



# Health Insights & Outlooks

*A bi-weekly newsletter*

*Welcome to the April 6, 2007 issue of Health Industry Insights' newsletter, Health Insights & Outlooks. We publish every two weeks, examining recent events and offering opinions on key trends in the healthcare and life science industries. Please feel free to forward this newsletter to colleagues or others who might find it relevant.*

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## **The Move Offshore: Global Drug Development (and Markets) Are Becoming Real**

**By Alan S. Louie, Ph.D.**

With multiple major pharmaceutical companies announcing new strategic R&D investments overseas, it appears that the trend towards globalization of the entire pharmaceutical value chain is well underway. Recent investments by GlaxoSmithKline (\$13 million in Singapore), AstraZeneca (\$15 million in India), and Eli Lilly (\$150 million expansion of Singapore R&D operations) reflects an expansion of strategic thinking beyond operational cost cutting and is a growing trend. In the beginning, the pharmaceutical industry, like other industries, offshored and outsourced to take advantage of lower costs (e.g., clinical trials in the pharmaceutical industry and manufacturing in other industries). Clinical trials have also been an attractive early offshoring option based on the very limited potential for intellectual property (IP) loss, a major concern that has slowed offshoring overall in the industry.

The offshoring of pharmaceutical R&D is a more recent activity, which has grown with the concurrent implementation of increased international IP protections. While clinical trial offshoring is growing in major low cost regions (e.g., China, India, and eastern Europe), R&D offshoring is advancing more selectively, based on confidence (or lack of confidence) in IP protections and access to an educated workforce. Where India and Singapore have seen significant pharmaceutical R&D investments, China has not. This is likely to change as China improves its IP policies, in part due to growing concerns over protecting its own IP.

Beyond drug development efforts supporting pharmaceuticals destined for the U.S. market (still the largest consumer of new drugs), there is an emerging and growing pharmaceutical market opportunity in both China and India. With increasing industrial productivity and increasing wealth in these countries, an overseas market opportunities are emerging. With more than a billion people each in both China and India, these markets are likely to grow and provide new revenue for existing and future drug solutions. The global market, however, is not without its potential pitfalls, including Abbott Laboratories' current difficulties that are playing out in Thailand. Recognizing that the fleeting value of IP is not solely a major pharmaceutical company concern, Thailand and Indonesia are looking to leverage the value of their early exposure (and access) to H5N1 flu virus samples to gain preferential, affordable access to future H5N1 flu therapeutics that might be developed from the virus samples.

From a pharmaceutical industry perspective, the world is becoming truly global, with significant potential for improved development efficiency and new market opportunities. Today, the world's playing field is irregular and uneven, with laws, requirements, and expectations varying greatly from country to country. To effectively compete in this dynamic and changing environment, companies must remain globally agile and locally knowledgeable. For success in tomorrow's global marketplace, the time to start is today.

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## The Life Science Supply Chain: IT Investment Priorities for 2007

