

One Health Newsletter

A quarterly newsletter highlighting the interconnectedness of animal and human health



Special Edition

One Health Initiative Task Force Report

August 2008

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This newsletter was created to lend support to the One Health Initiative and is dedicated to enhancing the integration of animal, human, and environmental health for the benefit of all.

AVMA One Health Initiative Task Force's Final Report: a Call for World Health through Collaboration

Mary Echols, DVM, MPH, Editor

When it was established in May of 2007, the One Health Initiative Task Force was charged with the mission of defining "One Health" and of outlining a plan to facilitate collaboration and cooperation among health science professionals. Over the next year, the Task Force, a group of thirteen key leaders from public health, human medicine, environmental health, veterinary medicine, education and industry, developed a set of recommendations and strategic actions to support and expand the One Health concept. They released their final report on July 15, 2008. This special issue of the One Health Newsletter is dedicated to publicizing the release of that report.

The Task Force Report underscores that partnerships are critical to the success of One Health and calls for the collaborative efforts of multiple disciplines working locally, nationally and globally to attain optimal health for animals, people and the environment.

In the Executive Summary of the report, Dr. Lonnie King, Director of the National Center for Zoonotic, Vector-borne, and Enteric Disease, Centers for Disease Control and Prevention and Chair of the One Health Initiative Task Force issued a call to action:

"We now stand at the precipice of health care transformation where disease prevention and health promotion in people, animals, and our environment have become a critical strategic need. Every profession has its defining moments-special points in time when talented individuals work cooperatively to influence the course of events for generations to come. For veterinary medicine and the other health sciences, that time is now."

The Executive Summary of the report appeared in the July 15, 2008 issue of the Journal of the American Veterinary Medical Association (JAVMA) http://www.avma.org/onehealth/executive_summary.asp. The full report can be accessed at: www.avma.org/onehealth/.



An Interview with Ronald M. Davis, MD, immediate past president, AMA, and AMA liaison to the AVMA One Health Taskforce - July 2008

Carina Blackmore, DVM, PhD



Ronald M. Davis, MD

The immediate past president of the American Medical Association

Dr. Ron Davis and Dr. Roger Mahr, working with Dr. Laura Kahn and other veterinary and public health colleagues, introduced a One Health resolution to the AMA House of Delegates in June 2007.

Dr. Davis served as the AMA liaison to the AVMA One Health Taskforce.

1. What was it about One Health that intrigued you enough to join the AVMA One Health Taskforce?

I met with Dr. Roger Mahr in East Lansing in March of 2007. He outlined his vision for One Health and it resonated with me. With my public health and epidemiology background, I clearly saw the overlap between animal and human health in the areas of emerging infectious diseases and zoonotic disease surveillance. Also I was just launching a project to educate pet owners about the risks associated with exposure to secondhand smoke. Several studies show or suggest that pets whose owners smoke have a higher risk of acquiring certain types of cancer. Our hypothesis was that pet owners may be willing to quit smoking or ban smoking inside the home to prevent disease in their pets. I also saw an opportunity to reduce obesity among humans and their pets by promoting the benefits of dog walks. Working with Dr. Laura Kahn and veterinary and public health colleagues, we introduced a One Health resolution to the AMA House of Delegates in June 2007, the resolution passed, and I was invited to serve as the AMA liaison to the AVMA One Health Taskforce.



Ronald Davis, Roger Mahr and Laura Kahn
June 2007 (Courtesy Joseph L. Murphy)

2. Is (How is) one Health relevant to the practicing clinician/physician?

Of the roughly 1,500 diseases now recognized in humans, about 60% are due to multi-host pathogens that move across species. It is very important for physicians to take careful histories to make sure they don't miss a potential animal-human connection.

3. Is there a group of physicians for whom One Health is of particular importance? Others?

A key group is physicians on the frontlines of health care, including primary care physicians—most notably family physicians, internists, and pediatricians—and emergency medicine specialists. Other specialties with One Health links include infectious disease specialists and preventive medicine and public health physicians.

“I congratulate the leaders who have made significant contributions over many years to gather support for the One Health initiative.....

.....These include Drs. Roger Mahr, Lonnie King, Bruce Kaplan, Tom Monath, and Laura Kahn, and all the people who came before them; the AVMA for investing resources towards the effort; and the AVMA One Health Taskforce.”

“I hope we now have reached a tipping point for the campaign to move forward and become self-sustaining.”

