IMPLEMENTING ONE HEALTH: AN ACADEMIC PERSPECTIVE
Laura H. Kahn, MD, MPH, MPP
Research Scholar, Princeton University
Stone Mountain Meeting
May 4, 2010
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
Mount Sinai School of Medicine Course

- 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

- 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

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<thead>
<tr>
<th>Undergraduate Level</th>
<th>Graduate Level</th>
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<tbody>
<tr>
<td>Earlier in careers</td>
<td>Further along in careers</td>
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<tr>
<td>Open minds</td>
<td>Potential blinders from specialization</td>
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<tr>
<td>No obvious home for One Health</td>
<td>Turf battles over One Health (Veterinary field)</td>
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<tr>
<td>May influence ultimate career choice</td>
<td>Less likely to impact ultimate career choice</td>
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<tr>
<td>Easier for interdisciplinary efforts</td>
<td>Harder for interdisciplinary efforts—more silos</td>
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<tr>
<td>More time in curriculum</td>
<td>Less time in curriculum</td>
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<tr>
<td>Major in One Health?</td>
<td>One Health specialist?</td>
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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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- Jack Woodall, PhD

http://www.onehealthinitiative.com