

WOAH Collaborative Centre Reports Activities 2022

Activities in 2022

This report has been submitted : 21 avril 2023 17:14

Title of WOA Collaborating Centre	Emerging and Re-Emerging Zoonotic Diseases
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1. Activities as a centre of research, expertise, standardisation and dissemination of techniques within the remit of the mandate given by WOA

Disease Control	
Title of activity	Scope
	The United States continues to collaborate across public health, agriculture, wildlife, and environment sectors and with other One Health partners to address zoonotic diseases. CDC coordinates the One Health Federal Interagency Coordination Committee (OH-FICC) to bring together representatives from 23 key federal agencies representing multiple departments across

The One Health Federal Interagency Coordination Committee (OH-FICC), a federal level One Health coordination mechanism

the United States (U.S.) government to coordinate One Health collaboration related to prevention, detection, control, and response to zoonotic diseases and related One Health issues across federal agencies; Focus areas over the past year included emerging infectious and zoonotic diseases like COVID-19, mpox, zoonotic influenza, and Ebola. Multiple federal agencies and departments including CDC, U.S. Department of Agriculture (USDA), U.S. Department of the Interior (DOI), and others are involved. Partners from other WOAHC collaborating centres located in the U.S. are invited to participate. CDC is coordinating federal interagency collaboration to advance One Health in the U.S. including to develop a National One Health Framework and to develop a formalize a multisectoral, One Health coordination mechanism for the federal government as directed by the Consolidated Appropriations Act linked here: <https://www.congress.gov/117/bills/hr2617/BILLS-117hr2617enr.pdf> <https://www.cdc.gov/onehealth/what-we-do/federal-coordination.html>

Disease Control

Title of activity	Scope
<p>Provided One Health Coordination between OH-FICC and variety of One Health partners on COVID-19, Ebola, zoonotic influenza, mpox, and other related One Health issues</p>	<p>1. CDC coordinates a monthly One Health State Federal Update Call to bring together state, tribal, local, territorial, and federal partners from public health, animal health, and environment sectors on the One Health aspects of priority zoonotic diseases to share timely updates, disseminate information, and address concerns. Invitees included state, local, and territorial public health officials, animal health officials, and wildlife officials and OH-FICC members. 2. CDC coordinates a quarterly One Health Partners Webinar to present news and key updates on the One Health aspects of emerging zoonotic diseases and other One Health issues, as well as guidance and resources and to provide a platform for non-governmental partners to ask questions. Attendees include variety of non-governmental partners including organizations, academic, industry, and others. Partners from other WOAHC collaborating centres located in the U.S. are invited.</p>

Disease Control

Title of activity	Scope
<p>Influenza and Zoonoses Education for Youth in Agriculture in the United States</p>	<p>CDC has worked with the Council of State and Territorial Epidemiologists (CSTE) to promote a One Health collaboration between federal, state, and local public health and animal health authorities and state youth agriculture groups through a program called Influenza and Zoonoses Education Among Youth in Agriculture. This innovative program educates youth about zoonotic diseases shared between animals and people (including emerging zoonoses), delivers disease prevention messages, and strengthens One Health networks among state human and animal health departments and agricultural communities across rural America. For more information and to access globally</p>

available prevention resources, please visit www.cdc.gov/onehealth/pdfs/youth-in-ag-508.pdf and www.cdc.gov/onehealth/domestic-activities/index.html

Disease Control

Title of activity	Scope
Healthy Pets, Healthy People	<p>CDC manages the Healthy Pets, Healthy People website. This website provides up-to-date information on zoonotic diseases related to people and interactions with pets, livestock, and wildlife, including U.S. outbreaks linked to animals and animal products. The website also provides resources for public health and animal health officials (domestic and wildlife), as well as veterinarians and human healthcare providers; educational materials on staying healthy around animals; guidelines for preventing zoonoses in high-risk people, and in public settings such as petting zoos; and resources for pet owners on how to prepare pets for disasters. This website is used globally by >50 countries annually and is the 30th most popular CDC website. In 2022, the website received more than 6 million views.</p> <p>www.cdc.gov/healthypets</p>

