Communicating Infectious Disease Information to the Public

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At one time, information about the science of medicine was almost the sole purview of physicians and scientists, and the vehicle of communication was predominantly the scientific journal. Today, a broad audience is interested in the results of scientific investigations, which are disseminated widely in a variety of media. This session sought to provoke discussion about scientific communication in the broadest sense and to describe the roles and perspectives of science writers and journalists.

Robin Cook, a science fiction writer, described two experiences during his medical training that prompted him to become an author: He realized that medicine involved high drama with star quality, and he noted a tremendous gulf between what physicians knew and what the public knew about medicine.

Physicians and scientists need to recognize basic differences between the goals of medical professionals and the goals of the media. Physicians and scientists seek to transmit information; the media, on the other hand, seek to entertain in addition to transmitting information. Fiction is a powerful tool because it places information in an emotional context that people remember, and its message has lasting influence.

Nichols Fox, a free-lance writer, discussed her interest in foodborne infectious diseases, particularly *Escherichia coli* diarrheal disease. Sometimes, in their research, reporters arrive at conclusions that are not entirely objective. The following are some of the conclusions Nichols Fox shared with the panel. 1) When you close the door on one microbe, you open the door for another. 2) Measures that make food more affordable may also increase disease risk. 3) Efficiency may not be the most important issue in food production, and in a cost-benefit analysis, the people benefitting are not always the ones sharing the cost. 4) Treatment of food animals and risk for disease are related. 5) Recycling food animals, particularly diseased animals, into animal feed, can cause problems.

Laurie Garrett, science and medical writer for Newsday magazine, highlighted the ability to place events within a historical perspective, discussed reasons for differing viewpoints of the same events (particularly differences between journalists and scientists), and suggested ways in which journalists and scientists can broaden public perspective.

Paraphrasing Barbara Rosenberg of the Harvard School of Public Health, Laurie Garrett noted public health professionals cannot see their work in a historical light. At the same time, seeing events in such light may not be possible. Further, each person's perspective is determined by cultural, educational, and other factors; therefore, alternative views of the same event should be allowed.

Like public health professionals, journalists need to consider the historical perspective as they deal with the task of reporting daily events. Journalists and scientists should gauge the current and future import of an event and examine how it reflects on events of the past. The Heisenberg principle of uncertainty also applies to epidemiology. When you see an event, you alter it—in particular, you bring your cultural perspective to it. Cultural perspective and scientific training affect interpretation of events and should be taken into account when making observations.

Journalists and authors of science fiction may make the scientific community uncomfortable with probing questions. Sometimes they simply reflect a different point of view or perspective; sometimes they make historical connections not plainly obvious to everyone. With a broad view in mind, scientists and journalists can bring a larger perspective to the public.

Patricia Cornwell, a crime novelist, noted that two sayings are wellknown in the morgue:

the case is only as good as the evidence (a book is only as good as the existing research), and as forensic pathologists say, people often die in the way that they lived—a saying not true about infectious diseases and bioterrorism in which the randomness is striking.

The session's message was that scientists should view science writers as the scribes who can disseminate a story to the public by translating technical language into accessible terms. Scientists, like science writers, should cultivate good sources and pick stewards who will communicate the information accurately. The world wants to know about emerging threats to health, and writers can help.