which has not been vaccinated shall have it examined immediately by a licensed veterinarian who shall submit a report to the Animal Control Officer within 24 hours of the incident.

(2) The animal shall be confined for a period of 10 days upon the premises of a duly licensed veterinarian, located within the City. It shall be unlawful for any person to release from confinement any animal or remove any animal from its place of confinement to another place without the consent of the Animal Control Officer. The confinement of the animal shall be at the expense of the owner or custodian of the animal. Following consultation with a licensed veterinarian, if the Animal Control Officer has reasonable cause to believe the animal is diseased, or upon exigent circumstances, the Animal Control Officer shall be empowered to order examination of the animal to determine whether it may have rabies. It shall be unlawful for any person to refuse to surrender any animal for quarantine when demand is made by the order of the Animal Control Officer. If the animal dies or is killed, a laboratory examination of the head shall be made, at the expense of the animal's owner or custodian.

(Ord. 1492, Sec. 5.10.100)

2-118. Animals Bitten by Rabid Animals.

Whenever a dog, cat or other animal is bitten by a rabid animal or an animal later proved to have been rabid, it shall be the duty of the owner of the animal that is bitten, to report that fact to a licensed veterinarian and/or the Police Department. It shall also be the duty of the owner of the bitten animal to either destroy or have his or her bitten animal destroyed unless:

(a) The animal which was bitten had been vaccinated against rabies at least three (3) weeks before being bitten and has a current vaccination; and

(b) If the bitten animal has a current vaccination, it shall be confined for 90 days; and

(c) The bitten animal shall be released from confinement only upon written order from a licensed veterinarian, who declares the animal to be free of rabies; and

(d) If the animal is found to have contracted rabies during confinement, it shall be properly disposed of.

(Code 1989)

DESOTO

CHAPTER II. ANIMAL CONTROL AND REGULATIONS

ARTICLE 1. GENERAL PROVISIONS

2-113. BITE REPORTS

- (a) Dog and Cat Bite Quarantine. Upon receipt of notification from the city clerk or a duly licensed practitioner of medicine or registered nurse or animal control officer that a dog or cat bite incident has occurred and been confirmed by one of the four foregoing individuals, it shall be the duty of the animal control officer or his or her agent duly authorized to contact the owner, keeper or harbinger of the dog or cat involved in the incident and advise him or her to place the dog or cat immediately with a regularly licensed and practicing veterinarian of the owner's choice for a confinement of not less than 10 days or more than 15 days from the time of the occurrence of the bite. The exact period of the confinement shall be at the discretion of the veterinarian selected and the owner shall be liable for all such costs incurred.
- (b) Violation; Penalties. Any owner, keeper or harbinger who shall fail to comply with the provisions of this section shall be deemed guilty of a misdemeanor punishable as hereinafter provided in section 2-117 and the animal control officer shall, upon violation, take such dog or cat into custody and commit it for the above described confinement period.
- (c) Confinement. Animals who have described on a bite report shall be confined according to the following guidelines:
 - (1) Owner Located. Such animal shall not be killed, but shall be confined on such a way and for such a period of time as the city clerk shall direct. No person shall release from confinement any such animal or remove such animal from its place of confinement to another place without the consent of the city clerk. The confinement of the animal shall be at the expense of the owner or custodian of such animal, and the city clerk shall be empowered in his or her discretion to order impoundment or examination of such animal, or both, to determine whether it may have rabies. No person shall refuse to surrender any animal for quarantine when demand is made by the order of the city clerk. If the animal dies or is killed, a laboratory examination of the head shall be made.
 - (2) Owner Not Located. Biting dogs or cats for which the owner, keeper or harbinger cannot be located shall be taken into custody by the animal control officer and confined for a minimum period of 10 days and no more than 15 days from the time of the occurrence of the bite. Should such animal become ill or die within such period, the health officer shall be notified and his or her instructions followed for further management. If such dog or cat is alive and well at the end of the confinement period, the dog or cat shall become property of the city.
- (d) Duty to Report. When any animal subject to rabies has bitten or attacked any person, or when an animal is suspected of having rabies, it shall be the duty of any person having knowledge of such facts to report the same immediately to the city clerk. Such report may be made at city hall.

(Ord. 904, Sec. 14)

EDGERTON

CHAPTER II. ANIMALS

Article 1. ANIMALS AND FOWL GENERALLY

2-111. ANIMALS BITING PERSONS; REPORTING; IMPOUNDMENT AND EXAMINATION.

(a) When any animal subject to rabies has bitten or attacked any person, or when an animal is suspected of having rabies, it shall be the duty of any person having a knowledge of such facts to report the same immediately to the animal control officer. Such report may be made at the city office or police department.

(b) Such animal shall not be killed but shall be confined in such way and for such period of time as the city animal control officer shall direct. No person shall release from confinement any such animal or remove such animal from its place of confinement to another place without the consent of the animal control officer. The confinement of the animal shall be at the expense of the owner or custodian of such animal, and the city animal control officer shall be empowered in his discretion to order impoundment or examination of such animal, or both, to determine whether it may have rabies. No person shall refuse surrender any animal for quarantine when demand is made by the animal control officer. If the animal dies or is killed, a laboratory examination of the head shall be made.

(c) Any person refusing or failing to comply with the provisions of this section or with the order of directives of the city animal control officer relating thereto is guilty of a code violation.

(Code 1995; Ord. 556, 1986)

2-112. IMPOUNDING, REDEMPTION AND DISPOSITION OF ANIMALS RUNNING AT LARGE OR INVOLVED IN BITING PERSONS OR OTHER ANIMALS.

The animal control officer is authorized to receive and dispose of at his or her discretion, donated or gift dogs, cats or other small animals, and to impound, sell or destroy any animal running at large in violation of the terms of this chapter or any animal that has bitten a person or other animal, or such animal suspected of having a disease transmissible to human beings. Such animals may be taken up or impounded even though no citizen makes a complaint and even though the animal control officer issues no notice to appear. Impoundment shall be subject to the following:

(a) The animal control officer shall attempt notification of the owner of an animal, identifiable by a tag or other approved method, which is impounded under this chapter, by telephone or letter or personal service.

(b) Such animal shall be confined in the approved pound for a period of at least 72 hours, but not more than five days, such period of time beginning at 9:00 a.m. on the morning following the day the owner is notified or the attempt made as provided in this section. If the owner does not claim his or her animal during the five day period, or the animal control officer is unable to locate and notify the owner after making a good faith effort to do so, within the five day period, then the animal control officer may sell or destroy such animal. If the animal is not identifiable by a tag or other adequate identification no notice is required and such animal shall be confined for a period of at least 72 hours beginning at 9:00 a.m. of the morning following its capture; after such time the animal control officer may dispose of the animal.

Notwithstanding the above, any animal impounded pursuant to a report that any person or other animal has been bitten by that animal, shall be held for a period of at least 10 days for the purpose of observing such animal for symptoms of rabies disease; after such time the animal control officer may dispose of the animal.

(c) Any currently vaccinated dog or cat covered by permit as required in this chapter may be claimed by its owner upon payment of an impoundment fee and boarding fee as follows:

(1) Impoundment Fee:

(A) \$ 25 – first offense

(B) \$50 – each subsequent offense.

(2) Board fee of \$10 per day up to a maximum of \$50.

(d) In addition to paying the impoundment and boarding fees provided for in this section, any animal for which no permit has been issued or that has not been vaccinated pursuant to this chapter, the owner of such animal shall pay the additional fees:

(1) Vaccination deposit of \$25 is required but redeemable when proof of rabies vaccination is received from any licensed veterinarian. The deposit is forfeited to the city if proof of vaccination is not received by the city clerk within 72 hours of the making of the deposit.

(2) License fee for dogs and cats equal to an amount due in accordance with the schedule in this chapter.

(e) The city shall attempt to recover all costs incurred in caring for any animal impounded or held pursuant to the provisions of this chapter, including but not limited to the cost for necessary veterinarian care. The fees shall be in addition to any fine imposed for violation of the provisions of this chapter.

(f) All animals impounded for reasons of suspected disease may be reclaimed by their owners upon evaluation and treatment by a veterinarian approved by the city who shall certify the release of such animal.

(Ord. 887, 2010; Ord. 878, 2010; Ord. 852, 2009; Ord.
556, 1986)

FAIRWAY

Chapter 4 - ANIMALS

FOOTNOTE(S): --- (1) --- State Law reference— Pet animals, K.S.A. 47-1701 et seq.

ARTICLE II. DOGS AND CATS

Sec. 4-41. - Animal bite quarantine procedure.

(a) Procedure for quarantine. The procedure for quarantine of animals shall be as follows:

(1) Except as provided in Subsection (b) of this section, an animal that bites a person so as to cause an abrasion of the skin shall be quarantined immediately with a licensed veterinarian of the owner's, keeper's or harborer's choice or with a facility designated by the City at the owner's, keeper's or harborer's expense for a period of not less than ten (10) days nor more than twelve (12) days.

(2) If the owner, keeper or harborer of the animal cannot be immediately notified, the Animal Control Officer or a police officer shall cause such animal to be quarantined immediately, at the owner's, keeper's or harborer's expense, for a period of not less than ten (10) days and not more than twelve (12) days. If the address of the owner, keeper or harborer can be determined, the police officer or the Animal Control Officer shall make a reasonable effort to notify such owner, keeper or harborer that such animal is impounded under the provisions of this section and that such person has the right to redeem the animal at the expiration of confinement upon the payment of any license fees then owing and the charges of the veterinarian or facility wherein the animal was impounded.

(b) Exceptions.

(1) Determining factors. In the event the investigating officer determines:

(A) The animal which injured the person did so while confined on a leash on property under the control of the animal's owner, keeper or harborer or within a fence or building enclosing property under the control of the animal's owner, keeper or harborer; and

(B) The animal had a valid rabies inoculation certificate and was duly licensed, if a dog, at the time of the injury;

then the animal need not be impounded in accordance with the provisions of Subsection (a)(1) of this section, but the alternative procedure in Subsection (b)(2) of this section may be followed.

(2) Alternative procedure.

(A) If the injured party, the parent or guardian desires that the animal be impounded and agrees in writing to pay for its board during the period of impoundment, it shall be impounded for the period of time specified in Subsection (a)(1) of this section.

(B) If the injured party, the parent or guardian is unwilling to agree in writing to pay for the animal's boarding during the period of impoundment, the animal shall be permitted to remain on the property of its owner, keeper or harborer, provided that such owner, keeper or harborer signs a written agreement to keep the animal confined to the property for the period specified in Subsection (a)(1) of this

section and further agrees to allow the animal to be examined periodically to determine its physical condition during the confinement period. If the owner, keeper or harbinger of the animal is unwilling to sign such an agreement, the animal shall immediately be impounded in accordance with the provisions of Subsection (a)(1) of this section.

GARDNER

Chapter 6.05

ANIMAL REGULATIONS

6.05.110 Animal biting persons/Rabies – Report – Impoundment and examinations.

A. When any animal subject to rabies has bitten or attacked any person, or when an animal is suspected of having rabies, it shall be the duty of any person having knowledge of such facts to report the same immediately to the Gardner Public Safety Department.

B. Such animal shall be confined for a period of 10 days as directed by the Animal Control Officer. If the animal possesses a current, verified, rabies vaccinated tag, and the person bitten is the owner or member of the immediate family, the Animal Control Officer can authorize the quarantine of said animal within the confines of the owner's residence. No person shall release from confinement any such animal or remove such animal from its place of confinement to another place without the consent of the Director of Public Safety or designee. The confinement of the animal shall be at the expense of the owner or custodian of such animal. No person shall refuse surrender of any animal for quarantine when demand is made by the order of the Animal Control Officer.

C. The Animal Control Officer shall be empowered in his/her discretion to order examination of such animal to determine whether it may have rabies. If the animal dies or is killed, a laboratory examination of the head shall be made.

(Ord. 2175 § 1. Code 1990 § 6-111)

LEAWOOD

CHAPTER II. ANIMAL CONTROL

ARTICLE 1. GENERAL PROVISIONS

2-111. BITE AND SCRATCH PROCEDURES.

(a) When any animal has bitten or attacked any person within the City limits of Leawood, and/or when an animal is suspected of having rabies, it shall be the duty of any person having knowledge of such to report the same immediately to the Police Department.

(b) Except as provided in subsection (f) herein, an animal alleged to have bitten or otherwise so injured a person causing an abrasion of the skin, shall immediately be quarantined at the expense of the owner with a licensed veterinarian within Johnson County, Kansas for a period of 10 days.

(c) If the owner, keeper or harbinger of the animal alleged to have bitten or injured a person cannot be immediately contacted, the Leawood Police Department shall immediately impound such an animal at the expense of the owner for not less than 10 days. If the address of the owner can be determined, the Leawood Police Department shall mail a notice to the owner that the animal has been impounded under the provisions of this section. The owner has the right to redeem the animal if that animal is determined to be free of rabies at the expiration of confinement upon payment of all expenses including the boarding, any veterinarian fees and any license and penalty fees due and owing the city. There may be conditions concerning the keeping, housing and handling of the animal that the owner, keeper or harbinger must follow until the municipal judge determines how the animal shall be kept.

(d) In the event the original place of quarantine is not the choice of the owner, the owner may request a change of place of quarantine to a licensed veterinarian of the owner's choice in Johnson County, Kansas from the A.C.O. The A.C.O. shall insure that the place of quarantine and licensed veterinarian complies with all provisions of this article. The total period of confinement of the animal is a period of not less than 10 days. No credit shall be given for any period of time the animal remained at large.

(e) The veterinarian with whom the animal is quarantined shall provide a written report to the Police Department as to the health of the animal immediately after receiving any information concerning rabies.

(f) In the event that the investigating officer determines:

(1) that the animal which injured the person did so while properly secured on or within the property of the owner, harbinger or keeper of the animal;

(2) that the person injured was upon the property without the consent of the owner; and

(3) that the animal had an effective rabies vaccine and was duly licensed under this article at the time of the injury, then the animal need not be impounded in accordance with Section 2-112 (a), but the following alternative procedure shall be followed:

(i) If the injured person or legal guardian desires that the animal be impounded and agrees in writing to pay for the board during the period of impoundment, it shall be impounded for the period specified notwithstanding any other provision of this article.

(ii) If the injured party or legal guardian is unwilling to agree in writing to pay for the boarding of the animal during the period of impoundment, the animal shall be permitted to remain confined in the residence of the owner or keeper, provided that the owner or keeper signs a written agreement to keep the animal confined for the specified period and

allows the animal to be periodically examined by an ACO to determine its physical condition during the confinement period. If the owner or keeper is unwilling to sign such an agreement, the animal shall be immediately impounded in accordance with this chapter.

(4) The owner, harbinger or keeper of any animal that bites or otherwise so injures a person causing an abrasion of the skin, shall be punished by a fine of not less than \$100 but not more than \$500, or by imprisonment of not more than 180 days, or by both such fine and imprisonment. The Judge may also order that the animal be euthanized taking into consideration the nature and severity of the incident and whether the animal has displayed dangerously aggressive behavior and is likely to inflict injury on another person or animal.

(Ord. 2685C; 09-02-14)

(Ord. 1796C, 05-17-99)

LENEXA

Chapter 3-2 ANIMALS AND ANIMAL CONTROL

Article 3-2-D ANIMAL NUISANCES

Section 3-2-D-11 ANIMALS BITING PERSONS.

A. Report of Animal Bite:

When any animal has bitten or attacked any person within the City, or when an animal is suspected of having rabies, it shall be the duty of any person having knowledge of such facts to report the same immediately to Animal Control.

B. Rabies Observation:

1. Any animal that has bitten a person must be confined for a period of ten (10) days from the date of the bite for observation. The animal may be confined at an animal shelter; with a licensed veterinarian approved by Animal Control; or, in the discretion of Animal Control, upon the premises of the owner ("home confinement") if the animal has a current rabies inoculation certificate, a current city license, and the owner has not had previous animal ordinance violations. All confinement expenses shall be the responsibility of the owner.

2. If home confinement is permitted, the owner shall maintain observation of the animal for a period of not less than ten (10) days from the date of the bite; shall not remove the animal from the property except for necessary veterinary treatment; and shall allow the Animal Control Officer to make daily checks on the animal. At the end of the observation period, the Animal Control Officer may require that a licensed veterinarian examine the animal and furnish written notification to the Animal Control Officer about the animal's health.

3. No person shall release from confinement any such animal or remove such animal from its place of confinement to another place without the consent of the Animal Control Officer. Animal Control shall have the authority to remove an animal from home confinement and place it with an animal shelter or veterinarian at any time if there is reasonable suspicion to believe any conditions of home confinement, or requirements of this Code, are not being followed.

4. If the Animal Control Officer has probable cause to believe the animal is diseased, the Animal Control Officer shall be empowered to order euthanasia and an examination of such animal to determine whether it may have rabies. No person shall refuse to surrender any animal for confinement or euthanasia when demand is made by the Animal Control Officer. If the animal dies or is euthanized, a laboratory examination of the head shall be made, at the expense of the animal's owner.

