Health Affairs

At the Intersection of Health, Health Care and Policy

Cite this article as:
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Health Information Technology: One Author Responds
Health Affairs 18, no.2 (1999):258-259
doi: 10.1377/hlthaff.18.2.258-a

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A Maturing Market For Health Information Technology?

To the Editor:

J.D. Kleinke paints a sobering picture of the health information technology (HIT) industry and its ability to deliver tools for meaningful clinical quality improvement (“Release 0.0: Clinical Information Technology in the Real World,” Health Affairs, Nov/Dec 98). Kleinke argues that the HIT revolution may ultimately be realized through wider use of electronic medical records. While agreeing with this general premise, we suggest that the market for health information technology first must mature in several important ways.

First, health information applications must begin to focus more intensely on the information needs, decision processes, and practice patterns of clinicians. The industry is well capitalized by Wall Street but grossly undercapitalized in terms of access to the intellectual resources maintained by health care providers. Clinicians must be directly involved in the development and implementation of these technologies within health organizations. As Kleinke notes from his experiences at Kaiser, these products must be customized to respond to the practice characteristics of the clinicians who will use them. Otherwise, the medical community is likely to continue to view these products as difficult to use and of little value in clinical applications.

Second, the HIT industry must become more focused on using clinical data to support the information needs of consumers. Without such an appreciation, popular support may continue to build for overly restrictive policies to protect health information confidentiality. As Donald Moran points out, such policies threaten the availability of health data for legitimate purposes in clinical research and quality improvement (“Health Information Policy: On Preparing for the Next War,” Health Affairs, Nov/Dec 98). More importantly, progress toward the ideal of information-driven clinical quality improvement cannot be fully achieved without greater attention paid to consumers’ use of health information.

Clinical information technology holds great promise for applications that enhance physician/patient communication and inform consumers’ decision making. Information systems based on valid, population-based health data can help consumers to get beyond the existing jumble of consumer health information resources to find specific, relevant, and reliable answers to their questions. Special attention, however, must be given to strategies for addressing the needs of consumers whose understanding is hampered by language barriers, educational deficits, or cognitive impairments. By adopting a more consumer-oriented focus, the HIT industry can add more value to health services delivery and management systems.

To be sure, the industry cannot be expected to develop these new and expanded activities independently. Technology corporations need to invest in new partnerships with entities that can offer insight about the information needs and decision-making processes of clinicians and consumers. These partners may include medical practices, health plans, employers, community organizations, and academic health institutions. Such strategies may cost more, but the payoff to consumers, providers, and the health information industry as a whole should be worth the cost.

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Information Technology: Value To Patients

To the Editor:

Donald Moran and J.D. Kleinke present realistic observations about the information technology issues that confront our health care system. Traditional health care delivery has been fragmented and reactive. Providers bill for services separately and use different patient accounting systems and media to submit claims. Up until now, encounter and billing information has been the only source of data on health care services, outside of a patient’s chart. As a result, and as Kleinke states, “The most significant information management challenge posed by claims data is the fragmentation of patient information over time and geographic space as patients move through the fragmented treatment system.” In addition, with the advent of treatment options, alternative medicine, cost containment, managed care, physician advice on the Internet, and television physicians telling us about the latest and greatest, patients have so much noise to contend with that it may be almost impossible to comprehend what to do. Patients often lack a single point of focus, instead encountering fragmented and sometimes conflicting information.

Enter health care decision-support applications at the practitioner level. My view is that technology application is an enabling tool for both the physician and the patient. Such an application is simply a more comprehensive medical charting system that incorporates related and relevant patient information that a provider only previously saw in the isolation of his or her own patient care domain. Technology has the capacity to reduce the fragmentation of information, to show the “whole patient” to a provider. A recent article in Health Care Innovation states, “A physician who receives information specific to his patient is more likely to take action . . . [Y]ou need a full-color picture of each patient.”

With regard to Moran’s notion that “it is easy to visualize . . . that clinicians might come to rely on ‘what the black box says’ to make critical decisions about a patient’s care,” I argue that technology, like all other tools in medicine, is just one piece of the puzzle. It is difficult to believe that any well-trained, disciplined practitioner would rely solely on computer data without touch or talk to make patient care decisions.

