

Evaluating the Value Propositions of Health Plan Disrupters

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The continual increase in health care costs that exceed levels of general inflation has spurred innovation related to products and services that operate in conjunction with a health plan. These disruptive solutions purport to improve the quality of care, improve the health of the plan participant and reduce the cost of care to the participant and the plan.

As a result, health plan sponsors (employers and other large group health plan purchasers like unions and associations) now have a myriad of choices when it comes to proposed innovative solutions or disrupters. A review of the market by the authors suggests there are more than 100 such organizations offering solutions with varying value propositions for savings and quality improvement—And these are just the ones that market to health plan purchasers. Some have suggested the number of disrupters actually exceeds 300.

Health care innovators, or disrupters, offer a number of different services and products to employers and other purchasers of group health plans. These offerings include wellness, care coordination, utilization management, population management, telemedicine, on-site and near-site clinics, patient advocacy, navigator support, surgery carve-out, transparency tools, remote monitoring of patient care, decision-support tools for plan participants, in-home care, and other niche and unique solutions.

Very few of these innovators, however, have value propositions that can be supported by credible analyses from in-

dependent sources. Many rely on the intuitive or theoretical savings that should result from a program rather than from any empirical evidence if any was even available. Wellness programs are a prime example that intuitively should provide better adherence to treatment protocols or improved health from living a better, healthier lifestyle.

A recent study by the American Medical Association of 32,974 employees at a large U.S. warehouse retail company concluded that “Employees exposed to a workplace wellness program reported significantly greater rates of some positive health behaviors compared with those who were not exposed, but there were no significant effects on clinical measures of health, health care spending and utilization,

AT A GLANCE

- There are more than 100, and potentially more than 300, health plan disrupters in the market, offering products or services to help health plans reduce costs and improve quality.
- Few of these offerings have value propositions that can be supported by credible analyses from independent sources.
- Health plan sponsors need to take more control over the process of assessing the value proposition offered by disrupters. These vendors should be able to demonstrate their value through their actual book-of-business data and show how that value would translate specifically to an organization’s health care claim utilization and population.

or employment outcomes after 18 months.”¹ To date, there is very little evidence to show actual reduced cost associated with wellness programs. That’s not to say savings doesn’t exist; it just is very difficult to prove with any level of certainty.

Coincidental with the expansion of these health care disrupters are failed promises of value from many of these entities. This has resulted in large group health plan purchasers demanding a greater level of support for their value propositions. It also hasn’t helped that many of the large benefit consulting firms that supported these purchasers in the decision to partner with an innovator have been swallowed by brokerage firms, leading to questions of independence. Employers and other large purchasers are now looking to conduct their own analyses, leveraging internal resources or smaller, independent consulting resources to tailor the value propositions to their own populations and claim utilization profile. This increased desire for independent verification of proposed savings requires a review of the methodologies and data required to conduct credible analyses that withstand scientific and actuarial scrutiny.

This article focuses on best practice approaches to establish actuarial credibility for the stated financial value propositions of health care disrupters, taking into account the design of the specific solution and available data, including the purchasers’ actual population and claim experience history. Value other than financial may be an outcome for a plan sponsor (such as member satisfaction, reduced absenteeism and increased productivity); however, the best practice approaches discussed here will focus on the financial value to the health plan itself.

Before addressing these best practice approaches, this article will first consider the need to understand a health plan’s experience, the establishment of guiding principles that will drive future decision making within an organization and data credibility.

Understand Health Plan Cost Drivers

To the extent possible, group health plan purchasers should use data accumulated from insurers, third-party health care administrators or, if available, from health care data management systems to conduct analyses to determine the current cost components and the main drivers of cost increases. Anal-

yses should look at utilization and price components across the full spectrum of service categories and disease states to identify and prioritize major areas for focus that are systemic within the plan’s population. Analyses should compare plan cost drivers and disease states against normative benchmark data and annual trends. Further analyses of the cost drivers by service categories and disease states can be viewed separately by health plan administrator, health plan offering, business unit, union groups or other significant categories to determine what cost issues may be pertinent and specific to these groupings.