5. This Section shall not apply to on duty police dogs.

C. Violation:

Any person refusing or failing to comply with the provisions of this Section, or with any orders or demands of the Animal Control Officer relating thereto, shall be guilty of a violation of this Chapter and subject to penalties as set forth in Article F of this Chapter.

MERRIAM

CHAPTER 4 ANIMALS

Article V. Quarantine; Impoundment.

Sec. 4-50. Animal Bites; Rabies Quarantine

- a. Upon receipt of notification that an animal bite incident has occurred, or when an animal is suspected of having rabies, the community services officer shall make reasonable effort to contact the owner of the animal involved in the incident or report, if known, and advise the owner to place the animal immediately with a regularly licensed and practicing veterinarian of the owner's choice for a confinement period of a minimum of ten (10) days from the time of the occurrence of the bite. The exact period of confinement may be longer than ten (10) days at the discretion of the veterinarian selected. If the owner fails to comply with the provisions of this Section within twenty-four (24) hours of notification, the owner shall be deemed in violation of this Article and the community services officer shall take such animal into custody and commit it for the above described confinement period. The owner shall be liable for all costs incurred as a result of confinement.
- b. In the event that an owner of a biting animal cannot be located, the community services officer shall take such animal into custody and impound the animal at an animal shelter or veterinary premises for a period of not less than ten (10) days from the time of the occurrence of the bite. If the owner seeks to claim the animal during the confinement period, the provisions of subsection a. shall govern the confinement of said animal.
- c. No person shall release from confinement any animal subject to the confinement requirements set forth herein or remove such animal from its place of confinement to another place without the consent of the community services officer.
- d. As an alternative to subsection a., the community services officer may authorize the confinement of the animal on the owner's premises if at the time of the bite the animal was not running at large as defined by Sec. 4-1 and Sec. 4-27 and if the owner produces a rabies vaccination certificate showing that the animal has been vaccinated with a vaccine currently in effect. The expiration date of the rabies vaccination shall be recorded on the vaccination certificate along with positive identification of the animal for which such certificate is issued. The owner of the animal must sign a written agreement to keep the animal confined as directed by the community services officer and further agree to allow the animal to be examined periodically to determine its physical condition during the confinement period. The animal must be confined as directed by the community services officer.
- e. In the event that an animal involved in a bite incident becomes ill, dies or is euthanized within the confinement period, the bite victim or victim's representative shall be notified and the City shall direct further management of the animal or animal remains.
- f. If, at the end of the confinement period, the animal involved in the bite incident is alive and healthy, the bite victim or victim's representative shall be notified and the animal shall be released to the owner upon payment of costs, or in the event the owner refuses to pay for said costs within three (3) business days of said notice, or in the event that no one claims ownership of the animal, the animal shall become the property of the City-designated animal shelter.

MISSION

Chapter 210: Animal Control

Article I: Domestic Animals — Generally

Section 210.200 Animal Bites and Quarantine.

[Ord. No. 613, 4-14-1982; Code 1997; CC 2000 §2-121]

A. It shall be unlawful for the owner of any animal or any person harboring an animal when notified that such animal has bitten any person or another animal or has so injured any person or another animal as to cause an abrasion puncture or other puncture of the skin, to sell or give away such animal or to permit or allow such animal to be taken beyond the limits of the City for a period of not less than ten (10) days or more than thirty (30) days after the date that such animal has so bitten or injured any person, except under the care of a licensed veterinarian. It shall be the duty of such owner or keeper upon receiving notice of the character aforesaid to immediately surrender such animal to the Animal Control Officer to be taken to a licensed veterinarian hospital where such animal shall be confined for a period of not less than ten (10) days or more than thirty (30) days; and such owner or person keeping or harboring such animal shall notify the Court Clerk of the name and location of the veterinarian hospital and the date that the animal was confined. Upon termination of confinement, it shall be the duty of the owner or harborer to claim the animal from the veterinarian hospital and pay all the expenses incurred as a result of the confinement.

B. The Animal Control Officer shall assure that the owner, keeper or harborer is in compliance with this Section. The Animal Control Officer may impound the animal in lieu of the owner so doing but must notify the owner, if known, of the bite and impoundment and location. The Animal Control Officer shall prepare and complete all written notices, reports, impoundment forms or any other necessary paperwork required by ordinance or State law and insure they are disseminated to the proper authorities and that any notifications required are properly completed.

C. No individual, owner, keeper, harborer, shelter personnel, medical doctor, veterinarian, agent or bailee has ordinance authority to release any animal in quarantine, except the Animal Control Officer or agent and then only after the specified impoundment time period has expired and the animal is not ill or rabid.

Section 210.210 Alternative Quarantine.

[Ord. No. 613, 4-14-1982; Code 1993; CC 2000 §2-122; Ord. No. 1335 §1, 11-17-2010]

A. In the event the investigating Animal Control Officer determines: The animal which injured the person did so while confined on a leash or on the property under the control of the animal's keeper or harborer or within a fence or building enclosing property under the control of the animal's keeper or harborer and the animal had rabies inoculation at the time of injury, then the animal need not be impounded in accordance with the provisions of Section 210.200, but the following alternative procedure may be followed:

1. If the injured person, his/her parent or guardian desires that the animal be impounded and agrees in writing to pay for its board during the period of impoundment, it shall be impounded for the period of time specified in Section 210.200 and all the provisions therein.
2. If the injured party, his/her parent or guardian is unwilling to agree in writing to pay for the animal's board during the period of impoundment, the animal shall be permitted to remain on the property of its owner, keeper or harborer. Provided that such owner, keeper or harborer signs a written agreement to keep the animal confined to the property for the period specified in Section

210.200 and further agrees to allow the animal to be examined periodically to determine its physical condition during the confinement period. If the owner, keeper or harbinger of the animal is unwilling to sign such an agreement, the animal shall immediately be impounded in accordance with the provisions of Section 210.200.

MISSION HILLS

Article 1 – Domestic Animal Regulation

8-108. Examination and Quarantine.

It shall be the duty of the Owner of any Animal, when notified that such Animal has bitten any person or so injured any person as to cause an abrasion of the skin, to immediately place such Animal in a licensed veterinarian hospital for a period of not less than ten (10) days. Such Owner shall notify the Clerk of the name and location of said veterinarian and the date that said Animal was confined and such Owner shall not sell or give away such Animal or permit or allow such Animal to be taken beyond the limits of the City for a period of fifteen (15) days commencing with the date of such bite or injury except for the purpose of placing such Animal in a licensed veterinarian hospital.

In the event such Owner shall fail or refuse to place such Animal in a licensed veterinarian hospital as provided above, it shall be the duty of any police officer of the City to capture and deliver such Animal to such licensed veterinarian hospital as may be designated by the City Administrator for that purpose. In carrying out this duty, any police officer of the City may enter upon any private premises and take possession of such Animal. All expenses of such confinement shall be the obligation of the Owner of such Animal.

(Ord. 1077 03-10-03; Ord. 1391 04/14/14)

MISSION WOODS

CHAPTER II. ANIMAL CONTROL AND REGULATION

ARTICLE 2. DOGS AND CATS

2-204. EXAMINATION AND QUARANTINE.

It shall be unlawful for the owner of any animal or any person harboring an animal when notified that such animal has bitten any person or has so injured any person as to cause an abrasion of the skin, to sell or give away such animal or to permit or allow such animal to be taken beyond the limits of the city, for a period of not less than 15 days after date that such animal has so bitten or injured any person, except under the care of a licensed veterinarian. It shall be the duty of such owner or keeper upon receiving notice of the character aforesaid to immediately place such animal in a licensed veterinary hospital, where such animal shall be confined for a period of not less than 10 days; and such owner or person keeping or harboring such animal shall notify the city clerk of the name and location of the veterinary hospital and the date that the animal was confined. The owner or keeper of the animal shall pay any unpaid license fees, penalties and board costs of the animal.

OLATHE

TITLE 8 ANIMALS

CHAPTER 8.10 ANIMAL NUISANCES

8.10.100 Animals Biting or Scratching Persons Report--Impoundment and Examination.

A. When any animal subject to rabies has bitten, scratched or attacked any person, or when an animal is suspected of having rabies, it shall be the duty of any person having knowledge of such facts to report the same immediately to the animal control officer. Such report shall be made to the Olathe Police Department.

Such animal shall not be killed but shall be confined for a period of ten (10) days at the Olathe animal shelter or upon the premises of a duly licensed veterinarian located within the corporate limits of the City of Olathe, Kansas.

No person shall release from confinement any such animal or remove such animal from its place of confinement to another place without the consent of the animal control officer. The confinement of the animal shall be at the expense of the owner or custodian of such animal. Following consultation with a licensed veterinarian, if the animal control officer has reasonable cause to believe the animal is diseased, or upon exigent circumstances, the animal control officer shall be empowered to order examination of such animal to determine whether it may have rabies. No person shall refuse to surrender any animal for quarantine when demand is made by the order of the animal control officer. If the animal dies or is killed, a laboratory examination of the head shall be made at the expense of the animal's owner or custodian.

B. As an alternative to subsection A, the animal control officer may authorize the confinement of the animal on the owner's premises if at the time of the bite, scratch or attack the animal was not running at large as defined by Section 8.02.020 and if the owner produces a current rabies vaccination certificate showing that the animal has been vaccinated. The expiration date of the rabies vaccination shall be recorded on the vaccination certificate along with positive identification of the animal for which such certificate is issued. The owner of the animal must sign a written agreement to keep the animal confined as directed by the animal control officer and further agrees to allow the animal to be examined periodically to determine its physical condition during the confinement period. The animal must be confined as directed by the animal control officer.

C. The provisions of Section 8.10.100 do not apply to police dogs.

D. Any person refusing or failing to comply with the provisions of this section or with the order or directives of the animal control officer relating thereto shall be guilty of the commission of a Class B public offense.

(Ord. 10-31 § 12, 2010; Ord. 97-45 § 1, 1997; Ord. 95-47 § 1, 1995; Ord. 88-120 § 3, 1988; Ord. 87-173 § 2, 1987.)

OVERLAND PARK

TITLE 6 ANIMALS

Chapter 6.08 CONTROL AND IMPOUNDMENT OF DOMESTIC ANIMALS

6.08.085 Injury to Person or Animal.

It shall be unlawful for the owner, keeper or harbinger of any animal to permit such animal to:

- A. Cause injury to people.
- B. Bite or cause injury to any person or other animal.

(History: Ord. DAC-2771 §4, 2009)

6.08.090 Rabies Impoundment Procedures.

Except as provided in 6.08.130, a dog, cat, or ferret which bites, scratches, or otherwise causes an abrasion that breaks the skin of a person shall immediately be quarantined at the owner's expense by City personnel with a City authorized impounding agent or a licensed veterinarian, for a period of ten days. 1) If the owner is known and is present or is available to make arrangements, and the injury occurs during regular office hours, the animal will be impounded with a veterinarian of the owner's choice whose place of business is in Johnson County, Kansas, for a period of ten days. 2) If the injury occurs after normal business hours, and the owner is unable or unavailable to make arrangements for impounding of the animal, the animal will be impounded at a City authorized impounding agent until the next business day at which time the owner must make arrangements for the animal to be transferred to the facility of a licensed veterinarian whose place of business is in Johnson County, Kansas, for the remainder of the confinement period. The total period of confinement of the animal is to be for a period of not less than ten days from the date of the actual bite, scratch or abrasion. Any animal quarantined at the City's impound agent shall be transferred to a licensed veterinarian whose place of business is located within Johnson County, Kansas, no later than the next business day upon payment of all fees. Procedures related to the isolation of mammals other than dogs, cats and ferrets causing exposure to rabies for observation and procedures related to mammals exposed to rabies shall be in accordance with Kansas Administrative Regulations 28-1-13 and 28-1-14, or as otherwise directed by a county, state or federal health official with jurisdiction and knowledge of the same.

(History: Ord. DAC-2959 §2, 2012; DAC-2199 §1, 2000; DAC-1311 §10, 85; DAC-880 §2, 76; DAC-711 §3, 72)

6.08.100 Notice of Impoundment of Biting Animal to Chief Animal Control Officer.

In all cases of impoundment under this Section, the veterinarian or City-authorized impounding agent with whom the dog, cat, ferret or other mammal is impounded, shall give immediate written notice to the Chief Animal Control Officer that such animal has been confined and will be confined not less than 10 days nor more than 12 days.

(History: Ord. DAC-2959 §3, 2012; DAC-2771 §5, 2009; DAC-2199 §2, 2000; DAC-1311 §11, 85; DAC-711 §3(part), 72; DAC-697 §15(B), 72)

6.08.110 Notification of Owner of Impounded Animal.

If the address of the owner of the animal can be determined, the Chief of Police shall make reasonable effort to notify the owner that the animal is impounded under the provisions of 6.08.090 through 6.08.130 and the owner must redeem the animal and pay all pound fees, any veterinarian fees and any license and

penalty fees then due and owing the City. Upon redemption, the owner must transfer the animal to a licensed veterinarian as required by 6.08.090.

(History: Ord. DAC-2199 §3, 2000; DAC-711 §3(part), 72; DAC-697 §15(C), 72)

6.08.120 Lien Against Animal Impounded - Sale or Disposal.

The City shall have a lien against the animal for its keep and if, after the period of impoundment provided in 6.08.090 through 6.08.130, the animal has not been redeemed by the owners, the City shall have the right to order disposal of the animal through sale to any private individual and apply the sale proceeds to the expense incurred in keeping the animal. If the animal is not redeemed or sold after the period of impoundment, it may be given away or humanely destroyed.

(History: Ord. DAC-711 §3(part), 72; DAC-697 §15(D), 72)

6.08.130 Alternatives for Confined Animal.

1. In the event the investigating officer determines:

A. That the animal owner has no prior animal violations; and

B. That the animal is not vicious nor likely to attack or bite someone else; and

C. That the animal had an effective rabies inoculation and was duly licensed under this title at the time of the injury, then, the animal need not be impounded in accordance with Section 6.08.090 but the following alternative procedure shall be followed:

(1) If the injured person, his/her parent, or guardian desires that the animal be impounded and agrees in writing to pay for its board during the period of impoundment, it shall be so impounded for the period specified in Section 6.08.090 notwithstanding any other provision of this title.

(2) If the injured party, his/her parent, or guardian is unwilling to agree in writing to pay for the animal's board during the period of impoundment, the animal shall be permitted to remain on the property of its owner or keeper; provided no animal shall be allowed to remain on the property of its owner or keeper under this Section unless such person signs a written agreement to keep the animal confined to the property for the period specified in Section 6.08.090 and further agrees to allow the animal to be examined periodically to determine its physical condition during the confinement period. If the owner or keeper is unwilling to sign such an agreement, the animal shall be immediately impounded in accordance with Section 6.08.090.

2. If the animal was not duly licensed with the City but otherwise met the requirements of this paragraph for home confining the animal, the animal must be confined outside the home as required by this Section, provided, should the owner license the animal during the ten day confinement period, the animal may be confined at home in accordance with the standards set forth in this Section for any remaining portion of the confinement period.

3. Animal Control officers shall have the authority to remove an animal from home confinement and place it with an animal shelter or veterinarian at any time during home confinement if the animal becomes ill during the quarantine period or the Animal Control officer develops reasonable suspicion that any conditions of home confinement or requirements of this Code, are not being followed.

(History: Ord. DAC-2756 §1, 2009; DAC-2199 §4, 2000; DAC-1679 §12, 91; DAC-880 §3, 76; DAC-711 §3, 72)

PRAIRIE VILLAGE

CHAPTER II. ANIMAL CONTROL AND REGULATION

ARTICLE 2. GENERAL PROVISIONS

2-136 DUTY TO REPORT ANIMAL BITES AND SCRATCHES.

When any animal, while within the City limits of Prairie Village, has bitten or attacked any person or domestic animal and has caused a break to the skin, or when an animal is suspected of having rabies; it shall be the duty of any person having knowledge of such facts to report the same immediately, or as soon as practicable, to the Police Department or the Animal Control Officer.

(Ord. 1562 (part), 1985; Ord. 2091 (part), 2005; Ord. 2106 (part), 2005; Ord. 2213, Sec. VIII, 2009)

2-137 ANIMAL BITE PROCEDURE.

