



Data Analytics

The Key to Controlling Employee Healthcare Costs

by Jim Anfield, Principal

Q: Who can best control the huge growth in US healthcare expense?

A: Employers who offer health insurance.

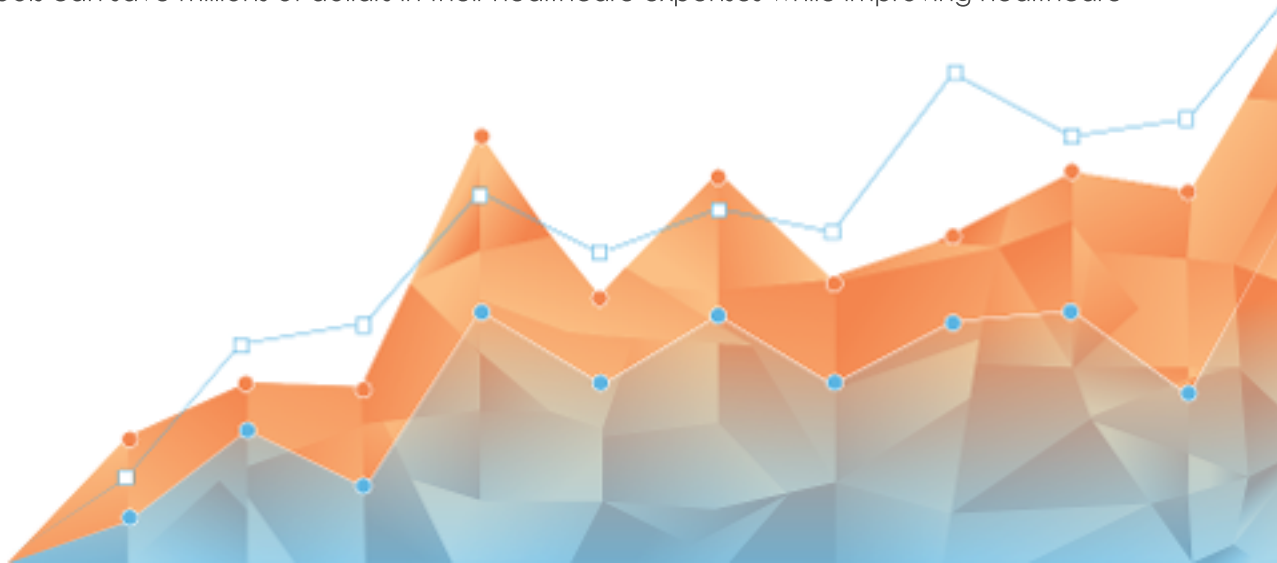
With the right strategic focus using the right technology including a comprehensive employee healthcare data warehouse and the right data science analytical tools, US employers can save millions of dollars of healthcare expense. At the same time, they can enable much better healthcare outcomes and reduced healthcare expense for their employees and their families.

Health insurance in the United States accounts for 17% of the GDP, and forecasts indicate that amount will rise to 20% in the not-too-distant future. That translates to an additional \$600 billion of healthcare spending per year, and employers will foot the bill for a sizeable portion of those expenses.

The State of US Health Insurance

- As many as **110 million** people are covered under group health insurance plans from self-insured employers.
- In 2018, each of those individual policies cost an average premium of **\$6,896** or an average family premium of **\$19,616**.
- Employers paid **82% (\$5,655) of individual premiums** and **71% (\$13,927) of family coverage**.

Altogether, that accounts for over \$850 billion spent directly on healthcare claims by self-insured employers on everything from hospital and doctors' visits to pharmaceuticals and personal medical equipment. The good news is that self-insured employers with a strategic focus, a comprehensive data warehouse, and the right data science analytical tools can save millions of dollars in their healthcare expenses while improving healthcare outcomes.



Current Status of Employer Healthcare Analytics

Data analytics and predictive modeling are not new concepts, but utilization varies. Only 39% of companies treat analytics as a core part of their business strategy, which limits their ability to reduce group health insurance costs. Though each business is different, there are common trends contingent upon size:

Large Employers

By nature of their size and resources, these businesses have the highest level of self-funded insurance plans. At least 91.0% of businesses with over 5,000 employees and 78.5% of businesses with over 500 employees are self-insured. Thanks to their greater access to technology and the budgets necessary to hire first-rate data analytics experts, these businesses have the resources to conduct the necessary analysis to control healthcare spending.

Fortune 500 companies spend about \$270B on health insurance annually leaving over \$930B spent by small and mid-cap companies on healthcare and health insurance.