This reporting enables group health plan purchasers to better understand issues systemic within their population, assess how plans are performing from one year to the next, and compare performance with industry and national benchmarks. In this way, purchasers better understand which solutions are likely to produce the greatest benefits for the population. This helps focus the purchaser’s attention away from solutions that promise greater potential value based on results from the vendor’s book of business or other sources that may not have the same issues as the population covered by the plan.

The detailed reporting necessary to identify cost drivers is beyond the scope of article; however, the authors offer an appendix to this article on their website, <https://MorningStarActuarial.com>, with the detailed reporting that should be developed to best understand the plan sponsor’s cost drivers.

The health plan purchaser may need to further drill down from these initial reports in order to better determine the subset of health care innovation solutions most aligned with their specific needs. In this way, the team responsible for the health plan can limit its focus for assessments of solutions to those entities that address a primary need.

The following real-life example can bring this to light: A large association health plan with more than 150,000 members was exhibiting C-section rates exceeding 25% of all deliveries for low-risk women and exceeding Healthy People targets.² This was first identified by substantial increases in inpatient hospitalization costs, which after further drill-down showed that the majority of the increases were related to maternity cases. Additional analyses that broke down cost and utilization between normal vaginal deliveries versus C-sections and for low-risk women identified the high usage of the more invasive

procedure. This level of information, first identified in a trend report, demonstrates the value of such analyses to determine where efforts should be focused. This information allowed the health plan sponsor to focus on solutions and vendors that can better manage maternity cases.

Conducting these analyses annually will help determine whether priorities should be changed and/or whether contracted solutions are making a satisfactory impact in the major areas of focus.

Establish Guiding Principles

Establishing a set of guiding principles with key stakeholders in the organization builds consensus around the process for selecting and evaluating innovative health care solutions. By bringing together key stakeholders (business unit leaders, unions, finance, others within human resources and other senior leaders) to develop mutually agreed-upon principles, the team charged with evaluating innovative health care solutions can justify the selection of a provider to all stakeholders using the criteria developed. These guiding principles can significantly speed up the evaluation and selection process and provide a consistent basis for the selection or exclusion of a particular solution and disrupter. Guiding principles also can help quickly identify solutions that are not consistent with the organization's objectives, eliminating them from consideration early in the process, thus conserving internal and external resources devoted to assessing the best solution(s) for the organization.

A typical guiding principle session would start by sharing basic information around the overall health care spend, plan-specific costs, recent cost increases and other information from the health care data analyses regarding the main drivers of cost increases and quality concerns.

Having established an understanding of the base issues, the group then addresses a set of questions designed to establish a consensus around the philosophy for evaluating and selecting innovative health care partners. Just as the health care cost drivers are different for each organization, so are the underlying philosophies and culture that drive an organization's decision-making process. Examples of issues that could be addressed in a facilitated, guiding principle session include the following.

- What are the primary objectives?
- What level of responsibility is shared between the organization and its members for managing health and well-being?
- How is the value of an innovative health care solution defined?
- How should underperforming vendors be handled?
- What is an acceptable level of resource allocation appropriate for the management of innovative health care vendors?

Following the facilitated session, a set of guiding principles would be developed and shared with the key stakeholders for any necessary refinement and agreement. While these principles can be adjusted from time to time, they are meant to provide long-term guidance for evaluation and selection. The team charged with evaluating proposed and adopted innovative health care solutions uses this guidance, which provides the basis for justifying the team's decisions to the key stakeholders.

Data Quality and Credibility

Before any discussion of specific methodologies to assess solutions, a quick discussion about the quality and credibility of the data used for any analysis is warranted. Poor data quality can significantly impair the ability to draw correct conclusions. The analyst should assess reasonableness of data before beginning any study. Plan sponsors should validate the totals, including claim dollars, claim counts, membership counts, etc., against the health plan or third-party administrator's total to ensure they have a complete database that represents the population they want to analyze. In addition, they need to inquire whether other factors that might not appear in the total counts have impaired that data. For example,

Credible Data Concerns?

Small- and medium-sized group health plans with concerns about the credibility of their claim experience may still be able to glean insights from these analyses but should consult their health care actuary to determine the best approach to manage these concerns.

a known lag in the claim processing or other reporting problems from providers might affect the total counts or the cost of the services reported. The analyst also should be aware of typical data adjustments that have yet to be incorporated into the data such as the timing of rebate payments from pharmacy benefit managers (PBMs) or other settlements between the health plan and the providers that deliver care or products.

