



WELCOME TO THE
TWELFTH ONE MEDICINE SYMPOSIUM
TEAMING UP AGAINST THE FLU:
A ONE MEDICINE APPROACH TO INFLUENZA AT
THE HUMAN-ANIMAL INTERFACE



Welcome to the Twelfth One Medicine Symposium, hosted by the NC Department of Agriculture and NC Department of Health and Human Services in cooperation with NC State University College of Veterinary Medicine, UNC Gillings School of Global Public Health, and USDA APHIS Veterinary Services.

Our goals are to provide professionals from a variety of backgrounds with current information and take-home tools to improve awareness and understanding of the topics from a One Medicine perspective, promote collaboration across disciplines, and enhance preparedness for natural or man-made disasters, infectious disease outbreaks, and other challenges affecting human and animal health.

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

This year’s agenda features a variety of presentations related to influenza in humans and animals, focusing on providing up to date information on recent and ongoing disease outbreaks such as Highly Pathogenic Avian Influenza and critical partnerships for influenza preparedness and response activities. Participants will gain valuable knowledge from real-world event and case discussions on human and animal influenza preparedness and response as well as an understanding of the partnerships and collaboration among disciplines.

The sponsoring agencies are pleased to host this conference. Our joint collaboration has made it possible for us to offer a world-class program with highly accredited speakers. We welcome you to learn from and enjoy our program.

Sharron Stewart, BS, Certified PM

Julie Casani, MD, MPH

Director, Emergency Programs Division, N.C. Department of
Agriculture & Consumer Services

Director, PH Preparedness and Response, N.C. Department of
Health and Human Services

SINCERE THANKS AND APPRECIATION TO...

Planning Committee:

Akers, Bruce, DVM, Regional Veterinary Specialist, NC Department of Agriculture & Consumer Services
Allen, Anna, DVM, MPH, Public Health Liaison Veterinarian, NC Department of Agriculture & Consumer Services

Beck, Karen, DVM, PhD, Surveillance Veterinarian, NC Department of Agriculture & Consumer Services

Casani, Julie, MD, MPH, Preparedness Director, NC Division of Public Health

Critchley, Sara, MS, BSN, Nurse Planner, Nurse Consultant, Health Scientist, Centers for Disease Control and Prevention

Daniels, Christin, MA, Director of Research, Gillings School of Global Public Health, University of North Carolina-Chapel Hill

Farag, Noha H., MD, PhD, CDC Medical Epidemiologist, Centers for Disease Control & Prevention

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Kennedy-Stoskopf, Suzanne, DVM, PhD, Professor/Ecosystem Health Specialist, NC State University, College of Veterinary Medicine

Kittrell, Jim, DVM, Veterinary Medical Officer, NC Department of Agriculture & Consumer Services

Maillard, Jean Marie, MD, MSc, Medical Director, Communicable Disease Branch-Epidemiology Section, NC Division of Public Health

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McElroy-Bacon, Connie, MEd, Continuing Education Coordinator, NC State University, Office of Professional Development

Moore, Zack, MD, MPH, Medical Epidemiologist, NC Division of Public Health

Rhea, Sarah, DVM, MPH, PhD, Epidemic Intelligence Service Officer, Centers for Disease Control & Prevention

Stewart, Sharron, BS, Director Emergency Programs, NC Department of Agriculture & Consumer Services

Sullivan, Susan, RN-BC, MS, Public Health Nurse Consultant, NC Division of Public Health

Williams, Carl, DVM, State Public Health Veterinarian, NC Division of Public Health

Woodlief, Carol, DVM, Veterinary Medical Officer, NC Department of Agriculture & Consumer Services

Moderators:

Beck, Karen, DVM, PhD, Surveillance Veterinarian, NC Department of Agriculture & Consumer Services

Suzanne Kennedy-Stoskopf, DVM, PhD, Professor/Ecosystem Health Specialist, NC State University, College of Veterinary Medicine

Carl Williams, DVM, State Public Health Veterinarian, NC Division of Public Health

Special Thanks to:

United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Veterinary Services (VS)

North Carolina State University (NCSU) College of Veterinary Medicine (CVM)

University of North Carolina, Gillings School of Global Public Health (GSGPH)

NC State University, Office of Professional Development (OPD)

**TEAMING UP TO FIGHT THE FLU:
A ONE MEDICINE APPROACH TO INFLUENZA AT THE HUMAN-
ANIMAL INTERFACE
SYMPOSIUM GUIDE**

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MAP

Sheraton Imperial Hotel & Convention Center Research Triangle Park, NC Meeting & Event Facilities



Wednesday - Thursday, December 9 - 10

Registration: Imperial Foyer I

General Session: Imperial I, II, III, IV

Lunch: Imperial V, VI, VII

GENERAL INFORMATION

Event Location:

All 2015 symposium meetings and events will take place at the Sheraton Imperial Hotel and Convention Center at 4700 Emperor Blvd., Durham, NC 27703. The symposium will be held in the Imperial Ballroom. A map of the hotel with meeting locations can be found on page 4 of this guide and on signs in the hotel.

