One Health Collaborations in US State / Local Government & Policy Webinar – Part 1

October 23, 2019

Hosted by the One Health Commission and the International Student One Health Alliance





ISOHA







- ISOHA Trustee
 - Immediate past president
- 3rd-year DVM/MPH Student at lowa State University

Anastasia Lambrou, BS, MSc



- ISOHA Trustee
 - Immediate past Vice President for Members
- 4th-year PhD Candidate at the Johns Hopkins Bloomberg School of Public Health

International Student One Health Alliance



ISOHA aims to connect, create resources, and promote the One Health concept to students globally, irrespective of their field of study.





Webinar Purpose & Goals

Purpose:

- Connect U.S. State and Local Governments working in One Health
- Create a forum for U.S. State and Local Governments working in One Health to share their experiences
- Initiate communications and collaborations between U.S. State and Local Governments working in One Health

Attendees will:

- Learn who major change-makers are in One Health in U.S State and Local Governments
- Learn practices for promoting One Health collaboration in government
- Be able to apply this in their own One Health related-work
- Form a community/forum around One Health in State and Local Governments



Cheryl Stroud, DVM, PhD Executive Director







Forming Collaborations that transcend disciplinary boundaries

Connect, Create, Educate













https://www.onehealthcommission.org/

What is One Health all about?

The term 'One Health' refers to the interconnectedness and interdependency of human, animal (wild and domestic) and environmental health. The resurrection of this ancient concept began in the late 1990s when ecologists and wildlife conservationists realized that our 'systems' of specialized professionals had forced us into silos that never interact. The concept was embraced by the veterinary medical profession and catapulted into the human health domain with growing awareness of diseases that are transmitted from animals to people such as AIDS, Avian Influenza, Bovine Spongiform Encephalopathy, Severe Acute Respiratory Syndrome, Nipah and Ebola viruses, to name a few. Our understanding of the need for a One Health, multidisciplinary approach to complex problems expanded further with the realizations that urbanization and economic development can affect human, animal and environmental health, that incidence of vectorborne zoonoses such as Babesiosis, Bartonellosis, Lyme Disease, Rocky Mountain Spotted Fever, Zika virus and others can be altered by changing climate and landscapes and pose serious health and economic threats to human and animal populations, that understanding diseases and conditions shared by people and animals can lead to preventive and therapeutic measures beneficial to both, that food and water safety and security for all living things depends on conservation and soil health, that antimicrobial resistance among people and animals has an unavoidable environmental component, and that we cannot have good human health and welfare without good animal, plant and environmental health and welfare. One Health has many faces. Indeed, every profession must be at the table if we are to bridge our current siloed systems to achieve long term health goals for people, animals, the environment and, in turn, to enhance global security.

What is the One Health Commission?

Chartered as a 501(c)(3) non-profit organization, the One Health Commission (OHC) is a prominent, international body of action-oriented, One Health-dedicated individuals and organizations. Its programs are designed to serve as a gateway for the active exchange of One Health-related information and knowledge, sharing of resourcelated information and knowledge, sharing of resource.

and collaborative initiatives that extend beyond disciplinary boundaries. Based in central North Carolina and working globally, it is governed by a Board of Directors.

Our Mission

Our mission is to connect, create, educate and support networks to improve shared health outcomes and wellbeing of people, animals and plants and to promote ecosystem resilience through a collaborative, local to global One Health approach.

Achievements

Connecting the Global One Health Community

The Commission provides opportunities for One Health leaders around the world to share their programs and initiatives. Its First (2014) and Second (2016) International Who's Who in One Health online webinars drew over 1.500 participants from more than 35 countries. The OHC manages a growing Global One Health Community listsery of over 8,000 international participants, distributes a monthly global One Health Happenings newsletter of One Health news, events, opportunities, announcements and publications and maintains an ever-expanding global directory of 'Who's Who in One Health'. Its website serves as a One Health Library and a clearinghouse for One Health events, scientific publications, relevant popular media news items, training, employment and funding opportunities. It also provides global outreach and representation of One Health at major international conferences.

Creating and Leading One Health Actions

Many of our 'wicked' health challenges, like antimicrobial resistance, can be controversial. The Commission provides a 'safe zone' for interprofessional conversations, projects and actions. Volunteer One Health Action Teams, made up of individuals from diverse backgrounds identify public health and education gaps and work to address them. Examples include the OHC Bat Rabies Education Team, the International One Health-Social Sciences Initiative and the newly forming One Health-Ecology and Environment Team, Yet to be formed are teams to address

One Health Comparative Research and Medicine, One Health-Food Safety and Security, One Health Advocacy and Public Policy, and others. In 2016 the OHC led an international stakeholder partnership to create an annual, global One Health Day which is now celebrated around the world every year on November 3. One Health Day 2016 registered over 155 events in more than 35 countries. One Health Day 2017 and 2018 saw similar global participation. In 2017 the OHC partnered with the US Environmental Protection Agency on a citizen science National Pet Health Survey that collects health information on dog and cat companions and will be used by scientists, pet owners and the public to inform human health.

Educating about One Health and One Health Issues

The Commission communicates credible, science-based information on One Health issues to the public through venues such as the bi-lingual 'What is One Health' public service radio announcement and YouTube video. It hosts free global educational webinars that raise awareness and educate about the economic, public health and global health security benefits of a One Health approach to shared challenges. It provides its online webinar platform to unincorporated One Health groups such as the Washington DC One Health Academy that would not otherwise be able to share their One Health initiatives with a global audience. Since 2014 it has hosted or supported over 20 such webinars on topics such as Antibiotic Resistance and 'Understanding Bartonella: A One Health Perspective'. Its One Health Education Initiative prepares and compiles K-12 education resources made freely available to teachers. Its 2015 letter to the White House was co-signed by many organizations and individuals, encouraging the creation of One Health platforms by the U.S and United Nations agencies.

Engaging and Nurturing the Next Generation of One Health Professionals and Leaders



The Commission provides students with leadership opportunities by bringing student representatives from human, animal, environmental and plant health domains onto its <u>Board of Directors</u>. It has supported creation of an independent <u>International Student One Health Alliance (ISOHA)</u> for which it provides an online meeting platform, webpages, a student listsery and encouragement for student-led One Health projects. ISOHA and the Commission are partnering to identify Student One Health groups around the world to facilitate formation, very early in their careers, of trans-disciplinary relationships among emerging health professional leaders. The Commission also awards two of four \$2,000 One Health Day Student Events Competition Awards each year to multidisciplinary student teams.

Summary



One Health, our "Ray of Hope for the Future", has gained great traction globally in the 21st Century. The One Health Commission provides leadership, platforms and resources to connect hundreds of One Health advocates and groups around the world, allowing them to combine forces to break through disciplinary silos and to re-orient collective thinking and practice towards interactive systems frameworks. It seeks to sustain and expand it programs, to increase its global impact promoting interdisciplinary approaches to health challenges shared by people, animals and the environment. Its goal is to make One Health the default way of operating at all levels of academia, research, and governments around the world.