Disease Control

Title of activity	Scope
CDC's Antimicrobial Resistance (AMR) Exchange Series	<p>During CDC's first AMR Exchange of 2022, Antifungal Resistance: Understanding this Growing Global Threat, experts shared ways of addressing antifungal-resistant infections, like those caused by deadly Candida Auris, to protect people, animals, and the environment. CDC's AMR Exchange Series is global webinar series to engage a broad group of partners, practitioners, veterinarians, and policymakers on AR topics across One Health. Since the launch of the AMR Exchange Series in 2021, CDC has hosted five webinars attracting more than 17,000 registrants globally. CDC will continue the AMR Exchange Series in 2023.</p>

Disease Control

Title of activity	Scope
COVID-19 United States (U.S.) Impact on Antimicrobial Resistance (AR) Special 2022 Report	<p>In 2022, CDC released the 2022 Special Report: COVID-19 U.S. Impact on AR, analyzing the state of AR in the U.S. immediately following the 2020 peak of the COVID-19 pandemic. The report highlights that the threat of antimicrobial-resistant infections is not only still present but has gotten worse – with resistant hospital-onset infections and deaths both increasing at least 15% during the first year of the pandemic. The report also highlights the importance of appropriate antibiotic use in both humans and animals to stop the spread of antibiotic-resistant pathogens including zoonoses. To date, the report has been featured in more than 130 news stories, 7 partner briefs, and numerous partner newsletters, press articles, and social media.</p>

Disease Control

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Title of activity	Scope
Tracking colonization in hospitals and communities	<p>The Antibiotic Resistance in Communities and Healthcare (ARCH) research consortium is a part of CDC's Global Antimicrobial Resistance Laboratory and Response Network. ARCH is a network of research partners tracking the amount and spread of AMR colonization, including animal and environmental exposures, in hospitals and communities in six countries and studying predictors and outcomes of colonization. The data from the ARCH studies will help us understand the source of new resistance threats, how widespread the threats are, and how we can tailor prevention strategies to lessen the impact.</p>
Disease Control	
Title of activity	Scope
Technical assistance for Viral Hemorrhagic Fever (VHF) outbreak response and preparedness, multiple countries	<p>In 2022, CDC provided technical assistance for VHF outbreak response and preparedness and laboratory diagnostic support to a number of countries globally, including for Ebola (Sudan virus), Crimean-Congo hemorrhagic fever (CCHF), and Rift Valley fever in Uganda, Chapare virus and hantavirus in Bolivia, Ebola in Democratic Republic of the Congo, CCHF in the Republic of Georgia and Iraq, Lassa fever in Sierra Leone, and Nipah virus in Bangladesh.</p>
Disease Control	
Title of activity	Scope
PulseNet	<p>PulseNet is a national laboratory network that connects foodborne, waterborne, and One Health-related illness cases to detect outbreaks. PulseNet uses DNA fingerprinting of bacteria making people sick, to detect thousands of local and multistate outbreaks. Since the network began in 1996, PulseNet has improved our food safety systems through identifying outbreaks early. This allows investigators to find the source, alert the public sooner, and identify gaps in our food safety systems that would not otherwise be recognized. PulseNet International performs a similar role for foodborne illnesses globally.</p>
Disease Control	
Title of activity	Scope
National Antimicrobial Resistance Monitoring System (NARMS)	<p>NARMS is a collaboration among state and local public health departments, CDC, the U.S. Food and Drug Administration (FDA), and the U.S. Department of Agriculture (USDA). This national public health surveillance system tracks changes in antimicrobial susceptibility of certain enteric (intestinal) bacteria found in ill people (CDC), retail meats (FDA), and food animals (USDA) in the United States. The NARMS program at CDC helps protect public health by providing information about emerging bacterial resistance, the ways in which resistance is spread, and how resistant infections differ from susceptible infections.</p>