- a) Except as provided in subsection E of this section an animal which bites or otherwise so injures a person as to cause an abrasion of the skin shall immediately, or as soon as practicable, be quarantined at the owner's expense with a licensed veterinarian of the owner's choice or with the City City's impounding agent for a period of not less than ten days nor more than twelve days.
- b) If the owner, keeper or harbinger of the animal cannot be immediately notified, City personnel shall immediately, or as soon as practicable, impound such animal with a City authorized impounding agent, at the owner's expense, for a period of not less than ten days nor more than twelve days. If the address of the owner of the animal can be determined, the Police Department shall make a reasonable effort to notify the owner that said animal is impounded under the provisions of this section and the owner has the right to redeem the animal at the expiration of confinement upon the payment of pound fees, any veterinarian fees, and any license and penalty fees then due and owing to the City.
- c) In the event the original place of impoundment is not the choice of the owner, the owner may cause the animal's place of impoundment to be changed to a licensed veterinarian of the owner's choice; provided all other provisions of this chapter are complied with. The total period of confinement of the animal at the one or more locations is to be for a period of not less than ten days nor more than twelve days. Credit for any period the animal remains at large after the bite shall not be given.
- d) The veterinarian or City-authorized impounding agent with whom the animal is impounded, shall give immediate written notice to the Chief of Police that such animal has been confined and will be confined for not less than ten days no more than twelve days. At the expiration of the aforesaid confinement period, the veterinarian or City-impounding agency shall give immediate written notice to the Chief of Police as to the health of such animal pertaining to the diagnosis of rabies.
- e) In the event the investigating officer determines that the animal had an effective rabies inoculation and was duly licensed under this chapter at the time of the injury, then the animal need not be impounded in accordance with subsection A of this section but the following alternative procedure shall be followed:
 - 1) If the injured person, his parent, or guardian desires that the animal be impounded and agrees in writing to pay for its board during the period of impoundment, it shall be so impounded for the period specified in subsection A of this section notwithstanding any other provision of this chapter.

2) If the injured party, his parent, or guardian is unwilling to agree in writing to pay for the animal's board during the period of impoundment, the animal shall be permitted to remain confined in the residence or enclosed yard of its owner or keeper; provided no animal shall be allowed to remain on the property of its owner or keeper under this section unless such person signs a written agreement to keep the animal on the property in confinement for the period specified in subsection A of this section and further agrees to allow the animal to be examined periodically to determine its physical condition during the confinement period. If the owner or keeper is unwilling to sign such an agreement, the animal shall be immediately, or as soon as practicable, impounded in accordance with subsection A of this section.

(Ord. 1562, (part), 1985; (Ord. 2091 (part), 2005; Ord. 2106 (part), 2005; Ord. 2213, Sec. VIII, 2009)

ROELAND PARK

CHAPTER II. ANIMAL CONTROL AND REGULATION

ARTICLE 1. GENERAL PROVISIONS

2-119. IMPOUNDMENT OF RABIES SUSPECTS.

(a) Any law enforcement officer or local health officer may take up, upon private or public property, any animal which has bitten or scratched a person or other animal and impound the animal in the City pound, securely penned and separated from other animals, or in a veterinary hospital or animal care facility for a period of not more than 30 days during which time the local health officer shall determine whether or not such animal is suffering from a disease and, if not, the local health officer shall authorize the release of the animal upon payment by the owner of the boarding fee therefore. The health officer may authorize the keeping of any such animal on the owner's premises if the owner produces a rabies vaccination certificate showing that the animal has valid rabies vaccination protection. Impoundment costs shall be borne by the owner. If in the opinion of the local health officer symptoms develop justifying a microscopic examination, then the animal shall be killed and examination made by the state department of health and environment.

(b) In lieu of the provisions of subsection (a), the owner of any such animal may, at his or her own expense, take such animal to any duly qualified and licensed veterinarian in the City for observation. Such veterinarian shall report his or her findings in writing to the local health officer. If in the opinion of such veterinarian a microscopic examination is justified, then the animal shall be turned over to the animal control officer or any law enforcement officer to be killed and examination made by the state department of health and environment.

(c) Any animal desired for observation by the local health officer under this section shall be delivered to the animal control officer or any law enforcement officer upon demand and shall not be withheld, hidden or harbored. Any person violating this provision shall be guilty of a violation of this Code. Upon refusal of any person to so deliver such animal, the municipal judge shall cause a warrant to be issued for the arrest of such person, which warrant shall also provide for the surrender of the animal and shall be lawful authority for the apprehending and forcible taking of the animal.

(Ord. 408, Sec. 13; Code 1986)

2-120. ANIMALS BITTEN BY RABID ANIMALS.

Whenever a dog, cat or other animal is bitten by a rabid animal or an animal later proved to have been rabid, it shall be the duty of the owner of the animal that is bitten, to report that fact to the local health officer and/or the police department. It shall also be the duty of the owner of the bitten animal to either destroy or have his or her bitten animal destroyed unless:

(a) The animal which was bitten had been vaccinated against rabies at least three weeks before being bitten and has a current vaccination; and

(b) If the bitten animal has a current vaccination, it shall be confined for 90 days; and

(c) The bitten animal shall be released from confinement only upon written order from the local health officer, who declares the animal to be free of rabies; and

(d) If the animal is found to have contracted rabies during confinement, it shall be properly disposed of.

(Code 1986)

SHAWNEE

TITLE 06 – ANIMALS

6.08.070 QUARANTINE FOR ZONOTIC DISEASES.

A. Bites must be reported to Police Department. Any bite, wound, or other tissue invasion exposing a Person to the possibility of rabies or other zoonotic diseases, shall immediately be reported to the Police Department by the victim and by the Animal's Owner, Keeper or Harbored if the incident is known to him or her so that a Police report may be taken. The Animal's Owner, Keeper, or Harbored shall then keep the Animal confined indoors until contacted and instructed further by a Community Service Officer, even if the Animal has been vaccinated. It shall be unlawful for the Owner, Keeper or Harbored to release the Animal from his or her custody or allow such Animal to be taken outside the City limits unless so authorized by the Community Service Officer until an observation period stipulated for that Animal species has expired or such period is determined in writing by a Community Service Officer or licensed veterinarian to be unnecessary.

B. Confinement of Animal for Observation. Any warm-blooded Animal having bitten a Person, caused a break in the skin, or otherwise exposed a Person to the possibility of rabies through tissue invasion shall be confined until the stipulated observation period for that species of Animal is completed.

1. A Community Service Officer or Police Officer shall personally notify the Animal's Owner, Keeper, or Harbored, if the Owner, Keeper, or Harbored can be ascertained, and direct the Owner, Keeper, or Harbored to either place the Animal in a licensed veterinarian's care within twenty-four (24) hours for the stipulated observation period or to confine the Animal indoors at home for the stipulated observation period with an examination by a licensed veterinarian on the final day of the observation period. If veterinary confinement is ordered, the Animal's Owner, Keeper, or Harbored shall notify the Community Service Officer of the confinement location and the licensed veterinarian's name. The Community Service Officer shall confirm custody and ascertain the health of the Animal after the aforesaid confinement. All expenses for veterinary care, observation, and examination shall be the expense of the Animal's Owner, Keeper, or Harbored.

2. If the Owner, Keeper, or Harbored is not known, the Community Service Officer shall arrange for the Animal's confinement and observation by a licensed veterinarian or at an Animal Shelter contracted by the City.

3. Any Animal having bitten a Person which is impounded by a Community Service Officer or a Police Officer shall be confined for observation by a licensed veterinarian or at an Animal Shelter contracted by the City, and if the Owner, Keeper, or Harbored thereof can be found, the Owner, Keeper, or Harbored shall be liable for the expenses incurred.

C. Euthanasia. If Euthanasia of the Animal is necessary in lieu of confinement due to the Animal's condition, species breed, or mix of breeds, the Animal shall be immediately Euthanized and appropriate procedures shall be carried out to ascertain zoonotic transmissibility at the time of the exposure, and if the Owner, Keeper, or Harbored thereof can be found, the Owner, Keeper, or Harbored shall be liable for the expenses incurred.

(Ord. 2876, 2007; Ord. 2567, 2001; Ord. 2221 §1(part), 1995: Ord. 2213 §4(part), 1995)

SPRING HILL

CHAPTER II. ANIMALS AND FOWL

ARTICLE 3. ANIMAL BITE

2-301. ANIMAL BITE PROCEDURE - GENERALLY.

Except as provided in Section 2-305, a dog, cat, other domestic animal and any other warm-blooded animal which bites, scratches, or otherwise injures a person shall immediately be quarantined at the owner's expense by city personnel with a veterinarian whose place of business is within Johnson or Miami County, Kansas of the owner's choice or with the city's impounding agent, if the impoundment occurs during regular office hours, for a period of not less than ten days nor more than twelve days. If the initial impoundment is not during regular office hours, the city personnel shall immediately impound such dog, cat, other domestic animal or warm-blooded animal with a city-authorized impounding agent at the owner's expense for a period of not less than ten days nor more than twelve days. In the event the original place of impoundment is not the choice of the owner, the owner may cause the animal's place of impoundment to be changed to a licensed veterinarian, whose place of business is located within Johnson or Miami County, Kansas, of the owner's choice provided all other provisions of this title are complied with. The total period of confinement of the animal at the one or more locations is to be for a period of not less than ten days nor more than twelve days, from the date of the actual bite itself. Provided, however, that any animal which is not located, apprehended or picked up within the ten to twelve day period from the date of the bite, shall immediately upon apprehension, be taken to a qualified veterinarian for the purposes of testing or checking the animal for rabies or any other communicable diseases. Such tests or checks shall be made at the animal owner's expense.

(Ord. 2008-03)

2-302. NOTICE OF IMPOUNDMENT OF BITING ANIMAL TO POLICE CHIEF AND CITY CLERK.

In all cases of impoundment under this section, the veterinarian or city-authorized impounding agent with whom the dog, cat, other domestic animal or warm-blooded animal is impounded, shall give immediate written notice to the Chief of Police that such animal has been confined and will be confined not less than ten days nor more than twelve days. At the expiration of the aforesaid confinement period, the veterinarian or city impounding agency shall give immediate written notice to the City Clerk as to the health of such animal pertaining to the diagnosis of rabies.

(Ord. 2008-03)

2-303. NOTIFICATION OF OWNER OF IMPOUNDED ANIMAL.

If the address of the owner of the animal can be determined, the Chief of Police or animal control officer shall make reasonable effort to notify the owner that the animal is impounded under the provisions of Sections 2-301 through 2-305 and the owner has the right to redeem the animal at the expiration of confinement upon the payment of pound fees, any veterinarian fees and any license and penalty fees then due and owing the city.

(Ord. 2008-03)

2-304. LIEN AGAINST ANIMAL IMPOUNDED - SALE OR DISPOSAL.

The city shall have a lien against the animal for its keep and if, after the period of impoundment provided in Sections 2-301 through 2-305, the animal has not been redeemed by the owners, the city shall have the

right to order disposal of the animal through sale to any private individual and apply the sale proceeds to the expense incurred in keeping the animal. If the animal is not redeemed or sold after the period of impoundment, it may be given away or humanely destroyed.

(Ord. 2008-03)

2-305. ALTERNATIVES FOR CONFINED ANIMAL.

In the event the investigating officer determines:

A. That the animal which injured the person did so while confined on a chain or leash on property under the control of the animal's owner or within a fence or building enclosing property under the control of the animal's owner;

B. That the person injured was upon the property without the consent of the owner;

C. That the animal had an effective rabies inoculation and was duly licensed under this title at the time of the injury, then, the animal need not be impounded in accordance with Section 2-301 but the following alternative procedure shall be followed:

1. If the injured person, his parent, or guardian desires that the animal be impounded and agrees in writing to pay for its board during the period of impoundment, it shall be so impounded for the period specified in Section 2-301 notwithstanding any other provision of this title,

2. If the injured party, his parent, or guardian is unwilling to agree in writing to pay for the animal's board during the period of impoundment, the animal shall be permitted to remain on the property of its owner or keeper; provided no animal shall be allowed to remain on the property of its owner or keeper under this section unless such person signs a written agreement to keep the period specified in Section 2-301 and further agrees to allow the animal to be examined periodically to determine its physical condition during the confinement period. If the owner or keeper is unwilling to sign such agreement, the animal shall be immediately impounded in accordance with Section 2-301.

(Ord. 2008-03)

WESTWOOD

CHAPTER II. ANIMAL CONTROL AND REGULATION

ARTICLE 1. ANIMALS AND FOWL GENERALLY

2-112. IMPOUNDMENT OF RABIES SUSPECTS.

(a) Any law enforcement officer or local health officer may take up, upon private or public property, any animal which has bitten or scratched a person or other animal and impound the animal in the city pound, securely penned and separated from other animals, or in a veterinary hospital or animal care facility for a period of not more than 30 days during which time the local health officer shall determine whether or not such animal is suffering from a disease and, if not, the local health officer shall authorize the release of the animal upon payment by the owner of the boarding fee therefore. The health officer may authorize the keeping of any such animal on the owner's premises if the owner produces a rabies vaccination certificate showing that the animal has valid rabies vaccination protection. Impoundment costs shall be borne by the owner. If in the opinion of the local health officer symptoms develop justifying a microscopic examination, then the animal shall be killed and examination made by the state board of health.

(b) In lieu of the provisions of subsection (a), the owner of any such animal may, at his or her own expense, take such animal to any duly qualified and licensed veterinarian in the city for observation. Such veterinarian shall report his or her findings in writing to the local health officer. If in the opinion of such veterinarian a microscopic examination is justified, then the animal shall be turned over to the animal control officer or any law enforcement officer to be killed and examination made by the state board of health.

(c) Any animal desired for observation by the local health officer under this section shall be delivered to the animal control officer or any law enforcement officer upon demand and shall not be withheld, hidden or harbored. Any person violating this provision shall be guilty of a violation of this code. Upon refusal of any person to so deliver such animal, the municipal judge shall cause a warrant to be issued for the arrest of such person, which warrant shall also provide for the surrender of the animal and shall be lawful authority for the apprehending and forcible taking of such animal.

(Code 2008)

2-113. ANIMALS BITTEN BY RABID ANIMALS.

Whenever a dog, cat or other animal is bitten by a rabid animal or an animal later proved to have been rabid, it shall be the duty of the owner of the animal that is bitten, to report that fact to the local health officer and/or the police department. It shall also be the duty of the owner of the bitten animal to either destroy or have his or her bitten animal destroyed unless:

(a) The animal which was bitten had been vaccinated against rabies at least three weeks before being bitten and has a current vaccination; and

(b) If the bitten animal has a current vaccination, it shall be confined for 90 days; and

(c) The bitten animal shall be released from confinement only upon written order from the local health officer, who declares the animal to be free of rabies; and

(d) If the animal is found to have contracted rabies during confinement, it shall be properly disposed of.

(Code 2008)

WESTWOOD HILLS

CHAPTER 2. ANIMAL CONTROL AND REGULATION

ARTICLE 2. DOGS AND CATS

2-205. EXAMINATION AND QUARANTINE.

It shall be unlawful for the owner of any animal or any person harboring an animal, when notified that such animal has bitten any person or has so injured any person as to cause an abrasion of the skin, to sell or give away such animal or to permit or allow such animal to be taken beyond the limits of the City, for a period of not less than 15 days after the date on which such animal has so bitten or injured any person, except under the care of a licensed veterinarian. It shall be the duty of such owner or keeper, upon receiving notice of any such injury, immediately to place such animal in a licensed veterinary hospital, where such animal shall be confined for a period of not less than 10 days, and such owner or person keeping or harboring such animal shall notify the City Clerk of the name and location of the veterinary hospital and the date that the animal was confined. The owner or keeper of the animal shall pay any unpaid license fees, penalties and board costs of the animal.

Appendix 3 – Johnson County Rabies Exposure Protocol



Johnson County Rabies Exposure Protocol

Based on relevant and current statutes and compendia

February 2015

DEFINITIONS

Animal—Any of the order Mammalia, all of which are capable of being infected with and transmitting rabies.

Animal shelter—A public facility that is maintained by a government entity or a private facility, holding a current state pound or shelter license, providing contractual services to a government entity for the purpose of impounding or harboring animals.

Bite—Wound made by biting where the skin has been penetrated by an animal's teeth.

Cat—Any domestic feline animal (*Felis catus*).

Currently vaccinated against rabies—Vaccination status of an animal that has received a primary rabies vaccine or has received a booster vaccine administered in accordance with the current Compendium of Animal Rabies Prevention and Control, authored by the National Association of State Public Health Veterinarians. Rabies vaccination must be performed by a veterinarian who is licensed or legally permitted to practice veterinary medicine in the state.

Dog—Any domestic canine animal (*Canis familiaris*).

Ferret—Any domestic ferret animal (*Mustela putorius furo*).

Isolation—The separation of an animal that may have caused exposure to rabies from others, in places and under conditions that prevent the direct or indirect conveyance of the infectious agents from those infected to those who are susceptible or who may spread the agent to others. The isolation shall be conducted under an order issued by the Animal Control Officer/Community Service Officer with jurisdiction designating the specific place, manner, and provisions of the isolation.

Local Health Officer or Designee—Refers to the Johnson County Department of Health and Environment Medical Director and/or designated staff.

Non-bite exposure—Instance where saliva or other infective tissue from an animal has come in contact with an open wound or a mucous membrane.

Observation—The keeping of an exposed animal by the owner as per normal handling procedures in a manner that allows the animal to be watched for any changes of behavior or health. The observation shall be conducted under an order issued by the Animal Control Officer/Community Service Officer with jurisdiction designating the specific place, manner, and provisions of the observation.

Own—To keep, harbor, or have control, charge, or custody of an animal.

