

Medicine in the Media: Symposium Addresses Challenge of Reporting on Medical Research

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It has been widely accepted in the medical community for more than 3 decades that a woman who takes hormones to counteract her decrease in production of hormones after menopause will have fewer menopausal symptoms and perhaps reduce her risk of such diseases as coronary arterial disease and osteoporosis. So it was a shock to doctors and their patients in the summer of 2002 when results of a large, prospective randomized clinical trial published in July showed that women who take combination (estrogen and progestin) hormone replacement therapy (HRT) for 5 or more years have a higher risk of blood clots, breast cancer, and cardiac events than women who do not take the drugs.

Medical reporters faced several challenges in writing the story. Women who had been taking HRT for several years wanted to know how high their personal risk of disease was. Women who had just begun taking HRT wanted to know what risks they faced. And every reporter had to answer one big question: If medical practice arises from medical research, why do the results of this one study supersede the results of all studies before it?

In the summer of 2002, the Office of Medical Applications of Research (OMAR) at the National Institutes of Health (NIH) held a symposium to give reporters the background knowledge to answer those types of questions for their readers. Participants in "Medicine in the Media: The Challenge of Reporting on Medical Research" learned about the fundamentals of medical research and how to explain them at a 2½-day symposium that was part lecture and part workshop.

The purposes of the symposium, which was the brainchild of OMAR Director

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Barnett Kramer and was coordinated and implemented by his staff, were to enhance the ability to distinguish strength of opinion from strength of evidence, to look at the inherent limitations of the scientific process, to examine commonly held views about medicine, to provide an advanced set of tools to place new research findings in a useful context, to address external issues that get in the way of presenting the full story, and to hone skills in selecting for coverage the stories that hold meaningful messages for the public.

Before tackling those issues, University of Missouri Professor Robert Logan gave a broad overview of the prevalence of medical news in the popular media. Some highlights: Health stories rank third in topics covered on the evening network news, there are about 120 health or fitness consumer magazines in the United States and about 65 regional newspapers that cover health or medicine as a beat, and health news is at the top of the list of important issues for people 50 and older.

Logan also identified some of the major challenges that medical reporters face: avoiding general statements based on single anecdotes, examining weaknesses in scientific studies, evaluating conflicts of interest in sources, questioning findings about a treatment's effects, and representing risks appropriately.

The key to overcoming some of those

challenges is a basic understanding of the structure of medical research. Steven Woolf, of the Medical College of Virginia, kicked off the teaching lectures with an overview of levels of evidence among clinical studies—case reports, case series, case-control studies, controlled cohort studies, and randomized controlled trials. He pointed out the strengths and weaknesses of each study design and gave the participants tips about how to evaluate a study's validity and generalizability.

The results of studies, which are sometimes reported in obscure statistical terms, can be difficult to decipher. Dynamic duo Steve Woloshin and Lisa Schwartz, of the Veterans Affairs Medical Center in White River Junction, Vermont, defined and explained several basic statistical concepts and suggested ways to report their true meaning. Woloshin and Schwartz took participants through several examples of medical studies reported in the media or in advertising to determine exactly what results were being reported and whether the findings were correct and meaningful.

One of the most difficult fields to understand is cancer screening. Although it is natural to assume that finding cancers before they appear to have spread throughout the body allows them to be treated and, it is hoped, cured, this line of reasoning is not always true. Kramer elaborated on this difficult concept and explained

several types of bias that can show up in studies of cancer screening—selection bias, lead-time bias, and length bias. And he explained the concept of overdiagnosis, the potential for screening tests to find cancers that would not have been detected during a patient's lifetime.

Participants also gave presentations to their peers and worked in small groups at various points throughout the symposium. In a half-day session, participants worked in groups to develop a news story from a recent research article and accompanying press release. Each group then presented its story to a panel of symposium faculty and other participants. In another interactive session, participants discussed news articles that they had written that were particularly challenging or difficult.

Even the most experienced science and medical reporters are challenged by some topics. On the last day of the symposium, participants heard from veteran science reporters Joe Palca of National Public Radio and Gina Kolata of the *New York Times*. Both presented articles that they had written and described the processes and tools they used to put their stories together.

Workshop participants were treated to lectures by three prominent figures in the evidence-based-medicine community. Barron H Lerner, associate professor of medicine and public health at Columbia

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University, tracked the history of research on breast cancer screening and treatment. Lerner, author of *The Breast Cancer Wars*, showed how the interplay between politics and science has led to today's national policy. Leon Gordis, professor at the Bloomberg School of Public Health

at Johns Hopkins University, discussed the power of evidence from anecdotes and clinical trials and the differences between individual risk and population risk. Gordis chaired a 1997 NIH consensus conference on mammography for women in their 40s. Barney S Graham gave a lecture on the development of a vaccine for HIV; Graham is the chief of the Viral Pathogenesis Laboratory and Clinical Trials Core at the National Institute of Allergy and Infectious Diseases.

The conference was well received by the 30-plus participants. In a note to the symposium staff, one participant noted, “The wonder is that by the time we arrived, [the symposium coordinators] had done such a marvelous job that it all seemed like summer camp. . . . For me it was a blast to be surrounded by people whose outlook and abilities have been burnished by this profession we all share. This was much more than just another meeting.”

The staff at OMAR plan to hold this symposium annually, but details for next year are not yet final. The agenda and information for this year's meeting can be accessed at medmediacourse.nih.gov/. 

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