Disease Control	
Title of activity	Scope
Mpox outbreak response & surveillance capacity	CDC continues to work closely with partners in Cameroon, Democratic Republic of Congo, and Nigeria to support laboratory-based surveillance of disease and technical input on outbreak investigations of mpox.
Disease Control	
Title of activity	Scope
Zoonotic mpox transmission and the human-animal-environment interface	CDC continues to work closely with colleagues to better understand and characterize the interactions between humans and wild animals in mpox endemic areas. • CDC has trained teams in Nigeria, Cameroon, DRC, and Sierra Leone to capture, sample, and test animals for mpox virus infections. These studies will provide information about which types of animals are naturally infected with mpox virus in the environment and potentially transmitting the virus to human populations. • CDC is working with in country partners to use mixed methods (qualitative and quantitative) interviews to examine mpox risk factors for human mpox cases at the human-animal interface. These studies will provide missing data about how people in Nigeria and DRC are being exposed to infected animals. • CDC is collaborating to assess the activity patterns and relative abundances of suspected mpox reservoirs in disturbed and undisturbed environments in rural DRC. This will provide information on how the ecological aspects of these animals may increase the risk of human mpox infections at the human-animal-environment interface.
Disease Control	
Title of activity	Scope
Risk Guidance on Reducing Spillover of Mpox (Monkeypox) Virus from Humans to Wildlife, Pet Animals and other Animals	CDC technical experts contributed to and co-authored WOAHA guidance, Risk Guidance on Reducing Spillover of Mpox (Monkeypox) Virus from Humans to Wildlife, Pet Animals and other Animals, published in September 2022. https://www.woah.org/en/document/risk-guidance-on-reducing-spillover-of-mpox-monkeypox-virus-from-humans-to-pet-pet-animals-and-other-animals/
Disease Control	
Title of activity	Scope
A Review of Zoonotic Disease Threats to Pet Owners: A Compendium of Measures to Prevent Zoonotic Diseases Associated with Non-Traditional Pets Such as Rodents and Other Small Mammals, Reptiles, Amphibians, Backyard Poultry, and Other Selected Animals	Provides recommendations and best practices that were developed using a One Health approach with the goal of preventing zoonotic disease transmission between non-traditional pet species and people and reducing zoonotic disease risks in environments with animals and people https://www.liebertpub.com/doi/10.1089/vbz.2022.0022

Epidemiology, surveillance, risk assessment	
Title of activity	Scope
One Health Surveillance and Investigation of SARS-CoV-2 at the human-animal-environment interface in Southeast Asia	<p>CDC, in collaboration with the Health Security Partners, is supporting One Health SARS-CoV-2 surveillance project at the human-animal-environment interface. The objectives of this project are to collaborate with countries in the region to identify gaps across the region for surveillance activities for SARS-CoV-2; characterize risks in environments where humans and animals come into contact; conduct SARS-CoV-2 surveillance at the human-animal-environment interface within the region; build surveillance capacity across One Health sectors within countries; and share best practices and lessons learned within the region.</p> <p>Four partners across Thailand, Indonesia, and Vietnam have been funded to conduct these activities. These sites are conducting surveillance for SARS-CoV-2 in hospitals/clinics for people and exotic pets, zoological parks, live animal markets, wildlife rescue centers, bat roosts and caves, confiscation sites, farms, and garbage dump sites. Collection of samples, testing, and data analysis is ongoing.</p>
Epidemiology, surveillance, risk assessment	
Title of activity	Scope
Emerging/re-emerging zoonotic Viral Hemorrhagic Fever (VHF) surveillance activities in Uganda	<p>Since 2010, CDC has been supporting the Uganda Ministry of Health (MOH) and Uganda Virus Research Institute (UVRI) with Uganda's National Viral Hemorrhagic Fever Surveillance Program. This program includes routine surveillance of ebolaviruses, Marburg viruses, CCHF, and RVF in humans and animals in Uganda. Of note, in September 2022, Uganda MOH declared an outbreak of Ebola (Sudan virus) that began in Mubende District in Central Uganda. CDC provided technical support to Uganda MOH with surveillance, laboratory, and ecological investigations, among other areas of outbreak response. Additionally in 2022, CDC, in collaboration with the Uganda MOH and UVRI, continued longitudinal surveillance for RVF and CCHF in livestock and humans associated with livestock in multiple districts in Uganda. This data is being used to validate a prediction model and determine environmental factors associated with high seropositivity and transmission. CDC continued work with Uganda Wildlife Authority (since 2007) performing surveillance for filoviruses in bats and tracking nightly and seasonal movements of known filovirus reservoir animals.</p>
Epidemiology, surveillance, risk assessment	
Title of activity	Scope
Crimean-Congo hemorrhagic fever (CCHF) surveillance and risk modeling in the Republic of Georgia and Iraq	<p>CDC provided technical consultation and analysis support for CCHF in the Republic of Georgia and Iraq by analyzing previous surveillance and environmental and ecological variables to help determine the cause for higher-than-expected numbers of cases</p>