Along with data quality, the analyst will need to assess the overall level of data credibility. *Actuarial credibility* is a measure of the predictive value in a given application that the actuary attaches to a particular set of data. For analyses on the entire population and its associated claims data, some actuaries consider the information 100% credible only if the data set is derived from thousands of members. This doesn't mean that the data used will make any prediction derived from it 100% accurate. It simply means that the plan may not require the use of additional data, like a benchmark database, to better improve the predictive accuracy of the model.

Even with a database that is deemed to be credible, other factors may diminish the predictive power of the data. Such factors may include significant changes in the population from the period over which the data was collected (mergers, acquisitions, divestitures, high turnover, etc.), changes in the plan administrators that might affect payments and utilization, changes in plan design, changes in claim management protocols and a host of other

factors. Even with such changes, the data may still be usable for a specific study, but the analyst should consider these changes and take them into account in the analyses, possibly applying actuarial assumptions or other adjustments to the data.

The use of only a subset of the data for an otherwise credible population will also diminish credibility. This may result from analyses that focus on a specific disease state or type of health care service. Analyzing the data for a solution that focuses only on surgeries or diabetes management, for example, may require more data in order to get to a credible data source for analyses. Analyses and conclusions that rely on limited data may benefit from the use of a benchmark database.

One alternative to improve credibility would be to use data from multiple periods rather than, say, simply the past 12 months. While the use of data from two 12-month periods doesn't double the actuarial credibility over one 12-month period of data, it can help to improve the predictive value overall.

A complete discussion of credibility is beyond the scope of this article. It is mentioned here to alert the reader of the need to consider credibility of the underlying data in association with the model being used to assess the effect of any innovative health care solution.

Evaluating Health Plan Disrupters

The actuarial model used to develop the value proposition for a specific disrupter will depend on several factors. A disrupter that targets specific member conditions, disease states or services

likely requires a different model to assess value than a solution that affects all or most health plan services. In addition, the availability of quality and credible data affects the model selected to best represent the savings that a solution might produce. A number of approaches can be deployed. Each has its advantages and disadvantages that will require careful consideration before a decision is made to use a specific model. It might be wise to use more than one approach, depending on the circumstances and available data. Different methodologies may offer insights about the solution that may not become known with the use of just one approach.

The methodologies discussed can be applied either to information available from the health care innovator on its book of business to demonstrate the value of its solution or by the plan sponsor after selecting a solution to assess its value after implementation. Plan sponsors should consider these approaches and inquire about the study methodologies used by the health care innovator to substantiate its claims. Those that can't demonstrate adherence to proper actuarial evaluation techniques should be viewed more cautiously. Regardless of the innovator's approach to marketing its value, plan sponsors should adopt the approach that best fits the solution selected for its population and available data and conduct studies to monitor the success and progress of a selected solution.

The authors differentiate evaluation methods between comprehensive and specific approaches.

Comprehensive Methods

Comprehensive methods encompass a review of the plan's entire claim and utilization experience to assess value and typically rely on plan-specific metrics, including per employee or per member costs or the percent change in these costs from year to year. Comprehensive methods are particularly relevant for disruptive solutions that address a broad spectrum of health care services. Examples would include large case management, navigation and patient advocate systems. Comprehensive methods include randomized samples, historical (pre/post), participant vs. nonparticipant, geographical and plan comparisons.

Randomized Samples

Randomized sampling methodologies require equivalent samples from the same population to create a control group and an intervention group. The sampling occurs prior to the intervention or disrupter and is applied to the noncontrol group so that results among the two populations can be compared. Since this methodology is not very practical in a health plan sponsor setting and is typically used in more academic settings, we will not explore it further.

Historical (Pre/Post)

Historical or pre/post approaches are the most common methods deployed by actuaries conducting studies for large health plan sponsors and purchasers. This approach compares the results from the same population or an equivalent population over different time periods (before and after the introduction of the disrupter's solution). A historical analysis provides greater assurance of similarity in risk profile of population, pre- and postintervention. Historical claim and utilization data for the health plan are gathered from a period before the introduction of the solution. This is used as the base period for comparison against the period after the solution was introduced—the intervention period.

