



IMPLEMENTING ONE HEALTH: AN ACADEMIC PERSPECTIVE

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Stone Mountain Meeting

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AN ACADEMIC PERSPECTIVE

- Graduate Level One Health Course
- Undergraduate Level One Health Course
- Advantages/Disadvantages
- Take Home Messages
- One Health Journal



MOUNT SINAI SCHOOL OF MEDICINE



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COURSE

- Breaking Barriers Conference Sept. 2005 at Princeton University
- Spring 2006 Elective Course in Graduate MPH Program
- Team Taught: Dr. Mary Bussell, Dr. Reginald Miller, myself
 - Course met 1 ½ hours, once/week, 8 weeks
 - Students: 10 medical and 3 graduate students
 - Guest Lecturers
 - Midterm and Final Examinations
 - Students gave Powerpoint Presentations



TOPICS AND SPEAKERS

- Influenza—Adolfo Garcia-Sastre PhD, Dept. of Microbiology, MSSM
- West Nile Virus—Annie Fine MD, New York City Dept. of Health
- Bovine Spongiform Encephalopathy—Gary Smith, PhD, UPenn School of Veterinary Medicine
- Exotic Animal Disease Surveillance—Roxanne Mullaney DVM, USDA
- Zoonoses of Laboratory Animals—Reginald Miller DVM, MSSM
- “One Medicine” Zoonoses as a Global Issue—Nathan Powell DVM, CDC



STUDENT PRESENTATION TOPICS

- Zoonotic threats in immunosuppressed populations
- Influenza: The human-animal connection
- Eating bushmeat and the transmission of zoonotic diseases: the HIV/AIDS story
- Emerging zoonotic diseases in Asia: SARS
- Rabies in the U.S.: Factors in its spread
- The exotic pet trade: The monkeypox story
- Weather patterns, field mice, and the spread of Hanta virus



STUDENT EVALUATIONS

- Strengths: “Variety of topics,” “Interesting and overall well taught,” “Excellent book, made good use of different lecturer’s expertise,” “A great course overall!”
- Weaknesses: “Too much on influenza,” “Some repetition of topics, too much on avian influenza,” “more continuity between lectures,” “at times, guest speakers presented material at a level beyond what we understood,” “the powerpoints should be posted.”



PRINCETON UNIVERSITY



PRINCETON UNIVERSITY COURSE

- “When Cows Go Crazy”
- Freshman Seminars at Princeton University
- Seminar Format/Up to 15 Students
- Met 1.3 hours twice/week, 12 weeks
- Guest Lecturers
- Weekly One Page Papers
- Final Paper/ Powerpoint Presentation
- Course Website:

[http://www.princeton.edu/~lkahn/When Cows Go Crazy.html](http://www.princeton.edu/~lkahn/When_Cows_Go_Crazy.html)



COURSE TOPICS

- Historical Overview
- Introduction to public health and epidemiology
- Introduction to Zoonoses (Wildlife), (Livestock and Pets)—Andy Dobson PhD, Ecology and Evolutionary Biology (EEB)
- Comparison of Physician and Veterinarian Training—Leslie Reperant DVM, PhD candidate in EEB
- Human and Animal Health Infrastructures (National and Global) Bob Bokma DVM, USDA and Alonso Aguirre DVM, Wildlife Trust
- West Nile Virus—Annie Fine MD, NYC DOH
- BSE—Gary Smith PhD, UPenn School of Veterinary Medicine
- Leaderships in One Health—Drs. Tom Monath, Paul Klotman, Dean Joan Hendricks.
- Monkeypox Outbreak in the U.S. Midwest



EXAMPLES OF WEEKLY QUESTIONS

- Do you think people should kiss their pets and share their beds with them? Why/why not?
- Why do you think some kings/emperors/aristocrats showed more affection and care to their pets than to other humans?
- Why did some physicians believe that studying animal diseases was undignified? Do you think this attitude might persist today? Why/why not?
- How did human settlements affect mosquito evolution and adaptation?
- Do you think malaria could be eradicated today? Why/why not?
- Can you think of ways that industry and public health interests might be protected at the same time? Or are they mutually exclusive?
- What changes in the agricultural industry possibly contributed to the emergence of BSE in the early 1980's in the U.K.?
- How might the U.S. address the illegal trade of exotic animals?



STUDENTS' PRESENTATIONS AND PAPERS

- Nipah Outbreak 1999: Meat and the Developing World in the 21st Century
- 1999 NYC West Nile Virus: How to Improve Communication Relations and Laboratory Capabilities for Future Outbreaks of Unknown Causes
- 2010 Rabies Outbreak in New York City
- Zimbabwe: Corruption in the Time of Cholera
- Lyme Disease in an Environmentally Conscious New Jersey
- What is the best approach to dealing with the ongoing Q fever outbreak in the Netherlands?
- Prevention of Future Outbreaks of Ebola in the Democratic Republic of Congo
- Using DDT: Is it Worth it?
- Protecting Paradise: The Importance of Keeping WNV out of Hawaii and How to do so.



STUDENT EVALUATIONS

- Pending!!



ADVANTAGES/DISADVANTAGES

Undergraduate Level

- Earlier in careers
- Open minds
- No obvious home for One Health
- May influence ultimate career choice
- Easier for inter-disciplinary efforts
- More time in curriculum
- Major in One Health?

Graduate Level

- Further along in careers
- Potential blinders from specialization
- Turf battles over One Health (Veterinary field)
- Less likely to impact ultimate career choice
- Harder for inter-disciplinary efforts—more silos
- Less time in curriculum
- One Health specialist?



TAKE HOME MESSAGES

- One Health in Academia:
 - Committed Individual(s)
 - Inherently Interdisciplinary
 - Institutional Commitment and Support Required
 - Undergraduate/Graduate Advantages/Disadvantages



THE ONE HEALTH JOURNAL

- A new journal for a rapidly growing interdisciplinary field that spans human and veterinary medicine, ecology, public health and public policy. To serve the One Health community.
- Vision: “To serve the medical, veterinary medical, nursing, public health, and environmental health communities by providing an academic forum for the exchange of “One Health” research findings and innovative ideas in education, clinical care and public health. The ultimate goal is to improve the health of all species including humans, domestic animals, wildlife and plants.”
- Publisher: New Prairie Press. A new online academic press produced by the Kansas State University Library.
- Inaugural Issue: January 2011; quarterly
- An online edited journal without access fees or submission fees.
- Eager to get input! Looking for volunteers to serve on the editorial advisory board, as associate editors, and to submit articles.





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<http://www.onehealthinitiative.com>

