

Rethinking solutions for public health problems
Dr. Laura C. Streichert, One Health Advocate
A Webber Training Teleclass



Rethinking solutions for public health problems:
a holistic One Health Social Science (OHSS)
systems approach



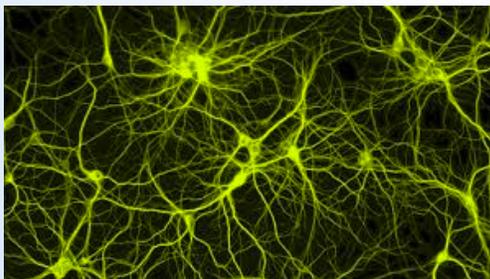
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One Health Advocate
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Rural Water Initiative for Climate Action (RWICA)

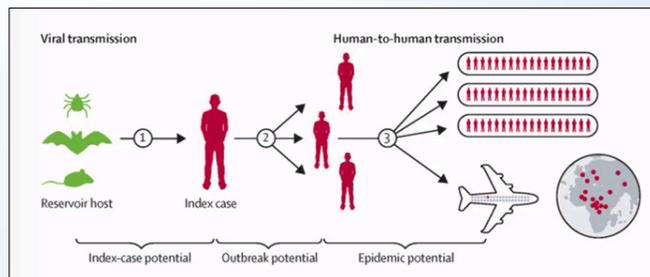
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February 10, 2022

Synapse to Synergy



Neural networks



Global networks

Common Features

- Network connections
- Fixed and dynamic interactions
- Reinforced patterns of activity
- Chains effects

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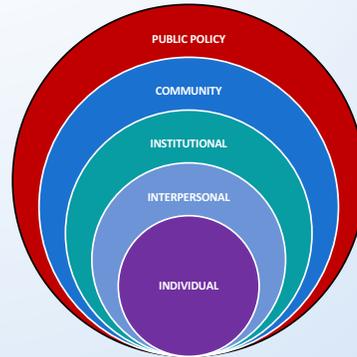
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Rethinking solutions for public health problems: a holistic One Health Social Science (OHSS) systems approach



Learning Objectives

1. To review One Health principles in the context of social systems.
2. To present practical examples of OHSS solutions in different global settings.
3. To introduce the OHSS Initiative and other opportunities to collaborate across sectors.
4. To promote the advancement of a skilled workforce using the best available technologies working on the most significant issues.



The Socioecological Model

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One Health Defined

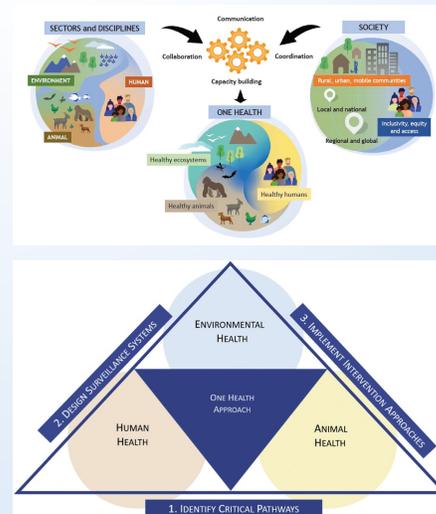
Tripartite and UNEP support OHHLEP's definition of "One Health"

Joint Tripartite (FAO, OIE, WHO) and UNEP Statement

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.

The approach 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.
(1 December 2021)



Source: WHO, O'Brien and Xagorarakis

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Why learn about One Health?

New Definition serves to:

- Promote a clear understanding and translation across disciplines and sectors.
- Advances use OH to address the full spectrum of disease control
- Mainstream and operationalize One Health at the global, regional, and national levels
- Support countries in establishing and achieving national targets and priorities for interventions
- Mobilize investment
- Advances equitable and holistic solutions

Why ONE HEALTH is Important

As Earth's population grows, our connection with animals and the environment changes:



People live closer together



Changes in climate and land use



More global travel and trade



Animals are more than just food

These factors make it easier for diseases to spread between animals and people.

A One Health approach tackles shared health threats by looking at all angles—human, animal, plant, and environmental

www.cdc.gov/onehealth



Moving ideas to action

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One Health can help reach public health goals at the local and global level



- UN Sustainable Development Goals (SDGs) provide a blueprint for systematically addressing the social determinants of health.
- One Health provides the tactics and the actual means to achieve the goals.
- OHSS makes the solutions practical and sustainable.

