Look before you leap: Shared risk programs and considerations for health systems

Simon Moody, FSA, MAAA

Shared risk programs are upon us! The Patient Protection and Affordable Care Act of 2010 established accountable care organizations (ACOs) as part of Medicare. In particular, the healthcare reforms created the Medicare Shared Savings Program, which established financial incentives for ACOs to deliver more effective and efficient care to Medicare beneficiaries. However, the concept of shared risk is not unique to traditional Medicare, and there has since been significant activity among health systems and payors in the commercial and other insurance markets, stimulated in part by the move to patient-centered medical homes.

Health systems are recognizing that the traditional fee-for-service (FFS) approach is becoming increasingly unsustainable as utilization falls. When FFS payments are greater than variable operating costs, profits decrease with decreasing utilization. Utilization decreases often have the opposite impact under a “population payment” model.

Many health systems and insurers are negotiating new payment models
While many health systems and payors are in the throes of negotiating contracts, the lessons learned from the capitation models of the 1990s may still be fresh in the mind of some longer-serving health system chief financial officers (CFOs). Understandably, some health systems are cautiously transitioning to new payment models. Shared risk agreements appear to be a starting point for health system organizations to transition away from FFS payment structures to population-based payment arrangements without taking on unnecessary exposure to “insurance” risks.

At the same time, payors are keen to establish shared-savings programs and other payment models to drive incentives for health systems to bend the current cost curve while providing high-quality care. Many national carriers have stated goals in terms of the number of collaborative accountable care initiatives they are targeting to have in place over the next few years. Smaller regional carriers and large self-insured employers are also now entering into performance-based payment arrangements with health systems.

Fair deals often require substantial and thoughtful collaboration
When negotiating the terms of a new shared risk agreement with a payor, it is important for health systems to understand the opinions of what “fair” can mean. For many, it involves care management incentive agreements rather than insurance risk transfer agreements. Payor and health system incentives should be aligned, with appropriate and realistic targets, and the economic risk to the health system of being in FFS reimbursement with flat or declining utilization should be hedged.

Some payors have a standard program model, in some cases with limited opportunity for the health system to negotiate desired refinements to the model framework or to the detailed terms and assumptions used to populate the model. Other payors are working with health systems almost from scratch. The level of collaboration varies significantly.
While deal concepts are often straightforward, details are almost always complex

In theory, the concept of shared risk is relatively straightforward:
- Define the attributed population
- Develop a baseline per member per month (PMPM) cost
- Mutually agree on an appropriate trend and project the baseline cost to the performance year
- When the performance year is complete, measure the actual PMPM cost
- Risk-adjust the result
- Calculate the net savings/loss
- Apply any agreed upon adjustments for quality parameters
- Share the savings/loss

However, in practice, shared risk agreements are incredibly complex to put together. The financial terms alone comprise many different and often interrelated components, all of which need careful consideration. Additionally, health systems may face additional implementation considerations such as identifying where the savings opportunities lie, how to accrue and report savings/losses in financial statements, administration of the program, ongoing reporting requirements through the contract period, and how to divide up a surplus or deficit among the different provider and other groups within the health system.

This paper highlights some of the key issues a health system should consider when negotiating a shared risk program with a payor. The issues presented here are covered at a high level and are by no means exhaustive. The structures and terms of agreements vary significantly. There is no “one size fits all” or “off the shelf” solution. An optimal model is one that reflects the underlying circumstances of the health system organization and its attributed population, while also recognizing the objectives of the insurer.

If it looks too good to be true, check out the details!

Perhaps the most dominant consideration of any proposed agreement is the full economic impact on the health system. What might appear to be a good deal on paper (the “stated” share of any surplus or deficit) might actually be something very different in practice (the “true” share). This is often caused by the mechanics of three model components commonly included in shared risk models:
- Target rebasing methods
- Minimum risk corridors
- Quality adjustments

Depending on how these components are dealt with in the model, it is feasible that a health system may receive as little as 20% (possibly less) of the aggregate savings over a five-year period under many “50/50” agreements proposed by some payors.

Watch out for target rebasing that shifts savings to payors too quickly

Using the most recent available data to establish the following year’s cost target can shift 100% of savings to the payor in subsequent years. This can result in less opportunity for the health system to recover the initial investment used to generate savings.