Get Involved! Contact:

isohaexco@gmail.com cstroud@onehealthcommission.org

If the One Health concept resonates with you, if you believe that the Commission performs a function vital to the shared health of people, animals and the environment on planet earth, please consider how you and your organization can play a part in this global effort.

Donate Now! http://bit.lv/2PX5miw

One Health Commission, P.O. Box 972, Apex, NC 27502 Phone: 984-500-8593

Website: https://www.onehealthcommission.org/

Twitter: @OneHealthCom Facebook: One Health Commission

☐ Connecting One Health Stakeholders – we can accomplish more *together!*





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JOIN the GLOBAL OH COMMUNITY LISTSERV

Sign-up to get global One Health news and updates from the One Health Commission delivered to your inbox.

Click here to join our global listserv

OHC Listserv Sign-up

http://bit.ly/2IJIUC
E

One Health-Social Sciences
Initiative
Engaging Social Scientists in
the One Health Concept



☐ Connecting One Health Stakeholders – we can accomplish more together!



https://www.onehealthcommission.org/en/resources service





https://www.onehealthcommission.org/en/news



https://www.onehealthcommission.org/en/resources services/one health library/

Book Chapters

☐ Educating about One Health and One Health Issues

One Health Educational Resources

One Health for One Planet (1HOPE) Education Initiative

The World We Need

PREPARING SOCIETY TO CREATE THE WORLD WE NEED THROUGH ONE HEALTH EDUCATION

http://bit.ly/2Ld6lF









Basic Guide for developing K-12 One Health lessons

K-12 Educational Resources

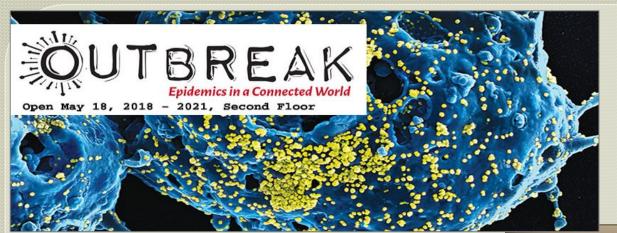
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OHC BRET- Bat Rabies Education Team

http://bit.ly/2KF3JP

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116TH CONGRESS 1ST SESSION

IN THE SI

Ms. SMITH (for herse

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S. 1903

To establish an interagency One Health Program, and for other purposes.

116TH CONGRESS 1ST SESSION

H.R. 3771

To establish an interagency One Health Program, and for other purpose











To establish an

- 1 Be it end
- 2 tives of the Ur
- 3 SECTION 1. SE
- 4 This Act
- 5 Preparedness
- 6 SEC. 2. FINDIN

June 19, 2019

IN THE HOUSE OF REPRESENTATIVES

JULY 16, 2019

Mr. SCHRADER (for himself and Mr. YOHO) introduced the following which was referred to the Committee on Energy and Commerce, an addition to the Committees on Agriculture, Natural Resources, and eign Affairs, for a period to be subsequently determined by the Spei in each case for consideration of such provisions as fall within the j diction of the committee concerned

A BILL

To establish an interagency One Health Program, and for other purposes.

- 1 Be it enacted by the Senate and House of Representa-
- 2 tives of the United States of America in Congress assembled,
- 3 SECTION 1. SHORT TITLE.
- 4 This Act may be cited as the "Advancing Emergency
- 5 Preparedness Through One Health Act of 2019".
- 6 SEC. 2. FINDINGS.



Representative Kurt Schrader



Representative Ted Yoho



To establish in the US an Inter-Agency One Health Program

July 16, 2019









Promoting efforts around the world to bring together all human, animal, and environmental health discipline:

created and hosted by







✓ check **www.onehealthday.org** for more information



Groups Featured today

October 23, 2019

Harris County Public Health in Texas

Elya Franciscus, BASc, MPH

Idaho One Health Consortium

Leslie Tengelsen, PhD, DVM

Los Angeles Dept of Public Health - Veterinary Public Health

Karen Ehnert, DVM, MPVM, DACVPM

Minnesota One Health Antibiotic Stewardship Collaborative

Amanda Beaudoin, DVM, PhD, DACVPM

Nebraska One Health

Liz VanWormer, DVM, PhD

North Carolina One Medicine Symposium

Carl Williams, DVM, MPH

Texas Dept. of State Health Services, James Steele DIN Conference,

Eric Fonken, DVM, MPAff, Bonny Mayes, MA, RYT



One Health – Local Health Department

Elya Franciscus, MPH

Lead Epidemiologist, Office of Science, Surveillance and Technology

Dana Wiltz-Beckham, DVM, MPH, MBA

Director, Office of Science, Surveillance & Technology

Harris County Public Health (HCPH)

One Health Collaborations in U.S. State/Local Government and Policy

October 23, 2019

Houston, TX



#InvisibilityCrisis

Twitter:@HCPHTX





















Harris County: Big, Diverse & Complex

Harris County is the third most populous county with over **4.7 million** people spread over **1,778 square miles**.























ONE HEALTH: THE BEGINNING



















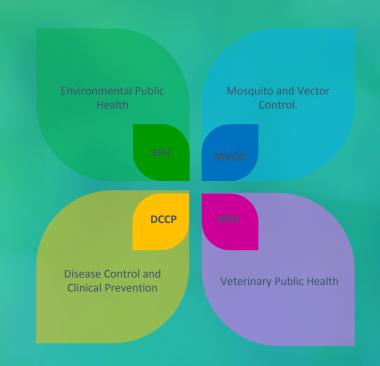
Vision

One Health, One Goal: Healthy people, animals, and places

Mission

Harris County Public Health's One Health Team is committed to creating healthy, resilient communities by promoting and sustaining the health and well-being of humans, animals, and the environment, through:

- Joint education and communication efforts
- Creating and enhancing multi-disciplinary community partners
- Promoting policies which support One Health principles



HCPH and the Case for "One Health"

In one year in Harris County, diseases that spread from animals to people ...

396

Salmonella and E.coli cases

Due to eating or handling contaminated animal products



West Nile Virus, chikungunya, and malaria cases All transmitted by mosquitoes



31

Cryptosporidium or "crypto" cases

A parasite spread by food, water, or soil contaminated by sick animals

*Numbers represent closed cases of illness in humans in unincorporated Harris County (excluding Houston) in 2014.³

Before One Health



A person's positive test result for West Nile Virus arrives at the health department



Mosquitos at the health department's entomology lab test positive



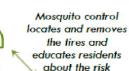
Old tires are observed by a department animal control officer while on a routine call

After One Health

Disease
investigators tell
mosquito control
about the West Nile
Virus case



Connected approach = Cause of disease eliminated





Animal control reports the location of the dumped tires to mosquito control



















ONE HEALTH: HARRIS COUNTY PARTNERS

















One Health Stakeholders and Partners

National Partners



Biowatch and CDC

Local Health Departments



Texas
Department of
State Health
Services, Central
Office, Regional
Office, local
health
departments