Hotel Contact Information:

(919) 941-5050, 1-800-325-3535

(919) 941-2958 (fax)

www.sheratonrtp.com

Conference Times:

Wednesday, December 9, 2015

Registration: 8:00 - 9:30 a.m.
Welcome: 9:30 - 10:00 a.m.
Sessions: 10:00 a.m. - 4:15 p.m.
Lunch: 12:00 p.m. - 1:00 p.m.
Breaks: 10:45 a.m. - 11:00 a.m.
2:45 p.m. - 3:00 p.m.

Thursday, December 10, 2015

Registration: 8:00 - 9:00 a.m.
Welcome: 9:00 - 9:30 a.m.
Sessions: 9:30 a.m. - 4:00 p.m.
Lunch: 11:45 p.m. - 1:00 p.m.
Breaks: 10:30 a.m. - 10:45 a.m.
2:15 p.m. - 2:30 p.m.

Continuing Education & Evaluation Forms:

If you wish to receive CMEs, CNEs, CEUs, or a certificate of participation for non-physicians, please go to www.cdc.gov/TCEOnline. At this site, you will evaluate this educational activity (SP2599) and complete the posttest. You have until **January 11, 2016** to complete this action.

Participants wishing to obtain Veterinary or Environmental Health Specialist continuing education credits should visit the registration desk at the conclusion of the symposium and return a completed evaluation to receive the appropriate credits.

Complete continuing education information is available on pages **8-9** of this guide.

Speaker Presentations:

With the approval of our speakers, speaker presentations will be available for download at: www.onemedicinenc.org.

Conference Notices:

Notice of changes in program, special events, speakers, etc., will appear on sign boards in the registration area.

Hotel Shuttle Service:

The Sheraton Imperial offers a courtesy shuttle service to all guests. The shuttle prioritizes all guests with a scheduled airport arrival/departure, but is otherwise available to transport guests to any restaurant within a 3-mile radius from the hotel. It is not guaranteed that the shuttle will be available upon request.

Area Attractions:

If you are interested in local happenings, restaurants, directions, etc. in the surrounding cities, please visit the following websites:

Raleigh: www.visitraleigh.com

Durham: www.durham-nc.com

Chapel Hill: www.chocvb.org

Participants with Special Needs:

Please contact the symposium registration desk with any reasonable accommodations you need in order to participate in this conference.

Wi-Fi:

Complimentary wireless internet service is available in the main hotel lobby and restaurant area.

Questions or Concerns?

Please visit the symposium registration desk with any meeting or hotel issues. We will do our best to address your needs!

Twelfth One Medicine Symposium

Teaming Up Against the Flu: A One Medicine Approach to Influenza at the Human-Animal Interface

WEDNESDAY DECEMBER 9

Time	Topic
8:00 am	Registration
9:30 am	<p>Opening</p> <ul style="list-style-type: none"> • Sharron Stewart, BS, Certified PM, Director, Emergency Programs Division, N.C. Department of Agriculture & Consumer Services <ul style="list-style-type: none"> ◊ Overview of Conference Logistics and Schedule ◊ Introduction of Welcome Speakers
9:45 am	<p>Welcome Speakers</p> <p>Steve Troxler, Commissioner of Agriculture, NC Department of Agriculture & Consumer Services</p> <p>Megan Davies, Acting State Health Director, NC Department of Health and Human Services</p>
10:00 am	<p>One Health and Influenza</p> <ul style="list-style-type: none"> • Dr. Greg Gray, BS, MD, MPH, Professor, Division of Infectious Diseases, Global Health Institute, & Nicholas School of the Environment, Duke University <ul style="list-style-type: none"> ◊ Overview of One Medicine/One Health concept ◊ Overview of influenza from a multi-species and multi-disciplinary perspective
10:45 am	Networking Break
11:00 am	<p>Human Influenza in the US and NC – The Current Picture</p> <ul style="list-style-type: none"> • Dr. Zack Moore, MD, MPH, Medical Epidemiologist, Communicable Disease Branch, N.C. Department of Health and Human Services, Division of Public Health • Anita Valiani, BS, MPH, Influenza Coordinator, Epidemiologist, N.C. Department of Health and Human Services-Communicable Disease Branch, Division of Public Health <ul style="list-style-type: none"> ◊ Overview of human influenza biology and epidemiology ◊ Overview of current picture of human influenza in the United States and North Carolina
12:00 pm	Lunch
1:00 pm	<p>Animal Influenza in the US and NC – The Current Picture</p> <ul style="list-style-type: none"> • Dr. Barbara Porter-Spalding, BS, DVM, MVPH, Swine Epidemiologist, Avian, Swine, Aquaculture Health Commodity Staff, U.S. Department of Agriculture, Animal and Plant Health Inspection Service, Veterinary Services <ul style="list-style-type: none"> ◊ Overview of animal influenza biology and epidemiology including avian, swine, and other species ◊ Overview of current picture of animal influenza in the United States and North Carolina
1:45 pm	<p>Influenza Surveillance and Testing – The Laboratory Perspective</p> <ul style="list-style-type: none"> • Dr. Scott Zimmerman, BA, MPH, DrPH, CPEP (ASM), Director, North Carolina State Laboratory of Public Health, N.C. Department of Health and Human Services, Division of Public Health • Dr. Barbara Porter-Spalding, BS, DVM, MVPH, Swine Epidemiologist, Avian, Swine, Aquaculture Health Commodity Staff, U.S. Department of Agriculture, Animal and Plant Health Inspection Service, Veterinary Services <ul style="list-style-type: none"> ◊ Overview of influenza testing and surveillance for humans and animals ◊ Overview of laboratory preparedness for outbreaks, surge capacity, and novel influenzas
2:45 pm	Networking Break
3:00 pm	<p>Disease Communication</p> <ul style="list-style-type: none"> • Brian Long, BA, MPA, Director, Public Affairs, N.C. Department of Agriculture and Consumer Services • Kendra Gerlach, BBA, Director, Office of Communications & Public Affairs, N.C. Department of Health and Human Services <ul style="list-style-type: none"> ◊ Overview of disease and outbreak communication considerations and techniques for human and animal diseases (transparency, confidentiality/security, choice of words, ethics)
4:15 pm	Closing comments/Adjourn

