



# **Analyzing Disease Reporting and Hispanic Outreach Efforts in Riley County**

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Infectious Diseases and Zoonoses  
May 2021

Applied Practice Experience Site: Riley County Health Department



# **APPLIED PRACTICE EXPERIENCE**

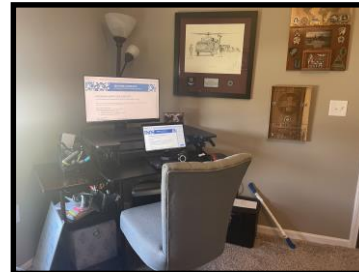
June-December 2020

# Applied Practice Experience Efforts

- **Riley County Health Department Internship**  
Preceptor: Mr. Edward Kalas, MPH, RS
  - **Disease Reporting Project (Jun-Dec 2020)**
    - Team Member: Anna Kucera, DVM/MPH Student
  - **Hispanic Outreach Project (Jun-Aug 2020)**
    - Team Members: Melitza Ramirez & Sofia Scavone, MPH Students
  
- **Additional Public Health Experiences**
  - **COVID-19 Risk Management (Nov 2020)**
    - Collaborator: Ron Orchard, DVM/MPH Student
  - **COVID-19 Contact Tracing (May-Jul 2020)**



Source: <https://www.rileycountyks.gov/>





Riley County Health Department Internship

# **DISEASE REPORTING PROJECT**

# Project Objectives

“Is Riley County as healthy as the disease reporting says we are?”

- Compare mandatory disease reporting between human and veterinary healthcare providers in Kansas.
- Create surveys that yield measurable, relevant, useful data about disease reporting attitudes and behaviors.
- Plan and conduct surveys of populations within Riley County.
- Generate evidence-based recommendations based on data gained through research and surveys.

# Kansas Disease Reporting Regulations



## Human Disease Reporting Regulations

- Administrative regulations and statutes (published by Secretary of State)
  - **KAR 28-1-12 and 28-1-18**
  - **KSA 65-118, 65-128 and 65-6001 through 65-6007**
- “Mandated reporters” must notify state or local health department when suspecting or diagnosing a disease that is listed on the “Reportable Diseases in Kansas list”
  - **List maintained at [kdheks.gov](http://kdheks.gov)**
- Reporting methods (KDHE): phone, fax, mail (depending on disease)



## Animal Disease Reporting Regulations



- Kansas Department of Agriculture Division of Animal Health
- List of reportable diseases (by species) published
  - **List maintained at [agriculture.ks.gov](http://agriculture.ks.gov)**
- Reporting methods: phone
  - **KDA (785)-564-6601 or KDHE (877)427-7317**
- Additional diseases may be added in the event of an outbreak

# Kansas Disease Reporting

## Riley County Health Department Guidance:

### Disease Reporting

Certain diseases must be reported to public health officials in the State of Kansas; a list of those can be found by clicking on this link: [KS Notifiable Disease Form and List \(pdf\)](#).

To report diseases, contact the health department's 24/7 number for notifiable/reportable disease and public health emergencies: 785-317-0474.

Source: <https://www.rileycountyks.gov/1813/Epidemiological-Services>

## Kansas Department of Health and Environment (KDHE) Guidance:

### Contact Information

Immediate telephone reports, when required, should be made to KDHE at: **877-427-7317**.

Fax non-urgent reports to KDHE at: **877-427-7318**.

Mail non-urgent reports to:

Infectious Disease Epidemiology and Response  
1000 SW Jackson, Suite 075  
Topeka, KS 66612-1274

For certain diseases that must be reported **within 4 hours**. Others may be reported to the local health department.

Source: [https://www.kdheks.gov/epi/disease\\_reporting.html#requirements](https://www.kdheks.gov/epi/disease_reporting.html#requirements)

## REPORTABLE DISEASES IN KANSAS

(K.S.A. 65-118, 65-128, 65-6001 - 65-6007, K.A.R. 28-1-2, 28-1-4, and 28-1-18. Changes effective as of 5/11/2018)

For **4-hour reportable diseases** report to the KDHE Epidemiology Hotline: 877-427-7317. For **all other reportable diseases** fax a Kansas Reportable Disease Form and any lab results to your local health department or to KDHE: 877-427-7318 within 24 hours or by the next business day.