Animal Partners



Mosquito agencies, veterinarians, wildlife rehabilitation

Other Partners



Environmental
Health
Association,
School districts,
Human
healthcare,
academia

ONE HEALTH: SHOW ME THE MONEY

















Funding Sources

- A little bit of everything!
 - General funds
 - Grant funds
 - Working with existing FTEs
 - PHAP program
 - CSTE fellowships



ONE HEALTH: SUCCESS AND CHALLENGES







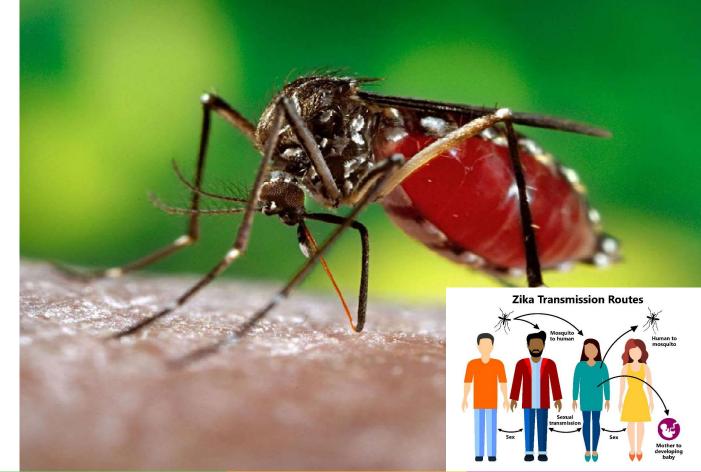














Zika –

2016-2017











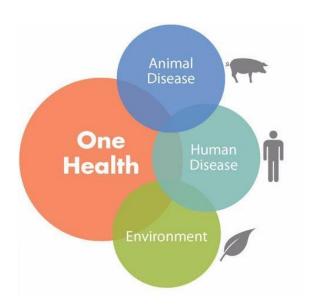


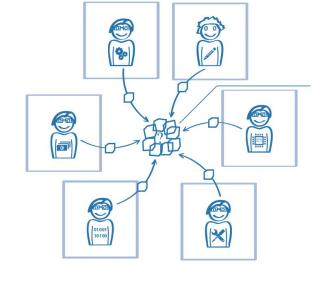




HCPH Components of Effective Zika Response







Health Equity One Health Multi-Disciplinary Team (MDT)







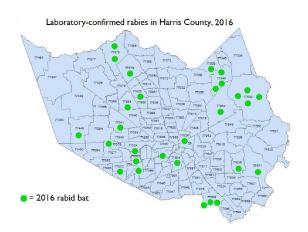














Rabies Disease









WILDLIFE/ENVIRON
MENT EXPORTS

VETERINARIAN

EPIDEMIOLOGIST

MEDIA







COMMUNITY

ANIMAL CONTRO
OFFICERS

PHYSICIANS



















Ebola – 2014-2015















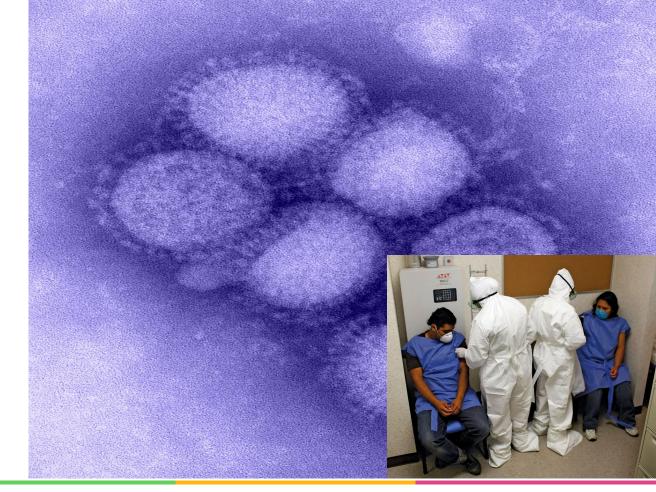








Novel H₁N₁ -2009-2010





















One Health Conference

From Theory to Practice

September 14-15, 2018

www.OneHealthConferenceHC.org * www.facebook.com/OneHealthConference







One Health, One Goal: Healthy People, Animals and Places #ONEHEALTH2018

ONE Health **ONE** Goal

Healthy People, Animals and Places





Two Days, 32 speakers, 300+ professionals including Veterinarians. Technicians, Public Health, Physicians, Nurses covering topics: Zoonotic Disease, Human-Animal Bond. Antibiotic Resistance, Climate Change etc.



















NEVER A DULL MOMENT

- ☐ Tropical Storm Allison (2001)
- ☐ Nation's first Biowatch hit in Houston (2003)
- ☐ *Monkey Pox found in exotic pet market (2003)*
- ☐ Possible Lassa Fever on cargo ship Africa (2004)
- ☐ Crosby Well natural gas explosion (2005)
- ☐ Hurricane Katrina Response Astrodome (2005)
- ☐ Hurricane Rita Evacuation (2005)
- ☐ Multi-State GI illness investigation soccer (2005)
- ☐ Fake Flu Investigation (2005)
- ☐ Hydrobromic acid release (2006)
- ☐ Rabies Response teenager death (2006)
- ☐ Hepatitis A Response restaurant worker (2007)
- ☐ Salmonella Saint Paul investigation (2008)













ONE HEALTH: THE FUTURE

















We are not prepared for:

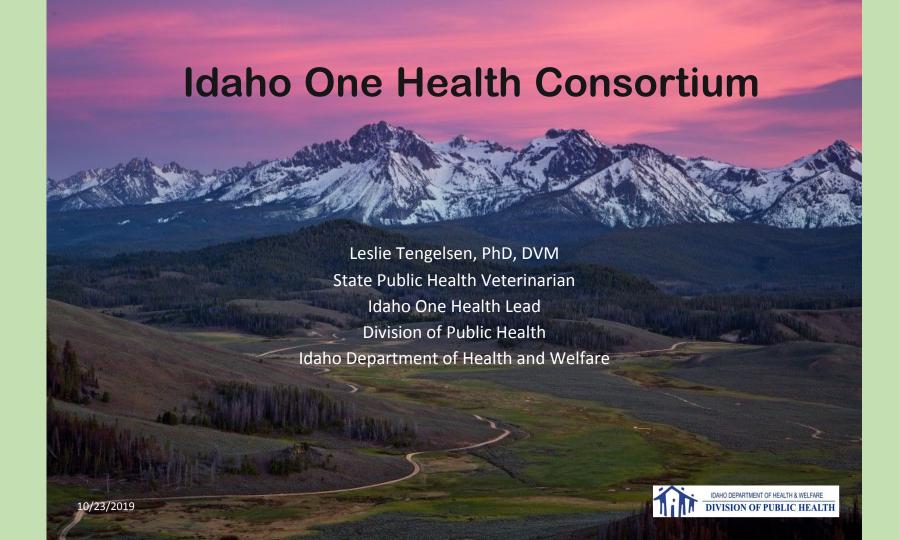
- More cases
- More germs
- More risk

But we could be with:

- More funding
- More vector control
- More research & education

Future State: -ooking

Proactive Policies and Funding Support that are Flexible and Appropriate to Build Necessary Capacity at the Local Level



Idaho One Health Consortium (IOHC)

- Idaho is a predominantly rural, agricultural state (population 1.7 million*)
- The IOHC was formed by the Idaho Department of Health and Welfare (IDHW) in 2015 with the intention of engaging professionals from diverse disciplines and perspectives in conversations around OH-worthy topics that touch aspects of human, animal, and environmental health

Goals:

- To increase awareness of OH issues across disciplines (didactic),
- To identify OH issues in Idaho, and, when possible,
- Identify action items and workgroups to improve OH outcomes.