	being reported in 2022 and to also identify locations/regions more at risk for CCHF human and animal disease. CDC also provided input on serosurvey studies in development.
Epidemiology, surveillance, risk assessment	
Title of activity	Scope
Multiple Multistate Salmonella Illness Outbreak Infections Linked to Backyard Poultry, Small Turtles, and Bearded Dragons	CDC and public health officials in multiple states states investigated multiple multistate outbreaks of Salmonella infections linked to contact with a variety of animals including backyard poultry, small turtles, and bearded dragons. More details at: • US Outbreaks of Zoonotic Diseases Spread between Animals & People https://www.cdc.gov/healthypets/outbreaks.html
Training, capacity building	
Title of activity	Scope
One Health Zoonotic Disease Prioritization (OHZDP) Workshops	CDC works with partners to conduct OHZDP workshops to bring together human, animal, and environmental health sectors and other relevant partners to prioritize zoonotic diseases of greatest concern in a country, region, or other area and develop next steps and action plans to address the priority zoonotic diseases in collaboration with One Health partners. The OHZDP Process uses a transparent, collaborative approach that incorporates equal input from all represented One Health sectors. The OHZDP helps strengthen multisectoral, One Health collaboration, coordination, and communication, supports the creation or strengthening of multisectoral, One Health coordination mechanisms, helps build capacity for identified priorities, and is adaptable to local context. Zoonoses most commonly prioritized globally include rabies, zoonotic influenza, brucellosis, viral hemorrhagic fevers such as Ebola virus and Rift Valley fever, anthrax, and zoonotic tuberculosis. In 2022, two national OHZDP workshops were conducted in Thailand and Nigeria and four subnational workshops were conducted within Colombia. A WOAH representative participated in the Thailand workshop. Additional details can be found at: https://www.cdc.gov/onehealth/what-we-do/zoonotic-disease-prioritization
Training, capacity building	
Title of activity	Scope
One Health Zoonotic Disease Prioritization Process Facilitator Training	CDC in collaboration with trained facilitators from WHO and FAO, conducted facilitator trainings on the One Health Zoonotic Disease Prioritization Process for ministerial representatives from human, animal, and environmental health sectors in Colombia, Thailand, and Nigeria. Additionally, CDC conducted a facilitator training for staff from Africa CDC staff and the African Union Pan African Veterinary Vaccine Center (AU-PANVAC).
Training, capacity building	

Title of activity	Scope
One Health Rapid Response Teams	CDC is developing a framework for One Health Rapid Response Teams (OHRRT) and is providing technical assistance to the Government of Cambodia for the integration of One Health into their Rapid Response Team infrastructure. These activities will support the development of One Health Rapid Response Teams to enhance surveillance and response capacity for human, animal, and environmental health sectors for zoonotic respiratory diseases and other priority zoonoses.
Training, capacity building	
Title of activity	Scope
Evaluation of Infection Prevention and Control (IPC) Performance for COVID-19 and Preparedness Activities for Sudan Virus Disease (SVD)	CDC supported ICAP at Columbia University to establish the East Africa Infection Prevention and Control (EA IPC) Network to build healthcare worker capacity to improve adherence with IPC standards. The network included 20 hospitals across four countries: Ethiopia, Kenya, Tanzania, and Uganda and includes weekly case-based learning sessions, collaborative quality improvement projects for IPC, facility assessments to evaluate IPC performance for COVID-19 and tailored professional development for facility IPC focal points and team members. The network is now being leveraged to share information on response and preparedness activities underway after the identification of the Sudan ebolavirus (SUDV) in Uganda.
Training, capacity building	
Title of activity	Scope
Training and capacity building in infectious disease pathology	CDC provides training opportunities for physician and veterinary pathology trainees and practitioners. This includes in-person and virtual training through use of glass or digitally scanned slides, for identification of pathologic lesions associated with infectious etiologies, including zoonotic and emerging pathogens. CDC also provides in-person and telepathology support for infectious disease capacity building efforts in under-resourced countries in South America, Africa, and Asia.
Zoonoses	
Title of activity	Scope
Preventing, Detecting, and Responding to Emerging and Reemerging Zoonotic Diseases in Multiple Countries	Preventing, Detecting, and Responding to Emerging and Reemerging Zoonotic Diseases in Multiple Countries
Zoonoses	
Title of activity	Scope
	Since 2016, CDC has collaborated with Njala University to conduct routine surveillance in small mammal populations for

