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Concluding Thoughts



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In this final chapter, we advance some touchstone issues for consideration by scholars and policymakers. We also seek to highlight *experiences* that suggest some might wish to temper what we judge to be excessively exuberant *expectations* of what the Internet can deliver in terms of health care.

COST-BENEFIT COMPARISONS

Perhaps the most seductive of expectations—especially for providers—is that the Internet in general and Web sites in particular will improve health care services while lowering costs and reducing staff. We are skeptical. Moving services onto the Internet will not yield anything like the reported benefits; rather, it will increase costs and require more labor. Our prediction is not entirely pessimistic; the Internet will improve many aspects of health care, and in some cases shall do so dramatically. But we must emphasize that many of these improvements will come at greater system costs and require more labor, not less.

Space considerations permit only one brief illustration, drawn from the pharmaceutical industry. It spent \$8 billion in 1999 promoting drugs to physicians, and employed more than 65,000 people as pharmaceutical sales representatives. Certainly, one might be tempted to think, the Internet would be able to make inroads into these attractively plump figures. But Glaxo Wellcome, an international leader in pharmaceuticals, plans not to pare but to expand its 8,600-person force of sales representatives; it will be adding nearly 10% in the year 2000 while at the same time dramatically expanding manpower and expenditures to ramp up its use of the Internet as a marketing tool. Like most other large pharmaceutical manufacturers, Glaxo Wellcome sees the Internet as an addition to its business portfolio, not unlike automated teller machines (and, one has to add, the Internet) are for banks. Investments will rise, not sag. Glaxo Wellcome, as are its competitors, will be aggressively promoting Internet marketing to physicians, including computer-giveaways, free high-speed connections, e-symposia, real-time video detailing, and Internet programs delivered to the physician's home. Interestingly, the Internet will not (at least not in the near future) replace traditional marketing methods, but rather will supplement access to smaller offices or those that reject the overtures of human sales people (Fisher, 2000a).

Interest in the Internet is not simply a case of technology push; the pull from consumers is strong indeed. Hence the health care sector has not only to staff its traditional activities, but also respond to consumer demand and competitive pressures. For their part, rather than slashing staff, hospitals and medical offices have been forced to hire still more personnel to tend to the administrative and communication needs of an Internet presence. Whatever efficiencies will be gained by using the Internet are likely to come slowly; the costs, though, will come immediately. This is suggested by the fact that after a quarter century of effort being devoted to electronic data processing in the health care sector, 60% of physician claims are still submitted manually (Fisher, 2000b). Further, so far only two sites for health professionals, *medscape.com* and *mediconsult.com*, have positive "stickiness"—page views and revisits by users ("Internet Traffic Data," 2000); others, such as *drkoop.com*, seem to be suffering from "negative growth." So, paradoxically, the health care sector must run faster simply to stay in place.

This having been said, we do not contravene the likelihood that enormous savings will be realized by harnessing the Internet in certain areas, especially the business-to-business arena. However, these are fundamen-

tally different business processes than the delivery of health care to consumers and patients (see Chapter 15, this volume)

THE IMPLICATION OF INTEGRATION FOR NEAR-TERM INVESTMENTS

While there has been dramatic progress in Internet technology over the past two decades, surely we are only at the beginning stages of this revolution. A simple analogy may suffice to illustrate. In this analogy, the computer is an automobile, and the network is a highway system. If you were to come across an automobile placed in the midst of a swamp, you would likely judge it an impressive piece of machinery. Upon examination, you would find it comfortable to rest in. If the weather were cold, the car could heat you. If the weather were hot, the car could cool you. It would have a radio to entertain you. Yet it would remain simply an isolated machine, unconnected to the vast activities of the world. But given a network of highways, its transfiguring power could be unleashed. The automobile could carry you to the ends of the continent, and allow you to work and play, and to develop and maintain relationships, far from home.

This is analogous to the situation of health care and the computer. It is only when the computer becomes connected to other computers via networks that its higher powers become unleashed. The difference between a computer and a network is the difference between the power of one person and the power of an organization. Moreover, the interaction that networks allow create self-organizing social units that can envision and carry out enterprises that extend beyond the creativity of any one individual.

The modern highway system has wide lanes, is built of concrete, and displays readily comprehensible signage. Our information highway is one lane wide, potholed, with superficial and uninformative signage ("Error 404—page not found"). These limitations spill over into the ability of the Internet to serve health care needs.