Acute flaccid myelitis

**Anthrax** ☞

Anaplasmosis

Arboviral disease, neuroinvasive and nonneuroinvasive  
(including chikungunya virus, dengue virus, La Crosse, West Nile virus, and Zika virus)

Babesiosis

Blood lead levels (any results)

**Botulism** ☞

Brucellosis

Campylobacteriosis

*Candida auris* ☞

Carbapenem-resistant bacterial infection or  
colonization ☞

Carbon monoxide poisoning

Chancroid

Chickenpox (varicella)

*Chlamydia trachomatis* infection

**Cholera** ☞

Coccidioidomycosis

Cryptosporidiosis

Cyclosporiasis

**Diphtheria** ☞

Ehrlichiosis

Giardiasis

Gonorrhea (include antibiotic susceptibility results,

**Influenza, novel A virus infection** ☞

Legionellosis

Listeriosis ☞

Lyme disease

Malaria

**Measles (rubeola)** ☞

**Meningococcal disease** ☞ ☞

**Mumps** ☞

Pertussis (whooping cough)

**Plague (*Yersinia pestis*)** ☞

**Poliovirus** ☞

Psittacosis

Q Fever (*Coxiella burnetii*, acute and chronic)

**Rabies, human** ☞

Rabies, animal

**Rubella** ☞

Salmonellosis, including typhoid fever ☞

**Severe Acute Respiratory Syndrome-associated  
coronavirus (SARS-CoV)** ☞ ☞

Shiga toxin-producing *Escherichia coli* (STEC) ☞

Shigellosis ☞

**Smallpox** ☞

Spotted fever rickettsiosis

*Streptococcus pneumoniae*, invasive disease ☞

Syphilis, all stages, including congenital syphilis

**Tetanus** ☞





Gonorrhea (include antibiotic susceptibility results, if performed)

*Haemophilus influenzae*, invasive disease ☞

Hansen's disease (leprosy)

Hantavirus

Hemolytic uremic syndrome, post-diarrheal

Hepatitis, viral (A, B, C, D, and E, acute and chronic)

Hepatitis B during pregnancy

Hepatitis B in children <5 years of age (report all positive, negative, and inconclusive lab results)

Histoplasmosis

Human Immunodeficiency Virus (HIV) (Report the CD4+ T-lymphocyte cell counts, report viral load of any value, and report each pregnancy of women diagnosed with HIV)

Influenza deaths in children <18 years of age

Leptospirosis

**Tetanus** ☞

Toxic shock syndrome, streptococcal and other  
Transmissible spongiform encephalopathy (TSE) or prion disease

Trichinellosis or trichinosis

**Tuberculosis, active disease** ☞ ☞

Tuberculosis, latent infection

Tularemia, including laboratory exposures

**Vaccinia, post vaccination infection or secondary transmission**

Vancomycin-intermediate and resistant *Staphylococcus aureus* (VISA and VRSA)

Vibriosis (all *cholerae* and non-*cholerae Vibrio* species) ☞

**Viral hemorrhagic fevers** ☞

Yellow fever

☞ **Outbreaks, unusual occurrence of any disease, exotic or newly recognized diseases, suspect acts of terrorism, and unexplained deaths due to an unidentified infectious agent should be reported within 4 hours by telephone to the Epidemiology Hotline: 877-427-7317**

☞ - Indicates that a telephone report is required by law within four hours of suspect or confirmed cases to KDHE toll-free at 877-427-7317

☞ - Indicates that bacterial isolate, original clinical specimen, or nucleic acid must be sent to:  
Division of Health and Environmental Laboratories, 6810 SW Dwight St, Topeka, KS 66620-0001  
Phone: (785) 296-1620

Source: kdheks.gov

# KANSAS ANIMAL HEALTH REPORTABLE DISEASES

The Kansas Department of Agriculture's Division of Animal Health mission is to ensure the public health, safety and welfare of Kansas' citizens through the prevention, control and eradication of infectious and contagious diseases and conditions affecting the health of livestock and domestic animals in Kansas. Below is list of animal diseases the Animal Health Commissioner has determined to be immediately reportable to Kansas Animal Health officials. Other diseases the livestock commissioner determines to be immediately reportable due to an animal health emergency situation may be added at any time.



