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SALES + MARKETING

Data and Analytics Unlocking Future of Pharma Sales Planning

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The only thing constant is change. But while competitive forces and cost pressures continue to be the primary drivers of change, recent technological advances around data and analytics have emerged to create a perfect storm of opportunity for sales planning in the pharmaceutical and life science industries. This opportunity will redefine traditional cyclical sales planning processes.

What will the future look like—and what can you do to be ready? This paper introduces emerging capabilities in sales planning that we predict every commercial operations department must prepare to adopt in the future, illustrates how some companies are already building these capabilities and offers three key considerations that can mean the difference between leading or following in this competitive market.

Over the years, the pharmaceutical industry has changed quickly and dramatically. And more change is ahead as a result of demographic, regulatory and technological drivers: People live longer, consume more medical services, and stretch insurance and government budgets to their limits.

Pressure to contain costs and improve outcomes radiates throughout health care. Meanwhile, new generations of products are more specialized and cover smaller markets, further pressuring profitability and commercial business models for pharmaceutical manufacturers. Another major change driver is technological innovation: A multitude of systems and providers are collecting more data, cloud database providers and architectures enable more vast data repositories, and increasingly sophisticated analytics drive faster, more precise decision making.

How will our commercial models evolve, and what capabilities will the future require? ***We believe that cost and other pressures will force the pharmaceutical industry to adopt big data, automated analytics and real-time sales planning capabilities in the next three to five years.***

Big data: Uniting structured and unstructured data

While the retail, financial and travel industries have long relied on big data to improve competitiveness, life science has been slower to incorporate data into its planning beyond pure sales and customer attributes. But with many non-sales factors driving today's environment, we are starting to recognize big data's potential.

We are grappling with issues of access, control, influence and perception. Luckily, the opportunity to find answers is huge, with more data than ever, in more formats (structured and unstructured) and from more places offering insight into these new questions. Gartner predicts that unstructured data will grow 80% through 2015,[1] or 15 times the growth rate of structured data.[2]

New data systems and repositories emerge every day: Medicare and Medicaid databases, electronic medical records repositories and aggregators, social networks like Doximity and PatientsLikeMe, not to mention quickly accumulating internal data, such as repositories of video and audio interactions with customers, outcomes databases and closed-loop marketing clickstreams.

[1] http://practicalanalytics.wordpress.com/2011/11/11/big-data-infographic-and-gartner-2012-top 10-strategic-tech-trends/
[2] http://www.strategyand.pwc.com/media/file/Strategyand_Benefitting-from-Big-Data.pdf


Claims
PatientsLikeMe
Call Center Transcripts
Level Sales
Payer
CDC Outbreak Data
Sentiment
Prescriber
Sales
PubMed
Patient Networks
Pharmacies
Physician Access Restriction Data
Physician
Affiliation Database
MC Formulary
MD Social Networks
Academic Institutions
Doximity
Hospital
Demographics
Profiles
Disease Prevalence
Copay
Electronic
Health Records
Patient
Level APLD
Closed Loop Marketing Data
Enrollment
Publications
& Quotations
Physician Channel Preference

Much of this data offers clues to questions we've struggled with for the past decade: Who are the most influential and authoritative key opinion leaders (KOLs)? What are their opinions and concerns about our medicines? The opportunity is limitless, but to extract the right answers will require mastery of this data and the ability to put it together.

Harness the data: One life science example of how to harness this new, unstructured data involves a company that sought to understand important influencers for a new drug before launch. To identify the greatest authorities and their academic employers, ZS helped the company pull data from PubMed's database of 24 million citations.[3]

We then filtered the data by citations and articles related to the relevant therapeutic area using an authority score (reflecting the number and influence of references to an author's articles) for further analysis. The process identified KOLs in the field, as well as colleagues, co-authors and the most influential academic institutions. Ultimately, this produced a small but powerful list of KOLs to coordinate with before the launch.

Analytics: Unlocking data's potential

All the data, however, is meaningless without appropriate analytical tools. Several years ago, Gartner's Peter Sondergaard made one of the more hyperbolic comments about big data: "Information is the oil of the 21st century, and analytics is the combustion engine."[4] In life science, sales planning has always been based on analytics—for example, promotion response analysis helps identify the most responsive doctors and the optimal amount of effort across the field. But today's data and analytical methods go far beyond that.

Early advanced analytics in life science: Some companies already leverage analytics to unlock new data sources, but such use is far from widespread. For example, one company in a competitive market has been developing a model to identify brand switchers. It used analytics to look into anonymized patient-level data (APLD) to identify doctors likely to "switch in," or to "switch out," and developed a different message for each audience, allocating extra effort for these types of doctors.