According to David Nash and Frank Coker, “Success will rely on every healthcare organization’s ability to measure [itself] . . . None of those efforts are possible without integrated information technology solutions . . . [M]easurement must do more than simply look back at events; it must play a role in the decision making process for individual patient care. The transition to that new paradigm will . . . require a real cultural and psychological change-wave among physicians. And along with that cultural change, let’s look at the other key to maximizing value: ready access to information technology across the continuum of care.”

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Health Information: A Broader View

To the Editor:

Donald Moran persuasively argues that “the central questions posed by health information technology developments should be considered ‘en bloc.’” We agree, but the agenda needs to be broadened to include other important elements. By focusing primarily on the
clinical enterprise, the authors are in effect arguing for construction of just one leg of a health information policy stool. Health information in this construct seems to be tacitly defined as clinical knowledge, with only a passing nod to biomedical research databases, much less population data or information related to other determinants of health.

The National Committee on Vital and Health Statistics (NCVHS) recently submitted a concept paper on a national health information infrastructure to Donna Shalala, secretary of health and human services. The multiple purposes of such an infrastructure include improving patient care, monitoring public health, and educating consumers and patients. The audiences include clinicians, researchers, policymakers, medical and public health managers, and the public. The paper suggests that improving the population dimension of the data infrastructure can help to identify and analyze disparities in health status and care and support targeted educational programs, community services, and evidence-based health services. Beyond clinical information explicitly for health professionals, improving knowledge management and decision support for consumers and patients can support self-education and self-care as well as offering useful data about available care options. Three potentially linked computer-based health records—patient, population, and personal health records—might facilitate coordination, research, and assessments for both clinical care and public health and permit individuals and communities to participate more intelligently in their own health.

The reasons for favoring a broader view of "health information" are pragmatic. First, the rapid diffusion of Internet-based information channels supports a more ubiquitous delivery system that includes public health and people at home, work, school, and elsewhere as well as the traditional clinical settings. Innovators will build these emerging technologies to expand their market potential. Second, this same technology wave has merged with the consumer empowerment movement to create a potential tsunami of consumer/patient health information applications that are not always linked to an explicit clinical relationship. Third, since the determinants of health are multifactorial, including social, economic, and cultural factors as well as clinical illnesses, the optimal strategy for disease prevention and/or control may transcend various of these parameters. Indeed, nonhealth factors may play a disproportionately large role for many users of the medical care system.

A national discussion of "health information policy" should include all relevant determinants of health and illness, including both the information and policy implications of the issues. A more comprehensive approach will offer the best chances of improving the health status of all Americans.

Don E. Detmer, Chair
Mary Jo Deering, Staff
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1. The NCVHS paper notes that similar comprehensive approaches are being actively developed in Australia, Canada, and the United Kingdom, among others. The paper is available on the NCVHS Web site at http://aspe.os.dhhs.gov/ncvhs/hii-nii.htm.

A New Proposal For Cooperation In HIT Development

To the Editor:

Public policy has the potential to improve the interaction between public and private sectors in developing HIT products, to the ultimate benefit of patients. Private medical software development results in products that are challenging to integrate internally, as well as into purchasing health plans’ existing HIT systems. In seeking ways to share information, medical businesses eventually discover a vast desert of nonconducting silica between their HIT systems and those of others. This interface problem is a huge opportunity for the private interface developer but can also be an opportunity for the public good.

Legislation allowing Tax-Exempt Com-
Community Health Information Projects (TE-CHIPs) are one approach to deal with many problems in this area. Nonprofit corporations that qualify for TE-CHIP status would allow low-interest financing of electronic medical records (EMRs) and similar technologies that turn isolated medical encounters into digitized, structured, anonymous data. Such nonprofits, with consumer/patient representation, would be a reasonable forum to set up local privacy and security policies in the current policy void. The nonprofit community structure would reduce the incentive for inappropriate data mining (“push tactics”) from the community resource (the digitized information residing on local servers).