VHF surveillance activities in Sierra Leone	VHFs. This work continued in 2022 through a cooperative agreement with Viral Special Pathogens Branch.
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Diagnosis, biotechnology and laboratory

Title of activity	Scope
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Global Networks and Antimicrobial Resistance Innovation Research Projects Update	<p>The CDC Global Antimicrobial Resistance Laboratory and Response Network (Global AR Lab & Response Network) has completed a successful first year of AR efforts around the globe, since its launch in December 2021. This is a comprehensive network to improve the detection of antimicrobial-resistant threats and prevent their spread globally. The Global AR Lab & Response Network spans nearly 50 countries and works with more than 20 organizations worldwide to build laboratory capacity to detect AR organisms; prevent infections in health care and the community through proven infection control practices; and apply new and innovative ways to respond to AR threats. This network works to identify risk factors driving the emergence and spread of AR across One Health, including in health care, the community, and the environment (e.g., water and soil), while also responding on the ground to AR threats emerging across healthcare, sexually transmitted, fungal, enteric, and invasive bacterial and respiratory pathogens. The initially funded recipients will continue to expand their efforts into year two, while five new recipients have also been added to cover AR threats in additional areas. These ongoing investments represent progress in accomplishing the ambitious goals in the National Action Plan for Combating Antibiotic-Resistant Bacteria (CARB) 2020 – 2025 and reflect CDC’s commitment to transforming the way the world responds to AR across One Health.</p>
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Diagnosis, biotechnology and laboratory

Title of activity	Scope
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Tissue-based diagnosis of zoonotic and high-consequence pathogens	<p>CDC provides pathologic evaluation and laboratory testing of human and animal biopsy and autopsy specimens for zoonotic, emerging, and high-consequence pathogens, including Category A, B, and C bioterrorism agents.</p>
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Diagnosis, biotechnology and laboratory

Title of activity	Scope
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Tissue-based diagnosis of mpox and other poxviral infections	<p>CDC provides pathologic evaluation of human and animal biopsy and autopsy specimens for Mpox and other poxviral infections by immunohistochemistry and PCR. In situ hybridization techniques are in also development. Currently characterizing the pathology of severe and fatal Mpox infections in immunosuppressed patients, with plans for manuscript detailing pathology, virus distribution, and coinfections in these patients.</p>
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Diagnosis, biotechnology and laboratory	
Title of activity	Scope
Tissue-based diagnosis of mycobacterial infections	CDC provides pathologic evaluation of human and animal biopsy and autopsy specimens for mycobacterial infections, including M. tuberculosis complex and nontuberculous mycobacteria, by immunohistochemistry and PCR. Molecular detection of drug resistance testing is provided in cases where M. tuberculosis complex is identified.
Diagnosis, biotechnology and laboratory	
Title of activity	Scope
Characterize pathology of fatal SARS-CoV-2 infection in big cats	CDC completed pathologic evaluation and SARS-CoV-2 detection by immunohistochemistry, in situ hybridization, and PCR for necropsy tissue samples from 5 big cats from U.S. zoos. Characterized pneumonic and other pathologic features and identified fatal Aspergillus fungal coinfections associated with SARS-CoV-2 in these cats. Manuscript in progress for publication in Veterinary Pathology.
Diagnosis, biotechnology and laboratory	
Title of activity	Scope
Laboratory support for whole genome sequencing of Sporothrix spp.	CDC is supporting partners in South America on whole genome sequencing of Sporothrix isolates collected through laboratory surveillance. Of 61 isolates (48 human, 13 feline), 56 were identified as S. brasiliensis, 4 S. schenckii and 1 S. globosa.
Diagnosis, biotechnology and laboratory	
Title of activity	Scope

