

Pharma perspectives

A prescription for marketing and drug development



In spite of strong sales, the pharmaceutical industry faces a future of declining margins. With that, companies are re-thinking their operations and strategy—whether that means new markets, new business models, or new prospects for innovation.

Biotechnology, for example, holds out potential. And Terry Hisey of Deloitte Touche Tohmatsu argues that a “convergence of drugs, devices, and diagnostics” could lead to new growth opportunities.¹

Pressure is also on R&D and marketing departments to find greater efficiencies and improve results.

Marketing and sales have a narrow margin of opportunity to optimize revenues. According to one estimate, big firms spend over a third of their budgets “peddling pills.”² Yet an average sales visit lasts three minutes, or less. In such a tight cycle, it takes a highly informed team to differentiate the benefits, influence decision-makers, and maximize selling effectiveness.

On the R&D side, getting a new drug from the lab to pharmacists’ shelves is hugely expensive—developing a single component is estimated to be as much as \$1.7 billion.

While drug development is inherently costly, there are ways to streamline the process. By leveraging their IT systems and integrating the entire clinical trials program, some companies have sped up trials by 10 percent or more, says the *McKinsey Quarterly*.

Information flows too can improve throughput. “Certain companies have improved their speed, quality, and costs by focusing on getting the right data the first time, managing work flows to reduce bottlenecks, and making data more transparent across the entire clinical process.”³

In this paper, we offer three perspectives on the pharmaceutical industry. First, we look at transitions in sales and marketing, and the move toward smaller, more targeted consumer-driven strategies.

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¹ *Beyond the Pill*, The Economist, October 25, 2007.

² Ibid

³ Sam Marwaha, Samir Patil, and Navjot Singh, Using IT to speed up clinical trials, The McKinsey Quarterly, July 2007.

Next, we discuss one solution for planning and managing clinical trial costs: the *IBM Cognos® Clinical Trials Forecasting Blueprint*. Finally, we focus on another planning tool that helps companies effectively manage their patient enrollment to ensure successful clinical trials.

Beyond the blockbuster: using BI for better sales in pharma

With \$700 billion in global drug sales expected by the year 2008, the future for pharma may seem anything but bleak.⁴

But in spite of continued growth and high profits, overall margins have been declining over the last decade. And the downward trend is leading executives to re-think their business models.

A new order of business

“Pressure from investors, buyers, regulators, doctors and patients is already forcing the world’s leading drug makers to question the way they do business,” says *The Economist*. The result may be less big pharma and more diversification in the years ahead.⁵

Blockbuster drugs (those that generate annual sales of at least \$1 billion) will continue to drive growth, argues *Fortune* magazine. But over the long term, “the industry faces a difficult transition from its tried-and-true formula of mass-market medicines to more elegant biotech drugs, which are derived from genetic research and tailored to smaller, more targeted groups of patients.”⁶

This new order of business doesn’t support the traditional push model of selling—which focuses on blitz-style marketing and big TV ads. Instead, companies will need to reach discrete, targeted markets through focused initiatives driven by consumer information and knowledge.

Understand the consumer

The trend is already underway. *Pharmaceutical Executive* says that there is a “new level of refinement in strategy and sophistication in execution” as advertisers get better at targeting their audience.

“Pressure from investors, buyers, regulators, doctors, and patients is forcing the world’s leading drug makers to question the way they do business.”

– The Economist

⁴ Shereen El Feki, *Prescription for Change*, *The Economist*, June 16, 2005.

⁵ *Ibid.*

⁶ John Simons, *5 Blockbusters to Save Big Pharma*, *Fortune*, January 20, 2006.

GSW Worldwide, for example, did its research to develop ads on the pain associated with gout, something all sufferers could relate to. Wunderman and MBC asked breast cancer survivors to share their experiences—it became the basis for a sophisticated educational campaign.⁷

For targeted marketing to work, companies have to do their homework. Market research plays a role. But consumer information also resides in CRM, ERP, and other systems—clinical trial data, purchase patterns, satisfaction levels, sales trends, and so on.

Business intelligence consolidates and leverages this data to provide an integrated view of the market. Who is most likely to buy which drugs? Why? Who are the best customers and how do you attract more of them? These insights into consumer needs and trends help organizations define more effective ads, promotions, and marketing campaigns.

