

# INTRODUCING THE MESA BLUEPRINT

A Medical Episode Spending Allowance Benefit Model

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SOLUTIONS THAT MATTER. HEALTH CARE THAT WORKS.



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## EXECUTIVE SUMMARY

How to pay for the coverage of those who are employed, self-employed or unemployed boils down to how much will come out of each of four coffers: the federal budget, the state budget, the employer's budget, and the individual insured's budget.

Kaiser Family Foundation research has repeatedly shown that rising premiums continue to be a growing burden on the insured as well as employers.<sup>1</sup> The upshot is that as premiums continue to rise at a faster rate than income, employers have been forced to reduce the value of the insurance coverage they offer. They have done this largely by switching to higher deductible health plans.

Unless the cost of coverage stabilizes, employers will continue to pursue cost-sharing as a solution to managing rising costs. That's because research consistently shows that as the insured bears an increasing portion of the total plan costs, the use of health care services decreases.<sup>2</sup> Of course, the decrease in use is indiscriminate, affecting high and low-value services. This is particularly concerning for patients who need to consume health care services for the management of on-going conditions, whether cancer, or lifelong illnesses such as diabetes, hypertension, asthma and other conditions.

Further, shifting costs to the individual insured, while having an effect on the demand side of services, doesn't affect the supply side of services. For that side, a combination of new payment models (referred to as alternative payment models) and transparency in price and quality, are generally accepted as the right solution mix.

### THERE'S A BETTER SOLUTION

Put simply, payers and their insured must adopt an approach that combines supply and demand side management to curtail the rise of premiums and overall costs. The current path is unsustainable and ultimately leads to a majority of consumers being completely priced out of the market.

What is the solution? We propose a new benefits model—known as the Medical Episode Spending Allowance Plan (or MESA Plan)—that more precisely manages supply and demand through data, quality measures, incentives, and engagement. The MESA plan is designed for those who need and use health care services more than the average, people who haven't fared well under high deductible plans because they don't provide the right incentives at the right targets.

The MESA plan addresses this by turning the current high deductible health plan design on its head by moving the deductible above a specified allowance for a medical episode. The allowance covers a patient health event—whether a combination of on-going conditions or a major procedure—by estimating the amount that should reasonably be spent for the care

<sup>1</sup> See 2016 Employer Health Benefits Survey results at <http://www.kff.org/report-section/ehbs-2016-summary-of-findings/>

<sup>2</sup> See McKinsey report on Imperatives for US Healthcare, Exhibit 2, at <http://healthcare.mckinsey.com/next-imperatives-us-healthcare>



of that event. The MESA Plan also engages the patient in selecting physicians, hospitals and health systems that have accepted the financial responsibility of managing those events, and when they do select one of those providers, the patient can potentially eliminate all cost-sharing.

## WHAT MAKES MESA DIFFERENT?

While some of these concepts are not new as they have been evoked by others as part of a broader push to reform health benefits,<sup>3</sup> we bring them together in a comprehensive health benefits plan that marries payment reform with benefits reform, provider engagement with consumer engagement, physician accountability for costs of care with patient accountability for managing their health and costs of care.

The purpose of this blueprint is to provide employers with a practical understanding of the following:

- **How the MESA Plan works (section 1);**
- **How it complies with various legal and regulatory statutes (section 2);**
- **How it can be made to be actuarially equivalent to an existing group health plan (section 3);**
- **How it can be scaled to aggregate employers for maximum market impact (section 4); and**
- **The operational platform that is required to make it fully operational (section 5).<sup>4</sup>**

## HOW IT WORKS IN PRACTICE: A HYPOTHETICAL CASE STUDY

Perhaps the best way to summarize the MESA Plan is with a practical example that involves a prototypical employer and employee.

Mary's employer, Peoria Holdings, employs 350 people and provides health care insurance to 900 individuals. During the past five years the company's premiums have grown 5% year over year, now reaching an average of \$10,500 per employee. The company switched to a high-deductible health plan in 2013 and the deductible has risen steadily to \$1,300 for individual insured and \$3,000 for family coverage. The out-of-pocket maximum has also increased, now reaching \$5,000 for an individual and \$10,000 for family coverage.

Like many companies, Peoria Holdings is concerned that the added financial burden on its employees may lead some to look for other jobs or forego needed health care services, and is looking for an alternative. Peoria Holdings' benefits consultants suggest an alternative to the high-deductible health plan, the MESA Plan. The consultants explain to Peoria Holdings' CEO that the MESA Plan would be a new plan option and not a full replacement plan. The goal will be to attract those who need and use health care services the most in the MESA Plan so that they could benefit from the various features of the plan. This could lead to lowering premiums on the standard high-deductible plan while helping to control the costs for those who need care the most.

<sup>3</sup> See Value-based Insurance Design principles and programs at <http://vbidcenter.org/>

<sup>4</sup> The blueprint was a collaborative effort that included Epstein, Becker and Green—a law firm specializing in health care, employment and labor—and Optumas—a health care consultancy—and has been supported by a grant from the Robert Wood Johnson Foundation.



The CEO, while nervous about how this would play out, agrees to offer the plan to employees, but wants a few key questions answered:

- **The MESA Plan seems to ride on the ability to have local physicians, hospitals and health systems agree to sign up for alternative payment models, and yet the local provider market has seemed to move slowly in that direction. The CEO asks, How will MESA ensure there are enough quality providers for our employees to choose from?**

The benefits consultants explain that the MESA Plan sponsors have created a Trust Based Plan in which individual employer-sponsors participate so that the Trust Based Plan negotiates the alternative payment models on behalf of all the employers in a geographic region. The consultants indicate that three other employers have already agreed to offer the MESA Plan and that, as a result, some of the physicians, hospitals and health systems in the area are agreeing to the alternative payment models and willing to take on financial risk in exchange for greater patient engagement and more patients, which is what the MESA Plan encourages.

- **The MESA Plan is designed to eliminate cost-sharing for employees that actively participate, which could lead to the employer paying a greater share of expenses. The CEO wants to know, Will my expenses rise?**

The benefit consultants have used the actuarial model developed by the MESA Plan sponsors to calibrate the MESA allowances and ensure actuarial equivalence to the current high-deductible health plan.

- **The MESA Plan seems to require a degree of sophistication by employees and their family members to make it work optimally, and, so far, wellness and other programs to engage Peoria Holdings employees haven't proven very successful. The CEO asks, What makes MESA different in this respect?**

The benefits consultants explain that the MESA Plan includes a “navigator” that is dedicated to a small number of plan members and helps them throughout the year to get the most out of the plan.

The CEO's initial concerns are addressed. But how does the employee regard the new offering? Let's explore through the perspective of Mary, an employee whose need and use of healthcare is higher than the average.

Mary has been trying her best to manage the combination of on-going conditions that she has contracted over the years. These include adult-onset diabetes, hypertension, coronary artery disease and mild depression. Her total out-of-pocket expenses, including her portion of the plan premium totaled more than \$10,000 last year, a substantial portion of her total income. When she learns of the new MESA Plan offering, Mary takes a hard look and realizes that she could significantly decrease her expenses by enrolling in that plan. Her portion of the plan premium would be the same as that of the current high deductible health plan, but her other expenses—deductible, co-insurance and co-pays—could be completely eliminated. She also sees that her current physician would be in the network, so Mary decides to enroll.

Prior to the start of the new plan year, Mary gets a notification from her navigator to enroll in MyMESA and enter critical information about her health status. As she goes through that process, she sees that she will have two pre-set allowances for the coming year, one that covers her routine preventive and sick care, and one that covers the management of her



on-going conditions. She also sees that some of the local physicians have agreed to care for her on-going conditions for the amount set in her allowance, which would mean that, if she selected one of them, she would not have any out-of-pocket expenses for that care during the entire year. Unfortunately, her physician did not agree to contract for that allowance and guarantee Mary's care, and she has a decision to make. Either she stays with her current provider and may end up with out-of-pocket expenses, or she switches.

Mary also sees that the Wellness Program could offer her some additional rewards if she complies with her program goals in collaboration with her physician's recommendations for the management of her conditions. Overall, the MESA Plan has some important features that are triggered based on her selection of her treating physician and her participation in and adherence to the Wellness Program. Mary decides to talk through this with her navigator, but she feels confident that this will work out a lot better for her than her prior plan.

In section 1 we provide two examples of prototypical employees and how they would use the MESA plan, including the impact of the Wellness Program. Section 2 delves more deeply into the various ways in which the combination of the Wellness Program and the MESA Benefits Structure are wrapped into a group health plan to comply with existing laws and regulations governing health plan benefits and self-insured employers.

Section 3 describes how the MESA Plan can be made actuarially equivalent to an existing group health plan and some of the caveats embedded in the assumptions that had to be made to develop the mathematical models. Section 4 explains how the Trust Based Plan can act as an aggregator of individual trusts, which are the plan fiduciaries for each employer.