We have been pessimistic about the rapid adoption of the Internet for health care enterprise management and patient-physician communication. And by no means are we alone in our judgment about the limited potential of the Internet for health care communication. A survey was taken in late 1999 of 125 chief information officers (CIOs) at a variety of hospitals and health care facilities in United States; the respondents were responsible for spending more than \$1 billion annually on information technology

(IT). The survey found what could only be described as extremely limited interest in spending on Internet-related IT. The judgment of these IT professionals was that although eventually of interest, Internet technology is not yet suitable for any sizable investment from the health care community. Fewer than 10% of the surveyed managers anticipated investing in technologies that were exclusively Internet based. To the extent they were interested in Internet technologies, it was to use them to access their already installed legacy systems base (Goldman-Sachs, 2000; see Mittman & Cain, Chapter 2, this volume).

As we said above, we see vast potential over the longer term. One of the earliest points of development and user acceptance is likely to be in the areas of small, intelligent wireless applications. In particular, we expect the personal digital assistants, the most prominent of which is the Palm Pilot, to become readily adopted by hospital-based health personnel generally, and physicians in particular. This form of technology is portable, small, and convenient. Thus it fits especially well with the predispositions and prerequisites of the physician and other medical personnel. The key is the wireless nature of the technology. By being portable, it fits with the requirement that we sketched out in our introduction to Section I of this book, namely that technology must be compatible with user needs. The most successful technologies are those that work conveniently and usefully with human social routines and that are also capable of extending them. As such, we expect that future generations of the personal digital assistant will become a widely adopted extension of the human health care agent. This will be in stark contrast to today's arrangement that is dominated by a centralized processing station.

SURMOUNTING THE FOOTHILLS ONLY TO SEE THE MOUNTAINS

Our argument is that while the promise of information technology to improve health care communication is an inviting one, the realities of implementing it are consistently and dramatically underestimated by its advocates. Specifically, we see that the pragmatics of daily life, including organizational exigencies, competition over the command of scarce resources, poor interpersonal communication, needs for security and confidentiality, and the nuanced nature of human interaction, all make the early realization of these prospects difficult if not unlikely.

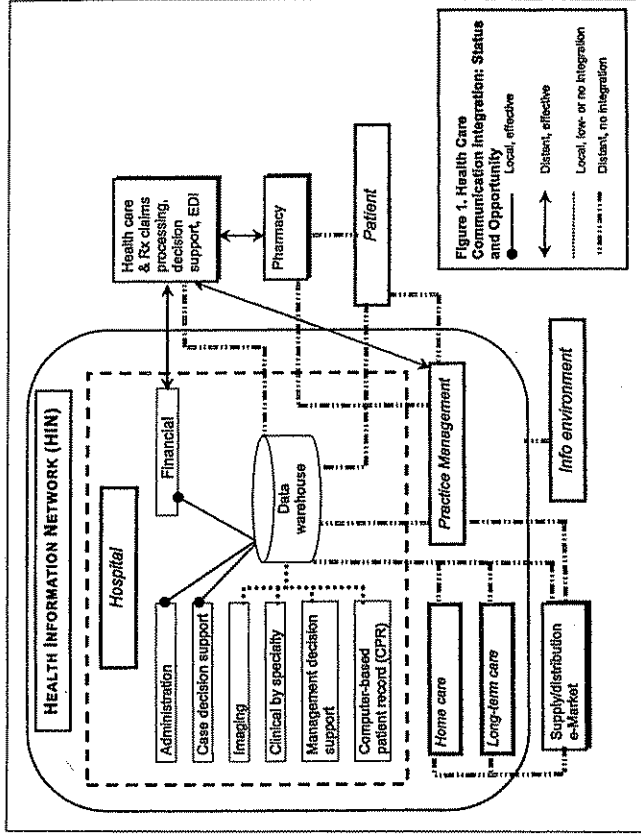


Figure 19.1. Health Care Communication Integration: Status and Opportunity

In an attempt to illustrate better the principles we are discussing, we have chosen to depict the situation in Figures 19.1 and 19.2. Figure 19.1 shows the general information environment within which patients and physicians operate, and the areas where there are effective systems as well as the areas where progress has been slight. Within this context, we note that there has been much discussion of late about health information networks (HIN). Thus, to illustrate the situation better, we have depicted a health information network in Figure 19.1. Figure 19.1 details areas where sophisticated data interchange systems are already working effectively in most health care environments. We have also sought to indicate where there might be interconnection among units, although the processes are still at a primitive state. Figure 19.1 also makes a distinction between local networks, which are readily addressed (relatively speaking) by an institution, versus those networks that we characterize as "distant," such as the Internet. These latter systems cross institutional boundaries and thus can be exceedingly complex to coordinate.