While a historical analysis can be conducted with aggregate-level claim data only, obtaining and using detailed claim information can significantly improve decision makers' ability to more fully understand how the solution is providing value to the plan and its members. Information with benefit- or service-level detail (inpatient hospital, physician office visits,

emergency room visits, prescription drugs, etc.) would be helpful in seeing where the solution affected change to assess whether the impact is consistent with the initial value proposition provided by the disrupter. The availability to further analyze the changes by provider and or provider type, major diagnostic category (MDC), ICD-10 codes, CPT-4 codes, National Drug Codes (NDC) and episodes of care can provide further insights into not only what is driving the change but also where the plan sponsor can continue to work with the disrupter to improve the value of the solution and improve members' experience with the plan.

The challenge with this approach, however, is accounting for changes that were not a result of the solution deployed after the base period. These changes include health care cost trend from the base period to the intervention period, any plan design changes, changes in plan administrators and changes in the provider network servicing plan members, as well as the impact of catastrophic claims and other random events. Other challenges may include the credibility of the data if the plan is evaluating a solution that impacts a small subset of services or health conditions under the plan as opposed to solutions that have a broader impact on most or all services and benefits.

Plan sponsors with minimal turnover from year to year and no changes in plan design or plan administrators or significant changes in the provider network will have to account only for health care inflation and, potentially, the impact of catastrophic claims. The impact of catastrophic claims can be accounted for by simply excluding the impact of all claims that exceed a certain threshold (e.g., \$100,000) from both the base period and the intervention period. While some solutions can have an impact on members with conditions that may generate larger claims, excluding claims that exceed a certain threshold will remove potential outliers from the assessment and offer a better comparison between the base and intervention periods.

Care should be taken, however, with the decision to exclude catastrophic claims from the analysis. Very large- and jumbo-sized plan sponsors are likely to exhibit consistency in both the frequency and size of large claims from year to year. Excluding these claims may then eliminate the ability to obtain valuable insights with little or no impact on man-

aging variability not tied to the disrupter’s solution. In addition, certain solutions may legitimately have an impact on catastrophic claims, so excluding them could adversely affect the results and conclusions of the analysis. For these solutions, the analysis could exclude only those catastrophic claims that would not be expected to be impacted, like major accidental injuries. Alternatively, the analysis can separately review changes in the severity of large claims versus their incidence to assess the solution’s ability to manage the cost of catastrophic claims.

When applying this method to one specific plan, the trend rate chosen should be that rate that would be expected in the absence of the proposed intervention. If the evaluation will be the basis for a performance guarantee, it is essential that it be agreed upon in advance of the reconciliation, which can prove challenging. Often, the parties will agree to rely on one or more published trend surveys. The plan sponsor should assess its own health care trends before the intervention period and compare against published trend surveys.

When using this method for book-of-business analyses, it is common to base the trend on industry average rates developed by independent sources. The industry trend rates used should represent trend before the impact of plan changes. To make the disrupter’s book-of-business data consistent with these trend rates, paid claims must be actuarially adjusted to eliminate the impact of known changes. Alternatively, al-

lowed charges (if available) could be used instead of actual paid claims to minimize the number of adjustments needed.

Care needs to be taken, however, in understanding the basis under which the trend studies or surveys were conducted if they are taken from external sources. Surveys typically rely on responders to express the trend experienced and may be a reflection only of the change in per capita costs from year to year. Health care trends should not include the impact of any plan design changes or changes in the provider network’s contractual arrangements that affect the price of services (i.e., charges, discounts, rebates, etc.). Surveys also may exhibit biases that may factor into the use for comparison against the plan sponsor’s trend. Therefore, care needs to be taken in both the assessment of the plan sponsor’s actual health care trends, as well as the trends used for comparison, to arrive at the assumption between the base period and the intervention period, assuming the absence of the solution.

Table I provides an example of the results of a historical analysis assuming a 5% health care trend adjustment between the base and intervention periods and typical changes in plan design or network. For the sake of simplicity, the example in Table I reviews only the high-level impact on the overall plan cost.

In this example, there was a decrease between the base and intervention period of \$500 per member per year (PMPY) (or 8.3%) after the introduction of the solution.

