

American Society for Microbiology National Funding
One Health Project 2013
Northeast Branch of the American Society for Microbiology
in association with
The Department of Public Health and Community Medicine
Tufts University School of Medicine
The Cummings School of Veterinary Medicine of Tufts University
and the MCPHS University

One Health is: “a worldwide strategy for expanding interdisciplinary collaborations and communications in all aspects of health care for humans, animals and the environment” (<http://www.onehealthinitiative.com>). The One Health Initiative promotes the idea that the health of people, animals and the environment are inextricably linked.

While the concept is widely supported, operationalizing the concept in daily professional practice has been challenging. In recognition of the difficulties in promoting the One Health initiative among health professionals, the Northeast Branch of the American Society for Microbiology (NEB-ASM) proposed to host two forums in Massachusetts to engage undergraduates, graduate students and professional students in a discussion of One Health, and assess both their enthusiasm for the concept and their ideas about promoting it. The goal was to explore earlier introduction of the One Health concept into pre-professional and professional education in an attempt to incorporate it as part of preparation for the health professions.

The forums were held in the evening in Boston in the spring and Worcester in the fall. Invitations were sent by e-mail to student lists at colleges and universities in the area, and through the schools. Distinguished multidisciplinary panels of experts provided their perspectives on One Health and attendees were engaged in discussion. The program was then evaluated by the participants and ideas for promoting One Health were solicited.

Summaries of the forums follow.

Conclusions

There was substantial support for the concept of One Health and interest in its encouragement. Students gave the forums high ratings. Overall, they felt that they learned much about One Health. They were very engaged and offered many suggestions.

In general, participants supported broader dispersion of information about One Health, earlier in the education experience. They felt that college campuses, community events, agricultural fairs and community organizations (such as 4H, other youth organizations, etc.) were good opportunities for getting the word out about One Health. Campus pre-professional organizations would be receptive to One Health information. There was a strong feeling expressed that One Health concepts needed to be presented in an age-

appropriate fashion in early education; elementary and high school curricula. Linkage with environmental sustainability and farming groups was suggested. Antibiotic resistance was another topic with broad One Health implications. Human medicine and veterinary practitioners should talk about the human-animal interface with their patients. Engagement of media and popular culture, with active web sites and other marketing tools, would be desirable. There was strong interest in next steps among participants.

On the basis of the input generated by the forums, the following actions by NEB-ASM might be considered:

- Organize of a One Health Day event on a college campus to raise awareness among a large number of undergraduates. This take the form of lectures and exhibitions related to One Health, with multidisciplinary faculty including physicians, veterinarians, microbiologists, environmentalists and other health and public health professionals. Such an event may also generate media interest.
- Sponsor a similar event engaging veterinary and medical students
- Convene focus group(s) of elementary and high school teachers to explore the potential for incorporating One Health into science education.
- Incorporate One Health themes into conferences and educational programs, especially those highlighting antimicrobial resistance as a topic.
- Sponsor a multidisciplinary conference.
- Add a One Health page to the branch web site with links to One Health related information.
- Engage organizations focused on environmental concerns.
- Promote more interaction between veterinary and human health professionals.

One Health Forum
April 22, 2013

Sponsored by the Northeast Branch of the American Society for Microbiology and the Tufts University School of Medicine, Department of Public Health and Community Medicine

Arthur M. Sackler Center for Medical Education
Tufts University, Boston Campus

Summary and Evaluation

The format of the forum was a panel discussion of the One Health initiative, what it means and why it should be promoted, followed by a facilitated floor discussion with the attendees. Invited were undergraduates, graduate students, health professions students and interested members of the sponsoring organizations. The panel consisted of Larry Madoff (Director of

the Division of Epidemiology and Immunization, Massachusetts Department of Public Health (MDPH); Editor Pro-MED Mail), Catherine Brown (State Public Health Veterinarian, MDPH), Jean Mukherjee (Department of Infectious Disease and Global Health, Cummings School of Veterinary Medicine at Tufts University), Michael Pentella (Director, William A. Hinton State Laboratory Institute, MDPH) and Mary Montgomery (Harvard Medical School, Brigham and Women's Hospital).