Long-term outcome:

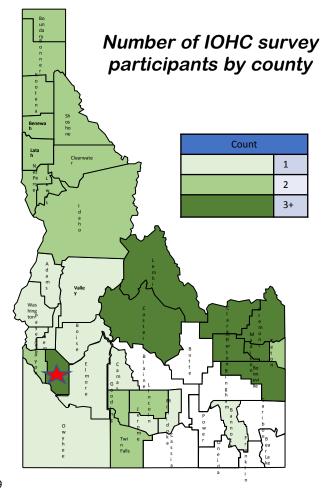
Build upon and develop cross-cutting relationships in daily work activities



Participants

- Prior to 2015, members of state government (health, agriculture, fish and game) and federal government (USDA) would meet annually to focus on zoonotic disease topics (Zoonotic Disease Working Group [ZDWG]).
 - ~10 members (small and typically lacked action items, stayed in our silos)
- 2015, the IOHC was formed with ZDWG members with an eye on expanding the scope of meetings and expanding participants, to include additional professionals working on OH areas. <u>In-person meetings only</u>, word of mouth, targeted invitations.
- In 2017, with initial assistance from the One Health Commission (Go-to-Meeting), the IOHC initiated <u>statewide webinar participation</u> options!
- In 2018, Idaho moved to WebEx platform.
 - Expanded to ~100 members statewide!
 - federal, state, local government representation in areas of public health, Ag, wildlife, environmental quality, academia, members of healthcare, veterinarians, etc..
 - Meet 3x per year





2018 Survey of IOHC Participants

- Snapshot: Regional variation noted in current IOHC participation (single survey)
- Primary work county noted by participants (map)
- 10 additional respondents selected 'statewide', representing government or academia.
- 1 listed 'national' work duties.



Focused Meetings

The IOHC has convened 13 times since September, 2015

Date	Торіс		
9/22/2015	One Health 101		
1/22/2016	Food Safety: Foods of Animal Origin		
5/11/2016	Antimicrobial Stewardship-part 1		
9/19/2016	Novel Influenza		
12/5/2016	Antimicrobial Stewardship-part 2 FDA Veterinary Feed Directive		
6/28/2017	Brucellosis		
9/27/2017	Tuberculosis-focus on Ag and Ag worker concerns		
12/15/2017	Flooding in Ag settings- preparedness and response to unintentional run-off		
5/4/2018	Prion disease-focus on chronic wasting disease (CWD)		
9/7/2018	Veterinarians and the opioid crisis		
12/14/2018	Cyanobacterial blooms- problem solving for response to harmful algal blooms		
4/5/2019	Rabies response in Idaho		
8/23/2019	Echinococcosis concerns. CWD revisited		
Upcoming 1/2020	Response to pesticide exposures (topic yet to be finalized)		



Participation in Broader OH Activities

- Pacific NW partners: ID, OR, and WA share borders and collaborate on various public health/one health activities
 - Building relationships: Idaho has participated in OR and WA regional zoonotic and OH meetings in person and via webinar
 - Idaho recently worked with UW/Dr. Rabinowitz on curricula development for Ag worker safety (areas of OH and zoonotic disease)
 - Participate in regional efforts to understand rare fungal diseases, including their geographic distribution
- Attend the annual National Institute of Animal Agriculture antibiotic stewardship One Health meetings
- Use some limited CDC support to maintain OH activities in Idaho



Limitations/Challenges

- Gaining and maintaining participation by healthcare providers and clinical veterinarians is challenging. Hoping to identify some federal funding to offer CE for future meetings.
- Would like to see topics for discussion coming more often from non-public health partners.
- Depending on the topic, IOHC has had various levels of success in identifying action items.
- Addressing OH problems could prove difficult in terms of actions needed.
- Continually working to identify optimal ways to expand participation geographically and by discipline.



https://www.onehealthcommission.org



Successes

- 2018 survey of members suggest that the meetings were well received and valued
- Relationships have been forged, with a broader, deeper understanding of OH topics achieved across disciplines
- Selected action items from past meetings include:
 - A survey of licensed veterinarians was deployed, in collaboration with the Idaho board of veterinary medicine, to learn more about the role veterinarians play in the opioid crisis
 - Public health was able to contribute to the Idaho Department of Fish and Game CWD surveillance and response plan
 - One health members contributed to the Idaho statewide Rabies Protocol and are working collaboratively with CDC on a bats and rabies safety video
 - Currently working on enhancing aspects of echinoccocus surveillance to learn more about the burden this rare parasite might place on human, domestic animal (pets, livestock), and wildlife in Idaho



Summary

- Overall, IOHC meetings appear to be a valuable activity in Idaho
- Starting to see an increase in OH thinking from participating agencies
- Initially it took some time to increase participation, but once we provided a webinar option, membership steadily grew
- No shortage of topics for future meetings!





The LA Experience: Healthy Pets Healthy Families Initiative

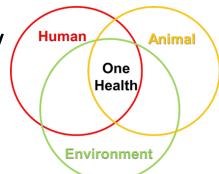
One Health Commission webinar October 23, 2019

Karen Ehnert, DVM, MPVM, DACVPM
Director, Veterinary Public Health
Los Angeles County DPH



Healthy Pets Healthy Families (HPHF) Initiative

- Started in 2011, reliant on program resources only
- 2011 gathered animal health data
- 2012 started HPHF Coalition
 - Meets quarterly
 - Includes: veterinarians, physicians, nurses, health educators, epidemiologists, vector control, animal control, non-profit organizations, universities, dog trainers,...
 - Participatory decision making
 - Facilitated input from members
 - Final decision by program





HPHF Mission & Goals

- Mission: To use the connections between human and animal health in order to promote a healthy community.
- Goals established for seven focus areas

Based on local data

Outlined in Community Report
 http://publichealth.lacounty.gov/vet/Reports.htm



	1. Spay and Neuter
	2. Bite Prevention
	3. Vaccine-Preventable Diseases
	4. Pet Obesity
S	5. Secondhand Smoke
	6. Disaster Preparedness and Pets
Sap.	7. Zoonotic Disease and Parasite Prevention



HPHF Projects



outreach

2013

HPHF

Community

Report

handout



HPHF Projects

2018

- □Disaster Forum
- □ Skid Row Clinics Flea-borne Typhus prevention
- □Cannabis & Pets
- □Community Needs
 Assessment