Minimum risk corridors can push modest savings to payors

Intended to avoid payments that are due to random variation, this is a percentage range around the target within which there is no settlement of savings or losses. However, it can lead to a health system losing out on sharing in savings from small but consistent reductions to utilization. Wide corridors may also lead to the payor keeping 100% of any savings. If health systems are entering these agreements because they are confident of generating savings, then there is a higher likelihood that risk corridors will reduce savings shared by the health system than minimize deficits shared by the health system.

Quality adjustments can be inappropriately biased toward the payor

Most shared risk models will incorporate a link between quality and the health system’s share of any savings/deficit. Many are structured such that the health system does not receive the full savings unless there are significant improvements in quality beyond current levels. In many standard payor models, quality adjustments are used to reduce the health system’s share of surplus while having no impact on the health system’s share of any deficits. This is particularly onerous if the quality targets are not realistic.

Figures 1 and 2 provide a simple illustration to demonstrate the above concepts. In this illustrative commercial market scenario, the key terms of the agreement are:
- The PMPM cost used to set the target for each year is based on the PMPM cost from two years prior (e.g., the year 3 target is based on the year 1 PMPM costs)
- The target is rebased each year such that the baseline PMPM cost used to set the target is the actual PMPM cost that the ACO achieved from two years prior
- Savings and deficits are shared 50/50 (the “stated” share)
- The ACO receives its full 50% share if quality measures are achieved, less if some are not fully met
- There is a minimum risk corridor of 1.5% (i.e., no savings or deficits are shared if within 1.5% of the target PMPM)
- The market trend used to set the cost target is 5% annually

The scenario further assumes the ACO achieves an annual trend of 4% over the five-year contract period, and partially meets the quality measures, resulting in it receiving 80% of its 50% share of savings.
Figure 1 illustrates the share of the savings under the terms of the agreement. On average over the five-year contract period, the ACO receives 36% of the total savings achieved (i.e., on average a $3.73 PMPM share of the $10.37 PMPM total average saving measured against the rebased cost target). The ACO’s share of available savings over the five-year period is less than the stated share of 50% because the minimum risk corridor impacts year 1 and the quality adjustment impacts years 2 through 5.

**Figure 1: Share of Savings Under Terms of Agreement**

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Average Year 1-5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Projected Market Trend</strong> (Used to Set Cost Target)</td>
<td>5.0%</td>
<td>5.0%</td>
<td>5.0%</td>
<td>5.0%</td>
<td>5.0%</td>
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<tr>
<td><strong>Actual ACO Population Trend</strong> (Used to Calculate Actual Cost)</td>
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<td>4.0%</td>
<td>4.0%</td>
<td>4.0%</td>
<td>4.0%</td>
<td></td>
</tr>
<tr>
<td><strong>Minimum Risk Corridor (MRC) – % of Cost Target</strong></td>
<td>1.5%</td>
<td>1.5%</td>
<td>1.5%</td>
<td>1.5%</td>
<td>1.5%</td>
<td></td>
</tr>
<tr>
<td><strong>Baseline Cost for Attributed Population ($ PMPM)</strong></td>
<td>$500.00</td>
<td>$525.00</td>
<td>$546.00</td>
<td>$567.84</td>
<td>$590.55</td>
<td></td>
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<tr>
<td><strong>Cost Target ($ PMPM)</strong></td>
<td>$551.25</td>
<td>$578.81</td>
<td>$601.97</td>
<td>$626.04</td>
<td>$651.09</td>
<td>$601.83</td>
</tr>
<tr>
<td><strong>Actual Cost ($ PMPM)</strong></td>
<td>$546.00</td>
<td>$567.84</td>
<td>$590.55</td>
<td>$614.18</td>
<td>$638.74</td>
<td>$591.46</td>
</tr>
<tr>
<td><strong>Savings / (Loss) Before Impact of MRC</strong></td>
<td>$5.25</td>
<td>$10.97</td>
<td>$11.41</td>
<td>$11.87</td>
<td>$12.34</td>
<td>$10.37</td>
</tr>
<tr>
<td><strong>Minimum Risk Corridor ($ PMPM)</strong></td>
<td>$8.27</td>
<td>$8.68</td>
<td>$9.03</td>
<td>$9.39</td>
<td>$9.77</td>
<td></td>
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<tr>
<td><strong>Net Savings / (Loss) Eligible for Sharing After MRC ($ PMPM)</strong></td>
<td>$0.00</td>
<td>$10.97</td>
<td>$11.41</td>
<td>$11.87</td>
<td>$12.34</td>
<td></td>
</tr>
<tr>
<td><strong>Share of Savings Before Quality Adjustment</strong></td>
<td>50%</td>
<td>50%</td>
<td>50%</td>
<td>50%</td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td><strong>Actual Share of Savings After Quality Adjustment</strong></td>
<td>40%</td>
<td>40%</td>
<td>40%</td>
<td>40%</td>
<td>40%</td>
<td></td>
</tr>
<tr>
<td><strong>ACO Share of Savings / (Loss)</strong></td>
<td>$0.00</td>
<td>$4.39</td>
<td>$4.56</td>
<td>$4.75</td>
<td>$4.94</td>
<td>$3.73</td>
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<tr>
<td><strong>Payor Share of Savings / (Loss)</strong></td>
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<td>$6.58</td>
<td>$6.85</td>
<td>$7.12</td>
<td>$7.41</td>
<td>$6.64</td>
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<tr>
<td><strong>ACO Percentage of Savings / (Loss)</strong></td>
<td>0%</td>
<td>40%</td>
<td>40%</td>
<td>40%</td>
<td>40%</td>
<td>36%</td>
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<tr>
<td><strong>Payor Percentage of Savings / (Loss)</strong></td>
<td>100%</td>
<td>60%</td>
<td>60%</td>
<td>60%</td>
<td>60%</td>
<td>64%</td>
</tr>
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</table>

