

# Trends and Directions in Health Communication Research

Gary L. Kreps

*Der Beitrag gibt einen Überblick über zentrale Forschungsfelder im Bereich „Health Communication“. „Health Communication“ stellt einen spannenden Bereich anwendungsbezogener sozialwissenschaftlicher Forschung dar, der die wichtige Rolle menschlicher und medienvermittelter Kommunikation in der Gesundheitsversorgung und -förderung untersucht. Der Autor stellt die Entstehung und Entwicklung der „Health Communication“-Forschung dar und macht Vorschläge dazu, wie die Wissenschaft von der „Health Communication“ weltweit gefördert werden könnte.*

**Keywords:** health communication; Gesundheitskommunikation; Gesundheitsinformation; Kommunikationswissenschaft; intrapersonale, interpersonale, soziale, gruppen- und organisationsspezifische Kommunikationsanalyse, Gesundheitsinformatik, zielgruppenspezifische Maßnahmen, Gesundheitskampagnen

## 1. Introduction

Health communication research has developed rapidly in North America over the last three decades as an exciting interdisciplinary applied social scientific area of inquiry concerned with the powerful roles performed by human and mediated communication in health care delivery and health promotion (Kreps, Bonaguro, & Query, 1998; Kreps, Query, & Bonaguro, in-press). Interest and activity in the field of health communication is growing now beyond North America, with scholars from Europe, Asia, the Middle East, Australia, Africa and many other parts of the world examining communication and health. Research concerning health communication is often problem-based, focusing on identifying, examining, and solving health care and health promotion problems (Kreps, 2001a).

Health communication scholars typically examine the pragmatic influences of human and mediated communication on health care and public health, often using the data they gather to enhance the delivery of health care and direct health promotion efforts. A major reason for the rapid growth and development of health communication inquiry is the relevance of this research area for addressing complex and challenging health care and health promotion demands of modern society. In fact, a growing body of published research illustrates the centrality of communication processes in achieving important health care goals and the promotion of public health (for reviews of this literature see: Jackson & Duffy, 1998; Kreps & Chapelsky Massimilla, 2002; Kreps, 2001a; Kreps & O’Hair, 1995; Zook, 1994). This article describes the current state of health communication inquiry and suggests directions for advancing health communication scholarship throughout the world.

## 2. Framing Health Communication Research

Health communication inquiry is a broad research area that examines human and mediated communication in a wide range of social contexts, at many different levels of interaction, and through a wide array of communication media and channels. It is a sub-field

growing out of the broader academic disciplines of communication science, public health, health education, sociology, psychology, anthropology, and many of the health care professional fields (such as medicine, nursing, pharmacy, clinical psychology, and social work) (Kreps, Query, & Bonaguro, in-press). The study of health communication combines and applies important theories, concepts, and methods drawn from diverse areas of social and communication sciences (such as the study of language and behavior, interpersonal relations, group/organizational behavior, social influence, media studies, behavioral change, intercultural relations, and new information technologies).

The settings for health communication inquiry are also quite diverse. They include the wide range of settings where health information is generated and exchanged, such as homes, offices, schools, clinics, and hospitals. Health communication scholars must be aware of the ubiquitous nature of health communication so they can design and conduct studies across many relevant field settings (Kreps, 2001b; Rootman & Hershfield, 1994). Health communication research has examined such diverse issues as the role of interpersonal communication in developing cooperative health care provider/consumer relationships (Makoul, 1998; Smith & Pettegrew, 1986), the role of comforting communication in providing social support to those who are troubled (Metts, Manns, & Kruzic, 1996; Query & James, 1989), the effects of various media and presentation strategies on the dissemination of health information to those who need such information (Baker, Friede, Moulton, & Ross, 1995; McGuinnis, Deering, & Patrick, 1995; Sechrest, Backer, Rogers, Campbell, & Grady, 1994; Wallack, Dorfman, Jernigan, & Themba, 1993; Winnett & Wallack, 1996; Yom, 1996), the use of communication to coordinate the activities of interdependent health care providers (Freidson, 1970; Johnson, 1997; Kreps, Hubbard, & DeVita, 1988; Kreps & Kunimoto, 1994), and the use of communication for administering complex health care delivery systems (Geist & Hardesty, 1992; Lammers & Geist, 1997; Ray & Miller, 1990). Since health communication inquiry encompasses such a broad range of communication media, channels, levels, and settings, it is a convergent research area that benefits from the work of scholars representing multiple perspectives, research traditions, disciplines, methodological, and theoretical perspectives (Kreps, Query, & Bonaguro, in-press). Indeed, health communication scholarship attracts researchers representing multiple related social scientific, humanistic, and technical disciplines who conduct research that focuses on a diverse set of health issues, in a broad range of health care settings.

