

Health Plan Secret Weapon: Integrated Data Analytics

Making Sense of Data to Make More
Informed Benefit Plan Decisions



SUMMARY

HEALTH PLAN SECRET WEAPON: INTEGRATED DATA ANALYTICS

Making Sense of Data to Make More Informed Benefit Plan Decisions

DOES YOUR ORGANIZATION COLLECT OR RECEIVE DATA about how its employees use their health insurance and other benefits? More importantly, does it analyze that data to effect change that improves outcomes for both your benefits plan and employees?

Your answers to both questions can mean your benefits plan has satisfied, healthier and accountable employees. Or they can mean your employees continue unhealthy habits unabated while plan costs increase above industry averages.

Data is everywhere, it is abundant and it can be perplexing. Google the term *Big Data* and you'll find more than three-quarters of a *billion* results. But without context and analysis, data means nothing. Your business may have many thousands of pieces of data about health plan members alone.

Now, Google the term *data analytics* and you'll find about one-tenth of the results. Yet, the difference between reporting data and analyzing it is *Grand Canyonese*. Data is little more than a jumble of disconnected parts without analysis. Why spend the time and resources necessary to collect all this data if you don't analyze it?

Analysis gives you the information needed to learn why claims might be unusually high or why employees don't use their preventive health benefits. With analysis, you can turn data into actionable information and develop solutions to align with your organization's goals.

This white paper from Assurex Global will show you the difference between reporting and analysis. It is based on information and insights provided by Denise Mirtich, Analytics Leader and Co-Chair of Oswald Companies' Women's Leadership Council. The firm is an Assurex Global Partner and thought leader in Employee Benefits. The following details the steps you can take to make data—and your benefits plan—work for both your company and your employees.

We'll explore what's involved in robust data analysis. This will help you discover how it helps companies like yours encourage a healthier workforce through a more targeted, potentially less costly benefits approach. Data analytics can help you get there. We'll show you how.

OVERVIEW

1. What is data analytics and why does it matter?
2. What are the most common analytics tools to measure benefit plan effectiveness?
3. Using data analytics to integrate findings and solutions
4. Case studies: Data analytics in real life
5. The importance of wellness programs
6. The future of data analytics and employee benefits
7. Conclusion



ABOUT THE EXPERT

Denise Mirtich is the Data Analytics Leader and Co-Chair, Women's Leadership Council, for Oswald Companies, a Cleveland-headquartered insurance broker. Denise empowers clients by using Oswald's advanced information management systems and technological innovations to enhance the client experience by providing high-value deliverables and data-driven guidance in an easy-to-digest format.



Oswald Companies is an Assurex Global Partner. Assurex Global is the world's premier Partnership of independent insurance, risk management and benefits brokers. Assurex Global Partners have undergone a rigorous selection process that has evaluated them on market position, history of growth, overall quality, breadth of services, integrity, commitment to serve their clients and the clients of other Partners around the globe.

Oswald Companies is employee-owned, and one of the nation's largest independent insurance brokerage and risk management firms.

WHAT IS DATA ANALYTICS?

DATA ANALYTICS DRIVES RESEARCHERS' SEARCH for defective genes, helps meteorologists predict destructive hurricanes and identifies instances of fraud. Data analytics is simply a way to make sense of data. It can identify what doesn't work, so it can be fixed, and highlight what does, so it can be strengthened.

There is a lot to identify and fix in today's continuously changing health insurance benefits landscape. Data analytics is especially important in this area due to the continuous rise of health insurance costs and complexity of offerings.

Make no mistake about it—analyzing data is a huge undertaking. There is an almost endless volume of health-related data across the globe. As an example, Oswald Companies alone helps employers manage health insurance plans covering more than 108,000 people. Its database has an astounding 1.5 billion pieces of data. Put another way, that's more than 13,800 pieces of data per covered person in its database.

So it's easy to see why understanding raw data is an exercise in futility without robust analysis. Imagine a person who knows only the English language's 26 letters trying to decipher Mandarin Chinese and its thousands of characters without a translation guide. In the same way, analytics deciphers untold pieces of data, translating incomprehensible bits into understandable information you can use.

