Advancing the One Health Concept through Collaborations that Connect, Create, and Educate

Clinician Outreach and Communication Activity (COCA) Call
November 17, 2016
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**AAVSB/RACE:** This program was reviewed and approved by the AAVSB RACE program for 1.0 hours of continuing education in the jurisdictions which recognize AAVSB RACE approval. Please contact the AAVSB RACE Program at race@aavsb.org if you have any comments/concerns regarding this program’s validity or relevancy to the veterinary profession.

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To Ask a Question

- **Using the Webinar System**
  - “Click” the Q&A tab at the top left of the webinar tool bar
  - “Click” in the white space
  - “Type” your question
  - “Click” ask

- **On the Phone**
  - Press Star (*) 1 to enter the queue
  - State your name
  - Listen for the operator to call your name
  - State your organization and then ask your question
Objectives

At the conclusion of this session, the participant will be able to:

- Describe the many disciplines that are included in One Health
- Define the challenges to instituting a One Health approach
- Identify the major global One Health leader organizations and groups
- Discuss how the One Health Commission is working to connect stakeholders to create One Health Action Teams that educate about One Health and the issues surrounding it
TODAY'S PRESENTER

Cheryl Stroud, DVM, PhD
Executive Director
One Health Commission
The findings and conclusions in this presentation are those of the author(s) and do not necessarily represent the views of the Centers for Disease Control and Prevention.

Advancing the One Health Concept Through Collaborations that ‘Connect, Create and Educate’
• **What is One Health?**
• *Brief* Historic Overview
• Updates on One Health around the world
• Why it matters to clinicians
Collaborations

start with

Relationships!!

Which start when we come together in direct conversations
“A lot of people have this ego need that makes them want to believe that Earth is the centre of the universe and humans are the most important species, the supreme expression of creation.” - Ann Druyan
Planetary Health

http://magazine.good.is/slideshows/human-impact-environment#0
What is ONE HEALTH all about?

Not a new concept

.........however........

A New Professional Imperative!!
## Scope of One Health

- Human-animal bond
- Professional education and training
- Comparative Medicine - Translational Research
- Food and water Safety and Security
- Agricultural production / land use
- Natural resources and conservation of natural resources
- Disease surveillance, prevention and response, both infectious and chronic diseases
- Clinical medicine – need for interrelationship between the health professions
- Environmental contaminants
- Maintenance of biodiversity
- Disaster preparedness and response
- Public policy and regulation
- Global trade and commerce
- Antimicrobial Resistance
- Climate Change
One Health is a pathway to Planetary Health and Global Security
Food Safety and Security

Current World Population ~ 7.23 billion

It is now estimated that it will increase by another 50% to 9 billion by 2042.

http://www.worldometers.info/world-population/#pastfuture
Salmonellosis - Salmonella Likes Chickens!

Eight Multistate Outbreaks of Human *Salmonella* Infections Linked to Live Poultry in Backyard Flocks

Posted July 19, 2016 1:00PM ET

What's New?

- One more outbreak was identified, bringing the total to eight outbreaks under investigation.
- 287 more ill people have been reported.
- 10 more states have reported cases, bringing the total to 45 states with ill people.
- In the eight outbreaks, 611 people infected with the outbreak strains of *Salmonella* were reported from 45 states.

At A Glance

- Case Count: 611
- States: 45
- Deaths: 1
- Hospitalizations: 138

More Information
Figure 3. Incidence rate of laboratory-confirmed human *Salmonella* infection reported to CDC, by age group and sex, United States, 2012 (n=46,097 with age and sex information reported)
Human-Animal Bond

No Words Needed...
Nature Deficit Disorder: Ecotherapy for Depression?
The Link Between Violence to People and Violence to Animals

In recent years there has been renewed interest in an idea dating back centuries — that acts of cruelty against animals can be a sentinel indicator — and often a predictor — of other forms of family and community violence. Research has documented relationships between childhood histories of animal cruelty and patterns of chronic interpersonal
Abuse Reporting Requirements by State (2015)