While we recognize that many self-insured employers will want to leverage their existing relationships with a third-party administrator in offering an alternative health plan to their employees, the lack of an operational infrastructure (detailed in Section 5) within those TPAs to power the MESA Plan makes it more viable to have a stand-alone offering with a dedicated MESA Plan TPA that has the expertise to make it work.

There is, of course, much work left to do and that will be the next phase in our journey to reform U.S. health care. This blueprint is just that, and now we must embark on the implementation of this blueprint through field work in pilot sites. As those sites are curated and pilots engaged, we will continuously report back lessons learned so that everyone can benefit from that experience and model their own programs to improve the affordability and quality of health care in America, without which health insurance coverage will be increasingly reserved to the ever-shrinking subset of the population that can afford it.



# PREAMBLE

The purpose of this blueprint is to provide employers and their benefits consultants or third-party administrators, with an introduction and comprehensive guide to a new way of designing and deploying commercial health care benefits. Policy makers and health systems leaders may also find this blueprint helpful, since it can apply to all non-Medicare or Medicaid eligible consumers—Americans covered by their employer’s health insurance or by individual policies—many of which are being financially harmed by the increasing cost of coverage.

Our research and work, funded by a grant from the Robert Wood Johnson Foundation, helped us develop a model in which those who most benefit from health insurance—people with one or more chronic or acute conditions or people with expected elective procedures—would potentially receive the greatest benefit.

The model is built on something we call a “referenced benefit”—an allowance—for any number of conditions or health events that a plan member may have, and above which sit the deductible and co-insurance. The plan member who selects network providers that have accepted financial risk (for example through a bundled payment) could potentially avoid all out-of-pocket expenses. We call this model the Medical Episode Spending Allowance (MESA) plan.

This blueprint contains a number of specifications:

- 1. The legal and regulatory requirements needed to ensure that the MESA benefits plan would be compliant with current regulations**
- 2. The legal and administrative structure through which the model could be adopted by self-insured employers throughout the United States**
- 3. The actuarial analyses that support the potential for the MESA Plan to offer an actuarial value similar to that of existing high deductible health plans and still carry the prospect for significant savings over time**
- 4. The operational framework required to build the administrative functions of the health plan**

A decade ago we published a similar blueprint that introduced a new way of paying for medical care. We called it the PROMETHEUS Payment<sup>®</sup> model. That model helped inform the payment reform approaches that people today call bundled payments. Most payment reform approaches that use bundled payment models, whether in the public or private sectors, start from the PROMETHEUS blueprint. Our hope is that the MESA Health Benefits Plan blueprint will similarly inspire many to reimagine health benefits for the better.



Then, as now, we introduced a new nomenclature to better convey the essential concepts embedded in the new model. The MESA nomenclature includes:

- **MESA—Medical Episode Spending Allowance.** Like its name may suggest, a MESA has a plateau which is the ceiling of the allowance that is calculated for a specific medical episode of care. Once that ceiling is exceeded, cost-sharing may kick in.
- **MESA Health Benefits Plan—**This is the name of our proposed health benefits plan and, as more fully explained in Section 1, it includes three components: a base group health plan, a MESA medical episode benefits structure, and a MESA wellness plan.
- **MESA Network—**The sub-network within the broader network included in the base group health plan that has agreed to upside and downside risk in alternative payment models for specific medical episodes.
- **MESA Benefits Structure—**The portion of the MESA Health Benefits Plan that is triggered when a plan member has a medical event that triggers a MESA.
- **MESA Wellness Plan—**This is the wrap-around wellness plan that is available to all enrolled in the MESA Health Benefits Plan and that creates specific rewards for those who comply with its terms.
- **MyMESA—**The plan member engagement and transparency tool that helps maximize the benefits that can be derived from enrolling in the MESA Health Benefits Plan.

There are, of course, many questions that cannot be answered in this blueprint and that won't be answered until the MESA Health Benefits Plan is piloted. For example, how individual insured will react to the new choices, whether providers will better collaborate with their patients, how the delivery system may react to more engaged consumers, or if consumer activation will even increase as a result of the model.

It should, however, answer a sufficient number of critical questions that reduce the inherent risk of trying something new and potentially disruptive.

We welcome your thoughts and comments<sup>5</sup> on this approach as we turn to the next phase of this work: its implementation in the field. We hope you'll join us on this journey to make health benefits work a lot better for all the hard-working women and men of this country.

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<sup>5</sup> Send comments to [francois.debrantes@altarum.org](mailto:francois.debrantes@altarum.org)



## SECTION 1

# HOW MESA WORKS

### MEDICAL EPISODE SPENDING ALLOWANCE: MOVING FROM REFERENCE PRICING TO REFERENCE BENEFITS

As many observed when high-deductible health plans (HDHP) were originally proposed: they're great if you're healthy, but not if you need care. That's because the plan member gets hit, indiscriminately, with mounting out-of-pocket expenses. First dollar coverage became post-deductible coverage.

While these high deductible plans helped spark an era of health plan consumerism, they did not direct their incentives on the right target. Instead, the choice architecture of traditional HDHPs places all health services expenses (besides preventive care) on the shoulders of the plan member, up to the out-of-pocket maximum. For example, a plan member trying to manage multiple chronic conditions has an incentive to not get necessary care because she doesn't want to spend the money unless absolutely necessary. She also has an incentive to not be concerned about cost once she has exceeded the deductible. However, studies have shown that when the choice architecture is changed to "reference pricing,"<sup>6</sup> the aim of consumerism is more on target.<sup>7</sup>

Our blueprint builds on the concept of reference pricing and extends it to a "referenced benefit"—a Medical Episode Spending Allowance (MESA). A MESA is a clinically nuanced pre-deductible allowance that is structured to encompass entire episodes of care, from start to finish, all component services included. It is a reference benefit model in a new and dynamic medical marketplace, which, as appendix A explains more fully, is something the current HDHP framework renders virtually impossible.

Let's take a quick initial look at how this plays out for an individual who needs an elective surgery. Further, we'll explore how it will work for a person with multiple chronic conditions.

<sup>6</sup> For a description of health benefits plan terms, see: <https://www.catalyze.org/wp-content/uploads/2017/04/2016-A-Typology-of-Benefit-Designs.pdf>

<sup>7</sup> *Reference Pricing Changes The 'Choice Architecture' of Health Care For Consumers*, James C. Robinson, Timothy T. Brown and Christopher Whaley, *Health Affairs* 36, no.3 (2017):524-530.



## PROCEDURAL MESA EXAMPLE: JOHN JACKSON, TOTAL KNEE REPLACEMENT (TKR)



John Jackson  
Age 55  
Manchester, NH  
Spending Allowance  
for Knee Replacement  
Procedure: \$24,000

John Jackson, age 55, has been suffering from osteoarthritis in his knee for several years, and has been finding simple daily activities harder with each day. During enrollment period last year, John's employer offered the MESA Health Benefits Plan (MESA Plan). Suspecting he might need a knee surgery, John enrolled in the program.

Since then, John has been actively engaged with his MyMESA tool, filling out his Personal Health Record, creating a Better Health Plan with his family doctor, and passing the plan fulfillment tests that enable him to fully understand his MESA Plan benefits and how they work. He has already received his first quarterly Wellness Report, which tells him he is in full compliance with his better Health Plan, meeting his goals, and well on the way to receiving his year-end wellness reward.

As time passes, and a more conservative approach to treatment fails to yield results, John's family doctor recommends that he see an orthopedic specialist about total knee replacement (TKR) surgery. Under a normal plan, John would likely go to whomever his family doctor referred. Instead, John does a little research on MyMesa about orthopedic groups in Manchester, New Hampshire, and the surrounding areas, and to learn about the procedure itself. Here's what John discovers during his research:

- Within 25 miles of his home, there are three orthopedic surgeons belonging to groups have contracted for TKR and two that haven't (they continue to be paid fee-for-service in the group health plan's broader network).
- His pre-deductible MESA allowance for TKR is \$24,000.
- The contracted prices with MESA Network and broader network providers can either cause him to save or potentially "lose" money (e.g. John will pay costs above \$24,000 up to his deductible and out-of-pocket max).
- All of the surgeons have quality grades and if he wants to find out more about how they are graded, he can drill further into the MyMESA tool for detailed information about the TKR procedure and how quality measures are factored in for TKR.