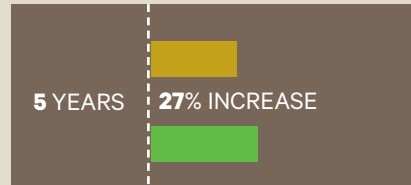
With so much raw data, it is imperative to maximize its value by identifying and viewing the data needed to prove or refute any hypothesis. Without this process, you run the risk of spiraling into an endless review of data elements, grasping in the dark for any light source to illuminate patterns and trends.



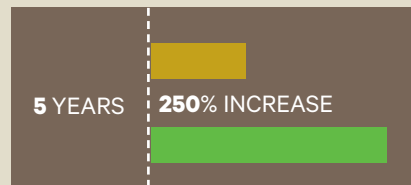
► Health insurance costs continue to climb

Without analysis, your data is meaningless, little more than a jumble of zeros and ones. With analysis, you can find new opportunities to slow your benefit spend, reduce employee sick days and create a more satisfied workforce. Never has this been more crucial, as employers and employees continue to battle escalating healthcare costs.

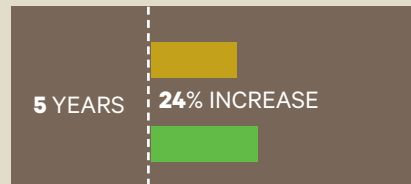
- In 2015, the average annual premiums for employer-sponsored health insurance were \$6,251 for single coverage and \$17,545 for family coverage. Family coverage premiums rose 4% over 2014 and 27% over five years.¹



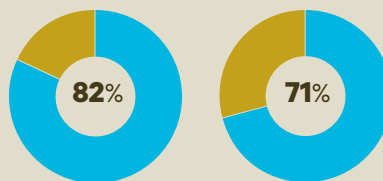
- While workers' pay increases barely kept pace with inflation over the past five years, health insurance costs rose at about two and a half times the rate of pay raises.¹



- Workers contributed an average \$1,071 for single coverage and \$4,955 for family coverage in 2015, a 24% bump over five years.¹



- Despite the added financial burden on workers, employers still pay on average 82% of workers' single coverage and 71% of their family coverage.¹



Premiums, however, are often the least of what workers pay for out of pocket. Employees have an average \$1,077 deductible with their health plans.¹ They further share costs in the form of copayments and coinsurance for medical care, specialty care and prescription drugs.¹ Add it all up and this can total many thousands of dollars annually.

► **Why This Matters**

Employees have long cited health insurance as one of the most important benefits. Valued benefits can help companies attract and retain the best and brightest talent. But employers don't have unlimited resources to continue providing top-tier benefits and deal with increasing regulatory complexity at the same time.

What should employers do in their continuous quest to remain competitive for the most qualified employees? How do they remain competitive in their marketplaces while benefits costs rise?

Enter data analytics.

Knowing average costs nationally gives an idea of a problem's scope, but doesn't guide employers to meet their own challenges. Analyzing an employer's individual offerings and comparing them to their peers average, taking complex pieces of data and finding the cause and effect of change, and using software and analyzing data culled from it to help employers manage its insurance costs does.

Data analytics is not about one single element. It can disclose complex, integrated correlations that show how a change in one element of a benefit can significantly alter another. It is about helping employers and employees get the most from the money they spend on health benefits.



COMMON DATA ANALYTICS TOOLS AND HOW THEY WORK TOGETHER

BEFORE YOU PLAN FOR THE FUTURE, YOU MUST ANALYZE THE PRESENT. Data analytics will help you along this path. It may start by identifying health plan behaviors. Perhaps you need to investigate reasons for misuse of services. Maybe you need to identify the barriers that block optimal usage.

Consider how data analytics tools analyze these major components of a health benefits plan.

DEMOGRAPHICS

Identifies: Your benefit recipients. The average plan once had 2.5 people per employee taking advantage of health insurance benefits. Today that average is likely lower. One reason? Perhaps people have fewer children. Another? Some plans with richer-than-average benefits have many spouses who work elsewhere enrolled in them. Why the latter development?