In recent years, several states have focused their attention on animal abuse, neglect, and cruelty reporting by veterinarians, health care providers, and other social service providers. The clickable map below shows state laws and regulations that AVMA is aware of which require or encourage veterinarians and veterinary technicians to report animal abuse and cruelty. The map also includes states that provide civil or criminal immunity for good faith reporting of animal abuse. Keep in mind that veterinary professionals may report suspected abuse to authorities even in the absence of such a legal requirement.

http://www.avma.org
“The danger that the decline of bees and other pollinators represents to the world’s food supply was highlighted ..... when the European Commission decided to ban a class of pesticides suspected of playing a role in so-called “colony collapse disorder.”
Monarch Migration Plunges to Lowest Level in Decades

The number of monarch butterflies that completed an annual migration to their winter home in a Mexican forest sank this year to its lowest level in at least two decades, due mostly to extreme weather and changed farming practices in North America, the Mexican government and a conservation alliance reported on Wednesday. By MICHAEL WINES NY Times: March 13, 2013
The test will not only check for lead, but other metals including copper, mercury, zinc, iron and mercury. More than 170 dogs have been tested during the previous three events.

There have been five cases of dogs that tested positive for lead.

Endocrine Disruptors in our Environment: flame retardants

Hyperthyroid cats

Elevated PBDE Levels in Pet Cats: Sentinels for Humans?

JANICE A. DYE,* † MARTA VENIER, ‡ LINGYAN ZHU, ‡ III CYNDIA R. WARD, ‡ RONALD A. HITES, † AND LINDA S. BIRNBAUM †

U.S. Environmental Protection Agency, Office of Research and Development, National Health and Environmental Effects Research Laboratory, Experimental Toxicology Division, Research Triangle Park, North Carolina 27711, School of Public and Environmental Affairs, Indiana University, Bloomington, Indiana 47405, and College of Veterinary Medicine, University of Georgia, Athens, Georgia 30602

Endocrine Disruptors in our Environment: Flame Retardants
Contribution to Childhood obesity? – postulated

Serum PBDEs in a North Carolina Toddler Cohort: Associations with Handwipes, House Dust, and Socioeconomic Variables
Heather M. Stapleton,1 Sarah Eagle,1 Andreas Sjödin,2 and Thomas F. Webster3

1Nicholas School of the Environment, Duke University, Durham, North Carolina, USA; 2Centers for Disease Control and Prevention, National Center for Environmental Health, Division for Laboratory Sciences, Atlanta, Georgia, USA; 3Department of Environmental Health, Boston University School of Public Health, Boston, Massachusetts, USA

The New York Times

MARCH 8, 2014

The Fat Drug

By PAGAN KENNEDY

Credit Jing Wei
Man in America

Obesity: a major cause of death today

Could there be links in our environment??????
A vaccine developed in dogs is helping dogs with malignant melanoma and the findings have been applied to create a similar vaccine for humans!

glioblastoma multiforme, GMB ~ in humans and dogs
Researchers Turn to Canine Clinical Trials to Advance Cancer Therapies

Julie A. Jacob, MA


About 6 million dogs are diagnosed with cancer each year, and more than half of dogs older than 10 years will develop cancers such as osteosarcoma, lymphoma, or melanoma (http://1.usa.gov/10AxiB). But the heartbreaking diagnosis for dog owners is a treasure trove of potential data for oncology researchers. In clinical trials at academic research centers across the country, veterinarians and physicians are studying how pet dogs respond to cancer therapies and analyzing the genetic makeup of these tumors. Although medicine and veterinary medicine, for the most part, have been viewed as 2 different worlds, with little exchange of information between the two, that is beginning to change.
Scientists test nanoparticle drug delivery in dogs with osteosarcoma

Date: July 25, 2016
Source: University of Illinois at Urbana-Champaign
Summary: An engineer teamed up with a veterinarian to test a bone cancer drug delivery system in animals bigger than the standard animal model, the mouse. They chose dogs -- mammals closer in size and biology to humans -- with naturally occurring bone cancers, which also are a lot like human bone tumors.