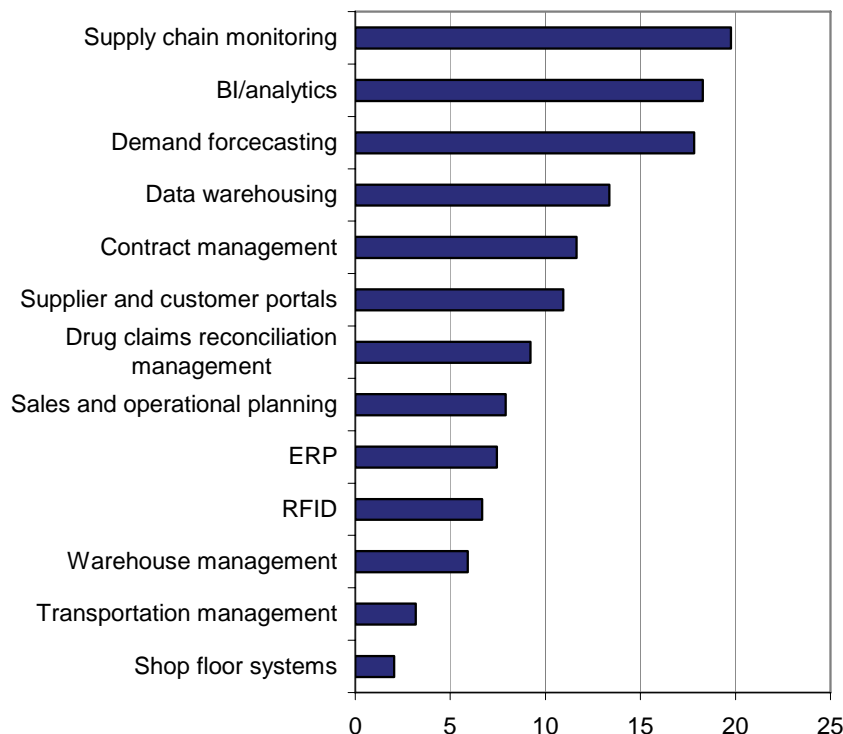
**By Eric Newmark**

Health Industry Insights recently completed its annual Life Science Supply Chain Technology Survey. One hundred fifty-eight industry leaders were asked to identify what their most important IT-related supply chain investments would be in 2007. Results from the survey clearly indicate that increasing supply chain visibility will be the most important strategic goal for life science companies in the upcoming year.

As life science companies strive to increase drug safety and lean out distribution channels through increased utilization of inventory management agreements (IMA), fee-for-service (FFS) agreements, drug pedigrees and item level serialization, survey results indicate that life science companies are appropriately aligning supply chain dollars to support these initiatives. Supply chain monitoring, business intelligence/analytics, and demand forecasting tools rounded out the top three choices with more than 55% of life science companies planning to invest in at least one of these three aforementioned technologies. Interestingly, while RFID is expected to enable increased supply chain visibility for the industry, it is yet to reach its tipping point, as it ranked among the lowest identified with just under 7% of companies mentioning RFID as a 2007 priority. The complete list of planned 2007 IT investments is depicted in the figure below.

### Supply Chain Technology

*Q. What do you think will be the most important technologies you invest in to support your supply chain initiatives in 2007? (Select all the apply)*



n=158

Source: Health Industry Insights' 1Q07 Leading Indicators in Life Science IT Spending Survey



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Regarding acquisition of these technologies, companies were relatively split between investing with large enterprise vendors (15%) and smaller best-of-breed vendors (16%), with a gap of just 1%. However, the majority of respondents indicated that their company (21%) expects to build out these supply chain capabilities in-house, as more life science companies try to consolidate IT systems and reduce their existing data integration challenges. For more information, including complete results and an in-depth look at the data from the survey, please refer to the supply chain portion of this quarter's *1Q07 Leading Indicators in Life Science IT Spending Survey*.

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## **The IT Contribution to Resurging Healthcare M&A** *By Janice W. Young*

After a brief hiatus of healthcare mega-mergers, new activity surged in nearly all US healthcare industries in the first quarter of 2007:

### Life Sciences/Pharmaceuticals:

- Schering-Plough announced a \$14 billion acquisition of Organon BioSciences
- Caremark agreed to a \$27 million merger with CVS

### Hospital:

- Community Health Systems, based in Franklin, Tenn., is in a deal to buy Texas-based Triad Hospitals for \$5.1 billion, making it the largest publicly traded U.S. hospital company

### Healthcare Insurance:

- Highmark Inc. and Independence Blue Cross announced talks for a possible merger

Regulatory disenchantment, particularly on the healthcare payer side, with concerns over lack of realized economies of scale, had slowed overall healthcare M&A activity in late 2006. However, there are a number of drivers that would suggest that healthcare merger and acquisitions will resurge, not the least of which are worldwide healthcare IT spending trends.

Taking the U.S. healthcare insurance industry as an example, two seemingly contradictory data points combine to suggest strong continuing merger and acquisition activity:

1. U.S. healthcare insurance companies historically spend less on information technology than others in information rich industries, most significantly, financial services.
2. However, in IDC's Worldwide Spending Guide for Healthcare Insurance, U.S. companies represent nearly 65% of all worldwide healthcare insurance IT spend.

The question is how these two seeming contradictory data points (not enough spending in one case; excessive spending in another) may be rationalized. The answer is that the IT spending projections are yet another reflection of the broken U.S. healthcare market model. Much money (perhaps too much money) is spent on IT across the market, but spread across too many organizations, resulting in disconnected and redundant investments and an overall poor IT investment. Goldman Sachs Equity Research estimates that, although consolidation among large health plans has been considerable, 20% of commercially insured individuals are served by more than 500 health plans. Individually, healthcare payer organizations spend a smaller percentage of revenue on IT and continue to lag well behind corporate counterparts in other industries. Few healthcare payer companies have invested adequately to achieve the levels of automation and information availability, not to mention to adhere to privacy and security standards.