Owner—A person having the right of property or custody of an animal or who keeps or harbors an animal or knowingly permits an animal to remain on or about any premises occupied by that person. This term shall not apply to veterinarians or kennel operators who have temporary custody, for a period of less than 60 days, of animals owned by others.

Quarantine—The strict confinement of an animal in a manner that precludes direct contact with other animals not concurrently in quarantine or persons other than the owner or caretaker. For their protection, the person providing care should be vaccinated against rabies. The quarantine shall be conducted under an order issued by the Animal Control Officer/Community Service Officer with jurisdiction designating the specific place, manner, and provisions of the quarantine.

Rabies Control Authority—A government agency or persons who are legally authorized and responsible for enforcement of applicable codes. Persons may include Animal Control Officer (ACO), Community Service Officer (CSO), and/or Local Health Officer or Designee.

Stray, Unwanted, or Unclaimed—Any of the following:

- i.) An animal is found running at-large with no identification;
- ii.) An animal's owner has not claimed an impounded animal after 5 days of impoundment, regardless of whether such owner has notice of such impoundment;
- iii.) Owner has abandoned an animal as evidenced by lack of care, including the failure to provide food, water, or shelter for more than 12 hours;
- iv.) Owner relinquishes ownership by expressing an intent to do so; or,
- v.) An animal's general condition and health evidences a disregard for the animal's well-being.

INVESTIGATION PROTOCOLS

To ensure proper documentation and observation of rabies exposure cases, all applicable forms must be completed and transmitted to the appropriate Johnson County Department of Health and Environment offices.

I. Animal Control Officer (ACO)/Community Service Officer (CSO) of Johnson County:

- A. Complete a (Johnson County Department of Health and Environment) RABIES EXPOSURE – HUMAN INVESTIGATION FORM (ANIMAL BITE). If investigation indicates a possible exposure to rabies, continue with following steps. If no exposure to rabies, continue with appropriate medical care for injured person(s)/animal(s) and/or actions by ACO/CSO as warranted.
- B. Contact JCDHE- Disease Containment at 913-826-1303 if human rabies exposure may have occurred.
- C. Complete a RABIES EXPOSURE – DETAILED INFORMATION FORM for a possible human and/or animal exposure.
- D. Notify JCDHE- Environmental at 913-715-6900 for specimen submittal to the Kansas Veterinary Diagnostic Laboratory (KSVDL) for rabies testing. Provide a completed copy of RABIES EXPOSURE – DETAILED INFORMATION FORM.
- E. Manage the appropriate confinement period of the animal as determined by the circumstances of the case. Complete RABIES EXPOSURE – ANIMAL DISPOSITION FORM.
- F. Fax all completed forms to JCDHE- Disease Containment at 913-826-1300 for recording.

II. Johnson County Department of Health and Environment - Environmental:

- A. Contact JCDHE- Disease Containment for recommendations and/or investigation at 913-826-1303.
- B. Complete the RABIES EXPOSURE – DETAILED INFORMATION FORM (if not completed by ACO/CSO) and fax to JCDHE- Disease Containment at 913-826-1300 for recording.
- C. For specimens sent to the KSVDL for rabies testing, follow recommended KSU Rabies Laboratory Selection, Collection, and Shipping protocols. Complete the KSVDL Rabies Diagnostic Requisition form and submit with specimen.

III. Johnson County Department of Health and Environment - Disease Containment:

- A. After notification of an animal bite identified as high risk for rabies transmission, log report into the Animal Bite Surveillance and/or EpiTrax database.
- B. Document the JCDHE and/or EpiTrax case numbers and the date received on the RABIES EXPOSURE – DETAILED INFORMATION FORM and any other applicable forms.
- C. Determine treatment recommendations based on the species of animal involved and on a case-by-case basis utilizing: *Kansas Statute 75-5661; K.A.R. 28-1-13, 28-1-14*; the

NASPHV *Compendium of Animal Rabies Prevention and Control* (2011); and, the Kansas Department of Health and Environment *Rabies Investigation Guideline* (2014).

- D.** Follow-up on each case until completion of treatment recommendations or receipt of negative result of rabies testing from the KSVDL. Document results on forms and file appropriately.

RABIES EXPOSURE PROTOCOLS

Management of Animals That Bite Humans

(K.A.R. 28-1-13, K.A.R. 28-1-14, KS Statute 75-5661)

Reporting Animal Bites

Rabies is a reportable disease; therefore, possible rabies exposures will be investigated. Any person in Johnson County that is bitten by a wild or domestic animal considered to be a reservoir for rabies, shall immediately report the bite to local law enforcement or the Johnson County Department of Health and Environment. Animal bites (non-rabies exposures) are not required by law to be reported to the Kansas Department of Health and Environment (KDHE).

Rabies Titers/Serology

Rabies virus antibody titers do not directly correlate with absolute protection against a rabies infection; there is no "protective" titer against the rabies virus. Therefore, use of rabies virus antibody titers in animals that have bitten a person should not be used for making decisions about the disposition of such animal.

A. Dogs, Cats, and Ferrets – Animal Found

Rabies virus is excreted in the saliva of infected dogs, cats, and ferrets during illness or for only a few days before illness or death.

1. Any healthy dog, cat, or ferret that is owned or wanted, regardless of rabies vaccination status, that exposes a person should be isolated and observed daily for 10 days from the time of the exposure. The location for isolation shall be determined by the ACO/CSO with jurisdiction.
 - a. Locations for isolation can include:
 - i. Residence of the animal's owner,
 - ii. A veterinary hospital, or
 - iii. A facility holding a current state pound or shelter license.

- b. Administration of rabies vaccine to the animal is not recommended during the isolation period to avoid confusing signs of rabies with rare adverse reactions to vaccination.
- c. Monitoring of the isolated animal is the responsibility of the ACO/CSO with jurisdiction.
- d. Release of the animal from isolation is authorized only after final evaluation of such animal by the ACO/CSO with jurisdiction. This ACO/CSO is to inform the Local Health Officer or Designee of the final disposition/outcome of the isolated animal.
- e. Any illness in the animal should be reported immediately to the Johnson County Department of Health and Environment (JCDHE). Such animal should be evaluated by a veterinarian at the first sign of illness during confinement.
 - i. If the attending veterinarian has determined that signs suggestive of rabies have developed (e.g., paralysis or seizures):
 - 1. The ACO/CSO with jurisdiction has the responsibility to coordinate with the animal's owner and/or attending veterinarian to immediately and humanely euthanize the animal, at the owner's expense; and,
 - 2. Coordinate the proper submittal of specimen to the Kansas State Veterinary Diagnostic Laboratory (KSVDL) for rabies testing.
 - a. Submittal is performed by JCDHE- Environmental or the attending veterinarian.
 - ii. JCDHE- Environmental personnel, ACO/CSO with jurisdiction, or attending veterinarian, after submitting specimen to the KSVDL, shall:
 - a. Notify JCDHE- Disease Containment of submittal of animal specimen;
 - b. Receive results of test; and,
 - c. Notify JCDHE- Disease Containment, ACO/CSO with jurisdiction, and person who submitted the specimen of the results.
 - d. If the specimen is determined to be unsuitable by the KSVDL, the results are automatically considered "**Positive**".
- 2. Any dog, cat, or ferret that is conclusively determined to be stray or unwanted and exposes a person shall be:
 - a. Euthanized immediately and humanely and the head submitted to the KSVDL for rabies testing; or,
 - b. Isolated and observed daily for 10 days from the time of the exposure following the protocol for an owned or wanted animal.
- 3. Any rabies-vaccinated "service animal" (i.e., police dog) that bites a human in the course of its service duties shall not be removed from its handler or detained for observation.

B. Dogs, Cats, and Ferrets – Animal Not Found

- 1. ACO/CSO must continue efforts to locate the missing animal.

2. If the animal is not found within 24 hours after the bite/exposure, the ACO/CSO must submit the appropriate RABIES EXPOSURE form(s) to JCDHE- Disease Containment.
3. JCDHE- Disease Containment will instruct the victim to consult with physician and discuss treatment options including TT/Td/Tdap/DTap (tetanus) vaccination, antibiotics, and Post-Exposure Prophylaxis (PEP).
4. JCDHE- Disease Containment will provide the victim with information concerning rabies, risk factors, and PEP.
5. If the animal is found, the ACO/CSO will notify JCDHE- Disease Containment.
 - a. Animal will be isolated and observed as stated in section A.

C. Other Animals

Other animals that might have exposed a person to rabies should be reported immediately to the JCDHE. Management of animals other than dogs, cats, and ferrets depends on the species, the circumstances of the exposure, the epidemiology of rabies in the area, the exposing animal's history and current health status, and the animal's potential for exposure to rabies, and will be determined by the Local Health Officer or Designee and the ACO/CSO with jurisdiction.

1. The shedding period for rabies virus is undetermined for most species.
2. Offspring of wild species cross-bred with domestic dogs or cats, skunks, foxes, raccoons, coyotes, bats and other species known to be involved in the transmission of rabies, whether owned or unowned, shall be euthanized immediately and the head submitted to the KSVDL for rabies testing.
3. Small rodents and lagomorphs (e.g., squirrels, hamsters, guinea pigs, gerbils, chipmunks, rats, mice, wild rabbits and hares) are not known to transmit rabies to humans and are not usually found to be infected with rabies.
 - a. These animals do not need to be euthanized unless circumstances, in the judgment of the ACO/CSO with jurisdiction and the Local Health Officer or Designee, indicate otherwise.
 - i. An exception may be rodents and lagomorphs caged outdoors.
4. Any animal exhibiting signs suggestive of rabies is always considered a high-risk animal.
5. Previous vaccination of animals other than dogs, cats, and ferrets might not preclude the necessity for euthanasia and rabies testing.

Management of Animals Exposed to Confirmed or Suspected Rabid Animal

(K.A.R. 28-1-13, K.A.R. 28-1-14, KS Statute 75-5661)

Wild mammalian carnivores (including bats, skunks, raccoons, foxes, and coyotes) that are not available or suitable for testing should be regarded as rabid animals. Therefore, any mammal potentially exposed to rabies virus by a wild mammalian carnivore that is not available for testing shall be regarded as having been exposed to rabies.

A. Dogs, Cats, and Ferrets

Any illness in an exposed animal should be reported immediately to the Johnson County Department of Health and Environment (JCDHE). If the attending veterinarian determines that signs suggestive of rabies develop (e.g., paralysis or seizures), the animal

should be euthanized immediately and humanely and the head shipped to the Kansas State Veterinary Diagnostic Laboratory (KSVDL) for rabies testing.

1. Dogs, cats, and ferrets that are currently vaccinated against rabies and are exposed to a rabid animal should be:
 - a. Revaccinated against rabies by a licensed veterinarian immediately,
 - b. Kept under the owner's control, and
 - c. Observed for 45 days.
 - i. The rationale for an observation period is based in part on the potential for an overwhelming viral challenge, incomplete vaccine efficacy, improper vaccine administration, variable host immunocompetence, and immune-mediated fatality (i.e., early death phenomenon).
 - d. Monitoring of the observed animal is the responsibility of the ACO/CSO with jurisdiction.
 - e. Release of the animal from observation is authorized only after final evaluation of such animal by the ACO/CSO with jurisdiction. This ACO/CSO is to inform the Local Health Officer or Designee of the final disposition/outcome of the observed animal.
2. Dogs, cats, and ferrets overdue for a rabies booster vaccination and are exposed to a rabid animal should be:
 - a. Quarantined for 6 months at one of the following locations as determined by the ACO/CSO with jurisdiction:
 - i. Residence of the animal's owner,
 - ii. A veterinary hospital, or
 - iii. A facility holding a current state pound or shelter license; and
 - b. Revaccinated against rabies by a licensed veterinarian 1 month prior to release from quarantine.
 - c. Monitoring of the quarantined animal is the responsibility of the ACO/CSO with jurisdiction.
 - d. Release of the animal from quarantine is authorized only after final evaluation of such animal by the by the ACO/CSO with jurisdiction. This ACO/CSO is to inform the Local Health Officer or Designee of the final disposition/outcome of the quarantined animal.
3. Dogs, cats, and ferrets that have never been vaccinated against rabies and are exposed to a rabid animal should be euthanized immediately.
 - a. If the owner is unwilling to have this done, the animal should be:
 - i. Quarantined for 6 months at one of the following locations as determined by the ACO/CSO with jurisdiction:
 1. Residence of the animal's owner,
 2. A veterinary hospital, or
 3. A facility holding a current state pound or shelter license; and
 - ii. Vaccinated against rabies by a licensed veterinarian 1 month prior to release from quarantine.
 1. There are currently no USDA-licensed biologics for post-exposure prophylaxis (PEP) of previously unvaccinated domestic animals, and there is evidence that the use of vaccine alone will not reliably prevent the disease in these animals.

- iii. Monitoring of the quarantined animal is the responsibility of the ACO/CSO with jurisdiction.
- iv. Release of the animal from quarantine is authorized only after final evaluation of such animal by the by the ACO/CSO with jurisdiction. This ACO/CSO is to inform the Local Health Officer or Designee of the final disposition/outcome of the quarantined animal.

B. Livestock

All species of livestock are susceptible to rabies. Cattle and horses are the most frequently reported infected species. Multiple rabid animals in a herd or herbivore-to-herbivore transmission are uncommon; therefore, restricting the rest of the herd if a single animal has been exposed to or infected by rabies is usually not necessary. Cases will be managed as determined by the ACO/CSO with jurisdiction, Local Health Officer or Designee, and the attending veterinarian.

Any illness in an exposed livestock animal should be reported immediately to the JCDHE and the Kansas Department of Agriculture (KDA). If the attending veterinarian has determined that signs suggestive of rabies have developed (e.g., paralysis or seizures), the animal should be euthanized immediately and humanely and the head shipped to the KSVDL for rabies testing.

1. Livestock currently vaccinated against rabies with a vaccine approved by the USDA for that species and are exposed to a rabid animal should be:
 - a. Revaccinated against rabies by a licensed veterinarian immediately, and
 - b. Observed for 45 days.
 - c. Monitoring of the observed animal is the responsibility of the ACO/CSO with jurisdiction.
 - d. Release of the animal from observation is authorized only after final evaluation of such animal by the by the ACO/CSO with jurisdiction. This ACO/CSO is to inform the Local Health Officer or Designee of the final disposition/outcome of the observed animal.
2. Unvaccinated livestock exposed to a rabid animal should be evaluated on a case-by-case basis by the JCDHE, KDA, and the attending veterinarian.
 - a. Unwanted or unowned livestock should be euthanized immediately.
 - b. If the animal is not euthanized, it should be:
 - i. Quarantined for 6 months.
 - ii. Monitoring of the quarantined animal is the responsibility of the ACO/CSO with jurisdiction.
 - iii. Release of the animal from quarantine is authorized only after final evaluation of such animal by the by the ACO/CSO with jurisdiction. This ACO/CSO is to inform the Local Health Officer or Designee of the final disposition/outcome of the quarantined animal.

Handling and consumption of tissues from exposed animals might carry a risk for rabies transmission. Risk factors depend in part on the sites of exposure, amount of virus present, severity of wounds, and whether sufficient contaminated tissue has been excised.

- a. If an exposed animal is to be custom or home slaughtered for consumption, it should be done immediately after exposure, and all tissues should be cooked thoroughly.
- b. Persons handling exposed animals, carcasses, and tissues should use barrier precautions.
- c. Historically, federal guidelines for meat inspectors required that any animal known to have been exposed to rabies within 8 months be rejected for slaughter. If such exposures occur in food animals before slaughter, USDA Food and Inspection Service and state meat inspectors should be notified.
- d. Rabies virus is widely distributed in tissues of rabies infected animals. Tissues and products from a rabies infected animal should not be used for human or animal consumption or transplantation.
- e. Pasteurization and cooking will inactivate rabies virus; therefore, inadvertently drinking pasteurized milk or eating thoroughly cooked animal products does not constitute a rabies exposure.

C. Other Animals

1. Other mammals exposed to a rabid animal should be euthanized immediately.
 2. Animals maintained in USDA-licensed research facilities or accredited zoological park should be evaluated on a case-by-case basis in consultation with public health authorities.
 - a. Management options may include isolation, observation, or administration of rabies biologics.
-

Testing of Suspect Rabid Animals

If a suspect rabid animal is available for testing, an animal that was bitten by or otherwise potentially exposed to the suspect rabid animal will be quarantined pending the rabies test result on the suspect animal. If the test results are negative, the bitten or otherwise potentially exposed animal shall be released from quarantine only after the approval of the ACO/CSO with jurisdiction. This ACO/CSO is to inform the Local Health Officer or Designee of the final disposition/outcome of the bitten or potentially exposed animal.

RESOURCES USED TO UPDATE PROTOCOL

1. American Veterinary Medical Association (AVMA). (2013). AVMA Model Rabies Control Ordinance, 1-6.

2. Centers for Disease Control and Prevention (CDC). (2008). Human Rabies Prevention – United States, 2008, Recommendations of the Advisory Committee on Immunization Practices. *MMWR Recommendations and Reports*, 57(RR03), 1-21.
3. Kansas Department of Health and Environment (KDHE). (2014). Rabies Investigation Guideline (Includes Potential Exposure Management), 1-38.
4. National Association of State Public Health Veterinarians, Inc. (NASPHV). (2011). Compendium of Animal Rabies Prevention and Control, 1-16.