Figure 2 presents the calculation of savings using a different cost target than Figure 1. Note that for this use, cost target refers to the estimated projected costs absent any ACO intervention. Under this view, the projected costs for the entire five-year period are calculated by applying the market trends to the actual PMPM cost from two years prior to year 1 of the agreement. This results in a larger measurement of total savings, $17.74 PMPM, than the total savings as defined in the agreement, $10.37. As a result, even though the ACO receives the same $3.73 PMPM in shared savings, this amount now represents just 21% of this alternative definition of total savings. This illustrates the adverse impact on the health system of rebasing the agreement’s cost targets, if the health system is able to demonstrate sustainable reductions in cost trends.

**Figure 2: Share of Total Achieved Savings**

<table>
<thead>
<tr>
<th></th>
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<td>$590.55</td>
<td>$614.18</td>
<td>$638.74</td>
<td>$591.46</td>
</tr>
<tr>
<td><strong>Total Savings / (Loss) Achieved Against Market Trend</strong></td>
<td>$5.25</td>
<td>$10.97</td>
<td>$11.41</td>
<td>$11.87</td>
<td>$12.34</td>
<td>$17.74</td>
</tr>
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<td>$6.85</td>
<td>$7.12</td>
<td>$7.41</td>
<td>$6.64</td>
</tr>
<tr>
<td><strong>ACO Percentage of Savings / (Loss)</strong></td>
<td>0%</td>
<td>40%</td>
<td>27%</td>
<td>20%</td>
<td>16%</td>
<td>21%</td>
</tr>
<tr>
<td><strong>Payor Percentage of Savings / (Loss)</strong></td>
<td>100%</td>
<td>60%</td>
<td>73%</td>
<td>80%</td>
<td>84%</td>
<td>79%</td>
</tr>
</tbody>
</table>
Tactics to mitigate the impact of random variation are important

Typically, utilization of medical services will fluctuate from year to year for temporary reasons. These include short-term economic changes, flu season intensity, environmental changes, natural disasters, short-term changes in birth rates, changes in medical practice, and patient behavior. Therefore, mitigating the impact of random variation is an important consideration when developing a shared risk model. However, health systems should recognize that it will still exist, especially within programs with smaller attributed populations. For this reason, some programs require a minimum attributed population. The minimum size will vary from one program to another, depending on factors such as current utilization levels and the use of other contract terms designed to minimize the destabilizing impact of random variation.

Health systems should recognize that random variation will still exist, especially within programs with smaller attributed populations.

Agreements often include specific stop-loss to remove variation caused by high-cost claimants. Questions to consider are: At what level should the stop-loss be set? Are claims truncated at the stop-loss level or is the member removed completely? How much cost—and what type of cost—is likely to be removed? Will it remove cost the health system believes it can manage better? Answers to these questions will differ from one health system to another and from one deal to another. Actuarial analysis can provide valuable insight to health systems in terms of the magnitude of the likely random variation.

