In the e-Driver's Seat

TECHNOLOGICAL ADVANCES CONTINUE TO RESHAPE PHARMACEUTICAL R&D ORGANIZATIONS, FORCING THEM TO EVOLVE TO REMAIN COMPETITIVE.

As technology is impacting how physicians are seeking to fulfill their need for information and other services and are finding answers through digital channels

Every sector of the life-sciences industry — from R&D to marketing — is being challenged to keep up with technology advances.

by
Carolyn Gretton

INFORMATION TRANSFORMATION

In its report, Shaping the Future of Pharmaceutical R&D: Executing to a Vision of High Performance, Accenture noted that the leading-edge R&D groups are abandoning existing organizational barriers in favor of a networked, virtual, and flexible approach to R&D. Many thought leaders believe this approach can be best achieved through a shift from a closed, internal IT infrastructure to cloud computing services. Cloud computing provides organizations with the ability to quickly access variable computing power, software, and storage options that are closely aligned with its own business performance and needs, and to turn fixed capital hardware investment into manageable, transparent operational cost.

A growing number of pharma companies are using cloud computing services as a fast, inexpensive way to manage traditionally cumbersome, time-consuming scientific and clinical processes.

John Pelkowski, senior director, client engagement for AstraZeneca, says the company has seen a number of benefits from moving its scientific affairs customer relationship management (CRM) process to the cloud.

"The benefits have been decreased annual costs to support process, improved CRM functionality, enhanced compliance reporting, and additional customer insight for pre-interaction planning," Mr. Pelkowski says.

On the down side, cloud models typically offer fewer opportunities for customization compared with systems developed within the company. But, according to Mr. Pelkowski, there are ways to work around that comparatively minor restriction.

"The power of the cloud model is leveraging pre-developed software that is easy to configure to meet most of your needs," he says. "At AstraZeneca, we mitigated the risk of less customization by prioritizing our needs versus wants and focusing on the overall efficiency and the macro effect of improved processes. To do that, we had business sponsorship on accepting that some processes in the cloud may not be as 'custom' as the legacy system."

In its R&D report, Accenture observes that instead of engaging in the traditional management and reporting of data, R&D informatics need to help R&D organizations convert the ever-increasing flow of data into insights that inform outcomes for the patient. In the future, high-performing companies will be the ones in which R&D and R&D informatics organizations align themselves to jointly pursue the data-to-insights capabilities needed to execute

POTENTIAL BENEFITS OF INTEGRATING EHR DATA WITHIN DRUG DEVELOPMENT

Trial Design (Refining Inclusion/Exclusion Criteria)

- EHR alerts increased enrollment rates from 2.4% to 22% of recruited patients (Prior knowledge of health status could drive further improvement)
- Total cost savings for screening 40,000 patients with a 5% "hit" rate is approximately $3.2 million

Patient & Investigator Recruitment

- A 28% increase in eligible patient identification
- A doubling of monthly patient enrollment rate
- A near-tenfold increase in the enrolled-to-referred ratio

Patient Compliance Tracking

- Journaling compliance increased from 11% with paper-based methods to 94% electronically
- EHR-based monitoring enables intervention before patient must be excluded from dataset
- Use of EHR data and patient alerts reduces attrition rate by 50%, reducing overall trial size

Potential savings: $3.2 million

- Assumptions for Calculating Savings & Additional Revenue

Potential revenue estimate: $125 million

- Phase III clinical trial
- 40,000 patients screened given 5% "hit rate"
- 2,000 patients enrolled in anticipantion of 25% attrition rate
- Recruitment expected to last 250 days
- Per patient screening cost: $100
- Cost per enrolled patient: $6,000
- Anticipated product revenue: $1 M/day

Potential savings: $1.8 million

Source: Deloitte Consulting, Secondary uses of Electronic Health Record (EHR) data in Life Sciences.
For more information, visit deloitte.com.

Social media offers an opportunity to create a dialogue with our customer base in a meaningful way by providing information to help people make informed decision and balanced way.

Mike Derkacz
Cephalon

on the promise of the new R&D model. While a handful of pharmaceutical companies are already making the investments to capitalize fully on this opportunity, most pharmaceutical companies are underinvesting significantly both in resources and timing relative to the size of the opportunity, Accenture says.

According to Deloitte Consulting Principal Rich Cohen, harnessing the vast amounts of data generated by life-sciences companies in an efficient, effective manner requires a clear strategic vision combined with the right processes and technologies to make it reality.

"In this environment, I believe companies that are able to exercise real control over their mountains of information have a distinct competitive advantage," Mr. Cohen says. "They're able to move more nimbly in response to shifts in the marketplace, as well as to time-consuming regulatory demands. They can collaborate more seamlessly with partners up and down the healthcare food chain. And they can use their own valuable information to innovate in ways their competitors couldn't dream of doing."