### 3. The Central Role of Information in Health Communication Inquiry

Health information is a central focus of health communication inquiry. Relevant and timely health information is a critical resource in health care and health promotion because it is essential in guiding strategic health behaviors, treatments, and decisions (AHCPR, 1997; Freimuth, Stein, & Kean, 1989; Johnson, 1997; Kreps, 1988; McGuinness, Deering, & Patrick, 1995). Health information is the knowledge gleaned from patient interviews and laboratory tests used to diagnose health problems, the precedents developed from clinical research and practice used to determine the best available treatment strategies for a specific health threat, the data gathered in check-ups used to assess the efficacy of health care treatments, the input needed to evaluate bioethical issues and weigh consequences in making complex health care decisions, the recognition of warning signs needed to detect imminent health risks and direct health behaviors designed to avoid these risks (Kreps, Bonaguro, & Query, 1998). Health care providers and consumers depend on communication to generate, access, and exchange relevant health in-

formation for making important treatment decisions, for adjusting to changing health conditions, and for coordinating health preserving activities. The process of communication also enables health promotion specialists to develop persuasive messages for dissemination over salient channels to provide target audiences with relevant health information to influence their health knowledge, attitudes, and behaviors. Health communication scholars are well poised to promote public health by examining and helping to enhance social mechanisms for disseminating relevant health information to consumers and providers of health care.

#### 4. Health Communication Levels of Analysis

A frequently used hierarchical framework for illustrating primary levels of health communication analysis describes intrapersonal, interpersonal, group, organizational, and societal levels of health communication inquiry (Kreps, 2001a, 1988; Kreps & Thornton, 1992; Thornton & Kreps, 1993). Intrapersonal health communication inquiry often takes a psychological perspective to examining internal mental and psychological processes that influence health care, such as the health beliefs, attitudes, and values that predispose health care behaviors and decisions (see for example, Babrow, Kasch, & Ford, 1998; Booth-Butterfield, Chory, & Beynon, 1997; Burgoon, 1996; Burgoon & Hall, 1994; Guttman, 1996; Hyde, 1990; Kelly, St. Lawrence, Smith, Hood, & Cook, 1987; Treichler, 1987).

Interpersonal health communication inquiry examines the ways communication influences the development of health care relationships, and how relational communication influences health outcomes. The doctor/patient relationship has been a popular area of interpersonal health communication research (Kreps, Arora, & Nelson, 2003). Topics for interpersonal health communication research often include examinations of the ways the exchange of messages can establish relational control in health care interactions, provide social support, sustain health education, promote psychological adjustment, and facilitate informed health-related decision making (see for example, Cline & McKenzie, 1998; Kim, Odallo, Thuo, & Kols, 1999; Kreps, 1988b; Makoul, 1998; Miller & Zook, 1997; Marshall, 1993; Phillips & Jones, 1991; Query & Kreps, 1996).

Group health communication inquiry examines the role communication performs in the interdependent coordination of members of collectives, such as health care teams, support groups, ethics committees, and families, as these group members share relevant health information in making important health care decisions (see for example, Fabregas & Kreps, 1999; Ferguson, 1996; Gifford, 1983; Metts, Manns, & Kruzic, 1996; Query & James, 1989). As specialization of health care services and technologies continues to increase, there is growing dependence on health care teams in the delivery of modern health care. Similarly, the growing complexities of health care delivery demand greater input from groups of individuals in making difficult and challenging health care decisions (Fabregas & Kreps, 1999). Interdependent health care providers, administrators, and consumers must learn how to share relevant information and coordinate efforts in group settings. Communication scholars are particularly well-situated to study the communication demands inherent in these groups and to help facilitate effective coordination and cooperation in health care teams and important decision making groups.

Organizational health communication inquiry examines the use of communication to coordinate interdependent groups, mobilize different specialists, and share relevant health information within complex health care delivery systems to enable effective multidisciplinary provision of health care and prevention of relevant health risks (see for ex-

ample, Frey, Adelman, & Query, 1996; Geist & Hardesty, 1992; Klinge, Burgoon, Afifi, & Callister, 1995; Kreps, 1998; Lammers & Geist, 1997). With the rise of managed care, the delivery of health care services has become increasingly controlled by financial and bureaucratic concerns (Geist & Hardesty, 1992). There is growing frustration among many consumers about the quality of care they receive and their ability to participate actively in making important health care decisions (Jones, Kreps, & Phillips, 1995). There are many important opportunities for health communication scholars to examine ways to promote greater receptivity, flexibility, and sensitivity towards consumers within the increasingly complex and highly regulated modern health care system (Kreps, 1998; Sharf, 1997; Lammers & Geist, 1997).

Societal health communication examines cultural influences on health care and the generation, dissemination, and utilization of health information communicated via diverse media to the broad range of professional and lay audiences in society that influence health education, promotion, and health care practices (see for example, Eng & Gustafson, 1999; Guttman, 1997; Kreps, Hubbard, & DeVita, 1988; Kreps & Kunimoto, 1994; Kreps, Ruben, Baker, & Rosenthal, 1987; Myrick, 1998; Pavlik, Finnegan, Strickland, Salman, Viswanath, & Wackman, 1993; Quesada & Heller, 1977). Social marketing has been widely adopted by communication scholars as an important strategic framework for designing sophisticated health promotion campaigns (Abrecht & Bryant, 1996; Dearing, Rogers, Meyer, Casey, Rao, Campo, & Henderson, 1996; Kotler & Roberto, 1989; Lefebvre & Flora, 1988; Maibach, Shenker, & Singer, 1997; Ratzan, 1999; Ressler & Toledo, 1997).