TABLE I

Historical Analysis Assuming a 5% Health Care Trend Adjustment Between the Base and Intervention Periods and Typical Changes in Plan Design or Network

	Base Period	Intervention Period
	2017 Calendar Year	2018 Calendar Year
Per member per year (PMPY) claim cost (adjusted for high-cost claimants)	\$6,000	\$5,500
Health care trend to intervention period	5%	n/a
Adjustment for change in plan design	-3%	n/a
Adjustment for change in network discounts, rebates, etc.	-5%	n/a
Adjusted PMPY	\$5,805	\$5,500

However, taking into account health care trend, plan design and network changes, we would have expected the PMPY cost to have been \$5,805 in the intervention period absent the introduction of the solution. The net result of including the solution is a savings of \$305 PMPY or 5.3% of total claim cost spend in a year. This analysis can be conducted each year to ensure savings are still accruing to the plan. However, each year forward requires the use of another year's trend assumption from the base experience period adding additional subjectivity to the analysis.

Participant vs. Nonparticipant Method

This method avoids the use of health care claim trend. In this approach, members' claim experience is placed into separate pools based on their participation (or nonparticipation) in the intervention, and statistical comparisons are made between the two groups. Doing this allows for comparison of results over the same time period and after the implementation of the solution, avoiding the use of a subjective trend assumption or the need for other adjustments like changes in benefits, administrators or provider networks.

The disadvantage to this approach, however, may not be surmountable to many actuaries or data analysts. Members of each group may exhibit different risk factors including age, gender, disease states, severity of illness, and complex or comorbid conditions. In addition, geographical differences in medical practice patterns by providers also could confound this analysis if geographical diversity is not consistent between the two populations. Efforts can be taken to select participants from each pool who exhibit similar risk factors (often referred to as a matched cohort), but a health plan would have to be very large in order to have produced a credible pool of members for each group (participant group and nonparticipant group).

Finally, the choice to be a participant in the program by itself suggests a bias. Those who choose to participate may do so because they already exhibit behavioral characteristics that are aligned with the solution. For example, individuals who participate in voluntary fitness tracking may already exhibit good exercise regimens; those who don't may have physical conditions that make exercise difficult.

This may be more difficult to adjust for than the other risk factors of age, gender, disease states, severity of illness, and complex or comorbid conditions.

These concerns may be alleviated if the disrupter can demonstrate that they have been successful in engaging all members across the plan population.

Geographic-Based Methods

These methods enable an organization to implement an intervention in one population in a certain geography in order to test the solution before implementing it companywide. Comparisons can then be made over the same time period and after the implementation of the solution, avoiding the use of a subjective trend assumption like the participant vs. nonparticipant analysis. It also avoids the need for other adjustments like changes in benefits, administrators or provider networks. Efforts can be taken to normalize the populations to reflect similar risk patterns but may require very large populations in each geography in order to produce a credible pool of members for each group. The inherent geographical differences in medical practice patterns by providers in this method could confound the analysis.

Plan Comparison Models

These models allow for the gradual introduction of an intervention on a plan-by-plan basis for organizations that offer more than one plan. The benefit of this approach, like that of the geographic-based models, is to test the solution before implementing it throughout the organization and compare results with a population covered by the plan or plans without the disrupter solution. Differences in benefit design, provider networks, risk profiles of those who elect the various plans, and geographical differences could confound the true differences between the plans, however.

For both the geographic and plan comparison methods, historical relationships of costs and trends between the respective components will help decide whether these are viable methodologies and may help with the interpretation of results if adopted.

With respect to all the comprehensive approaches just addressed (i.e., historical, participant vs. nonparticipant, geographic-based and plan comparison), once the aggregate

gate plan savings are assessed, plan sponsors can review various components of the plan to determine whether the savings were derived from expected sources.

As an example, health care navigator and advocacy programs may show changes in certain services vs. what might otherwise occur in their absence. Use of specialists might drop as advocates direct members to primary care physicians (PCPs), resulting in a net cost savings due to the lower cost for PCPs. Emergency room care may decline as a result of discussion on what constitutes a real emergency compared with what can be treated at lower cost settings designed for non-emergency care. Cost per visit and the number of visits per member (or per 1,000 members) can be assessed to determine whether the intervention is working in the areas expected. Ana-

lyzing component sources of savings can help validate the assessed value if savings are resulting from expected sources and not as a result of other changes between the periods or populations analyzed.