JCDHE 9/81; Rev. 1/11, 8/13, 2/15

Appendix 4 – Rabies Exposure Forms

JOHNSON COUNTY KANSAS Health & Environment					RABIES EXPOSURE – HUMAN INVESTIGATION FORM (ANIMAL BITE)				
DESCRIPTION OF INCIDENT: _____ _____ _____ _____									
ANIMAL(S) CAUSING EXPOSURE INFORMATION Number of animals causing exposure? _____ List each animal separately:									
SPECIES	COLOR / DESCRIPTION	OWNED ANIMAL	PROOF OF CURRENT RABIES VACCINATION	ANIMAL AVAILABLE FOR TESTING / OBSERVATION					
		YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>					
		YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>					
		YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>					
1) Was/were the animal(s) exhibiting signs/symptoms of rabies at the time of exposure? YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN <input type="checkbox"/> Unusual aggression <input type="checkbox"/> Wild animal not afraid of people <input type="checkbox"/> Nocturnal animal active in daytime <input type="checkbox"/> Excessive salivation <input type="checkbox"/> Difficulty swallowing <input type="checkbox"/> Impaired movement <input type="checkbox"/> Paralysis <input type="checkbox"/>									
2) Was it possible that the animal(s) had any contact with any potential rabies vectors? YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN <input type="checkbox"/> Bats <input type="checkbox"/> Skunks <input type="checkbox"/> Raccoons <input type="checkbox"/> Coyotes <input type="checkbox"/> Foxes <input type="checkbox"/> Stray Dogs <input type="checkbox"/> Stray Cats <input type="checkbox"/>									
<i>If YES or UNKNOWN was selected for one or both of the previous questions, a Rabies Exposure may have occurred. Refer to KDHE Rabies Exposure Assessment Algorithm, Provoked Animal Bites and Rabies Exposure, and Rabies Risk Level Assessment documents if further guidance is needed.</i>									
3) DOES THIS INVESTIGATION INDICATE A POSSIBLE RABIES EXPOSURE? YES <input type="checkbox"/> NO <input type="checkbox"/>									
<ul style="list-style-type: none"> • If YES, complete the following actions: <ul style="list-style-type: none"> ○ Contact JCDHE Disease Containment at 913-826-1303. ○ Complete RABIES EXPOSURE – DETAILED INFORMATION FORM. ○ Complete RABIES EXPOSURE – ANIMAL DISPOSITION FORM. ○ Fax all completed forms to JCDHE Disease Containment at 913-826-1300. ○ Direct exposed person(s) to a healthcare provider for immediate care. • If NO, incident does not need to be reported to JCDHE Disease Containment. Appropriate medical care for injured person(s) and/or actions by Animal Control Officers should be continued as warranted. 									
<i>Johnson County Department of Health and Environment Information Only:</i>									
Date Received: _____ Case Number: _____ Epitrax Number: _____ Status: _____									
Date Investigation Began: _____ Date Investigation Completed: _____ Investigator Name: _____									
JCDHE 2/15									

RABIES EXPOSURE – DETAILED INFORMATION FORM

VICTIM INFORMATION

Name of Victim: _____ Birth Date: _____ Age: _____ Sex: _____
Address: _____ City: _____ State: _____ ZIP: _____
Telephone: Home: _____ Work: _____ Cell: _____ Email: _____

HEALTHCARE INFORMATION

Healthcare Provider Consulted: _____
Telephone: _____ Fax: _____ Email: _____
Description/Anatomical Site of Exposure(s): _____

EXPOSURE INCIDENT INFORMATION

Date of Exposure: _____ Address of Exposure: _____
Exposure Type: Bite ☐ Non-Bite (Saliva or Nervous Tissue Exposure) ☐ Non-Bite (Scratch or Abrasion) ☐ None ☐
Persons Exposed to Animal: Victim ☐ Owner ☐ Reporting Officer ☐ DVM/Staff ☐ Other Animals ☐ None ☐

DESCRIPTION OF INCIDENT/COMMENTS

ANIMAL OWNER INFORMATION

Animal Owner: _____ Relationship to Victim: _____
Address: _____ City: _____ State: _____ ZIP: _____
Telephone: Home: _____ Work: _____ Cell: _____ Email: _____

ANIMAL INFORMATION

Species: _____ Breed: _____ Color/Description: _____
Age: _____ Sex: _____ Intact? Yes ☐ No ☐ Owned Pet? Yes ☐ No ☐ Unknown ☐ Origin: _____
Date of Last Rabies Vaccination: Known ☐ Unknown ☐ No Vaccine Available for Species ☐
Veterinarian/Veterinary Facility: _____ Phone: _____ Fax: _____
Was animal injured at time of exposure? Yes ☐ No ☐ Did animal appear sick at time of exposure? Yes ☐ No ☐
Was bite provoked? Yes ☐ No ☐ If yes to previous, explain: _____
Status of Animal: Alive – 10 Day Isolation ☐ Alive – 45 Day Observation ☐ Alive – 6 Month Quarantine ☐
Location of Isolation/Observation/Quarantine: _____ Begin Date: _____ End Date: _____
Deceased ☐ Date Deceased: _____ Euthanized? ☐ Date Euthanized: _____ Unknown (reason): _____
Cause of Death/Euthanasia: _____ Submitted for Rabies Testing? Yes ☐ No ☐ Submittal Date: _____

REPORTING OFFICER INFORMATION

Reported By: _____ Department: _____ Date of Report: _____
Address: _____
City: _____ State: _____ ZIP: _____
Telephone: _____ Fax: _____ E-mail: _____

Johnson County Department of Health and Environment Information Only:

Date Received: _____ Case Number: _____ Epitax Number: _____ Status: _____
Date Investigation Began: _____ Date Investigation Completed: _____ Investigator Name: _____

RABIES EXPOSURE – ANIMAL DISPOSITION FORM

<input type="checkbox"/> Euthanized, submitted for testing	Submitted by: _____ Date submitted: _____
<hr/>	
<input type="checkbox"/> 10 Day Isolation (animal bites a person) Location of isolation: <input type="checkbox"/> Owner's Home <input type="checkbox"/> Veterinary Office _____ <input type="checkbox"/> Animal Shelter Did the animal survive the 10 day isolation? <input type="checkbox"/> Yes <input type="checkbox"/> No If no, was specimen submitted for testing? <input type="checkbox"/> Yes <input type="checkbox"/> No	Isolation start date: _____ Isolation end date: _____ Released by: _____ Submitted by: _____ Date submitted: _____
<hr/>	
<input type="checkbox"/> 45 Day Observation (rabies-vaccine-current-animal bitten by another animal) Location of observation: <input type="checkbox"/> Owner's Home <input type="checkbox"/> Veterinary Office _____ <input type="checkbox"/> Animal Shelter Was animal rabies vaccinated at initiation of observation? <input type="checkbox"/> Yes <input type="checkbox"/> No Did the animal survive the 45 day observation? <input type="checkbox"/> Yes <input type="checkbox"/> No If no, was specimen submitted for testing? <input type="checkbox"/> Yes <input type="checkbox"/> No	Observation start date: _____ Observation end date: _____ Vaccination date: _____ Released by: _____ Submitted by: _____ Date submitted: _____
<hr/>	
<input type="checkbox"/> 6 Month Quarantine (rabies-vaccine-not-current-animal bitten by another animal) Location of quarantine: <input type="checkbox"/> Owner's Home <input type="checkbox"/> Veterinary Office _____ <input type="checkbox"/> Animal Shelter Was animal rabies vaccinated 1 month prior to end of quarantine? <input type="checkbox"/> Yes <input type="checkbox"/> No Did the animal survive the 6 month quarantine? <input type="checkbox"/> Yes <input type="checkbox"/> No If no, was specimen submitted for testing? <input type="checkbox"/> Yes <input type="checkbox"/> No	Quarantine start date: _____ Quarantine end date: _____ Vaccination date: _____ Released by: _____ Submitted by: _____ Date submitted: _____
<hr/>	
<input type="checkbox"/> Unavailable Reason: _____	
Additional Notes: _____ _____ _____	
<hr/> <p>* At end of isolation/observation/quarantine period, please fax results to JCDHE Disease Containment at 913-826-1303. *</p> <p><i>Johnson County Department of Health and Environment Information Only:</i></p> Date Received: _____ Case Number: _____ Epitax Number: _____ Status: _____ Date Investigation Began: _____ Date Investigation Completed: _____ Investigator Name: _____	
<hr/> <p>JCDHE 1/15</p>	

RABIES EXPOSURE – HUMAN DISPOSITION FORM

VICTIM INFORMATION

Name of Victim: _____ Birth Date: _____ Age: _____ Sex: _____
 Address: _____ City: _____ State: _____ ZIP: _____
 Telephone: Home: _____ Work: _____ Cell: _____ Email: _____
 Race: American Indian/Alaska Native ☐ Asian ☐ Black/African American ☐ Hispanic/Latino ☐
 Native Hawaiian/Pacific Islander ☐ White/Caucasian ☐ Other ☐ _____ Unknown ☐

HEALTHCARE INFORMATION

Healthcare Provider Consulted: _____
 Telephone: _____ Fax: _____ Email: _____

EXPOSURE INCIDENT INFORMATION

Date of Exposure: _____ Address of Exposure: _____
 Exposure Type: Bite ☐ Non-Bite (Saliva or Nervous Tissue Exposure) ☐ Non-Bite (Scratch or Abrasion) ☐ None ☐
 Description/Anatomical Site of Exposure(s): _____
 Description of Incident: _____

MEDICAL HISTORY

Did victim previously complete a rabies prophylaxis protocol? Yes ☐ No ☐ Date of last vaccination: _____
 Did victim receive a Tetanus vaccine within the previous 5 years? Yes ☐ No ☐ Date of last vaccination: _____

TREATMENT RECOMMENDATIONS

Was Post-Exposure Prophylaxis (PEP) recommended by JCDHE or KDHE? Yes ☐ No ☐ Insufficient Information ☐
 If recommended, was PEP started? Yes ☐ No, patient refused ☐ No, other reason ☐ _____

TREATMENT RECEIVED

Treatment: None ☐ Sutures? Yes ☐ No ☐ Surgery? Yes ☐ No ☐ Antibiotics? Yes ☐ No ☐
 TT / Td / Tdap? Yes ☐ No ☐ HRIG Administration? Yes ☐ No ☐ Rabies PEP? Yes ☐ No ☐

POST-EXPOSURE PROPHYLAXIS At end of PEP, please notify JCDHE Disease Containment at 913-826-1303.

Final recommendations made by: JCDHE ☐ Local Health Officer ☐ Healthcare Provider ☐ Other ☐ _____
 PEP series completed? Yes ☐ No, animal tested negative for rabies ☐ No, patient refused further treatment ☐
 No, patient lost to follow-up ☐ No, other reason ☐ _____

Human Rabies Immune Globulin (HRIG)	Yes <input type="checkbox"/>	Date given: _____	Location: _____	No <input type="checkbox"/>
Human Rabies Vaccine - Dose 1 (Day 0)	Yes <input type="checkbox"/>	Date given: _____	Location: _____	No <input type="checkbox"/>
Human Rabies Vaccine - Dose 2 (Day 3)	Yes <input type="checkbox"/>	Date given: _____	Location: _____	No <input type="checkbox"/>
Human Rabies Vaccine - Dose 3 (Day 7)	Yes <input type="checkbox"/>	Date given: _____	Location: _____	No <input type="checkbox"/>
Human Rabies Vaccine - Dose 4 (Day 14)	Yes <input type="checkbox"/>	Date given: _____	Location: _____	No <input type="checkbox"/>
Human Rabies Vaccine - Dose 5* (Day 21)	Yes <input type="checkbox"/>	Date given: _____	Location: _____	No <input type="checkbox"/>

*if victim is immunocompromised

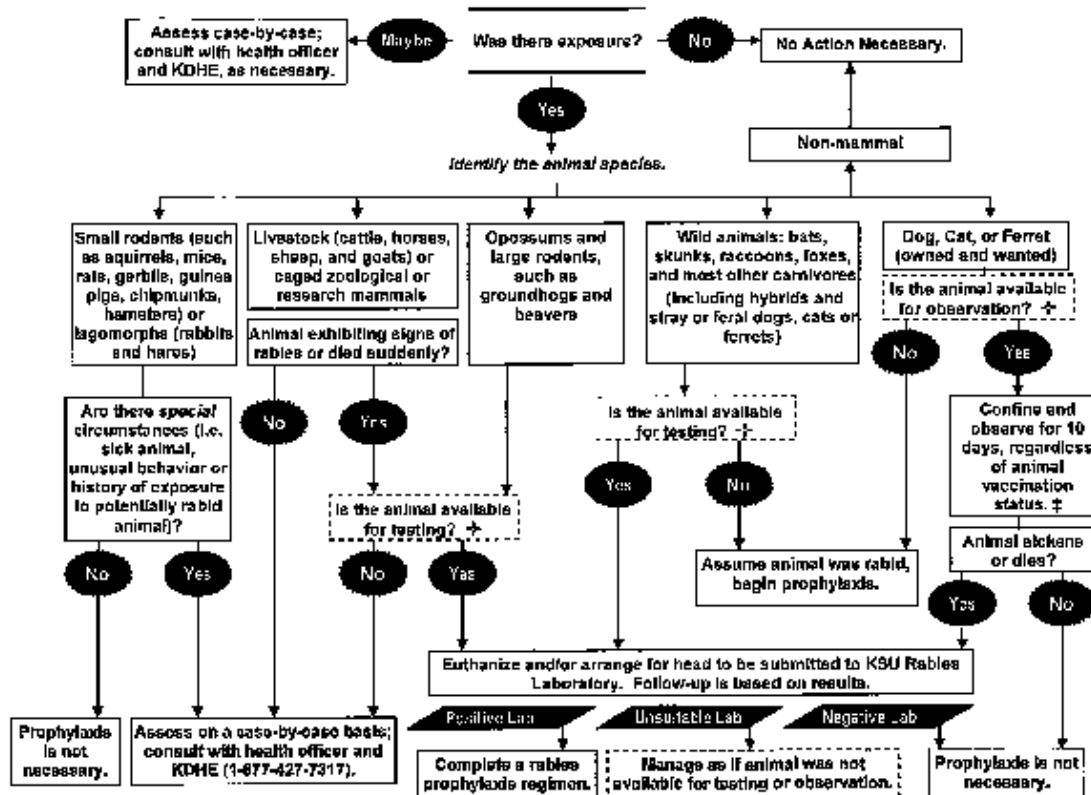
Locations include: Emergency Room (ER), Physician's Office (PO), JCDHE, Urgent Care (UC)

Johnson County Department of Health and Environment Information Only:

Date Received: _____ Case Number: _____ Epitax Number: _____ Status: _____
 Date Investigation Began: _____ Date Investigation Completed: _____ Investigator Name: _____

Appendix 5 – KDHE Rabies Exposure Assessment Algorithm

Rabies Exposure Assessment Algorithm: Human Exposures to Potentially Rabid Animal



Notes:

- 1) **Exposure:** any penetration of the skin by the teeth or any contamination of mucous membranes or fresh, open cuts in the skin with saliva or brain material. Please refer to note 2) for bats.
- 2) **Bat Exposure:** Every effort should be made to safely capture and test the bat involved. If the patient can provide an adequate testimony that while conscious, no direct exposure occurred then no PEP is necessary. If the patient is an unobserved child, or was an unobserved person who was asleep, intoxicated or mentally challenged, then PEP may be indicated if testing cannot be done.
- 3) **Immediate care:** Proper wound care should always occur. (i.e. cleaning area, tetanus booster and/or antibiotics, as needed)
- 4) **For consultation:** Contact a KDHE epidemiologist on call 24 hours/day any day.

‡ Exposed individuals may be offered post-exposure prophylaxis (PEP) at anytime during the period of testing or observation if the situation is considered one of high risk for potential rabies transmission. If the animal is later determined not rabid, treatment should be stopped.

On a case-by-case basis, it may be allowable to wait to identify an animal's owner or to capture an offending animal (assuming the correct animal can be positively identified). The local health officer can waive any holding period in lieu of the urgency of the situation.

‡ For the 10 day observation period, day 0 is the day that the bite or exposure occurred.

Appendix 6 – Provoked Animal Bites and Rabies Exposure

Provoked Animal Bites and Rabies Exposure

From Kansas Department of Health and Environment Rabies Investigation Guidelines, version 10/2014

Assess the risk of rabies transmission

3. Investigate the circumstances of exposure: Talk to the exposed person and/or other witnesses to get an account of what occurred. Make a distinction between a provoked and unprovoked bite considering the animal's "normal" behavior. An unprovoked bite may be attributable to rabies. Provoked bites are less likely to reflect behavioral changes associated with rabies.

