



One Health: Improving Animal, Human and Environmental Health

October 11, 2022
USAHA One Health Committee



Cheryl Stroud, DVM, PhD
Executive Director



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<https://www.onehealthcommission.org/en/sponsorship/>



Strategic Priorities

- Connecting One Health Stakeholders – we can accomplish more *together!*
 - Educating about One Health and One Health Issues
 - Nurturing the Next Generation of One Health leaders




- The full scope of One Health (arenas in need)
- How our health and wellness is connected to the health and wellness of animals, ecosystems and our environment?
 - How do we recognize, respect and protect the world around us, understand how it affects us and how we affect it?
- How do we make that understanding the default way of doing business in all programs and policies?

No one profession can know everything!

Collaborations
start with
Relationships!!

*Which start when we
come together in direct conversations*



<http://magazine.good.is/slideshows/human-impact-environment#0>

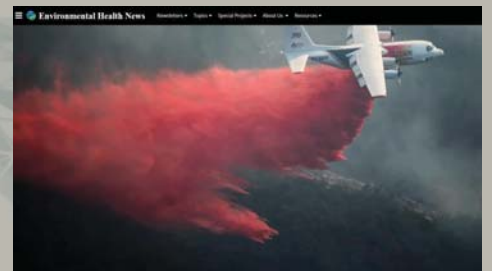


'Circle of Life' image credit Elaine Maier, StavePuzzles.com with human figure overlays

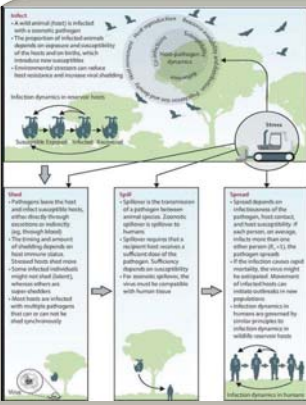
Aerial Fire Retardants: - Fish kills, aquatic life impacts, and algae blooms

The primary aerial retardant used in western wildfires is called Phos-Chek. It contains about 80% water and 10% ammonium phosphate fertilizer solution that sticks to plants and inhibits combustion. Proprietary ingredients, such as thickening and coloring agents and corrosion inhibitors, make up the remainder of the formula.

Laboratory studies show that current formulations of Phos-Chek are potentially deadly to rainbow trout. When retardant hits the water, a highly-concentrated ammonia plume develops that can quickly kill fish.



<https://www.ehn.org/fire-retardant-spray-wildfire-wildlife-2655069755/collateral-contamination-from-wildfire-retardants>



Human, Animal, Environment Triumvirate

Land use-induced spillover: a call to action to safeguard environmental, animal, and human health

Plowright RK, Reaser JK, Locke H, Woodley SJ, Patz JA, Becker DJ, Oppler G, Hudson PJ, Tabor G, *The Lancet Planetary Health*, 2021, published online March 5, 2021

https://www.sciencedirect.com/science/article/pii/S2542519621000310?fbclid=IwAR2APlyIMyMFDzgomxEx8hqF6eG-bPQnE4EwXvDeST-HAHnZpUz_ru1OH4

Many faces (arenas in need) of One Health

- Animals as Sentinels
- Antimicrobial Resistance
- Bio-Diversity /Conservation Medicine
- Climate Change
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- Disaster Preparedness / Relief
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- Zoonotic Diseases

Zoonotic Diseases



Why do we need One Health?


'Because' Our *Systems have forced us into silos*

- Academic Tenure process
- Government Agency silos
- Industry Proprietary knowledge
- Publication systems – no access (See 'Open Science can Save the Planet' <https://goo.gl/8yIVQp>)
- Language barriers across professions (unfamiliar acronyms)





Animals as Sentinels



Elevated PBDE Levels in Pet Cats: Sentinels for Humans?

Environ. Sci. Technol. 2007, 41, 6350–6356

JANICE A. DYE,^{1,2} MARTA VENIER,¹ LINGYAN ZHU,^{1,2} CYNTHIA R. WARD,³ RONALD A. HITES,¹ AND LINDA S. BIRNBAUM¹

Environ Health Perspect. 2012; 120(7):1049-54. Research | Children's Health and


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, Atlanta, Georgia, USA; ³Environ Res, 2016 Nov; 151:145-153. doi: 10.1016/j.envres.2016.07.027. Epub 2016 Jul 29.

U.S. domestic cats as sentinels for perfluoroalkyl substances: Possible linkages with housing, obesity, and disease.

Bost PC¹, Shinar M², Reiner JL³, Zweidenbaum JA⁴, Secoura PL⁵, Lindstrom AG⁶, Die JA⁶.



Hyperthyroid cats


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Humans?? as Sentinels

The 1999 West Nile Story in the US
Tracey McNamara: [\(Human\) Canaries in the Coal Mine](#)



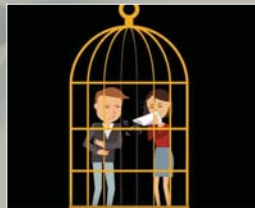
Our current funding structures are the 'opposite' of One Health. They virtually guarantee that we will not find an emerging zoonotic threat until we have people in emergency rooms or bodies in the morgue.



June 21, 2018 <https://www.youtube.com/watch?v=qm8NnL582uc&t=61s>

Humans?? as Sentinels

Why we need species neutral, rapid disease detection (biosurveillance) of companion animals (pets) and wildlife



<https://www.nytimes.com/2017/01/12/myregion/sick-cats-virus-quarantine-center-aspca.html>

Animals as Sentinels



Are we paying attention???

Or will we let humans be the Sentinels??

Do we have 'systems' in place for sharing of data across the sectors?

Cenozo. Immunol Microbiol Infect Dis. 2012 Mar;35(2):163-7. doi: 10.1016/j.cimid.2011.12.009. Epub 2012 Jan 16.

Estimating Lyme disease risk using pet dogs as sentinels.

Smith ED¹, Ballantyne R, Morgan EB, Wall B.



Stark Reminders - why we urgently Need to implement One Health

"The threats we face today have changed and evolved..... but our systems have not. We are left with a species gap. CDC focuses on human diseases; it does not do surveillance for animal diseases."

"What if?"

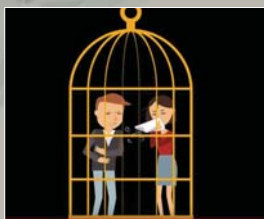
What if that flu in cats in a shelter in New York in 2017 had turned out to be like the 1918 flu pandemic? like the coronavirus we are facing today? It can happen again so easily.

We are missing what is right in front of our noses.....
.....All the animals in our environment.

In the US right now with no bio-surveillance of non-agricultural animals.....

We are using taxpayers as 'sentinels'.

<https://www.youtube.com/watch?v=qm8NnL582uc&t=61s>



Many faces (arenas in need) of One Health

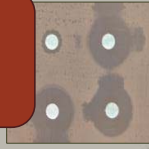
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Laura Kahn, MD, MPH, MPP

What about AMR in companion animals?? And in the Environment?

We share our microbiomes with those we live with, including our pets..... but pets are not under any surveillance systems.