At the University of Illinois, an engineer teamed up with a veterinarian to test a bone cancer drug delivery system in animals bigger than the standard animal model, the mouse. They chose dogs -- mammals closer in size and biology to humans -- with naturally occurring bone cancers, which also are a lot like human bone tumors.

In clinical trials, the dogs tolerated the highest planned doses of cancer-drug-laden nanoparticles with no signs of toxicity. As in mice, the particles homed in on tumor sites, thanks to a coating of the drug pamidronate, which preferentially binds to degraded sites in bone. The nanoparticles also showed anti-cancer activity in mice and dogs.

The researchers report their results in the Proceedings of the National Academy of Sciences.

These findings are a proof-of-concept that nanoparticles can be used to target bone cancers in large mammals, the researchers said. The approach may one day be used to treat metastatic skeletal cancers, they said.

The dogs were companion animals with bone cancer that were submitted for the research trials by their owners, said Li Lu of University of Illinois clinical medicine.

Related Stories

Drug Trials in Pet Dogs With Cancer May Speed Advances in Human Oncology
June 16, 2015 — Pet dogs may be humans' best friends in a new arena of life: cancer treatment, says a veterinary clinical medicine. Physiological similarities between dogs and humans, and conserved genetics ... read more »

Gene Signatures Predict Doxorubicin Response in Canine Osteosarcoma
Apr. 19, 2015 — A gene expression model that predicts canine osteosarcoma response to doxorubicin has been identified by researchers, potentially allowing veterinary oncologists to better choose which drug to use ... read more »

Variety of Genetic Risk Behind Bone Cancer in Dogs
Dec. 12, 2013 — Bone cancer in dogs is affected by a variety of genetic risk factors. Researchers have discussed these variabilities in a new study. The study
large dogs that typically live for eight to ten years; they would start giving the drug to animals aged six to nine. A pilot trial would involve about 30 dogs, half of which would receive the drug, and would allow the researchers to dose the dogs for a short time and observe effects on heart function and some other health measures. The trial could be completed in as little as three years, but researchers will know long before that — perhaps in months — whether rapamycin improves cardiac function or other aspects of health.

Rapamycin acts on a protein that is involved in cell growth, but little is known about how it extends life. It might retard the ageing process itself or it might prevent age-related diseases. One hypothesis is that it works primarily by preventing the development of cancers.

Pet dogs should provide a more realistic test than lab mice of how the drug would work in humans. Pets experience some of the same environmental influences and get some of the same age-related diseases as their masters, says Kaeberlein. (He plans to enrol his own German shepherd dog when it is old enough.)

Other researchers say that Kaeberlein and Promislow’s reasoning makes sense. “We’re talking about whether aged pets will benefit, and that’s a good model for a human population.”
The Role of Clinical Studies for Pets with Naturally Occurring Tumors in Translational Cancer Research: Workshop Summary

Released: October 30, 2015

Note: Workshop Summaries contain the opinion of the presenters, but do NOT reflect the conclusions of the Health and Medicine Division or the Academies. Learn more about the differences between Workshop Summaries and Consensus Reports.

Recently, there has been renewed interest in comparative oncology—the study of naturally developing cancers in animals as models for human disease—as one way to improve cancer drug development and reduce attrition of investigational agents. Tumors that spontaneously develop in pet dogs and other companion animals as a result of normal aging share many characteristics with human cancers, such as histological appearance, tumor genetics, biological behavior, molecular targets, and therapeutic response. They also exhibit acquired resistance, recurrence, and metastasis, similar to human cancers. The Comparative Oncology Trials Consortium was established to provide the infrastructure and resources needed to integrate clinical trials for pets with naturally occurring cancers into the development pathways for new drugs, devices, and imaging techniques for human cancers. However, the cancer research community has not reached agreement concerning the value of these clinical trial data for advancing human cancer research or on how best to integrate comparative oncology trials within the cancer research continuum. Thus, the Institute of Medicine’s National Cancer Policy Forum, with support from a coalition of sponsors, hosted a workshop held in Washington, DC, on June 8–9, 2016, to examine the rationale and potential for integrating clinical trials for pet patients with naturally occurring cancers into translational cancer research and development. The workshop also highlighted potential opportunities to overcome existing challenges to that integration.
Comparative Oncology Program