## CERVID & CAMELID

Foot and Mouth Disease

Vesicular Stomatitis

Tuberculosis  
(active and latent)

Anthrax

Brucellosis

-Rabies

Chronic Wasting  
Disease

Johne's Disease



## CATTLE

Foot and Mouth Disease

Vesicular Stomatitis

Tuberculosis  
(active and latent)

Anthrax

Brucellosis

-Rabies

Rinderpest

Psoroptic Mange

Scabies

Johne's Disease

Trichomoniasis

Bovine Spongiform  
Encephalopathy



## EQUINE

Piroplasmosis

Vesicular Stomatitis

Equine Infectious  
Anemia

Anthrax

Brucellosis

-Rabies

Equine Herpesvirus  
Myeloencephalopathy  
(EHM)

Western, Eastern and  
Venezuelan Equine  
Encephalomyelitis

West Nile Virus



## SHEEP & GOATS

Foot and Mouth Disease

Vesicular Stomatitis

Scabies

Anthrax

Scrapie

Psoroptic Mange

Brucellosis

-Rabies

Tuberculosis  
(active and latent)

Johne's Disease



## SWINE

Foot and Mouth Disease

Vesicular Stomatitis

Classical Swine Fever/  
Hog Cholera

Anthrax

Vesicular Exanthema

Pseudorabies

Brucellosis

-Rabies

African Swine Fever



## AVIAN

Avian Influenza

Fowl Typhoid

Exotic Newcastle  
Disease

Psittacosis

Pullorum



## DOGS & CATS

Brucellosis

Canine Influenza

-Rabies

## ZOONOTIC (HUMANS)

A zoonotic disease is an infectious disease that can be transmitted from animals to humans.

Many of these diseases, when diagnosed in humans, are reportable to KDHE and include;

- Anthrax
- Brucellosis
- Psittacosis
- Rabies
- Tuberculosis, and
- West Nile Virus

A complete list of reportable diseases in humans can be found at [www.kdheks.gov/epi](http://www.kdheks.gov/epi)

†Report all suspect or confirmed cases of rabies, including rabies in animals, to KDHE at 1-877-427-7317.

KDA: (785) 564-6601 • KDHE Hotline: (877) 427-7317

KDA Division of Animal Health • 1320 Research Park Drive, Manhattan, KS 66502 • (785) 564-6601 • [agriculture.ks.gov/animalhealth](http://agriculture.ks.gov/animalhealth)

# Project Goals

- 1. Estimate level of compliance** of Riley County healthcare providers with Kansas disease reporting regulations
- 2. Assess Riley County healthcare providers' and Kansas veterinarians' knowledge** of notifiable disease reporting requirements in Kansas
- 3. Identify potential barriers** to accurate, timely reporting of diseases
- 4. Compare preferred methods of reporting** between Riley County human healthcare providers and Kansas veterinarians



**Kansas Veterinarians:**

**We are seeking YOUR input about disease reporting in Kansas**

Please take a few minutes to participate in an anonymous survey!