Human Impact: Antibiotic Resistance and the Environment:



Advances in Antibiotics & Antibodies

Zhang et al., Adv Antibiotics Antibodies 2015, 1:1
http://dx.doi.org/10.4172/2155-1008101

Editorial

Open Access

Application of Antibiotics for Control of Citrus Huanglongbing

Mingyong Zhang^{1*}, Chuanyu Yang² and Charles A Powell²

¹State Key Lab of Conservation and Utilization of Biological Agro-biological Resources, Guangxi University, Nanning, 530004, China
²University of Florida, Fort Pierce, FL 34945, USA

Crop Use of Antibiotics

Virginia Stockwell
USDA Agricultural Research Service
Horticultural Crops Research Unit
Corvallis, Oregon

Three antibiotics are permitted by the U.S. Environmental Protection Agency for use in plant agriculture

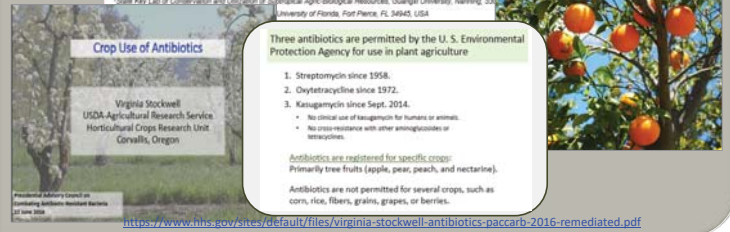
1. Streptomycin since 1958.
2. Oxytetracycline since 1972.
3. Kanamycin since Sept. 2014.

- No clinical use of kanamycin for humans or animals.
- No cross-resistance with other aminoglycosides or tetracyclines.

Antibiotics are registered for specific crops:

Primarily tree fruits (apple, pear, peach, and nectarine).

Antibiotics are not permitted for several crops, such as corn, rice, fibers, grains, grapes, or berries.



Human Impact: Shared Environment and Microbiome Ocean Microbiome

AEM
Lombard, IL, USA

The Ocean as a Global Reservoir of Antibiotic Resistance Genes

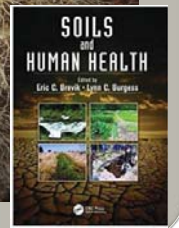
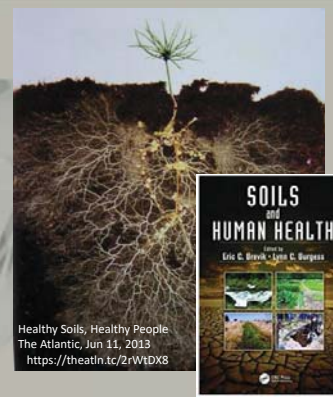
Stephan H. Hartog^{1*}, Adam C. Martiny^{2*}
Department of Ecology and Evolutionary Biology, University of California, Irvine, California, USA; Department of Earth System Science, University of California, Irvine, California, USA

Citation: Hartog SH, Martiny AC (2015) The ocean as a global reservoir of antibiotic resistance genes. Appl Environ Microbiol 81:7593–7599. doi:10.1128/AEM.00736.15

Healthy Soil Microbes, Healthy Plants, Healthy Animals, Healthy People



The microbial community in the ground is as important as the one in our guts.



Healthy Soils, Healthy People
The Atlantic, Jun 11, 2013
<https://theatlantic.com/2rWtDX8>

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Declining Pollinator Populations - A Threat to Global Agriculture

Bees and the crops they pollinate are at risk from climate change, IPCC report to warn



<http://www.telegraph.co.uk>
Photo: PA, March 29, 2014

Monarch Butterflies Struggling for Survival due to:
Climate Change
Loss of Habitat
Insecticides in the environment



ANTIBIOTICS AND THE BEEKEEPER

March 2, 2011 - Andrew F. Scahill - Science



Before the advent of the Varroa mite (Varroa destructor), the biggest challenge to honey bee health was American foulbrood (AFB), caused by the rod-shaped spore-forming bacterium *Pseudomonas aeruginosa* (now *Pseudomonas*), which is the most widespread and destructive of the brood diseases, according to Wikipedia.com. "A year or so three days old become infected by ingesting spores present in their food. Young larvae less than 24 hours old are most susceptible to infection. Spores germinate in the gut of the larva and the vegetative bacteria begin to grow, taking nourishment from the larva. Spores will not germinate in larvae over three days old. Infected larvae normally die after their cell is sealed. The vegetative form of the bacterium will die, but not before it produces many millions of spores. American foulbrood spores are extremely resistant to desiccation and can remain viable for more than 40 years in honey and beekeeping equipment. Each dead larva may contain as many as 100 million spores."

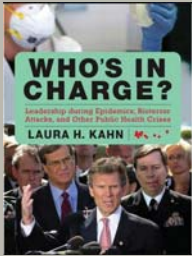


Disaster Preparedness / Relief / Response



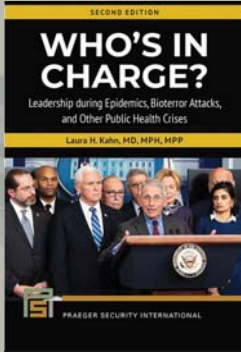
1999 Hurricane Floyd





2009

<https://www.amazon.com/Whos-Charge-Leadership-Epidemics-International/dp/0275994856>



2020

https://www.amazon.com/Leadership-Epidemics-Bioterror-Security-International-ebook-dp-80876F2FFZ/dp/B0876F2FFZ/ref=dp_ob_image_bk

During an emergency or Health Crisis is a really bad time for government (local, state, national) leaders and health officials to be exchanging Business cards.

Relationships and operating procedures need to be in place 'ahead' of a crisis!!!!

Food and Water Safety and Security



CSIS CENTER FOR STRATEGIC & INTERNATIONAL STUDIES
INVITATION
The Smart Women, Smart Power Initiative cordially invites you to
Food Insecurity as a Security Challenge

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Salmonella

Food Safety

Outbreaks of *Salmonella* Infections Linked to Backyard Poultry

Investigation Notice

Published September 25, 2020 at 2:00 PM EDT

CDC is alerting public health officials to the risk of salmonellosis by highlighting the importance of addressing backyard poultry. Backyard poultry, such as chickens and ducks, are a common source of salmonella infections. Backyard poultry can be a source of salmonella infections. Backyard poultry can be a source of salmonella infections. Backyard poultry can be a source of salmonella infections.

CDC estimates *Salmonella* bacteria cause about 1.35 million infections, 26,500 hospitalizations, and 420 deaths in the United States every year. Food is the source for most of these illnesses.

<https://www.cdc.gov/salmonella/>

- An estimated 600 million – almost 1 in 10 people in the world – fall ill after eating contaminated food and 420 000 die every year.
- US \$110 billion is lost each year in productivity and medical expenses resulting from unsafe food in low- and middle-income countries.

<https://www.who.int/news-room/fact-sheets/detail/food-safety>



Image by klinkin from Pixabay

Campylobacter

How does food and water get contaminated with *Campylobacter*?

Campylobacter can contaminate food and water in several ways.

Many chickens, turkeys, cows, and other animals that show no signs of illness carry *Campylobacter*. *Campylobacter* can be carried in the intestines, feces, and other organs of animals and can be transferred to other animals when an animal is slaughtered. In 2015, National Antimicrobial Resistance Monitoring System (NARMS) testing found *Campylobacter* on 34% of raw chicken brought from retailers.

Milk can become contaminated when a cow has a *Campylobacter* infection in her udder or when milk is contaminated with manure. *Campylobacter* makes milk safe to drink.

