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Structural and Legal Implications of E-Health.

NICOLAS P. TERRY
(St Louis University, US)

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ABSTRACT: Web and attendant e-Commerce phenomena are irretrievably at odds with the traditional structure and hence legal regulation of health delivery. E-Health delivers healthcare information, diagnosis, treatment, care, and prescribing of drugs in a nonlinear, nonhierarchical manner that encourages patients to "enter" the system at an infinite number of points, thus defying current regulatory constructs. Similarly, e-Commerce fundamentals such as disintermediation and disaggregation result in medical information being delivered through unfamiliar channels, creating immensely difficult questions for health lawyers.

The rules and regulatory agencies that fill health law space can appear remote, even disconnected from the realities of medical practice. Yet, in large part, legal rules merely react to health system practices, mapping to the industry's structures and relationships. Traditional (physical space) healthcare delivery (and hence applicable health law) remains premised on structures or precepts that are decades, even centuries old. In contrast, e-Health¹ is premised on a fundamentally new patient experience that is unconstrained by familiar points of entry and structures or traditional channels for delivering information. Not surprisingly, therefore, the e-Health revolution has as many serious implications for health lawyers² as for medical professionals.

Traditionally, patient access to the healthcare delivery system has been limited to a small number of predetermined points of entry, even to a single access point, such as through a primary care physician. Thereafter, the patient's progress through the system has been relatively linear, frequently dictated by seemingly rigid hierarchical structures. Health professionals and lawyers alike will testify to the massive impact of the past three decades of structural change. Yet, sandwiched beneath the reimbursement layer and above the business organizational layer of today's partially or fully integrated structures, is the patient's experience that different? Many of the players now have additional functions (for example, doctor as gatekeeper), there may be some new internal institutional processes (such as utilization review), and the system's center of gravity may have shifted from physician to institution. Overall, however, the *patient experience* is essentially unchanged. For the patient there may be new forms, phone numbers, and irritants, but the linear, hierarchical process persists, and subtleties of business structures, payments systems, incentives, and disincentives frequently are scarcely visible.

In our traditional, real space system of health delivery, processes such as diagnosis, treatment, and care have involved physical presence and personal interaction between providers and patients.

Almost by definition, such physical presence guarantees the identification (i.e., lack of anonymity) of the parties and their roles. Medical information has been controlled by the healthcare system; its delivery intermediated by healthcare professionals and patients bearing the costs of informational asymmetry. Data flow has been predominantly asynchronous, the physician-patient relationship being light on interactive dialog. As a result, while patients may no longer suffer Katz's "secret world,"³ they have yet to realize costless synchronous data-sharing. And, one final observation on contemporary, traditional health delivery-- consumers have *paid* for all aspects of their healthcare information treatment and care, either directly or through increasingly complex reimbursement systems.

Quality assurance and related regulatory features of current health law resolutely map to these characteristics of physical space health delivery. For example, a predetermined single point of entry to the delivery system dictated by physical presence synchronizes with state-based licensure systems with their attendant limitations on practice across state lines and related limitations on corporate⁴ (institutional) and, in some states, commercial ("for-profit"⁵) practice. The requirement that a physician have hospital staff privileges perpetuates the dominance of the initial physician relationship and keeps the patient within a geographical area and a limited institutional space. Similarly, a subsequent physician-provided prescription processes the patient onward through the system to interact with (typically⁶) a physically local, state licensed,⁷ and geographically restricted pharmacist.

In physical space, malpractice exposure is premised on the existence of a physician-patient relationship that itself is rooted in physical contact and communication. Equally, malpractice based quality assurance retains ties with locality-based (and hence quite specific physical space) customary standards.⁸ Liability structures persistently reference the single-point-of-entry paradigm; it is the individual physician who is the primary defendant in malpractice cases, while the institutions and payment systems that rapidly take over diagnosis, treatment, and care are exposed to liability only through the application of arcane secondary liability rules such as vicarious liability and agency.⁹

Physical space models also have determined how the legal system regulates the flow of information. Warnings accompanying prescription drugs are viewed as directed only at the "learned intermediary" physician: in essence a legal confirmation of our system's refusal to open up a patient-manufacturer channel. The informed consent doctrine, premised as it is on the existence of informational asymmetry between patient and *physician*, imposes duties only on the latter, not on institutions. Meanwhile, the regulation of the distribution of patient data is achieved through the narrow duty of confidentiality owed by the physician to the patient rather than by way of a generalized, system-wide right of privacy enjoyed by the patient.