TE-CHIPs would not exclude simultaneously developed for-profit firms that provide the same service (such as the Wisconsin Health Information Network, supported by Ameritech). They would mirror the tax structure of hospital corporations, with both private and public ownership—managed through a process similar to that put in place by the 1946 Hospital Survey and Construction Act (Hill-Burton), where the government encourages investment in population health in exchange for some control of the rules. A hybrid agency such as the model Lynn Etheredge has described (using the model of the Securities and Exchange Commission and the Financial Accounting Standards Board) could approve tested protocols and networking systems (such as HL7 or TCP/IP) as they evolve.1

TE-CHIPs would be funded via transactional service charges between members whose representatives sit on the same board of directors. These nonprofit ventures would allocate revenues according to local priorities, which could include publishing community-wide health care performance data to assist consumers in making decisions. Consumers could see other immediate benefits, such as reduced drug interactions as demonstrated by LDS Hospital in Salt Lake City.2

Where does this idea fit into Donald Moran’s health information policy concerns? Like David Kendall and and Robert Levine’s Perspective (Health Affairs, Nov/Dec 1998), this proposal vigorously promotes private innovation, governmental support for rapid adoption, and promotion of an evolving national standard of securing the interchange of data between HIT systems, so that providers, imaging companies, health plans, and other interested parties can be assured of the compatibility of each product.

As suggested by Kendall and Levine, a new organization that “can earn the public trust because it neither controls or is controlled by existing institutions” may need to evolve. The nonprofit TE-CHIP could be the prototype for such an organization. Policymakers should encourage development of these organizations in a way similar to how the Health Maintenance Organization (HMO) Act of 1973 encouraged HMO development. Government’s health information policy and tax incentives, in concert with national funders’ support for fledging model organizations and private ingenuity in product development, as well as the input of consumers and providers, could develop the systems we envision.

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Health Information Technology: One Author Responds

To the Editor:

I appreciate the thoughtful comments of those who took the time to reflect on the wide-ranging implications of emerging issues surrounding health information technology. The comments of Don Detmer and Mary Jo Deering, read together with those of Gary Cantlon, raise a crucial question with which we must wrestle in deciding how we want health information policy to evolve. That
question is whether the proper focus of public policy is on the use of information technology to optimize the operations of the clinical enterprise, or on using technology to optimize the health care system from the perspective of the patient. As these commenters make clear, these two viewpoints are hardly identical.

The challenge for public policy is that, as I attempted to point out in my paper, the market will invest heavily in the “enterprise view” of information technology without public prodding, provided that the regulatory environment product vendors face is relatively congenial. If we want the “holistic patient-centric view,” however, we face a different set of challenges, since in my judgment the private market will not automatically satisfy all potential requirements.

Today’s marketplace features private companies building Web-based “patient communities,” designed to provide information, advice, and peer support for patients—in exchange for the right to use demographic and clinical history data entered by the patient to support a variety of commercial applications, the value of which justifies the vendor’s expenditure in supporting the “community.” As long as medical records privacy regulations permit such voluntary transactions, the market will continue to invest in new ways to serve the interest of patients in exchange for their valuable data.

We are a long way, however, from the “universal medical record” that permits the blending of clinical data from all sources of care under one electronic roof—and will probably never get there under the natural evolution of the marketplace. If we want this, we must acknowledge a classic “information externality” and treat the creation of the infrastructure necessary to support this as a “public good.” Doing so, of course, would raise an important but unfortunately complex array of subsidiary questions about the design and management of the interface between private and public information systems.

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Moran Company
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**Need To Measure Absolute, Not Relative, Access To Care**

To the Editor:

In their paper, “Access to Care: How Much Difference Does Medicaid Make?” (*Health Affairs*, May/June 98), Marc Berk and Claudia Schur do not address an important policy question: the absolute, not relative, access to care of the uninsured. For example, their Exhibit 2 shows that in 1994, 15.1 percent of the nonelderly uninsured were unable to obtain medical/surgical care, compared with 8.2 percent of the Medicaid population and 4.0 percent of privately insured persons. The authors state that these figures were derived from the 1994 Robert Wood Johnson Foundation (RWJF) National Access to Care Survey, which asked respondents whether they were able to obtain the health care “they believe was needed.” One conclusion to be drawn from this exhibit is that almost 85 percent of the uninsured did not have a difficulty in obtaining needed care. Similar good news could be inferred from this exhibit regarding dental care, prescription drugs, and eyeglasses.