Fruits and vegetables can be contaminated through contact with soil or water containing feces (poop) from cows, birds, or other animals. Animal feces can contaminate lakes and streams. Washing or scrubbing fruits and vegetables and disinfecting untreated drinking water helps prevent illness.

<https://www.cdc.gov/campylobacter/faq.html#whats>

Food and Water Safety and Security



Jun 05, 2019

Environmental Health News

Our food system's reckoning with nature is coming

Agriculture expert explores how today's relationship to food banishes nature and the environment to the periphery of how we live, instead of at the center.

Kevin Walker

<https://www.ehn.org/our-food-systems-reckoning-with-nature-is-coming-2638684015.html>

Water-borne Zoonotic Diseases



Cryptosporidium oocysts
Oregon State Public Health Laboratories

Cryptosporidiosis

Protozoans: genus *Cryptosporidium*.
This hopefully would be quickly identified today by pediatricians??

- Can be deadly in AIDS patients
- Major outbreaks often result from waterborne transmission
- Oocysts highly infectious and resistant to harsh conditions / cleaners (chlorine)
- Human-human, animal-human, fecal-oral, and waterborne transmission
- Cyclical life cycle!!!!

Value of One Health: Saving Lives

Water Safety

True One Health Stories

1986

20 mo. old male, severe, chronic, watery diarrhea

Lasted over 6 weeks

Contagious: Mom got it, Dad got it, quite debilitating

Pediatrician treated symptomatically

Baby: dehydrated, losing weight

Both parents were DVMs.... Took soiled diaper to Vet School parasitologist



Many faces (arenas in need) of One Health

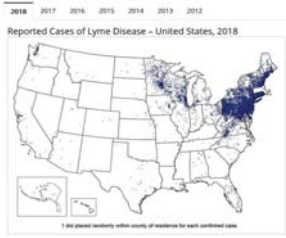
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Animals as Sentinels

Lyme Borreliosis – Humans - 2018



Lyme Disease Maps: Historical Data



<https://www.cdc.gov/lyme/stats/maps.html>

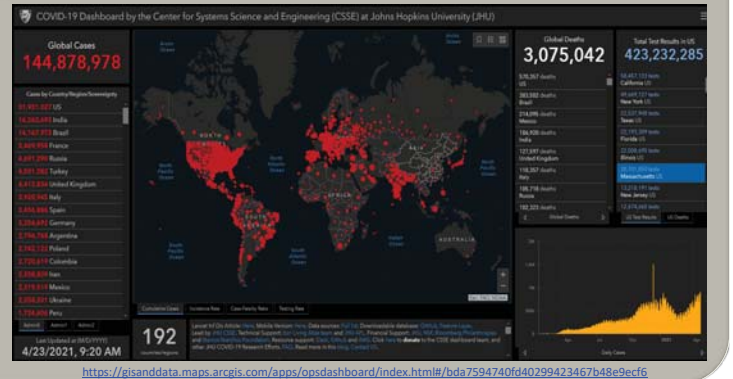


Lyme Borreliosis – Dogs - 2018



<https://capcvet.org/maps/#2020/all/lyme-disease/dog/united-states/>

COVID-19 Global Cases by Johns Hopkins April 23, 2021



<https://gisanddata.maps.arcgis.com/apps/opsdashboard/index.html#/bda7594740fd40299423467b48e9ecf6>

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One Health Commission
Published by Cheryl M Stroud · November 4 at 3:48 PM · 🌐

Widespread Coronavirus Infection Found in Iowa Deer, New Study Says
Researchers and outside experts characterized the study's findings as a troubling development in the course of the pandemic. Widespread infection among North America's most ubiquitous game species could make eradicating the pathogen even more difficult, especially if they became a reservoir for mutations that eventually spilled back over to humans.

Call for strong, consistent wildlife bio-surveillance program in the US
https://www.nytimes.com/_/story/2020/11/04/deer-covid-infection.html

NYTIMES.COM
Widespread Coronavirus Infection Found in Iowa Deer, New Study Says
<https://tinyurl.com/mvcnawzh>

Goats and Soda · NEWS OR OPINION BY A NON-POLITICAL EDITOR · NPR.org

How SARS-CoV-2 in American deer could alter the course of the global pandemic
November 01, 2020 · 10:49 AM PT

<https://tinyurl.com/ce3di8p4>

Nature is NOT the Enemy !

We have seen the enemy.....and it us.

- Viruses just hitch a ride on the conditions that we humans create
- Antimicrobial resistant bacteria are just evolving as they have for eons

We humans are the culprits...

S2, Ep. 5: The Wildlife Origins of SARS-COV2 and Employing a One Health Approach



Interview with Dr. Steve Osofsky <https://tinyurl.com/y92g9npx>

Times Evoke: Preventing the next pandemic — We can make this a 'never again' moment

TMN | Updated: Apr 3, 2020, 09:35 IST

Mouth and Nose Cover

Protect Your Health From Contaminated Farms, Weatherable and Reusable with Fast Free Shipping



Steve Osofsky is a wildlife veterinarian and Jay Hyman Professor of Wildlife Health and Health Policy at Cornell University's College of Veterinary Medicine. He led the drafting of *The Manhattan Principles on One World, One Health* in 2004. He is also a Cornell Atkinson Center for Sustainability Faculty Fellow. Writing for Times Evoke, Osofsky discusses how to

The Times of India

<https://tinyurl.com/y92g9npx>



The World Bank has worked for over a decade to promote and operationalize One Health approaches supported by country partners, technical institutions, international organizations, and donors. The World Bank's knowledge base on One Health includes:

People, Pathogens, and Our Planet;

Investing in Climate Change and Health series;

the One Health Operational Framework; from panic and neglect to investing in health security; Financing pandemic preparedness at a national level;

One Health at the World Bank: Safeguarding Animal, Human and Ecosystem Health

<https://bit.ly/51Hup7>

<https://www.worldbank.org/en/topic/agriculture/brief/safeguarding-animal-human-and-ecosystem-health-one-health-at-the-world-bank>

JOURNAL OF AGRICULTURE
2021, VOL. 28, NO. 1, 2-12
https://doi.org/10.1080/10801080.2021.1981038



Animal Agriculture and the One Health Approach

David I. Dougherty, PhD, MPT, MBA, CPE, CSP

ldough@ucla.edu

According to the Centers for Disease Control and Prevention, One Health is the integrative effort of multiple disciplines to attain optimal health for people, animals, and the environment.¹ The One Health concept recognizes that human health is connected to the health of both animals and the environment. Within the One Health framework, livestock operation productivity and efficiency involve a total of interactions between the animal, equipment and environment, and workers.

A One Health approach has been recommended to facilitate communication and collaboration across research disciplines in responding to challenges in human, animal, and environmental health. While One Health may have generated a great deal of research interest in the infectious disease disciplines, the One Health model has yet to fully embrace the research silos and barriers which can prevent cross-discipline collaboration.² To date, research emphasis has been placed on the animal health or production practices, with very little research attention placed on the worker and farmer associations with the animal or environment. A thematic session was dedicated to the One Health approach at annual agriculture at the 2019 Western Regional Agricultural Safety and Health Conference in Seattle, WA. In this session, presenters addressed how worker health and safety research is implemented within a One Health framework across different animal production practices.