Twelfth One Medicine Symposium

Teaming Up Against the Flu: A One Medicine Approach to Influenza at the Human-Animal Interface

THURSDAY DECEMBER 10

Time	Topic
9:00	<p>Opening</p> <ul style="list-style-type: none"> • Sharron Stewart, BS, Certified PM, Director, Emergency Programs Division, N.C. Department of Agriculture & Consumer Services <ul style="list-style-type: none"> ◊ Overview of Conference Logistics and Schedule ◊ Introduction of Welcome Speakers
9:15	<p>Welcome Speakers</p> <p>Dr. Paul Lunn, Dean, NC State University College of Veterinary Medicine Dr. Barbara Rimer, Dean, UNC Gillings School of Global Public Health</p>
9:30	<p>Highly Pathogenic Avian Influenza – The US Outbreak</p> <ul style="list-style-type: none"> • Dr. Doug Meckes, BS, DVM, State Veterinarian, N.C. Department of Agriculture & Consumer Services • Dr. Sarah Mason, BS, DVM, PhD, Director, Animal Health Programs, Poultry, N.C. Department of Agriculture & Consumer Services • Sharron Stewart, BS, Certified PM, Director, Emergency Programs Division, N.C. Department of Agriculture & Consumer Services <ul style="list-style-type: none"> ◊ Overview of HPAI outbreak, preparedness, and response
10:30	Networking Break
10:45	<p>Environment</p> <ul style="list-style-type: none"> • Joe Hudyncia, BS, MS, Environmental Programs Specialist, N.C. Department of Agriculture & Consumer Services • Michael E. Scott, BS, MS, Deputy Director, Division of Waste Management, N.C. Department of Environmental Quality <ul style="list-style-type: none"> ◊ Overview of environmental impact and considerations related to preparedness and response for highly pathogenic avian influenza (HPAI)
11:45	Lunch
1:00	<p>Wildlife/Zoo Community</p> <ul style="list-style-type: none"> • Keith Wehner, BS, North Carolina State Director, US Department of Agriculture Animal and Plant Health Inspection Service, Wildlife Services • Dr. Jeanie Lin, BA, MLA, DVM, MPH, Veterinary Medical Officer, U.S. Department of Agriculture, Animal and Plant Health Inspection Service, Animal Care • Brad Hazelton, AA, General Curator, Sylvan Heights Bird Park <ul style="list-style-type: none"> ◊ Overview of impact and considerations for the wildlife and zoological communities and animals related to preparedness and response for highly pathogenic avian influenza (HPAI)
2:15	Networking Break
2:30	<p>Public Health</p> <ul style="list-style-type: none"> • Dr. Julie Casani, MD, MPH, Director, PH Preparedness and Response, N.C. Department of Health and Human Services <ul style="list-style-type: none"> ◊ Overview of considerations and challenges for human/public health disciplines for human and animal influenzas, especially HPAI ◊ Practical advice/solutions for practitioners
3:15	<p>Emergency Management</p> <ul style="list-style-type: none"> • Michael Sprayberry, BA, MA, Director, N.C. Division of Emergency Management <ul style="list-style-type: none"> ◊ Overview of impact and considerations for emergency management related to HPAI ◊ Differences between animal disease response and other disasters ◊ Balancing resources, unique considerations of diseases/animal diseases
4:00	Closing Comments/Adjourn

CONTINUING EDUCATION CREDIT INFORMATION

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TEAMING UP AGAINST THE FLU: A ONE MEDICINE APPROACH TO INFLUENZA AT THE
HUMAN-ANIMAL INTERFACE
SP2599**

CME: This activity has been planned and implemented in accordance with the Essential Areas and policies of the Accreditation Council for Continuing Medical Education through the joint providership of the Centers for Disease Control & Prevention and North Carolina State University College of Veterinary Medicine, North Carolina Department of Health and Human Services, North Carolina Department of Agriculture & Consumer Services, University of North Carolina Gillings School of Public Health and the United States Department of Agriculture-Animal and Plant Health Inspection Service, Veterinary Services. The Centers for Disease Control and Prevention is accredited by the Accreditation Council for Continuing Medical Education (ACCME®) to provide continuing medical education for physicians.