Of course, one explanation of these numbers is that many of the respondents who did not indicate a problem did not, in fact, need care. Perhaps if they had needed care, they would have had access problems. It would be useful to see what Exhibit 2 would show if it were confined to persons who reported their health status as “fair/poor,” that is, confined to persons who would more likely have sought health care. Exhibit 3 presents data in this way but for a composite of services. Even then, we are led to infer from this exhibit that 42 percent of uninsured persons who were in fair or poor health did not experience any difficulty in obtaining medical/surgical care, dental care, prescription drugs, eyeglasses, and mental health care.

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Access To Care: Authors’ Response

To the Editor:

We agree with Steven Schreiber’s contention that it is important to ascertain that absolute levels of care are appropriate rather than simply measuring the access of those on Medicaid relative to the privately insured and the uninsured. This is difficult, both because identifying a “gold standard” of care often cannot be done and because establishing “appropriateness” is beyond the capacity of most general population surveys, for which medical records are not available. However, the RWJF access survey allowed us to move in this direction by collecting information on whether people received care for specific, physician-rated symptoms. Preliminary tabulations indicate that the uninsured are much less likely than the insured are to receive care for the same types of serious symptoms.¹

Schreiber is also correct that unmet need for care is likely to be higher among those with poor health status. We note on page 174 of our paper that “persons are more likely to seek care when in ill health.” Our earlier Health Affairs paper states that “persons reporting good or excellent health were less likely than persons in fair or poor health to have unmet health care needs.”² Indeed, this is why we examined inability to obtain care by health status; the large differences in unmet need with respect to health status for the five services combined (Exhibit 3) are virtually identical to those for the medical care measure shown in Exhibit 2. Therefore, we did not repeat the same material in both exhibits.

Finally, Schreiber characterizes our finding that 85 percent of uninsured Americans did not have access problems as “good news.” We disagree. We found that thirty-nine million uninsured Americans could not get the care they needed. Our paper does not imply, nor do we believe, that such a level of unmet need is acceptable.

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Performance Measures And Batting Averages

To the Editor:

David Eddy focuses on the deficiencies in current performance measures and discusses ways to fix them (“Performance Measurement: Problems and Solutions,” Health Affairs, July/Aug 98). He acknowledges the difficulty in developing accurate performance measures and presents a number of solutions. However, he does not directly address one overriding, critical issue in performance measurement: How can the consumers of health services use performance data to make choices to improve their health care?

There is much public debate about the effectiveness of report cards in assisting consumers to make good health care choices. There is little convincing evidence that they have significantly improved the quality of health care or consumers’ choices. One reason may be that the information report cards contain is difficult for many consumers to understand. Most performance measures are reported as rates of some kind. What most rates lack is a benchmark or gold standard and a clear basis for interpretation.

Contrast performance measures in health care with performance measures in other disciplines. For example, in sports, fans and professionals, with near-equal capability, use rates to assess both individual and organizational performance. The link between measured performance and what is empirically observable is very close; the relationship for some measures is, in fact, nearly one-to-one. For instance, “batting average” is a rate that directly reflects a baseball player’s hitting performance. This rate is also highly related to
other accepted measures of performance such as runs scored and runs batted in and, in effect, shows strong evidence of construct validity by correlating with other accepted measures of performance.

In what might be viewed as a grotesque juxtaposition, contrast batting averages with cesarean section rates in terms of interpretability. Although c-section rates are one of the most widely used hospital performance measures, there is considerable controversy about how well these rates actually do measure performance. C-section rates are not necessarily unidirectional: A high rate is not necessarily bad; a low rate is not necessarily good. Using hospitals’ or individual physicians’ c-section rates alone to make choices is problematic in any but the most extreme cases.

Other more appropriate measures of performance could have been chosen to compare with batting averages. The results would have been no more favorable than they were for c-section rates. For example, nosocomial infection rates may be unidirectional (low rates are always good and high rates always bad), but the evidence suggests that they are not so easily or uniformly measured as c-section rates are. Moreover, experience has shown that the distributions of infection rates are highly positively skewed, making it difficult to compare one provider with another or even one provider with itself over time.

Process measures may be better suited to actually improving performance than outcome measures; however, such measures are not especially useful to consumers. Consumers are more likely to be interested in results that they can understand, not in processes that they are ill prepared to assess.