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The excessive overall IT spend, coupled with the insufficient and inefficient individual corporate investments, suggests continued merger and acquisitions. The expectation is that the larger organizations will coordinate more efficient and effective investments to improve industry processes, transactions and information exchange.

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## **HIT From The Consumer Perspective: Boon or Bane?**

***By Marc Holland***

In the January 12<sup>th</sup> edition of this newsletter, several Health Industry Insights analysts weighed in on the issue of privacy and security of personal health information, in general, and genetic data, in particular. At that time, the precipitating event was the announcement by the VA of the initiation of a pilot project to link genetic sample data to the electronic health records data of those VA patients who volunteered to participate in the pilot.

A few days ago, the concept of collecting and analyzing patient-specific genetic information again made headlines. On Friday, March 23<sup>rd</sup>, at a speech before the Personalized Medicine Coalition at the National Press Club, Department of Health and Human Services' Secretary Michael Leavitt outlined his vision of a future health care delivery system based on "Personalized Health Care."

"Personalized health care will combine the basic scientific breakthroughs of the human genome project with computer-age ability to exchange and manage data," Secretary Leavitt said in his speech. "Increasingly, it will give us the ability to deliver the right treatment, to the right patient, at the right time – every time."

Realizing the Secretary's vision of Personalized Health Care will require the free and full exchange of patient medical records data, and powerful software tools designed to manage and mine vast amounts of data, glean meaningful patterns and translate that knowledge into effective diagnostic and therapeutic actions at the individual level.

According to the Secretary, and those who follow or participate in research in this area, the potential benefits could be significant. And while we certainly concur with this view, we believe that there are significant collateral issues that must be simultaneously addressed. The principal issue is privacy.

Case in point: Neither at the time of the VA announcement, nor since, were safeguards related to the manner in which the genetic information would be stored, managed and associated with patient-specific identifying information discussed. Based on past history, the probability of abuse of the information, absent effective privacy and security controls, remains high.

Acknowledging these concerns, Secretary Leavitt noted in his remarks that HAS was "engaged in a broad review of the implications for privacy protection as HIT is increasingly adopted, including needs for genetic information, and the anticipated effect on the confidentiality, privacy and security of individually identifiable health information."

If the Secretary was speaking of the efforts of the AHIC Confidentiality, Privacy and Security Workgroup, it's small comfort. In late February, Paul Feldman, Deputy Director of the Health Privacy Project, a Washington think tank, resigned as co-chair of that AHIC workgroup. In his letter of resignation to Dr. Robert Kolodner, Acting National Coordinator for Health Information Technology, Feldman noted that the workgroup "has not made substantial progress toward the development of comprehensive privacy and security policies that must be at the core of the NHIN." If progress is not being made with respect to ensuring the privacy of the type of electronic





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health information that is planned to be accessible over the NHIN, ensuring the security of sensitive genetic data poses far greater risks.

Spring is in the air and, so it seems, is a growing consumer opposition to HIT initiatives. Ironically, on the Monday following the Secretary's speech, the results of a Harris poll on Medical Data Privacy were released. Half of the more than 2,200 consumers polled said that they believed that "patients have lost control over how their medical records are used by organizations such as life insurance companies, employers and *government health agencies*." Additionally, 17% of the respondents overall, and 21% of those who characterized their state of health as "fair" or "poor," acknowledged withholding information from their health care providers out of concern that the confidentiality of the information would not be respected.

Consumer backlash has the potential to derail the efforts of those driving the efforts to digitize the capture, storage and sharing of health information. Privacy is a critical component of this debate, and one that has not yet had its turn at the podium. This time is coming, and the privacy issue must get a fair hearing, or a lot of valuable efforts may come to naught.