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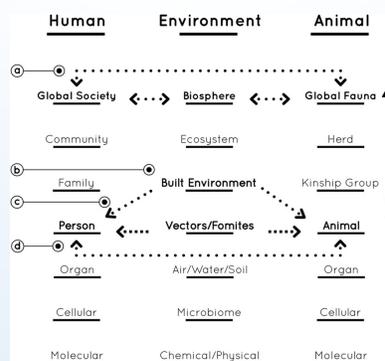
One Health is a social phenomenon



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One Health: coordinated approaches to health

- a) Planetary level
- b) Shared environment
- c) Shared exposure
- d) Clinical relationships
- e) Shared bond



EXAMPLES:

- a) Interactions of climate (such as heat waves) on global populations of humans and animals.
- b) Both people and animals are affected by degree of heat stress related to amount of neighborhood greenspace and pavement.
- c) Shared exposure to household built environment aspects including building design and ventilation as well as the presence of ticks and other vectors.
- d) Direct clinical relationships, including the human-animal bond and comparisons between disease manifestations.

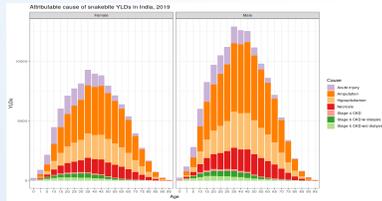
Source: Rabinowitz

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Natural Science

Study of nature

- Experimental data
- Controlled variables
- Methods
 - Quantitative
 - Lab experiments
 - Descriptive studies
- **Examples**
 - Biology
 - Ecology
 - Human medicine
 - Veterinary med

Social Science

Study of human context

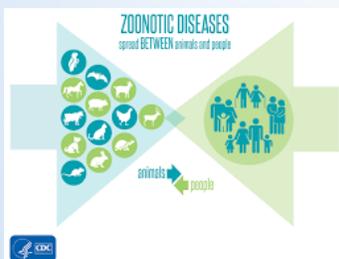
- Experiential data
- Uncontrolled variables
- Confounding factors
- Methods
 - Quantitative and Qualitative
 - Focus groups, field work, surveys
- **Examples**
 - Economics
 - Psychology
 - Sociology
 - Anthropology
 - Law

Source: <http://www.differencebetween.net/science/difference-between-science-and-social-science/>

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Infection prevention and control calls for One Health solutions

- Zoonosis = disease transmission between animals and humans
- 75% of emerging diseases are zoonotic



Did You Know?

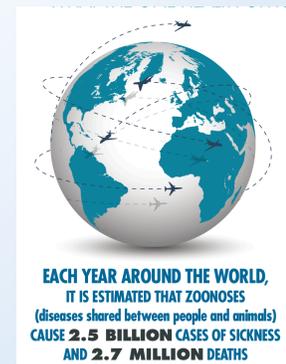
One Health issues include:

- Zoonotic diseases
- Antibiotic resistance
- Food safety and security
- Vector-borne diseases
- Environmental health
- Chronic diseases
- Mental health
- Occupational health



...And more!

www.cdc.gov/onehealth



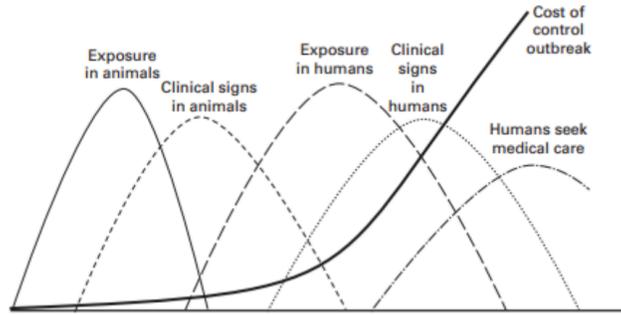
"You can't tell the story of human health separate from animal health or environmental health"
--Dr. William Foege

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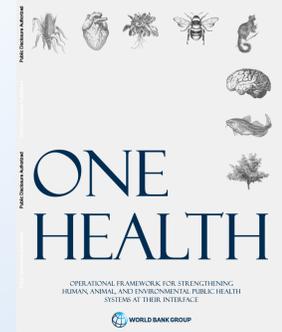
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Why? Accelerated response saves lives and money

Figure 1. Relationship between time of detection of emerging zoonotic disease and total cost of outbreak.



Source: World Bank [14]



Source: Berthe, 2018

A systems view of COVID-19

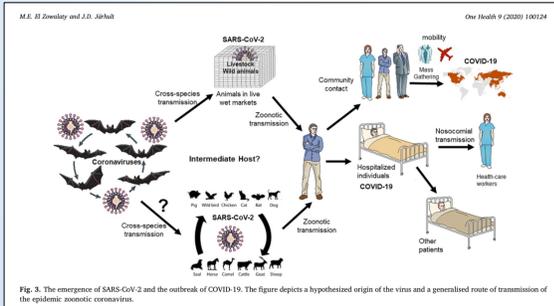
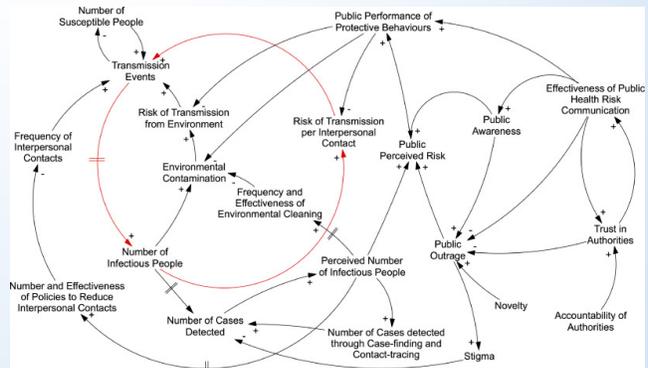
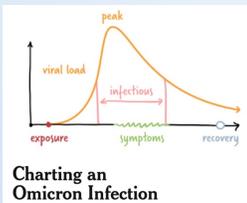