Web and attendant e-Commerce phenomena are irretrievably at odds with the traditional structure and hence legal regulation of health delivery. E-Health delivers information, diagnosis, treatment, care, and prescribing in a nonlinear, nonhierarchical manner that encourages patients to "enter" the system at an infinite number of points. With the declining influence of proximity or geography, patients (and others in e-Health space) will have more choice, a phenomenon that will accelerate the decline of traditional professional relationships, a deconstruction that finds its extreme in the concept of "click-loyalty."¹⁰

This lack of physicality, the decoupling of physician from jurisdiction- delimited practice, severely challenges state licensing systems that apply to healthcare professionals.¹¹ Telemedicine statutes that have been passed in a few states may map to a narrow range of business-to-business e-Health businesses.¹² However, in the case of most business-to-consumer e-Health models, state authorities will be faced with extravagant interpretations of provisions that permit, for example, out-of-state consultations¹³ or, in the case of prescription drugs, mail-order supply.¹⁴ As a result, many

practitioners will be risking a charge of unlicensed practice of medicine, while their patients may face an additional risk of dealing with a physician without (typically geographically limited) malpractice insurance coverage. Inevitably, as e-Health expands, these issues will provide impetus for adoption of more portable licensing requirements,¹⁵ increased reciprocity, and even transnational qualifications.

Wherever or however a consumer enters e-Health space, she will find vast amounts of health and health-related information waiting for her. Most of this information is *free*, though not necessarily untainted by advertising and conflicts of interest. The informational asymmetry that has long existed between healthcare provider and patient is the product of "the trade-off between richness and reach" of information that can be delivered in real space.¹⁶ Indeed, physical space's inability to deliver both richness and reach is the fundamental reason our society historically has selected a small number of persons to be educated in rich information (be it medical or legal or nuclear physics). E-Health space has the potential to deliver rich information to all.¹⁷ Of course, the "richness" delivered by first generation e-Health sites is somewhat immature, long on quantity but short on quality. That is why physicians worry about the dangerous or distracting information their patients are finding¹⁸ and why consumers are incurring very high "sorting" costs. Yet, over time, true richness will win out, aided by "just-in-time" delivery, location-dependent focus (triggered by global positioning system locators in our wireless devices), and evolving personalization technologies. Once the promise of richness is delivered on and patient-incurred information costs (informational asymmetries) are eliminated from the system, we should reach a point at which the doctrine of informed consent becomes redundant.¹⁹

Whatever information *is* delivered, increasingly it will be delivered by e-Health players other than doctors. Disintermediation, or removing the middleman, is too powerful an e-Commerce phenomenon to spare even the most traditional of information gatekeepers.²⁰ Clearly, physicians already are experiencing disintermediation as vertical Web portals, drug manufacturers, and managed care organizations wage war on the Web for patient eyeballs and mouse clicks. In cases where informational inefficiencies persist, these traditional players will themselves be disintermediated by entirely new species of infomediaries, from auctions²¹ to aggregators,²² to buying "groups."²³

Medical information delivered through unfamiliar channels creates immensely difficult questions for health lawyers.²⁴ The physical space medical malpractice system begins with identifying a physician-patient relationship. Yet, what is sufficient to trigger a relationship that gives rise to a duty of care in e-Health space?²⁵ Daily, thousands of physicians are risking the creation of a physician-patient relationship when they answer unsolicited e-mail.²⁶ Still other physicians are making contact with patients through auctions, attracting speculation as to insurance coverage issues.²⁷

Assuming the absence of any traditional physician-patient relationship, what standards do we apply to health portals and others that offer advice? Physical space malpractice liability has been spared the perils of First Amendment analysis. Yet, in advice site cases, that will be only the beginning, as "commercial speech" arguments and statutory immunities²⁸ face off.²⁹ Health lawyers used to dealing with customs of the profession will now have to deal with competing e-Health codes of conduct³⁰ and intriguing proposed technological "trustmark" solutions.³¹ So far, only relatively obvious predictions can be made.³² In a world of Direct-to-Consumer marketing of prescription drugs,³³ the "learned intermediary" rule³⁴ becomes superfluous.³⁵ And the fiction of the patient's legal relationship being with the physician rather than a treating institution, although a miraculous survivor of managed care, is unlikely to survive the information age's take on industrialized medicine.³⁶

While the physician is becoming at least partially disintermediated by advice sites, other Web-related

technologies seek to disaggregate traditional provider functions. As our homes become hard-wired to the internet, the "always on" nature of broadband access encourages the development of patient diagnosis and monitoring devices.³⁷ These Web appliances will report data to diagnostic databases, essentially disaggregating the traditional functions of data collection and diagnosis. While this "ATM" model of medical care raises plenty of commercial and ethical issues for physicians, health lawyers will have to determine whether they are dealing with the sale of a product or the supply of a service, whether to apply strict products liability or professional negligence.³⁸ Additional categorization questions will arise as on-line providers incorporate forms-based diagnostic tools on their sites.