In the past, research focusing on the societal perspective to health communication inquiry was conducted primarily by media studies communication scholars who examined the ways that various media can deliver health promotion and risk prevention messages to targeted audiences. However, as health promotion efforts have become more and more sophisticated, utilizing multiple message strategies and delivery systems, there are increasing opportunities for greater participation by communication scholars (and others) with expertise in intrapersonal, interpersonal, group, and organizational levels of health communication analysis (Engleberg, Flora, & Nass, 1995; Hafstad & Aaro, 1997; Korhonen, Uutela, Korhonen, & Puska, 1998; Maibach, Kreps, & Bonaguro, 1993; O'Keefe, Hartwig Boyd, & Brown, 1998; Reardon & Rogers, 1988; Valente, Poppe, & Merritt, 1996).

## 5. Health Communication Channels

Health communication inquiry also involves examination of many communication channels. Face-to-face communication between providers and consumers, members of health care teams, and support group members are the focus of many health communication studies (see for example, Jones, Kreps, & Phillips, 1995; Kim, Odallo, Thuo, & Kols, A. 1999; Maibach & Kreps, 1986; Makoul, 1998; Phillips & Jones, 1991). A broad range of personal (telephone, mail, fax, e-mail) and mass (radio, television, film, billboards) communication media are also the focus of health communication inquiry (see for example, Freimuth, Stein, & Kean, 1989; Gantz & Greenberg, 1990; Hammond, Freimuth, & Morrison, 1990; Hofstetter, Schultze, & Mulvihill, 1992; Larson, 1991; Signorielli & Lears, 1992; Stoddard, Johnson, Sussman, Dent, & Boley-Cruz, 1998). More and more, the use of new communication technologies have developed and have been examined as important health communication media (see for example, Cassell, Jackson, & Chevront, 1998; Chamberlain, 1996; Clark, 1992; Eng & Gustafson, 1999; Ferguson,

1996; Harris, 1995; Lieberman, 1992; Smaglik, Hawkins, Pingree, Gustafson, Boberg, & Bricker, 1998; Slack, 1997; Street, 1996; Street, Gold, & Manning, 1997). These new media, especially the use of interactive computer technologies and the internet have become increasingly important sources for relevant health information and support for many health care consumers and providers, and is a most promising topic for health communication inquiry (AHCPR, 1997; Eng & Gustafson, 1999; Sonnenberg, 1997).

We are in the midst of an information revolution that is rapidly changing the nature of health care and health promotion. This revolution is spurred by the development and adoption of powerful new communication technologies, providing broad access to relevant health information. Information technology is providing health care providers and consumers with unparalleled opportunities for accessing, sharing, and processing relevant health information, ushering us into an era of “e-health.” The health communication research questions growing out of this e-health information revolution challenge us to examine how we can best harness new information technologies to address serious health threats and promote public health and well-being. How can e-health applications be effectively used along-side more traditional tools of health promotion to achieve important goals? What does the future hold for technology and health communication?

Consumer health informatics is an exciting area of inquiry that examines ways that computer-mediated communication can be used to provide health care consumers with relevant health information to support decision-making about health care delivery and the promotion of health. In many ways, the broad focus on the consumer in consumer health informatics overlaps with other important areas of health informatics inquiry, especially examination of the use of medical information systems that are increasingly designed to connect health care providers and consumers, the use of telemedicine systems to provide remote and home health care, as well as the development of public health campaigns designed to support consumer decision-making.

Consumer health informatics has become an increasingly important area of e-health study and practice due to both the growing complexity of the modern health care system and the escalating demand for relevant health information by both consumers and providers to direct health care and health promotion (Kreps, in-press). Concerted energy and intelligence needs to be focused on examining the critical issues confronting effective development, implementation, and utilization of consumer health information systems to make sure consumers have ready access to the best possible health information. While the sophistication of information technology is growing rapidly, providing consumers with relevant and timely health information is not really just a technology issue – it is a complex communication issue. The process of communication in consumer health informatics demands a high level of sophistication, strategy, and collaboration to address critical issues and to achieve challenging health information dissemination and application goals.

## 6. Communication in Health Care Delivery and Health Promotion

Health communication inquiry focuses both on health care delivery and the promotion of public health. These areas of health communication inquiry are distinct in many ways, yet are also increasingly interrelated within the modern health care system. Health communication research that focuses on health care examines the ways communication is used by health care consumers and providers in seeking and delivering health care services. Health communication research and applications on health care delivery are often concerned with the organization and coordination of health care services, the develop-

ment of effective consumer/provider communication relationships, the process of health care decision-making, and the communication of social support. Traditionally, health communication research from the health care delivery perspective has adopted a human communication (interpersonal, group, organizational) focus.

Health communication research and applications that have focused on health promotion typically examine the persuasive uses of messages and media to promote public health, the diffusion of health innovations, the dissemination of health information, and the development and evaluation of communication campaigns. Traditionally, most health communication research from the health promotion approach has adopted a mediated communication (mass communication, campaign delivery, and new media) focus.

There are many points of overlap between the health care delivery and health promotion focuses on health communication. For example, modern health care delivery systems are increasingly adopting mediated channels for delivering health care, such as the use of telemedicine technologies as tools for diagnosing and treating patients. Health care delivery settings often serve as primary sites for health promotion efforts, with health care providers counseling their clients about prevention and screening opportunities, providing health education, and delivering health promotion messages in person, on-line, or with relevant publications. Indeed, health promotion efforts are increasingly utilizing human communication channels in health campaigns for disseminating health information, such as the use of support groups, personal appeals, family involvement programs, neighborhood, workplace, and government interventions. It is clear that health care delivery and health promotion are closely related activities, with health care providers devoting increasing energy towards health education, and health promotion efforts that are increasingly being coordinated with the many related activities and programs of the health care delivery system (Kreps, 1996a; 1990; Kreps, Bonaguro, & Query, 1998).