MAXIMIZING EHR DATA

Most life-sciences R&D functions are under increasing pressure to improve innovation, reduce development inefficiencies, and advance product safety. According to Accenture, the life-sciences industry spends an estimated $3 billion to $4 billion annually on external healthcare data for decision support around discovery, product development, clinical trial design, safety, product launch, and sales and marketing. Yet the value generated by this expenditure has not been maximized, and life-sciences companies currently lack true business-driven, extensible analytics capabilities that bring value to data, Accenture analysts say.

Experts believe patient-level data collected through EHR systems hold promise for redefining R&D and revolutionizing the life-sciences value chain. The Deloitte report, Secondary uses of Electronic Health Record (EHR) data in Life Sciences, says globally aggregated patient-level data could support the identification of disease mechanisms and new discovery areas, accelerate the termination of unsuccessful compounds, decrease patient recruitment cycle times for clinical trials, and improve drug safety surveillance through continuous monitoring.

A number of pharma companies are recognizing the potential for integrating patient-level data across areas of drug discovery, development, and commercialization. According to the Deloitte report, Pfizer has dedicated resources to health informatics and is in the process of evaluating applications for EHR data use. Similarly, Johnson & Johnson has begun exploring the strongest applications for EHR data, including the integration of data in areas of safety surveillance, clinical trials, and outcomes research. Other healthcare companies are currently assessing opportunities to apply external EHR data using methodologies and governance models for future-state, EHR-based operations.

To better use its own massive repository of clinical data, the FDA has been investing in the infrastructure necessary to support electronic receipt of study data and to develop an environment conducive to analyses of large data sets. The agency also has participated in efforts and initiated pilot projects to begin aligning its systems to Health Information Technology (HIT) standards, which are part of a national effort to develop a system to support EHRs.

In a recent report outlining the framework for its regulatory science initiative, the FDA says its goal of transforming data into a harmonized format organized in a com¬mon database requires investments in informatics hardware and software and the development of standardized data models for relational databases and scientific computing. The insights provided by this type of common platform would benefit FDA and the biomedical and healthcare community at large, enabling physicians to make more informed decisions about the optimal use of FDA-regulated products.

THOUGHT LEADERS

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IMPLICATIONS FOR INFORMATICS

While change in the R&D environment is inevitable, this does not ensure success in deploying the new R&D model. Accenture recommends the following steps for developing and deploying a new-model R&D informatics organization:

- Strengthen capabilities to support enhanced collaboration and integration, encompassing both internal and external stakeholders, in a manner that accommodates both structured and unstructured interaction.
- Develop a flexible infrastructure — one that is highly secure, yet also elastic, globally present, and cost-effective.
- Facilitate the incorporation of new sources of data — from partners, providers, CROs, patients, and third-party sources—into an improved decision-making model.
- Enhance capabilities to assimilate and interpret a wide array of inputs, ranging from sentiment monitoring and social networks to fully digital operational data that is integrated and accessible.
- Incorporate a broad spectrum of analytics and predictive capabilities, ranging from simulation and modeling tools to visualization techniques that provide the means to absorb massive volumes of data.

GOING MOBILE

According to comScore data, 58.7 million people in the U.S. owned smartphones in the three-month period ended September 2010, up 15% from the preceding three-month period. In 2010, nearly three-quarters of physicians surveyed by Manhattan Research used smartphones, and the majority of those who used them called the devices essential to their practice. Significant numbers of physicians also have digital media players, webcams, iPads, and subscriptions to satellite radio. E-Pharma Physician data show that a substantial share of physicians is also very comfortable with various media formats, whether using apps or portable content on mobile phones, searching for videos on YouTube, or subscribing to an expert podcast on iTunes.

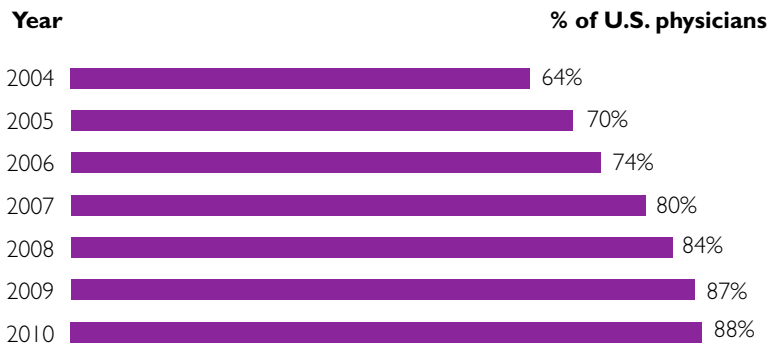
This trend toward growing physician comfort within the digital space, combined with the continued downsizing of pharma sales forces, has led many pharma companies to explore emerging technologies as a more effective way of interacting with and influencing physicians. As physicians juggle multiple devices, channels, and media formats, analysts recommend that to ensure success, pharma's digital-era marketing plans include multiple channels, seamless integration, and on-demand availability.

For example, live video detailing has made a strong comeback after a false start in the early 2000s, with physician adoption more than doubling in the past two years, according to Manhattan Research's ePharma Physician v10.0 study. A considerable share of these users self-report that their prescribing behavior is influenced by these programs, which is critical feedback for marketers concerned about the ROI of this channel.