Specific Methods

Specific methods focus only on specific segments of the populations' health care experience, such as emergency department usage, hospitalization or specific disease states. These are useful where total claims data is not available or where only a small segment of total costs is subject to intervention. It is not uncommon for specific evaluations to supplement and aid in the interpretation of comprehensive evaluation results.

Specific approaches include utilization impact, price impact and benchmark comparisons.

Utilization Impact

Utilization impact approaches review key utilization measures that are expected to be impacted by the intervention for changes in the desired direction. Again, these statistics should be readily available from insurer or third-party administrator reporting capabilities. Combined with the average cost of the key utilization measure, plan sponsors can attribute savings for each aspect measured. Table II offers an example of such an approach to evaluate a solution that is expected, among other things, to decrease the utilization of emergency room services related to nonemergency care. The analysis would not be complete without a corresponding review of places of services where care may have been directed from the emergency room setting.

In the example in Table II, utilization for emergency room services

TABLE II

Utilization Impact Approach Applied to Intervention Affecting Clinic, Urgent Care and Emergency Room Visits

	Preintervention	Postintervention	Savings/ (Cost Increase)
Emergency room visits per 1,000 members	197	180	\$20,400-\$22,100
Emergency room cost per visit	\$1,200	\$1,300	
Urgent care center visits per 1,000 members	100	105	(\$3,500)-(\$3,800)
Urgent care center cost per 1,000 visit	\$700	\$760	
Retail clinic visits per 1,000 members	38	40	(\$150)-(\$160)
Retail clinic cost per visit	\$75	\$80	
Total net savings per 1,000 members			\$16,750-\$18,140

dropped from its preintervention level by 8.6% (180 versus 197 visits per 1,000). It should be expected that when utilization is reduced in one type of service, other types may see an increase. In this case, urgent care and retail clinics see an increase as emergency room visits are diverted to those facilities. The postintervention cost-per-visit increases for all facilities in this example are greater than normal cost inflation. This happens because the diverted visits are typically those with lower-than-average emergency room costs but higher-than-average urgent care or retail clinic costs. The savings results are given as ranges due to the difficulty of determining the best average cost in those cases. If necessary, the parties can agree to use the pre- or postintervention or some external benchmark for the average cost per visit to arrive at a mutually agreeable savings value.

Price Impact Analyses

These analyses are useful for initiatives that focus on the per service costs (for instance, price transparency services) but are not expected to have a significant effect on utilization rates. These studies follow a methodology similar to utilization impact studies but keep the utilization rate constant. For example, if members are directed to more cost-efficient colonoscopy locations, the savings per 1,000 could be calculated as $(\$5,000 - \$3,500) \times 20 = \$30,000$, where the average cost per colonoscopy is \$5,000 preintervention and \$3,500 postintervention, and 20 is the number of colonoscopies per 1,000 members in the postintervention period. In those cases where utilization is likely to fluctuate randomly from year to year—a common issue with interventions that only address a small segment of the health care picture—it is important to review the clinical nature of the utilization from year to year to determine if the “savings” are due to the disrupter or simply random fluctuation.

Benchmark Comparisons

These comparisons are appropriate in place of utilization impact or price impact analyses where it is expected that utilization or prices are trending down or up across all plans—perhaps due to new procedures emerging, moving services traditionally performed by physicians to nonphysician health care workers or other systemic changes. These

studies compare the plan’s experience for each period with a benchmark for that period derived from a database of large group claim experience. Thus, if the utilization or price as a percentage of that benchmark has reduced, it is assumed that the intervention has been successful. Quantification of that success involves multiplying the difference in the percentages times the total preintervention cost. So if a plan spends \$500,000 on a particular medical service that is subject to intervention, and the price as a percent of benchmark reduces by 4%, the savings would equal \$20,000.

The trouble with specific evaluations is that medical costs are incredibly intertwined, and it is impossible to identify and quantify all potential impacts across the entire health care spectrum. As we saw in the utilization impact example, those impacts may reduce total savings that are attributable to that disruptive vendor. But they also may contribute additional savings. For instance, a program that reduces surgeries may increase the cost of physical therapy but reduce prescription costs by avoiding some medications.