The Centers for Disease Control and Prevention designates this **live** activity for a maximum of **9.5** *AMA PRA Category 1 Credits*[™]. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

CNE: The Centers for Disease Control and Prevention is accredited as a provider of Continuing Nursing Education by the American Nurses Credentialing Center's Commission on Accreditation.

This activity provides **9.5** contact hours.

IACET CEU: The Centers for Disease Control and Prevention is authorized by IACET to offer **1.0** CEU's for this program.

DISCLOSURE: In compliance with continuing education requirements, all planners, presenters, and their spouses/partners must disclose any financial or other association with the manufacturers of commercial products, suppliers of commercial services, or commercial supporters as well as any use of unlabeled product(s) or product (s) under investigational use.

CDC, our planners, our presenters and their spouses/partners wish to disclose they have no financial interests or other relationships with the manufacturers of commercial products, suppliers of commercial services, or commercial supporters. Planners have reviewed content to ensure there is no bias.

Presentations will not include any discussion of the unlabeled use of a product or a product under investigational use.

CDC did not accept commercial support for this continuing education activity.

CONTINUING EDUCATION CREDIT INFORMATION

To receive continuing education (CE):

Complete the activity by **January 11, 2016**.

Complete the Evaluation at www.cdc.gov/TCEOnline

Pass the posttest at 70% at www.cdc.gov/TCEOnline

FEES: There are no fees for CE.

VETERINARY CONTINUING EDUCATION CREDIT:

The North Carolina Veterinary Medical Board has approved this program for 9.5 hours of continuing education credit for veterinarians and veterinary technicians.

ENVIRONMENTAL HEALTH SPECIALISTS CONTINUING EDUCATION CREDIT:

The North Carolina Board of Environmental Health Specialist Examiners has approved this program for 9.5 hours of continuing education credit. Course #15208

Participants wishing to obtain **Veterinary or Environmental Health Specialist** continuing education credit should visit the registration desk at the conclusion of the symposium and return a completed evaluation to receive the appropriate credits and certificates.

SPEAKER BIOGRAPHIES

Julie Casani, MD, MPH

**Director of Public Health Preparedness and Response
North Carolina Department of Health and Human Services
Division of Public Health**

Dr. Julie Casani is the Director of Public Health Preparedness and Response in the North Carolina Division of Public Health. This Branch coordinates the preparedness system for 85 Local Health Departments and 4 regional offices. In addition to planning activities at the local, regional and state level, this Branch is responsible for providing Public Health coordination, subject expertise and support to the Local Health Departments. From 1999-2006, she was the Preparedness Director at the Maryland Department of Health and Mental Hygiene. Her office was lead on the anthrax events of 2001, implemented a number of enhanced health surveillance systems for Bioterrorism including BioWatch, and developed and implemented the Smallpox Preparedness and Response Program. She is Adjunct Associate Professor at NC State University where she instructs in Global Public Health, Agriculture Security and One Health. She has been a policy and health practice consultant to several national workshops and committees in Weapons of Mass Destruction for Federal and State agencies, serving on 3 Defense Science Boards. She also served three consecutive terms as a member of the Homeland Security Science and Technology Advisory Committee for DHS.

Dr. Casani practiced clinical Emergency Medicine in the Johns Hopkins system from 1983 until 2001. She has been actively involved in Emergency Medical Services since the 1970's serving at every level from ambulance provider to an appointed member of the Maryland State EMS Board.

Dr. Casani received her Medical Degree from New York University School of Medicine and her Masters in Public Health from Johns Hopkins Bloomberg School of Public Health.

Kendra Gerlach, BBA

**Director, Office of Communications
North Carolina Department of Health and Human Services**

Kendra Gerlach is the director of the Office of Communications and Public Affairs for the North Carolina Department of Health and Human Services. She is a health care public relations and marketing professional with extensive experience in media relations, communication and crisis communication - from mass fatality and active shooter emergencies to weather-related disasters to emerging illness preparedness.

Her 20-year background in communications spans roles that include newspaper reporter and editor, public information office for New Hanover Health Network, Wilmington, NC; director of Marketing and Public Relations for Atlanta Medical Center, Atlanta, GA, and senior manager of Market Strategy and Support for Emory Healthcare, Atlanta, GA.

Gerlach is an experienced Public Information Officer who places great emphasis on exercising ethical, strategic thinking and sound judgment. She believes in the power of building relationships and that together, all of us are smarter than any one of us individually.

Gregory C. Gray MD, MPH, FIDSA

Professor, Division of Infectious Diseases, Global Health Institute, & Nicholas School of the Environment, Duke University

Gregory C. Gray MD, MPH, FIDSA is a Professor at Duke University with 3 affiliations: the Division of Infectious Diseases in Duke University's School of Medicine, Duke Global Health Institute, and Duke Nicholas School of the Environment. He also serves part-time as a Professor in the Program in Emerging Infectious Diseases at Duke-NUS Graduate Medical School, Singapore and as a Professor of Global Health at Duke-Kunshan University in China. He has visiting professorship positions in six other academic institutions in China, Romania, Australia, and the USA. His medical boards are in Preventive Medicine and Public Health.