Once the physician and patient cease to occupy the same physical space, uncertainties may arise as to their identities. Clearly, some types of treatment will benefit from the anonymity inherent in a virtual space relationship: for example, psychotherapy without embarrassment and an increase in patient disclosure.³⁹ However, the risks are considerable and include fraudulent qualifications, impersonation of professionals, and fraud by patients. As a result, digital identification⁴⁰ and professional digital credentialing⁴¹ increasingly will become necessary accompaniments to physician on-line activity, potentially drawing certification authorities or other trusted intermediaries into the web of e-Health law.

Physicality also has played a role in how we have protected patient data. A robust confidentiality duty⁴² has sufficed because physical space inefficiencies have restricted providers to collecting relatively discrete data sets. This changes dramatically as soon as providers have access to coherent, integrated data. Not surprisingly, system-wide privacy is now a major issue and health professionals and their counsel are awash in the meticulous detail of the Health Insurance Portability and Accountability Act regulations providing for "Privacy of Individually Identifiable Health Information."⁴³ However, such technical rules are only the first step; our cultural and legal expectations must change and e-Health lawyers must turn their attention to protecting patient data throughout the healthcare delivery system.⁴⁴

E-Health, like other e-businesses, draws its vitality from the way it innovates, deconstructing traditional business models and relationships and constructing anew. As the health system reinvents itself to absorb e-Commerce business models, health lawyers are facing major reengineering challenges. As has been observed in a different context, "we must abandon conceptual systems founded upon ideas of center, margin, hierarchy, and linearity and replace them with ones of multilinearity, nodes, links, and networks"⁴⁵ --a truism both for reconceptualizing the delivery of health services in the information age and a warning as to the level of legal reengineering that will be required before e-Health law can operate as an effective overlay.

Endnotes

¹ E-health or, as e-commerce analysts term it, e-health space refers to the delivery of health information, diagnosis, treatment and other services or healthcare transactions using information technologies, particularly those utilizing the Web or Internet. The "space" includes such familiar interactions as telemedicine, physician-patient e-mail communications and online prescribing. More recently, however, considerable attention has been paid to what are known as business-to-business transactions between providers, insurers, and other institutions, transactions that impact financing and the confidentiality and security of patient records.

² See generally Nicolas Terry, *Legal Pitfalls of Cybermedicine*, in *Medical Ethics*, Lahey Clinic, Win. 2000 at 4.

³ See JAY KATZ, *THE SILENT WORLD OF DOCTOR AND PATIENT* (1984).