<https://www.tandfonline.com/doi/epub/10.1080/10801080.2021.1849136?needAccess=true>

Recording: <https://dechs.washington.edu/pnash/node/644>

OXFORD
UNIVERSITY PRESS

Clinical Infectious Diseases



To Succeed, One Health Must Win Animal Agriculture's Stronger Collaboration

Gregory C Gray, Jonna A K Mazet

Clinical Infectious Diseases, Volume 70, Issue 3, 1 February 2020, Pages 535-537, <https://doi.org/10.1093/cid/ciz729>

Published: 06 September 2019 Article history

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Abstract

The One Health approach has received widespread international endorsements from professional, academic, and governmental organizations as the way forward in tackling complex interdisciplinary problems, such as emerging zoonotic diseases, antimicrobial resistance, and food safety. Yet conspicuously absent from US One Health training or research activities are the animal agricultural industries. Their absence is likely due to multiple factors, including the lack of appreciation for their potential problem-solving roles, as well as the industries' business-oriented fears that such engagement could cause them to suffer economic damage. As demands on the swine, poultry, egg, beef, and dairy production industries are closely linked to the above-mentioned complex problems, we must find new, nonthreatening ways to better engage and win animal agriculture's collaboration into One Health training and research

<https://academic.oup.com/cid/article/70/3/535/5564334?guestAccessKey=ba013ff2-617d-4cf6-ac73-5f7c56d242f0&login=false>

Animal agricultural industries are conspicuously absent from US One Health training or research activities.

Their absence is likely due to multiple factors including:

- The lack of appreciation for their potential problem-solving roles
- the industries' business-oriented fears that such engagement could cause them to suffer economic damage.

We must find new, nonthreatening ways to better engage and win animal agriculture's collaboration into One Health training and research partnerships for successful health problem solving. Without animal agricultural industries' improved cooperation, One Health's efforts to control these complex problems are not likely to succeed.



Formerly led by the One Health Platform



30 OCT - 3 NOV



SEE YOU IN SINGAPORE!
#WOHC2022

2011, 2013, 2015, 2016, 2018, 2020, 2022 <https://worldonehealthcongress.org/>

RESEARCH ARTICLE <https://pubmed.ncbi.nlm.nih.gov/29176851/>

Economics of One Health: Costs and benefits of integrated West Nile virus surveillance in Emilia-Romagna

Giulia Paternoster, Sara Ballo Martini, Andrea Mattioli, Roberto Caporali, Paola Angelini, Romeo Bellini, Annalisa Sarti, Giorgio Galati, Simona Popella, Giuseppe Marano, Francesco Copello, Jonathan Reardon, Katharina D. C. Stark, Marco Tamba

Published: November 27, 2017 • <https://doi.org/10.1371/journal.pone.0188158>



Trans R Soc Trop Med Hyg 2017; 111: 225-237
doi:10.1093/trstmh/trx039

One Health Economics to confront disease threats

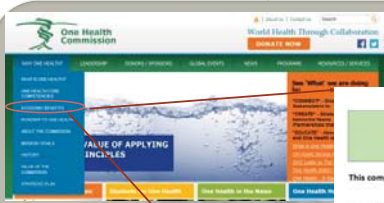
Catherine Machobane, Kristine M. Smith, Lisa Awafulo, Kevin Berry, Frank Bertha, Timothy A. Bouley

Abstract: Infectious disease and economics: The case for considering multi-sectoral impacts

Kristine M. Smith, Catherine C. Machobane, Richard Seltman, Yanke Federhake, William B. Kozak

Prevent, Prepare and Respond:
Economics of One Health to Confront Disease Threats
30 January - 2 February 2017
Workshop Report

Economic Benefits of One Health

This compilation of publications focuses on the Economic Benefits of using a One Health approach.

If you are aware of additional publications on the Economics of One Health that need to be included here please notify info@onehealthcommission.org

2019
Infectious disease and economics: The case for considering multi-sectoral impacts.
Smith KM, Machobane CC, Seltman R, Federhake Y, Kozak WB. One Health, Vol 7, June 2019
<https://doi.org/10.1016/j.oneh.2018.10.006>

Societal cost of zoonoses: One Health economics
Article from free online course 'One Health: Connecting Humans, Animals and the Environment'
Accessed 2-4-19. <https://www.futurelearn.com/courses/one-health/0/lessons/221486>

2018
Economics of bovine tuberculosis: a one health issue.
Azzam AH, Drouot J. Chapter 3 (Page no. 12) in Bovine Tuberculosis
Editors: Chambers M, Gordon S, Oka Popelka F, Barrow P, 2018. ISBN9781788931320, DOI: [10.1002/9781788931320.ch003](https://doi.org/10.1002/9781788931320.ch003)
<https://www.sagepub.com/healthcare/book/9781788931320>

Value of Applying One Health Principles
\$\$\$\$\$\$\$\$\$\$



ANNUAL one health DAY november 3

Preventing zoonoses, zoonotic and vector-borne diseases, antimicrobial resistance, and environmental health

check www.onehealthday.org for more info

➤ **Connecting One Health Stakeholders**

WHO'S WHO in One Health

ESTABLISHING CLOSER COLLABORATION AMONG ALL HEALTH-RELATED STAKEHOLDERS

Organizational Why's Why
 One of the most common reasons for wanting to connect One Health stakeholders is building a complete and coordinated One Health approach for the One Health goals. Another reason for your work is to build a strong

IMPROVING THE HEALTH OF PEOPLE, ANIMALS, PLANTS AND OUR ENVIRONMENT

Support The Commission | Collaborate For One Health | Share Results in Real Time

Academic Institutions working for One Health
 Government Agencies Implementing One Health
 Non-Profit Orgs/Coalitions working for One Health
 Private / For Profit Corporations embracing One Health

https://www.onehealthcommission.org/en/resources_services/whos_who_in_one_health/

2006

One Health Academy
Washington, D.C.
Monthly Discussion Series

<http://www.onehealthacademy.org/>

Online Webinar Support provided by
 One Health Commission
<https://www.onehealthcommission.org/>

➤ **Connecting One Health Stakeholders in the US**

United States

Group
 Academic
 Government
 Non-Profit
 Private-For Profit, Corporate

One Health Strategic Action Plans

<https://tinypic.com/OHC-OH-StratAct>

Recently Launched!!

<https://tinypic.com/OHC-OH-AMR>

OH Antimicrobial Resistance Strategic Action Plans

Global One Health AMR Strategic Plans

Recently Launched!! One Health Tools & Toolkits webpages

https://www.onehealthcommission.org/en/resources_services/one_health_tools_toolkits/

2017 The InterAction Council Dublin One Health Charter

The **InterAction Council** - 40 former world leaders - meet annually to mobilize their energy, experience and international contacts to develop recommendations and foster co-operation and positive actions around the world.

1. Strengthening multi-sector solutions for the SDGs – the One Health approach has the potential to act as a unifying theme;
2. Resilience to emerging threats -including AMR, disease outbreaks, climate change and environmental impacts;
3. Mainstreaming One Health within public health systems for UHC -including environmental health;
4. Strengthen One Health Governance mechanisms for systems reform;
5. Building leadership for One Health for future generations;
6. Establish an independent accountability mechanism for advancing action on One Health.

