ANALYTICS:
How Bold Employers Are Using Big Data To Lower Healthcare Costs

May 2012

Author
George Pantos  
Executive Director  
HPM Institute

Review Board
Susan Lackey  
HPM Institute

Megan Crawford  
HPM Institute

Special Report
The combination of spiraling healthcare costs, massive health reform legislation and an increasingly complex regulatory environment has sharpened the focus on data analytics to improve healthcare quality and value within enterprises. Recent surveys support the increasingly important role of analytics in helping organization decision makers reduce costs and improve health quality. A new study of nearly 3,000 executives working across more than 30 industries reports that top-performing organizations use analytics five times more than lower performers. The study supports a widespread belief among business leaders that analytics is a critical path to better healthcare value and that analytics improvements increasingly are a priority in their organizations. The report describes how forward-looking firms are applying unique analytics software tools successfully to more effectively control healthcare costs and improve the quality of employee health.
Technology: The Road to Better Healthcare Value

Across the country, senior business executives question whether they are getting the full value of every dollar they spend on their employee health benefit plan. As costs continue to escalate, many organizations are exploring new and better ways to obtain greater value for their health plan dollars. Looking at aggregate, unanalyzed annual plan data and spreadsheets while relying on traditional responses (reducing benefits, shifting more costs to employees) are no longer sustainable solutions.

Forward-looking employers increasingly are turning to a new technology model to identify precisely where their health benefit dollars are going. Just as technology helps improve business processes, there is growing evidence that innovative analytics software can help pinpoint plan areas showing the highest potential for costly future medical risk and track plan medical expense trends. Subsequently, proactive steps can be taken to mitigate health risks in advance, improve employee health behavior and control costs. In short, savvy enterprise leaders are using analytics to determine what is happening in their plan now—in real time—as well as what is likely to happen in the near future and what strategies can be put in place in advance to gain optimal results and savings.

Analytics: A Key Component of Healthcare Performance Management

Analytics, a key component of a new business strategy known as Healthcare Performance Management (HPM), is being utilized by a growing number of forward-thinking companies. HPM is at the center of the current movement toward increased health plan data transparency that provides better insight into plan performance. As the pace of health reform change begins to accelerate, many companies are beginning to leverage existing health plan data to better manage plan performance, improve employee healthcare outcomes and reduce costs.²

Analytics-driven business models start with a top-level executive vision that better employee health is critical to a productive workforce and the overall success of the enterprise, whether in the private or public sector. In this respect, HPM addresses healthcare challenges in the same way that senior business leaders tackle other management issues such as Customer Relationship Management (CRM), Supply Chain Management (SCM) and Enterprise Resource Management (ERP).

Referring to analytics as “big data,” The Wall Street Journal recently touted the business value of computer-based, data-driven analytics in corporate decision making. With the help of analytics, a food company matched disparate customers with previous purchase patterns to generate more than 1.2 million in daily dynamic new customer recommendations which increased revenues from 3 percent to 4 percent.³ In a similar manner, HPM technology enables a growing number of firms to connect multiple disparate plan data points to reduce healthcare costs and improve workforce health outcomes.

² Healthcare costs projected to rise by 8.5% in 2012, Pricewaterhouse Coopers Research Institute, “Behind the Numbers Report,” 2011.
Relying on tested high-speed predictive modeling software tools that directly access real-time pharmacy, medical and disease management plan data, an analytics-driven HPM program is able to compare overall workforce population health risks against risk statistics in national databases such as the one maintained by Johns Hopkins Bloomberg School of Public Health. Developed in 1991, the Johns Hopkins Adjusted Clinical Groups (ACG) program is an industry standard risk adjustment and predictive modeling software program based on a computer algorithm that assesses the health of people enrolled in a given health plan or health system. Today, the ACG system helps finance and manage the care of more than 80 million people globally.4

Based on the ACG predictive modeler, a company using HPM software can gather, synthesize and analyze vast quantities of typically disjointed plan data in disparate data silos from pharmacy benefits managers, third-party administrators and disease managers. The HPM software engine compares the data against the database maintained by the Johns Hopkins system. The software engine typically is hosted on a secure server maintained by an outside vendor and is compliant with HIPAA and other relevant privacy rules. This enhanced “de-identified” and HIPAA-compliant data can be displayed on a reporting dashboard in order to identify costly plan health risks in advance.

Enterprise leaders can view where benefit dollars are going, identify risk exposure to preventable chronic conditions such as diabetes and identify alternate opportunities for savings.