Fig. 3. The emergence of SARS-CoV-2 and the outbreak of COVID-19. The figure depicts a hypothesized origin of the virus and a generalised route of transmission of the epidemic zoonotic coronavirus.



An example causal loop diagram illustrating some of the interacting components in a society responding to the threat of COVID-19.

Look at the arrows – not just the variables!

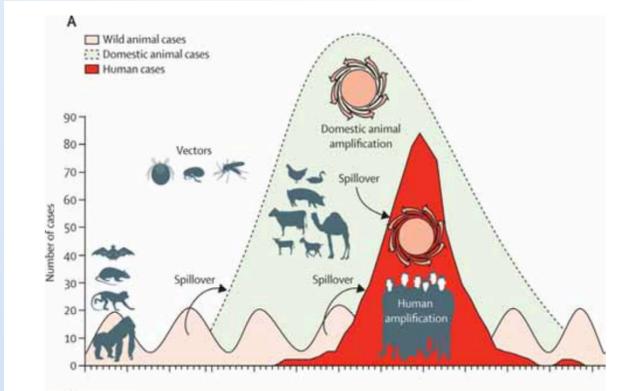
Source: NY Times; Bradley et al., 2020.

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Transmission of infection and amplification



Reduced disease incidence from early detection and control efforts

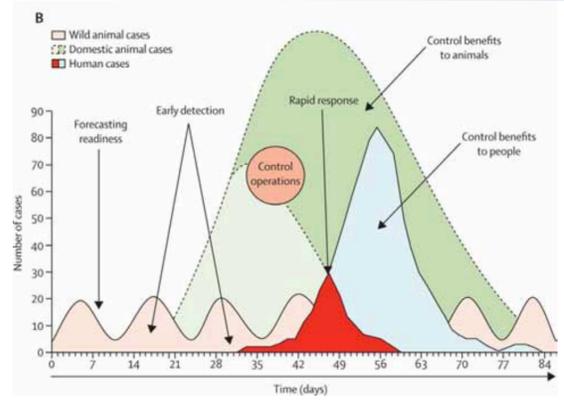


Figure 1.1: Clinical relevance of disease ecology. (A) Transmission of infection and amplification in people (bright red) occurs after a pathogen from wild animals (pink) moves into livestock to cause an outbreak (light green) that amplifies the capacity for pathogen transmission to people. (B) Early detection and control efforts reduce disease incidence in people (light blue) and animals (dark green). Spillover arrows show cross-species transmission (Karesh et al. 2012, *The Lancet*).

Source: Berthe, World Bank

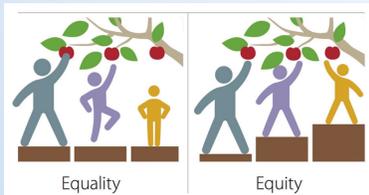
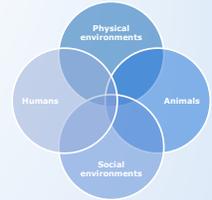
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OHSS, social justice, and gender equity



Consider vulnerable populations based on:

- Gender
- Socioeconomic status
- Cultural or religious affiliation
- Occupation
- Disability
- Age



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Gender Issues and an OHSS Approach

Health risk factors for women:

- Women as caretakers of infected people
- Direct contact with livestock
- Increased vulnerability to exposure to pathogens
- Cultural practices
- Gender roles, the distribution of labor, access and control over resources, and decision making in a patriarchal society
- Effects of poverty on housing, sanitation, hygiene

- **These have negative effects on:**
- Disease incidence
- Disease duration
- Disease severity: (morbidity, mortality, disability)



Source: Amuguni, OHSS Webinar

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OHSS solution for improving gender equity

Goals for improving gender equity

- Better understanding of gender-based risk factors from interactions with animals and the environment
- Gender sensitive public health education
- Partnership with local communities to provide gender information
- **Empower women as decision-makers**



To improve efficiency and effectiveness of policies and interventions, gender must be factored in all disease prevention and control programs

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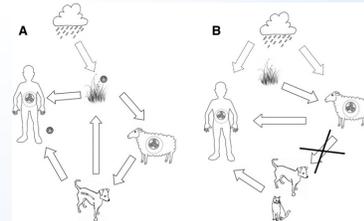
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OHSS: Learning from an anthropologist

Cross-case analysis highlights

- Differences between real and perceived mechanisms of disease
- Need for qualitative research.
- Tools of social scientists
- Mixed methods approaches – qualitative and quantitative research
 - Focus Group Discussions (FGDs)
 - In-depth individual interviews (IDIs)
 - Participant observations (POs)
- Complex social, cultural, political, economic and environmental determinants influence interventions to control endemic zoonoses
- Transmission dynamics are biosocial as well as biomedical
- Cultural beliefs and broader understandings of health and well-being might affect knowledge regarding zoonoses.