May 2017 - 34th Annual Meeting, Dublin, Ireland, the council endorsed the 'Dublin Charter for One Health'

<https://www.interactioncouncil.org/publications/dublin-charter-one-health>

2004 Twelve Manhattan Principals

"In September 2004 a group of strategic thinkers met in New York City and formulated **12 Manhattan Principles** that called for the international community to adopt a holistic approach to combat 'threats to the health of life on earth' under the banner 'One World, One Health'." Carol Rubin

Health experts from around the world met for a symposium focused on the current and potential movements of diseases among human, domestic animal, and wildlife populations organized by the Wildlife Conservation Society and hosted by The Rockefeller University. Representatives from the World Health Organization; the UN Food and Agriculture Organization; the Centers for Disease Control and Prevention; the United States Geological Survey National Wildlife Health Center; the United States Department of Agriculture; the Canadian Cooperative Wildlife Health Centre; the Laboratoire Nationale de Sante Publique of Brazzaville, Republic of Congo; the IUCN Commission on Environmental Law; and the Wildlife Conservation Society were among the many participants.

<http://oneworldonehealth.org/>

2010 One Health Tripartite Concept Note
<https://tinyurl.com/ta44harm>

Animal Production and Health

ONE HEALTHY

FAO in One Health: working proactively instead of reactively

The current approaches to animal disease prevention and control emphasize transmission disruption. What critically important, the current approaches do not address the root causes of disease.

Joint Call for Experts - One Health High-Level Expert Panel (OHHLEP)

Cost effectiveness and st

OneHealth Tool

FAO/WHO Collaboration (Tripartite)

One Health Tripartite-Plus > Quadripartite

2020 [One Health High Level Expert Panel \(OHHLEP\)](#)

- **November 12, 2020** - Launched at the Paris Peace Forum by the French and German Foreign Ministers and the leadership of the World Health Organization (WHO), the World Organization for Animal Health (OIE), the United Nations Food and Agriculture Organization (FAO) and the United Nations Environment Programme (UNEP) <https://www.youtube.com/watch?v=lyC0rF0vmWc>
- **26 independent experts** selected as advisors to the Quadrapartite to represent the different disciplines
- Met in **May, July, September and December, 2021**
- **December 2021** – Released [new operational definition for One Health](#)
- **March 2022**
 - Released OHHLEP [2021 Annual Report](#)
 - Outlined creation of a [Quadrapartite Joint One Health Plan of Action](#)

2021 [Berlin One Health Principles](#)

Highlights

- The Berlin Principles update the Manhattan Principles from 2004, which first coined the term One Health for a broader public.
- The Berlin Principles reconnect the health of humans, animals, and ecosystems in an economic and socio-political context.
- Global environmental changes and the COVID-19 pandemic starkly remind the world of these foundational interconnections.
- An urgent One Health call-to-action for cooperative, multilateral, and democratic engagement at all levels of society.

Science of the Total Environment 764 (2021) 42819

Contents lists available at ScienceDirect

Science of the Total Environment

journal homepage: www.elsevier.com/locate/scitotenv

The Berlin principles on one health – Bridging global health and conservation

Kim Gruetzmacher¹, William B. Karch^{1,2}, John H. Amusa³, Adnan Arshad⁴, Andrew Farlow⁴, Sabine Gabrysch⁵, Jens Jetrkowitz¹, Susan Lieberman¹, Clare Palmer¹, Andrea S. Winkler^{6,7}, Chris Walzer^{8,9,10}

<https://www.sciencedirect.com/science/article/pii/S09266410210048969720364494>

What is One Health?

(March 2022)

One Health is an integrated, unifying approach that aims to sustainably balance and optimize the health of people, animals and ecosystems. It recognizes the health of humans, domestic and wild animals, plants, and the wider environment (including ecosystems) are closely linked and inter-dependent.

One Health mobilizes multiple sectors, disciplines and communities at varying levels of society to work together to foster well-being and tackle threats to health and ecosystems, while addressing the collective need for clean water, energy and air, safe and nutritious food, taking action on climate change, and contributing to sustainable development.



Recent (2022) Updated Definition Created by the One Health High Level Expert Panel (OHHLEP) with support of FAO, OIE, WHO and UNEP (now referred to as the *One Health Quadrapartite*) <https://tinyurl.com/yvub8m6t>



AFWA's new One Health Resolution just passed

PLUS - Upcoming AFWA White Paper:

"The Association of Fish and Wildlife Agencies and the One Health Approach: Providing the Foundation for a Leadership Role"

AFWA will be evaluating next steps in keeping with the tone and content of the resolution and the paper!

State Fish & Wildlife Agency Directors Pass Four Resolutions at AFWA's 2022 Annual Meeting

The voting membership of the Association of Fish & Wildlife Agencies passed seven resolutions during its business meeting held on September 21, 2022.

RESOLUTION 2022-02-04

SUPPORTING STATE, PROVINCIAL, TERRITORIAL AND ASSOCIATION LEADERSHIP FOR A "ONE HEALTH" APPROACH TO THE WELL-BEING OF PEOPLE AND WILDLIFE

WHEREAS, people, wildlife, and their shared ecosystems face a multitude of cross-cutting and urgent challenges including novel zoonotic pathogens, habitat loss, and climate change; and

WHEREAS, recognition of the need for a unified approach by fish and wildlife conservation, public health, and environmental protection professionals has sparked a movement toward interdisciplinary collaboration to meet these challenges and promote the central role of nature in securing the physical, mental, and social well-being of individuals and communities; and

WHEREAS, this collaborative approach is carried out with varying emphases by individual sectors and stakeholders at the local, regional, national, and global levels but is commonly known as One Health; and

WHEREAS, an essential goal of One Health is the achievement of optimal health outcomes among people, wildlife, commercial animals, and plants, and success will be fostered by the active cultivation of closer professional interaction and collaboration between disciplines and governmental, non-governmental, and commercial sectors; and

WHEREAS, One Health is crucial to building capacity for surveillance of novel and re-emerging pathogens, when over 60 percent of known infectious diseases in people can be spread by animals and up to 75 percent of new or emerging pathogens come from animals; and

WHEREAS, the Association of Fish and Wildlife Agencies (Association) has previously recognized the essential role and capacity of state, federal, tribal, provincial, territorial, and regional fish and wildlife agencies in carrying out fish and wildlife disease surveillance; and

WHEREAS, principles of One Health include equity between sectors and disciplines, inclusion and empowerment of under-served communities, sustainably fulfilling human needs including food, water, shelter, and energy while safeguarding biological diversity and advancing animal health, and substantiating plans and policies with modern and traditional forms

<https://www.fishwildlife.org/landing/blog/state-fish-wildlife-agency-directors-pass-four-resolutions-afwas-2022-annual-meeting>

Anney One Health Principles for Sustainable Integrated Disease Surveillance and Control

Watch for Workshop Summary and Outcomes



GIZ - German Corporation for International Cooperation

2021

One Health in German development cooperation

Project description
 Title: One Health sector project
 Commissioned by: German Federal Ministry for Economic Cooperation and Development (BMZ)
 Country: Germany
 Lead executing agency: Federal Ministry for Economic Cooperation and Development
 Overall term: 2021 to 2024

<https://www.giz.de/en/worldwide/106315.html>

January 11, 2021
4th edition of the One Planet Summit for Biodiversity

This 4th edition of the OPS brings together the preservation of the climate and ecosystems, two inseparable dimensions of the environmental challenge.