Studies show that 70 percent of all U.S. healthcare dollars are spent on preventable chronic conditions caused by unhealthy lifestyles and account for 50 percent of all claims. For example, studies show that obesity accounts for $94 billion in annual healthcare costs, with employers picking up $13 billion of this cost.5 Diabetes alone accounted for $174 billion in healthcare costs in 2007.

Plan administrators can also use the dashboard to simulate plan design changes that show how employees can more effectively consume health benefits and services. For example, a dashboard view of a company’s pharmacy drug claims data may produce risk assessments indicating that 78 out of 3,500 plan enrollees are at high risk for future medical problems which may result in sizeable future claims. The dashboard may show that these anonymous 78 members have nine unique chronic medical conditions (i.e. diabetes, cardiovascular, obesity, etc.).

Using predictive modeling, the simulator then projects that if costly medical claims are generated for this group, there is a 54 percent chance, for example, that the employer will have $4.4 million in cost exposure in year X. With this information, employers can guide plan design changes such as changes to less expensive alternative drugs, tiered drug copayments, telemedicine and preventive health screenings. Such data can be integrated with targeted outreach and employee engagement in wellness programs to mitigate risks. As part of this process, nurse health coaches can reach out to employees to proactively educate, assist and encourage participation in wellness and care management activities.

70 percent of all U.S. healthcare dollars are spent on preventable chronic conditions caused by unhealthy lifestyles

---

HPM Benefits

A special report issued by the Healthcare Performance Management (HPM) Institute spells out the benefits of using a HPM program. The report cites a study by Change Agent Work Group (CAWG), an industry group of technology innovators, that employer health plan sponsors are beginning to define value as the full benefit achieved for the worker and the employer—in terms of medical cost savings, lost time and lost productivity—for the money invested in health-related costs. The ability to add value to the business through better management of employee health may be the largest untapped source of competitive advantage, according to CAWG.¹

As a growing number of companies begin to automate HR operations to achieve greater efficiency, more analytics are being integrated into overall Human Resources (HR) missions. This is a process of making the paradigm shift from a tactical to a strategic focus, according to the Institute white paper.

Success Profiles

Several studies published by the HPM Institute document that technology can help organizations to more effectively manage health plan performance and control costs. With new software tools, companies are better able to manage their entire healthcare plan with a single portal using dashboards, systematic workflows, predictive analytics, simulations and voluntary employee engagement campaigns. The early results from the success profiles described below illustrate the advantages and benefits of this program.

The Men’s Wearhouse

After just one year, The Men’s Wearhouse, a national men’s retailer headquartered in San Francisco, reported health plan savings of $3.3 million in 2010. With 7,324 employees and 13,280 plan participants, The Men’s Wearhouse reduced medical and Rx claims paid per employee from $54.7 million in 2009 to $51.3 million in 2010, which translates to a savings of 6.3 percent per employee, or $462 PEPY. With strong member participation (57 percent), the study reflects a positive medical plan trend reduction from 11 percent to 6 percent and a positive return on investment based on the technology cost investment.

Cumulus Media

Cumulus Media, a national radio station operator with 1,454 employees, 2,572 plan participants and headquartered in Atlanta, Ga., transformed its health plan strategy by changing group coverage from a fully insured to a self-funded plan. Using HPM technology, Cumulus Media reduced total claims paid from $6.39 million in 2009 to $5.92 million in 2010, a savings of $463,000. Medical and Rx claims paid per employee were reduced from $4,395 in 2009 to $4,076 in 2010—a 7.3 percent savings per employee in one year, or $319 PEPY. Cumulus Media was able to achieve strong member participation reaching 79 percent. The study reflects a positive medical plan trend reduction from 8 percent to 0.06 percent and a positive return on investment based on the technology cost investment.

The SCOOTER Store

The SCOOTER Store, a national distributor of mobility devices with over 2,800 plan participants and headquartered in San Antonio, Tx, reported savings of $2.34 million in one year. Using HPM Web-based technology, The SCOOTER Store reduced total medical and Rx claims paid from $12.6 million in 2009 to $10.26 million in 2010. Claims per employee paid were reduced from $6,600 in 2009 to $5,400 in 2010—a 22 percent saving per employee in one year, or $1,200 PEPY. Both Member participation (35 percent) and executive endorsement of the program were strong. The study reflects a positive medical plan trend reduction from 19 percent to 10 percent and a positive return on investment based on the technology cost investment.
The “Engine” Behind HPM Analytics

The HPM software program is driven by a unique software “engine” or operating system that can track, monitor and manage the fragmented and constantly changing enterprise healthcare landscape. Enterprises require frequent, or even real time, windows into the wellness of their members and the resulting medical cost patterns that emerge. Healthcare plan data is accessed from various sources and multiple vendors such as insurance carriers, TPAs, PBMs, PPOs, HRMs and labs. Plan data contains disparate content such as Rx, medical, lab, X-ray, health risk assessments, etc. which is aggregated by the software engine to drive superior analytics and reporting.