Comparative Oncology Trials Consortium

The Comparative Oncology Trials Consortium (COTC) is an active network of twenty academic comparative oncology centers, centrally managed by the NIH-NCI-Center for Cancer Research’s Comparative Oncology Program, that functions to design and execute clinical trials in dogs with cancer to assess novel therapies. The goal of this effort is to answer biological questions geared to inform the development path of these agents for future use in human cancer patients. Trials conducted by the COTC are pharmacokinetically and pharmacodynamically rich with the product of this work directly integrated into the design of current human Phase I and II clinical trials. Our trials are carried at COTC member institutions, which currently include 22 sites.

All veterinary universities that met the established criteria have been invited to join the Comparative Oncology Trial Consortium.

- Auburn University, Auburn, AL
- Colorado State University, Ft. Collins, CO
- Cornell University, Ithaca, NY
- Kansas State University, Manhattan, KS
- North Carolina State University, Raleigh, NC
- Oregon State University, Corvallis, OR
- Purdue University, West Lafayette, IN
- Texas A&M University, College Station, TX
- The Ohio State University, Columbus, OH
- Tufts University, North Grafton, MA
- University of California, Davis, CA
- University of Florida, Gainesville, FL
- University of Georgia, Athens, GA
- University of Guelph, Guelph, ON Canada
- University of Illinois, Urbana, IL
- University of Minnesota, St. Paul, MN
- University Of Missouri, Columbia, MO
- University Of Pennsylvania, Philadelphia, PA
- University Of Tennessee, Knoxville, TN
- University Of Wisconsin, Madison, WI
- Virginia-Maryland College of Veterinary Medicine, Blacksburg, VA
- Washington State University, Pullman, WA
Nakio becomes first dog to receive four prosthetic legs

By DogTime Staff

News outlets are calling Nakio “the bionic dog,” and the first known canine to have received four artificial legs. 

“Walt did the same as one of my human patients would have done post stroke and Walt walked around with four legs like a normal dog,” Kaufmann said. “And I thought, ‘Well shoot, that was pretty simple. I wonder if we can do other things the same that we do for our human patients as well?’”

Vector-borne Diseases

- Anaplasmosis
- Babesiosis
- Bartonellosis
- Borrelia (Lyme Disease)
- Leishmaniasis (cutaneous / visceral)
- Rocky Mountain Spotted Fever
- West Nile Virus
- Yellow Fever
- Zika Virus
- Ect...

Ecuador's Tungurahua volcano

Photograph by Guillermo Granja, Reuters
Two weeks after returning home: swollen painful joints, fever, skin lesions, discolored fingernails, shortness of breath

- Radiographs = lung lesions
- Granulamatous visceral lesions
Two yr - 76 specialists later – and 10 CT scans

Tentative Diagnoses:

- Hodgkin’s Lymphoma
- Non-Hodgkin’s Lymphoma
- Scabies, scleroderma
- Gastrointestinal stromal tumors (GIST)

- Scheduled for exploratory surgery for GIST, thought most likely to be sarcoma

- Blood sample to Dr. Ed Breitschwerdt Vector Borne Disease lab at the at the NCSU Vet School.......found
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Bartonella vinsonii
After surgery - the surgeon reported to father - found no evidence of malignancy.

Father answered, “I never thought she had a malignancy…(I believe) she has Bartonellosis’.

Surgeon replied: “I’m a surgeon.. I don’t know what bartonellosis is.”

Need for a way to exchange information across professions!!

