



# “One Health”

Understanding the link between human,  
animal, and environmental health.

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“Between animal and human medicine there is no diving line – nor should there be.”

-Rudolf Virchow



# History



- 75 % of emerging diseases in the past 30 years have been zoonotic.
- “One Medicine” – Dr. Calvin Schwabe, Veterinary Medicine and Human Health. 1984

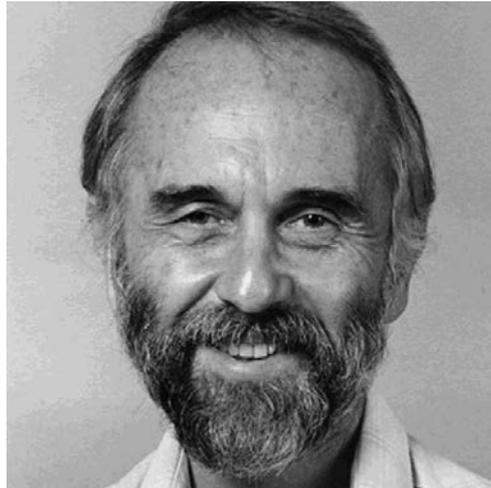


Photo courtesy of UC Davis credit CDC

# The Manhattan Principles



## One World, One Health: Building Interdisciplinary Bridges to Health in a “Globalized World”

2004, Wildlife Conservation Society and The Rockefeller University

1. **Recognizing the link** between human, domestic animal, and wildlife health, and the threat disease poses to people, their food supplies and economies, and the biodiversity essential to maintaining the healthy environments and functioning ecosystems we all require.
2. **Recognizing that decisions regarding land and water use have real implications for health.** Alterations in the resilience of ecosystems and shifts in patterns of disease emergence and spread manifest themselves when we fail to recognize this relationship.

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3. Including **wildlife health science as an essential component** of global disease prevention, surveillance, monitoring, control, and mitigation.
4. Recognizing that human health programs can greatly contribute to conservation efforts.
5. Devising **adaptive, holistic, and forward-looking approaches** to the prevention, surveillance, monitoring, control, and mitigation of emerging and resurging diseases that **fully account for the complex interconnections among species.**
6. Seeking opportunities to **fully integrate biodiversity conservation perspectives and human needs** (including those related to domestic animal health) when developing solutions to infectious disease threats.



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7. Reducing demand for, and better regulating, the **international** live wildlife and bushmeat trade to:

- Protect wildlife populations
- Lessen the risks of disease movement, cross-species transmission, and the development of novel pathogen-host relationships.

The costs of this worldwide trade in terms of impacts on public health, agriculture, and conservation are enormous, and the global community must address this trade as the real threat it is to global socioeconomic security.

8. Restricting the mass culling of free-ranging wildlife species for disease control to situations where there is a **multidisciplinary, international scientific consensus** that a wildlife population poses an urgent, significant threat to human health, food safety, or wildlife health more broadly.

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9. Increasing investment in the global human and animal health infrastructure commensurate with the serious nature of emerging and resurging disease **threats to people, domestic animals and wildlife**. Enhanced capacity for global human and animal health surveillance and for clear, timely information-sharing (that takes language barriers into account) can only **help improve coordination** of responses among governmental and nongovernmental agencies, public and animal health institutions, vaccine / pharmaceutical manufacturers, and other stakeholders.
10. **Forming collaborative relationships** among governments, local people, and the private and public (i.e. non-profit) sectors to meet the challenges of global health and biodiversity conservation.

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11. Providing adequate resources and support for global wildlife health surveillance networks that **exchange disease information** with the public health and agricultural animal health communities as part of early warning systems for the emergence and resurgence of disease threats.
  
12. Investing in educating and raising awareness among the world's people and in influencing the policy process to increase recognition that we must better **understand the relationships between health and ecosystem** integrity to succeed in improving prospects for a healthier planet.

# Goals



- Synergize with health practitioners, scientists, environmental managers and develop multidisciplinary approach to combat disease.
- Better prepare us for a broad array of threats to people, animals, or environments.
- Achieve optimal health outcomes for people, animals, and the environment.





# One Health In Action



“Lead Poisoning Investigation in Northern Nigeria”. CDC. October 25, 2016.

In 2010, ducks started to disappear in northern Nigeria.

No one thought it was important at the time.

In May 2010, hundreds of children became sick. Symptoms included vomiting, abdominal pain, headaches, and seizures. 25% of the children had died in the past year.

A team from the CDC, WHO, and Nigerian health officials traveled to the northern villages and began an investigation.





# Outcome



The team found:

- Unsafe levels of lead in many of the homes and water supplies from community wells.
- Children in both villages had dangerously high levels of blood.
- Disappearing ducks was an early warning sign.
- The importance of education in resolving the issue.

Also, mining was made safer for the communities.



# Conclusion

- What role do you play in protecting health?
- What can you do to increase collaboration between disciplines?





# More Info

- <http://www.cdc.gov/onehealth/index.html>
- [www.avma.org/KB/Resources/references/pages/one-health.aspx](http://www.avma.org/KB/Resources/references/pages/one-health.aspx)
- [https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/SA\\_One\\_Health](https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/SA_One_Health)
- <https://www.usda.gov/wps/portal/usda/usdahome?navid=onehealth>
- <http://www.onehealthinitiative.com>