Case study of cystic echinococcosis
Demonstrates added value of anthropology



Dr. Séverine Thys

Stories + data → deeper understanding → practical and sustainable solutions

Source: Dr. Séverine Thys, OHSS Webinar, Saadi, 2021

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OHSS in Action: Nepal Case Study: Rabies



Rabies key facts:

- Found in >150 countries, tens of thousands of deaths
- Fatality after symptoms appear – 100%
- Globally costs \$8.6 billion
- Worldwide - 99% from dogs
- Bats are the main source of rabies in the United States.
- Interruption through vaccination of dogs and prevention of dog bites
- Human rabies is preventable by early recognition of exposure and receipt of postexposure prophylaxis (PEP).



Source: <https://www.who.int/news-room/fact-sheets/detail/rabies>

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OHSS in Action: Nepal Case Study: Rabies



Sociocultural beliefs

- You can't get rabies from a puppy bite....
- If you have no symptoms within 3 weeks, you are ok....
- Jackals don't bit people
- Lack of knowledge about interspecies transmission dynamics



```

    graph LR
      A[Habitat pressure from jungle clearing] --> B[Wild jackal with rabies attacks farmer's chickens]
      B --> C[Farmer sends dog to kill jackal]
      C --> D[Jackal bites and transmits rabies to dog]
      D --> E[Dog bites and transmits rabies to farmer]
      E --> F[Farmer does not receive post-exposure prophylaxis]
      F --> G[Dog dies. Farmer dies.]
  
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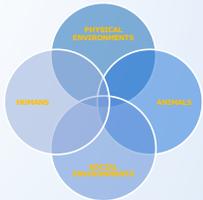
1981



2019

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OHSS in Action: Nepal OHSS Solutions



- Communication
 - Knowledge transfer and networking across veterinary, medical health, wildlife, and public health sectors
 - Contact lists for outbreak identification and mitigation
 - Stakeholder analysis to understand culture (e.g., Kukur Tihar)
 - Social science research to determine rabies vaccination rates
 - Community engagement to build campaign acceptance and interventions (e.g., dog culling)
- Collaboration
 - Joint training in One Health
 - Rabies education campaigns with women, farmers, students
- Coordination
 - Dog vaccination
 - Concurrent animal and human vaccine campaigns to address barrier of traveling long distance to the health/veterinary center



Kukur Tihar (Nepali: कुकुर तहिर) is annual Hindu festival to worship dogs to please Yama, god of death, since dogs are believed to be his messengers.

See: Wikipedia, Kukur Tihar

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OHSS in Action: USA

Case Study: Rabies



Time since symptom onset	Outcomes
DAYS 1-6	Receives diagnosis and treatment for : Carpal tunnel syndrome Panic attack Acute cardiac ischemia
DAY 6	Hospital staff members question about animal exposure. Husband says she was bitten by a dog 6 weeks ago while touring in India.
DAY 7	Patient received endotracheal intubation and mechanical ventilation
DAY 8	Specimens collected and sent to CDC
DAY 9	Rabies confirmed
DAY 18	Family withdraws advanced medical support, patient dies

Human Rabies — Virginia, 2017

*John Murphy, DVM; Carol D. Sills, MS; Shashi Prasad; Maria Harberg; Christine Bugh; Jani Brown, DVM; James Brown, PhD; R. Elaine Caputo; John B. Eubank; Milton Wilkins, MD; Crystal Ugano; PhD; Edgar Cardiel; Karen Gramstad; PhD; John M. Wilkin, DVM**

On May 9, 2017, the Virginia Department of Health was notified regarding a patient with suspected rabies. The patient had sustained a dog bite 6 weeks before symptom onset while touring in India. On May 11, CDC confirmed that the patient was infected with a rabies virus that circulates in dogs in India. Despite aggressive treatment, the patient died, becoming the ninth person reported to rabies abroad who has died from rabies in the United States since 2008. A total of 210 health-care workers were assessed for exposure to the patient; 72 (29%) of whom were administered postexposure prophylaxis (PEP).

The standard pharmacological use for PEP includes intramuscular rabies vaccine and rabies immunoglobulin (RIG). Intramuscular rabies vaccine should consider a potential consultation with travel health specialists; rabies postexposure prophylaxis is warranted for travelers who will be in rabies endemic countries for long durations, in remote areas, or who plan activities that might put them at risk for a rabies exposure.

Case Report