[The summit](#)



January 11, 2021

Launch of **PREZODE (Preventing Zoonotic Disease Emergence)** at the **One Planet Summit for BioDiversity 2021**

Three French research institutes - INRAE, CIRAD and IRD – teamed up with the French Ministry of Higher Education, Research and Innovation and the Ministry of Europe and Foreign Affairs and around ten other research bodies in France, Germany and the Netherlands to launch PREZODE at the One Planet Summit for biodiversity. PREZODE is designed to incorporate and reinforce networks in human health, animal welfare and the environment, in line with the One Health concept

<https://www.inrae.fr/en/news/one-planet-summit-launch-prezode-first-ever-international-initiative-prevent-future-pandemics>

2021

RSC SRC

ABOUT US FIND EXPERTISE SUPPORT THE RSC RESOURCE

NEWS EVENTS PUBLICATIONS MEMBERS AWARDS

The Working Group on One Health

The Working Group is preparing a Policy Briefing for release in early 2022.

<https://rsc-src.ca/en/themes/one-health>

<https://rsc-src.ca/en/covid-19-policy-briefing/strengthening-one-health-approach-to-emerging-zoonoses>

2022

Strengthening A One Health Approach to Emerging Zoonoses
 June 2022

All RSC Policy Briefing


2019

UiO University of Oslo, Norway
Faculty of Medicine
Institute of Health and Society



Menu
Research Centres Global Health Global Health in Action

The Lancet One Health Commission

Lancet One Health Commission
Commissioners and Secretariat




One Health
THE LANCET COMMISSION

Co-Chairs of The Lancet One Health Commission
Dr. John Schmidt MD, and Prof. Andrea S. Bredal MD

<https://www.med.uio.no/helsam/english/research/centres/global-health/global-health-in-action/lancet-commission-one-health/>





Launch of Balkan One Health Network

Launch of Côte d'Ivoire National One Health platform



Launch of One Health and Implementation Research Journal

Launch of New Global One Health Environment Learning Modules



New online game, *Plague Inc: The Cure* - Experts and Gamers join forces to fight COVID-19 via



FAO, OIE, UNEP and WHO form One Health High-Level Expert Panel (OHHLEP) of 26

March 23, 2021 2021-2025 Vietnam One Health Partnership for Zoonotic Diseases Signing Ceremony

2019

Webinar Quién es Quién (Who's Who) en One Health Latinoamérica y El Caribe (OHLA)



<https://tinyurl.com/v4cbkn5a>

July 15, 2019

[Webinar Summary](#)

[Presentation Slides](#)

2017




Visit ISOHA's website: <https://isohaonehealth.wordpress.com/> Contact ISOHA: isohaexco@gmail.com

Students for One Health Facebook Page

Students for One Health Twitter

Students for One Health Listserv Sign-up

<https://tinyurl.com/rtkh7gq>

2021

February 17, 2021
WHO Director-General announces that leaders will discuss One Health at upcoming G7 and G10 meetings
 Tedros Adhanom Ghebreyesus underscored an emerging scientific consensus around a One Health holistic approach to pandemic prevention that involves more than just human health. "For many people, One Health may have once seemed simply a concept. It is no longer. ... We cannot protect human health without considering the impact of human activities that disrupt ecosystems, encroach on habitats, and further drive climate change," he told a meeting of health officials this month.
<https://tinyurl.com/44e6yve>



Group of Ten Members

Seismic Shift by G7 in Recognizing One Health as Critical to Everyone's Health
 June 13, 2021
 By Richard Griffin, UNA-NCA Board of Directors, & Bruce Kuylen



The G7-nations (blue) and the European Union (teal)

<https://tinyurl.com/fs8dmm4w>



<https://tinyurl.com/4vb5yv7>

One Health Partners COVID-19 Webinar

Coordinated by the CDC One Health Office, in partnership with the One Health Federal Interagency COVID-19 Coordination (OH-FICC) Group

OneHealth@cdc.gov

March 29, 2022




[cdc.gov/coronavirus](https://www.cdc.gov/coronavirus)



2003 - Federal Interagency One Health Working Group

- Started informally during the first US Monkey Pox outbreak
- 2004 Informally worked together across Agencies on Strategy for Highly Pathogenic Avian Influenza
- 2014 became more formal with Global Health Security Agenda Joint Evaluation Process for the U.S.
- Solidified when Secretary of Agriculture Tom Vilsac declared a USDA One Health Joint Working Group – was led by Dr. Joe Anelli until his retirement 2017



Is now overseen by the CDC One Health Office that was formed in 2008 by Dr. Carol Rubin and is now Headed by Dr. Casey Barton-Behravesh.

The group is now referred to as

The One Health Federal Interagency Network (OHFIN) >> OH-FICC

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

October 23 and 24, 2019
 Hosted by the One Health Commission and the International Student One Health Alliance

<https://tinyurl.com/yxmj4uzw>



Alaska
 Arizona
 Connecticut
 Kentucky
 Idaho
 LA Co., California
 Maryland
 Massachusetts
 Minnesota
 New Mexico
 North Carolina
 Pennsylvania
 Tennessee
 Harris Co., Texas

<https://tinyurl.com/yxmj4uzw>

APHA
AMERICAN PUBLIC HEALTH ASSOCIATION
For science. For action. For health.

AVMA
AMERICAN VETERINARY MEDICAL ASSOCIATION

One Health

IN THIS ARTICLE

- Learn about the concept of One Health and the connections among animal, human, and environmental health.
- Discover how the AVMA supports One Health.
- Find out why veterinarians play integral roles in the One Health mission.

OUTBREAK
Epidemics in a Connected World
Open May 18, 2018 - 2021, Second Floor

Smithsonian

ONE WORLD ONE HEALTH

<https://naturalhistory.si.edu/exhibits/outbreak/digital-exhibit>

https://naturalhistory.si.edu/visit/virtual-tour/current-exhibits#section_outbreak

One Health education resources listed by MPH core competency.

In addition to the documents linked below, the resources are listed on our webpage here: [Organized Resources](#)

Biostatistics	Environmental Health Sciences	Epidemiology
Health Policy & Management	Social and Behavioral Sciences	Communication & Informatics
Diversity & Culture	Leadership & Professionalism	Public Health Biology
Program Planning	Systems Thinking	Additional Resources

https://www.onehealthcommission.org/en/resources_services/resources_for_public_health_educators/

Council on Education for Public Health's (CEPH's) 2016 accreditation criteria: Foundational learning objective #12

"Explain an ecological perspective on the connections among human health, animal health and ecosystem health (eg, One Health)."

2015

United States Senate
Washington, DC 20510

February 12, 2015

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

Dear Mr. President:

As you address current and future risks to our nation's health, we urge you to promote a multi-sector health response, and ensure that the health risks are addressed by the Centers for Disease Control and Prevention (CDC) and other federal agencies.

As you know, the health risks are caused by transmission of the virus between humans and approximately 70% of all newly human infections are caused by the health risks. We urge you to ensure that the health risks are addressed by the health risks and control public health issues, if efforts to control zoonotic disease, address such disease outbreaks in a substantive way.