Refine the sales process

“Drug companies have a powerful incentive to drive sales as hard as they can,” says *The Economist*. “Their patents are filed early in development and are being squeezed at both ends. Precious time is eaten up in clinical trials before the drugs come to market, and afterwards generic companies pile in.”⁸

Sales reps are also pressed for time. With the average sales visit lasting a mere three minutes, they need to make the most of the opportunity. They need a clear-eyed picture of the market to maximize their selling effectiveness.

But siloed data sources often mean piecemeal access to consumer and business information. In this case, instead of selling, reps spend too much time looking for answers.

Consolidate company data

BI provides a solution. Instead of scattered and inconsistent data, reps can access a shared platform that consolidates customer, product, and marketing information—to help them prepare for their sales calls.

⁷ Alana Klein, *Pharmaceutical Executive's Ad Stars*, *PharmExec.com*, April 1, 2006.

⁸ *Devil in the Detail*, *The Economist*, June 16, 2005.

For example, a rep can view a list of local doctors who are most likely to buy in the next quarter, based on their past purchase patterns. Managers might track national sample usage to drive better results. And R&D reports update sales on the product pipeline, such as the progress of a new compound as it enters Phase III.

Track results

Metrics offer a way to track selling initiatives. Is the direct-to-consumer TV campaign working? Are sales up or down? With scorecards and dashboards, people stay on top of critical measures like total exposures, response rates, and consumer satisfaction.

Users see how the organization is performing in terms of advertising and marketing. They can measure the cost of programs versus the revenue they produce, and which promotions have the biggest or least impact on sales. When results don't measure up, new approaches can be taken to improve campaigns.

On the sales front, metrics allow managers to monitor national, regional, territory, and product performance.

What are the top sales by product, city, region, or country? Who are the top sales reps? Armed with this information, management can re-allocate resources to maximize opportunities. And employees view and understand their performance against key indicators like sales, growth, and market share versus call activity, reach, frequency, and sales expenses.

From big to smaller, targeted markets

Pharma is undergoing a transition in sales and marketing, as companies look to smaller, more targeted consumer-driven strategies. BI can help businesses translate valuable consumer information into more effective campaigns. So they resonate with customers and make the most of sales time and resources.

“The industry faces a difficult transition from its tried-and-true formula of mass-market medicines to more elegant biotech drugs, which are...tailored to smaller, more targeted groups of patients.”

– Fortune

Getting past ‘eureka!’ in pharma

Where does innovation occur in the pharmaceutical industry? Is it only in the “eureka!” moments in the laboratory when a new drug is discovered? Those are essential, of course. But for a successful organization, innovation needs to go far beyond the lab.

Consulting giant Accenture examined the role of innovation in the business performance of top pharmaceutical companies in a research paper issued jointly with UK-based research firm CMR International.

The authors observed that “scientific innovation in discovery is not sufficient and companies need to examine the possibilities to be innovative in every activity involved in getting a commercially valuable product to market.”⁹

Innovation “throughout the value chain”

Accenture and CMR recognized that only a small percentage of drugs make it successfully from the lab to full-scale commercial release. They concluded that, for a company to be successful, “innovation needs to be applied to how processes are designed and refined, how technology is used to enable the business, and how the organization is structured and people and teams are managed.” They urged pharmaceutical companies to innovate “throughout the value chain.” And they asserted that “successful companies will be those that embrace innovation at every stage of R&D and marketing.”¹⁰

Clinical trials expensive, daunting

Bringing a new drug to market is costly. The most expensive part of the process, however, is not the breakthrough in the laboratory, but getting the drug from the lab to pharmacists’ shelves. And the most costly part of that lab-to-market process is clinical trials.

Managing the resource requirements and accurately forecasting the costs of a large-scale clinical trial can be a daunting task. Programs are often run globally (China, India, and Russia being the leading overseas venues for clinical trials by major drug companies¹¹) and involve the manual collection and consolidation of data on patient visits.

“Drug companies have a powerful incentive to drive sales as hard as they can.”

– The Economist

⁹ *Rethinking Innovation in Pharmaceutical R&D*, Accenture Health and Life Sciences Practice, CMR International, 2005.

¹⁰ Ibid.