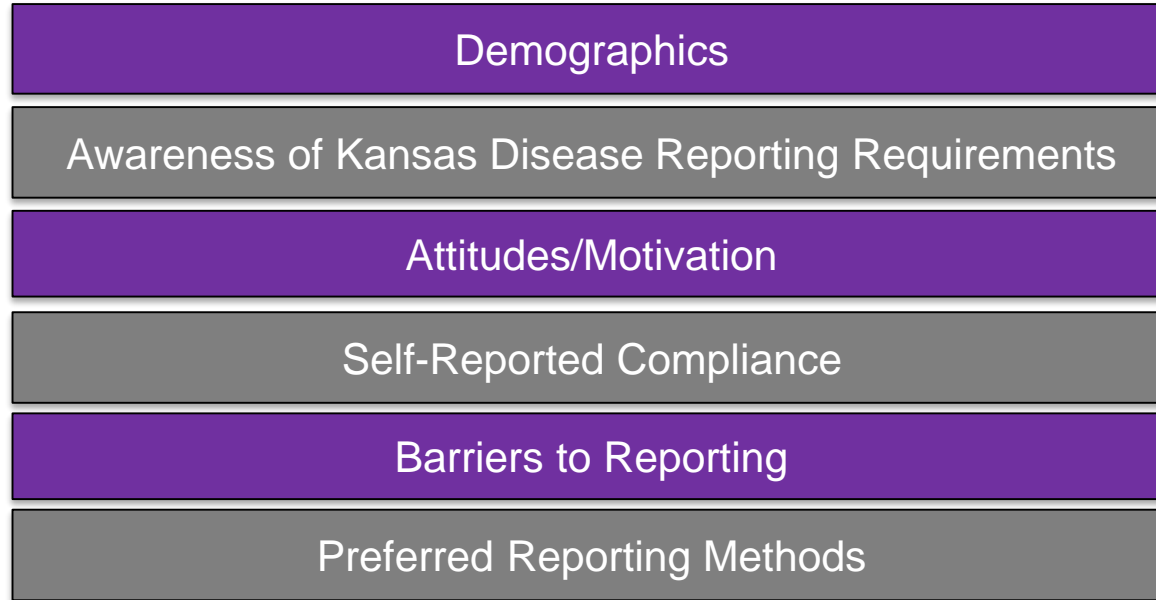
<http://bit.ly/DVMSurvey>

This 5-10 minute survey (a collaboration between the KSU MPH Program and Riley County Health Department) aims to increase awareness about disease reporting, by gaining input from Kansas Veterinarians and Physicians. The survey asks about awareness of, compliance with, attitudes toward, and barriers to existing disease reporting procedures.

**THE SURVEY IS OPEN THROUGH SEPTEMBER 25TH!**

Contact [mandaspreczewski@vet.k-state.edu](mailto:mandaspreczewski@vet.k-state.edu) with any questions. Thank you!

# Survey Design: Systems Thinking



Evidence-based  
Recommendations

# Methodology

- **IRB Approval:**
  - Exempt under criteria established in Federal Policy for the Protection of Human Subjects, 45 CFR §104(d), category 2, subsection ii
- **Populations surveyed:**
  - MD/DO/PAs: Board of Healing Arts Directory (Riley County)
  - Vets: Kansas Veterinary Medical Association (KVMA) members and KSU CVM Clinical Sciences Faculty
- **Survey format: Qualtrics**
  - October – November 2020



# Survey Results

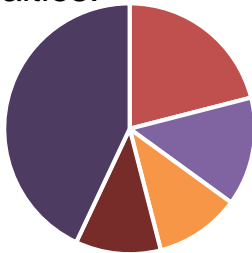
## Human Disease Survey:

Invited: 145

n = 28

### **Demographics:**

- 27 licensed providers & 1 RN
- Medical school graduation year
  - 1984-2016 (median 2005)
- Practice type:
  - Private/Group: 79%
  - Hospital-based: 11%
  - Student health clinic: 4%
- Specialties:



■ Family Med ■ Peds ■ Int Med ■ ER ■ Other

## Animal Disease Survey:

Invited: 1050 (estimated)

n = 79

### **Demographics:**

- Vet school graduation year
  - 1984-2019 (median 1991)
- Practice type:
  - Private: 68%
  - Academia: 17%
  - Government/Military: 4%
  - Other: 10%
- Species Treated:
  - SA 77%
  - LA/FA 39%
  - Equine 34%
  - Exotics 18%
  - Birds 15%
  - Wildlife/Zoo 4%



# Survey Results

**Goal 1: Estimate level of compliance of Riley County Healthcare providers/nurses with KS regulations**

Goal 2: Assess Riley County healthcare providers/nurses' knowledge of notifiable disease reporting requirements in Kansas

Goal 3: Identify potential barriers to accurate, timely reporting of human diseases and compare those barriers to those reported by Kansas veterinarians regarding animal diseases

Goal 4: Identify and compare preferred methods of reporting among Riley County human healthcare providers/nurses and Kansas veterinarians

- **Self-Reported Compliance**
  - 80% of the time when diagnosed
  - 51% of the time when suspected
- **Influence of knowledge on compliance**

# Survey Results

**Goal 1:** Estimate level of compliance of Riley County Healthcare providers/nurses with KS regulations

**Goal 2: Assess Riley County healthcare providers/nurses' knowledge of notifiable disease reporting requirements in Kansas (human diseases)**

