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From the Editor

## The Real Information Technology Challenge

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## From the Editor

### The Real Information Technology Challenge

Earlier this year, I had the privilege of speaking at national meetings sponsored by the SMS Corporation (Malvern, Pennsylvania) and the Eclipsys Corporation (Delray Beach, Florida). Knowledgeable readers would agree that these two firms represent some of the elite health information technology (IT) companies in the United States.

Personally, my information technology skill set is modest, so to prepare for these presentations, I began several months of industry interviews and voracious reading of trade journals and computer oriented textbooks. For example, I scoured magazines like *Healthcare Informatics* and articles like "Nine Hot Technology Trends."<sup>1</sup> Ergo, I became familiar with terms like bandwidth, traffic congestion, and back-end database. I was enamored of the potential power of the data warehouse and the seemingly ubiquitous reach of powerful, nationally prominent chief information officers, or CIOs. I even co-authored an essay in one of these magazines to test the waters and demonstrate some fluency with their arcane language.<sup>2</sup>

Yet, my preparation left me with a nagging unease about the real role of IT in health care. Several intertwined events made me re-think the role of IT. Let me share these events with you, the reader, and offer some sobering insight as to the future of IT in health care.

Accomplishments in IT have been synonymous with Intermountain Health Care, a health system of 23 hospitals and medical centers headquartered in Salt Lake City, Utah. For nearly 15 years,<sup>3</sup> IHC has been an acknowledged leader in the creation of the computerized patient record, and the so-called Health Evaluation Through Logical Processing (HELP) system. For all of their technical prowess, what I have learned about IHC is through the work of one of their leading physician researchers, and my close friend, Dr. Brent James. Brent's message about IT is deceptively simple; he preaches a message that says "You manage what you measure." Central to being able to measure and therefore manage is clinical integration, which has been discussed in these pages previously (see January 1998 *Health Policy Newsletter*, Editorial). According to Brent's definition, clinical integration means a shift from a financial measurement model to a clinical process model which closely mirrors the core way we actually accomplish our work as clinicians. In a nutshell, Brent got me thinking about the real mission inherent in all of the technospeak that often muddies the conversational waters when it comes to IT.

Last spring, on the very day that the stock market eclipsed the 10,000 mark, the Wall Street Journal<sup>4</sup> ran a front page story entitled, "The Rocket Under the Tech Boom: Big Spending by Basic Industries," written by reporters with a strong health care pedigree such as George Anders and others. Anders points out that when adjusted for price fluctuations, IT outlays now account for more than one-quarter of all U.S. investment and more than half of business spending on new machines. The article goes on to celebrate the continued payoff from information technology and what it has done for some of the 30 companies that comprise the Dow Jones Industrial Average. In short, the message was "the more technology, more profits, the higher the stock market." This, of course, reinforces a popularly held belief in the power of technology both in and out of the health care sector.

Finally, a colleague shared with me a recent article in the *Harvard Business Review*<sup>5</sup> that crystallized my thinking. While astute observers recognize that in 1997, the health IT industry, taken as a whole, represented \$15 billion worth of good and services and by the year 2000, the best estimates put it at \$25 billion worth of goods and services. This reflects what market watchers know is a price-earnings ratio for the industry of greater than 33, eclipsing the Standard and Poors' price earnings ratio of 23. Yet, those *Harvard Business Review*<sup>5</sup> authors contend we've missed the main point. In their study, evaluating how Japanese and Western managers frame IT management questions, they discovered some startling concepts.

Western corporations frame IT using five management principles: strategic alignment, value for money, technology solutions, user relations, and systems design. This business school jargon really means that in a Western context we ask: What is the return on our capital investment for technology? We develop an IT strategy that aligns with our business strategy, and we adapt capital budgeting processes to manage and evaluate these types of IT investments. The authors go on to conclude that we assume that technology offers the smartest, cheapest way to improve performance, and we design the most technically elegant system possible and ask our employees to adapt to it. Does this sound like *your* integrated delivery system, *your* managed care company, or *your* practice?

On the other hand, the Japanese firms studied framed the IT management question with the concepts of strategic instinct, performance improvement, appropriate technology, organizational bonding, and human design. These concepts, loosely translated, mean we let the basic way we compete, especially our operational goals, drive the IT investment. We judge investments based on operational performance improvement and not necessarily a detailed return on investment calculation. The Japanese do not establish the office of the Chief Information Officer. Alternatively, they encourage integration by rotating managers through the IT function, collocating specialists and users and giving IT oversight to executives who also oversee other functions. Instead of system design, their human design recognizes the use of the tacit and explicit knowledge that employees already possess. To me this sounds like Brent James again: "You manage what you measure."

Put in another way, the real challenge of IT in health care means we must begin to answer the question, What do we want to improve and by how much, and is it the length of stay, the cost per case, the infection rate, adverse drug reactions, or all the above? We need to pick our IT battles more selectively and focus with laser-like precision on opportunities to improve performance. This strategy will lead to improvements in quality and lower costs in the long run. My message to SMS and Eclipsys was to ask the right questions and to help their customers to reflect on these Western and Eastern approaches to the power of IT in health care.

What about the future? Shaller and others, writing in *JAMA*,<sup>6</sup> have called for a national action plan to meet the health care quality information needs in the age of managed care. They propose a coordinated national network of independent public-private quality measurement alliances established through strong purchaser and consumer leadership at the state, regional, or local levels. They further argue that these independent alliances would each undertake specific quality measurement and consumer information projects to meet local health care market needs by drawing on combinations of the emerging national standardized quality measures. Regrettably, I believe this is unworkable in our heterogeneous health care economy that worships decentralization.

Fortunately, the leadership of American medical education is, I believe, up to the challenge. Witness the recent report from the Medical Schools Objectives Project (MSOP) of the Association of American Medical Colleges, specifically, their second report<sup>7</sup> from the Medical Informatics Panel. This panel (a blue-ribbon collection of experts from around the country) identified five physician roles in which informatics plays a vital part: life-long learner, clinician, educator-communicator, researcher, and manager. The panel defines strict criteria and informatics learning objectives important for each role. In my view, they have gone a long way toward delineating the real role of IT in health care for the future. I hope that many of our colleagues in medical education throughout the Jefferson Health System and across the country take these recommendations to heart and begin the difficult process of operationalizing them.

We can only "manage what you measure" so we must be very careful about what it is we select to manage. Pick those areas that will improve performance and recognize that the return on the capital investment will come later. As usual, I am very interested in your views.

- David B. Nash, MD, MBA

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