Sincerely,

Al Franken
Al Franken
United States Senator

Christie A. Coons
Christie A. Coons
United States Senator

Kirsten Gillibrand
Kirsten Gillibrand
United States Senator

Mark R. Warner
Mark R. Warner
United States Senator

Michael Bennet
Michael Bennet
United States Senator

Michael E. Lee
Michael E. Lee
United States Senator

Michael F. Lee
Michael F. Lee
United States Senator

One Health Commission

Date: June 30, 2015

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

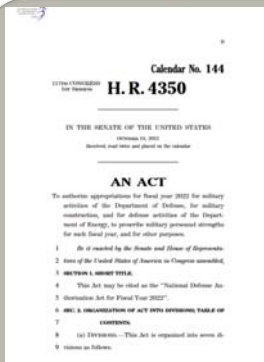
Dear Mr. President:

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, request your creation of One Health platforms in both the United States (U.S.) and the United Kingdom (U.K.).

As the across U.S. senator (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 actively areas of the consequences of operating in separate health professional "silos". Within the past century many of these working within one domain and mutual health systems have evolved from generalist, broader 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

<http://bit.ly/2Hc4jx8>

https://www.onehealthcommission.org/documents/news/FINAL_7115_OHC_Letter_to_White_House_EAF0A2C42C844.pdf



National Defense Authorization Act for 2022

Passed in House of Representatives September 23, 2021

- Sec. 6491. Interagency One Health Program.
- p 2554 Sec 6102 International Cooperation
 - o It is the sense of Congress that global institutions, FAO, OIE, WHO, together with leading nongovernmental organizations, veterinary colleges, and USAID, should promote the paradigm of One Health - the integration of human health, animal health, agriculture, ecosystems and the environment as an effective and integrated way to address the complexity of emerging disease threats.
- p 3026 - 3029 Sec 6491 Interagency One Health Program - Secretaries for HHS, Ag, Interior, with USAID, EPA, DHS, DoD, Dept Commerce and other departments and agencies as appropriate, shall develop, publish and submit to Congress a national One Health Framework for coordinated Federal Activities under the One Health Program
 - o National OH Framework - seems to be a repeat of what was called for last December in the Omnibus Bill? just calling for a report of where we are in the US with OH and asking CDC and USDA to propose a Framework / how it could work???

p 3242 - 3249 p 3249 Zoonotic Disease Task Force P 3059 - 3063

<https://www.congress.gov/bills/117/congress/117th-congress/house-bill/4350/text>

November 2017
One Health Month

November 2019
One Health Month

Jan 2021
One Health Awareness Month

ISOHA has created an instructional document on how to pursue legislative or executive branch advocacy for One Health initiatives. While focused on government advocacy in the United States, this document may also be helpful for those planning One Health advocacy in any country. <http://bit.ly/2B3Lx6k>

KIRSTEN GILLIBRAND
UNITED STATES SENATOR FOR NEW YORK

Coming Soon – Senator Gillibrand, D-NY to introduce the One Health Security Act

The One Health Security Act will create a:

1 Title: To prevent and respond to global pandemic threats by establishing the One Health Security Council.

2

3

4

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

6

7 SECTION 1. SHORT TITLE.

8 This Act may be cited as the “One Health Security Act”.

9

10 SEC. 2. PURPOSE AND SCOPE.

11 (a) Finding.—Congress finds that—

12 (1) the interconnectedness of human, animal, and environmental health systems poses risks to public health, safety, and security; and

13 (2) the interconnectedness of human, animal, and environmental health systems poses risks to the health, safety, and security of the United States.

14 (b) It is the sense of Congress that—

15 (1) the interconnectedness of human, animal, and environmental health systems poses risks to the health, safety, and security of the United States; and

16 (2) the interconnectedness of human, animal, and environmental health systems poses risks to the health, safety, and security of the United States.

17 (A) animal food supplies;

18 (B) contribution to natural habitat loss, biodiversity loss, and exploitation of wildlife, which has led to the movement of wild animals to closer proximity to domesticated animals and people;

19 (C) increased urbanization and population density in certain regions; and

20 (D) led to the increased movement of humans, animals, plants, and products made

21

22

DRAFT

One Health Security Council: A Deputy National Security Advisor for One Health would lead a One Health Security Council within the Executive Office of the President to guide implementation of the new strategy, use of dedicated funding and strengthening an early warning networks.

One Health Security Strategy: The One Health Security Council would develop a strategy that would advise the President with respect to the integration of domestic, foreign, and military policies relating to One Health Security to enable federal agencies to cooperate more effectively.

One Health Security & Pandemic Preparedness Network: The network would support global efforts to develop a prevention, early detection and warning system for zoonotic and vector-borne disease.

One Health Security Funding: The One Health Security Council would allocate new funding for activities that would be critical to improving our biodefense and ability to defend against natural, human-generated and accidental biological events.

June 2021

New Jersey first state in U.S. to legislate a One Health task force to fight disease transmission from animals to people - How it got started

Last month, New Jersey became the first state in the U.S. to legislate a “One Health Task Force,” which promotes communication between state agencies and scientists who study human health, animal health and the earth sciences. The state law is based on the Rutgers One Health Steering Committee, which was started in 2016 by Gloria Bachmann, director of Women’s Health Institute at the Rutgers Robert Wood Johnson Medical School, Amy Papi, a volunteer at the Women’s Health Institute and Sona Jasani, an instructor at the Medical School. <https://tinyurl.com/428k9pfx>

<https://www.rutgers.edu/news/rutgers-inspires-establishment-new-jersey-one-health-task-force>



A screenshot of the One Health Commission website. The main heading is 'World Health Through Collaboration' with a 'DONATE NOW' button. Below this, a large banner reads 'IMPROVING THE HEALTH OF PEOPLE, ANIMALS, PLANTS AND OUR ENVIRONMENT'. A sidebar on the right lists 'What we are doing for' with bullet points: 'CONNECT - One Health Stakeholders to Collaborate - Strategic partnerships/teams/partnerships that will', 'EDUCATE - About One Health and One Health Issues', and 'COVID-19 and One Health'. At the bottom, there are four categories: 'Support The Commission', 'Advocates for One Health', 'One Health in the News', and 'One Health Hot Topics'.

Strategic Priorities

- Connecting One Health Stakeholders – we can accomplish more *together!*
- Educating about One Health and One Health Issues
- Nurturing the Next Generation of One Health leaders

A banner for the 'One Health-Social Sciences Initiative' with the subtitle 'Engaging Social Scientists in the One Health Concept'. It features images of a person in a surgical cap, a chick, and a colorful bird. A circular graphic contains the words 'people', 'human', 'social', 'health', 'research', 'Health'. Below the banner is a flyer for a 'One Health-Social Sciences Initiative Webinar Series' held on January 15, 2019, featuring speakers: Laura Streichert, MPH, PhD; Helena Chapman, MD, PhD; Bernardo Moreno, MD; Veronica Ormea, DVM, MSc; and Severine Thys, PhD. The flyer also lists the organizers: Brigitte Begout, PhD and Helen Amagiri, DVM, MS, PhD. A URL <http://bit.ly/2GxZnqQ> and email ohss@onehealthcommission.org are provided.

➤ **Educating** about One Health and One Health Issues



One Health Education - US
OHE-US@onehealthcommission.org
<https://tinyurl.com/OHC-OHEducatus>

ONE HEALTH EDUCATION
 UNITED STATES

ONE HEALTH EDUCATION DEVELOPS STUDENTS WHO INHERENTLY UNDERSTAND THE CONNECTIONS OF HUMAN, ANIMAL, AND ECOSYSTEM HEALTH WHICH HELPS KEEP STUDENTS HEALTHY, THINK CRITICALLY, AND PREPARES THEM TO BE FUTURE LEADERS AND RESPONSIBLE CITIZENS IN OUR COMPLEX AND EVER-CHANGING WORLD.