Attendance was not as large as hoped, but the approximately 25 people who attended were interested, engaged and diverse. The limited attendance may have been related to the Marathon bombings and sequelae of the previous week, with ongoing traffic problems in Boston and conflicting events. One student told me that we did not get the message about the forum out effectively; she only got one e-mail and thought her contemporaries would only notice a blast of e-mail and social media messages. Twenty attendee completed evaluations.

Attendees included 14 undergraduates, 2 DVM/MPH students, 1 graduate student and 3 others. Fields of study/work included biology, chemistry, pre-med, pre-vet, microbiology, environmental health, nursing, nutrition and biomedical sciences.

Among those who completed evaluations, 74% felt they did not know a lot about One Health before the forum, while 100% agreed (75% "strongly") that they learned more by attending. Fifty-five percent thought One Health was worth promoting before the forum, while 95% agreed after; strongly agreed rose from 30% to 60%). All evaluating participants agreed (70% and 75% agreed strongly) that One Health deserves to be adopted more widely and has the potential of improving the health of the planet. That the forum was useful was agreed to by 95%, strongly agreed to by 65%. To the statement that the forum help promote One Health, 90% agreed (55% strongly), while 85% agreed or agreed strongly that they wanted to become more active in promoting One Health.

Comments:

What did you like best?

- Informal program
- Diversity of panelists
- Small enough for a discussion without intimidation
- Professionals from many areas sharing ideas and suggesting books
- Varied panel (2)
- Informative about "a new way of thinking"
- Great speakers, very informative (4)
- Learning about One Health
- Great introduction, informative
- Short talks by different speakers
- Different perspectives and very informative
- Group discussion
- No PowerPoints

What did you like least?

- Would have liked more formal presentations
- Not much direction about "what's next"
- Would have liked slides
- Not many attendees
- No agenda prior to meeting
- Sound system
- Should have been longer, ? one day, exciting possibilities
- No coffee

Suggestions for further events

- James Cameron
- More media
- Target undergraduates, undergraduate associations (2)
- More spreading of the word
- Programs at fairs, festivals, etc.
- More forums, with linkage to stressed environment and zoonotic emerging diseases
- Action plan, what's next?, what can we do?
- Go deeper, more literature
- More group collaboration

What would you do to promote One Health?

- Encourage physicians and veterinarians to talk with their patients about the disease interface
- Develop and effective advertizing, marketing tools, logo that people can relate to
- Campus groups to promote concept
- Better publicity
- Attract college and graduate students
- Connect with the environmental sustainability movement
- I could do more if I could learn more
- Introduce the One Health concept in earlier education (early childhood/elementary), normalize it
- Engage media and popular culture
- Actively apply the principles in life
- Bring the message to other forums, agricultural fairs, etc.
- Introduce an evolutionary perspective, vis a vis long term interactions
- Engage farmers, etc.
- Re-vitalize the comparative approach in medical training
- Spread the word at school
- Create a more prominent and interactive web site
- Networking

One Health Forum
September 30, 2013

Sponsored by the Northeast Branch of the American Society for Microbiology, the Cummings School of Veterinary Medicine of Tufts University and MCPHS University

Fuller Conference Center
MCPHS (Massachusetts College of Pharmacy and Health Sciences) University
Worcester, Massachusetts

Summary and Evaluation

The format of the forum was again a panel discussion of the One Health initiative, what it means and why it should be promoted, followed by a facilitated floor discussion with the attendees. Invited were undergraduates, graduate students, health professions students and interested members of the sponsoring organizations. The panel consisted of Larry Madoff (Director of the Division of Epidemiology and Immunization, Massachusetts Department of Public Health (MDPH); Editor Pro-MED Mail), Michael McGuill (Faculty of the Cummings School of Veterinary Medicine and former State Public Health Veterinarian), Christine Rioux (Environmental Health, Tufts University School of Medicine), Michael Pentella (Director, William A. Hinton State Laboratory Institute, MDPH), Catherine Brown (State Public Health Veterinarian, MDPH) and Mary Montgomery (Infectious Diseases Fellow, Brigham and Women's Hospital).