2. Proposal or development of any procedure that will facilitate harmonisation of international regulations applicable to the main focus area for which you were designated

Proposal title	Scope/Content	Applicable area

4. Did your Collaborating Centre maintain a network with other WOAHA Collaborating Centres (CC), Reference Laboratories (RL), or organisations designated for the same specialty, to coordinate scientific and technical studies?

Yes

Name of OIE CC/RL/other organisation(s)	Location	Region of networking Centre	Purpose
Multiple WOAHA CCs/RLs/other organizations	multiple	Africa Americas Asia and Pasific Europe MiddleEast	CDC is in communication with multiple collaborating centres, reference laboratories, and other organizations from multiple countries and regions to maintain a network and share information on One Health activities related to emerging and re-emerging zoonoses.
Africa CDC	Ethiopia	Africa	Coordinating opportunities for workforce capacity training and advancing One Health
Multiple diagnostic laboratories across West and Central Africa	West and Central	Africa	Establishing a network of partners in West and Central Africa to coordinate diagnostic capabilities and research for mpox

5. Did your Collaborating Centre maintain a network with other WOAHA Collaborating Centres, Reference laboratories, or organisations in other disciplines, to coordinate scientific and technical studies?

Yes

Name of OIE CC/RL/other organisation(s)	Location	Region of networking Centre	Purpose
WOAHA CCs affiliated with the U.S. Centers for Disease Control and Prevention; Department of Agriculture; National Institutes of Health; Food and Drug Administration; Environment Protection Agency; U.S. Department of the Interior: National Park Service, U.S. Fish and Wildlife Service, U.S. Geological Survey; U.S.	United States	Americas	To communicate, coordinate, and collaborate on projects related to One Health; Approaches to prevention and control of emerging and re-emerging zoonotic diseases; To identify and pursue opportunities to improve efficiency outcomes

Department of Homeland Security; U.S. Department of Defense; Defense Threat Reduction Agency; U.S. Department of Labor, U.S. Agency for International Development, and others			for human, animal, and environmental health across the U.S. government and with One Health partners.
Institute for Infectious Animal Diseases Member of the Texas A&M University System	United States	Americas	Active SARS-CoV-2 surveillance investigations for animals housed in congregate settings exposed to a suspect or confirmed case of COVID-19 in humans or other animals with SARS-CoV-2 infections.
National Wildlife Health Center US Geological Survey Department of the Interior	United States	Americas	One Health coordination and collaboration to conduct surveillance for coronaviruses in wildlife.
National Veterinary Services Laboratory- USDA-APHIS, Veterinary Services; CC for Diagnosis of Animal Diseases in the Americas	United States	Americas	Communicate, coordinate, and collaborate on projects related to One Health and related emerging zoonoses including COVID-19.

6. Did your Collaborating Centre place expert consultants at the disposal of WOA?H?

Yes

NAME OF EXPERT	KIND OF CONSULTANCY	SUBJECT
Casey Barton Behravesh, MS, DVM, DrPH, DACVPM	Technical Assistance, Attendance at WOA?H Meetings, Member of Steering committees, WOA?H ad hoc Group on COVID-19 at the human-animal interface and mpox, WOA?H Mpox Guidelines panel	One Health, COVID-19, mpox, emerging and reemerging zoonoses, surveillance, outbreak investigation and response, public health, Tripartite Zoonoses Guide, global health security, and World Animal Health Information System+ Steering Committee, also a member of One Health High Level Expert Panel (OHHLEP) which supports the Quadripartite organizations
Colin Basler, DVM, MPH, DACVPM	CDC One Health Liaison to WOA?H, Technical Assistance for WOA?H-FAO-WHO joint project "Building Tripartite International Guidance Tools for the National Implementation of One Health"; Member of WOA?H WAHIS Active Search Team; Member of Global Laboratory Leadership Program (GLLP) Animal Health Working Group	One Health, COVID-19, emerging and reemerging zoonoses, surveillance, outbreak investigation and response, public health, Tripartite Zoonoses Guide, antimicrobial resistance, global health security, food safety, World Animal Health Information System+, laboratory capacity, multisectoral workforce development, and joint risk assessment