Earlier chapters in this volume discussed many of these aspects. Three of the most salient discussions were on joint community program development, Web-enabled hospitals, and cooperative research programs within the highly competitive Australian pharmaceutical industry. There is enormous progress to be made, even within a hospital setting, and a tremendous potential in linking the various elements of a health information network.

Figure 19.2 suggests some of the complexity inherent in health care processes that is disguised by the higher-level view of the elements of Figure 19.1. In particular, it is easy to see that there are immense, rich, and complex communication issues that need to be addressed in order to make these various parts of the system work coherently together. In sum, these two figures highlight the importance of a sophisticated, social-scientific understanding of the communication process in the health setting. However, they also indicate, at least by implication, how difficult it will be to harness the tremendous power of data processing and communication on behalf of flexible, sophisticated health care service delivery.

FACILITATING HEALTH COMMUNICATION

An area in which the Internet is making a vital but underappreciated contribution to the welfare of the public is as a means to give and receive emotional support and succor. This area seldom appears in business plans or as an integral part of health initiatives. Emotional well-being and support are much less tangible than quantitative goals, such as reducing the number of deaths due to cigarette smoking or AIDS. Yet the emotional side of the equation is both real and important; it is a quality-of-life issue, and the quality of life counts for much. This benefit is tempered by the extreme difficulty in identifying credible information in most online support groups, and the dissemination of inaccurate and even dangerous suggestions and treatments that populate the Internet.

An area where we do not see revolutionary prospects for improvement is in physician-patient communication. Long before the advent of the Internet, physicians were complaining about patient intrusion into their attempt to minister to the welfare of their patients. Spielberg (1998) notes 17th-century traditions of doctors diagnosing patients without direct physical examination, and early use of the telephone and telegraph for pa-

Figure 19.2. Potential Internet Health Care Communication Foci and Information Service Requirements [Selected] (Details of selected cells from Figure 19.1)

Primary—Daily	Patient
<ul style="list-style-type: none"> • Privacy • Security • Marketing • Compliance • Device performance monitoring • Information seeking • Appointment scheduling • Emergency summons • Social support network • Communication and e-mail participation • Insurance interaction and forms processing • Updates and alerts about conditions of concern • Appropriate browsing material 	<ul style="list-style-type: none"> • Scheduling • Practice management • Patient records • Claims processing • Communication & e-mail • Accounting • Specialty referrals • Decision support • Practice info data • Research database • Training • Staff management • Vendor interfacing • Medical economics
Periodic—Routine	<ul style="list-style-type: none"> • Financial • Administrative • Imaging • Record keeping • Remote device monitoring • Resource management • Training and community outreach • Interface with regional and licensing boards • EDP • Security • Compliance • Fund raising • Ancillary services
Urgent—Chronic	<ul style="list-style-type: none"> • Rehabilitation facilities • Emergency transportation
Infrastructure—Regulatory	<ul style="list-style-type: none"> • Professional review • Administrative review • Juridical proceedings • Licensing & training • Public records • Specialty societies & boards • Insurance & qualification • Special interest health advocacy & support groups • Insurance & social services • Research centers • Local, county, state & federal agencies

tient-physician communication. A brief nod to the history of the telephone may be in order at this point to show the context of e-mail and how it may be oversold by those who think it will be a panacea for patient-physician communication. An early concern about the telephone was privacy, security, and intrusiveness (Katz, 1999); party lines, poor connectivity, and knowing the operators were among the problems. To increase privacy and security, portable telephone booths and the use of codes became popular (Katz, 1999).

The first telephone exchange, established in Connecticut, was used to connect several physicians to a local drugstore (Starr, 1982, pp. 69-78, cited in Spielberg, 1998). In the *British Medical Journal* in 1878, presumably reflecting the culture and concerns of the times, a physician advertised to the public that, "He may be summoned or consulted through the telephone in either by night or day. Communication is . . . absolutely private and confidential" ("The Telephone," 1878, quoted in Spielberg, 1998). On the other side of the coin, concerns were raised at that time about privacy, confidentiality, doctors inundated by patients' phone calls, ordering drugs from centralized pharmacies, overhearing of conversations by party-line members or operators, and reduced quality of health care from telephone-based diagnoses. In terms of excessive accessibility to patients, one physician complained that the profession was becoming "slaves" to the telephone calls of anxious patients ("The Telephone," 1878, cited in Spielberg, 1998). Yet as use of the telephone proliferated, "physicians began to use the telephone to their advantage, screening potential visits and using intermediaries to assess the priority of the calls" (Spielberg, 1998, p. 1357). The telephone was accepted much more rapidly for patient-doctor communication than e-mail apparently has been. Note, however, that the telephone has become a major tool in the arsenal of the physician for *moderating* access. Rare indeed are physicians who will give out to patients their home telephone numbers; virtually all have elaborate mechanisms in place to protect themselves from being readily accessible to their patients.