Veterinary Medicine, Mind over Miller, July 2011

http://veterinarymedicine.dvm360.com/vetmed/Medicine/Are-we-too-specialized-Part-1-Human-medicine/ArticleStandard/Article/detail/731458
Powassan virus neuroinvasive disease cases reported by state, 2004–2013

Source: ArboNET, Arboviral Diseases Branch, Centers for Disease Control and Prevention

Data table: From 2004 through 2013, Powassan virus neuroinvasive disease cases have been reported in Maine (2), Massachusetts (1), Minnesota (20), New Hampshire (1), New Jersey (1), New York (17), Pennsylvania (1), Virginia (1) and Wisconsin (13).
Antibiotic resistance is the quintessential One Health issue

Key words: Antibiotics • Antimicrobial resistance (AMR) • Environment • Health • Livestock • One Health

The scale of antimicrobial resistance

In May this year, the long-awaited final report from the Review on Antimicrobial Resistance was published. The report estimates that the 700,000 annual deaths currently attributable to infections by drug-resistant pathogens will increase, if unchecked, to 10 million by 2050, running up a bill of US$100 trillion in terms of lost global production between now and then. The reported numbers are somewhat...
Antibiotic Resistance and the Soil Microbiome

Plant-Microbe Interactions

www.the-scientist.com
One Health and Disaster Preparedness

http://www.emdat.be/  hosted by USAID
Lessons from Katrina

- A game changer in disaster response
- Don’t show up without pet carriers!
Chapter 3.4

NOAH’S BURDEN: A PROLEGOMENON TO THE ETHICS OF VETERINARY DISASTER RESPONSE

Bernard E. Rollin, PhD

1. The most fundamental question pertaining to veterinarian involvement in disaster relief is a jarring, politically incorrect one—why spend (waste?) resources on animals when the same money could be spent to benefit humans?
All professions are needed to make One Health the default way of doing business at all levels of research, clinical practice, governments and policy.

- Agriculturalists
- Animal Health Practitioners
- Anthropologists
- Climatologists
- Engineers
- Entomologists
- Geologists
- Ecologists
- Human Health Practitioners
- Horticulturalists
- Plant Pathologists
- Social Scientists
- Wildlife Specialists
- Forestry Specialists
What are the challenges for developing One Health collaborations?

- Academic Tenure process
- Government Agency silos
- Industry Proprietary knowledge
- Environmental Resources
  - Harvest Systems
- Destructive Agricultural Technology
- Publication systems – no access
- Language barriers across professions

** No voice or forum in which to communicate across disciplines and professions**
One Health Wake Up Call!

We need a way to communicate and learn ACROSS disciplines
Wildlife Conservation Society holds One Health Symposia in Bangkok, China, Brazil and Brazil respectively

2007: The AMA and AVMA partner in a One Health Initiative Task Force between human and veterinary medicine

One Health Initiative will unite human and veterinary medicine

The One Health Initiative is a movement to forge co-equal, all inclusive collaborations between physicians, osteopathic physicians, veterinarians, dentists, nurses and other scientific-health and environmentally related disciplines, including the American Medical Association, American Veterinary Medical Association, American Academy of Pediatrics, American Nurses Association, American Association of Public Health Physicians, the American Society of Tropical Medicine and Hygiene, the Centers for Disease Control and Prevention (CDC), the United States Department of Agriculture (USDA), and the U.S. National Environmental Health Association (NEHA). Additionally, more than 800 prominent scientists, physicians and veterinarians worldwide have endorsed the initiative.

Please see MONOGRAPH in Veterinaria Italiana
"One Health - One Medicine": linking human, animal and environmental health

:: view large map ::

:: click here ::

HISTORY of the One Health Initiative team
2009

- The One Health Office is established at CDC
- USAID established the Emerging Pandemic Threats program
- One World, One Health Expert Consultation in Winnipeg, Manitoba
- U.S. One Health Commission is chartered as a 501c3 non-profit
EXECUTIVE SUMMARY OF THE ONE HEALTH COMMISSION SUMMIT

On Tuesday, November 17, 2009, the One Health Commission in partnership with the National Academies co-hosted a groundbreaking summit convening leading health science experts and policy makers across the human, animal, and ecosystem disciplines. The One Health Commission Summit raised awareness of the importance of transcending institutional and disciplinary boundaries to improve the health of people, animals, and the environment.