**Goal 3:** Identify potential barriers to accurate, timely reporting of human diseases and compare those barriers to those reported by Kansas veterinarians regarding animal diseases

**Goal 4:** Identify and compare preferred methods of reporting among Riley County human healthcare providers/nurses and Kansas veterinarians

- **Quiz Results**
  - 4 hour reportable diseases
    - Anthrax, Tetanus, SARS-CoV
  - 24 hour reportable diseases
    - Gonorrhea, elevated blood lead levels, Influenza death in a child, Varicella, CO, blood lead levels, Leptospirosis
  - Non-reportable diseases
    - *E. coli*
- **Self-assessed familiarity with list:**
  - 53% familiar with some/not all
  - 25% familiar with all
  - 20% not familiar
- **Legal obligation to report:**
  - 85% correctly identified



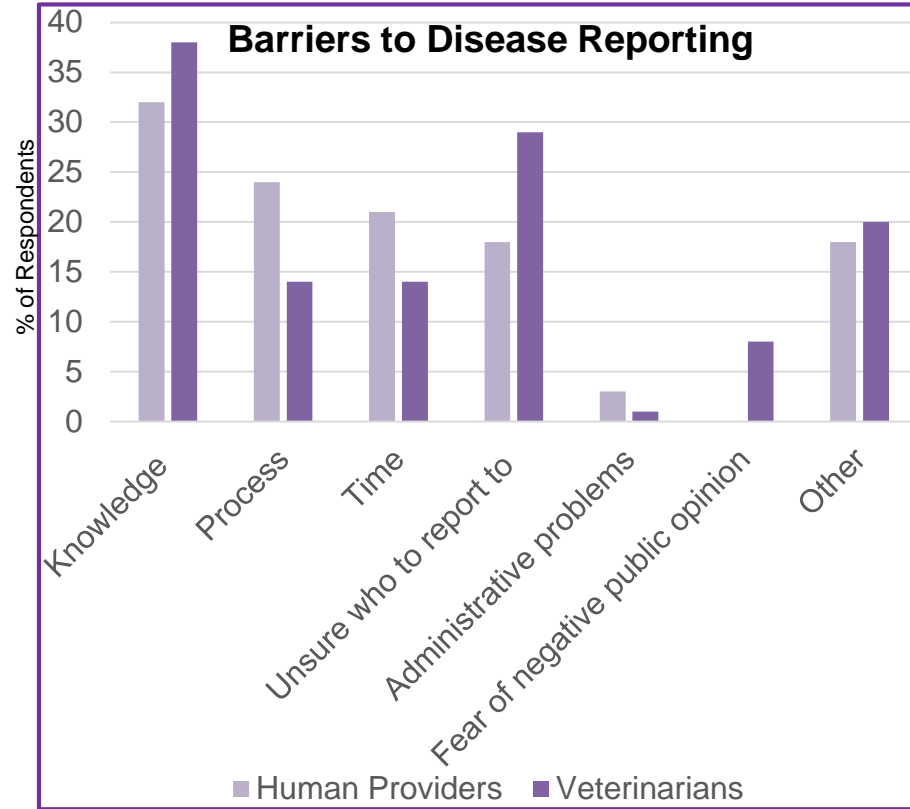
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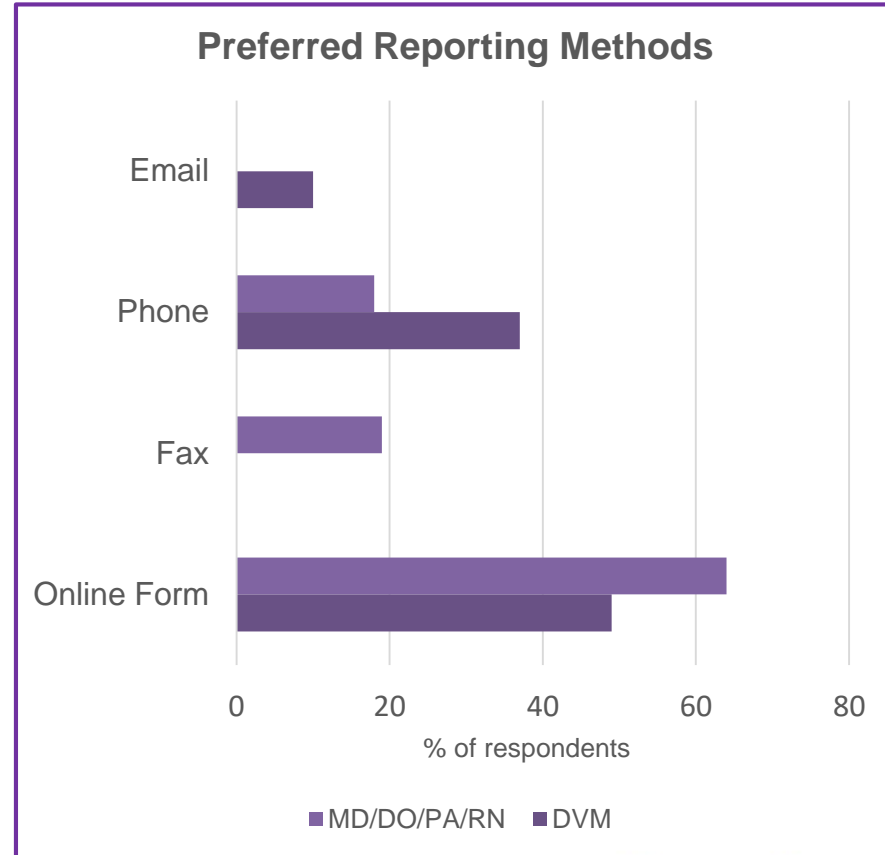
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# Discussion