Each evaluation method, whether comprehensive or specific, has difficult issues that confound the interpretation of the results. These issues do not necessarily disqualify that methodology, but it is important to understand how they’ve been addressed and how sensitive the answers are to the adjustments made. Often, it is useful to employ multiple methods to validate decisions. In the case of multiple disruption vendors, it may be appropriate to apply a comprehensive method to assess the success of all disrupters and then use specific methods to allocate savings to specific vendors.

Defining Success

Health plan disrupters can define success in various terms, including net savings to claims cost, return on investment (ROI), health care trend reduction, overall change in per employee per month (PEPM) cost or per member per month (PMPM) cost, or the difference in cost from the control group (the group before or without the intervention solution). Before assessing the vendor’s value proposition, plan sponsors should decide on what measure of financial or actuarial success is most meaningful to them and convert the savings on their own or require the value proposition be expressed in those terms.

Plan sponsors also must be diligent to consider all expenses associated with a solution, not just the fees charged by the disrupter that would offset claims savings. How much staff time will be committed to the solution both during implementation and on an ongoing basis? What additional data needs are required, and is there a cost associated with obtaining the information needed to administer the solution or value its success? Equally important, plan sponsors should consider how other vendor fees might be impacted. Will the health plan administrator increase its administrative charges to interact with the disrupter? Or can the plan sponsor negotiate a fee reduction if the disrupter is assuming duties previously performed by the plan or claim administrator? How might the stop-loss premium be reduced if catastrophic claims are reduced?

Some intervention providers will want to quantify their solution's value in one way or another. This may be for reasons that favor their marketing strategy and sales pitch. For example, a solution that has limited effect on the overall claims cost (i.e., is small when viewed as a percent of total health plan expenditures) may be best quantified in terms of ROI. While that may still be a value to the plan, it is in the plan sponsor's best interest to understand the total net cost savings when considering the internal administrative burden of the staff and disruption on members. Plan sponsors should define the measures of financial success that are meaningful to them and require the solution provider to speak about its value

in the plan sponsor's terms in order to fairly compare vendor offerings.

Another way to define success may be from a clinical perspective. Is the solution providing a better quality outcome for the members of the plan that may be in addition to the financial savings identified? If the intervention increases the quit rate of smokers, reduces hospital readmissions or improves the overall biometric measures of plan participants but can't demonstrate financial value after implementation, is that still a successful outcome for the plan sponsor? These measures should also be considered in advance to determine their importance to the organization.

Health care disrupters often assert value associated with employer productivity measures, including increased presenteeism, lower absenteeism, faster return to work, better quality of life for the member and family, member satisfaction, reduced stress, higher employee retention and greater satisfaction with employer benefits. These claims, however, are hard to quantify even if you can specifically associate a change in these measures solely to the health plan disrupter's solution. Productivity increases can be measured in terms of additional valued work hours and the associated wages or salary, or through increased profits. Again, the difficulty is associating productivity increases to solely the new health plan intervention. While these forms of value may be difficult to measure, they should at the very least be a consideration in the selection and ongoing assessment of the health plan disrupter's value proposition.

Misleading Value Propositions

We would be remiss if we didn't address value propositions that can mislead plan sponsors. This is not to say that vendors are intentionally trying to overstate their value but that the information made available to support their statements may not follow appropriate study methodology and, therefore, their assertions will require further analysis and investigation. The information in this section is offered to plan sponsors as means to assess and review value propositions with a healthy skepticism. Any innovative health care solution providers that are confident about their value will welcome further inquiry into how the value proposition was developed and how that value may translate to any specific plan sponsor.

One issue of concern that can plague studies, especially historical or pre/post studies, is the phenomenon called *regression to the mean*. If a variable—like average cost per person or the increase in the cost per person—is extreme on its first measurement, it will tend to be closer to the average on its second measurement. It is also true that if it is extreme on its second measurement, it will tend to have been closer to the average on its first. Plan sponsors seeking a solution to a bad claim year may be more likely to consider a disrupter following an extreme measurement in the year prior.

Studies need to consider this phenomenon, and plan sponsors should be prepared to inquire about this issue, if applicable, with disrupters when presenting their value proposition to determine if it could have influenced the

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results of their analysis. Plan sponsors should keep in mind, however, that there is a necessary lag between when a plan experiences an extreme year and when a new solution can be implemented, such that the bad claim year may have subsided to the norm prior to the intervention of the solution. Therefore, using claim experience immediately preceding the implementation date as the basis year may reduce the regression to the mean effect.