4. What do you think AMA's future role will be in the One Health effort?

It is under consideration. AVMA has invited AMA to be on the One Health steering committee. In May of this year, the AMA approached the World Medical Association (WMA) with a resolution to establish a dialogue on One Health with the World Veterinary Association. The resolution was approved by the WMA council for transmittal to the 90 national medical associations that are part of the WMA, for their review and comment. The resolution will be acted on at the WMA's general assembly meeting in Seoul, Korea, in October of 2008.

5. What advice do you have for physicians with an interest in One Health? How can they get involved?

Establish a dialogue between local and state medical and veterinary medical associations. Organize joint meetings or symposia on One Health involving the medical, veterinary, and public health communities. Encourage individual interactions between practicing physicians and veterinarians and between medical and veterinary schools.

6. What is your personal vision for One Health?

I support the recommendations made by the AVMA Taskforce and hope these will be implemented.

7. What action(s) would you advise for veterinarians in private practice, academe, public health, government and biomedical research with regard to One Health?

Reach out to your physician colleagues as individuals, through veterinary schools and your professional organizations.

8. Any parting thoughts or advice?

I congratulate the leaders who have made significant contributions over many years to gather support for the One Health initiative. These include Drs. Roger Mahr, Lonnie King, Bruce Kaplan, Tom Monath, and Laura Kahn, and all the people who came before them; AVMA for investing resources towards the effort; and the AVMA One Health Taskforce. I hope we now have reached a tipping point for the campaign to move forward and become self-sustaining.

Dr. Carina Blackmore served on the AVMA One Health Initiative Task Force, is a member of the One Health Newsletter editorial board and is Florida's state public health veterinarian.



An Interview with Dr. James H. Steele, DVM, MPH - July 2008

Carina Blackmore, DVM, PhD

James H. Steele, DVM, MPH is the doyen of veterinary public health worldwide. Dr. Steele, among many other accomplishments, was the founder of the veterinary public health division at CDC, assistant Surgeon General of the USPHS, and is Professor Emeritus (Ret.) of the school of public health, University of Texas. He has published numerous public health articles in scientific journals over the last 60 years and written/edited/co-edited several books including the Handbook of Zoonoses (Editor-in-Chief, George W. Beran, DVM, PhD).

How did you first get involved in veterinary public health?

I grew up in Chicago and graduated from high school in 1930. My mother wanted me to become a lawyer, but lawyers, along with many other professionals, had difficulty finding work during the depression. I worked for a few years to support my family but by 1937 both my parents were dead. I had no obligations and headed to Michigan State University with my last pay check in my pocket. I had an interest in preserving the environment and enrolled as a forestry major. I quickly discovered forestry was not for me. My cousin, who was enrolled in veterinary school, convinced me to give veterinary medicine a try. I needed to support myself and got a job in the brucella laboratory where I washed glassware, made brucella antigen and ran tests. I also participated in the investigation of a brucella outbreak in the class ahead of me. I became active in the junior AVMA and got to know Dean Ward Giltner, Michigan State College of Veterinary Medicine who had a public health and bacteriology background. He approached me and asked me whether I would consider a career in public health. To help me make up my mind, he arranged an internship with C. C. Young, who headed up the laboratory at the Michigan Department of Health at the time. I spent one semester at the health department making vaccinia vaccines. He also let me know that Harvard University Masters of Public Health (MPH) program would be opening up a spot for veterinarians and asked me to apply after I graduated from Michigan State University's veterinary school with a D.V.M. degree. I applied and received a scholarship from Harvard University in September, after receiving my M.P.H. degree from Harvard, I took a job as a sanitarian with the Public Health Service in Columbus, Ohio which led to my long career leading up to becoming the first Assistant Surgeon General for Veterinary Affairs.

Can you please describe your relationship with the legendary Alex Langmuir while you were at CDC?

Alexander Langmuir, MD, credited with starting the first epidemiology section at CDC, and the Epidemic Intelligence Service (EIS) training program was very interested in and supportive of zoonotic disease epidemiology and veterinary public health. He provided active support to the rabies vaccine development program and encouraged deployment of veterinarians as part of the epidemiology teams investigating zoonotic diseases. He integrated zoonotic disease epidemiological case studies into the EIS training early on and in 1953 he



(Image provided by Dr. Craig Carter)

1968 Photo of Dr. James H. Steele three years prior to leaving his position as the first Chief, Veterinary Public Health Division, CDC, Atlanta, GA.

James H. Steele, DVM, MPH, the doyen of veterinary public health worldwide, was the founder of the veterinary public health division at CDC.



Alexander Langmuir, MD, MPH



D. A. Henderson, MD, MPH

Recognizing that rabies in stray dogs was one of the most important veterinary public health problems of the time, Dr. Steele worked towards the development of a safe, effective, attenuated rabies vaccine and supported efforts to eliminate canine rabies.