On May 2, 2017, a woman aged 67 years with preexisting health conditions began experiencing pain and paresthesia in her right arm while gardening. On May 6, the patient sought care at an urgent care facility for the arm pain. She received a diagnosis of carpal tunnel syndrome and was prescribed a nonsteroidal anti-inflammatory drug and hydrocodone. On May 7, she was evaluated in hospital with decreased breath sounds, tachypnea, and difficulty swallowing. The patient reported concerns about exposure to a stray cat. Diagnostic test results including complete blood count, serum chemistry, lactate, and renal function tests, troponin, troponin, troponin, and chest radiograph were unremarkable. She was given 0.75 mg of lorazepam for a presumed panic attack and discharged. Upon entering the care she reported diarrheal stools and decreased breath sounds and tachypnea. She was admitted to hospital. An emergency department when she received an additional 0.75 mg of lorazepam and was again discharged.

On May 8, she was transported from her residence by ambulance to the ED of hospital 9 with chest discomfort, right shoulder and arm, and increased anxiety. On examination, she was agitated, tachycardic, and intermittently tachypneic. Her neurologic exam was notable for asymmetric tonic neck rigidity. Laboratory results were notable for elevated

cardiac enzymes, a serum troponin I level of 1.05 ng/mL (normal <0.02 ng/mL), and a serum lactate level of 8 mmol/L (normal 0.7–2.1 mmol/L). Electrocardiogram results* suggested acute cardiac ischemia with ST-segment depression. The patient underwent emergency cardiac catheterization, which indicated minimal coronary arteries.

On the evening of May 8, the patient became progressively agitated and combative and was unable to be gaiting for air when attempting to drink water. Hospital staff members questioned family about animal exposures, and the patient's husband reported that she had been bitten on the right hand by a puppy approximately 6 weeks before symptom onset while touring in India. According to the husband, the patient did not seek further medical treatment. The patient had no record of a personal health screening, did not receive rabies postexposure vaccination before the trip, nor had she ever been vaccinated against rabies.

On the morning of May 9, the patient required endotracheal intubation and mechanical ventilation for increasing oxygenation and ventilation, and oxygen desaturation; peak airway temperature was 100.0°F (38.3°C). Electroencephalogram demonstrated low-amplitude reactivity delta activity suggestive of acute encephalopathy in light of the concern for human rabies; the patient was sedated with ketamine and midazolam, and the Virginia Department of Health was notified because rabies PEP is ineffective for treatment of rabies and not indicated after the onset of symptoms. PEP was not administered. A lumbar puncture was performed. Cerebrospinal fluid (CSF) lactate was elevated (1.6 mmol/L; normal 0.5–2.2 mmol/L), and CSF white blood cell count was 10/field. Lumbar (L5–S1) and 10% polymerase chain reaction (PCR) for rabies virus, rabies virus antigen, rabies virus nucleocapsid, and 81% monoclonal antibodies, consistent with morphology. CSF, serum, saliva, and nasal discharge specimens were collected on May 9 and submitted to CDC for rabies testing on May 10.

On May 11, rabies was confirmed by the detection of rabies virus RNA in real-time reverse transcription-polymerase chain reaction (real-time RT-PCR) in saliva and also by immunofluorescence assays for direct fluorescent antibody staining of the skin biopsy (Table 1). No rabies virus antibodies were

*The results showed a T wave of ST segment depression in leads V1, V2, and V3 and a T wave of ST segment depression in lead II, III, and V5.

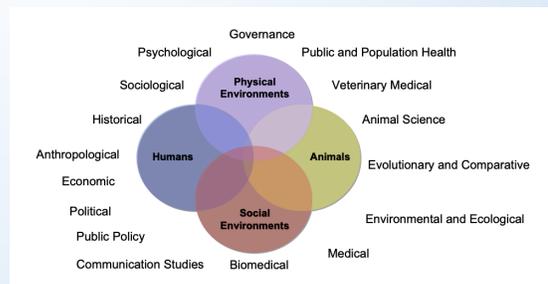
Source: MMWR, 2019; World Bank

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OHSS solutions: How could this case of rabies been avoided?

Responses from Nursing Students, Olympia College

Community practice & policy	<ul style="list-style-type: none"> Rabies/dog control in India Pre-travel guidance from CDC
Education	<ul style="list-style-type: none"> Public sensitization to animal contact risks Education about rabies and zoonotic disease
Healthcare system	<ul style="list-style-type: none"> Travel medicine Ask about animal exposures as part of health history Postexposure prophylaxis vaccine in India
Travel guide	<ul style="list-style-type: none"> Risk information guide with warnings – brochures and classes Animal bite procedures