Significant improvements in video technology and a growing crop of vendors supporting recruitment and fulfillment of these programs are paving the way for increased acceptance among physicians and reps alike. Video detailing presents a strong opportunity for manufacturers to elevate their multi-touchpoint customer service capabilities, particularly for their most valued customers, the ePharma Physician study says. Despite the challenge posed by putting physicians in a greater position of control of a tactic that's still in the realm of sales, marketing, and medical affairs, several pharma companiess are aggressively pursuing this opportunity. For example, Merck has established Merck OnCall, a website that provides physicians with real-time, Internet-enabled video conference access to Merck sales reps.

"Live video detailing is certainly a success story so far, which is great news for companies looking to optimize their sales strategy," says Monique Levy, senior director of research at Manhattan Research. "After this initial surge in participation, however, we expect adoption will likely plateau for the next few years while companies do a better job at relaying the value proposition and optimize targeting to non-users."

PERCENTAGE OF E-PHARMA PHYSICIANS IN U.S



Source: Manhattan Research, ePharma Physician v.10.0.
For more information, visit manhattanresearch.com.

OUT IN THE OPEN

The recent Manhattan Research report, Physician Social Media: Benchmarking Adoption and Assessing Strategic Opportunities, found that the majority of U.S. physicians are using professional user-generated content in some form, primarily on blogs, open message boards, and other online media. By contrast, fewer than 20% of U.S. physicians have visited closed professional online communities despite high interest in these types of forums, representing a challenge for marketers seeking to leverage social media as an engagement tool.

"Framing the social media landscape is a critical first step in understanding the growing audience of physicians interacting with one another online," says James Avallone, senior digital healthcare analyst at Manhattan Research. "Since physicians' primary consumption of professional

social media is happening outside the walls of existing closed physician-only communities, marketers need to evaluate other engagement opportunities, such as distributed content or niche communities."

In its recent report, Progressions 2010: Pharma 3.0, Ernst & Young notes that in the first generation of websites, content flowed primarily in one direction — from the companies that developed it to customers and other stakeholders, who consumed it. Now, information flows in multiple directions; it is constantly morphing, and no centralized authority controls the message. While this increased access is empowering for consumers, pharma is still wrestling with how best to harness ever-shifting resources.

"It's unreasonable to think we can stay in control of social media, but we can make our role transparent in the dialogue and be clear on what we can and can't do as a company," says Mike Derkacz, VP, marketing, CNS, at Cephalon. "Social media offers an opportunity to create a dialogue with our customer base in a meaningful way by providing information to help people make informed decisions. We've already seen examples of obtaining insights online either directly or indirectly from healthcare professionals, such as through Physicians Online and Sermo."

According to Ernst & Young, emerging healthcare-specific communities such as PatientsLikeMe could supplant more traditional social media as a crucial resource for pharma looking to connect with consumers. In June 2009, Belgium-based UCB became the first pharmaceutical company to partner with PatientsLikeMe when the two companies announced an agreement to build an online epilepsy community. Other companies that have since worked with PatientsLikeMe include Novartis, which helped build a community for organ transplant patients; and Avanir, which partnered with the community to recruit patients for an ALS clinical trial.

COMPANY NOT WELCOME

Though not their primary or even their secondary source in most cases, a significant share of physicians do seek out manufacturer-sponsored content online. According to Manhattan Research, more than four out of five physicians use corporate and product sites, and about half of doctors use manufacturer portals such as PfizerPro. While adoption of these resources has not declined at the same rate as face-to-face rep interaction, given the low frequency of physician visitation to these properties, the challenge for manufacturers is figuring out which properties or channels to invest in, and integrating and cross-promoting content assets to gain traction, according to the ePharma Physician study.

Manhattan Research found that physicians are using the Internet at multiple points through the day – even during patient consultations – making the service cycle almost continuous. Physicians are continually shifting more of their clinical and professional research to online channels. Some of the most popular medical journals have more than doubled, and in some cases tripled, their online audience since 2007, according to ePharma Physician data. Additionally, physicians researching information about biotech and pharmaceutical products online are most likely to use professional medical websites intended for healthcare providers, such as Medscape and UpToDate, as their first source.✦

PharmaVOICE welcomes comments about this article.

E-mail us at feedback@pharmavoice.com.

ViewPoints

R.J. Lewis
e-Healthcare Solutions

The pharmaceutical industry's digital media expenditures come nowhere close to correlating with your audiences' digital media usage levels.

Leigh Householder
GSW Worldwide

Every conversation about digital and e-marketing should shart with these six words: what do you want to accomplish?

Ashwin Mundra
Medidata Solutions

As the life-sciences industry focuses on moving toward a risk-based site monitoring approach, it is critical that the clinical organization have the right tools and process in place to execute such a strategy.

Jon Hudson
MedThink Communications

Companies should more assertively explore and implement digital strategies to enhance relationships and collaboration with experts..