There were over 35 attendees. There was a large representation from veterinary medicine (see below), so there was considerable pre-forum awareness of One Health and support for the concept.. Attendees were interested and engaged. Thirty-two attendees completed evaluations. They included 11 undergraduates (microbiology, food science, nursing, pre-med and pharmacy); 11 veterinary students, including 4 DVM/MPH students; 5 graduate veterinarians in the Tufts conservation medicine program, 2 graduate students, 2 preventive medicine residents, 1 MPH student, 1 veterinarian and 1 professor. At least 8 colleges and universities were represented.

Among those who completed evaluations, 31% felt they did not know a lot about One Health before the forum (a function of the veterinary medicine attendance), while 97% agreed (68% "strongly") that they learned more by attending. Seventy-eight percent thought One Health was worth promoting before the forum, while 91% agreed after. Ninety-seven percent of evaluating participants agreed that One Health deserves to be adopted more widely and 100% agreed that it has the potential of improving the health of the planet (84% agreed strongly). That the forum was useful was agreed to by 94%, with 2 attendees neutral. To the statement that the forum help promote One Health, 94% agreed (56% strongly), while 87% agreed or agreed strongly that they wanted to become more active in promoting One Health.

Comments:

General

- Plan a “One Health Day” where vet students and med students meet to discuss shared issues and ideas. Contact UC Davis for more information. Invite Zoobiquity author Barbara Natterson-Horowitz.
- Develop One Health activities to enhance other programming such as “Dog Bite Prevention Week” or education programs for pet-owners with chronic illness such as HIV/AIDS and asthma.
- Include One Health programming in antimicrobial resistance and stewardship conferences and meetings.
- Bring One Health concepts into discussions of food security, and the farm to table movement. Involve children via 4-H and other youth organizations.
- Identify jobs and career training that relate to One Health, not just clinical medicine, but laboratory, PH and environmental health careers.
- Use One Health concepts to enhance disease reporting. Veterinary oncology is ready for this. Develop ways to manage data
- Seek funding from foundations that traditionally support disease prevention and health promotion i.e. The Gates Foundation.

What did you like best?

- The panel, their varied background and their perspectives (15)
- The holistic approach of the microbiologist
- Diversity of the attendees
- Content of panel discussion
- The open discussion time (3)
- How everything is connected
- Antibiotic resistance discussion
- Food was good

What did you like least?

- Would have liked more representation of other healthcare professions
- Not given more biography and contact information for panelists
- Would have liked more on the consequences of interventions
- Geared mostly to Tufts students
- Lack of medical students
- Not enough input from human medicine
- Not enough discussion of environmental aspects
- Not enough time for discussion among panelists
- No PowerPoint
- Room too cold

Suggestions for further events

- More forums and social occasions to bring professions together
- MD/DVM joint seminars
- Explore funding opportunities
- Convene faculty/teachers to consider curriculum
- Examples of One Health projects/work (actual programs)
- Include an international representative on the panel

- Introduce concept to medical students and earlier
- Get medical students involved
- Community service event involving veterinary and medical students
- More focus on environmental implications
- "One Health Day" for health professionals and colleges
- More One Health lectures on campuses
- More about research
- One Health fairs for the community and public health/veterinary/medical officials
- More promotion of One Health to the public and professional societies
- Include environmental sustainability students
- Even more diversity of professional involvement

What would you do to promote One Health?

- Promoting professional school student presentations/projects on One Health
- Incorporate One Health in public health curricula
- More meetings for students
- Promote word of mouth, especially among medical students
- More presence of One Health on college and university campuses
- Form a One Health organization
- Incorporate One Health in academic and work activities
- More education
- Expose children to the connections of animal-human-environmental health
- More One Health events in academia
- Stress the connections of human and animal health
- Continuing these forums with an even wider audience
- Promote collaborative research

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