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## **The eClinical Singularity**

***By Chris Connor***

Since they were first introduced to the lexicon, the terms "paradigm-shift" and "sea change" have become overused to the point that they have lost their emotional impact. Back when those terms were fashionable, they were frequently misused to inflate and hype new technologies in search of problems to solve. Not surprisingly, many of those inflatable paradigms failed to shift out of first gear, or were down in a sea of pocket change. So it pains me when these terms are used to describe the changes taking place in the life science market. Simply stated, using either term is grossly inaccurate. But not because either fails to adequately describe the scale of the issue. Quite the opposite is true. Left unabated, there is little doubt that the forces buffeting the life science industry will be catastrophic. The issue that I take with the use of these terms is that neither conveys a rate of change. And because both of these terms have become so trite, they also fail to evoke any sense of urgency.

When describing the nature of technology adoption, in his latest book entitled *The Singularity is Near*, noted futurist Ray Kurzweil wrote: "It starts out almost imperceptibly and then explodes with unexpected fury—unexpected, that is, if one does not take care to follow its trajectory." Similar to the way that the credit card or the automated teller machine (ATM) heralded the transformation of the batch-driven processes relied on for decades in the financial industry, electronic data capture (EDC) sits poised to disrupt the life science industry which has relied its own paper-based processes, for nearly as long. The chart below is an excerpt from an upcoming report titled "U.S. Electronic Data Capture 2006-2011 Forecast and Analysis," which illustrates the impact of EDC as an agent of change in the life science market. The left axis depicts the annual adoption of EDC in new Phase I-III clinical trials. The right axis depicts the relative rate of acceleration in the annual growth of EDC adoption over the same period.

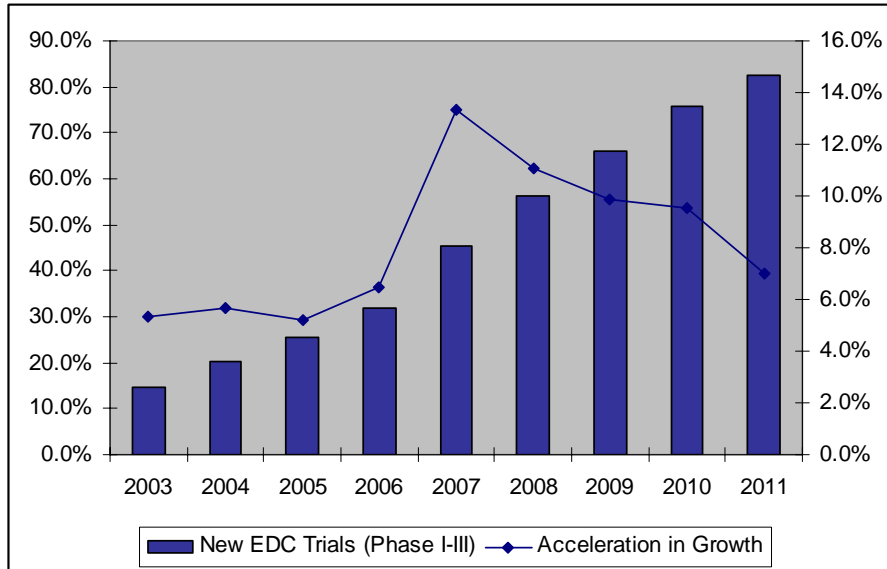




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## Growing Rate of EDC Adoption



Source: "U.S. Electronic Data Capture 2006-2011 Forecast and Analysis" Health Industry Insights #HI206351, 2007

EDC is changing the way clinical trials are conducted. A retrospective analysis of the technology's impact will only work if the growth rate is constant. If you discount the impact in the rate of change, reacting to high-tide and to a tsunami could be remarkably similar. The problem may be greater than simply where to put your beach umbrella.

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## Collaboration 101 *By Rachele Manning*

A recent *Boston Globe* editorial written by Dr. Joseph B. Martin, Dean of Harvard Medical School, discussed the reasons why providers are so resistant to technology, in spite of the benefits it provides such as improved care, reduced medical errors, and lowered medical costs. The reasons cited for the resistance included:

- Technology shifts the entire approach that physicians have to medicine
- Learning new technologies consumes too much time
- New technologies changes existing procedures too much

The article puts the onus for the resistance on older physicians. Older physicians consider the technologies disruptive. More than affecting their workflow, it affects the way they practice medicine, with a focus on teamwork, rather than working in silos. This mindset contradicts the way the older physicians were trained. Regardless of whether a vendor or payer is sympathetic to this resistance, stakeholders still need to understand the providers' perspective. Acknowledging and addressing these issues will further improve the chances of a successful IT implementation.