Solution: Rich health insurance benefits are known as **magnet plans**. If you have a magnet plan, non-employee spouses may choose coverage through your plan because it has better benefits. The National Business Group on Health found that 34 percent of employers will require surcharges next year for spouses who can obtain coverage through their own employer, up from 29 percent this year.² The intention is to encourage non-employee spouses to buy coverage through their own companies.

There are good reasons for this development. With the exception of babies born prematurely, non-employee spouses create the highest risk of incurring claims. One reason? Spouses don't have the same access to plan communication—including tips for staying healthy—that plan members have. A spousal surcharge is a premium increase that offsets the increased risk an employer plan may incur for insuring a non-employee spouse.

PER EMPLOYEE PER YEAR (PEPY)

Identifies: An average cost of how much employees and dependents cost your company plan.

Solution: Use this high-level look at expenses to benchmark benefit costs versus what competitors and peers spend. A significant variance from the norm may indicate the need to dig deeper, isolating the root cause driving the claims expenses. Once you identify the root cause, consider a holistic evaluation of changes needed.

HIGH COST CLAIMANTS (HCC)

Identifies: Details about the employee population that account for the bulk of a plan's claims and raises its total PEPY. Every company has claims. Some you can't control, such as a serious accident or cancer treatments. Others may include chronic illnesses, like diabetes. Left uncontrolled without proper treatment, diabetes can lead to high cost claims. Most organizations experience an 80/20 rule; 80% of claims are incurred by 20% of a plan's members. The best practice is to identify not only HCCs, but also the probability of future high-cost claimants that may escape a company's radar.

Solution: Identify all self-insured claims and analyze them in the context of the deductible with a cost-benefit analysis. This is crucial. If the number of plan participants in a self-insured plan who surpass a \$200,000 deductible (before stop-loss insurance takes over) increases by only five employees, that's an extra \$1 million out of your company coffers.

Stop-loss insurance protects self-insured plans against high claims. In this scenario, it may pay benefits once an individual exceeds \$200,000 in claims. Think the deductible is high? Dialysis and cancer treatment are two areas that can bust a plan's deductibles.

Even plans without continuous high-cost claims should analyze their stop-loss trigger. Any assessment should include a full risk analysis that includes the probability of future high cost claimants. Your claims might include one-and-done claims such as a premature birth and an auto accident, which create higher, one-time costs. To appropriately evaluate your stop-loss deductible, consider the data analysis and your plan's risk tolerance level.

CLAIMS EXPENSES VERSUS BUDGET

Identifies: How claims match up with your plan's budget to pay claims. This is similar to a loss ratio in fully insured plans. When a plan has a ratio of 100% or lower, claims are as expected or better. A ratio over 100% means claims expenses exceeded what was budgeted.

Solution: Work to achieve an 80% to 90% loss ratio. When this percentage exceeds 100%, dig deep into claims histories to find out why. The reasons may be systemic; maybe a population of many workers has untreated chronic diseases. Or maybe investigation will show that one expensive surprise claim—maybe a serious auto accident injury—skewed results. In any event, this piece of data analytics will give you actionable information that can drive change to reduce future claims expenses.

Trends and Solutions:

A Glance at Prescription Drugs

Data analytics can identify hundreds of areas for improvement in a company health plan. Here's a look at four potential solutions in one increasingly expensive area: prescription drugs. You'll notice one finding and solution will lead naturally to the next piece of connected data. Integrating these solutions can lead to better outcomes.

TRENDS	SOLUTIONS
Percent of prescription drug spend versus total plan spend	▶ A good ratio of prescription drug costs to total plan costs for self-insured plans is 20% or less. If higher, consider hiring or changing your prescription benefit manager.
Percent of specialty drugs to overall drug spend	▶ With specialty drugs projected to increase exponentially, it will be imperative to have a specialty drug management partner external of a carrier solution.
Metabolic and pre-metabolic (two or more chronic conditions) employee population increases	▶ Look to improve employee lifestyle choices (diet, exercise, drug adherence) to reduce the effects of or reverse metabolic conditions. Identify pre-metabolic individuals and offer prescription programs to move these people in the right direction.
Employees don't always use the preventive and maintenance drugs they should due to out-of-pocket costs.	▶ Consider plan design changes to lower out-of-pocket costs, which will encourage employees to maintain their prescription drug regimen and reduce future costs.