<p>Sean Shadomy, DVM, MPH, DACVPM</p>	<p>CDC Loaned Expert and One Health Liaison to FAO; Technical Assistance, FAO Technical project lead and focal point for WOA-FAO-WHO joint project, "Building Tripartite International Guidance Tools for the National Implementation of One Health"; lead for developing and piloting the Tripartite Zoonoses Guide Surveillance and Information Sharing Operational Tool; FAO member, WOA Ad Hoc Group on COVID-19 at the Human-Animal Interface; contributor, FAO Emergency Management Centre-Animal Health Incident Coordination Group (ICG) for Rift Valley Fever and for COVID-19; FAO observer to WOA Ad Hoc Group on Rabies, developed performance indicator Monitoring and Evaluation template for dog-mediated rabies control programs endorsement by WOA; FAO focal point for FAO-WOA-WHO United Against Rabies collaboration; co-presenter for FAO-WOA invited joint presentation for European Food Safety Agency Parma Summer School (June 2020)</p>	<p>One Health, COVID-19, emerging and reemerging zoonoses, surveillance, outbreak investigation and response, public health, Tripartite Zoonoses Guide, Operational Tools, global health security and multisectoral workforce development</p>
<p>Ryan Wallace, DVM, MPH</p>	<p>Ad hoc committee to review rabies control status (virtual) and tripartite meetings on the status of global rabies burden (in person); Rabies technical expertise and committee member</p>	<p>Ad hoc committee to review rabies control status (virtual) and tripartite meetings on the status of global rabies burden (in person).</p>
<p>Jeff Doty</p>	<p>Mpox technical expertise and panelist member</p>	<p>Member of WOA Mpox Guidelines panel and Mpox Diagnostics panel</p>
<p>Multiple CDC Subject Matter Experts</p>	<p>Technical Assistance</p>	<p>One Health, emerging and reemerging zoonoses, surveillance, outbreak investigation and response, preparedness, Global Health Security, Antimicrobial resistance, building laboratory and epidemiology capacity, and multisectoral workforce capacity</p>

7. Did your Collaborating Centre provide advice/services to requests from Members in your main focus area?

Yes

Details on CDC services and advice provided at the request of Members are cross reported in other sections of this document.

8. Did your Collaborating Centre provide scientific and technical training, within the remit of the mandate given by WOA, to personnel from WOA Members?

Yes

a) Technical visit : thousands

b) Seminars : >7500

c) Hands-on training courses: 45

d) Internships (>1 month) : 21

TYPE OF TECHNICAL TRAINING PROVIDED (A, B, C OR D)	CONTENT	COUNTRY OF ORIGIN OF THE EXPERT(S) PROVIDED WITH TRAINING	NO. PARTICIPANTS FROM THE CORRESPONDING COUNTRY
a,b,c,d	CDC provides a variety of scientific and technical training to both member and non-member countries.	global	thousands
b	CDC's One Health Office hosts the Zoonoses and One Health Updates (ZOHU Call), a monthly webinar to provide the latest news and resources on zoonoses and other One Health issues, including public health and animal health professionals (domestic and wildlife) and environment experts working in government, non-governmental organizations, industry, and academia. ZOHU calls offers continuing education for a variety of health professionals. For more information on the ZOHU Calls or to access webinar recordings or to subscribe to the monthly ZOHU Newsletter, visit: www.cdc.gov/onehealth/zohu/index.html	United States and others	5076
c	CDC's One Health Office and trained facilitators from FAO, WHO, and WOAHA conducted facilitator training sessions on the One Health Zoonotic Disease Prioritization Process for Colombia, Thailand, and Nigeria. Additionally, CDC conducted a facilitator training for staff from Africa CDC staff and AU Pan African Veterinary Vaccine Center (AU-PANVAC).	Colombia, Thailand, Nigeria, African Union	45
d	CDC hosted Epidemiology Elective Students and graduate student interns to provide public health training; students supported work on WOAHA projects	United States	21

9. Did your Collaborating Centre organise or participate in the organisation of scientific meetings related to your main focus area on behalf of WOAHA?