Technology has the potential to vastly affect the way providers practice medicine, and that requires a mind and culture shift that older physicians are less willing, or less-prepared, to make than younger physicians. The article noted that extensive training and technical assistance for







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the physicians, reverse-mentoring, incentives, and peer-pressure as key success factors for a successful IT implementation.

If you are a regular reader of this newsletter, you know that we at Health Industry Insights strongly believe that collaboration is crucial to improving IT adoption within healthcare. Through collaboration, healthcare stakeholders can address the above mentioned success factors as a means of successfully implementing healthcare IT.

Through collaboration, providers are part of the IT adoption process early on so they have some "skin in the game." For example, one question that comes up early is "who is going to pay for what?" If payers and providers collaborate on an IT adoption initiative, they need to decide how spending should be divided so all parties involved have a suitable amount vested. A stakeholder that has a poor collaboration experience will be reluctant to participate in future collaborations.

These issues will be discussed further in an upcoming research report. Regardless of who pays for what, engaging stakeholders from the beginning is crucial. If providers have a say in the process from the beginning and can prepare for the upcoming changes, they are more likely to accept the technology into their organization, the chances of a successful implementation increase, and all stakeholders involved are likely to collaborate in the future.

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### **The RHIO Market: "It was the best of times, it was the worst of times"**

***By Lynne A. Dunbrack***

In keeping with its "First State" moniker, Delaware is the first state to implement a state-wide regional health information organization (RHIO). Last week the Delaware Health Information Network (DHIN) began exchanging lab test results with three hospital systems, five physician practices (representing 30 offices and 70 physicians, and LabCorp. Lab results will be delivered via fax or email, or directly to their electronic medical record (EMR) system, according to physician preference. In the second phase of the project, relevant medical records will be forwarded from the patient's primary care physician (PCP) to the referring specialist who, in turn, can send back notes and test results through the DHIN. Ultimately, in this phase, providers (with the appropriate authorization) will be able to review a patient's electronic medical records stored by another physician. The third phase will add additional reports, such as radiology reports and images, and using data for medical and disease management. MEDICITY won the contract in October 2006 to develop a connectivity hub along with Perot Systems who will center, help desk and outreach training services. Terms of the contract were not provided. DHIN through private and public sector sources raised than \$8 million, including contributions from hospitals, LabCorp and Blue Cross Blue Shield (BCBS) of Delaware which totaled \$2.2 million in the first year.

DHIN is not the first RHIO to exchange clinical messaging; Indiana Health Information Exchange (INHIE) exchanges clinical messages to nearly 3,000 physicians in the Indianapolis region. However, DHIN is laying claim to being the first statewide RHIO. Of course, Delaware's small size is an advantage. The state is less than 2,500 square miles with a population of 843,524 (Census Bureau 2005). DHIN and other small state initiatives, such as the Rhode Island Quality Institute and MA-SHARE in Massachusetts, do serve as excellent exemplars for other RHIOs. Their nimble size allows them to engage the majority of the stakeholders in their region and address the barriers to HIE providing "lessons learned" for other, larger HIE initiatives.

The significant Delaware milestone is on the heels of another notable announcement made by Medicity. The HIE vendor announced in March that CalRHIO selected Medicity and Perot Systems to build a statewide HIE for California. Other statewide HIE wins include Orion Health in





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Vermont and Maine. This is in stark contrast to recent news about Santa Barbara County Clinical Data Exchange (SBCCDE) ceasing operations in March and the announcement this week by Quovadx that it sold the CareScience division (which developed the CDE technology for SBCCDE) to Premier, Inc. for \$34.9 million. The remaining divisions – Rogue Wave Software and Integration Solutions – were sold in a separate transaction to Battery Ventures, a venture capital and private equity firm. A private equity deal often signifies that the acquired company is "underpriced" and performing below its potential. Aggressive cost cutting and selling off parts of the business are common strategies to boost cash flow.

These recent announcements underscore the market turbulence faced by vendors and RHIO/HIE organizations alike. A recent Health Industry Insights report summarizing the results of a survey of the features and capabilities of 20 software products marketed to RHIO/HIE entities concluded that the emerging RHIO/HIE market will continue to be volatile, as technical requirements, standards, and vendor solutions evolve. The financial instability of RHIO/HIE organizations will exacerbate this situation. This situation is typical of emerging markets. Payer organizations and other stakeholders making investments in RHIO should move cautiously.