Some agreements also carve out other high-cost cases such as transplants and major burns. A few health systems have even considered carving out the risk of increases in the birth rate of the attributed population by excluding newborns and delivery costs from their agreements.

Random variation for small populations can also be mitigated by basing the target off more than one year of past history. From the health system’s perspective this removes the risk of the single year used to set the target being one with utilization levels that are lower than typical.

To limit the maximum downside, some health systems have also considered purchasing stop-loss reinsurance to cover overall program risk or incorporating maximum loss provisions in their agreements with payors.

Selection of the trend assumption is critical

The selection of the trend assumption to project the target PMPM from the base period cost is clearly a fundamental and important consideration. A key question is whether it makes sense to set the target using a static trend. If so, what should that static trend be based on? A second key question is whether the trend should be market-based. A market-based trend that reflects the local historical trend for the attributed members is often the best indication for setting a target. The trend should include fee schedule increases for the health system, and, as far as possible, other local health systems too. Ideally, where applicable, the trend should include adjustments for technology, mix, and benefit changes, because these risks are often beyond the control of the health system. The payor will be looking for the system to achieve a net utilization trend lower than the cost curve for the market.

The appropriate target trend will vary from one market to another and from one agreement to another. This is an area where actuarial scenario testing of potential outcomes is particularly valuable.

Development of the attribution methodology needs careful consideration

The attribution methodology should be considered in conjunction with likely population size. For example, if the methodology is visit-based, a sizable portion of potential attributed members may be immediately excluded, which is due to not having physician visits during the attribution period. At the same time, average costs for members included under visit-based attribution methods will usually be higher than the average of all members and, therefore, likely have more potential for savings.

Visit-based attribution models use prospective or retrospective approaches to determine attributed memberships. Under the prospective approach, historical data is used to determine the attributed membership prior to the start of the contract year. Retrospective approaches determine the attributed membership after the end of the contract year based on the member utilization patterns during the contract year (and perhaps earlier periods). Retrospective methods limit the health system’s ability to manage the population, so perhaps a prospective attribution works best if the health system wants to know who’s in. But then a prospective attribution runs the risk of a reducing population size over the course of the performance year, which may give rise to increased random variation, and the health system not actually managing the care of the attributed members during the performance year.

A member selection attribution method—i.e., where attribution is based on the member selecting a primary care physician (PCP)—will result in a larger attributed population than a retrospective visit-based method. If the plan administration is effective, it can result in close to 100% attribution of total plan membership. Attribution will change monthly based on the members’ selected PCP.

For health systems with high market shares or those entering narrow network agreements with payors, a geographic attribution method is a common approach. This assigns all members in a defined geographic area. The key advantages of this method are that it leads to the largest attributed population (and potentially lowest random variation) and attribution is known earlier than visit-based methods. However, the attribution is likely to include members treated by physicians outside of the health system’s organization.

Each method results in a somewhat different population attributed to the health system organization. Whichever attribution method is selected, it is crucially important that the other model components are matched to the method.
Many other components influence perceived fairness and financial outcome

A health system should carefully consider many other components of a shared risk model. The most common additional elements are discussed below, with key questions the health system needs to think through.

Upside/downside risk and upside/downside shares: Does it make sense, and is the health system willing, to take downside risk from year 1? Are the upside and downside shares equal? Other components of the model will often influence the answers to these questions.

Quality initiatives: Does this act as a threshold that needs to be met before any savings can be shared? Are the benchmark measures realistic, relevant to the attributed population, measurable, and credible? How dependent are the results to a few individual measurements? Do both the upside and downside risks get adjusted? Are the adjustments tiered (defined adjustments for meeting stepped thresholds) or continuous?

Maximum loss: What is the likely maximum loss each year and in total over the duration of the agreement? Does the agreement have any caps on losses, or a provision to renegotiate the terms if experience is less favorable or subject to more variation than was expected?

Risk scores: What risk model is used to adjust both base period and performance year costs? When are risk scores calculated (i.e., what run-out period is used)? How is normalization—the adjustment for "coding creep"—applied? What adjustments are made for any recalibration of the model between the base period and the measurement period?

Choice of contract period: How does this impact the attributed population throughout the measurement year?