2019

- ☐Pets & New Baby
- □Pets & Rental
 Housing White
 Paper
- □Pet Assisted
 Therapy Forum
- □Pet preventive clinics & health fairs

2020

- □3rd Pet Health Survey
- ■Decade report
- **□**Forum
- □Education at
 Community Health
 Centers



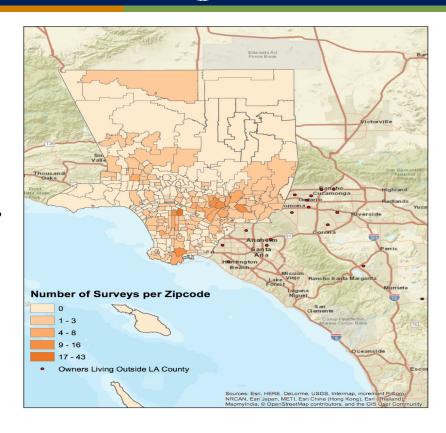
Dog KAP Survey 2016

Purpose

- Knowledge, Attitudes, and Practices of dog owners
- 40 Questions based on the Healthy Pets,
 Healthy Families 7 focus areas
- Adjusted from original survey to collect mid-baseline data

Methods

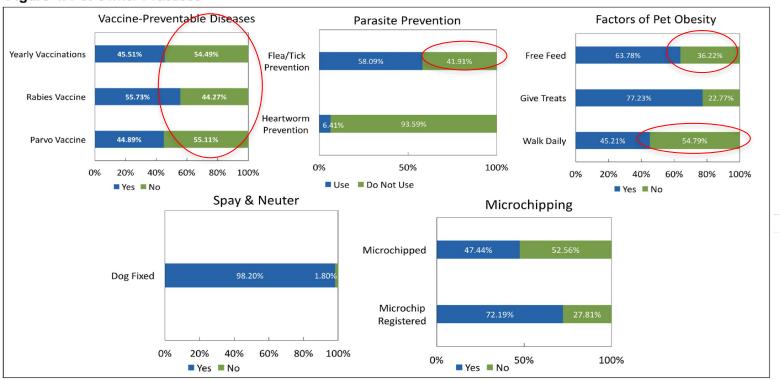
- Paper survey
- Collected at low-cost/free vaccination and spay/neuter clinics





Dog KAP Survey - Results - more work to do

Figure 4. Pet Owner Practices







Prevention and Education

Healthy Pet Expos

	2015	2016	2017
Attendance (public)	~1000	2000	1168
Pet vaccines given	Not tracked	500+	671
Pets sterilized	Not tracked	66	18
Pets dewormed	Not tracked	Not tracked	17





Surveys Bring Focus on Obesity

Dog Owner Survey

- 51% can't feel dog's ribs
- 11% think dog is overweight
- 43% walk dog daily
- 73 % free feed

Local Parks Survey

– Many not safe!

Dog friendly walking group toolkits

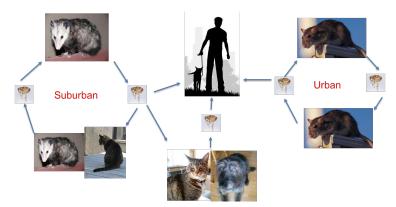
surveys to assesseffectiveness





Flea-borne Typhus: another opportunity to utilize One Health to reduce risk

- Illness in humans caused by Rickettsia felis or typhi
- Transmitted by flea bites
- Rats, opossums, cats and other animals as flea vectors
- Increase in human cases in 2018
- Clusters in Downtown Los Angeles and Willowbrook

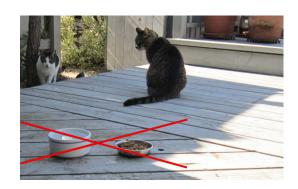




Flea-borne Typhus: One Health to reduce risk

Veterinary Partnership with Education

- Quarterly notification of veterinarians near human cases
- Promote messages:
 - Flea control for pets
 - Wildlife Don't harbor, don't harass!
 - Keep vegetation trimmed in yard, crawl spaces and deck underside sealed off (harborage)
 - Do not leave pet's food and water outside
 - If rat or mouse infestation recommend exterminator







Flea-borne Typhus: One Health to reduce risk

Skid Row Clinics

- Cluster of cases among homeless patients
- Collaborate with LA Animal Services, Downtown Dog Rescue, Inner City Law
- Weekly, then monthly free pet preventive clinics, including flea control
- Cases diminished in area





Questions?

Karen Ehnert, DVM, MPVM
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Los Angeles County
Department of Public Health
213-989-7060
kehnert@ph.lacounty.gov



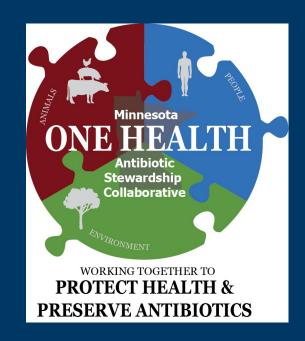
References

- 1. Ehnert K, Lamielle G, Scott T, et al. The Healthy Pets Healthy Families initiative as an example of one health in action. JAVMA2015 Jul 15;247(2):143-7
- 2. Healthy Pets Healthy Families website: https://publichealth.lacounty.gov/vet/HealthyPetsHealthyFamilies.htm
- 3. http://www.healthypeople.gov/2020/default.aspx
- 4. http://www.healthypeople.gov/2020/implement/mapit.aspx
- 5. HPHF Community Report: http://publichealth.lacounty.gov/vet/docs/2014HPHFCommunityReport.pdf
- 6. Obesity Report, Los Angeles County Department of Public Health, available at: http://publichealth.lacounty.gov/vet/docs/HPHF_ObesityReport2016.pdf
- 7. HPHF dog friendly community walking groups webpage: http://publichealth.lacounty.gov/vet/hphf/walkinggroup.htm

Minnesota One Health Antibiotic Stewardship Collaborative

Increasing awareness and behavior change through a collective mission, cross-disciplinary learning, and sharing of evidence-based approaches to antibiotic stewardship

MINNESOTA



Amanda Beaudoin, DVM, PhD, Diplomate ACVPM

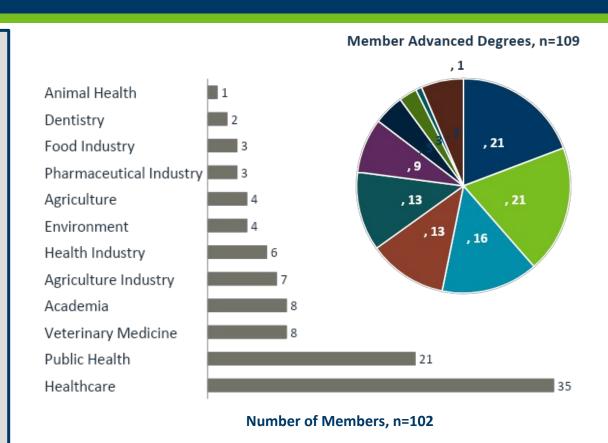
Director of One Health Antibiotic Stewardship Minnesota Department of Health

One Health Collaborations in Government Webinar, October 23, 2019

MN One Health Antibiotic Stewardship Collaborative (MOHASC)

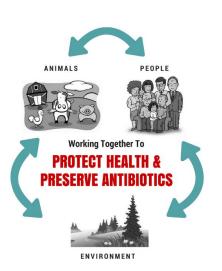
Collaborative Participants

- State agencies of health, agriculture, environment, animal health
- Healthcare professionals from inpatient, outpatient, long-term care, dentistry
- Veterinary professionals from large and small animal clinical practice
- University researchers from veterinary medicine, engineering, chemistry, pharmacy, medicine
- Industry and professional organizations, human and animal
- Pharmaceutical companies, human and animal



MOHASC Vision

Minnesota leaders in human, animal, and environment health will work together to raise awareness and change behaviors to preserve antibiotics and treat infections effectively.