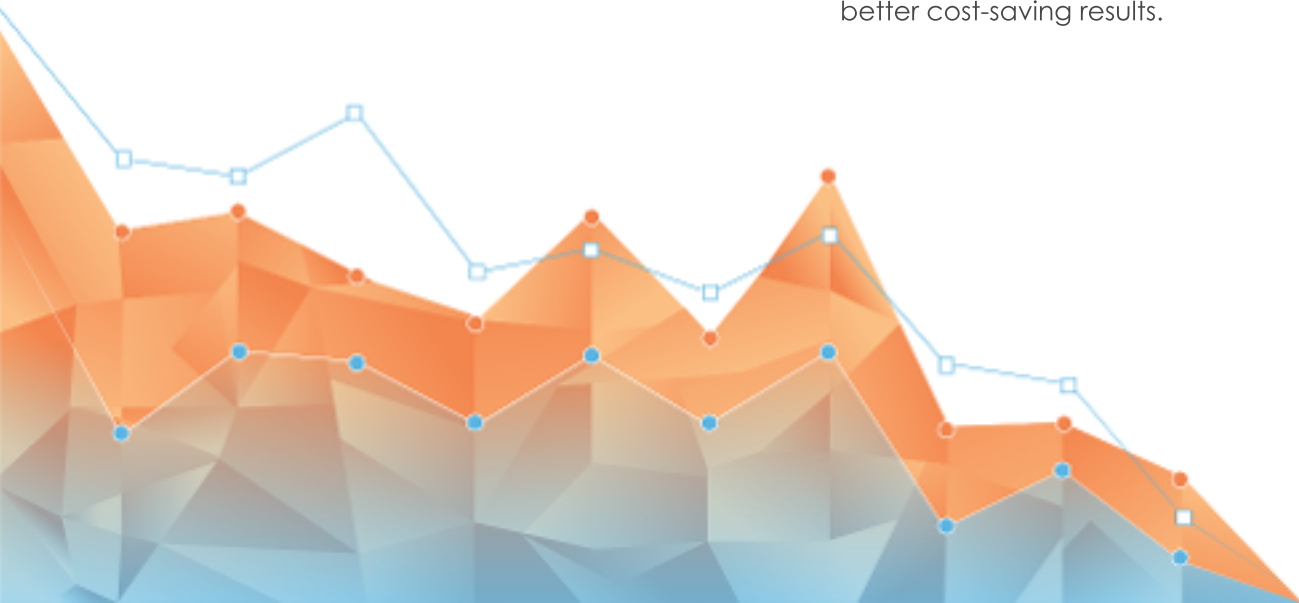
Often, they've built sophisticated data warehouses to consolidate their data and enable them to run analytics and predictive modeling. All that is holding these businesses back at this point is their willingness to make data-driven decision making a part of their business and their understanding of the possible use cases. With the right initiative, these companies can design efficient and effective health insurance plans that lower their costs and still fulfill their employees' healthcare needs.

Mid-to-Small Employers

There are more opportunities but greater obstacles for businesses in this size range. As many as 30.1% of mid-sized companies (100 – 499 employees) and 14.2% of small companies (less than 100 employees) are self-insured. These businesses are responsible for the vast majority of the national employer spend (77% or \$930 billion) but lack the resources to reduce health insurance spending on their own.

In most cases, mid-to-small employers are heavily reliant upon third parties to help them understand and manage their employee health data. Yet the extent to which third party vendors (brokers, consultants and even the health insurance payers themselves) grasp effective data management, advanced analytics, and predictive modeling will influence an SMB's ability to reduce their spend.

There is tremendous upside for small and mid-sized companies focusing on the data side of employee healthcare benefits. The cost of technology for data warehouse, analytics, and data science has dramatically fallen in the past few years bringing these capabilities well within their reach. If they work with data science consulting firms to identify, consolidate, and analyze their comprehensive employee healthcare data, they can generate even better cost-saving results.