Speakers called for integrated solutions and collaborative leadership to address the significant challenges of a changing environment.

A series of keynote addresses was delivered by senior officials at the U.S. Department of Agriculture, College of Veterinary Medicine at The Ohio State University, Centers for Disease Control and Prevention, Food and Drug Administration, and Minnesota Department of Natural Resources. These speakers called for integrated solutions and collaborative leadership to address the significant challenges of a changing environment populated by interconnected animal, human and ecosystem interactions.

“As we combat global pandemics, such as H1N1 influenza, it is imperative that health science professions, academia, government agencies, and non-governmental organizations act in unison across the human, animal and ecosystem sciences,” said Doug O’Brien, Senior Advisor to the Secretary of the U.S. Department of Agriculture.

Following the keynote addresses, a panel of experts began a dialogue on the One Health approach and answered questions from audience members.

The One Health Commission Summit set the stage for the work of the One Health Commission, which was created to establish closer professional collaborations and educational opportunities across the health science professions and their related disciplines.
2010 – OH Tripartite Note

One Health

One Health “at a glance”

Cost effectiveness and strategic planning (WHO-CHOICE)

The OneHealth Tool is a software tool designed to inform national strategic health planning in low- and middle-income countries.

While many costing tools take a narrow disease-specific approach, the OneHealth Tool attempts to link strategic objectives and targets of disease control and prevention programmes to the required investments in health systems. The tool
2011

- The 1st International One Health Congress is held in Melbourne, Australia
- The 1st One Health Conference in Africa is sponsored by OHCEA
- Tripartite organized a High Level Technical Meeting in Mexico City

2012

- USDA One Health Office is established

2013

The 2nd International One Health Congress is held in conjunction with the Prince Mahidol Award Conference, Bangkok, Thailand
2014
- International One Health Research Symposium held in China

- International Conference on One Medicine, One Science (ICOMOS) held in at University of Minnesota

2015
- 3rd International One Health Congress, Amsterdam, Netherlands

- World Medical Association / World Veterinary Association Joint One Health Meeting, Madrid, Spain
2016

http://oheh2016.org/

http://www.cvent.com/events/2nd-global-conference-on-one-health/
Welcome to the One Health Platform web portal, the virtual meeting place for the fast growing One Health community.
What Can We Do?
JOIN the GLOBAL OH COMMUNITY LISTSERV

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

Click here to join our global listserv

OHC LISTSERV Sign-up

For Email Marketing you can trust.

6000 + names
Welcome to the Webinar:

Understanding Bartonella: A One Health Perspective

The broadcast will begin momentarily

The One Health Commission is proud to support and share announcement of webinar:

“Antimicrobial Resistance in the Environment” by Dr. Laura Kahn

Webinar Date/Time:
July 13, 2016 @ 11am-12pm EDT

Overview:

This presentation will discuss findings of widespread antibiotic resistance in the environment. Massive amounts of human and animal waste applied to agricultural fields alter the global “resistome.” Wildlife never exposed to antibiotics harbor antibiotic resistant bacteria in their feces. The Human Microbiome project has found that microbial cells outnumber human cells by an estimated 10-fold, fundamentally changing our perceptions about health and disease. Taken together, the findings of antibiotic resistance in external and internal environments suggest that human antibiotic use has altered global microbial populations in ways that we do not fully understand. We are fast approaching a post antibiotic era. This presents challenges and opportunities and will require a One Health approach to succeed.
Summary of First Students for One Health (SOH) online Meeting (March 30, 2015)

Students for One Health
First Web Conference
March 30, 2015 4 pm EST
Hosted by the One Health Commission

Student Organizer:
Sarina Selisk (Cambridge School of Theology)
Lauren DeBrey (NC State)

One Health Commission
World Health Through Collaboration

Opportunities * Education * Grants * Jobs * Mentor

Opportunities:
One Health Graduate Educational Programs
One Health Undergraduate Courses / Programs
Additional Educational Opportunities
Employment Opportunities
Grants / Funding Opportunities
Internships / Externships
Postdoctoral/Postdoc
Mentor Match Program

Please note that the start date is the when the One Health Commission was made aware of this opportunity. The end date is typically the date when applications are due or when the position is open.