Communication Approach:

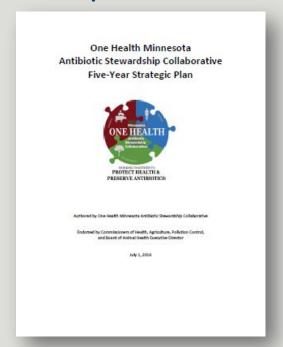
- Human, animal, and environmental health are inseparable.
- All antibiotic use can lead to resistance.
- There is some contribution to resistance from every sector using antibiotics
- Lack of "proof" of harm is not an argument for irresponsible use.
- Greater abuse in other disciplines is not an argument for injudicious use in yours.
- There are unreasonable critics.
- Behavior change is key.

• Promote understanding of One Health antibiotic stewardship

• Improve human antibiotic stewardship

• Improve animal antibiotic stewardship

Develop "antibiotic footprint" tools



Operational Logistics

- Annual in-person meeting
 - Discussion of hot topics in each health discipline, Q&A
- 4 Work Groups align with strategic plan goals
 - Quarterly calls held to advance projects
- Email bulletin
 - >850 recipients in MN and beyond
 - Stewardship news from all health disciplines, education opportunities, MOHASC updates
- Website
 - Platform for human, animal, environmental health professionals, educators, public
- Multistate One Health stewardship quarterly call
 - Federal agencies, national organizations, >20 states

Impact

- Collective vision magnifies state investment
 - 1.0 FTE at Minnesota Department of Health
 >1,000 hours/year of in-kind member contributions
- A common mission energizes daily stewardship practice
 - New resources, ideas, research opportunities
- Networking drives practice change

for animal health

- Mentorship that benefits giver and recipient
- Improved continuing education offerings
- Evidence-based approaches are shared to fill gaps
 - Healthcare tools modified for other care settings and
- Together, we ensure the public receives reliable information
 - Website, fact sheets, videos, Minnesota State Fair booth

I pledge to preserve the power of antibiotics.

• One Health Engagement

- State Fair booth engagement with >12,000 attendees
- "Professional exchange" events to observe antibiotic use and stewardship in diverse setting

Healthcare

- Tiered honor roll incentivize stewardship improvements in acute and long-term care
- Public engagement initiatives to educate patients and families

Animal Health

- Webinar series to support veterinary stewardship education
- Point prevalence studies of antibiotic use in companion animal practice
- Initiatives to mitigate understanding gap between agriculture, healthcare, and public

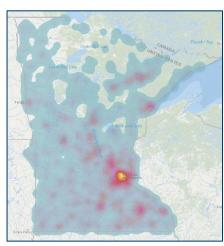
Environment

- Multidisciplinary research to explore Minnesota's "antibiotic footprint"
- Education and promotion of drug disposal best practices



Using Minnesota's Antibiotic Footprint to Define Consequences of Antibiotic Use and Drive Behavior Change

Mapping Minnesota's Antibiotic Footprint in the Natural Environment



1. Map-based modeling

- Where are antibiotics used, and where do they end up?
- 2. Environmental sampling
- Measure antibiotic concentrations, resistance genes in environment
- 3. Model validation

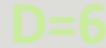
Outcomes

- Develop a tool to predict environmental contamination with antibiotics and resistance genes
- Propose risk-based mitigation and behavior change strategies to minimize antibiotic resistance
- Maximize impact of funds invested to protect environmental, human, and animal health

The "D"s of Antibiotic Stewardship Drive Behavior Change

- Diagnosis.
- Drug.
- Dose.
- Duration.
- De-escalation.
- **Disposal.** Dispose of antibiotics properly.

Do not put in sink toilet or trash.



Professional and Public Engagement to Increase Knowledge

Minnesota State



Antibiotic Stewardship Professional











- Minnesota One Health Antibiotic Stewardship Collaborative membership
- Ruth Lynfield MD, State Epidemiologist and Medical Director, Minnesota Department of Health
- Beth Thompson JD, DVM, State Veterinarian and Executive Director, Minnesota Board of Animal Health
- Minnesota Commissioners of Health, Agriculture, Pollution Control Agency
- Emma Leof MPH, Epidemiologist
- Minnesota Department of Health HAI-AR Unit staff
- CDC Division of Healthcare Quality Promotion for continued ELC funding of MOHASC Director position and Annual Summit

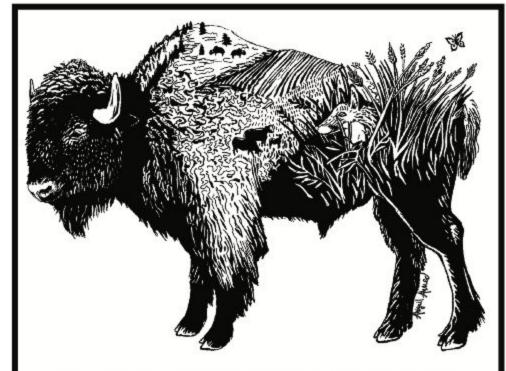


PRESERVE ANTIBIOTICS

MDH Contacts for One Health Antibiotic Stewardship

Amanda Beaudoin, DVM, PhD Director of One Health Antibiotic Stewardship amanda.Beaudoin@state.mn.us

Ruth Lynfield, MD
State Epidemiologist and
Medical Director
ruth.Lynfield@state.mn.us