James H. Steele, DVM, MPH

In 2007 the CDC announced the successful eradication of canine rabies from the United States.

asked me to recruit some competent veterinarians to participate in the program. Today EIS-trained veterinarians are integrated into all activities of the Public Health Service, state health departments, agricultural agencies, colleges and universities, other countries, and international organizations.

What was your relationship with DA Henderson, the man credited with wiping out smallpox worldwide?

Langmuir told me DA Henderson, MD, was one of the finest EIS officers he had encountered. The respect was mutual because Langmuir spoke highly of me to Henderson as well. At one point I ran into DA Henderson in the hallway. DA Henderson asked me "Jim, is there an animal reservoir of Variola major or minor"? I told him no and he spent the next 40 years trying to disprove me! In 1998-1999 I traveled to Tromsø in northern Norway. I visited the ecological research center there and found a PhD thesis in a show case that intrigued me. It discussed vaccinia virus infections in rodents from northern Scandinavia and hypothesized that antibodies against the rodent vaccinia strain may have prevented smallpox from sweeping northern Europe. I gave a copy of the dissertation to Dr. Henderson.

What do you believe is your single most important contribution to One Health – your legacy?

The canine rabies vaccination program. After the Second World War was over in 1945, I recognized rabid stray dogs as one of the most important veterinary public health problems at the time. There were no effective vaccines, the inactivated vaccine licensed at the time had to be injected twice each year. I was approached by Dr. Harold Cox of Lederle Laboratory who had developed an attenuated rabies vaccine. I was able to help implement a five year study with a panel of experts to prove that the new vaccine was effective and safe. After the study I told the Surgeon General that with the new vaccine it will be possible to eradicate canine rabies in the United States. I have since supported the USDA's effort to eradicate both brucellosis and rabies.

What advice do you have for young veterinarians with an interest in One Health?

Make sure you know the history of public health and veterinary public health. You need to understand the population pressures and the population deficits. Work in a competitive area that deals with problems of significance to society and the veterinary field. Diseases the community can identify with, within your professional capacity. You need to have a business plan to satisfy the investors. Make sure you are identified as both a veterinary and public health authority when you arrive in the community. In addition - become Public Health Service Commission Corp members!



ONE HEALTH OUR COLLABORATIVE RESPONSIBILITY

Roger K. Mahr, DVM
AVMA Past President

Serving as president of the American Veterinary Medical Association (AVMA) and representing the veterinary medical profession around the world was, for me, the honor of a lifetime.

As I prepared to assume the AVMA presidency, I focused on the AVMA Mission, "Improving Animal and Human Health, Advancing the Veterinary Medical Profession." I also contemplated the following question: What is the value and responsibility of the veterinary medical profession to our global society?

I truly believe that animal and public health are at a crossroads. No other profession has as much impact on the health of both animals and people. The convergence of animal, human and environmental health dictates that the "one health" concept be embraced, and that the veterinary medical profession take on the responsibility of assuming a major leadership role in that effort.

It was upon that basis of value to our global society, and that sense of responsibility to the future, that I revealed my vision for a One Health Initiative in July of 2006 as I became AVMA president.

I have traveled the world meeting and talking with veterinarians, physicians, public health professionals, academicians, students, government officials, legislators and other stakeholders about the interrelationship between all health science related professions.

One of the most rewarding relationships which I established during my presidency was with American Medical Association (AMA) President Ronald M. Davis, MD. Soon after I was installed as AVMA president and Dr. Davis was elected AMA president-elect, I contacted and met with him to share my vision for a One Health Initiative.

As a public health physician and a preventative medicine specialist, Dr. Davis has been a prominent voice on public health issues, including tobacco use, obesity, and vaccinations. During our meeting, Dr. Davis readily recognized the value of collaboration between our respective professions. Subsequently, I invited him to be a guest speaker at the AVMA Annual Convention in July of 2007.

On April 14, 2007 the AVMA Executive Board took official action to establish the One Health Initiative by approving my recommendation to establish the AVMA One Health Initiative Task Force. The charge to the Task Force was to study the feasibility of a One Health Initiative that would facilitate collaboration and cooperation among health science professions, academic institutions, governmental agencies, and industries and that would help with the assessment, treatment, and prevention of cross-species disease transmission and mutually

"The convergence of animal, human and environmental health dictates that the "one health" concept be embraced."



Roger K. Mahr, DVM
AVMA Past President

(Photo courtesy Scott Nolen)
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"I truly believe that animal and public health are at a crossroads."