Choose the CATEGORY and YEAR from the menu below and CLICK "VIEW" to narrow your search.

One Health Undergraduate Courses / Programs

May 9 - Aug 5
Texas A&M One Health Summer Research Program
Location: College Station, Texas, USA
Time: 04/09/15 - 08/05/15 (Submit the online applications by 5:00 PM CST, Friday, February 5, 2015.)

Aug 26 - Aug 28
One Health Leadership Experience
Location: University of Saskatchewan, Saskatoon, Sask, Canada
Bat Rabies Education

Rabies is a deadly yet preventable disease that can be transmitted to people by mammals, including bats. It is a quintessential One Health issue living at the interface of human, animal, and environmental domains.

The One Health Commission is pleased to identify gaps in One Health arenas and to support volunteer One Health Action Teams to address the needs. When it was recognized that there is no focused public health effort in the Americas to educate children and parents that bats can carry deadly rabies virus, the Bat Rabies Education One Health Action Team was born.

This dedicated Team is actively working to get educational posters, developed in partnership with the Global Alliance for Rabies Control and Bat Conservation International, in front of children and parents across the United States and, eventually, into Central and South America. The Commission is proud to also offer on its website educational resources about bats and rabies.

Not all bats have rabies but most human cases of rabies in the United States are caused by bats. Our goal is to make everyone, especially children and parents, aware of the risk of rabies transmission from bats. For more information please contact a member of the Bat Rabies Education Team or send us email at batrabies@onehealthcommission.org.

Key Messages

- Never touch a bat - bats can have rabies
- You can't tell if a bat has rabies just by looking at it
- If bitten, wash the wound and see a doctor
- If you come into contact with a bat, tell an adult or health professional
- Keep pets rabies vaccines up to date to protect both people and pets

Unusual Bat Behavior

- Daytime activity
- Inability to fly
- Flopping on ground
- Unusual sounds

Rabid Bat Behavior

- Fluttering on the ground
- No fear of people
- Hissing
- Expanding wings

Posters

Never Touch a Bat - CHILDREN (English) (Español) (Português)
February 12, 2015

The President
The White House
1600 Pennsylvania Avenue, NW
Washington, DC 20500

Dear Mr. President:

As you address current and future zoonotic diseases—human diseases with animal origins—we write to urge you to pursue a multidisciplinary, multisectoral approach that encompasses both human health expertise, and animal and environmental health disciplines.

As you know, the Ebola virus disease outbreak that continues to devastate West Africa was caused by transmission of the virus from an animal into the human population. According to the Centers for Disease Control and Prevention (CDC), such zoonotic diseases account for approximately 75% of all recently emerging infectious diseases. The concept that the health of humans is connected to the health of animals and the environment, is often referred to as the One Health approach which often includes physicians, veterinarians as well as ecologists to monitor and control public health threats. Although One Health is widely recognized to be integral to efforts to combat zoonotic disease, the collaborative effort of multiple disciplines required to address such disease outbreaks that occur at the human-animal interface has yet to materialize in a substantive way.

Sincerely,

Al Franken
United States Senator

Christopher A. Coons
United States Senator

Kirsten Gillibrand
United States Senator

Mark R. Warner
United States Senator

Dianne Feinstein
United States Senator

Michael Bennet
United States Senator
Date: June 30, 2015

The President
The White House
1600 Pennsylvania Avenue NW
Washington, DC 20500, USA

Dear Mr President:

On behalf of the community of One Health advocates and stakeholders, the One Health Commission, a 501(c)3 non-profit organization, and the signatories below, writes to urge creation of One Health platforms in both the United States (U.S) and the United Nations (U.N).