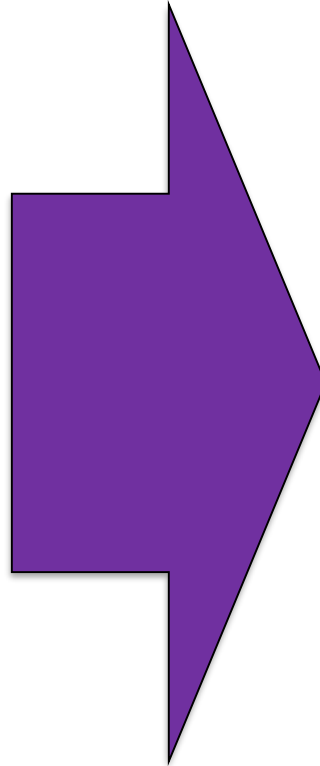
## Conclusions

Lack of knowledge/awareness of reporting regulations

Reporting process cited as a major barrier

Survey results largely agree with existing published research

Research limited by sample size and methodology



## Recommendations

Invest in educational resources for mandated reporters

Provide a secure, web-based reporting option to streamline reporting procedures



Riley County Health Department Internship

# **HISPANIC OUTREACH PROJECT**

# Hispanic Outreach Project

## Goals & Activities:

- **Survey** a sample of the Riley County Spanish-speaking population
- **Evaluate** Riley County websites for Spanish accessibility
- **Identify** best practices for effective communication with limited-English speaking populations
- **Develop recommendations** to improve RCHD communication and outreach efforts

## Outcomes:

- **Most recognized services** → vaccinations and dental care
- **Areas of Improvement** → more promotion, virtual events, more information in Spanish
- **Top barriers to seeking services** → lack of childcare, lack of money, inadequate health insurance

Encuesta sobre alcance de servicios de salud a la comunidad hispana en Riley County

Para participar en la encuesta, escanee el código QR



¿De qué se trata la encuesta?  
El equipo de alcance latino de Riley County está realizando una encuesta a hispanohablantes para determinar las necesidades, las barreras de acceso, y la conciencia sobre los servicios ofrecidos por el Departamento de Salud de Riley County.