Hence we are skeptical about the promise that e-mail will be a welcome and often-used addition to the doctor's black bag. The editors of this volume have done extensive research on mediated communication, including the personal and organizational impact of e-mail. Within this context, we note the startling lack of acceptance of earlier, albeit low-tech, ways of communication that could have, but did not, open a channel of communication between physician and patient. For instance, people could have

sent letters, called, or faxed their physicians (or physicians' offices), asking the same questions that are or could be asked by e-mail. The fact that these technologies were not adopted, we would argue, is not because the technology limits or permits access to physicians. Rather, it is the social structure that balances full access against managed boundaries. The prospects for e-mail in this regard are no better, or worse, than for the telephone or other media.

EXPECTATIONS, ETHICS, AND INTERESTS

We also note that there seems at times to be a wide gap between the behavior of those who operate Internet health sites and the expectations of the public. This may be seen, for example, in a January 2000 survey of consumer attitudes about health Web sites. This survey, sponsored by the California HealthCare Foundation and the Internet Health Care Coalition, determined that there are high levels of concern about sharing data online and about the improper disclosure of medical information. The public was especially suspicious of the ethical behavior of many Internet health Web sites. For example, 89% of the respondents to the survey said they would be unwilling to submit information to a health care Web site if it was going to be shared with advertisers or marketers. This norm is obviously at odds with conventional privacy practices of health care-oriented commercial Web sites. The report also vetted more than a score of these Web sites, noting that several clearly violated in practice their own stated privacy policies.

Certainly, the ethical dimensions of the proper conduct of a Web site are not entirely clear, especially to those who operate such Web sites. For example, the eminent physician and former Surgeon General, Dr. C. Everett Koop, organized an ethics summit for commercial health care Web site operators. It was perhaps not entirely coincidental that this "ethics summit" was held in the wake of a *New York Times* story revealing that Dr. Koop, who is a substantial shareholder of the medical site (<http://www.drkoop.com>) that bears his name, was receiving a percentage of the revenue from all products sold at the site. Moreover, the *New York Times* also learned that the recommended "community affiliate" vendors on Dr. Koop's site had to pay \$40,000 for the privilege of being so listed.

HOPES, EMPOWERMENT, AND RESPONSIBILITY

Does this mean that the future of Internet-based health care is bleak? Not at all. Clearly, as the contributors to this volume have amply demonstrated, much is being achieved; they offer extensive evidence of good things to come. What is also clear, though, is that the same behaviors that before the advent of the Internet were of great concern will be transported to, and even magnified by, this new medium. Alternative health, quackery, folk remedies, underappreciated solutions to health problems, thoughtful research findings, and traditional recommendations will all be competing for the eyeballs of the public even while they raise eyebrows. The ultimate consequence of this buzzing, blooming confusion will be not only greater potential power in the hands of the energetic or perceptive consumer, patient, and caregiver. It will also mean that for the less shrewd there will be enormous difficulties in using constructively the power that the Internet bestows. The freedoms of the Internet increasingly include the responsibility for making one's own choices, choices that carry risk. This includes the risks involved in learning about and taking responsibility for one's own health. We must not ignore the lessons of the so-called search for safety, that is, the institutionally based steps aimed at guaranteeing the public's safety, that are so energetic that they are taken at the cost of innovation and ultimately of the very goal they were pursuing (Wildavsky, 1993). We need embrace neither the heavy-handed regulation that excessively limits human freedom nor the abuses of what might be termed, in its worst sense, *medicins sans frontieres*. The Internet will continue to generate concern and consternation over health care at every level.