Dr. Gray has conducted diverse epidemiological studies of infectious diseases for 25 years in 5 continents. Much of his work has involved identifying risk factors for occupational diseases, particularly for infectious diseases. He has studied numerous occupational groups including farmers, animal breeders, veterinarians, military personnel, turkey workers, poultry workers, horse workers, hunters, and pig workers. A strong supporter for the One Health approach, he has won multiple One Health research and training grants, established two centers of One Health (USA & Romania) and developed 4 graduate programs in One Health (PhD, MHS, Certificate and Program). He has mentored more than 50 graduate students, postdocs, and international scholars in research and often guides their work to peer-reviewed publication.

He has served on numerous national expert advisory committees including those associated with the US Armed Forces Epidemiological Board, the Infectious Disease Society of America, and the Institute of Medicine. He has authored more than 260 scientific reports and book chapters in the peer-reviewed medical literature. Currently, he serves on the Editorial Board for the journals *Influenza and Other Respiratory Viruses* and *Tropical Diseases, Travel Medicine and Vaccines*.

Brad Hazelton, AA

General Curator, Sylvan Heights Bird Park

Brad Hazelton began his career as a zookeeper at the Fort Worth Zoo in 1990. Two years later, Brad left Texas to begin a year-long internship at Sylvan Heights Breeding Center in Scotland Neck, NC, where he continued to develop his knowledge of waterfowl and other avian species. He returned to the Fort Worth Zoo as a supervisor in the bird department, a position he held for six years until he was promoted to be the Curator of Birds. Five years later, he was approached by Mike Lubbock, the owner of Sylvan Heights Breeding Center, to become the General Curator of the new Sylvan Heights Waterfowl Park, which opened in 2006. Brad has held this position for eight years and still loves going to work every morning at such an incredible place. His work has taken him all over the world, including banding excursions all over South Texas; flamingo banding in the Yucatan and Bolivia; eagle workshops in Mexico and Spain; collection trips in the Gulf of Mexico (Roseate Spoonbills) and southern Arizona (hummingbirds); and as a guide for a safari in Kenya. Brad is also a lifetime member of the International Wild Waterfowl Association, and serves on their Board of Directors.

Jeanie Lin, MLA, DVM, MPH

Veterinary Medical Officer

U.S. Department of Agriculture, Animal and Plant Health Inspection Service, Animal Care

Before joining USDA-APHIS-AC as National Emergency Programs Manager, Dr. Jeanie Lin led a Veterinary Services department at an animal research facility. Prior to this, she was a Fellow for a joint program at the American Veterinary Medical Association and the American Association for the Advancement of Science. She was assigned to the US Department of Homeland Security and served as Executive Secretary on a White House subcommittee on animal disease threats. Dr. Lin worked previously in information technology, and landscape architecture. She is currently the Regional Emergency Programs Manager for Animal Care in APHIS Eastern Region, which covers states east of the Mississippi River, the District of Columbia, the Virgin Islands and Puerto Rico. Dr. Lin serves on AVMA's Committee on Emergency Issues.

Brian Long, MPA

Director, Public Affairs

N.C. Department of Agriculture and Consumer Services

Brian Long has worked in communications in both the public and private sectors for more than 25 years. For the past 12 years, he has served as director of public affairs at the N.C. Department of Agriculture and Consumer Services, managing a four-person staff with responsibilities for communicating about the department, North Carolina agriculture and the annual N.C. State Fair.

Long was honored with the 2014 Communication Award from the National Association of State Departments of Agriculture.

A native North Carolinian, Long earned a bachelor's degree in journalism from UNC-Chapel Hill and a Master of Public Affairs degree from UNC-Greensboro. He lives in Raleigh with his wife and two children.

Sarah Mason, DVM, PhD

Director, Animal Health Programs, Poultry,

N.C. Department of Agriculture & Consumer Services

Dr. Mason received her DVM from the University of Georgia College of Veterinary Medicine and a PhD from NC State University College of Veterinary Medicine. She has worked with NCDA&CS for over 10 years.

Doug Meckes, DVM

State Veterinarian

N.C. Department of Agriculture & Consumer Services

Dr. Meckes practiced clinical veterinary medicine in Apex from 1975-2005. He then served as an AVMA/AAAS Congressional Fellow from 2005-2006 and worked for the AVMA Government Relations Division from 2006-2007 in Washington D.C. He worked for the Department of Homeland Security Office of Health Affairs from 2007-2014 and became the North Carolina State Veterinarian in 2014.

Zack Moore, MD, MPH

Medical Epidemiologist, Communicable Disease Branch

N.C. Department of Health and Human Services, Division of Public Health

Dr. Moore received a medical degree from the University of North Carolina at Chapel Hill and a master's degree in public health from Harvard University. Dr. Moore completed an internship and residency in Pediatrics at Stanford University. Following residency, he worked with the National Immunization Program at the CDC before completing fellowship training in Pediatric Infectious Diseases at Emory University.

Dr Moore began working with the North Carolina Division of Public Health in 2006 as an officer with the CDC's Epidemic Intelligence Service. He is currently a Medical Epidemiologist with the Communicable Disease Branch. His duties include surveillance for respiratory diseases, healthcare-associated infections, and vaccine-preventable diseases, as well as consultation with local health departments regarding outbreaks and other communicable disease issues.