Para preguntas sobre la encuesta, por favor visite el enlace: <https://bit.ly/31z9Dvo>

Este proyecto es parte de la encuesta de alcance de servicios de salud a la comunidad hispana en Riley County. El equipo de alcance latino de Riley County está realizando una encuesta a hispanohablantes para determinar las necesidades, las barreras de acceso, y la conciencia sobre los servicios ofrecidos por el Departamento de Salud de Riley County. Para preguntas sobre la encuesta, por favor visite el enlace: <https://bit.ly/31z9Dvo>

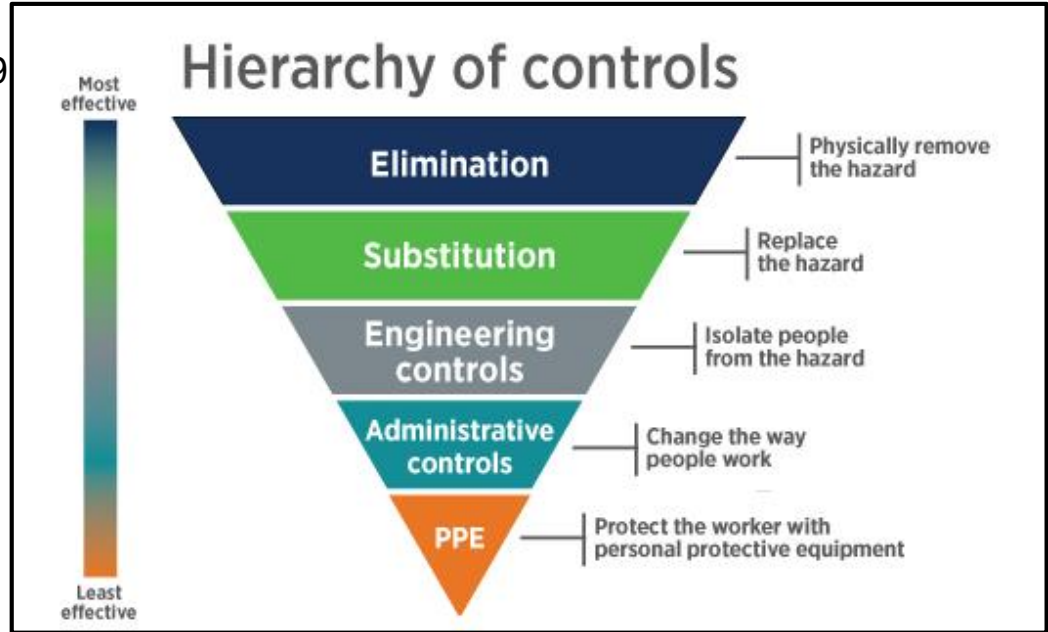


Community Outreach Public Health Experience

# **COVID-19 RISK MANAGEMENT**

# COVID-19 Risk Management

- **Goal:** Provide Community Veterinary Outreach (CVO) with practical, tailored recommendations for COVID-19 risk mitigation
- **Activities:** Performed qualitative COVID-19 risk analysis for mobile veterinary outreach
- **Outcome:** Collaborated with Ron Orchard (DVM/MPH student, 2022) to present risk analysis and mitigation strategies to CVO leadership



Source: AVMA, 2020

# RISK MITIGATION: PRACTICAL WORKPLACE EXAMPLES TO REDUCE EXPOSURE (AVMA)

- **Medium Risk of Exposure: close contact with people who may be infected but are not known or suspected to have COVID-19 (AVMA, 2020)**
  - Describes the majority of veterinary operations
  
- **Controls for Risk Mitigation**
  - **Engineering Controls:** physical barriers
  - **Administrative Controls:** PPE, minimize contact between staff and with clients, restrict client access to the treatment area, concierge service to minimize face to face contact, telemedicine (ipads?) for client/vet communication, leash exchange,
  - **PPE:** gloves, mask, face shield, +/- gown