Yes

NATIONAL/INTERNATIONAL	TITLE OF EVENT	CO-ORGANISER	DATE (MM/YY)	LOCATION	NO. PARTICIPANTS
International	World One Health Congress	multiple	2023-11-03	Singapore	>3000

10. Publication and dissemination of any information within the remit of the mandate given by WOAHA that may be useful to Members of WOAHA

a) Articles published in peer-reviewed journals:

Over 10,000 full text articles can be accessed at CDC Stacks: stacks.cdc.gov/welcome

CDC Stacks is a free, digital archive of scientific research and literature produced by CDC. This online archive is composed of curated collections tailored for public health research needs. This repository is retained indefinitely and is available for public health professionals, researchers, as well as the general public. CDC Stacks provides access to current CDC research and literature such as the Open Access Collection. In addition, CDC Stacks offers a historical perspective that was previously not available, such as the first 30 volumes of the Morbidity and Mortality Weekly Report. As a fully featured repository, CDC stacks provides the ability to search the full text of all documents browse journal articles by public health subjects and explore the curated collections of documents on relevant topics.

b) International conferences:

Each year, CDC technical and program staff attend and present at numerous international conferences.

c) National conferences:

Each year, CDC technical and program staff attend and present at numerous national conferences.

d) Other (Provide website address or link to appropriate information):

In 2022, CDC continued to focus on maintaining, streamlining, and distributing COVID-19 and mpox guidance for key One Health audiences outlining the risks and information known on SARS-CoV-2 and mpox and animals, including pets. New graphics featuring different One Health topics and classroom pets, a new factsheet outlining the importance of One Health, new animations highlighting One Health facts, and new pet owner safety notice videos were posted online. For One Health Day, CDC released a webpage, social media campaign, newsletter, and partner communications toolkit. New webpages were posted on solving outbreaks linked to animals and cleaning and disinfecting pet supplies. Two new One Health stories were posted on antibiotic resistance in people and animals and a One Health investigation Salmonella and wild songbirds. The Office distributed 43 newsletters to One Health partners and stakeholders, as well as pet owners.

Emerging Infectious Diseases (EID) Journal – Published monthly by CDC, EID was established to promote the recognition of new and re-emerging infectious diseases around the world and improve the understanding of factors involved in disease emergence, prevention, and elimination. EID Journal Website: wwwnc.cdc.gov/eid

The National Center for Emerging and Zoonotic Infectious Diseases (NCEZID) website maintains updated information on current outbreaks, recent work, and publications. www.cdc.gov/ncezid/

CDC's maintains two websites (One Health website [www.cdc.gov/onehealth/index.html] and Healthy Pets, Healthy People website [www.cdc.gov/healthypets/]), which provide up-to-date information on One Health activities and zoonoses-related prevention for the general public, public health professionals, human and animal health professionals, policymakers, partners, and other stakeholders. CDC led efforts for or participated in numerous One Health-related communication campaigns, including One Health Day, National Pet Week, National Preparedness Month, and US Antibiotic Awareness Week. Promotional activities included social media, graphic development, feature articles, newsletters, ZOHU Call presentations, and partner outreach, resulting in global awareness. CDC promotes programs supporting One Health-related activities, publications, and events.

Additionally, CDC continued its monthly Zoonoses and One Health Updates (ZOHU) Call, a webinar that reaches public health and animal health officials, epidemiologists, physicians, nurses, and other public health practitioners in federal, state, and local agencies as well as non-governmental organizations, industry, and academia. ZOHU Calls offer free Continuing Education for more than 11,500 subscribers from different disciplines and sectors.

11. What have you done in the past year to advance your area of focus, e.g. updated technology?

CDC Data Modernization Initiative:

<https://www.cdc.gov/surveillance/data-modernization/basics/index.html>

12. Additional comments regarding your report:

No additional comments.