Dr. Barbara Porter-Spalding, DVM, MVPH

Swine Epidemiologist, Avian, Swine, Aquaculture Health Commodity Staff

U.S. Department of Agriculture, Animal and Plant Health Inspection Service, Veterinary Services

Dr. Barbara Porter-Spalding is an epidemiologist with the USDA, APHIS, Veterinary Services (VS), in Raleigh, North Carolina. She received her DVM from Michigan State University College of Veterinary Medicine in 1991 and her Masters of Veterinary Public Health from North Carolina State University in 2007. In her current position, Dr. Porter-Spalding serves as an Epidemiologist/Emergency Coordinator on the National Preparedness and Incident Coordination Staff. Until recently she served on the Swine Commodity Staff. Barbara has been on a National Incident Management Team since 2004.

Before joining APHIS, Dr. Porter-Spalding worked in a dairy practice in Pennsylvania. After spending 2 years in Morocco in the Peace Corps, she worked with the Food Safety and Inspection Service in North Dakota, joining VS as a field Veterinary Medical Officer in 1998. In 2000, Barbara became a Regional Epidemiologist in Raleigh, NC working on issues in poultry, swine, traceability and foreign animal disease investigations.

Michael E. Scott, MS

Deputy Director, Division of Waste Management

N.C. Department of Environmental Quality

Michael Scott received B.S. and M.S. degrees from North Carolina State University in Agronomy and is a graduate of the NCSU Natural Resources Leadership Institute. Michael has worked for the Department of Environment and Natural Resources for over 13 years previously serving as the Branch Head of the Composting and Land Application Branch and the Section Chief of the Solid Waste Section before becoming the Deputy Director of the Division of Waste Management in 2014. As the Deputy Director, Michael is responsible for several Division program areas (Brownfields, Safety, Information Technology and Public Information) while also assisting the Director with management of the Division's four sections (Solid Waste, Hazardous Waste, Superfund and Underground Storage Tanks).

Sharron Stewart, BS, Certified PM
Director, Emergency Programs Division
N.C. Department of Agriculture & Consumer Services

Sharron Stewart has been the Director of Emergency Programs since 2008 and has served on the NC State Emergency Response Commission and State Emergency Response Team for more than 7 years.

Michael Sprayberry, MA,
Director, N.C. Division of Emergency Management

Mr. Sprayberry is currently serving as Director of NC Division of Emergency Management. Director Sprayberry previously served as Operations Chief for the Division for approximately 8 years where he managed all aspects of resources and operations for multiple disasters here in North Carolina including Emergency Services, Search and Rescue, Infrastructure, and Human Services including pet sheltering initiatives. Prior to this Director Sprayberry served in the NC National Guard from which he retired.

Anita Valiani, MPH
Influenza Coordinator, Epidemiologist, Communicable Disease Branch
N.C. Department of Health and Human Services, Division of Public Health

Anita Valiani works with respiratory viral diseases, predominantly influenza, at NC Division of Public Health. She earned her Master's Degree in Public Health from Touro University in California and has been working with NC DPH since 2010. Although her primary focus is seasonal influenza she has worked on numerous outbreaks and projects within the communicable disease branch. Some of the other respiratory illnesses she works with are Middle East respiratory syndrome coronavirus (MERS-CoV), Enterovirus D68, and avian influenza. She also works in conjunction with CDC on unusual presentations of flu, enteroviruses and influenza surveillance. She maintains and manages the NC influenza sentinel provider program, which enhances our influenza surveillance in the state.

Dr. Scott Zimmerman, MPH, DrPH, HCLD (ABB)
Director, North Carolina State Laboratory of Public Health
N.C. Department of Health and Human Services, Division of Public Health

Dr. Scott Zimmerman currently serves as Director of North Carolina State Laboratory of Public Health (NCSLPH) in Raleigh, NC; NCSLPH provides laboratory diagnostic support to a variety of public health programs in the NC Department of Health and Human Services (DHHS) including Newborn Screening, Communicable Disease Control, Women's and Children's Health, and Environmental Health for the State of North Carolina. Prior to his appointment at NC State Public Health Lab, Dr. Zimmerman served as the Director of the Regional Public Health Laboratories in Buffalo, NY for 19 years and as the Responsible Official for the Western and Finger Lakes region's Laboratory Response Network (LRN) Emerging Infections and Biodefense Laboratory. Dr. Zimmerman obtained both his doctoral and master degrees from the University of North Carolina at Chapel Hill School of Public Health. His doctoral research was conducted at the Centers for Disease Control and Prevention (CDC) and focused on immune factors associated with *Mycoplasma hominis* infections in pregnant women and pregnancy outcomes. Dr. Zimmerman conducted postdoctoral work as a fellow at the Erie County Medical Center and State University of New York at Buffalo. His undergraduate education was obtained from Houghton College. Dr. Zimmerman currently maintains faculty appointments as Adjunct Assistant Professor at the University of North Carolina at Chapel Hill's Gillings School of Global Public Health and the University at Buffalo's Schools of Medicine and Public Health & Health Professions. He has authored numerous publications and has presented technical and public health lectures and seminars at locations across the United States.

ADDITIONAL RESOURCES

American Veterinary Medical Association (AVMA)

www.avma.org

The AVMA represents over 73,000 veterinarians in numerous practice settings. The organization's website includes scientific, member and public resources about a variety of animal and public health issues.