Provocation - something that incites, instigates, angers, or irritates. Dictionary.com

From *Issues about Animal Behavior Relevant to Dog-Bite Statutes*, Richard H. Polsky, PhD

"Provocation may be defined as any action by a person which causes the dog [animal] to immediately engage in a response that is motivationally different from the response it was engaged in just prior to the action of the person. In other words, the person's actions must cause a radical change in the dog's [animal's] behavior. Causation may be inferred by the immediacy of the change."

Possible examples of provoked bites:

- Bites by unfamiliar animals the person was interacting with
 - Petting a dog on a leash
 - Feeding a dog at the dog park
 - Trying to catch a loose pet
- Bites by an injured animal
 - Touching or moving a dog or cat hit by a car
 - Touching or manipulating a dog or cat with a painful condition/illness
 - Arthritis
 - Post-Surgery
- Bites by an animal protecting "their space"
 - Dog biting someone entering their yard or home
 - Dog protecting its food, treats, toys, owner
- Bites by an animal when interacting with a veterinarian, veterinary staff, groomer, trainer
 - Often because:
 - Animal is nervous/scared
 - Animal is being restrained
 - Animal is painful

-
- **If a bite is provoked, the animal is healthy, and the animal is currently vaccinated against rabies, then the bite would not be considered a possible exposure to rabies. Therefore, the bite does not need to be reported to the JCDHE.** Other bites/exposures should be evaluated using the KDHE Rabies Exposure Assessment Algorithm. Appropriate medical care for injured person(s)/animal(s) and/or actions by Animal Control Officers/Community Safety Officers should be continued as warranted.

IF IN DOUBT, ERR ON THE SIDE OF SAFETY FOR THE PERSON(S) INVOLVED.

Appendix 7 – Rabies Risk Level Assessment

Rabies Risk Level Assessment – Animals Causing Exposure

Applies to animals that may have exposed a person to Rabies

HIGH-RISK

Wild Animals – May include Rabies Reservoir Species (denoted by an asterisk *) which are animals that can commonly be infected by and transmit rabies

- Raccoons*, Foxes* (Red and Gray), Skunks*, Coyotes*, Bobcats, Woodchucks (Groundhogs), Beavers, and other large carnivores
<http://www.cdc.gov/rabies/exposure/animals/other.html>
- Bats* – all species require special consideration
<http://www.cdc.gov/rabies/exposure/animals/bats.html>
- Wolf-hybrids and other Wild-hybrids

Stray or Feral Animals

- Dogs and Cats

LOW-RISK

Wild Animals – Unlikely to be infected with rabies unless there are other risk factors

- Wild Rodents – Squirrels, Rats, Mice, Voles, Moles, etc.
<http://www.cdc.gov/rabies/exposure/animals/other.html>
- Exotic Pets – Rabbits, Hamsters, Guinea Pigs, Rats, Mice, etc. – If born and maintained in captivity and have no exposure to other rabies transmitting species
<http://www.cdc.gov/rabies/exposure/animals/exotic.html>

A LOW-RISK WILD ANIMAL THAT IS EXHIBITING SIGNS CONSISTENT WITH RABIES IS ALWAYS RE-CLASSIFIED AS HIGH-RISK

Domestic Animals – Required to be observed for 10 days after biting a person

- Dogs, Cats, Ferrets, Horses, Livestock
<http://www.cdc.gov/rabies/exposure/animals/domestic.html>

NO-RISK – Only mammals can become infected with or transmit rabies

Birds

Reptiles (Lizards, Snakes, Turtles, etc.)





Amphibians (Frogs, Toads, Salamanders, etc.)

Fish

Insects

Appendix 8 – Rabies Brochure

Rabies Facts & Prevention

-  Rabies is an infectious disease that affects the nervous system of mammals, including humans.
-  After an animal bite, a person should seek immediate medical attention and be assessed to determine the need for Post-Exposure Prophylaxis (PEP).
-  PEP is recommended on a case-by-case basis.
-  Report all animal bites to your local animal control office or the Johnson County Department of Health and Environment at 913-826-1303 or the Kansas Department of Health and Environment at 1-877-427-7317.

Rabies Virus

Rabies is caused by a virus that affects the nervous system of warm-blooded animals. A person is exposed to rabies when he or she comes into contact with live rabies virus; most often through the bite of a rabid animal. Less common exposures can occur if the virus comes into contact with broken skin, or into the eyes or inside of the mouth (mucus membranes). Not all exposures result in rabies infection, although those with a confirmed exposure to rabies should receive treatment.

All mammals including humans, are at risk for rabies. The disease is most often found in animals such as dogs, cats, bats, skunks, foxes, coyotes and raccoons. Many cases are reported in livestock that generally contract the disease from infected wildlife. Rabies is present in all parts of the continental United States. *It can be found in animals during any season of the year.*

Worldwide, dogs account for 90 percent of human rabies exposures and 95 percent of the estimated 55,000 yearly deaths. But in the United States, rabies exposure is more common from wildlife, and we see only two to three deaths per year. This difference has been the result of nationwide programs to promote immunization of pets and to better control wildlife that harbor rabies.

Wildlife are the main reservoirs for rabies in the United States, but different animals are reservoirs in different areas of the country. The east coast usually sees more positive raccoons; the southwest and Alaska usually have more positive foxes; and Kansas, Nebraska and Oklahoma identify more positive skunks. Because bats are widespread in the United States, positive cases are identified nationwide. In Johnson County, Kan. rabies is most often found in bats (see Figure 1 and Table 1 on the next page).

Exposure to rabies may be minimized by avoiding all wild animals (especially those acting abnormally) and by vaccinating all pets.

Wild animals are not suitable pets and may expose people to unnecessary health risks.

Revised 02/15

Figure 1. Laboratory Confirmed Rabid Animals in Johnson County, 1998-2014

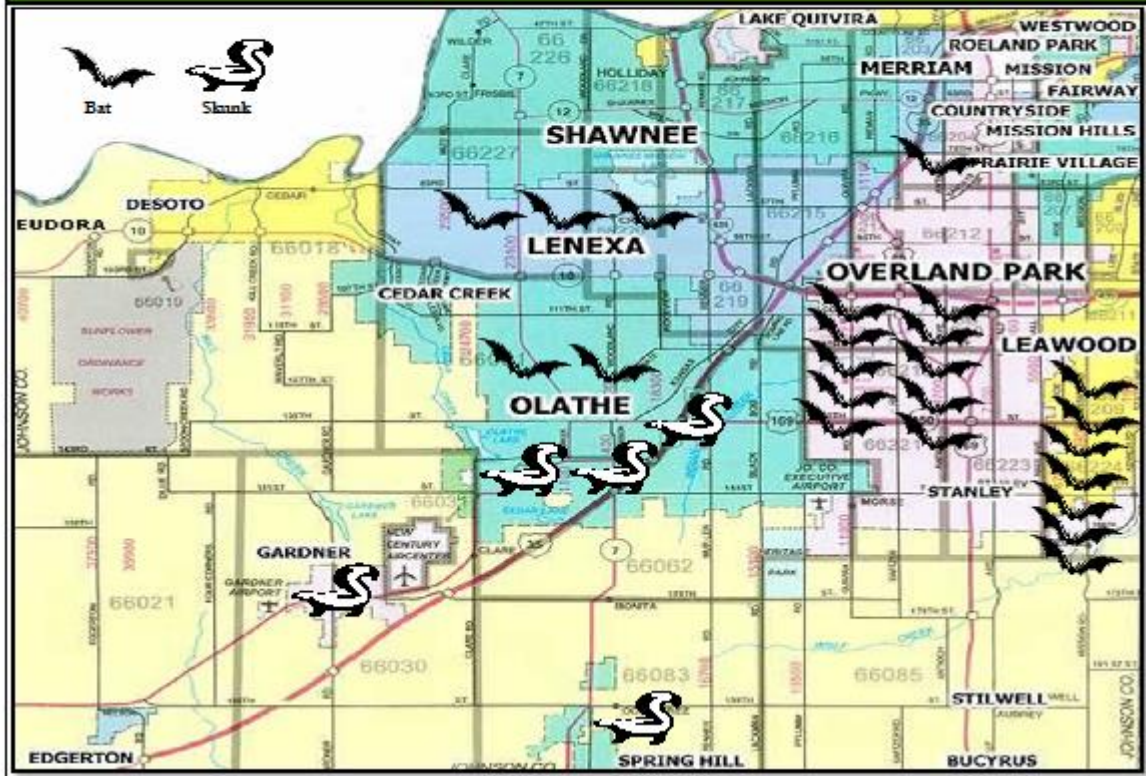
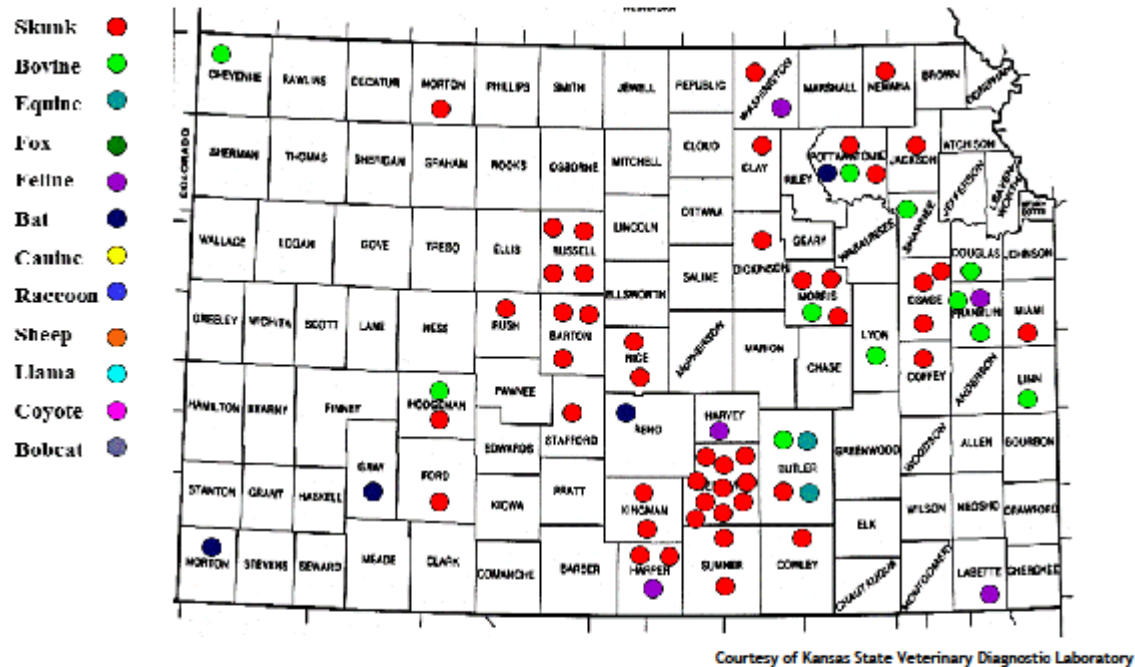


Table 1. Laboratory Confirmed Rabid Animals in Johnson County, 1998-2014

Year	Positive Results	Animal Species	Gardner	Leawood	Lenexa	Olathe	Overland Park	Prairie Village	Spring Hill
1998	1	Bat					1		
1999	0								
2000	3	Bat		2		1			
2001	1	Bat					1		
2002	3	Bat				1	2		
2003	1	Skunk	1						
2004	2	Bat		1			1		
2005	1	Bat			1				
	4	Skunk				3			1
2006	1	Bat			1				
2007	4	Bat		3	1				
2008	1	Bat					1		
2009	2	Bat		1			1		
2010	1	Bat					1		
2011	0								
2012	3	Bat					2	1	
2013	0								
2014	0								

Figure 2. Confirmed Animal Rabies Cases in Kansas, 2014

Confirmed Positives in Kansas 2014



On average, nearly 100 Kansas animals a year test positive for rabies. In 2014, there were 69 confirmed cases of animal rabies infection in Kansas. Of those positives, there were four bats, seven cats, nine cows, two horses, and 47 skunks. Sedgwick County had the most positive cases (10) identified, Johnson County had zero positive test results in 2014 (Figure 2). The last human case of rabies in Kansas occurred in 1968 and involved a young boy bitten by an infected dog in Cowley County.

Rabies Symptoms

Signs of rabies among wildlife cannot be interpreted reliably. Any mammal acting sick or showing abnormal behaviors, such as partial paralysis, staggering as if intoxicated or disoriented, excessive salivation, difficulty swallowing, self-mutilation, or exhibiting unprovoked aggression or unnatural tameness, could signal the animal is rabid. Avoid contact with wild animals, especially those that are acting abnormal. Contact the local animal control office and provide them with a description and last location of the animal in question.

Early symptoms of rabies may be difficult to notice in the first (Prodromal) phase of infection. These symptoms are similar to many other illnesses. Animals may seem lethargic, may not want to eat or drink water and may want to be left alone. Subtle changes in behavior may be noticed in these first 2-3 days.

The next two commonly recognizable phases of rabies infection are **Furious** and **Paralytic ("Dumb")**.



Furious rabies: Animals behave unpredictably and may become vicious, snap at imaginary objects, and attack people, animals, or random objects without warning. Excessive salivation may be seen. These symptoms may last 2-4 days, but are not always seen. The animal then progresses to shows signs of Paralytic ("Dumb") rabies.



Paralytic ("Dumb") rabies: Animals often develop weakness in the lower jaw—seen as difficulty swallowing and excessive drooling. Within 2-4 days, the paralysis spreads to other parts of the body. Soon the animal enters a coma and later dies as a result of respiratory arrest.

ANY wild animal that exposes a person to rabies should be euthanized immediately and have the brain submitted to the Kansas State Veterinary Diagnostic Laboratory for rabies testing.

If the results are negative, the person exposed does not have to receive PEP.

Exposures

When an exposure has occurred, the likelihood of rabies infection varies with the nature and extent of the exposure. Under most circumstances, two categories of exposure are considered: **Bites** and **Non-Bites**.

Bite	Any penetration of the skin by teeth constitutes a bite exposure. All bites, regardless of location on the body, represent a potential risk of rabies transmission. The risk varies with the species of biting animal, the anatomic site of the bite, and the severity of the wound. Bites by some animals, such as bats, can inflict minor injury and may be difficult to detect.
Non - Bite	Non-bite exposures from animals rarely cause rabies. However, occasional reports of rabies transmission by non-bite exposures suggest that such exposures should be evaluated for possible PEP administration. The contamination of open wounds, abrasions, scratches, or mucous membranes with infectious material (saliva, nervous tissue) from a rabid animal is considered a non-bite exposure.
Other contact, such as petting a rabid animal or contact with blood, urine, or feces of a rabid animal does not constitute an exposure and is not an indication for Post-Exposure Prophylaxis (PEP).	

What To Do If Bitten or Exposed

A physician should be consulted immediately if someone receives a wound from a known or potentially rabid animal. The physician will decide on the appropriate type of PEP.

Wound cleansing is the immediate treatment of all bite wounds and scratches and is perhaps the most effective means of preventing rabies. Wounds produced by the bite of a rabid animal or potentially rabid animal should be thoroughly cleaned with large amounts of soap and water.

Anyone who has been bitten by an animal, or who otherwise may have been exposed to the rabies virus, should start treatment as soon as possible following the exposure.



Rabies exposure is not a medical emergency, but it is a medical urgency!

**Table 2. Animal Type to Post-Exposure Prophylaxis Table
Provided by the Centers for Disease Control and Prevention (CDC)**

Animal Type	Evaluation and Disposition of Animals	Post-Exposure Prophylaxis Recommendations
Dogs, Cats, Ferrets	Healthy and available for a 10-day observation period	Should not begin PEP unless animal develops clinical signs of rabies
	Rabid or suspected rabid	Immediately begin PEP
	Unknown (escaped)	Consult public health officials
Raccoons, skunks, foxes, bats and most other carnivorous mammals	Regarded as rabid unless animal is proven to be negative by laboratory test	Immediately begin PEP
Livestock, horses, rodents (squirrels, hamsters, guinea pigs, gerbils, chipmunks, rats, mice), rabbits, hares and other mammals <i>These bites almost never require rabies PEP</i>	Consider individually on a case-by-case basis	Consult public health officials

Post-Exposure Prophylaxis (PEP)

A person who is exposed and has not been vaccinated against rabies should get **FOUR** doses of the *Human Diploid Cell Rabies Vaccine (HDCV)* - one dose should be given immediately (Day 0), and additional doses on Day 3, Day 7, and Day 14. A fifth dose, given on Day 28, is administered to persons with a compromised immune system. The vaccine should be administered intramuscularly in the deltoid area only for older children and adults; for young children the mid-lateral aspect of the thigh may be used. The vaccine should never be administered in the gluteal area.

At the same time the first dose of HDCV is administered, an injection of *Human Rabies Immune Globulin (HRIG)* is also given. HRIG should never be administered in the same syringe or into the same anatomical site as the HDCV site. Half of the HRIG may be infiltrated around the wound site, if possible, while the other half is administered intramuscularly in the gluteal area. The HRIG injection helps booster protection against the rabies virus.