¹¹ Bruce Einhorn, *The Rush to Test Drugs in China*, Business Week, May 28, 2007.

A new IBM Cognos Performance Blueprint to manage clinical trials forecasting

This is where the IBM Cognos *Blueprint* offers an invaluable innovation. The *IBM Cognos Clinical Trials Forecasting Blueprint* is a pre-configured planning, reporting, and policy template based on IBM Cognos 8 Planning and IBM Cognos 8 Business Intelligence.

The *Blueprint* is designed to help financial professionals and clinical trial managers forecast, plan, and manage expenditures using an activity-based approach that maps expenses to clinical trial activities.

Developed by the IBM Cognos Innovation Center for Performance Management, the *Blueprint* enables an entire portfolio of development projects to be modeled uniformly.

Create reliable forecasts

In large-scale clinical trials, the patient visit is the underlying driver for most costs. The *Blueprint* creates a reliable forecast by modeling such critical patient-visit factors as per-patient costs, retention, drop rates between visits, and the timing of visits relative to each patient enrolled in the study.

Pre-defined formulas update the forecast for the actual activity and re-forecast based on a range of assumptions—such as the average monthly spend, and cumulative and projected variances from budget.

Driver-based algorithms

The *Blueprint* accurately predicts clinical trial operating expenses, using driver-based algorithms. It pulls data from multiple systems, accommodating multi-year projects and portfolio management processes.

It can model *what-if* scenarios and assess the performance of different sites or regions across the trial portfolio. In addition, the *Blueprint* builds a performance data repository as a base for future decisions such as site selection for prospective studies.

“Companies need to examine the possibilities to be innovative in every activity involved in getting a commercially valuable product to market.”

– Accenture, CMR International

Accurate, real-time insight

The *Blueprint* provides accurate, real-time information that allows management to know how the trials are going, where the problems are, and where resources should be directed to make sure that deadlines and cost targets are met.

It maximizes insight into enrollment indicators that can affect the progress of a costly study. It enables finance and R&D to cooperate on hitting key dates in the FDA filing process. Most important, it helps companies extend innovation beyond the laboratory and throughout the value chain.

A Blueprint to manage clinical trial enrollment forecasting

Pharma spends enormous sums of money on research and development every year. One analysis put the worldwide total at \$90 billion in 2005.¹² That's roughly \$14 for every human being on the planet, and costs are rising steadily.

The \$90 billion figure represents an increase of more than 50 percent from 2001. Predictions are that companies will increase spending by at least seven percent per year through 2009.¹³ Estimates of the cost to bring just a single drug to market: from \$800 million to \$1.7 billion.¹⁴ Where does that money go?

Clinical trials the biggest part of R&D spending

Laboratories and high-tech medical equipment consume a sizeable portion of the R&D budget. But the largest single fraction of spending goes for clinical trials.

A 2007 report on R&D cost drivers prepared by Accenture for the Pharmaceutical Research and Manufacturers of America (PhRMA) found that "36 percent of the R&D budget is going toward late stage development, mostly due to the rather expensive Phase II and Phase III clinical trial process."¹⁵

Phase III clinical trials are those in which large numbers of patients are enrolled in multiple locations around the world.

The clinical trials forecasting Blueprint is designed to help financial professionals and clinical trial managers forecast, plan, and manage expenditures using an activity-based approach that maps expenses to clinical trial activities.

¹² EvaluatePharma® evaluatepharma.com, August 2006.

¹³ Goldman Sachs, PAREXEL's Pharmaceutical R&D Statistical Sourcebook 2006/2007.

¹⁴ *Pursuit of High Performance through Research and Development – Understanding Pharmaceutical Research and Development Cost Drivers*, Accenture Health and Life Sciences Group, 2007.

¹⁵ Ibid.

3C Pharma: Performance management and the future of drug development

Managing the costs and complexities of drug development is a huge challenge. But Karen Briegs, Senior Director of Marketing and Product Development at 3C Pharma, says companies will start to lose out if they don't find ways to make it work.

Strategies include co-licensing with smaller companies, consolidating core capabilities, and "looking at every step of the development cycle to find ways to compress it."

"We see organizations starting to reorganize themselves," says Briegs.