Data analytics outside a vacuum

When data analytics identifies areas that can improve, it reports past results. When analysts dissect a report, they identify the best ways to take action. Change, however, doesn't occur in a vacuum. Data analytics for a complex, integrated benefit like health insurance can lead to altering one aspect of a plan and unintentionally creating a significant impact on another. Some changes create the desired results. Others produce unintended consequences.

For example, Health Maintenance Organizations (HMOs) became popular as a way to manage healthcare costs through a single entry point—managed care. While they helped manage costs, they also limited care to those needing it, according to some people. Lawsuits³—an unintended consequence—followed.

Next, Preferred Provider Organizations (PPOs) became more popular, giving consumers more choice than HMOs afforded. Patients were allowed to see specialists without referrals, and services within the preferred-provider network were generously covered. What happened? A significant overuse of services.

Today, High Deductible Health Plans (HDHPs) have become common, driven by consumerism and a desire to reduce employer plan costs. Will this shift also have unintended consequences by causing plan members to avoid physician care when needed due to the difficulty of paying for the high deductible?⁴

Only time will tell, but predictive data analysis may help employers decide if HDHPs are, indeed, the best approach.



USING DATA ANALYTICS TO INTEGRATE FINDINGS AND SOLUTIONS

REPORTING DOES NOT HELP EMPLOYERS offer the most efficient benefits—data analytics does. But data is nothing without the ability to see correlations, find causes and predict effects. All of this requires a deft hand and knowledgeable professionals.

The human touch

Systems and software are marvels when targeting precise needs. But even the best data technology requires a human touch to produce optimal results. You need the human touch to guide you through the torrent of data.

Trained data analysts will look for consequences in behaviors and risks. They will understand and communicate what actionable information can help change the direction of poor claims. They should understand employee benefits—good analysts are also licensed health and life insurance professionals who exhibit the deeper knowledge needed when assessing employers' needs.



Consider a company with a higher-than-average use of emergency rooms visits. ER visits are more expensive than visiting a primary physician. Data analysis shows that employees with chronic conditions primarily used ER services. These visits could and should have been made to a primary care physician before employees' health needs became acute.

A data analyst should be an active member of any employee benefits service team. A skilled analyst can mean the difference between changes your employees will appreciate and changes they dislike.

As an example, Oswald Companies was one of two presenting a health benefits solution to a non-profit group. This organization considered benefits a significant part of its employee compensation package, as many non-profits do. Because the group couldn't afford robust salaries, it focused on affordable benefits to attract and retain the best talent. Now, this client couldn't absorb a 15% rate increase. The organization needed to reduce the increase to 5% or less. The competing insurance broker advised the client to shift the entire increase to the employees. However, its analyst crunched numbers within a vacuum and came up with a clearly inferior solution that could have and likely would have prompted a talent drain.

The Solution

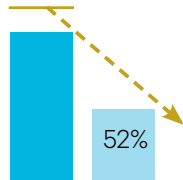
The better approach proved to be Oswald analysts meeting directly with the employer as part of the service team. They understood how valuable the employer's plan offerings were to attract and retain employees. As a result, they developed a three-year strategic plan that kept first-year cost increases to employees below 5%. Everyone was happy—except for the broker who lost the account. This is why no amount of data analysis can replace the human touch. It is the final component of a well-constructed benefits program.

Case Study #1:

The Union and Sunday Emergency Room Visits

Problem: The union's self-funded health benefit plan noticed increased ER utilization, but costs didn't increase at the same rate. Comprehensive data analysis showed that the visits were unnecessary; they were made for relatively inexpensive maladies, such as sore throats.