Identifying switchers, monitoring adherence challenges, predicting the impact of events such as allergy outbreaks: This all requires mastering both new data and new analytical methods. The positive is that many of the life sciences companies have already started building those models, albeit in very targeted uses. Much effort remains to go from individual analysis to a systematic, repeatable and ultimately automated process.

[3] http://www.ncbi.nlm.nih.gov/pubmed
[4] "Gartner Says Worldwide Enterprise IT Spending to Reach $2.7 Trillion in 2012," October 2011, gartner.com/newsroom/id/1824919.

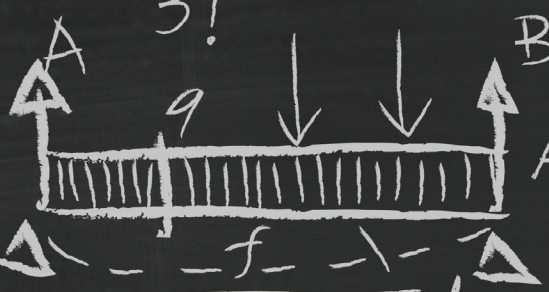
$$tg2\alpha = \frac{2tg\alpha}{1-tg^2\alpha} \qquad ctg2\alpha = \frac{ctg^2\alpha - 1}{2ctg\alpha}$$

$$\sin\frac{\alpha}{2} = \pm\sqrt{\frac{1-\cos\alpha}{2}}$$

$$\sin(45^\circ+\alpha)$$

$$\cos(45^\circ+\alpha)$$

$$\frac{m(m-1)(m-2)x^3}{3!} + \dots + \frac{m(m-1)(m-2)\dots(m-k+1)x^k}{k!}$$



$$A = B = \frac{ql}{2} \qquad f = \frac{5}{384}\cdot\frac{ql}{EI} \qquad T_x = \frac{q(l-2x)}{2}$$

$$\sin(-\alpha) = -\sin\alpha$$

$$tg(-\alpha) = -tg\alpha$$

$$\sin\left(\frac{\pi}{2} \pm \alpha\right) = \cos\alpha$$

$$tg\left(\frac{\pi}{2} \pm \alpha\right) = \mp ctg\alpha$$

$$\sin\frac{\alpha}{2} = \pm\sqrt{\frac{1-\cos\alpha}{2}} \qquad tg\frac{\alpha}{2} = \pm\sqrt{\frac{1-\cos\alpha}{1+\cos\alpha}}$$

$$\cos\frac{\alpha}{2} = \pm\sqrt{\frac{1+\cos\alpha}{2}} \qquad ctg\frac{\alpha}{2} = \pm\sqrt{\frac{1+\cos\alpha}{1-\cos\alpha}}$$

$$\sin^2\frac{\alpha}{2} = \frac{1-\cos\alpha}{2}; \qquad \cos^2\frac{\alpha}{2} = \frac{1+\cos\alpha}{2}$$

$$2lw + 2(h+2w)h$$

$$1 + x + x^2 + \dots + x^n + \dots = \sum_{n=0}^{\infty} x^n, \quad |x|<1$$

$$1 - x + x^2 - \dots + (-x)^n + \dots = \sum_{n=0}^{\infty} (-1)^n x^n, \quad |x|<1$$

$$e^x = 1 + x + \frac{x^2}{2!} + \dots + \frac{x^n}{n!} + \dots$$

$$T_1 = A = \frac{ql}{2} \qquad T_2 = -B = -\frac{ql}{2}$$

$$\cos(\alpha+\beta) = \cos\alpha\cos\beta - \sin\alpha\sin\beta;$$

$$\cos(\alpha-\beta) = \cos\alpha\cos\beta + \sin\alpha\sin\beta$$

$$2\alpha = \frac{ctg^2\alpha - 1}{2ctg\alpha}$$

$$tg^2\alpha - tg^2\beta = \frac{\sin(\alpha+\beta)\sin(\alpha-\beta)}{\cos^2\alpha\cos^2\beta}$$

$$ctg^2\alpha - ctg^2\beta = \frac{\sin(\alpha+\beta)\sin(\alpha-\beta)}{\sin^2\alpha\sin^2\beta}$$