Individual	<ul style="list-style-type: none"> Avoid travel Pretravel consultation Health screening Education on disease risk from animals Immediate care seeking Communication with family
Animal Health	<ul style="list-style-type: none"> Appropriate puppy vaccinations Wild dog management (neutering programs)



Source: Rock, 2009.

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OHSS solutions: How could the diagnosis been made more promptly?

Responses from Nursing Students, Olympia College

Community practice	<ul style="list-style-type: none"> Prevention interventions One Health partnerships across animal and human health sectors
Education	<ul style="list-style-type: none"> One health in medical and nursing training Education about rabies Zoonotic disease
Healthcare System	<ul style="list-style-type: none"> Obtain a detailed patient history and always ask about travel and animal exposure Interview family members sooner Comprehensive assessment on second admission
Travel Guide	<ul style="list-style-type: none"> Animal bite procedures
Individual	<ul style="list-style-type: none"> Education on disease risk from animals Immediate care seeking Communication with family

250 health care workers assessed for exposure

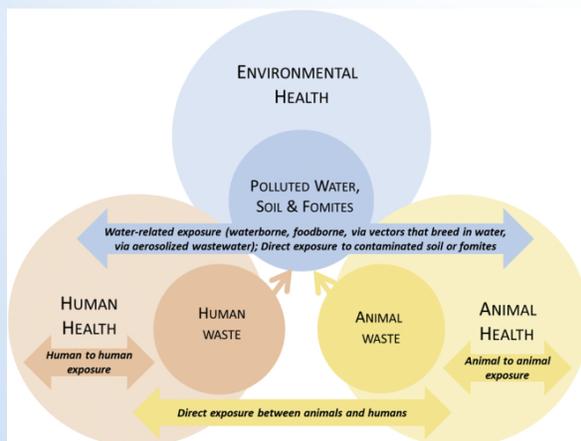
- Urgent care
- EMS
- Hospital
- Funeral home
- Medical examiner
- Assisted living residents
- Family

\$235,000 for PEP alone

\$\$\$ Additional costs

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OHSS in Action: Uganda Case Study: Access to safe water



Source: O'Brien, 2019.

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OHSS in Action: Uganda
Case Study: Access to safe water



Photo credits: Aisha Nankanja

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Rural Water Initiative for Climate Action, Ltd
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Vision
A world where rural communities live and prosper in harmony with nature to meet their water needs and build resilience to climate change.

About RWICA

- Nonprofit Community Service Organization (CSO) legally registered with the Republic of Uganda in December 2020.
- Focused on community-driven solutions to WASH issues -- from the grassroots to the policy levels.
- Maximizes resources and outcomes with partnerships to meet common goals.
- Female-led and governed by Board of Directors based in Uganda.
- Nonprofit management systems in place

RWICA Capacities

- Community Empowerment**
- Ecosystem Conservation**
- Gender Equity**
- Water System Solutions**

RWICA's **One Health** holistic approach aims to improve human, animal, and ecosystem health through community engagement and multisector collaborations that advance equitable access to safe water.

RWICA began as a collaboration sparked on a OHSS General Meeting Zoom call. Reach out to colleagues!

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OHSS in Action: India
Case Study: Snakebite



- Categorized as a Category A neglected tropical disease (NTD) by the WHO in 2017
- Venomous snakebite is a significant source of death globally and nonfatal burden in India
- The burden of snakebite is complicated due to:
 - Different species that cause varying short-term and long-term sequela
 - Burden tends to be worse in areas that are most difficult to measure
 - Polyvalent antivenom exist in India, yet preventable burden persists
 - Snakes are important part of ecosystem – play role in rodent control

nature

NEWS · 04 DECEMBER 2020

Snakebite steals millions of years of quality life in India

New data provide first estimate of the toll that snakebites take on survivors.

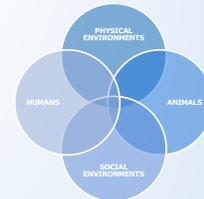


Farmers who work in fields in India are especially at risk of getting bitten by snakes such as the Russell's viper (*Daboia russelii*) shown here.

Photo Credit: John Benjamin Owens, MEFGL Bangor University/Captive & Field Herpetology

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OHSS in Action: India
OHSS Solutions



Pressure on habitat moves snakes into fields



Communication

- Knowledge transfer and networking across veterinary, medical health, wildlife, and public health sectors
 - Contact lists for outbreak identification and mitigation
- Stakeholder analysis to understand culture
 - Social science research to determine actual rates
- Community engagement to build campaign acceptance and interventions

Collaboration

- Joint training in One Health