NEBRASKA ONE HEALTH

nebraskaonehealth.unl.edu

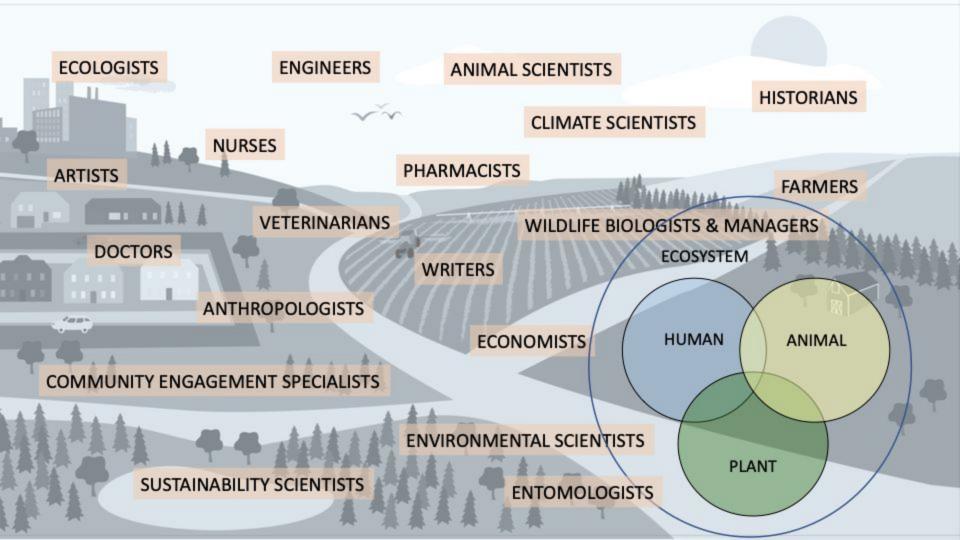
Linking Human, Animal, Plant, & Ecosystem Health



GOALS

- Connect individuals from diverse disciplines and organizations to address the health of people, animals, plants, and shared ecosystems
- Support One Health research, management, training, and outreach
- Enhance public awareness of One Health

Liz VanWormer, University of Nebraska-Lincoln, liz.vanwormer@unl.edu; nebraskaonehealth@gmail.com



Building stakeholder collaboration in Nebraska



Key One Health
 Issues in Nebraska

 Approaches to enhance communication among stakeholders

Identifying key One Health Issues in Nebraska









Working groups to build synergistic projects





Nebraska Dept. of Health and Human Services
- Healthcare Associated Infections-Antibiotic

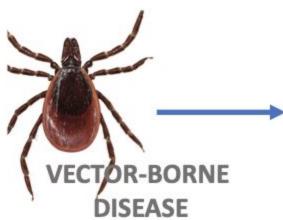
Resistance (HAIAR) team

iAMResponsible outreach program at UNL

UNL and University of Nebraska Medical Center researchers

USDA-ARS researchers





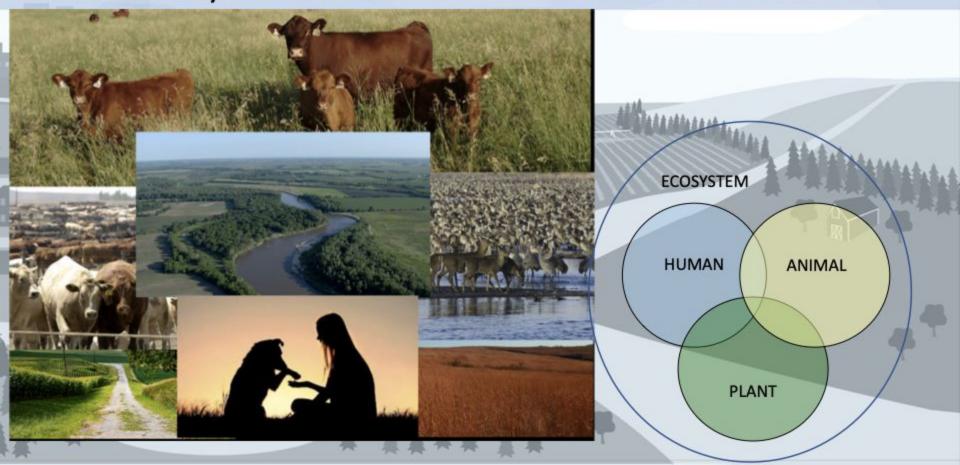
Nebraska Dept. of Health and Human Services

– Vector-borne disease epidemiologists

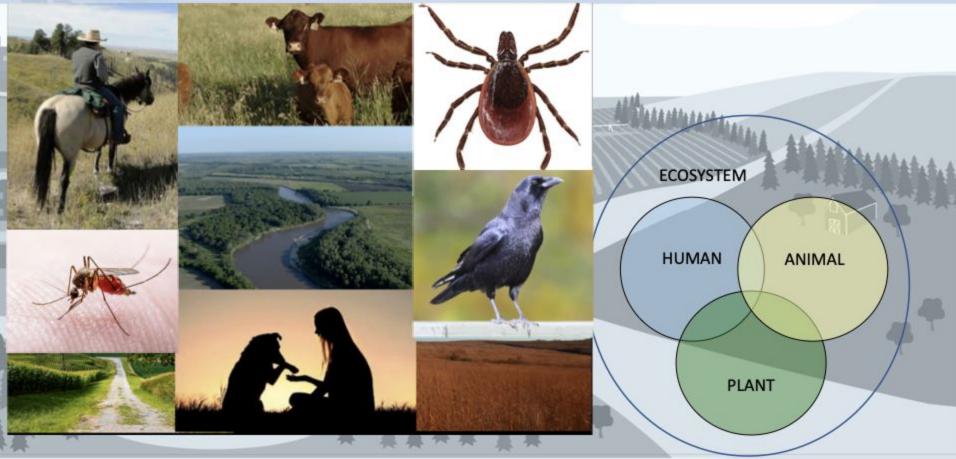
UNL researchers and extension specialists – entomology, veterinary medicine, natural resources

National Drought Mitigation Center researchers

What does this mean for us? Enhanced ability to understand and address antimicrobial resistance



What does this mean for us? Enhanced vector-borne disease surveillance and response

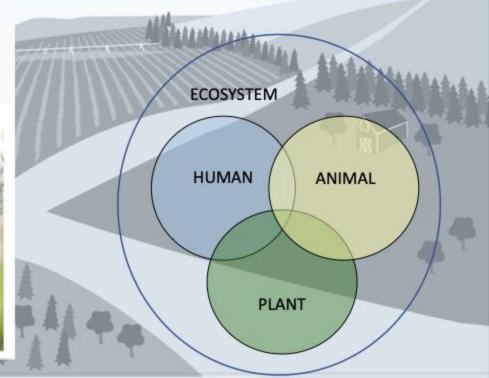


Maintaining contact among One Health partners

- In-person meetings, seminars and symposia (when funding allows for bigger events)
- One Health listserv and website to distribute information
- Seasonal and monthly newsletters to give program and partner updates, highlight exciting
 One Health projects, and share events and funding & training opportunities

ONE HEALTH





One Health project example:

Bryan Buss, CDC Epidemiologist, State of Nebraska







COLLEGE OF PUBLIC HEALTH YOUTH IN AGRICULTURE (YIA)

About Education Resources Contact



Contact Us

Youth In Agriculture

UNMC | College of Public Health

984355 Medical Center

Omaha. NE 68198-4355 402-559-4960 (phone)

402-559-4961 (fax)

Email us

Welcome to our education for youth in agriculture resource website.

A joint venture led by the NE DHHS in conjunction with the NE Dept of Ag, UNL Extension Services, and the UNMC. This project is supported by a grant from CSTE/CDC/USD/NAPHV.

