Proprietary Data Systems: Help or Hindrance?

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Proprietary Data Systems: Help Or Hindrance?

To the Editor:

Paul Starr’s paper, “Smart Technology, Stunted Policy: Developing Health Information Networks” (Health Affairs, May/June 1997), provides an important overview of the complexities of information technology to the health policy community.

However, the current economic and political realities of health care competition do not agree with Starr’s vision of health information technology. His vision is consistent with that of the National Health Board model contained in the 1993–1994 Clinton administration health care reform proposal, in which the federal government would have set a standard for health data collection and release.

Since then hospitals and insurers have invested billions of dollars in their information systems. For example, the Kaiser Permanente Health Plans are investing $1 billion over five years to develop a specialized information system to track health care outcomes across time for its members. These investments provide health care managers with strategic proprietary information that was never intended, let alone designed, to be shared in a national public health information network.

Starr regards the growth of proprietary data systems as a major step in the wrong direction toward developing a national health information resource. In contrast, I believe that the direction of these systems is a lateral step that will advance health information technologies. Health care’s complexities require advanced software applications to complete a variety of highly specialized tasks such as disease management, risk adjustment, physician profiling, and episode-of-care analysis. Health care software vendors are now advancing the state of the art in decision support systems using venture capital. But, like any emerging industry, defining the state of the art involves constant jockeying among vendors. The lure of high profit margins fuels substantial growth in the field and generates interest among Fortune 500 firms such as MCI, Microsoft, and Ameritech. Since 1995, two new trade journals that focus exclusively on health information technologies, Health Data Management and InfoCare, have helped to define the field as a separate industry. Investments in proprietary data systems will advance the technology infrastructure required for a national public health information network.

The infrastructure now being built with private-sector resources could ultimately provide the technological foundation for public policy goals such as the portability of health insurance. 3M is developing a lifetime electronic medical record that provides a complete patient history of medical treatments and diagnoses as well as providers’ clinical notes and storage of all images taken (for example, x-rays, CAT scans, and MRIs). Such a technology would permit a patient’s entire history to follow him or her from insurer to insurer. Assuming that patient confidentiality can be assured, this technology would be enormously helpful in reducing adverse drug reactions. A lifetime patient history could also enable health plans to develop far more complex actuarial methods to calculate accurate and fair premiums and enhance existing disease management programs.

This effort also illustrates the federal government’s new post-health reform perspective. 3M is developing this technology with matching funds from the U.S. Department of Commerce’s National Institute of Standards and Technology (NIST) Advanced Technology Program (ATP). An NIST goal is to encourage private firms to develop new information technologies that will enhance the efficiency of the U.S. health care system.

The point at which national efforts to create
a national health information data system be-
gin is critical. It should be at a time far enough
along a technology development cycle so that
the marginal benefits to be gained from allowing
the private sector to advance the state of the art
are less than the marginal costs of not moving to
some industrywide standard. It is clear that the
system that would have been frozen in time dur-
ding the Bush or early Clinton administration
years would have been inferior to those being
developed today. If private investment were not
forthcoming, Starr’s assumption that a federal
policy is required to advance a new technology
would be more valid than it is today.

In the future, the real challenge in health in-
formation technology will be to systematically
link information systems emerging from health
plans and providers. If they were linked, the
“skeleton” of every health care service or prescrip-
tion contained in claims data would be given the
“flesh” of a clinician’s diagnosis and prognosis that
can only be captured from medical records, along
with a virtual multimedia-rich treasure of voice
notes, diagnostic images, and laboratory results.
That is, the breadth of claims data would be mar-
rried with the depth of medical records data.

Consider the value of such a system in a
competitive environment where information is
lost every time a patient switches plans or
providers. At the heart of this vision is the eco-
nomic principle that competition works best
with perfect information. In the absence of
perfect information, finding a legal and techni-
cal method to meaningfully create what
amounts to a “lifetime” medical record pro-
vides data to sustain the benefits of a com-
petitive health care market. In effect, such a system
would create a “virtual” national repository of
health care data to benefit patients, providers,
and insurers and, with appropriate patient
confidentiality safeguards, provide researchers
with an unparalleled resource. However, this
vision may only be possible in a market econ-
omy in which insurers and providers have an
incentive to invest in information technology.

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NOTES
1. Health Security Act, 103d Congress, 1st sess., Title
V.
2. “A Clinical Data Network Is on Kaiser’s Priority
3. National Institute of Standards and Technology,
Information Infrastructure for Healthcare (Abstracts
of funded projects) (Gaithersburg, Md.: March
1997).

Proprietary Data Systems:
The Author Responds

To the Editor:

I have reread my paper, searching for the
errant phrase that could have misled Stephen
Parente into thinking that I oppose the growth
of proprietary data systems. A conspicuous
theme of my paper is that health information
networks can reduce the “cost of quality.” As
the paper makes clear, the biggest investments
have gone into networks built by health care
enterprises to “improve coordination of serv-
ces, reduce costs, control liability, and provide
more accurate and timely information.” Noth-
ing that I propose would diminish organiza-
tions’ incentive to invest in information tech-
nology for these purposes.

But market forces alone will not generate
the production and broad dissemination of
what the Bush—not Clinton—administration
called “comparative value information” about
plan and provider performance. Nor will the
market alone ensure the privacy and security
of personal medical information. For these
purposes—to make public what ought to be
public, and to keep private what ought to be
private—we need action by government.