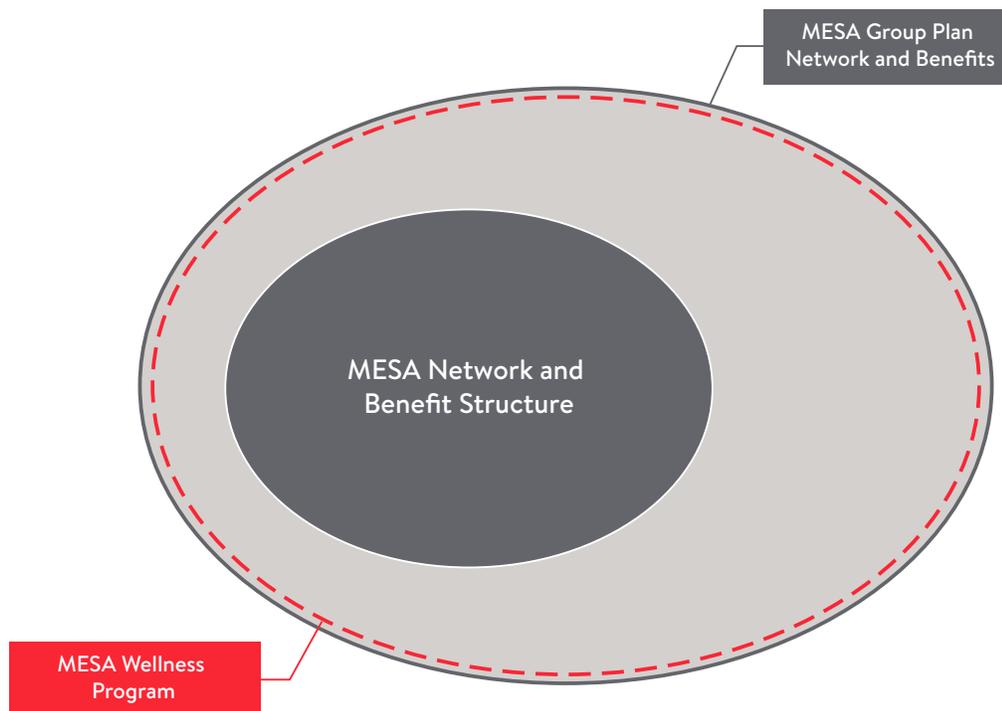


As this example illustrates, the MESA Health Benefits Plan (MESA Plan) builds upon the concept of reference pricing by creating a reference price for an entire episode of care, not just for individual medications, lab tests or even hospital stays. It goes further by giving consumers both the means and the incentive to find high-quality providers who offer a price that is either equal to or below the dollar value of the episode of care. The consumer covers any costs of care, up to the deductible, that exceed the MESA allowance.

In essence, the MESA Plan is a clinically nuanced *reference benefit* model wrapped in a comprehensive group health benefits plan. The benefit is allocated by the consumer who can choose providers based on price and quality through the My MESA transparency tool. This encourages healthy competition on price and quality among providers. Because of its structure, putting the deductible at the top, rather than the bottom, it benefits those who need and use healthcare more than the average.

As depicted in Figure 1, the MESA Plan has three components: a base group health plan deployed on a large network of providers contracted mostly fee-for-service; a MESA benefits structure tied to a MESA network of providers with two-sided risk contracts; and a MESA wellness program.

**FIGURE 1: THE THREE COMPONENTS OF THE MESA PLAN**





Employees in the MESA Plan are still subjected to deductibles, co-insurance and co-pays, but the point at which these out-of-pocket expenses are required will vary based on the choices made by each covered plan member at any point in time during the benefits year.

- **Opt-In Phase (Base Preventive Care and Wellness Program):** At the yearly open enrollment period, employees elect to opt into the MESA Plan. At the beginning of the plan year, they automatically receive a preventive care MESA that covers all recommended preventive and wellness services. If they take advantage of the preventive MESA according to the terms of the plan, and developed in partnership with their primary care physician—routine checkups, weight-loss programs, filling out a Personal Health Record, other—they qualify for a year-end wellness reward under the MESA Wellness Program. Importantly, these are person-centered wellness plans.
- **Treatment Phase:** When a specific medical need arises—whether a disease state or the need for a specific procedure—a treatment MESA triggers that covers all of the needed care for that medical event during a defined time period. The expense for that triggered treatment then becomes the plan member’s defined and prospectively set allowance. The member can use that allowance either with the broader network of providers, or with MESA network providers. In the latter case, the member can potentially waive all deductible and co-insurance obligations. Importantly, the MESA is the equivalent of predeductible coverage that provides *Secondary Preventive Care*—precisely where high deductible plans fail for chronic and procedural care.
- **Concurrent Phase:** Furthermore, if the plan member makes a good faith effort to comply with the MESA network provider’s care plan, the member is then eligible for a wellness reward that may be as much as 30% of the employee / employer yearly plan contribution.

FIGURE 2: TYING THE BENEFITS TOGETHER



As with any other plan, the MESA Plan is explained by Human Resources departments during the open enrollment period, which for most employers occurs in the fall, with coverage beginning January 1st of the next year. We will use that general timing format, rendering a “year-in-the-life” of a member’s experience in this new type of plan, and refer to Figure 2 as a guide.



Because the core of the MESA Plan is a traditional group health plan (which as we explain in Section 4 on Trust-Based Plans, can be any type of plan, including a general high deductible plan, PPO or POS plan), that core is explained in terms of deductibles, co-pays, co-insurance, essential benefits, and other aspects of a traditional plan. Employees that only use the core group health plan could be subject to out-of-pocket expenses that are similar to a basic high-deductible health plan. However, employees that opt into the MESA Benefits Structure could experience significantly lower, or zero out-of-pocket expenses, even if they have serious illnesses or need a major procedure.

## THE OPT-IN PHASE

In the Opt-In Phase, employees must activate their Preventive Care MESA and MESA Wellness Program by setting up their personal account in the MESA engagement tool (“MyMESA”). In addition to the ACA mandated preventive care services, which all forms of health insurance are mandated to cover, the Preventive Care MESA includes an allowance for routine sick care. For most plans the amount for routine sick care is about \$375; anything spent over that amount would be subject to the plan deductible.<sup>8</sup>

There is nothing passive about the MESA benefits structure; it requires attentive engagement throughout the plan year. MyMESA is really an educational pathway that helps employees understand how the MESA Plan works. As such, the participating employee will be asked to fill out Personal Health Records and share those records with their primary care physician, and take some basic training on how the plan works so they can optimize its benefits, including the MESA Wellness Program rewards.

During the Opt-In Phase, members are required to select a primary care provider (if they don’t already have one), and depending on their age and health status, create a Better Health Plan in MyMESA to build health goals for themselves, which if met (such as weight loss or smoking cessation), qualifies them for the year-end MESA Wellness Program rewards. As Figure 2 shows, a personalized Quarterly Report will be generated on progress. But here’s where the MESA Wellness Program may differ from others: the Better Health Plan must be shared with and signed off by a primary care physician, who makes the attestation that yearly goals have been met. If so, the employee gets the MESA Wellness Program reward; if not, the employee can try again the next year.

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<sup>8</sup> Sick care may include services for patients presenting with fever, swallowing difficulties, abdominal pain, nausea, vomiting diarrhea, headache etc. that resolve without evolving into any diagnosis that leads to admission or any other episode of care. It may include services for acute eye conditions like allergic or infective conjunctivitis, or general services for weakness, muscle pains, shortness of breath, palpitations etc. Services are often physician office visits, consults, lab tests, radiology and other diagnostic imaging etc. that help to diagnose or rule out underlying major or serious illnesses.



## THE TREATMENT PHASE

The Treatment Phase activates when an employee needs treatment for a serious illness like diabetes or cancer, a requires a major procedure, or is expecting to have a baby. The Treatment Phase begins in one of three ways:

- **the employee logs into My MESA, and selects the appropriate Treatment MESA,**
- **the provider triggers the appropriate Treatment MESA through the MESA operating environment (Section 5), or**
- **the MESA Health Benefits Plan administrator receives a triggering medical claim.**

At any of these three points, the employee will receive a Medical Episode Spending Allowance. Using My MESA, the employee can see the array of the broad network's providers plus any MESA Network providers who have contracted for that episode of care.

## CHOOSING A PROVIDER THROUGH THE MESA NETWORK

The employee may go to any of the listed providers, but if she selects a MESA Network provider she will have little to no out-of-pocket exposure. In fact, if employees choose MESA Network providers who come in under the employee's MESA budget, they may pocket the difference by flowing the savings back into next year's deductible (lowering it), apply it as an offset to next year's premium contribution, or simply cash it out as taxable income for that year.