4. See generally E. Haavi Morreim, *Playing Doctor: Corporate Medical Practice And Medical Malpractice*, 32 U. MICH. J.L. REFORM 939 (1999). See also WASH. REV. CODE § 18.100.050 (2000) (permitting certain professional corporations).
5. See, e.g., CONN. GEN. STAT. § 19a-486a (1999) (requiring state approval to transfer hospital assets from nonprofit).
6. Prescription activity is likely to be the first major B2C e-commerce breakout in the e-Health arena. See generally Iconocast, *Healthwatch*, June 29, 2000, <<http://www.iconocast.com/issue/20000629.html#macroview>>.
7. See, e.g., 225 ILL. COMP. STAT. 85/16a(a) (West 2000) ("The Department shall establish rules and regulations, consistent with the provisions of this Act, governing mail-order pharmacies, including pharmacies providing services via the Internet, which sell, or offer for sale, drugs, medicines, or other pharmaceutical services in this State.").
8. See generally James O. Pearson, Annotation, *Modern Status Of "Locality Rule" In Malpractice Action Against Physician Who Is Not A Specialist*, 99 A.L.R.3d 1133 (1980).
9. Nicolas P. Terry, *Cyber-Malpractice: Legal Exposure for Cybermedicine*, 25 AM. J.L. & MED. 327, 338 (1999).
10. "[C]ompanies must recognize that `customers will be kings,' because on the Internet, customers have `click loyalty. They'll stick around as long as they like the prices or what's being said.'" Ray Lane, President, Oracle, Keynote address at the Internet & Electronic Commerce Conference and Exposition, April 28, 1999, IDG News Service. (visited Oct. 15, 2000) <<http://www.pcworld.com/cgi-bin/pcwtoday?ID=10740>>.
11. Ross D. Silverman, *Regulating Medical Practice in the Cyber Age: Issues and Challenges for State Medical Boards*, 26 AM. J. L. AND MED. 255 (2000). See, e.g., COLO. REV. STAT. § 12-36-106(1) (2000), providing: For the purpose of this article, practice of medicine means:
 - (a) Holding out one's self to the public within this state as being able to diagnose, treat, prescribe for, palliate, or prevent any human disease, ailment, pain, injury, deformity, or physical or mental condition, whether by the use of drugs, surgery, manipulation, electricity, telemedicine, the interpretation of tests, including primary diagnosis of pathology specimens, images, or photographs, or any physical, mechanical, or other means whatsoever;
 - (b) Suggesting, recommending, prescribing, or administering any form of treatment, operation, or healing for the intended palliation, relief, or cure of any physical or mental disease, ailment, injury, condition, or defect of any person with the intention of receiving therefor, either directly or indirectly, any fee, gift, or compensation whatsoever
12. See, e.g., ARIZ. REV. STAT. § 36-3601(2)(2000) ("`Telemedicine' means the practice of health care delivery, diagnosis, consultation, treatment and transfer of medical data through interactive audio, video or data communications that occurs in the physical presence of the patient. For the purposes of this article, audio or video communications sent to a health care provider for diagnostic or treatment consultation also constitute telemedicine."). See also MONT. CODE ANN. § 37-3-343 (contemplating a Telemedicine Practice "Certificate").
13. See, e.g., A LA. CODE § 34-24-74 (Michie 2000) ("A doctor of medicine or doctor of osteopathy licensed to practice medicine in any state of the United States or the District of Columbia who may

be called into this state in order to treat a patient in consultation with a physician licensed to practice medicine in this state shall be allowed the temporary privilege of practicing medicine in this state. This privilege shall be limited to 10 calendar days in a calendar year.").

¹⁴. See, e.g., ARK. CODE ANN. § 17-92-401 (1999):

(a) Any pharmacy operating outside the state which routinely ships, mails, or delivers in any manner a dispensed legend drug into Arkansas shall hold a pharmacy license issued by the Arkansas State Board of Pharmacy, and that part of the pharmacy operation dispensing the prescription for an Arkansas resident shall abide by Arkansas law and regulations of the board.

(b) (1) Any pharmacy operating outside the state which routinely ships, mails, or delivers in any manner a dispensed legend drug into Arkansas shall be required to have on staff in the out-of-state pharmacy an Arkansas-licensed pharmacist, who shall be designated the pharmacist-in-charge for the Arkansas out-of-state pharmacy license.

¹⁵. See, e.g., Jay Greene, *Residents Press for National Doctor Licensure*, AM. MED. NEWS, (Jan. 3/10, 2000) <http://www.ama-assn.org/sci-pubs/amnews/pick_00/prse0103.htm>.

¹⁶. PHILIP EVANS & THOMAS E. WURSTER, *BLOWN TO BITS: HOW THE NEW ECONOMICS OF INFORMATION TRANSFORMS STRATEGY* 24, 28 (2000).

¹⁷. When everyone can exchange rich information without constraints on each, the channel choices for marketers, the inefficiencies of consumer search, the hierarchical structure of supply chains, the organizational pyramid, asymmetries of information, and the boundaries of the corporation itself will all be thrown into question. The competitive advantages that depended on them will be challenged. The business structures that had been shaped by them will fall apart.

Id. at 37

¹⁸. See, e.g., J. Sybil Biermann et al., *Evaluation of Cancer Information on the Internet*, 86 *CANCER* 381, 385 (1999) (noting the abundance of nonpeer-reviewed material and a 6% rate of factual inaccuracies).

¹⁹. In the near term, the informed consent doctrine may actually need to be broadened so as to include consent to the use of computer-mediated treatments. See, e.g., ARIZ REV. STAT. § 36-3602 (A) (West 2000) ("Before a health care provider delivers health care through telemedicine, the treating health care provider shall obtain verbal or written informed consent from the patient.").