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Ronald M. Davis, MD

“One of the most rewarding relationships which I established during my presidency was with American Medical Association (AMA) President Ronald M. Davis, MD.”

“It was indeed a privilege to be invited by Dr. Davis to the AMA Annual Meeting and granted the opportunity to testify before the AMA House of Delegates.”

prevalent, but non-transmitted, human and animal diseases and medical conditions.

In June of 2007, following the leadership of Dr. Davis, a resolution was introduced to the AMA House of Delegates co-sponsored by the American College of Preventative Medicine, American College of Occupational and Environmental Health, American Association of Public Health Physicians, and Academy of Pharmaceutical Physicians and Investigators. The resolution called for the AMA to support a One Health Initiative designed to promote collaboration between human and veterinary medicine and to engage in a dialogue with the AVMA to discuss means of enhancing collaboration in medical education, clinical care, public health and biomedical research.

It was indeed a privilege to be invited by Dr. Davis to the AMA Annual Meeting and granted the opportunity to testify before the AMA House of Delegates Reference Committee which considered this resolution. I was extremely pleased that the AMA House of Delegates passed this resolution unanimously. I am particularly grateful for the leadership taken by Dr. Davis following our initial contact and communication.



Roger Mahr speaks in favor of the One Health resolution in front of the AMA House of Delegates. (Photo courtesy of Ted Grudzinski, American Medical Association)

At the AMA Annual Meeting, Dr. Lonnie King, director of the National Center for Zoonotic, Vector-Borne and Enteric Diseases, and I were invited to address the AMA Student Medical Section concerning the integration of animal, human and environmental health. Both Dr. King, who subsequently served as the chair of the One Health Initiative Task Force, and I were thrilled to have this opportunity since nurturing student involvement and leadership in the One Health Initiative is vitally important to the success of this initiative as well as the future of both professions.

The Student AVMA has already established a One Health Challenge program, which last year supported World Rabies Day at almost all of the U.S. veterinary medical colleges. The students enthusiastically supported and participated in events promoting rabies prevention through educational symposia, community fundraisers, and athletic events.

Serving as valuable members of the One Health Initiative Task Force were the Student AVMA President Justin Sabota, who recently received his Doctor of



Julie L. Gerberding, MD, MPH

Director of the Centers for
Disease Control and Prevention

Veterinarians and physicians must present a seamless system in order to protect human and animal health in a world that grows smaller every day.



Roger Mahr, DVM

“By uniting our professions with a common focus, we can convert our 21st century challenges into opportunities for the benefit of our global society.”

Veterinary Medicine degree from the University of Florida, and Travis Meyer, a Pennsylvania State University third-year medical student.

It was extremely gratifying that last year’s 144th Annual AVMA Convention provided a venue at our nation’s capital for the culmination of a multitude of actions and presentations, which not only supported the one health concept and created further momentum for the One Health Initiative. The one health concept was highlighted during the opening session when Julie L. Gerberding, MD, director of the Centers for Disease Control and Prevention and administrator of the Agency for Toxic Substances and Disease Registry, gave the keynote address. Dr. Gerberding spoke eloquently to the fact that veterinarians and physicians must present a seamless system in order to protect human and animal health in a world that grows smaller every day.

Special sessions at the convention centered on the One Health concept. One focused on emerging global animal health threats and included a presentation by U.S. Ambassador John E. Lange, who heads the State Department’s Avian Influenza Action Group representing our nation in discussions surrounding avian and pandemic influenza. Another session featured Anthony S. Fauci, MD, the renowned researcher on AIDS and HIV, who is director of the National Institute of Allergy and Infectious Diseases.

At the convention Dr. Davis and I participated in a joint press conference concerning the One Health Initiative. Following the press conference we both presented together in a collaborative session, “One Medicine – Fly Under One Flag.” We were joined at this session by Jarbas Barbosa, MD, head of Health Surveillance and Disease Management of the Pan American Health Organization.

The One Health Initiative Task Force was comprised of thirteen visionary individuals, including three physicians, all with an appreciation for the one health concept and all of whom are excellent collaborators and communicators. Serving as liaisons to the Task Force were myself, Dr. Davis, and American Public Health Association (APHA) Past President Jay H. Glasser, PhD, representing the AVMA, AMA and APHA, respectively. The Task Force completed its charge on June 5, 2008 by presenting a final report detailing its findings and recommendations to the AVMA Executive Board.