## 7. The Development of Tailored Health Communication Interventions

An innovative application of computer technology to health communication campaigns has enabled the development of communication materials that are personalized to the unique characteristics of individuals within target audiences for health promotion campaigns. "Tailored health promotion materials are any combination of information and behavior change strategies intended to reach one specific person, based on characteristics that are unique to that person, related to the outcome of interest, and derived from an individual assessment" (Kreuter, et al., 2000, p. 5). This is a uniquely individualized intervention strategy that can process assessment data about a subject's unique personal characteristics and use these data to craft personally relevant health promotion messages. Computerized technologies have also made possible quick mass production and broad dissemination of individually tailored messages, via a broad range of channels (e.g., print, video, computers, etc.) to target audiences. Message tailoring is a highly motivating and persuasive strategy for crafting health promotion messages that are relevant and compelling to individuals. Certainly, the quality of tailoring is dependent on the saliency of assessment data gathered and the ability to use these data to develop personally motivating messages for individuals. Tailoring outcomes are also dependent on the effectiveness of message delivery channels. However, the use of message tailoring holds great promise for health promotion.

Health communication interventions have become increasingly sophisticated over time, especially in terms of the development of strategic messages designed to influence

target audiences. Early health communication interventions were developed with general message strategies that would appeal to broad audiences. These messages were designed to appeal to the common denominator among audience members, but were largely insensitive to the individual differences between members of these large audiences. Later, more sophisticated intervention studies began to segment target audiences based upon shared demographic factors so messages could be designed to appeal to common demographic factors within the segmented audience. Yet, even in highly segmented audiences, there were many unique factors between members of the target audience that were not accounted for in the targeted message strategies. While, these targeted communication interventions were generally more effective than previous generic message strategies, they still tended to gloss over unique and important differences between audience members. Still more recently, tailored message strategies have been adopted that identify key individual factors, such as health behaviors, to use in designing specific health promotion messages for each person, establishing the individual as the key unit of analysis in intervention message design (Kreuter, Farrell, Olevitch, & Brennan, 2000). Rimer (2000, p. xii) describes this evolution,

Where once health educators and other behavioral scientists relied on generic materials designed to reach as many people as possible, the growing evidence base of tailored communications shows that print and electronic communications created for individuals based on information specific to them can result in significant positive outcomes across a range of health problems and conditions.

Tailored communication is an exciting area for health communication inquiry.

## 8. Next Steps for Health Communication Inquiry

Health communication inquiry has come a long way and is moving in very fruitful directions. Current research on health communication clearly illustrates the powerful influences of communication on health (see for example Kreps & Chapelsky Massamilla, 2002; Kreps & O’Hair, 1995). Health communication inquiry has become increasingly sophisticated and directed towards addressing significant social issues. With the growing sophistication of health communication has come increasing interdisciplinary and institutional credibility for health communication scholars.

Health communication scholars are more likely now than in any time in the past to attract large-scale research funding. Federal agencies in the USA, such as the Centers for Disease Control (CDC), the National Cancer Institute (NCI), and the National Institute for Drug Abuse (NIDA) have become increasingly involved with sponsoring and conducting health communication research. For example, the NCI, the largest institute of the National Institutes of Health (NIH), recently identified cancer communications as one its scientific priorities for cancer research and outreach (NCI, 1999). The NCI has designed and begun implementing a comprehensive research and outreach strategy for introducing powerful new communication initiatives that promise to expand health communication knowledge and influence public health policies and practices.

Health communication scholars are receiving increasingly more respect across different areas of scientific inquiry, with health communication scholars invited to participate in interdisciplinary research teams and edit interdisciplinary social scientific journals. This level of interdisciplinary respect and credibility marks the growing maturation of the field of health communication. Health communication inquiry is also becoming a truly international field of study, with increasing international participation in health communication conferences and publication of important health communication

research by scholars from across the globe. This journal special issue illustrates growing European interest in health communication inquiry.

There is a growing emphasis on public advocacy, consumerism, and empowerment in health communication research that will help revolutionize the modern health care system by equalizing power between providers and consumers and relieving a great deal of strain on the modern health care system by encouraging disease prevention, self-care, and making consumers equal partners in the health care enterprise (see Arntson, 1989; Kreps, 1993; 1996a; 1996b). Health communication research will increasingly be used to identify the information needs of consumers and suggest strategies for encouraging consumers to take control of their health and health care. Ideally, health communication research should help identify appropriate sources of relevant health information that are available to consumers, gather data from consumers about the kinds of challenges and constraints they face within the modern health care system, as well as develop and field test educational and media programs for enhancing consumers' medical literacy. Such research will help consumers negotiate their ways through health care bureaucracies and develop communication skills for interacting effectively with health care providers.

Future health communication research should focus on effective dissemination of relevant health information to promote public health. Modern health promotion efforts must recognize the multidimensional nature of health communication, identify communication strategies that incorporate multiple levels and channels of human communication, and implement a wide range of different prevention messages and campaign strategies targeted at relevant and specific (well-segmented) audiences (Maibach, Kreps, & Bonaguro, 1993). Modern campaigns should integrate interpersonal, group, organizational, and mediated communication to effectively disseminate relevant health information to specific at-risk populations.