RESEARCH ISSUES

Table 19.1 summarizes the primary health care process issues and the primary research issues. Major foci include who is the community of interest (i.e., stakeholders); what is the content; where and when does connectivity occur; how this is accomplished through software and computers; whether the health care is virtual or real; who pays; and the legislation, rules, and regulations that affect the quality of health care and the uses of the Internet. Note that stakeholders include a wide range of actors, from health care providers and patients to significant others, medical research-

Table 19.1 Interaction of Health Care Process Focus and Research Issues

Health Care Process Focus	Community of Interest—Who	Content—What	Connectivity—Where & When	Computers & Software—How	Care—Real vs. Virtual	Cash—Who pays	Quality—Rules & Regulations
Examples	Physicians, caregivers, HMOs, patients, family and support network . . .	Journal articles, supplies, Q&A, products, information . . .	Open or closed network, public or private network, wire or wireless . . .	Thin vs. thick client servers, Web, chat, CDs, wireless, kiosks, boards, MUDS . . .	Synchronous, asynchronous, expert system . . .	Ads, information disclosure, per use, subscription, grants, insurance company, products . . .	Standards, boards, laws, genres, security, privacy . . .
Health Efficacy							
Service & Financial Efficiency							
Organizational & Community Decision Making							
Individual & Social Network Decision Making							
Access, Equity							
Privacy, Security							
Barriers to Adoption, Use, Evaluation							
Communication Flows and Networks							
Research Methods, Data, Analyses							

ers, and insurance companies. There is little research on most of the cross-stakeholder interactions, except for the initial work on Internet mediation of physician-patient and patient-patient communication, as well as work on provider-provider interaction.

Major research issues include outcomes such as health efficacy and cost-efficiency; the form and process of decision making at the community, organizational, and individual levels; access to and equity of care; privacy and security of personalizable health information; barriers to access and use; the flows and networks of communication among patients and providers; and methodology (both ethical and practical aspects of medical information and Internet usage data).

We tried to select topics and authors who could populate as many cells of Table 19.1 as possible. We encourage researchers, practitioners, and stakeholders to consider how the mix of cells in this process/research space may illuminate their activities.

CONCLUSION

Finally, in summing up, we argued in the first chapter that the intersection of the Internet and health communication is socially significant, as well as ethically and politically consequential. And, as researchers who are interested in the process of analyzing, understanding, and interpreting evidence, we find it methodologically challenging. Yet it is also something more. The topic of the Internet and health communication is fundamentally about communication, both tacit and overt.

In this context, our concluding judgment would be twofold. First, the trash heap of history is littered with failed communication technologies. The video-telephone and the stand-alone kiosks in doctor's offices for patients are but two of them. While we are not suggesting a similar fate for the Internet, the limits of computers also suggest that human communication cannot take place without regard to the biological and social linchpins that hold society together. Communication is a process of choreographic intensity and minute coordination. Hence there is a fundamental challenge and limit to the algorithmically dictated routines of software. This is why we see differential prognoses for various efficiencies within the broad applications and uses of the Internet. This is also why we see a critical need for the contributions of scholars of communication.

The other aspect of the Internet involves communication and health care in a different way; namely, negotiated reality, the understanding of the variegated and constructed nature of the Internet and how to manage a fundamental contradiction. That contradiction is between experience and expectations. On the one hand, most of the world's six billion people are living a life that is materially fuller than has been the case at any time in history (this relative comparison, of course, does not presume that more than a small percentage of the world's population has sufficient living conditions). Yet as good as the lived experiences are, the expectations are rising still faster, and the realities often do not match. This is as true in the case of health care as it is for the other forms of new media in the coming years (Katz, 2000). The Internet is a place to get rich and to get robbed, to communicate with others and to be mislead through others' communication, to take power and pursue glory, to recover one's life and to end it.

REFERENCES

- Fisher, J. (2000a, February 4). Big pharma makes first moves on the Internet. *WRH+Co. Weekly* [Newsletter], 2(5), 2.
- Fisher, J. (2000b, January 14). Medscape expands strategy. *WRH+Co. Weekly* [Newsletter], 2(2), 3.
- Goldman-Sachs. (2000). Y2K hangover makes 2000 a challenge: Results of our CIO survey. *Healthcare Internet technology*, January 27. New York.
- Katz, J. E. (1999). Communication in 2075. In *Science and the future* (pp. 176-191). Chicago: Encyclopedia Britannica.
- Katz, J. E. (1999). *Connections: Social and cultural studies of the telephone in American life*. New Brunswick, NJ: Transaction.
- Media Metrix. (2000). Internet traffic data. NY, January.
- Spielberg, A. (1998). On call and online: Sociohistorical, legal, and ethical implications of e-mail for the patient-physician relationship. *Journal of the American Medical Association*, 280(15), 1353-1359.
- Starr, P. (1982). *The social transformation of American medicine: The rise of a sovereign profession and the making of east industry*. New York: Basic Books.
- The telephone. (1878). *British Medical Journal*, 2(43).
- Wildavsky, A. (1993). *Searching for safety*. New Brunswick, NJ: Transaction.