As discussed previously, selection bias can impact study results for solutions where member participation is voluntary. Wellness strategies—including biometric monitoring, coaching, smoking cessation and other solutions that promote behavioral changes—often get participation from those who either already advocate the approach or exhibit healthy behaviors. Suggesting that the results for participants are transferrable to nonparticipants or that the differences in costs between participants and nonparticipants translates

into savings for nonparticipants are red flags. Plan sponsors should inquire how selection bias was accounted for in the value propositions for solutions where participation is voluntary.

Another issue for plan sponsors to consider is value propositions based off of studies for selected subsets of the disrupter's clients, or case studies on one specific client, rather than their book of business. Selected clients might exhibit more favorable results than the "average" client or the entire book of business of the disrupter. While legitimate reasons may exist to exclude certain clients (lack of data, issues with the credibility of data, characteristics of the population that deviate dramatically from the typical client, etc.), studies on selected clients should be viewed with skepticism. Some disrupters may require special cooperation with clients in order to conduct the studies necessary to demonstrate their value so, again, legitimate reasons may exist for studies conducted on one or several clients, but it still leads to questions about the translation of those results to other populations. Case studies are useful for illustration purposes but rarely are indicative of expected results for any other client.

Other value propositions that these authors have witnessed try to extrapolate findings from a separate, outside study to the experience for the prospective client or the industry in general. This may be the only option for newer disruptive solutions that lack experience from actual clients to analyze, so that leaves the plan sponsor with limited support to make a decision. However, vendors that don't attempt to show experience from their book-of-business results and rely on outside studies should be scrutinized more closely.

Summary

The proliferation of solutions that work in concert with an organization's health plans creates a strong competitive environment for an organization's hard-earned dollars. Plan sponsors need to take more control over the process of assessing the value proposition and steer away from heavy reliance on the disrupter's assertions. Health care intervention solutions should be able to demonstrate their value through their actual book-of-business data and show how that value would translate specifically to an organization's health care claim utilization and population. Any claim by an outside

party with respect to savings or ROI should be viewed with healthy skepticism and assessed internally or through independent actuarial resources.


Vendors may have legitimate reasons for not providing a transparent disclosure of their value proposition development with sufficient detail for such an assessment. This may include the need to protect proprietary data, such as trade secrets that could impair their competitive advantages if disclosed, or the confidential nature of such information. In these cases, the disrupters should be prepared to provide an actuarial certification of the results and the methodology employed by a reputable and independent source.

Plan sponsors should take steps to understand what drives the cost of their health plans. Time after time, the authors of this article have seen that despite two organizations exhibiting similar health care trends, the reason behind those changes varies from population to population. The solution that works for one organization may not be the right solution for another when differences in demographic makeup and any geographical disparity between the organizations are taken into consideration. Understanding the cost drivers is an important step in the process to better managing health care expenses.

Plan sponsors should take the time to develop guiding principles that will drive the decision-making process and find consensus in their organizations. Building consensus on what issues to tackle and the important factors in making a buying decision will go a long way in making the evaluation

process more effective and efficient. Following the guiding principles that are important to the organization will provide greater assurance that the solution selected will make a positive difference.

Finally, plan sponsors should identify solution providers that address the cost drivers plans need to manage. The value propositions and actuarial soundness of the approaches used to develop the value purported should be evaluated. After selecting a provider, plan sponsors should capture data to assess their performance against the plan's own health care experience and establish study methodologies that provide actuarial credibility based on the solution and available data. Targets and goals for the disrupter should be established based on plan claim and utilization experience. Performance guarantees can be beneficial, but plan sponsors must keep in mind that true success is having the disrupter produce the savings expected and not paying a penalty.

Very significant value from health care disrupters and innovators is available to every plan sponsor. However, achieving a successful partnership with a third-party solution provider requires a dedication to understanding the unique characteristics of a health plan and the development of a study methodology that aligns with the solution and the available data. 

Endnotes

1. See <https://jamanetwork.com/journals/jama/article-abstract/2730614>.
2. See <https://www.healthypeople.gov>.

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