- Education campaigns with women, farmers, students

Coordination

- Anti-venom availability

Anthropology concept: Perspectivism

- Entertains alternate realities
- Animals can embody people – people once had an animal state

Source: Brandão, 2021

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Preparing the One Health Workforce

By strengthening links between the human-animal-environment nexus and social science concepts, OHSS efforts:

- Advance innovative and interdisciplinary approaches and collaborations
- Ensure the sustainability of education and health system infrastructures
- Support the development of future One Health decision-makers
- Help to demonstrate need for funding and policy
- Maintain momentum to test and implement new practices



OHSS Education and Training

Table 1 Proposed One Health Competencies for Human Health Professionals

Professionals

- Skill sets:**
- Ability to elicit a history of human-animal-environment interactions.
 - Inter-professional communication and teamwork skills.
 - Ability to recognize and treat zoonotic and vector borne disease
 - Ability to assess and improve patient environments

- Knowledge competencies:**
- Zoonotic and vector borne diseases
 - Animals as sentinels
 - Human-animal bond and role of service animals, therapy animals, etc.
 - Prevention of animal-related injuries
 - Ecosystem function and health
 - Food systems, in particular animal source foods, in human health and disease
 - Role of environment on human health
 - Ethics and values including balance of health and environmental values and legal/ethical limits on physicians dealing with veterinary issues and veterinarians dealing with human health issues
 - Comparative clinical and evolutionary medicine

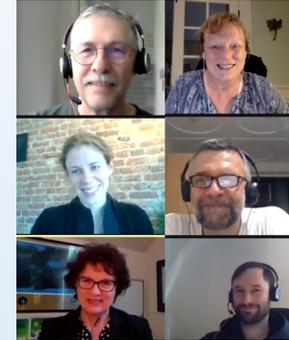


Source: Frankson

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Role of One Health Networks (OHNs)



- How is the One Health community involved with OHNs?
- Are they involved with COVID-19 response activities?
- What is the connection between participation in One Health Networks and involvement in the COVID-19 Response Activities
- What activities are the most useful?
- Barriers and facilitators to improvement



Funding: This work was supported by the One Health Commission and funding from the European Union's Horizon 2020 Research and Innovation programme under grant agreement No 773830: One Health European Joint Programme.

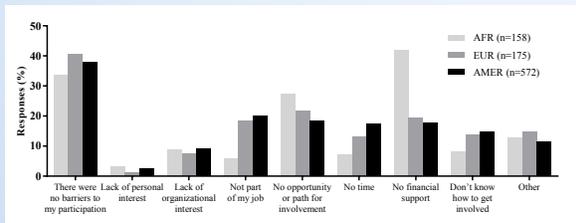
Source: Streichert, et al., 2021

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Participation in One Health Networks and Involvement in the COVID-19 Pandemic Response: A Global Study

1050 responses from 94 countries

- Location by WHO region
- Type of Organization
- Sector
- Participation in OHN activities
- Involvement in COVID-19 response
- Activities perceived as most useful
- Barriers and facilitators to participation



What OHN offerings do you think are especially useful during the COVID-19 response?

(N=923, no answer=127)	n	%
Increased public awareness of the value of OH	712	77.1
Networking with professionals across sectors with common interests	517	56.0
Trusted information about the COVID-19 pandemic	466	50.5
Links to popular media items relevant to OH and current events	338	36.6
Targeted training opportunities	335	36.3
Information about professional, career, and service opportunities	310	33.6
Opportunities to contribute in ways that my employment does not provide	269	29.1
Other	33	3.6

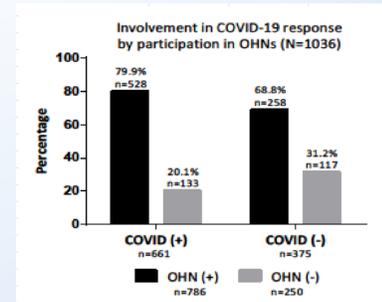
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Participation in OHNs is associated with involvement with COVID-19 response

	Involved in COVID-19 response	Not involved in COVID-19 response (n)	No answer	Total
Part of OHN	528	258	2	788
Not part of OHN	133	117	3	253
No answer	2	3	4	9
Total	663	378	9	1050



Contingency table showing the association (odds ratio: 1.8, 95% confidence interval: 1.3–2.4, Chi-square: 16.04) between being part of an OHN and being involved in the COVID-19 response.

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Social science and COVID-19 response

Aim:

Describe the participation of the social sciences sector in One Health Networks (OHNs) and involvement in COVID-19 response.

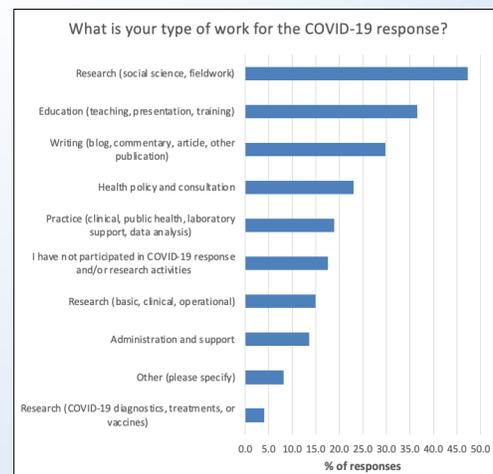
Methods:

Part of a larger cross-sectional study, conducted in 2020, The 16-question survey focused on participation in OHNs and involvement in the COVID-19 response.

Results:

79 of the 1050 (7.5%) survey respondents of the global survey were from the social sciences sector. Forty-two (53.2%) of them indicated they were affiliated with an academic organization.

Sixty (75.9%) of the 79 indicated that they were part of an OHN, and **being part of an OHN was positively associated with involvement with the COVID-19 response** (odds ratio 4.5, 95% confidence interval: 1.5–13.9). The most common types of response activities were research and education.



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One Health Social Sciences Initiative (OHSS)



OHSS Mission
 To strengthen the network of individuals who incorporate social science concepts and methods in research applications and community initiatives that link human, animal, and environmental health.

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

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OHSS Initiative in Action

Collaboration → Provide a platform

- Regular meetings
- Featured presentations
- Opportunities for input from network
- Online meeting technologies

Communication → Disseminate information

- Webinars and video library
- English and Spanish
- Mapping Project
- OHSS Webpage
- OHSS Update

Coordination → Engage OH and social science sectors

- Publications
- Presentations
- Workgroups

See: OHSS Webinar Library: <https://docs.google.com/spreadsheets/d/1skKRO9BVrKkLKwouC9T51cWySpTL1STsYDojOGTgJ-Y/edit#gid=60>

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2022 OHSS Work Groups: Get involved!



Work Group Topics

1. Climate change
2. Food security
3. Infectious diseases
4. One Health Policy
5. Pandemic Control

The OHSS Small Work Groups:

- Support the mission and vision of OHSS by joining people from different disciplines using electronic media to actively identify specific knowledge gaps at the social sciences and One Health interface.
- Develop activities that can contribute significantly to the global promotion of the One Health concept with links to social science approaches.
- Facilitate the expansion of professional networks across the globe and provide leadership opportunities.

If you are interested in joining a work group, please send a message to
ohss@onehealthcommission.org
Please put WORK GROUP and name of the topic in the Subject.

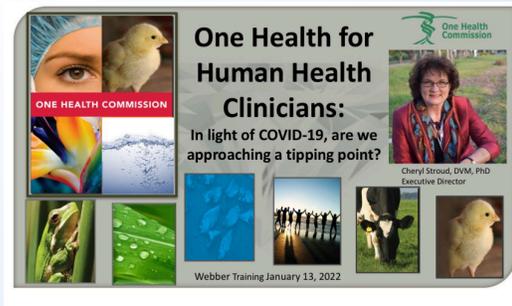
Taking ideas to action.

**To learn more about One Health
research, practice, and policy**



Dr. Prejit

Centre for One Health Education, Advocacy,
Research and Training (COHEART)
Kerala Veterinary and Animal Sciences
University
<https://coheart.ac.in/>



Dr. Cheryl Stroud, DVM, PhD

Executive Director, One Health Commission
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<https://webbertraining.com/recordingslibraryc4.php?command=viewVideo&ID=1018>

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Today's take home messages



- System problems need system solutions.
- One Health Social Science (OHSS) is an approach that stresses trans-disciplinary and multisectoral collaboration and the interconnectedness of animal, human, and environmental health.
- Social justice and gender equity are crosscutting OHSS themes.
- One Health needs to be part of education and training across sectors.
- One Health networks play a demonstrated role in capacity building.
- There are lots of ways to be involved.
- ***Be a One Health Advocate***

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Thank you!



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February 17, 2022	<u>ASSESSING THE CLINICAL ACCURACY OF A HAND HYGIENE SYSTEM</u> Speaker: Dr. Marco Bo Hansen , Copenhagen University Hospital, Denmark
February 24, 2022	<u>VACCINE HESITANCY ... WHAT'S HAPPENING?</u> Speaker: Prof. Rodney Rohde , Texas State University
March 3, 2022	<i>(FREE Teleclass ... Denver Russell Memorial Teleclass Lecture)</i> <u>BENEFITS AND POTENTIAL UNINTENDED CONSEQUENCES OF ROUTINE CHLORHEXIDINE BATHING IN HEALTHCARE FACILITIES</u> Speaker: Prof. Mary Hayden , Rush University Medical Center, Chicago
March 10, 2022	<u>HAND HYGIENE: NOT JUST FOR HEALTH CARE WORKERS ANYMORE!!</u> Speaker: Dr. Jocelyn Srigley , University of British Columbia
March 17, 2022	<u>INFECTION CONTROL IN CORRECTIONAL FACILITIES</u> Speaker: Nyreith Adeyemi , California Correctional Health Care Services
April 7, 2022	<u>MANAGEMENT PRACTICES FOR LEADERS TO PROMOTE INFECTION PREVENTION</u>

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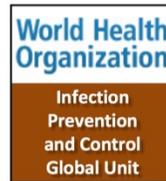
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