AN EXAMPLE OF ONE HEALTH ACTIVITIES IN NC

OCT 23, 2019

One Medicine

Although the concept has been embraced since the mid-19th century, Dr. Calvin Schwabe revived the phrase "One Medicine" in the 1980s. This short and simple phrase, originally coined by Sir William Osler, summarizes the need for collaboration among multiple disciplines to more collectively approach health issues that threaten animals, humans, and the environment.

- □ Held annually from 2003 through 2016
- Intended audience included:
 - Physicians, nurses, veterinarians, veterinary technicians, public health professionals, environmental health specialists, agriculture professionals, wildlife professionals, and federal, military, state and local emergency management and disaster response professionals

- Hosted by NCDA&CS and NC DHHS
- Cooperators included:
 - NC State University College of Veterinary Medicine, UNC Gillings School of Global Public Health, USDA APHIS Veterinary Services, and NCSU Office of Professional Development

- Symposium Goal
 - To educate and provide professionals with current information and take-home tools to improve awareness and understanding of health-related topics from a One Medicine perspective, promote collaboration across professional disciplines, and enhance preparedness for natural or man-made disasters, infectious disease outbreaks, and other challenges affecting human and animal health
 - Bridge research and applied one health

- Comprehensive CE offered for almost all allied health professions
- \square Registration costs kept at \sim \$100.00
- Attendance consistently between 200 350
- Funding was supported by CDC PHEP Cooperative Agreement
- Wide range of topics: AMR, Zoonotic Influenza, Tickborne Illness, Pesticide use...

- Ultimately funding waned
- Most attendees found the symposium to be educational and beneficial
- Continuance needs strong organizational and monetary support



Texas Department of State Health Services



James Steele Conference on Diseases in Nature Transmissible to Man

"Diseases in Nature Conference"
"DIN"



Texas Department of State Health Services

 Originating annual meeting at the Texas State Department of Health





Texas Department of State
Health Services

 Federal government proposed that this meeting become 1 of 4 federally-sanctioned national conferences to address biowarfare concerns



Source: Timetoast.com



Steele served in the U.S. Public Health Service, where he would eventually become the first assistant surgeon general for veterinary affairs with the rank of rear admiral.

Source: Houston Chronicle,

April 14, 2013



Texas Department of State Health Services

 First meeting of the "Conference on Diseases of Nature and Animal Diseases Transmissible to Man"

> Three Tay ... Inference On Diseases Of Nature ... Animal Piseases Transmissible To Man; Sponsored By The Texas State Realth Pepartment, The University Of Texas And Texas A. & M., June 12, 13, and 14. Headquarters -Austin Hotel MORNING SESSION - 9:00 A.M.-12:00 P.M. TUESTAY, JUNE 12, SUN ROOM Presiding . Pr. J. V. Irons, State Pepartment of Health, Austin Welcome - Tr. Geo W. Cox, State Health Officer, State Tepertment of Health. Mr. C. Read Granberry, Assistant to the Chancellor, University of Texas. Dean I. B. Bougtton, Veterinary Medical School, Toxas A. & M. Texas Morbidity Reports Tr. J. E Peavy, Epidemiology and Local Health Services, State Department of Health, Austin, Texas. Tac Pabies Problem in Texas. Dr. Kenneth S. Young, Public Health Veterinary Section, State Pepartment of Health, Austin, Texas. W.H.O. Rabies Control Program Pr. James H. Steele, Chief, Veterinary Public Health Services, Communicable Pisease Center, Atlanta, Georgia.



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Conference Format

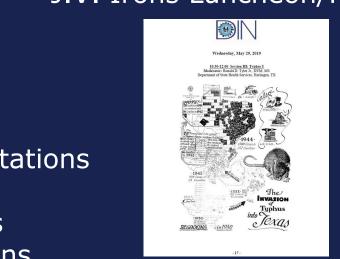


- One Health focus
- 2-1/2 day format
- Typical attendance 200-250
- J.V. Irons Luncheon/Reception

Health and Human Services **Texas Department of State Health Services**

• CE for 10 professions





Multi-Agency Curriculum Committee



Curriculum Committee	Affiliation
Thomas Leo Cropper, DVM, MPVM, DACVPM	Director, Trainee Health Surveillance Flight 559th Medical Group - Lackland AFB
Eric Fonken, DVM, MPAff	Texas Department of State Health Services
John Herbold, DVM, MPH, PhD DACVPM, DACAW, FACE, FNAP	University of Texas School of Public Health
Bonny Mayes, MA, RYT	Texas Department of State Health Services
Jeffery Musser, DVM, PhD, DABVP	Texas A&M University
Kristy Murray, DVM, PhD	Baylor College of Medicine, Texas Children's Hospital
Pamela Wilson, MEd, LVT, MCHES	Texas Department of State Health Services

DIN Conference Website





The James Steele Conference on

Diseases in Nature Transmissible to Man (DIN)

2019 Conference

Past Conferences

Conference History

J.V. Irons Keynote
Address

About Dr. James Steele

International
Conference on
Diseases in Nature
Communicable to
Man (INCDNCM)

Contact Us

DIN is a not-for-profit conference and serves as a forum for the presentation of epidemiological investigations, clinical case studies, basic and applied research, and other topics in emerging and current zoonotic and environmentally-acquired infectious diseases. The conference's goal is to increase knowledge and awareness of these diseases within the medical, public health, and academic research communities.

Participants include physicians, physician assistants, nurses, veterinarians, epidemiologists, virologists, microbiologists, parasitologists, entomologists, sanitarians, public health professionals, wildlife biologists, animal control officers, and others involved in the diagnosis, investigation, prevention, control, and research of zoonoses and environmentally-acquired infectious diseases.

DIN is co-sponsored by the Texas Department of State Health Services Zoonosis Control Branch and the Texas Health Institute. For more information about zoonoses in Texas, please visit the Zoonosis Control Branch's website at http://www.dshs.state.tx.us/idcu/health/zoonosis/. For more information about the Texas Health Institue, please visit http://www.texashealthinstitute.org/.

Dedicated to improving the public health through a better understanding of zoonoses and environmentally-acquired infectious diseases.

2020 Conference June 3-5, 2020







Texas Department of State Health Services



Animal Health Human Health One Health

The Life and Legacy of Dr. James H. Steele



By Craig Nash Carter

All sale proceeds benefit the American Veterinary Epidemiology Society

https://www.avesociety.org/



Thank you

Eric Fonken, DVM, MPAff Bonny C. Mayes, MA, RYT Texas Department of State Health Services

Discussion

- Do we want to make slides publicly available?
- May we release the speakers list? Including speaker contact info?
 - Should the speaker contact info be made available to webinar attendees?
- How do we want to continue building this One Health / Public Health community?
 - Partner with any existing organizations of public health workers?
- Would you be interested to learn how international governmental agency groups are implementing One Health?

Thank you for participating!

Be sure to tune in tomorrow!



Contact us

and each other!



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Cheryl Stroud:

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