Despite major advances in health communication inquiry, there is still a very long way to go for health communication scholars who want to maximize their opportunities to enhance health care delivery and promote public health (Kreps, 2001a; Sharf, 1993; 1997). The quality of health communication research and intervention efforts can and must be improved (Arntson, 1985; Gabbard-Alley, 1995; Lupton, 1994; Rootman & Hershfield, 1994; Zook, 1994). Knowledge gleaned from the very best health communication inquiry must be applied to refining health care delivery practices, directing health promotion efforts, and informing public health policy at the highest possible levels (Sharf, 1997; Zook, 1994). Ineffective communication practices and policies still consistently limit the effectiveness of health care/promotion efforts, causing unnecessary pain, suffering, and even deaths throughout the modern world (Kreps, 1998, 1996a, 1996b). As international health communication inquiry truly comes of age, health communication scholars will focus their attention on working collaboratively with an interdisciplinary group of scholars, health care practitioners, and public officials to improve modern health care delivery and health promotion efforts (Kreps, 1989). Health communication inquiry is moving towards a sophisticated multidimensional agenda for applied health communication research that will examine the role of communication in health care at multiple communication levels, in multiple communication contexts, evaluate the use of multiple communication channels, and assess the influences of communication on multiple health outcomes. There is a bright future ahead for concerted study of health communication that can help improve the quality of health care and health promotion across the globe.



## References

- AHCPR (Agency for Health Care Policy and Research) (1997). *Consumer health informatics and patient decision making. Final Report*. Rockville, MD: US Department of Health and Human Services, Agency for Health Care Policy and Research. AHCPR publication 98-N001.
- Allbrecht, T. & Bryant, C. (1996). Advances in segmentation modeling for health communication and social marketing campaigns. *Journal of Health Communication: International Perspectives*, 1: 1, 65 – 80.
- Arntson, P. (1985). Future research in health communication. *Journal of Applied Communication Research*, 13: 2, 118 – 130.
- Arntson, P. (1989). Improving citizens' health competencies. *Health Communication*, 1, 29 – 34.
- Babrow, A. S., Kasch, C. R., & Ford, L. A. (1998). The many meanings of uncertainty in illness: Toward a systematic accounting. *Health Communication*, 10: 1, 1 – 23.
- Baker, E. L., Friede, A., Moulton, A. D., & Ross, D. A. (1995). A framework for integrated public health information and practice. *Public Health Management Practice*, 1, 43 – 47.
- Booth-Butterfield, S., Chory, R., & Beynon, W. (1997). Communication apprehension and health communication and behaviors. *Communication Quarterly*, 45: 3, 235 – 250.
- Burgoon, M. & Hall, J. R. (1994). Myths as health belief systems: The language of salves, sorcery, and science. *Health Communication*, 6: 2, 97 – 115.
- Burgoon, M. (1996). (Non)compliance with disease prevention and control messages: Communication correlates and psychological predictors. *Journal of Health Psychology*, 1: 3, 279 – 296.
- Cassell, M. M., Jackson, C., & Chevront, B. (1998). Health communication on the internet: An effective channel for health behavior change? *Journal of Health Communication: International Perspectives*, 3: 1, 71 – 79.
- Chamberlain, M. (1996). Health communication: Making the most of new media technologies. *Journal of Health Communication, International Perspectives*, 1: 1, 43 – 50.
- Clark, F. (1992). The need for a national information infrastructure. *Journal of Biomedical Communication*, 19, 8 – 9.
- Cline, R. J. & McKenzie, N. J. (1998). The many cultures of health care: Difference, dominance, and distance in physician-patient communication. In L. D. Jackson & B. K. Duffy (Eds.), *Health communication research: A -guide to developments and direction* (pp. 57 – 74). Westport, CT: Greenwood Press.
- Dearing, J. W., Rogers, E. M., Meyer, G., Casey, M. K., Rao, N., Campo, S., & Henderson, G. M. (1996). Social marketing and diffusion-based strategies for communicating with unique populations: HIV prevention in San Francisco. *Journal of Health Communication: International Perspectives*, 1: 4, 342 – 364.
- Eng, T. R. & Gustafson, D. H. (Eds.). (1999). *Wired for health and well-being: The Emergence of interactive health communication*. Washington, DC: Office of Disease Prevention and Health Promotion, US Department of Health and Human Services.
- Engleberg, M., Flora, J., & Nass, C. (1995). AIDS knowledge: Effects of channel involvement and interpersonal communication. *Health Communication*, 7: 2, 73 – 92.
- Fabregas, S. M. & Kreps, G. L. (1999). Bioethics committees: A health communication approach. *Puerto Rico Health Sciences Journal*, 18: 1, 31 – 37.
- Ferguson, T. (1996). *Health online: How to find health information support groups and self-help communities in cyberspace*. Reading, MA: Addison Wesley.
- Freidson, E. (1970). *Professional dominance: The social structure of medical care*. Chicago: Al-dine.
- Freimuth, V. S., Stein, J. A., & Kean, T. J. (1989). *Searching for health information: The Cancer Information Service model*. Philadelphia, PA: University of Pennsylvania Press.
- Frey, L. R., Adelman, M. B., & Query, J. L. (1996). Communication practices in the social construction of health in an AIDS residence. *Journal of Health Psychology*, 1: 3, 383 – 398.
- Gabbard-Alley, A. S. (1995). Health communication and gender: A review and critique. *Health Communication*, 7: 1, 35 – 54.
- Gantz, W. & Greenberg, B. (1990). The role of informative television programs in the battle against AIDS. *Health Communication*, 2: 4, 199 – 216.