Solution: Analysis uncovered ER utilization occurred predominantly on Sundays. Union members were required to bring a doctor's note for any Monday sick days taken, and primary physicians weren't available on Sunday. Armed with this data, the client was empowered to change the next contract's Monday stipulation. Immediately, ER visits fell 52%.



Case Study #2:

The Union and Everyday Emergency Room Visits

Problem: This self-funded union health plan also saw high ER utilization. Again, costs are higher for ER visits than for primary care physicians.

Solution: Employees went to the ER to care for chronic conditions, so efforts were made with partners to drive chronic condition management out of the ER and back to primary care physicians. The client saved 15% through plan design modifications and pursuing new primary care relationships. By using data analytics to assess the current state, looking for additional areas of savings and implementing plan design modifications and strategic partnerships, this employer is now on target to save over \$8 million this year.

Case Study #3:

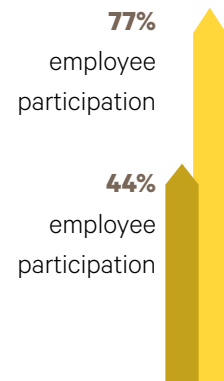
Employees and the Free Care They Didn't Know They Had

Problem: Employees didn't use the free preventive care that was part of their High Deductible Health Plan (HDHP). These plans are also called Consumer Directed Health Plans (CDHPs).

Solution: Because HDHPs typically require plan participants to pay first-dollar out-of-pocket costs, such as deductibles, employees thought deductibles applied to preventive care. They didn't. Preventive care in this plan, and in most HDHPs, is free to the employee. This is likely a widespread misunderstanding, considering how many employers offer these plans. According to an annual survey of large employers by the National Business Group on Health, 83 percent of respondents said they will offer a CDHP in 2016.⁵

With first-dollar exposure, employees tend to use the health care system more cautiously. That's good, but not when it leads to people avoiding preventive care when it is truly needed.

A data analytics team should evaluate preventive care consumption rates in this situation. Compare it to prior consumption rates and industry standards. When ratios aren't aligned, analysts should work with service and communications teams to develop a strategy that informs employees about these services and encourages them to get the care they need. In this case, employee participation in preventive care screening rose from 44% to 77% percent of those covered.



Case Study #4:

One Employee and Unnecessary ER Visits . . . Again

Problem: A woman covered by her employer's health insurance plan made repeated visits to the emergency room, not to a primary care physician, for prenatal care.

Solution: This example illustrates the individual data good analysts can explore. It shows how an integrated approach can have a big impact on a person's life, which human resources teams will appreciate. Why did this woman repeatedly receive prenatal care at her local hospital's emergency room?

The reason was simple: Her primary care physician's hours and her work hours were the same. The solution: finding other primary care facilities with expanded hours to participate in the plan. Or allow for a company policy change to flex time, which makes it easier for employees to seek medical care during the day. These solutions cost a little extra, but are insignificant when considering how this one decision like this can help attract a diverse workforce.

WELLNESS PROGRAMS CAN IMPROVE CLAIMS FREQUENCY AND SEVERITY

Employers continue to adopt wellness programs—either standalone or as part of a health insurance discount—to encourage employee wellness and lower plan costs.