Contact Us: OHE-US@OneHealthCommission.org

OHC BRET - Bat Rabies Education Team

Our Mission is to raise awareness about bat rabies in the Americas by promoting health education in a multi-strategic One Health approach.

<https://tinyurl.com/OHC-BatRabies>

Dr. Gregory D. Bossart Memorial One Health Scholarship



Dr. Gregory D. Bossart Memorial One Health Scholarship
 Funded by Georgia Aquarium, Administered by the One Health Commission
 Launched September 17, 2021

A \$5,000 USD Dr. Greg Bossart Memorial Scholarship is available to a graduate student in wildlife biology, epidemiology, veterinary, medical, public health, basic or social sciences or other post-graduate program focusing on the interconnection between people, animals, plants, and their shared environment using a One Health Framework. The next cycle of applications will be announced Spring 2022.

Greg Bossart, VMD, PhD, was a highly respected veterinarian, pathologist, and conservationist committed to advancing the understanding of marine mammals as sentinels of ocean and human health. With a career spanning 30 years and over 200 publications, Dr. Bossart identified reemerging and emerging diseases in dolphins, manatees, birds, and whales. His research and innovative techniques helped characterize the first viral disease in manatees and he was responsible for developing the first immunohistochemical technique for diagnosing brevetoxicosis (red tide poisoning) in both marine mammals and birds.

Dr. Bossart was a dedicated proponent of the One Health concept and approach which was a prominent theme in his long-running Atlantic bottlenose dolphin health and Environmental Risk Assessment (HEA) project. Started in 2005, HEA was designed to monitor how dolphin health in coastal habitats is impacted by environmental stressors and how those stressors potentially also impact human health. His contributions to the study of marine mammal health are far-reaching, and through this scholarship, Georgia Aquarium is committed to honoring Dr. Bossart's One Health legacy.

November 30, 2021 Announcement
 The Inaugural \$5,000 USD Bossart Scholarship Award goes to:

Taylor Weary

for her One Health Project titled

'Healthy Children, Healthy Chimps: Reducing respiratory disease transmission from humans to chimpanzees in Uganda'



https://www.onehealthcommission.org/en/programs/one_health_scholarships/

Bat Rabies Education



OHC BRET - Bat Rabies Education Team
 Our Mission is to raise awareness about bat rabies in the Americas by promoting health education in a multi-strategic One Health approach.

Rabies is a deadly, yet preventable, viral disease that can be transmitted to people by infected mammals, including bats. Bats are an integral part of our ecosystem, serving important roles like pollination, seed dispersal, and eating disease-causing mosquitoes and crop-damaging insects. Many people may be unaware of the health risk that bats can pose to people and pets through the potential for rabies virus. Not all bats have rabies, but bats are responsible for most human cases of rabies in the Americas.

NEVER TOUCH A BAT
 NEVER FEED A BAT
 NEVER TOUCH A BAT
 NEVER FEED A BAT

Bats can have rabies. Rabies is a deadly disease that can be transmitted to people by infected mammals, including bats. Bats are responsible for most human cases of rabies in the Americas.

NEVER TOUCH A BAT
 NEVER FEED A BAT
 NEVER TOUCH A BAT
 NEVER FEED A BAT

NEVER TOUCH A BAT
 NEVER FEED A BAT
 NEVER TOUCH A BAT
 NEVER FEED A BAT

NEVER TOUCH A BAT
 NEVER FEED A BAT
 NEVER TOUCH A BAT
 NEVER FEED A BAT

One Health Commission
 World Health Through Collaboration
 DONATE NOW

WHY ONE HEALTH? LEADERSHIP DONORS / SPONSORS GLOBAL EVENTS NEWS PROGRAMS RESOURCE / SERVICES

One Health Vector-borne Diseases Education Initiative

ONE HEALTH VECTOR BORNE DISEASE EDUCATION
 ONE HEALTH COMMISSION

A working group is being formed. Watch this space...

https://www.onehealthcommission.org/en/programs/one_health_vbd_education_initiative/

January is One Health Awareness Month

H. RES. 794
Supporting the designation of January 2020 as "National One Health Awareness Month" to promote awareness of organizations focused on public health, animal health, and environmental health collaboration throughout the United States and to encourage the national recognition of those organizations.

SOCIAL MEDIA CHALLENGE TOPIC CALENDAR

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31					

Following and Hashtags

https://www.onehealthcommission.org/en/events_since_2001/one_health_awareness_month/

COVID-19 Global Cases by Johns Hopkins August 4, 2022



<https://gisanddata.maps.arcgis.com/apps/dashboards/bda7594740fd40299423467b48e9ecf6>

Starting Feb 2020- Popular media OpEds and Commentaries about the coronavirus outbreak / pandemic that mention and/or call for One Health by name or theory.

COVID-19 and One Health

What we are doing in...
 - COVID-19: One Health
 - COVID-19 and One Health
 - COVID-19 and One Health
 - COVID-19 and One Health

Over 300 articles and the list is still growing >>>>>

<https://www.onehealthcommission.org/>

https://www.onehealthcommission.org/en/news/covid19_and_one_health/

The USAHA Community has been practicing One Health forever !!!!!

Beyond Biosurveillance of wildlife (and companion animals)

- still needed
- Ex. West Nile story
- COVID in deer / wildlife concerns

USAHA can help connect humans to nature

- Wildlife and Nature provide tremendous ecosystem services
 - Benefits of nature for human health
 - Link between healthy animals, health environments, and people
- Wildlife work SO important..... Yet SO NEGLECTED
 - Pandemic Prevention
 - Pandemic Response



Photo by Tore Skogheim on Unsplash

Collaborations
start with
Relationships!!

*Which start when we
come together in direct conversations*



**Opportunity / Call to Action
for the USAHA Community**

One Health is being more and more recognized, understood and embraced around the world and here in the U.S.

- So **USE** One Health as a platform/megaphone to:
 - Make NOISE 'en masse' about the importance of USAHA's work framed in One Health
 - Help the public and law/policy makers understand what you do and 'why' it is 'so' important
 - SCIENCE COMMUNICATION
- Create One Health USAHA messaging to share to the world via your own and the One Health Commission's networks
 - International Listserv > 17,000
 - Monthly One Health Happenings newsletter

One Health Happenings

BILL GATES
HOW TO AVOID A CLIMATE DISASTER

Tick-Borne Diseases
in the Standing Group

<https://tinurl.com/OHC-OH-Happening>

One Health: Not a new concept
However, it is

*A New
Professional
Imperative!!*



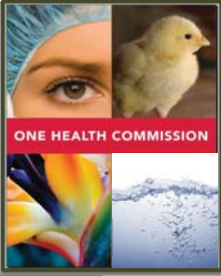
**Resurrecting an
Ancient Wisdom**



Review:

- *The full scope of One Health (arenas in need)*
- *How our health and wellness is connected with the health and wellness of animals, ecosystems and our environment?*
 - How do we recognize, respect and cherish the world around us, understand how it affects us and how we affect it?
- *How do we make that understanding the default way of doing business in all programs and policies?*





ONE HEALTH COMMISSION

One Health: Improving Animal, Human and Environmental Health



Cheryl Stroud, DVM, PhD
Executive Director

October 11, 2022
USAHA One Health Committee