Consumer health care information is vitally important and absolutely essential to improved health care delivery. Yet the potential for report cards to bring about improvements in health care choices has not yet been realized. Major problems include a lack of knowledge among consumers of the availability of consumer report cards, ambiguity of current report card data, limitations of the lay public in interpreting complex data, and the poor state of the art in translating health care performance statistics into valid depictions of health care quality. If report cards are ever to be of major benefit to consumers, they must contain information that is clearly presented and as valid and well understood as batting averages are to baseball fans. Is it possible to develop valid report cards for consumers that will be well understood and be used appropriately on a widespread basis? It is time for this question to be addressed in earnest by the health services research community.

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More On Reform Of The NHS

To the Editor:

Rudolf Klein’s analysis of the reforms to Britain’s National Health Service (NHS) (“Why Britain Is Reorganizing Its National Health Service—Yet Again,” Health Affairs, July/Aug 98) provides a perceptive summary of recent experience and future prospects. As Klein notes, the direction taken by the proposals announced by the new Labour government will be strongly shaped by the process of implementation, and a number of outcomes are therefore possible.

Klein himself emphasizes the centralizing tendencies in the government’s plans. These tendencies are most apparent in the style of political management that has been adopted not just in the arena of health policy but also in other areas of governmental activity. Prime Minister Tony Blair has made it clear that he expects high levels of performance in public services and has shown that he is willing to intervene to achieve them.

Yet, in parallel, there is also a strong element of decentralization in the government’s plans. At one level, this is manifested in the influence that primary care groups will exert on the English health service. Prime Minister Tony Blair has made it clear that he expects high levels of performance in public services and has shown that he is willing to intervene to achieve them.

Yet, in parallel, there is also a strong element of decentralization in the government’s plans. At one level, this is manifested in the influence that primary care groups will exert on the English health service. On this point Klein argues that although general practitioners (GP) purchasers may be in the driving seat of the new NHS, they may find themselves in charge of a vehicle that lacks an engine. Although this is certainly possible, pri-
Primary care groups also could drive change from the bottom up rather than the top down.

Experience under the Conservatives’ reforms underlines primary care groups’ likely influence. Although research evidence is inconsistent, a number of studies have shown that empowering GPs by giving them control over a budget resulted in some appreciable changes in service provision, especially apparent in change to prescribing practices and the delivery of additional primary care services.\(^1\) By extending influence over budgets to all GPs through primary care groups, the Labour government is encouraging innovation to primary care as a whole.

Government’s willingness to adapt the policies of its predecessors in this way reflects an important insight into the effects of the Conservatives’ reforms: In a national health service, a number of different instruments and levers are required to improve performance. Some of these instruments will involve strengthening government’s control over the management of services, but others will entail increasing professionals’ and managers’ ability to bring about change. The issue at stake is therefore less whether the NHS will be run on a more or less centralized basis but rather what kind of balance will be struck between central direction and local autonomy.

The other dimension of Labour’s strategy is the use of professional channels to question established practices. In this context, one of the most intriguing aspects of primary care groups, as Klein acknowledges, is the dynamic built into their design for doctors themselves to compare and review the performance of their peers. Because GPs are now required to work together to serve a population of 100,000 on average, under a budgetary constraint, peer pressure could become a key mechanism for reducing practice variations.

This new way of working involves a profound cultural change for GPs. Yet if peer pressure really works, it is likely to be at least as important as central oversight is in driving up standards. The government thus has given the medical profession the opportunity to promote efficiency and quality, while assuming new powers through the proposed National Institute for Clinical Excellence and the Commission for Health Improvement to intervene if doctors choose not to pick up the gauntlet.

Taken together, these proposals add up to an eclectic mix of strategies, underlying the claim that they constitute a “third way” in health care reform.\(^2\) This third way is less a fundamental departure from past policies than it is an attempt to reach a different kind of accommodation between dilemmas as old as the NHS itself. In view of the high political costs of government’s taking a more visible lead in the management of health care, the odds are that “blame diffusion” and professional self-control will continue to dominate.\(^3\)

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Funding Acknowledgment

To the Editor:

Please note that our study, “Quality of Care for Two Common Illnesses in Teaching and Nonteaching Hospitals” (Health Affairs, Nov/Dec 98), was supported by grants from the Agency for Health Care Policy and Research (HS06331) and the Commonwealth Fund. Acknowledgment of this funding was inadvertently omitted.

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