- Geist, P. & Hardesty, M. (1992). *Negotiating the crisis: DRGs and the transformation of hospitals*. Hillside, NJ: Lawrence Erlbaum.
- Gifford, C. J. (1983). *Health team literature: A review and application with implications for communication research*. Paper presented at the Eastern Communication Association conference, Ocean City, MD.
- Guttman, N. (1996). Values and justifications in health communication interventions: An analytic framework. *Journal of Health Communication: International Perspectives*, 1: 4, 365 – 396.
- Guttman, N. (1997). Ethical dilemmas in health campaigns. *Health Communication*, 9: 2, 155 – 190.
- Hafstad, A. & Aaro, L. E. (1997). Activating interpersonal influence through provocative appeals: Evaluation of a mass media-based anti-smoking campaign targeting adolescents. *Health Communication*, 9: 3, 253 – 272.
- Hammond, S. L., Freimuth, V. S., & Morrison, W. (1990). Radio and teens, Convincing gatekeepers to air health messages. *Health Communication*, 2: 2, 59 – 68.
- Harris, L. M. (Ed.) (1995). *Health and the new media: Technologies transforming personal and public health*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Hofstetter, C. R., Schultze, W. A., & Mulvihill, M. M. (1992). Communications media, public health, and public affairs: Exposure in a multimedia community. *Health Communication*, 4: 4, 259 – 272.
- Hyde, M. J. (1990). Experts, rhetoric, and the dilemmas of medical technology: Investigating a problem of progressive ideology. In M. J. Medhurst, A. Gonzalez, & T. R. Peterson (Eds.), *Communication and the culture of technology* (pp. 115 – 136). Pullman, WA: Washington State University Press.
- Jackson, L. D. & Duffy, B. K. (Eds.) (1998). *Health communication research: A guide to developments and direction*. Westport, CT: Greenwood Press.
- Johnson, J. D. (1997). *Cancer related information seeking*. Cresskill, NJ: Hampton Press.
- Jones, J. A., Kreps, G. L., & Phillips, G. M. (1995). *Communicating with your doctor: Getting the most out of health care*. Cresskill, NJ: Hampton Press.
- Kelly, J. A., St. Lawrence, J. S., Smith, S., Hood, H. V., & Cook, D. J. (1987). Stigmatization of AIDS patients by physicians. *American Journal of Public Health*, 77, 789 – 791.
- Kim, Y. M., Odallo, D., Thuo, M., & Kols, A. (1999). Client participation and provider communication in family planning counseling: Transcript analysis in Kenya. *Health Communication*, 11: 1, 1 – 19.
- Klingle, R. S., Burgoon, M., Afifi, W., & Callister, M. (1995). Rethinking how to measure organizational culture in the hospital setting: The Hospital Culture Scale. *Evaluation and the Health Professions*, 18, 166 – 186.
- Korhonen, T., Uutela, A., Korhonen, H. J., & Puska, P. (1998). Impact of mass media and interpersonal health communication on smoking cessation attempts: A study in North Karelia, 1989-1996. *Journal of Health Communication: International Perspectives*, 3: 2, 105 – 118.
- Kotler, P. & Roberto, E. (1989). *Social marketing: Strategies for changing public behavior*. New York: Free Press.
- Kreps, G. L. (1988a). The pervasive role of information in health care: Implications for health communication policy. In J. Anderson (Ed.), *Communication Yearbook 11*, (238-276). Newbury Park, CA, Sage.
- Kreps, G. L. (1988b). Relational communication in health care. *Southern Speech Communication Journal*, 53, 344 – 359.
- Kreps, G. L. (1989). Setting the agenda for health communication research and development: Scholarship that can make a difference. *Health Communication*, 1: 1, 11 – 15.
- Kreps, G. L. (1990). Communication and health education. In E. B. Ray & L. Donohew (Eds.), *Communication and health: Systems and applications*, (pp. 187 – 203). Hillsdale, NJ: Lawrence Erlbaum.
- Kreps, G. L. (1993). Refusing to be a victim: Rhetorical strategies for confronting cancer. In B. C. Thornton & G. L. Kreps (Eds.), *Perspectives on health communication* (pp. 42 – 47). Prospect Heights, IL: Waveland Press.