The challenge is to apply the software engine to multiple data systems, analyze and integrate the data and manage the data from a single, secure platform. With the HPM operating system, integrated data can provide a comprehensive overview of the enterprise health risk profile. The cutting-edge engine can identify potentially costly health risks within the workforce and then, in real time, guide implementation of strategies that mitigate these costs and risks. Plan design changes and incentives can be simulated on a desktop dashboard to assess the impact on future plan utilization. Knowing in advance the real risk exposures and real costs, allows for more realistic health plan budgets to be set for upcoming years.

Member Engagement

The analytics process can be converted into actionable member engagement campaigns targeted to reach the right members at the right time. Integrated and targeted campaigns help to educate members on relevant wellness programs and provide them with a consistent, single access point to all health applications offered, including nurse coaching care management. The campaign manager provides an administrative interface from which actionable intervention programs can be executed and results monitored. When combined with incentives, this targeted approach produces employee participation rates in wellness programs that far exceed national benchmark rates.
HR Mission and the New Paradigm

Active management of healthcare delivery and cost control has not typically been seen as an integral part of the HR mission. The new healthcare landscape has pushed technology center stage for companies that want to boost productivity while investing benefit dollars in better employee health outcomes. In other words, savvy employers realize that the social revolution underway is driving a paradigm shift to software associated with keeping employees healthier—this is the new path to healthcare value.

The rise of software and cloud computing has paralleled the waning dominance of the traditional HR approach to health plan management which has resulted in an ever-increasing upward curve in annual healthcare costs. Experience shows that the most efficient and responsive HPM engines are built on cloud-based platforms that integrate external information resources with an organization’s own data sources and business processes.7

CAWG contends that workforce health and productivity translate into direct and indirect costs for every employer; both the workplace environment and the lifestyles of employees and their families influence those costs. "While employer-sponsored health plans play a part in maintaining employee health, any approach that relies on providing medical services after employees get sick is a failed strategy," according to CAWG’s Employer Health Asset Management Roadmap.

The Institute white paper notes that while some healthcare advocates see cost shifting as a way to alleviate the problem, the total costs of an unhealthy workforce extend far beyond increases in medical and pharmacy claims to absenteeism and lost productivity. Increasingly, the high cost of absenteeism and presenteeism (a decrease in job performance due to health problems) are taking their toll on companies of all sizes. To address this effectively, companies are starting to view employee health as a strategic priority.8

The best way is to take a top-down approach that addresses employee health within the context of a company’s human capital asset management strategy.

Integrating HPM tools into the HR mission can not only help organizations to customize employee engagement campaigns to more effectively meet the needs of the workforce, but also increase productivity and reduce cost.

7 Ibid.
About the HPM Institute

The Healthcare Performance Management Institute (HPM Institute) is a research and education organization dedicated to promoting the use of business technology and management principles that deliver better and more cost-effective healthcare benefits for employers who cover their employees.

The Institute’s mission is to introduce and develop a new corporate discipline called Healthcare Performance Management (HPM)—a technology-enabled business strategy that tackles the challenge of controlling healthcare cost and quality in much the same way that enterprises have optimized customer relations, supply chain management and enterprise resource management. Supported by its four key pillars—Measure, Manage, Engage and Automate—HPM provides organizations with visibility and control over their healthcare benefits spending trends and risk management postures, while protecting individual employee privacy.

HPM Institute Board of Advisors

Henry Cha  
President  
Healthcare Interactive

Paul Chang  
Global Business Strategy Lead, Emerging Technologies  
IBM Software Group

Scott Haas  
Vice President  
Wells Fargo Insurance Services

Bill Lavis  
Partner  
Sitzmann Morris & Lavis

Keith Lemer  
President  
WellNet Healthcare Group

Sabrina Orque  
Vice President of Human Resources  
Charlie Palmer Group

George Pantos  
Executive Director  
Healthcare Performance Management Institute

Deanna Scott  
Vice President of Human Resources & Corporate Operations  
The SCOOTER Store

Todd Thompson  
Chief Technology Officer  
Lockheed Martin Federal