Anyone who is exposed to rabies and has been previously vaccinated should get **TWO** doses of rabies vaccine; one dose given immediately (Day 0) and another on the Day 3 after exposure. The Human Rabies Immune Globulin (HRIG) should not be administered to persons previously vaccinated against rabies.

Pre-exposure vaccination is generally recommended for people in high-risk groups, such as animal handlers, certain laboratory workers, veterinarians, and those living or traveling to areas where rabies is a constant threat. People who have frequent contact with dogs, cats, foxes, skunks, raccoons, and bats should also be considered for the pre-exposure vaccination. The vaccine is made from a killed rabies virus, therefore it cannot cause disease. Pre-exposure immunization does not eliminate the need for post-exposure treatment, it only reduces the amount of treatments needed.

Never wait for symptoms to occur... by that time it is too late for any treatment.

References

ACIP Guidelines on the Prevention of Rabies in Humans <http://www.cdc.gov/mmwr/pdf/rr57e507.pdf>
CDC Rabies Website <http://www.cdc.gov/rabies>
KDHE Rabies Website http://www.kdheks.gov/epi/human_animal_health.htm#rabies
Kansas State Veterinary Diagnostic Laboratory <http://www.vet.ksu.edu/depts/dmp/service/rabies/index.htm>
NASPHV Animal Rabies Compendium www.cdc.gov/mmwr/preview/mmwrhtml/rr5603a1.htm

JOHNSON COUNTY KANSAS Health & Environment

11875 S. Sunset Drive, Ste. 300, Olathe, KS 66061
11811 S. Sunset Drive, Ste. 2700, Olathe, KS 66061
6000 Lamar Ave., Ste. 140, Mission, KS 66202

Disease Reporting (Monday-Friday, 8 a.m. to 5 p.m.)
Phone: 913-826-1303; Fax: 913-826-1300
Main Phone: 913-826-1200 • www.jocogov.org/jcdhe

Kansas Department of Health and Environment
Phone: 1-877-427-7317 (after hours and weekends)

Connect with us!
Twitter: @JOCOHealth Facebook: /jocohealthdept
YouTube: /JCDHEKS Pinterest: /JCDHEKS

Bats and Rabies

Rabies — Bats

Rabid bats have been documented in all 49 continental states (Hawaii is rabies-free), and bats are increasingly implicated as important wildlife reservoirs for variants of rabies virus transmitted to humans.

Most of the recent human rabies cases in the United States have been caused by rabies virus from bats. Awareness of the facts about bats and rabies can help people protect themselves, their families and their pets.

Recent data suggest that transmission of rabies virus can occur from minor, seemingly unimportant, or unrecognized bites from bats. Human and domestic animal contact with bats should be minimized, and bats should not be handled by untrained and unvaccinated persons or be kept as pets.

PEP should be considered when direct contact between a human and a bat has occurred, unless the exposed person can be certain a bite, scratch, or mucous membrane exposure did not occur.

In all instances of potential human exposures involving bats, the bat in question should be safely collected, if possible, and submitted for rabies diagnosis.

Rabies can be confirmed only in a laboratory. However, any bat that is active by day, is found in a place where bats are not usually seen (for example, in your home or on the lawn), or is unable to fly, is far more likely than others to be rabid. Such bats are often the most easily approached. However, it is best to never to handle any bat.

In instances when a bat is found indoors and there is no history of bat-human contact, the likely effectiveness of PEP must be balanced against the low risk of an exposure. (See Table 3 for examples of possible exposures and non-exposures.)

Table 3.
Possible Non-Exposures and Exposures

Non-exposure	Exposure
Bat swoops by a person who does not feel it touch their skin or only has contact with clothing.	Bat found in the same room with an individual that may not be aware of contact (e.g., sleeping, mentally disabled, intoxicated, unattended infant or child).
Individual touches a bat, but is certain they did not get scratched or bitten.	Bat flies into an individual, touching bare skin and the person is unable to determine what type of contact occurred.
Bat droppings (guano) found in sleeping area.	A live bat is touched.
Contact with a completely desiccated (dried out) bat.	An individual steps on a live bat barefooted.
Bats are seen or heard in walls, chimney or attic.	An individual puts their hand in a firewood pile or brush, feels a pain, then sees a live bat.

PEP can be considered for persons who were in the same room as a bat and might be unaware that a bite or direct contact occurred (e.g., a sleeping person awakens to find a bat in the room or an adult sees a bat in the room with a previously unattended child, intoxicated person, or mentally disabled person) and rabies cannot be ruled out by testing the bat. Household members will be evaluated to determine if PEP is necessary.

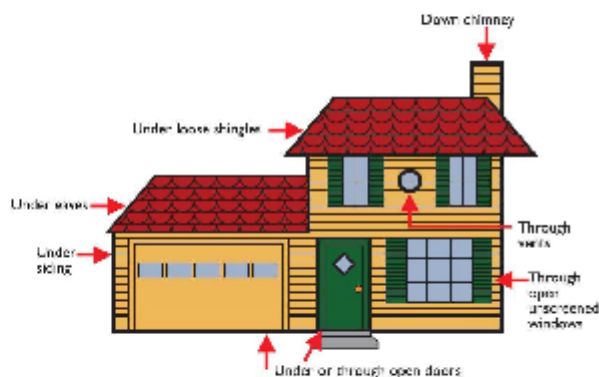
If you think your pet or domestic animal has been bitten by a bat, contact a veterinarian or the Johnson County Department of Health and Environment immediately and have the bat tested for rabies. Remember to always keep vaccinations current for cats, dogs and other animals.

Bat-Proofing Your Home

Bats commonly nest in buildings and there may be no reason to evict them if there is little chance for contact with people. However, bats should always be prevented from entering rooms of your home. Contact an animal-control or wildlife conservation agency for assistance "bat-proofing" your home.



Common Bat Entry Points



If you choose to do the "bat-proofing" yourself, here are some suggestions:

- Carefully examine your home for holes that might allow bats entry into your living quarters. Any openings larger than a quarter-inch by a half-inch should be sealed using caulking, etc.
- Use window screens, chimney caps, and draft-guards beneath doors to attics, fill electrical and plumbing holes with stainless steel wool or caulking, and ensure that all doors to the outside close tightly.
- During the summer, many young bats are unable to fly. If you exclude adult bats during this time, the young may be trapped inside and die or make their way into living quarters. If possible, avoid exclusion from May through August.
- Most bats leave in the fall or winter to hibernate, so these are the best times to "bat-proof" your home.

Additional "bat-proofing" can prevent bats from roosting in attics or buildings by covering outside entry points.

Observe where the bats exit at dusk and exclude them by loosely hanging clear plastic sheeting or bird netting over these areas. Bats can crawl out and leave, but cannot re-enter. After the bats have been excluded, the openings can be permanently sealed.

Big Brown Bat (*Eptesicus fuscus*) Range



Websites with more information about Bats

Centers for Disease Control and Prevention
<http://www.cdc.gov/rabies/bats/index.html>
 Bat Conservation International
<http://www.batcon.org>
 U.S. Fish and Wildlife Service
<http://www.fws.gov>

Appendix 9 – ESF 11 Resource Survey



Emergency Support Function 11 Resource Survey

February 2015

The Johnson County Department of Emergency Management and Communications is updating our database on resources available during an animal-related disaster or emergency, otherwise known as an Emergency Support Function (ESF) 11 Event. The information gathered from this survey will be used by Johnson County agencies to better plan for and better perform during a disaster or emergency. Questions regarding this form or ESF 11 functions can be directed to Rick Miller (Agriculture Agent, Johnson County K-State Research and Extension Office) at rick.miller@jocogov.org or Cary Gerst (Assistant Director of Planning, Johnson County Department of Emergency Management and Communications) at cgerst@jocogov.org.

Thank you for your time and participation!

AGENCY/FACILITY INFORMATION – LOCATION WHERE SERVICES ARE PERFORMED OR BUSINESS IS CONDUCTED

AGENCY/FACILITY NAME _____
STREET ADDRESS _____
CITY _____ COUNTY _____ STATE _____ ZIP _____
PHONE NUMBER _____ FAX NUMBER _____
E-MAIL _____ WEBSITE _____
HOURS OF OPERATION WEEKDAYS _____ SATURDAY _____ SUNDAY _____

TYPE OF AGENCY/FACILITY

☐ GOVERNMENT AGENCY ☐ ANIMAL SHELTER, PUBLIC ☐ ANIMAL SHELTER, PRIVATE
☐ VETERINARY HOSPITAL/CLINIC ☐ ANIMAL BOARDING FACILITY/KENNEL
☐ HUMANE/RESCUE ORGANIZATION ☐ WILDLIFE REHABILITATION CENTER
☐ PET SUPPLY RETAILER ☐ VOLUNTEER ORGANIZATION ☐ INDUSTRY GROUP
☐ OTHER, PLEASE SPECIFY _____

DIRECTOR/OWNER/OPERATOR INFORMATION – FOR ABOVE LOCATION

NAME _____ TITLE _____
WORK PHONE _____ CELL PHONE _____
FAX NUMBER _____ E-MAIL _____

EMERGENCY CONTACTS – IF OTHER PERSONS ARE TO BE CONTACTED FOR EMERGENCY RESPONSE

NAME _____ TITLE _____
WORK PHONE _____ CELL PHONE _____
FAX NUMBER _____ E-MAIL _____

NAME _____ TITLE _____
WORK PHONE _____ CELL PHONE _____
FAX NUMBER _____ E-MAIL _____

NAME _____ TITLE _____
WORK PHONE _____ CELL PHONE _____
FAX NUMBER _____ E-MAIL _____

PERSONNEL/RESOURCE INFORMATION

NUMBER OF: FIELD STAFF _____ SHELTER STAFF _____ OFFICE STAFF _____

NUMBER OF STAFF WITH EXPERIENCE IN:

SMALL ANIMALS _____ LARGE ANIMALS _____ EXOTIC ANIMALS _____

NUMBER OF DVM/RVT STAFF AVAILABLE FOR DISASTER RESPONSE:

DAY _____ NIGHT _____ WEEKEND _____

NUMBER OF NON-MEDICAL STAFF AVAILABLE FOR DISASTER RESPONSE:

DAY _____ NIGHT _____ WEEKEND _____

NUMBER OF SPECIALLY TRAINED STAFF IN:

HSUS DART _____ RED CROSS _____ FEMA/NIMS _____ CHEMICAL CAPTURE _____

EUTHANASIA CERTIFIED _____ BI-LINGUAL (LANGUAGE) _____

DO EMPLOYEES HAVE ACCESS TO CHEMICAL CAPTURE EQUIPMENT? ☐ YES ☐ NO

PLEASE LIST PERSONNEL AND THEIR SPECIAL SKILLS/TRAINING BELOW:

NAME: _____ SKILLS/TRAINING _____

NAME: _____ SKILLS/TRAINING _____

NAME: _____ SKILLS/TRAINING _____

NAME: _____ SKILLS/TRAINING _____

NAME: _____ SKILLS/TRAINING _____

FACILITY/RESOURCE INFORMATION

IF YOU ARE AN ANIMAL CONTROL OR OTHER AGENCY AND DO NOT MAINTAIN YOUR OWN SHELTER, PLEASE LIST INFORMATION FOR SHELTER WITH WHICH YOU ARE CONTRACTED BELOW

AGENCY/FACILITY NAME _____

STREET ADDRESS _____

CITY _____ COUNTY _____ STATE _____ ZIP _____

PHONE NUMBER _____ FAX NUMBER _____

E-MAIL _____ WEBSITE _____

HOURS OF OPERATION WEEKDAYS _____ WEEKENDS _____

WOULD THE CONTRACTED SHELTER BE WILLING TO COMPLETE THEIR OWN RESOURCE SURVEY?

☐ YES ☐ NO

IF YOU MAINTAIN YOUR OWN SHELTER, PLEASE ANSWER THE QUESTIONS BELOW

VETERINARIAN ON STAFF _____ PHONE NUMBER _____

E-MAIL _____

ARE YOU WILLING TO PROVIDE SERVICES DURING A DISASTER/EMERGENCY? ☐ YES ☐ NO

IF YES, CHECK ALL THAT APPLY: ☐ PRO BONO ☐ REDUCED RATE ☐ STANDARD RATE

☐ BUSINESS HOURS ONLY ☐ EVENINGS ☐ WEEKENDS ☐ HOLIDAYS

WHAT TYPE OF ANIMALS WOULD YOU ACCEPT? (CHECK ALL THAT APPLY)

☐ DOGS ☐ CATS ☐ BIRDS ☐ POCKET PETS ☐ REPTILES ☐ HORSES

☐ CATTLE ☐ SHEEP ☐ GOATS ☐ OTHER _____

NUMBER AND TYPE OF CAGES OR STALLS AVAILABLE (NORMAL OPERATIONS/EMERGENCY OPERATIONS):

☐ CAT CAGE ____ / ____ ☐ DOG, SMALL CAGE ____ / ____ ☐ DOG, MEDIUM CAGE ____ / ____

☐ DOG, RUN ____ / ____ ☐ HORSE STALL ____ / ____ ☐ CATTLE PEN ____ / ____

☐ KENNEL, PORTABLE ____ / ____ ☐ OTHER ____ / ____

DO YOU HAVE VETERINARIANS AND/ OR SUPPORT STAFF WILLING TO TREAT INJURED ANIMALS?

☐ YES ☐ NO

NAME _____ TITLE _____

☐ SMALL ANIMALS ☐ LARGE ANIMALS ☐ POCKET PETS

☐ NORMAL BUSINESS HOURS ☐ EVENINGS ☐ WEEKENDS

PHONE _____

☐ BIRDS ☐ REPTILES

☐ HOLIDAYS

NAME _____ TITLE _____

☐ SMALL ANIMALS ☐ LARGE ANIMALS ☐ POCKET PETS

☐ NORMAL BUSINESS HOURS ☐ EVENINGS ☐ WEEKENDS

PHONE _____

☐ BIRDS ☐ REPTILES

☐ HOLIDAYS

NAME _____ TITLE _____ PHONE _____

☐ SMALL ANIMALS ☐ LARGE ANIMALS ☐ POCKET PETS ☐ BIRDS ☐ REPTILES
☐ NORMAL BUSINESS HOURS ☐ EVENINGS ☐ WEEKENDS ☐ HOLIDAYS

WHAT ARE THE MINIMUM REQUIREMENTS FOR ANIMALS TO ENTER YOUR FACILITY? ☐ NONE
☐ RABIES ONLY ☐ OTHER VACCINES, PLEASE LIST _____
☐ PARASITE PREVENTATIVES, PLEASE LIST _____
☐ OTHER _____

WOULD YOU WAIVE THESE REQUIREMENTS DURING A DISASTER/EMERGENCY? ☐ YES ☐ NO

DO YOU HAVE ISOLATION FACILITIES? ☐ YES ☐ NO

WOULD YOU HAVE A MICROCHIP SCANNER AVAILABLE? ☐ YES TYPE _____ ☐ NO

SUPPLIES

MEDICAL

☐ MEDICATION ☐ VACCINES ☐ SYRINGES ☐ BANDAGE MATERIAL ☐ IV FLUIDS
☐ SURGICAL SUPPLIES ☐ PARASITE PREVENTATIVES ☐ EXAM GLOVES ☐ PEROXIDE
☐ RUBBING ALCOHOL ☐ EUTHANASIA SUPPLIES ☐ PAPER SURGICAL GOWNS
☐ OTHER _____

SMALL ANIMAL

☐ PET CARRIER/KENNEL ☐ CAT LITTER/SUPPLIES ☐ COLLARS ☐ LEASHES ☐ FOOD
☐ FOOD/WATER DISHES ☐ PAPER FOOD DISHES ☐ STOOL REMOVAL SUPPLIES ☐ PUPPY PADS
☐ BLANKETS/TOWELS ☐ RABIES POLE ☐ CAT GLOVES ☐ ID COLLARS/TAGS
☐ OTHER _____

LARGE ANIMAL

☐ HALTERS ☐ LEADS ☐ BLANKETS ☐ BEDDING ☐ ID TAGS ☐ FEED
☐ FEED BUCKETS ☐ WATER TROUGHS ☐ RAKES/PITCH FORKS ☐ WHEELBARROWS
☐ OTHER _____