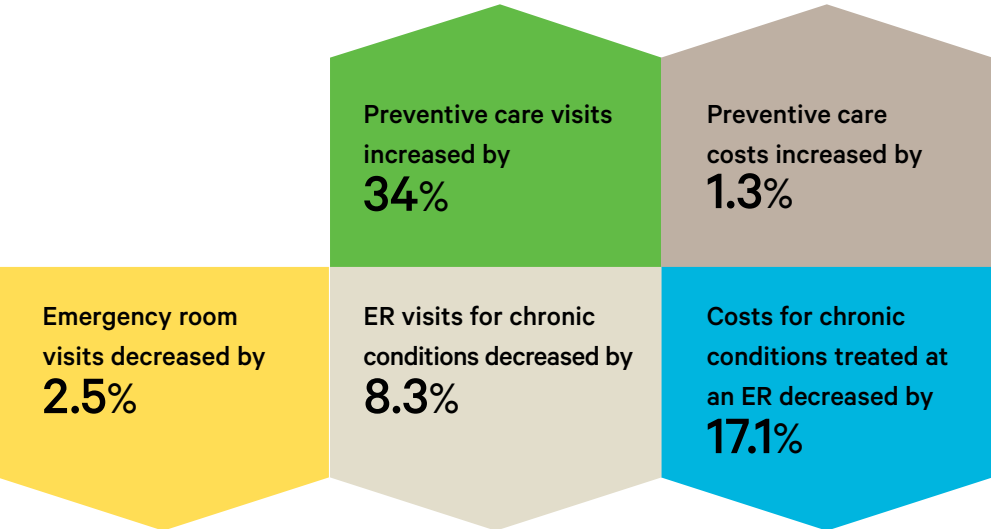
Simple wellness actions can prove almost as effective as large-scale wellness efforts. At one company, data analysts discovered that employees used a low volume of preventive care services, a high volume of emergency room services and the ER to treat chronic conditions.

The corrective action was helping that company establish a simple wellness program, administered by a third-party manager to keep individual health information private. Employees were offered discounts on health insurance premiums if they:

- Established a relationship with a primary care physician;
- Received all preventive services appropriate for their age groups and medical conditions.

Preventive services can help identify developing or worsening conditions before they get out of control. Regular doctor visits can yield both large and almost imperceptible changes, like recalibrating an insulin machine. These simple actions can remove old barriers to ensure that healthcare professionals treat their patients holistically.

In this case, employees reduced unnecessary care and improved their health. The employer saw these numbers:



Integration Yields Tangible Cost Benefits

Another employer incorporated wellness into a larger health benefit renovation. This employer was heading in the wrong direction, as analyzed claims data showed an increase in ER visits and inpatient costs, while use of preventive services was down.

The solution was to develop a three-year integrated solution:

- A program that offered employees required minimum essential coverage mandated by law
- Health advocacy program that encouraged employees to use their benefits wisely
- Wellness activities, including branding and a committee to monitor results
- A communication campaign to let employees know about their new benefits

The results were impressive:

SERVICE	CHANGE
Preventive Care Services	25.9% Increase
Preventive Care Costs	0.3% Increase
Emergency Room Services	0.6% Decrease
Emergency Room Chronic Conditions	50% Decrease
Emergency Room Costs	4.2% Decrease
Inpatient Services	7% Increase*
Inpatient Claimants	4% Decrease
Inpatient Costs*	7% Increase*
Services per 1,000 employees	18% less **
Employee Contributions (12%)	23% less **

*Increase significantly less than prior year and is well below industry standard

**Versus industry standard per Health Data and Management Solutions (HDMS) database

Doing nothing an expensive option

Another self-insured plan with more than 6,000 members spent some \$24 million on health and drug benefits annually. The employer had no wellness program strategy, no leadership support or communications, no smoking policy and no disease management program.

The company did offer biometric screening, but only 34% participated in this. The results: a \$1.3 million **increase** in its health benefit costs.

Clearly, identifying the problem and attacking it with an integrated, holistic approach is preferable to doing nothing.

\$1.13 million
increase
in health
benefit costs



THE FUTURE OF DATA ANALYTICS IN THE EMPLOYEE BENEFITS ARENA

WE COUNT STEPS AND COUNT CALORIES. We monitor our heart rate and how much we exercise each day. Individuals and organizations are collecting untold amounts of data, but what do we do with it?

The future is here today. Some organizations offer unique plan designs involving personal data transmitted to primary physicians. Devices like Fitbit and Jawbone monitor every movement and are being tested by transmitting data to physicians' offices. This could be too invasive for many people, but the technology is here.

Pay for performance models could offer another solution. This model, which integrates data from multiple sources, allows health organizations to offer their patients better service. Insurers will pay physicians for improved health outcomes, stabilizing chronic conditions and lowering other health risks. In this model, your health data will be integrated. Again, it's happening now.