Centers for Disease Control and Prevention (CDC)

www.cdc.gov

The CDC is one of the major components of the US Department of Health and Human Services. The CDC's mission is to collaborate to create the expertise, information and tools that people and communities need to protect their health—through health promotion, prevention of disease, injury and disability, and preparedness for new health threats.

CDC, Emergency Preparedness & Response

<http://emergency.cdc.gov/>

This site is intended to increase the nation's ability to prepare for and respond to public health emergencies. The Emergency Preparedness and Response website provides a wide variety of resources about bioterrorism agents, chemical emergencies, radiation emergencies, mass casualties, natural disasters, severe weather, recent outbreaks and incidents.

CDC, One Health

www.cdc.gov/onehealth

The One Health concept recognizes that the health of humans is connected to the health of animals and the environment. CDC uses a One Health approach by working with physicians, ecologists, and veterinarians to monitor and control public health threats. We do this by learning about how diseases spread among people, animals, and the environment.

Duke Global Health Institute

<http://globalhealth.duke.edu/>

The Duke Global Health Institute was established in 2006 as a University-wide institute to coordinate, support, and implement Duke's interdisciplinary research, education, and service activities related to global health.

Duke Nicholas School of the Environment

<https://nicholas.duke.edu/>

The mission of Duke's Nicholas School of the Environment is creating knowledge and global leaders of consequence for a sustainable future. The Nicholas School applies its disciplinary strengths and basic research capabilities in the physical, biological, and social sciences to address three major and interrelated environmental issues facing society: Climate and Energy, Terrestrial and Marine Ecosystems, and Human Health and the Environment.

Food and Agriculture Organization of the United Nations (FAO)

www.fao.org

The mandate of the Food and Agriculture Organization of the United Nations is to improve nutrition, increase agricultural productivity, raise the standard of living in rural populations and contribute to global economic growth. Strategic objectives include: help eliminate hunger, food insecurity and malnutrition, make agriculture, forestry and fisheries more productive and sustainable, reduce rural poverty, enable inclusive and efficient agricultural and food systems, and increase the resilience of livelihoods from disasters.

Infectious Diseases Society of America (IDSA)

www.idsociety.org/Index.aspx

IDSA represents physicians, scientists and other health care professionals who specialize in infectious diseases. IDSA's purpose is to improve the health of individuals, communities and society by promoting excellence in patient care, education, research, public health and prevention relating to infectious diseases.

NC Communicable Disease Control Manual

<http://epi.publichealth.nc.gov/cd/lhds/manuals/cd/toc.html>

From NC DHHS Division of Public Health, the Communicable Disease Control Manual contains useful references including a contact list, a General Guide to Foodborne Diseases, and a chapter on each of North Carolina's reportable diseases.

**NC Department of Agriculture and Consumer Services (NCDA&CS)
Emergency Programs Division**

www.ncagr.gov/oep/

The Emergency Programs Division's mission is to reduce the vulnerability to, or the impact from, any disaster, disease or terrorist attack on the agriculture community of North Carolina. Their website contains resources for the public, veterinary and agricultural communities.

**NC Department of Agriculture and Consumer Services
Veterinary Division**

www.ncagr.gov/vet/index.htm

The Veterinary Division protects the health of the state's livestock and poultry population through the administration of regulatory animal health programs and its diagnostic laboratory system. Responsibilities include the surveillance, monitoring, control, and eradication of diseases; regulation of animal movements; inspections and testing on the farm and at markets and sales; providing diagnostic laboratory service to owners and their veterinarians; and conducting regulatory disease testing to facilitate interstate and export movement of animals and food products.

NC Department of Health and Human Services (NC DHHS)

www.ncdhhs.gov

The mission of NC DHHS, in collaboration with its partners, protects the health and safety of all North Carolinians and provides essential human services.

NC Division of Emergency Management (NCEM)

www.ncem.org

The NCEM website provides information on training opportunities, family preparedness and links to other resources.

NC Division of Public Health, Public Health Preparedness & Response

<http://epi.publichealth.nc.gov/phpr/>

Public Health Preparedness and Response (PHP&R) is the branch of the North Carolina Division of Public Health that monitors and strengthens the abilities of our public health and healthcare systems to protect the public health in disaster situations such as disease epidemics, chemical and radiological releases, severe weather and natural disasters.

NC Division of Public Health, State Laboratory of Public Health (SLPH)

<http://slph.state.nc.us/>

The State Laboratory of Public Health provides certain medical and environmental laboratory services (testing, consultation and training) to public and private health provider organizations responsible for the promotion, protection and assurance of the health of North Carolina citizens.

NC Ready

<http://readync.org/EN/Index.html>

The State's preparedness link for all things related to Disaster Preparedness, planning, staying informed and recovering. Try out the State's ReadyNC mobile app.

NC SART

www.sartusa.org

SART is an interagency state organization dedicated to preparing, planning, responding and recovering during animal and agricultural emergencies in the United States. The national website provides links to state websites, news events and volunteer and training opportunities.