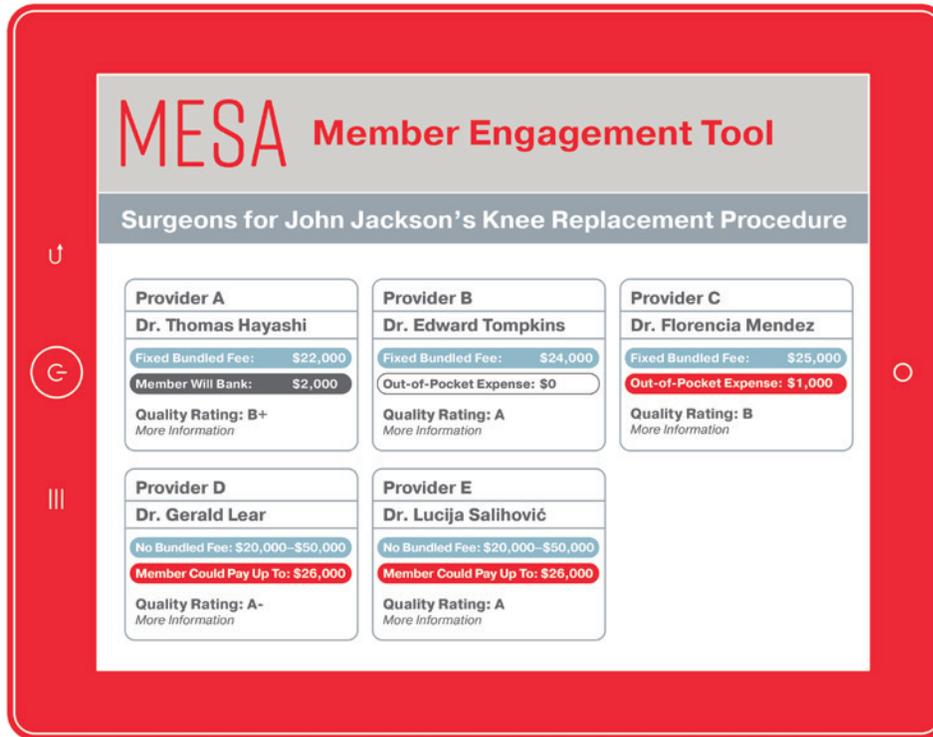
On the other hand, if the member chooses care from other providers, the member may incur out-of-pocket costs above the MESA and lose out on some of the MESA Wellness Program rewards. Because this is such a central element of the plan, deploying "navigators" and engaging the PCP in the selection of other MESA Network providers could lead to greater employee satisfaction with the plan.

Moreover, if the employee adheres to the MESA Network provider's care plan, she qualifies for the Wellness Program reward, which is designed to be an additional incentive mechanism to reinforce compliant behaviors. In this way, we can see that the Wellness Program is in force and with a differential effect at any point in time. The base is designed to keep major health events from triggering (except pregnancy); the add-on is designed to encourage more faithful compliance to provider care plans when a major health event occurs.

Let's illustrate how all this works by continuing with John's example. John's choices are laid out for him as illustrated in Figure 3.



FIGURE 3: MESA SURGEONS FOR JOHN JACKSON'S TKR



From this screen, John can easily see a variety of doctors that perform the surgery in his area, their quality rating, what they charge, and what his out-of-pocket cost (or his savings) would be based on who he chooses. Specifically, he sees the following:

- Dr. Thomas Hayashi has a grade of B+. Because his fee is lower than the MESA allowance, John could pocket \$2,000 if he chooses him;
- Dr. Tompkins has a grade of A. Since his fee equals the MESA allowance, John wouldn't have any out-of-pocket costs, nor would he pocket any savings.
- Dr. Mendez has a grade of B. Because his fee is higher than the MESA allowance, John would have to pay \$1,000 if he choose him.
- Drs. Lear and Salihovic have high quality grades<sup>9</sup> but wide swings in actual costs. This means John could have very high out-of-pocket expenses.

And it is here, from an employer's point of view, we see the power of setting the deductible on top of the MESA. Depending on how powerful an incentive the employer wants to use to encourage the use of MESA Network Providers, the deductible triggered above the allowance can be \$1,000 or several thousand dollars.

John's employer has chosen the latter, reasoning that there are three great Centers-of-Excellence (COE) providers for TKR in Manchester that have agreed to contract for the procedure and go at risk for quality care, and his employer does not want to pay for care from

<sup>9</sup> For a review of the proposed methods to determine quality of care, see Appendix C



providers who are not willing to stand behind their work. John may go to providers outside of the Centers-of-Excellence if he chooses, and it's possible that the actual cost will stay within his MESA budget. But there's a good chance the final costs will expose him to high deductible and co-insurance payments. That's why leveraging "navigators" and engaging PCPs in the selection of other MESA Network providers should lead to greater employee satisfaction with the plan.

### DRILLING DOWN FOR MORE INFORMATION

The MyMESA tool in Figure 3 allows John to click on Total Knee Replacement so that he can drill down into all the events and services that go into the episode of care. In this Blueprint, we do not show what the fully developed, consumer-tested graphics will look like, but we can show a draft graphic. In Figure 4, John sees a breakdown of the Total Knee Replacement episode by time periods, blocks of services and all the components go into the episode. By clicking on the segments, he can explore what doctors, nurses and physical rehabilitation specialists will be providing and when. For instance, he can click on the red segment and see a breakdown of Potentially Avoidable Complications (PAC) like those seen in Figure 5. PAC rates and the drivers behind them are vital indicators of quality and John will be able to see what they are, and how each of the providers he searches compare.

FIGURE 4: MY MESA TKR DRILL DOWN

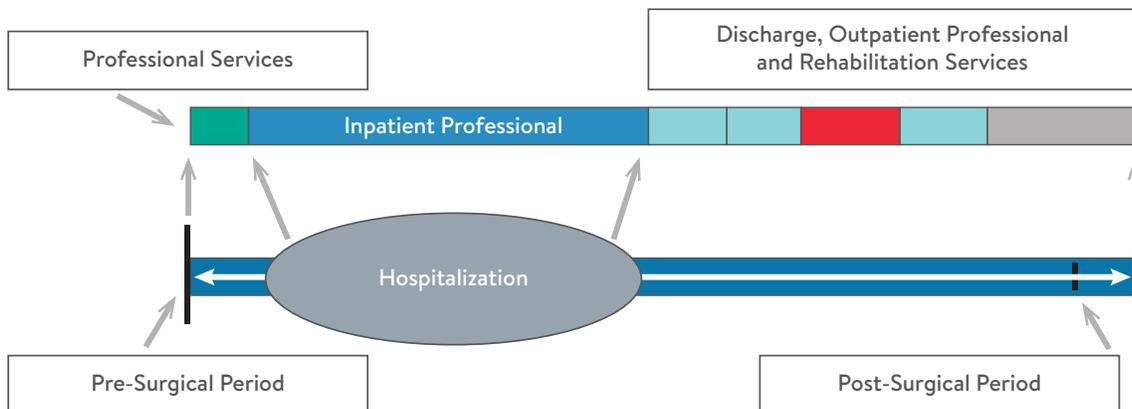
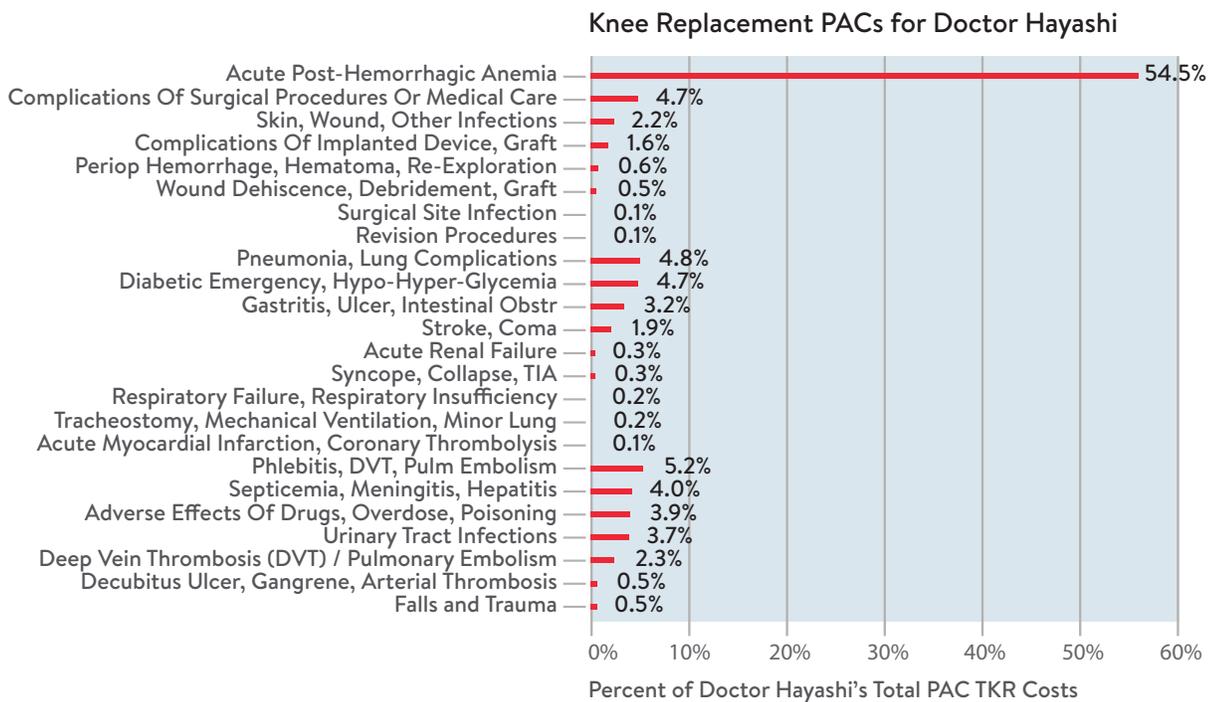




FIGURE 5: MY MESA TKR PHYSICIAN PAC RATES



Having done his consumer shopping in MyMESA, John decides to visit Drs. Hayashi, Tompkins and Mendez to find out which one he prefers. He can do this because his Treatment MESA budget covers the office visits for MESA Network providers (he would see this in the Pre-Surgical phase drill-down in Figure 3).