²⁰. See generally LARRY DOWNES & CHUNKA MUI, *UNLEASHING THE KILLER APP: DIGITAL STRATEGIES FOR MARKET DOMINANCE*, 45-46 (1998).

Nearly every distribution activity, from commodities to consumer goods, includes a range of intermediate players such as wholesalers, financiers, insurers, transporters, and warehousemen. These middlemen reduce transaction costs for functions that are outside the firm; that is, they mediate between the firm and the customer. Middlemen are valuable to the transaction only if they are cheaper than the equivalent functions found on the open market. Consequently, it's no surprise that as technology reduces transaction costs in the open market, the role of middleman is coming under attack and the power dynamic between players is changing rapidly. If buyers and sellers can find each other cheaply over the Internet, who needs agents (for instance, insurance) and distributors (for instance, home computers)? Complex transactions are becoming disaggregated, and middlemen who are not adding sufficient value relative to the open market are being disintermediated

21. For example, the reverse auction model used by MedicineOnline Inc., (visited Oct. 13, 2000) <<http://www.medicineonline.com/bidforsurgery/>>.

22. See, e.g., WebHealthy (visited Oct. 13, 2000) <<http://www.webhealthy.com/index.cfm>>.

23. See, e.g., HealthAllies.com (visited Oct. 13, 2000) <<http://www.HealthAllies.com>>; HealthMarket (visited Oct. 13, 2000) <<http://www.HealthMarket.com>>.

24. See generally Terry, *supra* note .

25. Telephone cases may be somewhat instructive. For example, in *Miller v. Sullivan*, 214 A.D.2d 822, 823 (N.Y. App. Div. 3d Dep't 1995), the court stated:

[T]he relationship is created when professional services are rendered and accepted for purposes of medical treatment. A telephone call affirmatively advising a prospective patient as to a course of treatment can constitute professional service for the purpose of creating a physician- patient relationship only when the advice, if incorrect, would be actionable. Thus, it must be shown that it was foreseeable that the prospective patient would rely on the advice and that the prospective patient did in fact rely on the advice.

In general terms, it may be argued that e-mail and chat are even more likely to trigger the finding of a physician-patient relationship, in large part due to the contemporaneous nature of the contact and the provision of services. In all such cases physicians are at considerable risk, because of the courts' tendency to view the creation of physician-patient relationship as an issue for the jury. See, e.g., *Bienz v. Central Suffolk Hosp.*, 163 A.D.2d 269, 269 (N.Y. App. Div. 2d Dep't 1990) ("Whether the physician's giving of advice furnishes a sufficient basis upon which to conclude that an implied physician- patient relationship had arisen is ordinarily a question of fact for the jury.").

26. Eysenbach Gunther, *Towards ethical guidelines for dealing with unsolicited patient e-mails and giving teleadvice in the absence of a pre-existing patient-physician relationship - systematic review and expert survey*, 2 J. MED. INTERNET RES. e1 (2000) <<http://www.jmir.org/2000/1/e1/>>.

27. Linda O. Prager, *Doctors may face liability risks in bidding for patients on Web auction sites*, AMNEWS, Sept. 4, 2000 <http://www.ama-assn.org/sci-pubs/amnews/pick_00/prsa0904.htm>.

28. E.g., 47 U.S.C. § 230 (providing arguable ISP/Web publisher immunity). See generally *Jane Doe One v. Oliver*, 755 A.2d 1000 (Conn. Super. Ct. 2000).

29. See Terry, *supra* note , at 349-58.

30. E.g., Hi-Ethics (visited Oct. 13, 2000) <<http://www.hi-ethics.org/Principles.index.asp>>; e-Health Ethics Draft Code (visited Oct. 13, 2000) <<http://www.jmir.org/2000/1/e2/index.htm>>; HONcode (visited Oct. 13, 2000) <<http://www.hon.ch/HONcode/>>. See also VIPPS system instituted by the National Association of Boards of Pharmacy (visited Oct. 13, 2000) <<http://www.nabp.net/>>.

31. See Alejandro R. Jadad and Anna Gagliardi, *Rating Health Information on the Internet: Navigating to Knowledge or to Babel?*, 279 JAMA 611 (1998); Nicolas P. Terry, *Rating the "Raters": Legal Exposure of Trustmark Authorities in the Context of Consumer Health Informatics*, 2 J. MED. INTERNET RES. e18 (2000) <<http://www.jmir.org/2000/3/e18/>>.