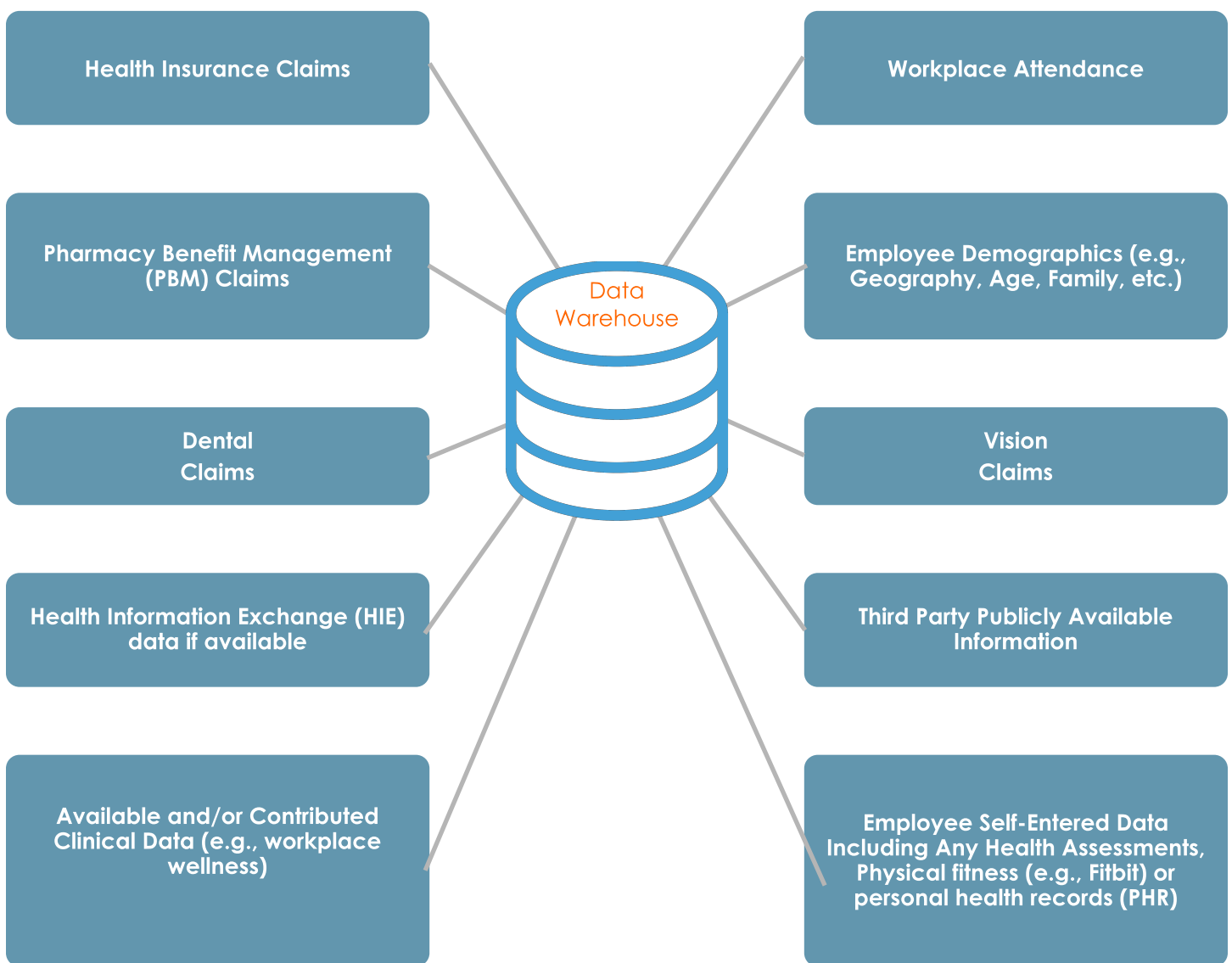


Create the Data Infrastructure to Enable Employer Healthcare Analytics

The overall thread across all businesses is the need for consolidation, effective management, and robust analysis of organizational employee health data.

This will require that the employer group merge all employee health data into a unified database with appropriate data architecture/data warehouse creating a single source of truth for all patient data information. Only when these data analytics capabilities are readily available will businesses be able to improve clinical outcomes, increase employee satisfaction, improve productivity, and reduce group health insurance costs.

The scope of data that businesses need to improve their health plan costs run the gamut in complexity and variety. That said, a unified data warehouse is at its most valuable if the following data types are accurately represented and available:



With Good Healthcare Analytics in Place – Take Action

Once all the employer group data is consolidated and normalized, companies can begin conducting analytics to maximize the value of the data on behalf of the employee group. Advanced analytics, such as machine learning, can also be used to find deep hidden value not readily apparent by traditional analytical methodologies.

For example, analytics that could benefit the paying employer group can include:

- Design health insurance plans that are optimized and customized to satisfy the unique circumstances to the employee labor pool. This would include selection of payer and insurance specifics of network (narrow network), types of plan (PPO, HMO, CDHP, HPLD), optimal, healthcare provider network, deductibles, out-of-pocket, additional health insurance features, and other relevant data.
- Create wellness programs that are specific to their employee base and encourage maximum levels of health improvement.
- Model out future potential healthcare liability and create financial strategies to minimize financial risk.
- Coach and educate employees towards personal wellness compliance with regards to immunization schedules, wellness exams, and appropriate wellness testing (e.g., mammograms, colonoscopies, etc.).
- Detect and drive out any potential fraud, waste, and abuse.
- Seek optimal expense modeling balance between employee burden and employer cost reduction for health benefit programs.
- Help coordinate employee disease management with the hospital ACO or patient centered medical home physician medical home (PCMH).



Of course, privacy concerns and HIPAA compliance will govern the analysis and movement of any employee health data. Extreme care must be taken to ensure that this data is safe and secure. It is also essential to make sure that the data analytics are done on behalf and for the benefit of the employee.

So, hospitals, doctors, and insurance companies will help manage US healthcare expense, but it is the employers who pay a huge percentage of the healthcare expense. Experience shows that the companies focused on the above analytical strategies will not only manage this large and growing expense line item better but also improve the health and longevity of their most valuable asset - their employees.

About Aptitive

Aptitive is a data and analytics consulting firm with a focus on healthcare and insurance. Based upon our client's existing business strategy, we develop data strategy/architecture and work within the cloud (e.g., Azure) or on premise to build out data infrastructure enabling Business Intelligence (BI), analytics, and also advanced analytics including machine learning, and AI.

About Jim Anfield

Jim is a principal at Aptitive in the healthcare and insurance practices focusing on helping his clients grow revenue, reduce cost, and deliver supreme customer experience by leveraging enterprise data and applying analytics.