John decides to have his surgery performed by Dr. Tompkins because he will have no out-of-pocket costs, Dr. Tompkins has an excellent quality score, and after meeting Dr. Tompkins and becoming familiar with his TKR program, John feels this is his best option, and the surgery is scheduled.

## THE CONCURRENT PHASE

Following the surgery and rehab work, John's left knee is repaired and feeling much better with improved daily activities. Throughout the entire process John could follow his progress on his MyMESA tool, including getting his quarterly wellness reports on the surgery and his Better Health Plan. Because he made effective use of his MyMESA tool, met his Better Health Plan goals, and worked hard to comply with Dr. Tompkins TKR care plan (especially in post-operative rehab), in addition to the fact that John paid no out-of-pocket costs, he also receives his Wellness Program reward at the end of the year. This is possible because Dr. Tompkins' care team sends a report to the MESA PLAN administrator on patient compliance factors as part of their contractual obligations, as did his family doctor.



## CHRONIC MESA EXAMPLE: MARY WASHINGTON—DIABETES, CORONARY ARTERY DISEASE (CAD), HYPERTENSION AND DEPRESSION



Mary Washington, 45, has been trying to manage her chronic illnesses for several years. She was diagnosed with Type 2 Adult Onset Diabetes at 40, and two years later with Prehypertension and Coronary Artery Disease (CAD). She continues to see her regular family doctor, but her conditions are not improving much, and her out-of-pocket expenses for medications and specialist visits under her high deductible plan have risen substantially, creating an additional strain. Last year, perhaps as a result of all the stress, she was also diagnosed with mild depression.

Then she learns her employer is offering a MESA Health Benefit Plan, and Mary decides to look into it more closely to determine how she could reduce the increasingly burdensome out-of-pocket expenses of her current high deductible health plan. As it happens, the MESA Health Benefits Plan brochure includes a side-by-side comparison of a traditional HDHP with an activated MESA PLAN for someone that has a similar profile as hers.



TABLE 1. COMPARISON OF BENEFITS

HIGH DEDUCTIBLE HEALTH PLAN \$2,500/\$6,000/20% (Deductible/OOP Max/Co-insurance)				
SERVICE CATEGORY	Cost	Deductible	Copay/ Co-ins.	Insurer
DRUGS	\$2,799	\$1,654	\$600	\$546
DME	\$609	\$304	\$61	\$243
EMERGENCY ROOM	\$1,950	\$48	\$381	\$1,522
FQHC & RURAL HEALTH	\$477	\$236	\$48	\$193
LABORATORY AND X-RAY	\$137	\$92	\$9	\$35
OUTPATIENT HOSPITAL	\$9,717	\$0	\$1,943	\$7,773
PHYSICIAN	\$937	\$166	\$154	\$617
<b>TOTAL</b>	<b>\$16,626</b>	<b>\$2,500</b>	<b>\$3,196</b>	<b>\$10,930</b>

PATIENT PAYS	Dollars			
DEDUCTIBLES	\$2,500			
COPAYS	\$600			
COINSURANCE	\$2,596			
LIMITS OR EXCLUSIONS	\$0			
<b>TOTAL</b>	<b>\$16,626</b>			

EPISODE COST	Dollars			
TOTAL COST	\$16,626			
INSURER PAYS	\$10,930			
MEMBER PAYS	\$5,696			

MESA HEALTH BENEFIT PLAN				
EPISODE	Episode Allowance	Deductible	Copay/ Co-ins.	Insurer
CORONARY ARTERY DISEASE	\$4,500	\$ -	\$ -	\$4,500
HYPERTENSION	\$1,800	\$ -	\$ -	\$1,800
DIABETES	\$5,000	\$ -	\$ -	\$5,000
DEPRESSION & ANXIETY	\$1,800	\$ -	\$ -	\$1,800
<b>TOTAL</b>	<b>\$13,100</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$13,100</b>

PATIENT PAYS	Dollars			
DEDUCTIBLES	\$0			
COPAYS	\$0			
COINSURANCE	\$0			
LIMITS OR EXCLUSIONS	\$0			
<b>TOTAL</b>	<b>\$0</b>			

EPISODE COST	Dollars			
TOTAL COST	\$13,100			
INSURER PAYS	\$13,100			
MEMBER PAYS	\$0			



Seeing the potential for eliminating all her out-of-pocket expense, Mary enrolls in the MESA Plan for the next year. When her new plan activates, Mary decides to spend some time on MyMESA to learn about her chronic conditions and what her options are. Through MyMESA, she searches for her diagnoses, selects each, and sees that she has a chronic care budget of \$8,000.

She is particularly alarmed that her blood sugar level (HbA1c) remains high, slightly above 8, and the feelings of numbness and pressure in her chest. So she looks to see what doctors may be participating in the MESA Network, and finds that there are three: Dr. Younger, Dr. Kothari and Dr. Carson. She also sees that her regular doctor, Dr. Rison, is not a MESA Network provider and that she could continue to be exposed to \$4,000 per year in out-of-pocket expenses if she continues her care with him— and his quality score is lower than some of the other physicians. So she uses her MyMESA tool to dig a little deeper into the MESA Network doctors' care management programs, just as John did for TKR shown above, and is especially impressed with Dr. Younger's approach. Using MyMESA, she learns that Dr. Younger's clinic is a nationally recognized Medical Home that features

- **A sophisticated EMR Diabetic Registry that has a practice wide diabetic care flow template continuously updating key diabetic care metrics such as HbA1c, Lipid profiles, blood pressure, weight, foot and eye exams, neuropathy exams, smoking cessation (she doesn't smoke), Influenza and Pneumococcal vaccination status—all vital aspects of managing her diabetes;**
- **A diabetic education class that includes representatives of local pharmacies and a Certified Diabetic Educator;**
- **Free glucometers and support with pharmacy for medication management and injection training (if required);**
- **Nutritional counseling and ongoing support;**
- **And if her HbA1c gets even worse (above 9), a personal coach to help her manage it.**
- **More importantly, Doctor Younger's clinic specializes in patients with diabetes and other conditions like heart disease and high blood pressure (each of which she can also zero in on and learn about through her MyMESA tool).**

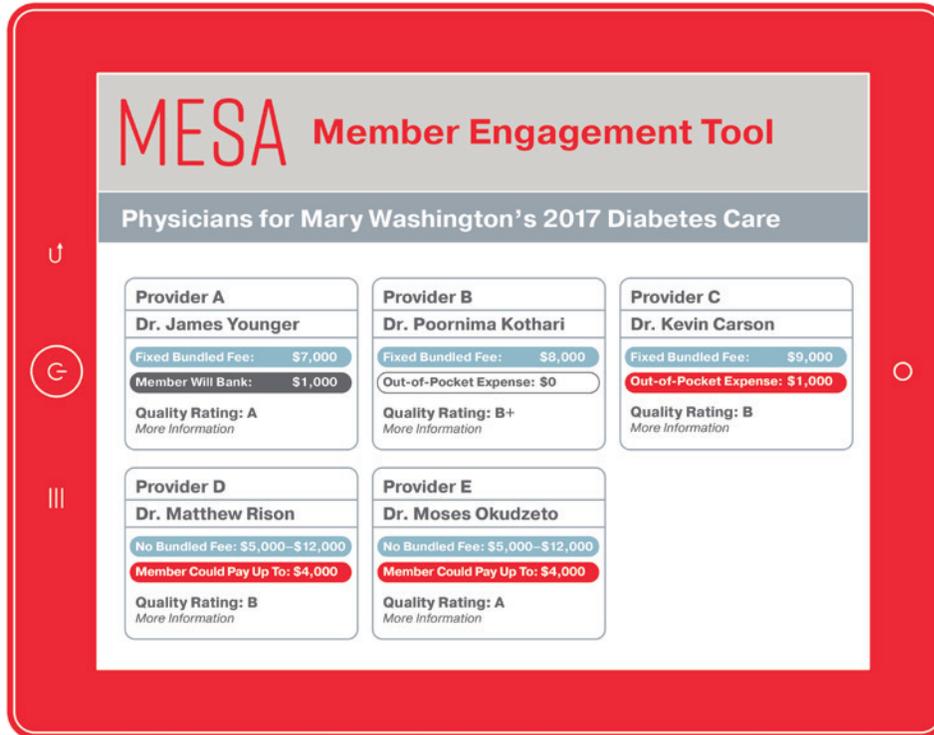
But it's the financial aspect that really captures her attention. In Figure 6, she sees her MESA allowance is \$8,000. The risk-adjusted contract price of Dr. Younger's program for patients like Mary is \$7,000, which means Mary will get back \$500 each and every full year she remains with him (her employer splits the savings 50/50), plus the possibility of earning of her full Wellness Program reward (her employer offers \$500 per plan year).