One employee recently went to a CVS Minute Clinic for strep throat. A week later, she went to her family doctor, who said, "I see you went to the Minute Clinic for strep throat and are taking antibiotics." Through full data transparency from the insurance carrier, the doctor had a full picture of the employee's medical care—even for health services outside of her office. This affords her the opportunity to treat health needs holistically.

What you do with data matters

Yes, data is everywhere. It can overwhelm even the brightest of us. What it requires is succinct analysis. We can tell how many employees in a given area had strep throat in August 2015, but how relevant is this information? Employers need actionable, meaningful data. They need solutions that help employees improve their health and lower health plan costs.

Or maybe those cases of strep throat in August are extremely relevant once you have context. Through a holistic view of data, you might find a higher rate of absenteeism in August. Is there a trend with the medical claims? Was there a pattern with medical claims and absenteeism? If so, why was there an outbreak?

Working backwards, schools begin in August—every August. Let the illnesses begin. Start a communication campaign in July to educate employees how to prevent the sharing of germs, including those leading to strep throat. Next, take actionable steps. If, for example, your workplace doesn't have hand sanitizers, install them. Although this is a minor example, it can have a profound impact on productivity and the health of employees and their families.

Now, you are taking steps that are impactful, specific and truly meet a specific health challenge. Now you are looking at employee health—and your plan costs—holistically. Now, you are establishing strategies and following through to control your health plan costs.



CONCLUSION: A BRAVE NEW WORLD

CHANGING BEHAVIOR IS DIFFICULT and people don't always like change. But when clear data analysis can predict future health trends and lead to suggestions that improve employee health, Big Data is just the right amount of data. When interpreting that data identifies areas of improvement in your plan and reveals those employees who can realize better health outcomes, you better control your plan's costs. When your employees reduce their health risks and take advantage of quality health services, everyone wins.

That's what is possible with an integrated approach to the solutions that data analytics can provide.

For many plan sponsors, too much data is as damaging as not having enough data.

Actionable data is the key, identified and prioritized according to your plan's objectives. When you can digest a full view of the impact your various benefits have on employees and your organization, you can understand your challenges more thoroughly. When you understand how plan design can encourage plan participants to adopt healthier habits, you appreciate the power of data when used wisely.

The key is working with a partner who helps you develop solutions that, in turn, guide you to meet your plan challenges. When you have the right information, you can attack nothing less than the root cause of your plan's inefficiencies.

In today's competitive environment, providing healthcare benefits has become a financial hurdle many small and mid-sized businesses must clear. But clear it they must, because robust benefits help companies attract the best and the brightest.

The trick is to identify the data important to your plan, and then develop solutions that align with your goals. Robust data analytics can help take you there.



Sources

- ¹ Kaiser/HRET survey, 2015, <http://kff.org/report-section/ehbs-2015-summary-of-findings/>
- ² National Business Group on Health via CNBC, 9/28/15;
- ³ Consumerist, 2015, <http://consumerist.com/2015/03/27/hmo-must-pay-28m-for-delaying-mri-that-could-have-saved-cancer-patients-leg/>
- ⁴ Business Insurance, High-Deductible Plans May Lead to Cost Headaches, by Shelby Livingston, 9/13/15 <http://www.businessinsurance.com/article/20150913/AUDIO/309139986/high-deductible-consumer-drive-health-insurance-plans-may-lead-to>
- ⁵ National Business Group on Health 2015 Survey, 8/12/15, via http://www.benefitspro.com/2015/08/12/large-employers-have-a-grip-on-health-care-costs?page_all=1



rcmd.com

RCM&D is ranked among the top independent insurance advisory firms in the United States. Our specialized teams provide strategic solutions and consulting for risk management, insurance and employee benefits. Leveraging 130 years of experience and strong local, national and global reach, we partner with you to meet all of your business objectives.



assurexglobal.com

Founded in 1954, Assurex Global is an exclusive Partnership of the most prominent independent agents and brokers in the world. With \$28 billion in annual premium volume and more than 600 Partner offices, Assurex Global is the world's largest privately held commercial insurance, risk management and employee benefits brokerage group. An international insurance powerhouse, the Partnership combines the local expertise and global reach of international brokers on six continents.