As the seven U.S. senators (February 12, 2015 letter to you), the American Veterinary Medical Association (AVMA, letter of March 12, 2015) and the American Public Health Association (APHA, letter of May 21, 2015) have noted, the One Health Commission is acutely aware of the consequences of operating in separate health professional “silos”. Within the past century many of those working within our human and animal health systems have evolved from generalist ‘healers’ to highly trained specialists within discrete areas of medical practice. While specialization has resulted in targeted research and applications that have significantly advanced our medical knowledge and health, that advancement has come at the expense of the entire medical system. Without a more

S. 2634

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

IN THE SENATE OF THE UNITED STATES
MARCH 3, 2016

Mr. FRANKEN introduced the following bill; which was read twice and referred to the Committee on Health, Education, Labor, and Pensions

A BILL

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

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the “One Health Act of 2016”.

SEC. 2. INTERAGENCY ONE HEALTH PROGRAM.

(a) IN GENERAL.—The President, acting through the National Science and Technology Council, shall coordinate and support a national, interagency One Health Program to address infectious diseases in animals and the environment, and to help prevent the transmission of known and emerging infectious diseases between animal populations and human populations.
June 9, 2016  For Immediate Release

Preparing society to create the world we need through ‘One Health’ education!

Two leading international One Health groups, the One Health Commission and the One Health Initiative Autonomous pro bono Team are partnering to help create and promote a comprehensive global education revolution that supports curriculum innovation on the unifying interconnected health of humans, animals, and the environment that sustains all life on earth. A Concept paper titled ‘Preparing society to create the world we need through ‘One Health’ education’ has been released calling for interested parties to step forward to help with planning. The One Health concept encompasses a wide range of global public health and comparative medicine endeavors.

Dr. George Lucasko, one of the “One Health” educational project leaders and author of a new One Health oriented book on global population health and well-being, said that, “In keeping with the UN 2030 global Agenda for Sustainability, there is an urgent need for collective action by policy-makers, public/private educators, and health professionals to provide global ONE HEALTH learning opportunities across the education spectrum.”

We must give younger generations in both low and high income nations “a better deal” for helping to shape a sustainable world, one that is being tested severely by a threatened environment, conflicts, inequities, poverty, ideological extremes, and consumerism. Time is running short. As one example, data from the Living Planet Index (2014) should “make us stop and think”: “in less than two human generations, population sizes of vertebrate species have dropped by half. These are the living forms that constitute the fabric of the ecosystems which sustain life on earth and the barometer of what we are doing to our planet, our only home.”
Smithsonian Institute Exhibit – Zoonoses and One Health – coming in 2018
On September 25th 2015, countries adopted a set of goals to **end poverty**, **protect the planet**, and **ensure prosperity for all** as part of a new sustainable development agenda. Each goal has specific targets to be achieved over the next 15 years.

For the goals to be reached, everyone needs to do their part: governments, the private sector, civil society and people like you.
Collaborations don’t just magically happen....
They start with **relationships**......
And
Relationships don’t just magically develop, they start when we have opportunities to

come together in direct conversations
One Health is a pathway to Planetary Health and Global Security
Hope you will help us advance the One Health Concept Through Collaborations that ‘Connect, Create, and Educate’.
To Ask a Question

- **Using the Webinar System**
  - “Click” the Q&A tab at the top left of the webinar tool bar
  - “Click” in the white space
  - “Type” your question
  - “Click” ask

- **On the Phone**
  - Press Star (*) 1 to enter the queue
  - State your name
  - Listen for the operator to call your name
  - State your organization and then ask your question
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Continuing education certificates can be printed immediately upon completion of your online evaluation. A cumulative transcript of all CDC/ATSDR CE’s obtained through the CDC Training & Continuing Education Online System will be maintained for each user.
Today's webinar will be archived

When: A few days after the live call

What: All call recordings (audio, webinar, and transcript)

Where: On the COCA Call webpage

http://emergency.cdc.gov/coca/calls/2016/callinfo_111716.asp
Upcoming COCA Call

Assessment & Evidence-based Treatments for Opioid Use Disorder
- Date: Tuesday, November 29, 2016
- Time: 2:00-3:00 pm (Eastern Time)

Free Continuing Education. Registration Not Required

http://emergency.cdc.gov/coca
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