"They're starting to build this layer of people who are focused on operations, focused on KPIs, and focused on project management as a core competency."

With that comes the need for performance metrics, trial performance data and status information, and finding ways to link performance with people.

Spreadsheets can't support the rigorous analysis needed to understand the major impacts on the business and to forecast the future with any kind of accuracy. But performance management can—and the industry is beginning to see the benefits of investing in this area.

Point applications provide partial solutions

To manage their Phase III trials, many companies use Clinical Trial Management Systems (CTMS) to record and store patients' medical data. CTMS are adequate for portions of their respective tasks, but they have serious shortcomings when applied to a large-scale process. CTMS lack the forecasting capability to effectively model the full enrollment picture across a worldwide development portfolio.

Spreadsheets are often used for modeling and forecasting, but they introduce problems of version control. They also lack important enterprise capabilities such as managed workflow and the ability to provide templates to hundreds of users simultaneously.

The result? Information is kept in silos and a great deal of manual effort is required to keep the process on track. There is, however, a better solution.

Estimates of the cost to bring just a single drug to market: from \$800 million to \$1.7 billion. where does that money go?

An IBM Cognos Performance Blueprint for managing patient enrollment

IBM Cognos Performance Blueprints offer a way to manage both the financial and operational aspects of large-scale clinical trials. The *Blueprints* are pre-configured planning, reporting, and policy templates based on IBM Cognos 8 Planning and IBM Cognos 8 Business Intelligence.

The *IBM Cognos Clinical Trials Forecasting Blueprint* (previous story) allows you to track and forecast the overall costs of a specific trial or even a whole portfolio of clinical trials. The *IBM Cognos Clinical Trial Enrollment Forecasting Blueprint* zeroes in on the enrollment details to assure that a specific clinical trial has sufficient numbers of patients to meet its goals. *Blueprints* working together

The two *IBM Cognos Performance Blueprints* are designed to work together, enabling changes in enrollment projections to update financial projections seamlessly. By linking enrollment and financial data, managers can better understand the cost of changes and the dollar effect of evolving enrollment projections.

The *IBM Cognos Clinical Trial Enrollment Forecasting Blueprint* provides dashboards and analytical reports. A pre-configured data model also consolidates data from the individual site level up through regions and countries.

The *Blueprint* alerts managers to trends and patterns, and allows them to drill down to detailed analysis and pull information from multiple transactional and planning systems. Managers can easily examine the enrollment status of a specific test site or across a range of sites.

The *Blueprint's* forecasting assumptions cover all possible scenarios and eliminate the need for manual, off-line number crunching. The model is also updated automatically to reflect input from users throughout the system. So changes to one of the assumptions will recalculate all the affected data instantly.

“36 percent of the R&D budget is going toward late stage development, mostly due to the rather expensive phase II and phase III clinical trial process.”

– PhRMA

Open business rules and a flexible model

With open business rules, the model is flexible enough to be changed or modified by business users as needed, without costly development and complex coding. The result? Managers can make timely decisions on whether or when to shut down test sites or set up additional sites as the clinical trial progresses.

Managing the enrollment process effectively is essential to help pharmaceutical companies control their growing costs.

But the greater value—both for the companies and the customers they serve—is assuring that the clinical trial process accomplishes its goal of proving the safety and efficacy of the drugs that are under study.

Track enrollment indicators for better results

The *IBM Cognos Clinical Trial Enrollment Forecasting Blueprint* enables pharmaceutical companies to track enrollment indicators that can affect the progress of a costly study. It helps overcome the problems of data integrity and information silos.

Using the *Blueprint*, managers can identify problems. What's more, they can direct resources effectively to ensure that patient enrollment is adequate to produce a successful clinical trial.

The clinical trial enrollment forecasting Blueprint enables pharmaceutical companies to track enrollment indicators that can affect the progress of a costly study.

About IBM Cognos BI and Performance Management

IBM Cognos business intelligence (BI) and performance management solutions deliver world-leading enterprise planning, consolidation and BI software, support and services to help companies plan, understand and manage financial and operational performance. IBM Cognos solutions bring together technology, analytical applications, best practices, and a broad network of partners to give customers an open, adaptive and complete performance solution. Over 23,000 customers in more than 135 countries around the world choose IBM Cognos solutions.

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