32. See Nicolas P. Terry, *Has Health Care Marketing Defeated Risk Management?* HEALTH LAW

NEWS (University of Houston), Dec. 1999 Vol. XIII, No. 2, at 6, 14 (visited Oct. 13, 2000) <<http://www.law.uh.edu/healthlawnews/12-1999.html#Section>>.

^{33.} See Direct-to-Consumer Promotion, 61 Fed. Reg. 24,314 (1996); Draft Guidance for Industry; Consumer-Directed Broadcast Advertisements; Availability, 62 Fed. Reg. 43,171 (1997); Guidance for Industry on Consumer-Directed Advertisements; Availability, 64 Fed. Reg. 43,197 (1999).

^{34.} The basic rule is summed up in *Tracy v. Merrell Dow Pharm., Inc.*, 569 N.E.2d 875 (Ohio 1991) as follows:

[T]he physician stands between the manufacturer and the patient as a learned intermediary. The physician has the duty to know the patient's condition as well as the qualities and characteristics of the drugs or products to be prescribed for the patient's use. The physician is in the best position, therefore, to balance the needs of patients against the risks and benefits of a particular drug or therapy, and then to supervise its use.

^{35.} *Perez v. Wyeth Laboratories Inc.*, 734 A.2d 1245, 1263 (N.J. 1999):

The direct marketing of drugs to consumers generates a corresponding duty requiring manufacturers to warn of defects in the product. The FDA has established a comprehensive regulatory scheme for direct-to-consumer marketing of pharmaceutical products. Given the presumptive defense that is afforded to pharmaceutical manufacturers that comply with FDA requirements, we believe that it is fair to reinforce the regulatory scheme by allowing, in the case of direct-to-consumer marketing of drugs, patients deprived of reliable medical information to establish that the misinformation was a substantial factor contributing to their use of a defective pharmaceutical product.

^{36.} [H]ospitals increasingly hold themselves out to the public in expensive advertising campaigns as offering and rendering quality health care services. One need only pick up a daily newspaper to see full and half page advertisements extolling the medical virtues of an individual hospital and the quality health care that the hospital is prepared to deliver in any number of medical areas. Modern hospitals have spent billions of dollars marketing themselves, nurturing the image with the consuming public that they are full-care modern health facilities. All of these expenditures have but one purpose: to persuade those in need of medical services to obtain those services at a specific hospital. *Kashishian v. Port*, 481 N.W.2d 277, 278 (Wis. 1992).

^{37.} See, e.g., Health News Digest.com, *Panasonic Develops Web Based Tele-Homecare Technology* (visited Oct. 14, 2000) <http://www.healthnewsdigest.com/news/hlth_pana-32.html>.

^{38.} See, e.g., *Budding v. SSM Healthcare Sys.*, 19 S.W.3d 678 (Mo. 2000).

^{39.} See, e.g., Ellen Almer, *Online Therapy: An Arm's-Length Approach*, N.Y. TIMES, April 22, 2000, at A1.

^{40.} See MEDePass (visited Oct. 14, 2000) <<http://www.medepass.com/>>.

^{41.} See Experian (visited Oct. 14, 2000) <<http://www.experian.com/>>; Intel IAS (visited Oct. 14, 2000) <http://www.intel.com/internetservices/security/Collab_Clients/index.htm#pros>.

^{42.} Based on "(1) breach of the duty of confidentiality; (2) invasion of the right to privacy; (3) violation of statutes concerning physician conduct, and (4) breach of implied contract." Lamb, Lonette E., *To Tell or not to Tell: Physician's Liability for Disclosure of Confidential Information About a Patient*, 13 CUMB. L.REV. 617 (1983).

- ⁴³. See *Notice of Proposed Rule Making for Standards for Privacy of Individually Identifiable Health Information* (last modified Nov. 3, 1999) <<http://aspe.hhs.gov/admsimp/nprm/pvclist.htm>>.
- ⁴⁴. See generally California HealthCare Foundation, *Report on the Privacy Policies and Practices of Health Web Sites* (Jan. 2000) <<http://ehealth.chcf.org/view.cfm?section=Privacy&itemID=1750>>.
- ⁴⁵. GEORGE P. LANDOW, *HYPertext: THE CONVERGENCE OF CONTEMPORARY CRITICAL THEORY AND TECHNOLOGY 2* (2d ed. 1997).