Run-out period: When is the final settlement calculated? How much claims run-out is included? Is it a hard cutoff, or is an allowance made for estimated incurred but not paid claims as of the date of settlement? Who prepares the final financial reconciliation and who reviews it? Consistency with the approach used to develop the target is important.

Unforeseen events: Does the agreement include provisions to adjust the target (or any other model components) following unforeseen events, such as major changes in the product or population mix or size during the contract year?

Infrastructure costs: Who pays for the cost of the health system organizational realignment that will likely be needed to implement a new model of care management? Many agreements include a contribution from the payor, sometimes called a "care coordination fee." In this scenario, the agreement should specify how that fee is included (if at all) in the shared savings calculation.

Appropriate interpretation of timely and accurate interim reports is a necessity

Reports received by the health system during the contract period typically seek to answer three fundamental questions:

1. **Who are we managing?** To be able to successfully manage the population, the system needs to know on a timely basis who’s in (or likely to be in) the attribution.

2. **How are we performing?** The health system needs to understand how it is performing against the terms of the contract. How much should the system accrue/provision for the potential likely surplus/deficit in its financial statements?

3. **Where are the opportunities?** The system will need to understand where the greatest opportunities for savings lie, in terms of type of service (e.g., inpatient, outpatient, professional, Rx, etc.), specialty, and leakage.

A balance will often need to be made between timeliness of information and the credibility—or usefulness—of that data. For example, information using one-month claims run-out periods will provide more "instantaneous" metrics, but will typically involve greater uncertainty, which is due to a greater component of incurred but not reported claims estimates. Longer run-out periods have greater certainty but may be provided too late to be useful for decision making, e.g., a Q1 report will likely not be available until partway into Q3.

Care is also needed when interpreting reports. For example, an increase in PCP and/or pharmaceutical spending might initially be thought of as cause for concern. However, it may be resulting in fewer inpatient admissions and surgical procedures. Understanding the benchmarks any results are being compared with is also important. At a minimum the benchmarks should be appropriately risk-adjusted, reflect differences in contract payment levels, and possibly also be adjusted for a number of other components of the shared risk agreement (e.g., attribution method, any service carve outs, stop-loss, etc.).

A carefully considered model for slicing up the pie can engage physicians and incentivize success

One aspect often initially overlooked during the development of a shared risk program is how the health system will divide up a surplus or provision for a deficit among the different provider and other groups that make up the health system. Many attributes define a successful distribution model, but the most important is to engage and incentivize everyone to row in the same direction. Perceived fairness is key to providers’ engagement and the greater likelihood of achieving savings.
Surplus may be allocated to various individuals or groups in a number of different ways, and some may also be withheld to fund items such as infrastructure costs or future deficits (as shown in Figure 3). The slices marked with an asterisk may be “sometimes slices,” i.e., they may not always receive a share of any surplus.

**FIGURE 3: ALLOCATIONS OF SURPLUS**

- Discretionary*
- Reserves*
- Infrastructure costs*
- PCPs
- Medical specialists
- Surgical specialists
- Other physicians*
- Hospitals

How big should each slice be? A traditional “actuarial” approach allocates larger shares to providers that see the largest fall in PMPM costs, as it will generally be reflective of lost fee-for-service revenues from improved cost management, i.e., larger shares will be allocated to hospitals and surgical specialists. However, an “impact” approach allocates larger shares to providers that have the greatest potential to improve care efficiency. This approach matches incentive with opportunity and typically allocates larger shares to primary care physicians and medical specialists. The optimal solution will vary from one health system to another, and include a number of other considerations that may be unique to each health system.

**Thoughtful evaluation and appropriate financial modeling will yield well-informed decisions**

Although it is clearly advantageous to develop agreements that are simple to implement and administer, shared risk programs are complex, with many intertwined components, and significant practical implementation issues to consider. No two deals will be the same, so it is likely that one deal struck with one payor will be very different from one struck with another payor. Thoughtful evaluation and careful consideration is recommended, likely including experienced advisors and appropriate financial modeling to allow both the health system and the payor to make well-informed decisions.

These programs are still evolving and will continue to do so over the next few years as more shared risk programs are implemented and results begin to flow through. Health systems and payors should be fully prepared for the prevalence of unintended consequences, certainly during the first year or two of the contract period. Experience tells that a good collaborative relationship between payor and health system is certainly very helpful, if not essential.

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