- Kreps, G. L. (1996a). Communicating to promote justice in the modern health care system. *Journal of Health Communication*, 1: 1, 99 – 109.
- Kreps, G. L. (1996b). Promoting a consumer orientation to health care and health promotion. *Journal of Health Psychology*, 1: 1, 41 – 48.
- Kreps, G. L. (1998). Social responsibility and the modern health care system: Promoting a consumer orientation to health care. In Salem, P. (Ed.), *Organizational Communication and Change* (pp. 293-304). Cresskill, NJ: Hampton Press.
- Kreps, G. L. (2001a). The evolution and advancement of health communication inquiry. In W. B. Gudykunst (Ed.), *Communication Yearbook 24* (pp. 232 – 254). Newbury Park, CA: Sage.
- Kreps, G. L. (2001b). Consumer/provider communication research: A personal plea to address issues of ecological validity, relational development, message diversity, and situational constraints. *Journal of Health Psychology*, 6: 5, 597 – 601.
- Kreps, G. L. (In-press). The importance of consumer health informatics. *Journal of the American Medical Informatics Association*.
- Kreps, G. L. & Chapelsky Massimilla, D. (2002). Cancer communications research and health outcomes: Review and challenge. *Communication Studies*, 53: 4, 318 – 336.
- Kreps, G. L. & Thornton, B. C. (1992). *Health communication: Theory and practice* (2nd. ed.). Prospect Heights, IL: Waveland Press.
- Kreps, G. L., Arora, N. K. & Nelson, D. E. (2003). Consumer Provider Communication Research: Directions for Development. *Patient Education and Counseling*, 50, 1 – 2.
- Kreps, G. L., Bonaguro, E. W., & Query, J. L. (1998). The history and development of the field of health communication. In L.D. Jackson, & B.K. Duffy (Eds.), *Health communication research: A guide to developments and direction* (pp. 1 – 15). Westport, CT: Greenwood Press.
- Kreps, G. L., Hubbard, S. ., & DeVita, V. T. (1988). The role of the Physician Data Query on-line cancer system in health information dissemination. In B. D. Ruben (Ed.), *Information and Behavior 2* (pp. 362 – 374). New Brunswick, NJ: Transaction Press.
- Kreps, G. L. & Kunimoto, E. N. (1994). *Effective communication in multicultural health care settings*. Thousand Oaks, CA: Sage.
- Kreps, G. L. & O’Hair, H. D. (1995). *Communication and health outcomes*. Cresskill, NJ: Hampton Press.
- Kreps, G. L., Query, J. L., & Bonaguro, E. W. (In-press). The interdisciplinary study of health communication and its relationship to communication science. In A. Schorr (Ed.), *Gesundheits-Kommunikation (Health Communication)*. Göttingen, Germany: Hogrefe-Huber Publishers.
- Kreps, G. L., Ruben, B. D., Baker, M. W., & Rosenthal, S. R. (1987, May–June). Survey of public knowledge about digestive health and diseases: Implications for health education. *Public Health Reports*, 102, 270 – 277.
- Kreuter, M., Farrell, D., Olevitch, L., & Brennan, L. (2000). Tailoring health messages: Customizing communication with computer technology. Mahwah, NJ: Lawrence Erlbaum and Associates.
- Lammers, J. C. & Geist, P. (1997). The transformation of caring in the light and shadow of “managed care.” *Health Communication*, 9: 1, 45 – 60.
- Larson, M. (1991). Health related messages embedded in prime-time television entertainment. *Health Communication*, 3: 1, 175 – 184.
- Lefebvre, C. & Flora, J. (1988). Social marketing and public health intervention. *Health Education Quarterly*, 15, 299 – 315.
- Lieberman, D. (1992). The computer’s potential role in health education. *Health Communication*, 4: 3, 211 – 226.
- Lupton, D. (1994). Toward the development of critical health communication praxis. *Health Communication*, 6: 1, 55 – 67.
- Maibach, E. W. & Kreps, G. L. (1986, September). *Communicating with clients: Primary care physicians perspectives on cancer prevention, screening, and education*. Paper presented to the International Conference on Dr.-Patient Communication, U of Western Ontario, Canada.
- Maibach, E. W., Kreps, G. L., & Bonaguro, E. W. (1993). Developing strategic communication