$$tg^2\alpha - \sin^2\alpha = tg^2\alpha\sin^2\alpha$$

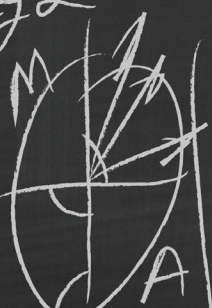
$$ctg^2\alpha - \cos^2\alpha = ctg^2\alpha\cos^2\alpha$$

$$1 \pm tg\alpha tg\beta = \frac{\cos(\alpha\pm\beta)}{\cos\alpha\cos\beta}$$

$$\frac{qa(a+2b)}{2L} \qquad \frac{qa}{2L}$$

$$A; \quad T_z = -B$$

$$A/q$$



$$\cos(\pi \pm \alpha)$$

$$ctg(\pi \pm \alpha)$$

$$\cos(2\pi k$$

$$ctg(2\pi k$$

Real-time planning: React before the next cycle

Embracing big data and unlocking its power with analytics takes you a long way, but what happens when it requires months to use those insights or to react productively? The true endgame involves both systems and internal processes evolving into real-time resource and activity reallocation.

How can we improve our processes and systems? Building capabilities to eliminate the cycle may be hardest because it requires going from today's analog state—the equivalent of printing directions before traveling—to automated, real-time systems and processes to advise the field—like GPS with traffic information and constantly recalculated directions. It requires both the systems that can do it and the field processes that expect it.

Turning insights into actions: Some companies are on their way. One promoter of an allergy brand captures a significant portion of its annual sales during pollen season. Sales efficiency during those few months is paramount to performance, yet the peak of pollen season varies annually and by region. To support its highest prescribers before and during the outbreak, the company uses CDC data and forecasts by zip codes to create weekly targeting guidance for reps. Targeted support by telesales and other channels were implemented to help the overwhelmed field. The company is also exploring monitoring social chatter to spot allergy complaints in various areas.


Driving on Going to the S
25
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Speed
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Menu

Future considerations for success

Only by rewiring systems and processes to respond as changes happen can you harness the power of data and analytics and ultimately eliminate the planning cycles. To make this happen, organizations should consider three building blocks for future success:

1. **Design a repeatable data and analytics process.** Data acquisition and integration and the execution of analytical models must be reliable and repeatable if sales planning and other operational processes are to depend on them. In addition to traditional data-warehousing systems and processes, data stewards and scientists need to be part of the operational process when dealing with unstructured data.

2. **Enhance your planning systems.** Configure planning systems to rely on additional modeling inputs, such as changing physician scores, promotional responses or customer channel preferences. Planning systems also should not stop at effort allocation, but go further to suggest messages and coordinate non-sales channels.

3. **Redesign processes for greater flexibility.** Many sales compensation plans, for example, rely on a frozen customer and target universe. We need to design goals and metrics that allow targets to change within the quarter, without reps feeling unrewarded for different effort. Representatives will also need to learn how to incorporate new information into call plans in real time, based on alerts or weekly newsletters.

Getting ahead of the game

One thing for certain, sales planning will evolve into a dynamic, analytically enabled model, one that can provide the right insights to deliver the right interactions, to the right customer, at the right time. And while some companies are taking advantage of these capabilities today to tackle specific challenges, their use is not widespread and far from systematic. Sales operations organizations across the pharmaceutical industry must prepare for the convergence of big data, automated analytics and real-time sales planning processes in the next three to five years, or prepare to be left behind by competitors.

About the Author

Maria Kliatchko is a Principal with ZS Associates in New York. At ZS she is leading the Javelin™ Professional Services team, as well as the Javelin™ Sales Planning software product line. She has more than 15 years of experience in working with pharmaceutical, medical devices and health-care companies on a diverse array of sales and technology strategy issues, including sales alignment, segmentation and targeting and call planning, as well as business intelligence, CRM and commercial data integration.

Prior to joining ZS in 2009, as a Director/Team Leader of Data Management at Pfizer Maria led the team developing and enhancing the pharmaceutical company's U.S. commercial data warehouse and BI solutions. Earlier, Maria held the position of Director, Incentive Compensation Systems, running the systems, processes and technical infrastructure of Pfizer's field compensation, including territory alignment, quota setting, sales reporting, and bonuses and awards.

Maria has an MS in computer science from St. Petersburg University in Russia and an MBA from Columbia Business School.

About ZS Associates

ZS Associates is a global leader in sales and marketing consulting, outsourcing, technology and software. For more than 30 years, ZS has helped companies across a range of industries get the most out of their sales and marketing organizations. From 21 offices around the world, ZS experts use analytics and deep expertise to help companies make smart decisions quickly and cost effectively. ZS comprises multiple affiliated legal entities.

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