Additionally, Dr. Younger and his clinic partners are so confident in their program due to their own record of excellence and the incentives of MESA patients to engage in their care, that they have signed a full risk contract to manage patients like Mary. This means that if Mary has any emergency services related to her conditions such as an emergency room admit, for say, diabetic ketoacidosis or angina, she will have no out-of-pocket costs.<sup>10</sup>

<sup>10</sup> Doctor Younger's clinic is part of a larger health system that specializes in full risk, population health contracts.



FIGURE 6: MESA PHYSICIANS FOR MARY'S DIABETES CARE



But this leaves Mary with something of a dilemma. She has been with existing provider, Dr. Rison, for many years. Although she has been generally healthy with no outstanding care needs, she and her family like Dr. Rison. Nevertheless, she decides to go ahead and schedule a visit with Dr. Younger and his care team (like John, she knows her MESA budget will cover this). Following her visit, she speaks with her family about her condition, her visit with Dr. Younger, and the fact that his chronic care program is the better choice. They all decide she is better off switching doctors to take full advantage of the benefits in the MESA Plan.

Subsequently, Mary begins working with Dr. Younger's care team where they jointly establish a care plan for Mary with goals that she can achieve during the time remaining in the plan year. Since it is July, and there are only 5 months remaining in the year, Mary and Dr. Younger set these reasonable goals:

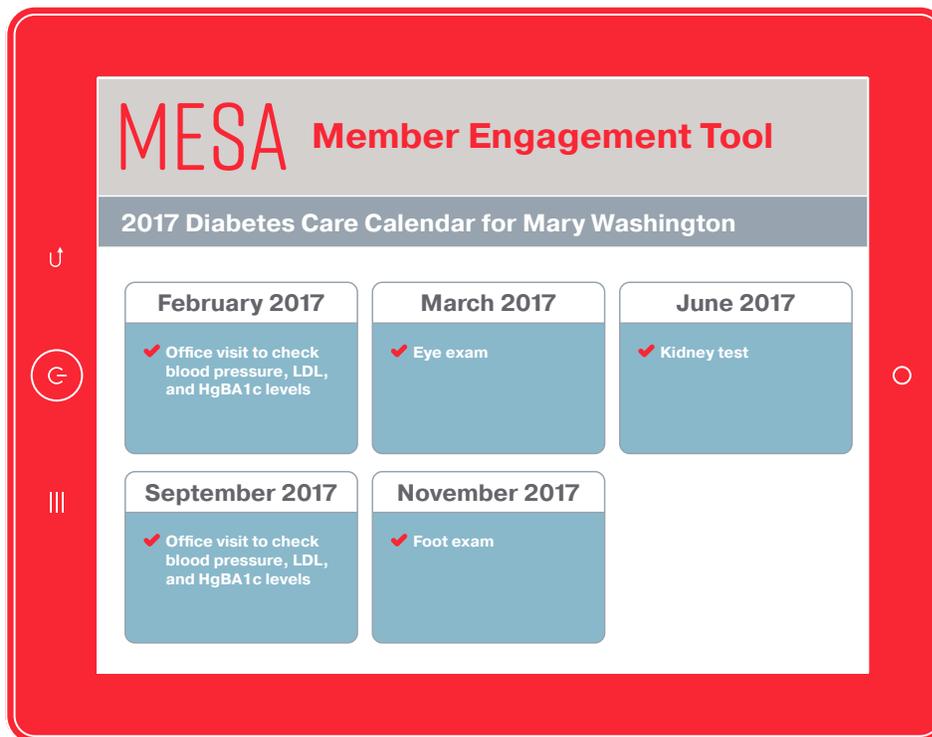
- Schedule and complete her diabetes education program with her Certified Educator (4 hours at the clinic)
- By year's end, get her HbA1c level below 7, next year down to 6 or less
- Switch her current diabetes prescription to Invokana, an oral medication that blocks blood sugar from kidney reabsorption and helps lower HbA1c levels (but is more expensive than her previous generic prescription) and a Phosphodiesterase type 5 inhibitor, Ravacio, for her Prehypertension, with the goal of getting her blood pressure down from 139/89 to 120/80 this year, and keep her on her current statin for CAD;
- No prescription for depression for the sole reason that it may not be necessary, her depression comes as a result of her health conditions, and with steady improvement, it is expected that Mary's outlook on life will improve.<sup>11</sup>

<sup>11</sup> Because Dr. Younger is not a FFS provider but at full risk, there is no incentive to prescribe a clinically non-indicated medication that may have an adverse reaction with her other medications.



Every month through her MyMESA tool, Mary receives a chronic care engagement update that reminds her of these goals and scheduled appointments to make sure she remains on track (Figure 7). The My MESA tool updates also tells her how much of the \$500 she gets back per month, which is \$41.67. That amount accumulates over the year, plus, if Dr. Younger’s team attests that Mary has been a compliant patient and met her goals, she receives her Wellness Reward (where her employer has set that amount at \$500). Next year, the MESA process starts all over again where Mary can continue to earn the full \$500 in savings and her additional \$500 wellness reward.

**FIGURE 7: MESA CHRONIC CARE ENGAGEMENT UPDATES**



### THE EMPLOYER'S VIEW

Mary’s benefit plan comparison will, to the trained eye of an actuary, benefits consultant or employer, cause an eyebrow (or both) to be raised. That’s because it appears clearly that under the high deductible plan, the employee pays \$5,696 while the employer pays \$10,930 (\$16,626 - \$5,696). However, in the MESA PLAN the employer would pay \$13,100 while the employee pays nothing. The net effect seems to be that the plan costs would increase under the MESA Plan. However, as is shown more completely in Section 3, the actuarial analyses and comparisons of plan costs indicate that the MESA Plan can be made actuarially equivalent to any High Deductible Health Plan. The upshot is that the employer, by setting the target MESA budget (as a % of the severity adjusted historical plan average) can force actuarial equivalence. More importantly, as is shown on Figure 5 of Appendix A, most plan members with one or more chronic conditions experience a Potentially Avoidable Complication during the course of the benefit year. These acute events amount to tens of thousands of additional plan expense per plan member, and many more thousands when added up across all plan members with those conditions.



In the example in this section there are some minor costs of complications (the emergency department visits and outpatient hospitalizations). But consider a case in which the plan member in the high deductible health plan had a cardiac arrest that was treated by multiple stents. The total costs of that complication could well exceed \$50,000. Under a HDHP the plan would have to absorb the entire cost of that added complication because the plan member would have exceeded their OOP maximum. However, under the MESA Plan, if the MESA Network provider cares for the patient, the cost of the complication is borne by the provider who has accepted downside financial risk.

The purpose of the MESA Plan is to join plan member incentives with provider incentives to create as complete an alignment as possible and targeted towards achieving better health outcomes for the plan member, and protecting employers from paying for potentially avoidable complications (and protecting patients from experiencing them). The full potential of the MESA PLAN is only realized when plan members are engaged and motivated to seek care from MESA Network providers and actively participate in the MESA Wellness Program.

## SUMMARY COMMENTS

Although it may sound counterintuitive, we expect the MESA Plan to benefit from adverse selection. The consistent pattern over the past few decades has been for managed care entrepreneurs, health plans, and benefits consultants to design benefits plans that would draw healthy workers into new kinds of plan offerings, leaving sicker workers in plans that ultimately became too expensive to sustain. This was most certainly the case with the so-called “indemnity death spiral” that was caused by HMOs in the 1990s. Today, however, that dynamic has played out, and with limited offerings—or just one type of plan offering that many employers currently sponsor; i.e., full replacement, high deductible HSAs—both sick and healthy workers find themselves residing in the same self-insured pools.

