

◆ Making a Difference Where It Counts: The Clinical Impact of Medical Journals

Panelists:

Frank Davidoff

Annals of Internal Medicine
Philadelphia, Pennsylvania

Cynthia Mulrow

University of Texas
San Antonio, Texas

Hank Slotnick

University of North Dakota
Grand Forks, North Dakota

Reporter:

Judith McIntosh White

Texas A&M University
College Station, Texas

The panelists agreed that although both print and electronic journals potentially can facilitate transfer of research evidence to clinical practice, they are underused. To optimize that potential, journal editors must understand how physicians learn, how they formulate questions, how they use journals to answer those questions, and how journals can be changed to meet physicians' needs.

Hank Slotnick, professor of neuroscience at the University of North Dakota, characterized physician learning as either specific (driven by patients' questions or their medical conditions) or general (undertaken to update or gain medical skills or knowledge).

Frank Davidoff, editor of the *Annals of Internal Medicine*, cited a number of studies of information-seeking by internists and family practitioners and indicated that physicians formulate two questions for every three patients seen; the commonest questions concern drug therapy. Physicians in these studies pursued answers

to about one-third of the questions they formulated.

Both Slotnick and Davidoff indicated that physicians consult various resources to try to answer their questions, including their peers (the resource most frequently used), print journals and texts, online sources, and continuing medical education (CME) courses. Physicians also learn from patients, who increasingly use the Internet to research their own conditions. "Doctors now refer to some patients as 'Internet-positive'," according to Davidoff.

Slotnick pointed out that physicians read journals to solve perceived problems. And physicians' perceptions often differ from those of researchers or journal editors, added Cynthia Mulrow, professor of medicine at the University of Texas-San Antonio and director of the Cochrane Center at San Antonio's Audie L Murphy Memorial Veterans Hospital.

"Physicians in busy practice are pragmatic", Davidoff said. The answers need not be perfect, just quickly obtainable and effective, he continued.

Davidoff said that physicians do not use journals to answer questions generated from patient interactions because of lack of time; lack of skill in formulating research questions; lack of expertise in searching, filtering, and critically assessing resources; and lack of incentives (including, until recently, the fact that category 1 CME credit was not given for reading journals).

Mulrow said that journals need to adapt presentations to cater to the needs of different types of readers. Readers want brief current information, she said, and like "high-impact, novel, or idiosyncratic" articles. To aid readers, she suggested that journals use titles reflecting content more clearly. Abstracts should be brief, struc-

tured, attractively presented, and grouped by topic. Internet journals could encourage readers to pursue specific articles by providing interactive links to full text and to related articles.

Specific information-seekers are looking for comprehensive background information on a particular topic or information that answers specific questions. Mulrow suggested aiding these readers by using bulleted key points, easy-to-understand graphs and other figures, glossaries, and questions to guide readers through an article. Specific information-seekers might also be helped by inclusion of links to continually updated electronic textbooks and use of "boxed special-alert bibliographies" that cite selected related articles.

Davidoff said that the *Annals* will soon begin using article summaries written for lay readers. Such summaries will also constitute "a quick read for doctors". Slotnick added that research indicates that information directed at patients finds its way back to doctors.

Slotnick agreed with members of the audience who labeled journal articles as "far too scientific". Writing articles in plain English and minimizing jargon might also help physician readers, he said.

Davidoff has proposed training "medical informationists" to locate, gather, assess, and give physicians material pertinent to their clinical practice questions.

The panelists expressed their hope that their suggestions can help journals facilitate both physician learning and patient problem resolution. 