GENERAL

☐ BLEACH ☐ DISINFECTANT ☐ CAGE SCRUBBER ☐ SPRAY BOTTLES
☐ PUMP/PRESSURE SPRAYER ☐ DAWN DISH SOAP ☐ ACCEL DISINFECTANT ☐ BROOM
☐ MOP/BUCKET ☐ WATERING CAN ☐ SAFETY GOGGLES ☐ LEATHER GLOVES
☐ CAMERA (DIGITAL/POLAROID) ☐ ZIP/CABLE TIES ☐ CLIP BOARDS ☐ DUCT TAPE
☐ PAINTERS' TAPE ☐ TRASH BAGS ☐ PLASTIC SHEET (10 MIL) ☐ PAPER TOWELS
☐ FLASHLIGHTS ☐ CARABINEERS ☐ WHISTLE ☐ 6 FOOT TABLE ☐ FIRST AID KIT
☐ PENCILS/PENS ☐ PERMANENT MARKERS ☐ PAPER ☐ STAPLERS ☐ HOLE PUNCH
☐ BINDERS ☐ COMPUTER ☐ SCANNER/PRINTER ☐ COPY MACHINE
☐ TRAIL MARKING TAPE ☐ GENERATOR ☐ HEATER ☐ FAN ☐ PORTABLE LIGHTING
☐ POWER WASHER ☐ EXTENSION CORD ☐ WATER HOSE ☐ SPRAY NOZZLE
☐ OTHER _____

WOULD YOU PROVIDE THESE SUPPLIES DURING A DISASTER OR EMERGENCY? ☐ YES ☐ NO
☐ FREE ☐ REDUCED RATE ☐ STANDARD RATE ☐ LOAN

WHAT COMPANY DO YOU USE TO ORDER SUPPLIES? _____

HOW SOON CAN YOU RECEIVE AN ORDER? _____

TRANSPORTATION – PLEASE LIST QUANTITY FOR EACH VEHICLE TYPE

☐ ANIMAL CONTROL VEHICLE _____ ☐ EXTENDED VAN _____
☐ MOBILE VETERINARY CLINIC _____ ☐ MINIVAN _____
☐ MOBILE DOG KENNEL _____ ☐ FLATBED/UTILITY TRAILER _____
☐ LIVESTOCK TRAILER _____ ☐ BOX TRAILER _____
☐ HORSE TRAILER _____ ☐ RV/MOTOR HOME _____
☐ ATV/GATOR _____ ☐ FLAT-BOTTOM BOAT _____
☐ OTHER _____

OTHER RESOURCES – LIST ANYTHING THAT MAY BE USEFUL DURING AN ANIMAL-RELATED DISASTER OR EMERGENCY

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

PLANNING

- ☐ EMERGENCY OPERATING PLAN
- ☐ CONTINUITY OF OPERATION PLAN
- ☐ FACILITY EVACUATION PLAN
- ☐ OTHER _____

MEMORANDA OF UNDERSTANDING (MOU) – PLEASE LIST ALL THAT ARE ESTABLISHED

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

OTHER INFORMATION

Appendix 10 – ESF 11 Contact List

Johnson County ESF 11 Contact List										
Department Name	Contact Name	Contact Title	Phone Number	Email Address	Address	City	State	ZIP Code	FAX Number	Notes
Bonner Springs		ADO	913-422-7800		130 N Matteson Avenue	Bonner Springs	KS	66012	913-422-1365	
Code 3 Associates		Disaster Response Director Large Animal Rescue	913-522-3048 913-256-4194							Cell 303-772-7724
Consolidated Fire District #2		Fire Chief	913-352-4800		3621 W 63rd Street	Prairie Village	KS	66208		
DeSoto Animal Control		Johnson County Sheriff	913-782-0720		PO Box C	DeSoto	KS	66018	913-583-3123	City Hall 913-583-1182
DeSoto Emergency Management			913-586-5252		32905 W 94th Street	DeSoto	KS	66018		City Hall 913-583-1182
Edgerton Animal Control		Animal Control Dispatch ADO	913-882-6801		404 E Nelson	Edgerton	KS	66021		
Edgerton Public Works		Superintendent	913-882-6801		404 E Nelson	Edgerton	KS	66021		
Fairway Police Department		Chief	913-282-2364		5252 Belinder	Fairway	KS	66205	913-282-1881	
Gardner Police Department		Sergeant ADO Records Clerk	913-856-7312 913-856-7312 x3036		440 E Main Street	Gardner	KS	66030	913-856-5733	
Johnson County Animal Response Team (JoCART)		Disaster Response Director	913-925-2321		8544 W 85th Street	Overland Park	KS	66212	913-649-0110	
Johnson County Community College		Emergency Preparedness Manager	913-486-7822		12345 College Boulevard, Bldg CC 115U	Overland Park	KS	66210		
Johnson County Disease Containment		Division Director Program Manager Disease Investigator	913-826-1303 913-826-1222 913-826-1208 913-826-1252		8000 Lamar Avenue, Suite 140	Mission	KS	66202	913-826-1300	TTD 800-798-3777
Johnson County Emergency Management		Assistant Director, Planning	913-715-1005 913-715-3028		111 S Cherry Street, Suite 100	Olathe	KS	66061		TTD 800-798-3777
Johnson County Environmental Department		Division Director Senior Secretary	913-715-6900 913-715-6904 913-715-6909		11811 S Sunset Drive, Suite 2700	Olathe	KS	66061	913-715-6870	
Johnson County Fire District #1		Fire Chief	913-782-3258		480 New Century Parkway	New Century	KS	66031		
Johnson County Fire District #2		Fire Chief	913-681-0764		19485 Metcalf Avenue	Shawnee	KS	66065		
Johnson County Park Police		Animal Control Dispatch Supervisor Records Clerk	913-782-0720 913-826-3470 913-826-3487 913-826-3487 913-826-3474 913-826-3489 913-826-3486		7900 Renner Road	Shawnee Mission	KS	66219	913-436-8074	
Johnson County Sheriff's Department		Animal Control Dispatch ADO	913-782-0720 913-539-6524		27747 W 158th Street	New Century	KS	66031	913-791-5405	
Kansas Department of Agriculture		Emergency Management Coordinator	785-554-6808		1320 Research Park Drive	Manhattan	KS	66502		Cell 785-207-0309
Kansas Department of Health and Environment		State Veterinarian	785-296-2501		1000 SW Jackson Street, Suite 075	Topoka	KS	66612	877-427-7318	Epi Hotline 877-427-7317
Lake Quivira Fire Department		Fire Chief	913-631-5300		10 Crescent Boulevard	Lake Quivira	KS	66217	913-631-5781	
Leawood Fire Department		Fire Chief	913-661-6788 x111		14021 Mission Road	Leawood	KS	66224		
Leawood Police Department Animal Control		Animal Control Dispatch Unit Supervisor ADO ADO ADO	913-642-7700 913-663-6301 913-663-6361 913-663-6363 913-663-6362		4201 Town Center Drive	Leawood	KS	66211	913-642-2238	Office 913-663-6322
Lenexa Animal Control		Animal Control Dispatch Supervisor ADO	913-477-7301 913-477-7301		12500 W 87th Street	Lenexa	KS	66215	913-886-8890	Office 913-477-7385

Department Name	Contact Name	Contact Title	Phone Number	Email Address	Address	City	State	ZIP Code	FAX Number	Notes
		AOO AOO								
Lenexa Fire Department		Division Chief	913-477-7914		9620 Pflumm Road	Lenexa	KS	66215		
Meriposa Veterinary Wellness Center		Veterinarian Veterinarian	913-825-3303		13900 Santa Fe Trail Drive	Lenexa	KS	66215		
Meriam Police Department		Lieutenant	913-322-5599		9010 W 82nd Street	Meriam	KS	66202	913-322-5595	
Meriam Police Department Animal Control		Animal Control Dispatch Supervisor AOO/CSO AOO/CSO	913-782-0720 913-322-5599		9010 W 82nd Street	Meriam	KS	66202	913-322-5595	Office 913-322-5590 Cell 913-208-0401 Cell 913-208-0195 Cell 913-208-0195
Mission Police Department		Captain (DM Lelton)	913-678-6311		6090 Woodson Road	Mission	KS	66202	913-722-3011	
Mission Hills Emergency Management		City Administrator	913-362-9620 x122		6000 State Line Road	Mission Hills	KS	66206	913-362-9620	
Northwest Animal Control (patrols Fairway, Mission, Mission Woods, Roland Park, Westwood, Westwood Hills)		Animal Control Dispatch AOO AOO	913-782-0720 913-236-7013 913-236-7013		6090 Woodson Road	Mission	KS	66202	913-722-3011	Office 913-678-6345
Northwest Consolidated Fire District		Fire Chief	913-582-3888		3745 KBI Creek Road	Owlsboro	KS		913-582-3183	
Olathe Animal Control		Animal Control Dispatch	913-782-0720							
Olathe Animal Shelter		Olathe Animal Shelter Supervisor Veterinarian AOO AOO AOO Clerk	913-471-6362 913-471-6753 913-471-6362 913-206-1845 913-236-6599 913-236-6026 913-471-6362		505 E Sunvale Drive	Olathe	KS	66061	913-471-6370	
Olathe Fire Department		Assistant Fire Chief	913-471-7911		1225 S Hamilton Circle	Olathe	KS	66061	913-471-7902	
Overland Park Animal Control		Animal Control Dispatch Supervisor AOO AOO	913-885-6300 913-885-6304		8500 Antioch Road	Overland Park	KS	66213	913-885-1279 913-885-1304	Office 913-885-9420
Overland Park Emergency Management		Emergency Operations Coordinator	913-885-6308		12401 Hemlock Street	Overland Park	KS	66213	913-885-6309	
Prairie Village Animal Control (patrols Mission Hills)		Animal Control Dispatch Supervisor AOO AOO	913-642-5151 913-385-4806		7710 Mission Road	Prairie Village	KS	66206	913-385-7710	Office 913-385-4831
Prairie Village Emergency Management		Assistant to City Administrator	913-385-4805		7700 Mission Road	Prairie Village	KS	66206	913-381-7755	
Roland Park Police Department		Chief of Police	913-477-3363		4600 W Strat Street, #100	Roland Park	KS	66205	913-722-3745	
Shawnee Animal Control		Animal Control Dispatch CSO CSO	913-431-2150 913-742-6802 913-742-6801		5850 Renner Road	Shawnee	KS	66217	913-431-6389	Office 913-431-2155
Shawnee Fire Department		Emergency Management Coordinator	913-742-6851		8501 Quivira	Shawnee	KS	66218		
Spring Hill Animal Control		Animal Control Dispatch AOO	913-592-3700		418 E Nichols	Spring Hill	KS	66083	913-592-2749	

Appendix 11 – Tuberculosis Mass Screening Briefing Materials

INCIDENT BRIEFING	1. Incident Name Mass TB Testing	2. Date 2015	3. Time 0730
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4. Map Sketch

6. Resources Summary			
Resources Acquired	Source	Location	Clinic Placement
Bottled water	JCDHE purchased	Commons area	Food/Water table
Snacks	School provided	Commons area	Food/Water table
Medical Screening Forms	Emailed to School	Commons area	Check-in table
Check-in Signs & sign holder	JCDHE purchased	Commons area	Check-in table
TB Screening Signs & Sign holder	JCDHE purchased	Commons area	
Event Staff Breakfast	JCDHE purchased	Detention Room	Food table
Event Staff Lunch	JCDHE purchased	Detention Room	Food Table

7. Summary of Current Actions

- Activation of JCDHE ICS structure
- Planning and strategy meeting conducted
- Informational session for school officials held
- Informational session for affected students held
- Planning meeting with State and Local partners conducted
- TB testing clinic setup at *****
- Informational session for parents and media held

INCIDENT OBJECTIVES	1. Incident Name Mass TB Testing	2. Date 2015	3. Time 0730									
<p>4. General Control Objectives for the Incident (include alternatives)</p> <ul style="list-style-type: none"> The overarching goal for this operational period is to conduct blood draws from all identified students Each student should receive a bottle of water Blood samples should be collected from each student Blood samples will be processed at the State Lab Results will be reported to students 												
<p>5. Weather Forecast for Period</p> <p>The National Weather Service, the forecast for 2015 is:</p> <p>Sunny, with a high near 72. Calm wind becoming south southeast around 6 mph in the afternoon.</p> <div data-bbox="280 806 826 1226"> <p>Day High: 71°F Low: 44°F Wind: 0-6 mph Max UV Index: 5 (Moderate) Thunderstorm: 0%</p> <p>Night High: 71°F Low: 44°F Wind: 0-6 mph Max UV Index: N/A Thunderstorm: 0%</p> </div>												
<p>8. General Safety Message</p>												
<p>9. Attachments (mark if attached)</p> <table border="0"> <tr> <td><input checked="" type="checkbox"/> Organization List - ICS 203</td> <td><input checked="" type="checkbox"/> Medical Plan - ICS 206</td> <td><input checked="" type="checkbox"/> Safety Message</td> </tr> <tr> <td><input type="checkbox"/> Div. Assignment Lists - ICS 204</td> <td><input checked="" type="checkbox"/> Incident Map</td> <td><input type="checkbox"/></td> </tr> <tr> <td><input checked="" type="checkbox"/> Communications Plan - ICS 205</td> <td><input type="checkbox"/> Traffic Plan</td> <td><input type="checkbox"/></td> </tr> </table>				<input checked="" type="checkbox"/> Organization List - ICS 203	<input checked="" type="checkbox"/> Medical Plan - ICS 206	<input checked="" type="checkbox"/> Safety Message	<input type="checkbox"/> Div. Assignment Lists - ICS 204	<input checked="" type="checkbox"/> Incident Map	<input type="checkbox"/>	<input checked="" type="checkbox"/> Communications Plan - ICS 205	<input type="checkbox"/> Traffic Plan	<input type="checkbox"/>
<input checked="" type="checkbox"/> Organization List - ICS 203	<input checked="" type="checkbox"/> Medical Plan - ICS 206	<input checked="" type="checkbox"/> Safety Message										
<input type="checkbox"/> Div. Assignment Lists - ICS 204	<input checked="" type="checkbox"/> Incident Map	<input type="checkbox"/>										
<input checked="" type="checkbox"/> Communications Plan - ICS 205	<input type="checkbox"/> Traffic Plan	<input type="checkbox"/>										
10. Prepared by *****		10. Approved by *****										

ORGANIZATION ASSIGNMENT LIST		1. Incident Name Mass TB Testing	2. Date 2015	3. Time 0730
POSITION	NAME	4. Operational Period		
5. Incident Commander and Staff		9. Operations Section		
IC		Chief		
		Deputy		
Safety & Liaison Officer		a. Branch 1 – Divisions/Groups		
		Staging Area Branch Manager		
Information Officer		Deputy		
		Greeter		
Technical Specialist		Check-In		
6. Agency Representatives		Check-Out		
Agency	Name	Foot Traffic		
High School		Foot Traffic		
High School		Foot Traffic		
		b. Branch 2 – Divisions/Groups		
		TB/EPI Branch Director		
7. Planning Section		Deputy		
Chief		TB Screening		
Deputy				
Resources Unit				
Situation Unit				
Documentation Unit				
Demobilization Unit		c. Branch 3 – Divisions/Groups		
Technical Specialists		Phlebotomist Branch Director		
Field Observer	Christopher Lewis	Phlebotomist Team		
8. Logistics Section				
Chief		Tube Labeling Team		
a. Support Branch				
Director				
Supply Unit				
Facilities Unit		10. Finance Section		
Ground Support Unit		Chief	JCDHE Accounting Staff	
Security Unit		Deputy		
b. Service Branch		Time Unit		
Communications Unit		Procurement Unit		
Medical Unit		Compensation/Claims Unit		
Food Unit		Cost Unit		
ICS 203	Prepared by *****			

HEALTH AND SAFETY MESSAGE

SAFETY starts with ***YOU***. We are **ALL** accountable for **SAFE** behaviors.

INCIDENT: Mass TB Testing Clinic	DATE: 2015	TIME: 0730
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Major Hazards and Risks:

- Potential contact with bloodborne pathogens
- Sharps and needlestick
- Contamination
- Dehydration

Narrative:

Drawing blood carries risks such as the possibility of the transfer of bloodborne pathogens. This can include infectious diseases such as HIV/AIDS, Hepatitis B, and Hepatitis C. Care must be taken around body fluids that may carry the risk of infection.

Drawing blood involves the use of sharps that can result in needlesticks if care is not exercised. In addition, needles should never be reused, as this carries the risk of contamination and should be disposed of in the proper Sharps Disposal Containers.

Dehydration can easily sneak up on workers who are engaged for several hours at a time, even when they are indoors. Be sure to continue to consume water throughout the day.

MEDICAL PLAN	1. INCIDENT NAME	2. DATE PREPARED	3. TIME PREPARED	4. OPERATIONAL PERIOD
	Mass TB Testing	2015	1900	2015
5. INCIDENT MEDICAL AID STATION				
MEDICAL AID STATIONS		LOCATION		
School Nurse's Office		Behind Front Office		
6. TRANSPORTATION				
A. AMBULANCE SERVICES				
NAME	ADDRESS	PHONE		
B. INCIDENT AMBULANCES				
NAME	LOCATION			
7. HOSPITALS				
NAME	ADDRESS	TRAVEL TIME GROUND	PHONE	
8. MEDICAL EMERGENCY PROCEDURES				
1. State the nature, condition and location of the patient.				

Staff Schedule – Wednesday

**0700
Briefing**

**0730
Planning Mtg.**

**0800
Begin TB Testing**

**1130
Lunch Arrives**

**1500
Wrap up TB Testing**