The stage at which common technical
standards ought to be prescribed is indeed a
tricky question, but it is false to assume that
the adoption of standards necessarily means
freezing in time a limited state of the art. Far
from freezing technology and commerce, the
open standards of the Internet—created in the
first place by government—have unleashed a
torrent of private development.

The concept that is missing from Parente’s
discussion of standard setting is “network ex-
ternalities”: the broad indirect benefits con-
ferred by the expansion of communication net-
works and wide adoption of compatible
technologies. This is where the health sector has lagged, and it is at the heart of Parente’s confusion: He seems to assume that common communication standards preclude the development of proprietary data systems. Then he rises to defend the need for private investment as if it were threatened. But many enterprises are more likely to invest if compatibility is assured and they can thereby benefit from network externalities. While individual vendors may lose out in the standard-setting process, the market as a whole will grow.

And, yes, as health networks build information networks, the potential for using smart technology for smart policy—like holding health providers accountable for their performance—will also increase. But the public will not get that accountability without positive action by government.

Paul Starr
Princeton University
Princeton, New Jersey

Understanding Managed Care

To the Editor:

An overlooked issue in health care is patients’ ability to read and understand complex health information, such as health report cards, health maintenance organization (HMO) policies, definitions, concepts, or glossaries of managed care terms. Although patient educators are familiar with literacy issues in health care, very few health policymakers are aware of the 1992 National Adult Literacy Survey conducted by the U.S. Department of Education. This survey gathered data on 14,000 Americans’ ability to understand prose, documents, and quantitative information and has important implications for communicating about managed care. Most literacy researchers recommend writing at a seventh or eighth grade reading level for the “general public.”

Two recent papers in Health Affairs found that consumers have a hard time understanding the health information they are given. Yet neither paper addressed the “readability” of this information. To make sure that information is understandable by the intended audience, one can use readability formulas/software or focus groups of consumers to evaluate the materials as they are being written.

This inability to communicate with the general public has important implications for managed care. Too often, patients are blamed for misusing a system that has not been explained to them in ways that they can understand.

Mark Hochhauser
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A Science-Driven Quality Model

To the Editor:

The May/June 1997 issue of Health Affairs contains an excellent collection of papers on “Quality in a Changing System.” Yet, I felt there was an unmistakable déjà vu quality about them. All of the papers seem to deal with variations of quality models that have been tried, refined, renamed, and tinkered with for decades.
Frankly, the results, after all this experience, are not encouraging. An example illustrates my point: the backlash against health maintenance organizations (HMOs). Both the states and the federal government have regulated HMO quality for more than twenty years in one of the best-funded and most extensive regulatory programs ever implemented. Nonetheless, this has not delivered acceptable results. If it had, there would be no HMO/managed care backlash.

I suggest that an entirely new approach to quality is needed. I am experimenting with the Personal Computer model, a field that suggests to me a science-driven quality model for health care. Why shouldn’t health care consumers (patients) receive the same continuous, high-tech quality improvements Personal Computer consumers receive?

This model for health care has some interesting, and unusual, implications.

(1) Medical science, like computer science, changes too quickly and involves too many uncertainties to be within the core competence of government or other external regulators. Thus, it is neither fair nor reasonable to expect state or federal government agencies to effectively regulate medical quality as science, as high-technology fields other than health care demonstrate daily.

(2) Science is national and international, not local. Thus under a science-driven pursuit of the best quality outcomes, the conventional wisdom that health care is local will change.

(3) Outside of health care, science-driven innovation often occurs in alliances and joint ventures rather than in single companies. Think Intel and Microsoft. Thus, alliances of physicians and others, rather than mergers, are likely in a science-driven quality paradigm.

(4) As an antitrust lawyer for more than twenty-four years, I can say that the antitrust enforcement and legal environment has never been better for science-driven innovation by alliances of providers, especially without risk sharing that can trigger state insurance regulation.

(5) Self-insured employee health plans are better positioned to take advantage of a new scientific dynamic in health care than prepaid HMOs are, given their numerical advantage (100 million versus 50 million covered lives), their Personal Computer-like freedom from government regulation, their national or broad geographic scope, and new antitrust flexibility.

(6) Self-insured plans using a science-driven quality model, with the proper group-level incentives, are also well positioned to improve outcomes for the 20 percent of the population that are the sickest and that account for 80 percent of any group plan’s costs, including Medicare.

(7) A science-driven paradigm can focus on improving the quality, outcomes, and costs of treating a group as a whole, including the individuals who get really sick. Group-level incentives avoid the cream skimming and adverse selection problems that haunt capitation models for Medicare and HMOs, and avoid incentives to undertreat the really sick.

(8) About ten million of the thirty-five million Medicare beneficiaries over age sixty-five receive self-insured Medicare supplement benefits from their employee health plans. This same science-driven model applied to these plans can be extended to Medicare and drive major improvements in quality, outcomes, and costs.

(9) As the Personal Computer market demonstrates, scientific advances by the few rapidly become scientific advances used by the many. A similar market multiplier effect is likely in health care, particularly if the proper incentives are in place.

In the final analysis, patients are like Personal Computer consumers: They care more about results than about process, pedigrees, or blue ribbons. Thus, it may be that a quantum leap forward in health care quality will be science-driven, using a high-tech model from outside of health care, such as Personal Computers.

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NOTE

1. C. Weller, Patient Choice Organizations: The Next Generation after Capitation and Managed Care (Gaithersburg, Md.: Aspen Publishers, August 1997).