- campaigns for HIV/AIDS prevention. In S. Ratzan (Ed.), *AIDS: Effective health communication for the 90s* (pp. 15 – 35). Washington, D.C.: Taylor and Francis.
- Maibach, E. W., Shenker, A., & Singer, S. (1997). Consensus conference on the future of social marketing. *Journal of Health Communication: International Perspectives*, 2: 4, 301 – 303.
- Makoul, G. (1998). Perpetuating passivity: Reliance and reciprocal determinism in physician-patient interaction. *Journal of Health Communication*, 3: 3, 233 – 259.
- Marshall, A. (1993). Whose agenda is it anyway: Training medical residents in patient-centered interviewing techniques. In E. Berlin Ray (Ed.), *Case studies in health communication* (pp. 15 – 29). Hillsdale, NJ, Lawrence Erlbaum.
- McGuiness, J. M., Deering, M. J., & Patrick, K. (1995). Public health information and the new media: A view from the public health service. In L. M. Harris (Ed.), *Health and the new media: Technologies transforming personal and public health* (pp. 127 – 141). Lawrence Erlbaum Associates.
- Metts, S., Manns, H., & Krusic, L. (1996). Social support structures and predictors of depression in persons who are seropositive. *Journal of Health Psychology*, 1: 3, 367 – 382.
- Miller, K. & Zook, E. G. (1997). Care partners for persons with AIDS: Implications for health communication. *Journal of Applied Communication Research*, 25, 57 – 74.
- Myrick, R. (1998). In search of cultural sensitivity and inclusiveness: Communication strategies used in rural HIV prevention campaigns. *Health Communication*, 10: 1, 65 – 86.
- National Cancer Institute. (1999). The nation's investment in cancer research: A budget proposal for fiscal year 2001. Washington, DC: NCI.
- O'Keefe, G. J., Hartwig Boyd, H., Brown, M. R. (1998). Who learns preventive health care information from where: Cross-channel and repertoire comparisons. *Health Communication*, 10: 1, 25 – 6.
- Pavlik, J. V., Finnegan, J. R., Strickland, D., Salman, C. T., Viswanath, K., & Wackman, D. B. (1993). Increasing public understanding of heart disease: An analysis of the Minnesota heart health program. *Health Communication*, 5: 1, 1 – 20.
- Phillips, G. M. & Jones, J. A. (1991). Medical compliance: Patient or physician responsibility. *American Behavioral Scientist*, 34, 756 – 767.
- Query, J. L. & James, A. C. (1989). The relationship between interpersonal communication competence and social support among elderly support groups in retirement communities. *Health Communication*, 1: 3, 165 – 184.
- Query, J. L. & Kreps, G. L. (1996). Testing a relational model of health communication competence among caregivers for individuals with Alzheimer's disease. *Journal of Health Psychology*, 1: 3, 335 – 352.
- Quesada, G. & Heller, R. (1977). Sociocultural barriers to medical care among Mexican Americans in Texas. *Medical Care*, 15, 93 – 101.
- Ratzan, S. C. (1999). Editorial: Strategic health communication and social marketing of risk issues. *Journal of Health Communication: International Perspectives*, 4: 1, 1 – 6.
- Ray, E. B. & Miller, K. I. (1990). Communication in health care organizations. In E. B Ray & L. Dohohew (Eds.), *Communication and health: Systems and applications* (pp. 92 – 107). Hillsdale, NJ: Lawrence Erlbaum and Associates.
- Reardon, K. K., & Rogers, E. M. (1988). Interpersonal versus mass media communication: A false dichotomy. *Human Communication Research*, 15: 2, 284 – 303.
- Ressler, W. & Toledo, E. (1997). A Functional Perspective on Social Marketing: Insights from Israel's bicycle helmet campaign. *Journal of Health Communication: International Perspectives*, 2: 3.
- Rimer, B. K. (2000). Foreword. In Kreuter, M., Farrell, D., Olevitch, L., & Brennan, L., *Tailoring health messages: Customizing communication with computer technology*. Mahwah, NJ: Lawrence Erlbaum and Associates.
- Rootman, I., & Hershfield, L. (1994). Health communication research: broadening the scope. *Health Communication*, 6: 1, 69 – 72.
- Sechrist, L., Backer, T. E., Rogers, E. M., Campbell, T. F., & Grady, M. L. (Eds.) (1994). *Effective*

- dissemination of health information*. Rockville, MD: Agency for Health Care Policy and Research.
- Sharf, B. F. (1993). Reading the vital signs: Research in health care communication. *Communication Monographs*, 60, 35 – 41.
- Sharf, B. F. (1997). The present and future of health communication scholarship: Overlooked opportunities. *Health Communication*, 11: 2, 195 – 199.
- Signorielli, N. & Lears, M. (1992). Television and children's conceptions of nutrition: Unhealthy messages. *Health Communication*, 4: 4, 245 – 258.
- Slack, W. V. (1997). *Cybermedicine: How computers empower doctors and patients for better health care*. San Francisco, CA: Jossey-Bass.
- Smaglik, P., Hawkins, R. P., Pingree, S., Gustafson, D. H., Boberh, E., & Bricker, E. (1998). The quality of interactive computer use among HIV-infected individuals. *Journal of Health Communication: International Perspectives*, Volume 3: 1, 53 – 68.
- Smith, D. H. & Pettegrew, L. S. (1986). Mutual persuasion as a model for doctor-patient communication. *Theoretical Medicine*, 7, 127 – 139.
- Sonnenberg, F.A. (1997). Health information on the Internet: Opportunities and pitfalls. *Archives of Internal Medicine*, 157, 151 – 152.
- Stoddard, J. L., Johnson, C. A., Sussman, S., Dent, C., & Boley-Cruz, T. (1998). Tailoring outdoor tobacco advertising to minorities in Los Angeles county. *Journal of Health Communication: International Perspectives*, 3: 2, 137 – 146.
- Street, R. L., Jr. (Ed.) (1996). *Health and multimedia*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Street, R. L., Jr., Gold, W. R., & Manning, T. (Eds.) (1997). *Health promotion and interactive technology: Theoretical applications and future directions*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Thornton, B. C. & Kreps, G. L. (Eds.) (1993). *Perspectives on health communication*. Prospect Heights, IL: Waveland Press.
- Treichler, P. (1987). AIDS, homophobia, and biomedical discourse: An epidemic of signification. *Cultural Studies*, 1: 3, 263 – 305.
- Valente, T. W., Poppe, P. R., & Merritt, A. P. (1996). Mass-media generated interpersonal communication as sources of information about family planning. *Journal of Health Communication: International Perspectives*, 1: 3, 247 – 266.
- Wallack, L., Dorfman, L., Jernigan, D. & Themba, M. (1993). *Media advocacy and public health*. Newbury Park, CA: Sage.
- Winnett, L. B. & Wallack, L. (1996). Advancing public health goals through the mass media. *Journal of Health Communication: International Perspectives*, 1: 2, 173 – 196.
- Yom, S. S. (1996). The Internet and the future of minority health. *Journal of the American Medical Association*, 275, 735.
- Zook, E. G. (1994). Embodied health and constitutive communication. Toward an authentic conceptualization of health communication. In S. A. Deetz (Ed.), *Communication Yearbook 17* (pp. 344 – 377). Thousand Oaks, CA: Sage.