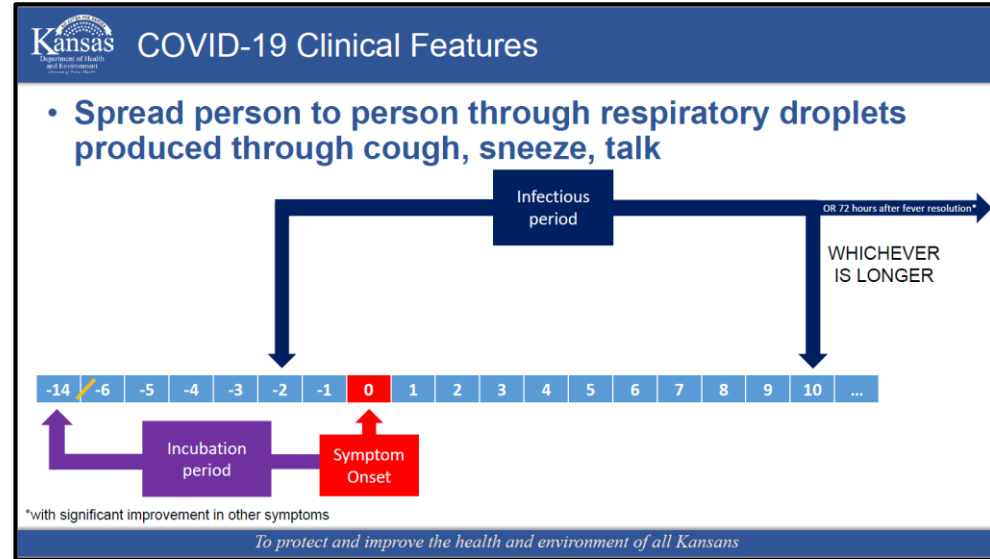


KDHE Public Health Experience

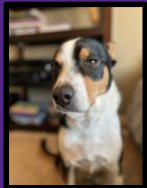
# **COVID-19 CONTACT TRACING**

# COVID-19 Contact Tracing

- **Key Responsibilities:**
  - Communicate public health guidance
  - Monitor contacts
- **Training Requirements:**
  - Online training
  - KDHE HIPAA certification
  - EpiTrax
  - Microsoft Teams, Amazon Connect
- **Challenges:**
  - Establishing initial contact
  - Relaying difficult news
  - Building and maintaining trust
  - Communicating through interpreters
  - Being unable to do more to help



Source: KDHE Contact Investigation Training, 2020



Kallie, my "co-worker"



Integration of Learning Experiences

# **MASTER OF PUBLIC HEALTH (MPH) COMPETENCIES**

Table 7.1

# MPH Foundational Competencies

Competency	Attainment
<p>4 <b>Interpret results of data analysis for public health research, policy or practice</b></p>	<ul style="list-style-type: none"> <li>• Disease reporting project design, survey creation, analysis of results</li> <li>• Development of evidence-based recommendations for RCHD</li> </ul>
<p>8 <b>Apply awareness of cultural values and practices to the design or implementation of public health policies or programs</b></p>	<ul style="list-style-type: none"> <li>• Hispanic outreach project design</li> <li>• Contact tracing cultural awareness</li> </ul>
<p>19 <b>Communicate audience-appropriate public health content, both in writing and through oral presentation</b></p>	<ul style="list-style-type: none"> <li>• Report of findings from disease reporting project to RCHD</li> <li>• Hispanic outreach presentation to Flint Hills Wellness Coalition</li> <li>• COVID-19 risk management presentation</li> <li>• Contact tracing experience</li> </ul>
<p>21 <b>Perform effectively on interprofessional teams</b></p>	<ul style="list-style-type: none"> <li>• RCHD team structure for disease reporting and Hispanic outreach projects</li> <li>• Contact tracing team (KDHE)</li> </ul>
<p>22 <b>Apply systems thinking tools to a public health issue</b></p>	<ul style="list-style-type: none"> <li>• Process mapping in disease reporting project design</li> <li>• Social Ecological Framework and disease reporting</li> </ul>

Table 7.2

# MPH Emphasis Area Competencies

## Infectious Diseases and Zoonoses

Competency		Attainment
1	<b>Pathogens/Pathogenic mechanisms</b>	<ul style="list-style-type: none"><li>Evaluate modes of disease causation of infectious agents.</li></ul>
2	<b>Host responses to pathogens/immunity</b>	<ul style="list-style-type: none"><li>Investigate the host response to infection.</li></ul>
3	<b>Environmental/ecological influences</b>	<ul style="list-style-type: none"><li>Examine the influence of environmental and ecological forces on infectious diseases.</li></ul>
4	<b>Disease surveillance</b>	<ul style="list-style-type: none"><li>Analyze disease risk factors and select appropriate surveillance.</li></ul>
5	<b>Disease vectors</b>	<ul style="list-style-type: none"><li>Investigate the role of vectors, toxic plants and other toxins in infectious disease.</li></ul>

# With gratitude for all of the support along this journey!



# References

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# Questions



Photo Credit: David Preczewski, 2014