### **Related Research**

- RHIO/HIE Market Players: Delivering a Framework for Better Healthcare (# HI206141, Mar 2007)
- RHIO/HIE Market Players: Delivering Better Healthcare Through Connected Applications (*forthcoming*)
- RHIO/HIE Technical Architecture: Building a Framework for Better Healthcare (# HI203996, Oct 2006)
- Santa Barbara County Clinical Data Exchange Shuts Down Operations (# HI206019, Mar 2007)
- RHIO/HIE Market Players: Vendors' Perspectives of the RHIO/HIE Market (# HI206056, Mar 2007)

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### **Health Industry Insights Latest Research**

<http://www.healthindustry-insights.com/HII/research/index.jsp>

#### **Scott Lundstrom, Vice President of Research**

1Q07 Leading Indicators in Life Science IT Spending Survey

Mar 2007 - Doc # HI205945      Survey

Life Sciences Industry Update, 4Q06

Jan 2007 - Doc # HI205281      Update

#### **Christopher Connor, Senior Research Analyst**

Lost in Translation: A 360 Degree Analyst Perspective

Mar 2007 - Doc # HI205938      Perspective

EDC: From Fuzzy to Focused

Nov 2006 - Doc # HI204361      Perspective

#### **Lynne A. Dunbrack, Program Director – Health Payer Research**

**New!** The PHR Maturity Model: The Road to Interoperability

Apr 2007 - Doc # HI206237      Perspective

**New!** RHIO/HIE Market Players: Delivering a Framework for Better Healthcare

Mar 2007 - Doc # HI206141      Market Players

#### **Marc Holland, Program Director – Health Provider Research**

**New!** RHIO/HIE Market Players: Delivering a Framework for Better Healthcare

Mar 2007 - Doc # HI206141      Market Players

**New!** A Vision for Sustainable Intelligence in Integrated Clinical IT Systems

Mar 2007 - Doc # HI206165      Market Overview





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**Dr. Alan S. Louie, Research Director**

**New!** A Vision for Sustainable Intelligence in Integrated Clinical IT Systems

Mar 2007 - Doc # HI206165    Market Overview

Technology Accelerates Drug Development - or Does It? .

Mar 2007 - Doc # HI205975    Market Overview

**Rachele Manning, Senior Research Analyst**

Which Stakeholders Are Investing the Most Capital in Healthcare?

Mar 2007 - Doc # HI206001    Perspective

Healthcare Industry Update, 4Q06

Jan 2007 - Doc # HI205280    Update

**Eric Newmark, Senior Research Analyst**

**New!** Revenue Leakage: Plugging the Holes in the Pharmaceutical Channel

Apr 2007 - Doc # HI205254    Market Overview

**New!** Item-Level Tagging: Moving Beyond the Frequency Dilemma

Apr 2007 - Doc # HI206122    Market Overview

**Janice W. Young, Program Director – Payer IT Strategies**

Pay for Performance and Provider Technology Investment: The Looming Disconnect

Mar 2007 - Doc # HI205976    Perspective

Healthcare Payer Pay for Performance: Technology Investment Strategies, 2007

Mar 2007 - Doc # HI205867    Survey

## Analyst Appearances

- Scott Lundstrom will present at the [Health Industry Insights 2007: "Health Care IT Trends & Technologies"](#) conference in New Zealand on April 18, 2007.
- Chris Connor and Dr. Alan Louie will both be presenting at this year's [Bio-IT World Conference & Expo](#) from April 30 – May 2, 2007 at the World Trade Center in Boston.
- Health Industry Insights is once again exhibiting at the [Drug Information Association \(DIA\) Annual Meeting](#) from June 17 –20, 2007 in Atlanta. To schedule time with Alan Louie, Chris Connor, Eric Newmark and/or Scott Lundstrom, please contact [lpscanlon@healthindustry-insights.com](mailto:lpscanlon@healthindustry-insights.com).
- Health Industry Insights is also hosting a dedicated healthcare track at [IDC's IT Forum & Expo](#) (June 7 – 8, 2007 in Boston). Featured speakers include Scott Lundstrom, Lynne Dunbrack and Marc Holland, as well as leading practitioners from the healthcare industry. To receive a complimentary pass to this event, please [read the qualifying criteria for attendees and register here](#) with the promo code "Insights."

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