Beneficial adverse selection, like the examples of John and Mary, is the intended purpose of the MESA program because absent some mechanism by which sicker workers can be attracted into a model that reduces costs through smarter contracting and benefits, entire pools will be drawn into indemnity-like death spirals, taking healthy workers down with them (at least in terms of ever escalating plan costs or even steeper buy-downs on behalf of hard pressed employers). If the object is to push consumerism only into the HDHP deductible and HSAs, where mostly healthy people interact, then there should be no expectation that a MESA Plan and a regular HDHP would be actuarially any different.

But if the object is to energize consumerism where sicker people can be intelligently tied to proactive providers taking risk on cost and quality, with an eye towards lowering potentially avoidable complications, then we should observe, over time, an increasing difference favorable to MESA Plans, especially if MESA wellness programs slow down the number of workers slipping into chronically worsening disease states. That’s the MESA Blueprint proposition: replace bluntness with precision.

This precision requires a degree of sophistication in the legal and regulatory constructs of the plan that are detailed in the next Section.



## SECTION 2

# MESA LEGAL AND REGULATORY COMPLIANCE ANALYSIS

From a regulatory and legal perspective, the MESA Health Benefits Plan has three major components. First, a traditional group health plan that meets the regulatory requirements of ERISA and the ACA and rests on a provider network that can give all enrollees access to comprehensive medical benefits. Second, within this regulation-compliant group health plan, there is a high performing network of providers created through direct referenced based contracts with the group health plan. This network will provide benefits under the MESA portion of the group health plan and is referred to as the MESA benefits structure. It is available to anyone in the group health plan regardless of their participation in the wellness program. Finally, a wellness program is in place to incentivize all enrollees to select providers in the high performing network and follow care paths for specific disease conditions and/or procedures when a MESA is triggered.

The specific way in which this health benefits plan is administered, and in particular the role of the Trust, is addressed in detail in the following section. This section will focus on the manner in which the plan can be deemed regulatorily compliant with (a) ERISA and ACA statutes, (b) HIPAA, in particular its non-discrimination statutes, and (c) wellness program regulations.

The legal issues associated with each of these components will be evaluated in detail below.

### A. ERISA AND ACA PLAN DESIGN COMPLIANCE

The fundamental vehicle for lowering costs and improving quality in a MESA Plan is the use of the high performing network that provides services under episode of care contracts. The high performing network is not a separate plan, but a subset of providers within the overall provider network created under the plan and that have agreed to provide services under referenced based direct contracts. We refer to this network subset as the MESA network. In this respect, the MESA Plan is substantively no different than a traditional plan design that presents different financial consequences for its beneficiaries through offering both an in-network and out-of-network provider option. In such plan designs, the plan beneficiaries have a choice between the two sets of providers and are informed about the financial effects of the choice they make. This is precisely what occurs with the MESA network option embedded in the MESA health benefits plan's broader network. The ability of the plan to create a high performing network with lower or no cost sharing to the individual enrollee is well settled under ERISA<sup>12</sup> if, when structuring the plan design, the employer functions, in trust law terms, as a "Settlor."

<sup>12</sup> See *Johnson v. Georgia-Pacific Corp.*, 19 F.3d 1184 at 1188 (7th Cir. 1994) and *Varity v. Howe*, 516 U.S. 489 at 530 (1996).



Under the provisions of ERISA an employer functioning in a Settlor capacity has a great deal of authority to design the structure of the benefits it wants to offer to its employees, subject to the requirements of the ACA.<sup>13</sup> In contrast, a plan fiduciary must give exclusive primacy to the interests of the benefit plan and those of the plan's beneficiaries. That's why the MESA Health Benefits Plan will be created and operated in such a manner that the employer functions as a Settlor, and administered in accordance with the plan that was set up by the employer in its role as a Settlor.

Importantly, when an employer acts in a Settlor capacity, it is not acting in the capacity of a plan fiduciary and can give primacy to its concerns as an employer. It is rational for a business to include a MESA network in its plan design to create an effective cost containment and quality of care improvement modality. This Settlor plan design choice also presents substantial benefits to the individual who elects to become a beneficiary of that plan. Critically, the addition of the MESA network does not deprive plan beneficiaries of coverage compared to what they would receive under the more traditional structures of in-network and out-of-network options.

Administratively, the employer creates the Trust that functions as the sponsor of the health benefit plan that is available to the employer's eligible employees and the beneficiaries that are eligible to be plan beneficiaries. It also decides whether the plan will be insured or self-funded and determines, through taking into account applicable legal requirements, how the Trust will be funded to enable it to deliver the designed plan benefits and otherwise administer the plan. Also in its Settlor capacity, the employer will select the entity that is to function as the Trustee of the Trust and be responsible for the proper administration of the Trust.

In its Settlor capacity, the employer selects the plan benefit design offered by the Trust. For example, what benefits will be covered, deductible levels, copay and co-insurance levels, benefit limits, whether it will be a closed or open provider network plan, or a combination. As a Settlor, an employer can select a plan design that incentivizes plan beneficiaries to use targeted high performing providers. It is in the context of its non-fiduciary Settlor function that the employer determines whether the plan benefits design that the Trust it creates will include a MESA network and associated benefits structure. It is in that capacity that an employer can design the incentives that will be provided to plan beneficiaries who elect to use the services of providers in the MESA network. Additionally, an employer can select whether to offer a wellness plan or not, and that decision also is not a fiduciary decision. In its Settlor role, an employer can make critical design decisions that have consequential financial effects without taking on any fiduciary duties or responsibilities. The latter can be the contractual obligation of the entity that contracts to function as the Trustee of the Trust which the employer has created to be the legal sponsor of the health benefit plan design the employer selects.

It is important to understand that the benefits provided to plan members by selecting providers in the MESA network does not constitute a separate group health plan under ERISA. Rather, the MESA network-related benefit structure is simply a feature of the overall MESA Health Benefits Plan design created by the Settlor, as described above, based on creating direct referenced based contracts with certain providers and a different cost sharing

<sup>13</sup> For a detailed description of the structure and operations of the Trust, see Section 3.



structure for services performed under those contracts. As a result, the regulatory and compliance obligations the plan is subjected to will be measured against the plan as a whole. And in that sense, the three components of the MESA Plan meet those obligations. For example, the ACA introduced a number of benefit mandates such as the requirement that certain insured plans provide “essential health benefits” through providing items and services in 10 defined categories. Because the MESA Plan is designed to be an ACA-compliant plan structure, the compliance obligation would be met through some combination of the base group health plan benefits, and the additional MESA design. Further, the administrative requirements of ERISA, such as the required filings and notices to beneficiaries would also encompass the plan as a whole, not just the MESA benefits structure.

It is important to note that because of the specific features of the MESA Plan and, in particular, the “pre-deductible” aspect of the MESA itself, the base structure of the health benefits plan is not compatible with Health Savings Accounts. As such, while the base portion of the MESA Plan can be a traditional plan design with deductible, co-insurance, etc., including an HSA would likely violate existing regulations associated with account-based plans.

## B. HIPAA COMPLIANCE

Amongst other statutes and regulations, HIPAA bars group health plans from discriminating on the basis of a “health factor.”<sup>14</sup> Under HIPAA, discrimination is triggered when the benefits provided by a plan are not uniformly available to all similarly situated individuals on the basis of certain health factors.<sup>15</sup>

Whether incorporating a MESA benefit structure in a health plan would implicate these antidiscrimination prohibitions is a facts and circumstances specific inquiry.<sup>16</sup> For our purposes, the analysis boils down to whether providing a MESA benefit structure would constitute discrimination based on two health factors; “health status” and “medical condition.”<sup>17</sup>

As a result of having a limited number of providers in the MESA network, we are most concerned with two types of discrimination; (1) discrimination due to providers being geographically inaccessible for beneficiaries and (2) discrimination due to availability, either not having providers for certain disease conditions or particular providers being unavailable as a result of scheduling conflicts, vacations, etc. Due to a lack of case law with regards to these types of discrimination, we are essentially interpreting bare regulations.

First and foremost, it is important to note that the HIPAA nondiscrimination provisions only require that benefits be uniformly provided within a particular group of similarly situated individuals; allowing benefits to vary between different groups (plans). As such, HIPAA allows health plans to differentiate groups of similarly situated individuals based on a bona fide employment classification. One such employment classification is geographic location.<sup>18</sup> Different plans with different benefits can be provided based on geographic location.<sup>19</sup>

<sup>14</sup> See 26 CFR 54.9802-1(a)(1); such “health factors” include: (i) health status, (ii) medical condition, (iii) claims experience, (iv) receipt of health care, (v) medical history, (vi) genetic information, (vii) evidence of insurability and (viii) disability.

<sup>15</sup> See 26 CFR 54.9802-1(b)(2)(i)(B).

<sup>16</sup> 26 CFR 54.9802-1.

<sup>17</sup> *Id.*

<sup>18</sup> See 26 CFR 54.9802-1(d)(1).