The twelve recommendations presented by the Task Force form the basic outline for a proposed One Health Initiative action plan which calls for the collaborative efforts of multiple disciplines working locally, nationally, and globally to attain optimal health for people, animals, and our environment. While the AVMA and AMA plan to continue to be leading key stakeholders in this effort, the success of these recommendations will depend upon the collaboration of various health science professions, academic institutions, governmental agencies, non-governmental organizations, and industries. I envision the success of this collaboration will lead to an integrated national strategy, and ultimately an international strategy, for one health.

It has been very heartening to experience so much commitment of support for the One Health Initiative during the past two years. By uniting our professions

“One Health...that, my colleagues, translates to value and responsibility.”

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Public Health Reports.



Original issue data:
May/June 2008, Volume 123,
Issue Number 3



Lonnie King, DVM, MS, MPA

“The greatest asset for us in the 21st century is collaboration through strategic planning and effective teaming.”

with a common focus, we can convert our 21st century challenges into opportunities for the benefit of our global society.

It is now my fervent hope and vision that all of us as professionals engaged in the health sciences will assume our collaborative responsibility to protect and promote our immeasurable value, to utilize that value to its fullest, and to make sure that our future is a promising future, a future of even greater value.

One Health...that, my colleagues, translates to value and responsibility.

Dr. Roger K. Mahr is the American Veterinary Medical Association Past President and served as the AVMA liaison to the One Health Initiative Task Force.



Collaboration in Public Health: A New Global Imperative

Lonnie J. King, DVM, MS, MPA

At the new National Center for Zoonotic, Vector-Borne, and Enteric Diseases at the Centers for Disease Control and Prevention (CDC), we are starting to focus on the concept of infectious disease ecology. Our goal is to maximize public health and safety nationally and internationally through the prevention and control of disease, disability, and death caused by zoonotic, vector-borne, foodborne, waterborne, mycotic, and related infections. To accomplish this goal, we need to change our thinking and invite the partnership of groups such as the Association of American Veterinary Medical Colleges and the Association of Schools of Public Health.

We need to understand the new factors of emergence that are creating the conditions for a perfect microbial storm. We know that approximately 75% of new emerging human diseases are zoonotic, and new zoonoses are going to be the “new normal” for infectious diseases. Foodborne and waterborne diseases are part of the new normal and are expected to increase in the future as well. So why is CDC interested in this? Why should all of you—health professionals, academics, and students—be interested? Because most significant global epidemics are zoonotic and require an ecological perspective to understand them and to prepare for the next problem.

Think of the movement of people and products, globalization trends, and moving vectors. One billion people will soon cross international borders every year. Thirty-seven thousand animals cross into the U.S. every day from other countries. Already, 40% of all trade and agriculture occurs between developed and developing countries, and 20% of all U.S. imports are food products. I think it was just two years ago that we started to import more agriculture goods into the U.S. than we exported. It is now a global food supply.

Another major consideration is human population growth. We’re pushing people together in urbanization areas where 60% of the world’s population, by 2030, may actually be living in sites and mega-cities, creating new environments.

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Also, what is going to happen to the environment when we add food animals to these mega-cities? We also need to look at climate and weather changes and what to do about them. Climate changes can modify agriculture production, influence the migration of animals, and change ecosystems. For example, we know that leptospirosis, Rift Valley Fever, and hantavirus are three zoonoses that are impacted by the weather pattern of El Nino and Southern Oscillation, especially with flooding conditions and conditions of producing more food for rodents that are the hosts for hanta infections. Zoonotic waterborne illnesses are also on the rise, and we think they will be a critical issue in the next decade.

We live in the global world and there are global implications of local problems and the need for critical linkages and partnerships. I think we have learned a lesson from the severe acute respiratory syndrome outbreak and how to use a systems approach to undertake our mission. We learned how countries can get together and how scientists, researchers, and public health practitioners can work together.

Our mission is changing from a focus on individual diseases and disciplines to looking at health across the lifetime. Multidisciplinary approaches and a whole new group of core competencies are needed to be successful. The greatest asset for us in the 21st century is collaboration through strategic planning and effective teaming.

Dr. Lonnie J. King is senior veterinarian at the Centers for Disease Control and Prevention and the director of the newly formed National Center for Zoonotic, Vector-Borne, and Enteric Diseases (ZVED). Dr. King served as Chair of the One Health Initiative Task Force.



Coming Events:

- **Public Health Reports and the Association of American Veterinary Medical Colleges**

"Meet the Author!" web cast on
Veterinary Medicine and Public Health

Friday, September 5 at 2:30 p.m.(EST)

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

- **Sixth Annual "One Medicine" Symposium**

Durham, North Carolina

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