NC State University, College of Veterinary Medicine

<http://www.cvm.ncsu.edu>

The mission of the College of Veterinary Medicine is to enhance the career and life success of students, staff, faculty, and veterinary professionals through initiatives in curriculum and lifelong learning, development of leadership and entrepreneurial skills, and partnerships with the community. College programs in animal health and wellness improve animal and human health and well being, and contribute to the economy of North Carolina and beyond through education, research (medical discovery), service, extension and engagement. North Carolina State University's College of Veterinary Medicine is ranked third among the nation's 28 colleges of veterinary medicine in the current survey by U.S. News and World Report.

North Carolina Veterinary Response Corps (NCVRC)

<http://www.ncagr.gov/oep/Veterinary/VetCorps.htm>

Through this program, veterinarians and veterinary technicians are trained to improve preparedness and response to disaster events that affect animals. The NCVRC is a program of the NC Department of Agriculture & Consumer Services.

North Carolina Wildlife Resource Commission (WRC)

www.ncwildlife.org

The WRC has been dedicated to the wise use, conservation, and management of the state's fish and wildlife resources.

OIE—World Organization for Animal Health

www.oie.int/eng/en_index.htm

The need to fight animal diseases at the global level led to the creation of the Office International des Epizooties (OIE) through the International Agreement signed on January 25, 1924. In May 2003, the Office became the World Organization for Animal Health, but kept its historical acronym OIE. The OIE is the intergovernmental organization responsible for improving animal health worldwide.

Southeastern Cooperative Wildlife Disease Study (SCWDS)

www.uga.edu/scwds/

The state-federal cooperative structure of SCWDS is the most cost efficient means of providing high quality wildlife disease expertise to State and Federal Agencies responsible for this nation's wildlife and domestic livestock resources.

United States ARMY Veterinary Corps

<http://www.goarmy.com/careers-and-jobs/amedd-categories/veterinary-corps-jobs.html>

The Veterinary Corps website explains the benefits and responsibilities of being an Army veterinarian.

United States Department of Agriculture (USDA)

Animal and Plant Health Inspection Service (APHIS)

www.aphis.usda.gov

The APHIS provides leadership in ensuring the health and care of animals and plants. The agency improves agricultural productivity and competitiveness and contributes to the national economy and the public health.

USDA Wildlife Services

www.aphis.usda.gov/wildlife_damage

The USDA Wildlife Services provides federal leadership expertise to create a balance that allows people and wildlife to coexist peacefully.

US Department of Health & Human Services (DHHS)

www.hhs.gov/about/

The DHHS is the United States government's principal agency for protecting the health of all Americans and providing essential human services, especially for those who are least able to help themselves.

US Department of Health & Human Services, US Food and Drug Administration (FDA)

<http://www.fda.gov>

This website provides links to information about FDA regulatory mission and many topics related to consumer education and animal drug/product development and approvals.

US Department of Homeland Security (DHS)

<http://www.dhs.gov>

The DHS website provides information for citizens, first responders, businesses and governments on homeland security and natural disaster emergencies for response personnel and the public.

US Environmental Protection Agency (EPA)

<http://www.epa.gov/>

The mission of EPA is to protect human health and the environment. To accomplish this mission, EPA develops and enforces environmental regulations, gives grants, studies environmental issues, and teaches the public about protecting the environment.

University of North Carolina, Center for Infectious Diseases

<http://www.med.unc.edu/infdis/>

The Center for Infectious Diseases at the University of North Carolina at Chapel Hill is an internationally recognized leader in infectious disease research and training. The center is committed to a broad range of clinical care, research and teaching activities in North Carolina and around the world. ID faculty and staff are extensively involved in prevention programs, from vaccination outreach to civilian biodefense preparedness.

University of North Carolina, Center for Public Health Preparedness (UNC CPHP)

cphp.sph.unc.edu

Formerly known as the North Carolina Center for Public Health Preparedness, the UNC CPHP brings together faculty and staff from the UNC Preparedness and Emergency Response Learning Center (PERLC), the North Carolina Preparedness and Emergency Response Research Center (NCPERRC) and projects on pandemic influenza planning, emerging and re-emerging infectious diseases, emergency law, public health surveillance, mental health preparedness, and applied epidemiology.

University of North Carolina Gillings School of Global Public Health

<http://sph.unc.edu/>

The mission of the UNC Gillings School of Global Public Health is to improve public health, promote individual well-being, and eliminate health disparities across North Carolina and around the world. Ranked in 2011 as the #1 public school of public health and the #2 school of public health overall by U.S. News & World Report.

University of North Carolina, Institute for Global Health and Infectious Diseases

<http://globalhealth.unc.edu/>

UNC-Chapel Hill is committed to improving health in North Carolina and around the world. The UNC Institute for Global Health & Infectious Diseases (IGHID) seeks to advance this goal by promoting global health research, teaching, and service activities across campus. IGHID recognizes that the most pressing health challenges and emerging diseases know no boundaries: global health is local health. IGHID fosters an environment in which faculty, students, and the broader university community work together in unique and innovative ways to address critical issues in global health, and to shape the next generation of global health leaders.

World Health Organization (WHO)

www.who.int/en

The WHO is the directing and coordinating authority for health within the United Nations system. It is responsible for providing leadership on global health matters, shaping the health research agenda, setting norms and standards, articulating evidence-based policy options, providing technical support to countries and monitoring and assessing health trends.



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