<sup>19</sup> *Id.*



### **i. Discrimination Based on Geographic Location**

With regards to the lack of geographically available providers in the MESA network, we believe the cleanest solution would be to provide health plans based on geographically defined coverage areas. For locations where there are no providers in the MESA network reasonably accessible to where the health plan beneficiaries are located, such locations would offer only a traditional in-network and out-of-network health plan without a MESA benefits structure. However, those individuals could still access the wellness program to better manage their disease condition and certain transparency tools even if no direct contract is in place.

Differentiating health plans based on geographic location will solve possible discrimination issues because the MESA benefits structure (or lack thereof) will be offered equally to all beneficiaries in a certain location. Providing different health plans based on geographic location ensures uniform treatment of similarly situated individuals (plan members) within a particular geographic location.

### **ii. Discrimination Based on Availability**

A lack of providers in the MESA network for a certain condition, or a beneficiary's inability to schedule an appointment with a certain provider in the MESA network is unlikely to constitute discrimination because the lack of a provider is not based on a "health status" or "medical condition" but rather a lack of availability.<sup>20</sup> While we do not believe this to be discrimination, there are certain safety precautions that can be built into the plan to further insulate the plan from the risk of discrimination. While the only true solution is for the plan to seek out and provide a qualified provider in the MESA network for all health conditions, administratively, this is not a very practical solution. A more practical approach would be to offer the beneficiary certain options to choose from.

One option would be for the plan to allow a beneficiary to identify a geographically suitable provider willing to accept the same terms and conditions as have been accepted by a provider in the MESA network who has a contract with the plan for the required service or course of treatment. In that event, the beneficiary would be treated in the same manner as any other beneficiary who chose to be treated by a contracted MESA network provider.

Another option would be for the beneficiary to accept as full coverage of the plan's obligations, a procedure / treatment budget amount equal to the price the plan would pay a contracted MESA network provider. That budget would cover all required procedures, including post-service and post-treatment procedures. Under this option, the beneficiary takes the risk that the budget amount may not cover the cost of the care that is required because of the quality of the treatment received from a provider who did not accept any downside risk. Certainly, this risk will have to be clearly disclosed to the beneficiary.<sup>21</sup>

<sup>20</sup> See 26 CFR 54.9802-1(a)(1).

<sup>21</sup> In this setting, the beneficiary is receiving all of the advantages that a beneficiary who selects a MESA provider would receive. In contrast, if the plan does not require the beneficiary to take the downside risk of receiving less than proper care, the plan has none of the protections and advantages that result when a qualified MESA provider who has taken a downside risk fails to provide top level care. Such a decision would be imprudent behavior on the part of the plan.



This notwithstanding, another possible argument can be made with respect to discrimination based on a MESA network provider's ability or inability to see certain beneficiaries. If two similarly situated beneficiaries went to see the same MESA network provider, and one beneficiary's schedule precluded him or her from finding a time the MESA network provider was free, then a claim could be made that they are being discriminated against based on a health factor. While this is a legal gray area, it is likely that the courts would make a distinction between discrimination based on a health factor and discrimination based on a provider's availability, which is only indirectly linked to health factors.

### **iii. Discrimination Based on Distribution of Cost Savings**

The direct reference-based contracts that form the basis of the MESA PLAN are designed to combat the wasteful spend in employer provided plans and improve health outcomes of enrollees. The MESA concept also hinges upon providing the enrollee with transparency tools so that the enrollee can make prudent decisions based on the cost and quality of the providers they choose. As described more fully in Section 4, the features of the MESA benefits structure will almost certainly result in cost savings over the base health plan benefits and network that is also available to the enrollee under the MESA Plan.

One of the linchpins of the MESA Plan is to create powerful incentives for plan members that select the MESA network and to share in the savings generated by selecting providers in that sub-network. For example, if the medical spending allowance for a plan member's knee replacement in a certain geographic area is \$20,000 and the plan has contracts in place with one or more providers in the MESA network for this service for \$18,000, there is a \$2,000 cost savings. However, the \$2,000 savings is a plan asset and as such must be administered in a way that is compliant with ERISA. We propose that a portion of the savings be shared in some fashion with plan beneficiaries to incentivize them to use MESA network providers. The modes of sharing could include a waiver of applicable deductibles, copayments, coinsurance payments, or periodic payments as a reward for using a MESA network provider.

The sharing of savings with plan beneficiaries that will induce them to obtain better care resulting in meaningful long term cost savings to a plan is a prudent expenditure of plan assets. In addition, there should be no concerns that the sharing of the savings could constitute a prohibited transaction. The recipients of the shared savings—the plan beneficiaries- are neither fiduciaries of the plan nor parties in interest engaged in a prohibited transaction with the plan. They are simply beneficiaries of the plan who have followed a course of action that is expressly permitted by the plan design and are receiving no more than the plan design authorizes.



In fact, the language of the HIPAA nondiscrimination provisions supports this view. The HIPAA nondiscrimination provisions provide a helpful example:<sup>22</sup>

**“Example 7.**

(i) Facts. Under a group health plan, doctor visits are generally subject to a \$250 annual deductible and 20 percent coinsurance requirement. However, prenatal doctor visits are not subject to any deductible or coinsurance requirement. These rules are applied uniformly to all similarly situated individuals and are not directed at individual beneficiaries or beneficiaries.

(ii) Conclusion. In this Example 7, imposing different deductible and coinsurance requirements for prenatal doctor visits and other visits does not violate this paragraph (b) (2)(i) because a plan may establish different deductibles or coinsurance requirements for different services if the deductible or coinsurance requirement is applied uniformly to all similarly situated individuals and is not directed at individual beneficiaries or beneficiaries.”

According to this example, under certain circumstances, the HIPAA nondiscrimination provisions allow for one beneficiary to benefit through the waiving of deductibles and coinsurance while another beneficiary does not. It can be inferred from the example above, as long as a certain benefit is available uniformly to all similarly situated individuals and not directed at individual beneficiaries or beneficiaries, that such benefits are allowable.

That being said, depending on how certain health factors are subdivided with regards to benefits, an argument can still be made that providing cash benefits to certain beneficiaries constitutes discrimination. If certain benefits are provided for heart attacks and not for congestive heart failure, an argument could be made that such a framework violates the nondiscrimination provisions of HIPAA because it does not apply benefits to individuals who suffer from cardiovascular conditions equally. Due to a lack of case law to support one notion or the other, such an area is still unclear. But because Medical Episode Spending Allowances are created as homogenous clinical condition sets and delineated by clear clinical markers, the benefits would accrue to all plan members that have a clinically distinct defined condition or set of conditions.

Finally, there could be a concern with “benign discrimination.” Benign discrimination is essentially providing more favorable terms to beneficiaries who suffer from adverse health conditions. Typically, this would be classified as discrimination, but it is explicitly allowed under the HIPAA nondiscrimination provisions:

*“Nothing in this section prevents a group health plan from establishing more favorable rules for eligibility (described in paragraph (b)(1) of this section) for individuals with an adverse health factor, such as disability, than for individuals without the adverse health factor.”<sup>23</sup>*

Given the lack of case law or guidance that specifically addresses whether the provision of cash benefits for certain groups of similarly situated individuals constitutes discrimination, an official opinion on this matter should be sought.

<sup>22</sup> See 26 CFR 54.9802-1(b)(2).

<sup>23</sup> See 26 CFR 54.9802-1(g)(1)(i).



### C. Wellness Program Compliance

The MESA group health plan design's ability to produce price savings and improve quality in employer provided plans is dependent upon employees using all aspects of the plan. In order to encourage plan members to access the MESA network and adhere to provider-recommended care paths, the wellness program includes specific features and is referred to as the MESA Wellness Program.

The MESA Wellness Program (MESA WP) is designed to provide rewards for using the MESA network and adhering to care requirements provided by the MESA network providers. It is also designed to give all MESA Plan members an opportunity to earn rewards for compliance with wellness directives. Every plan beneficiary that chooses to participate in the MESA WP will receive a preventive medical episode spending allowance. And even if the enrollee does not experience a health event that triggers a condition or procedure-specific MESA, they will still receive the full wellness reward at the end of the year if they comply with the preventive services MESA.

When an employee's health condition triggers another MESA, they will receive information and a list of providers that have entered into reference based contracts to provide services to the plan member. If an employee uses MESA network providers and follows the care paths defined by those providers during the period of time defined by the MESA, they will be entitled to the full wellness reward at the end of the year.

By design, the MESA wellness program will require certain plan members to do more (seek care from MESA network providers and follow prescribed care paths) based on a health factor. Therefore, the wellness program will be categorized as a health-contingent wellness program. However, it is important to note that participation in MESA Plan or access to MESA network providers is not contingent upon participation in the wellness program. Any employee can take advantage of the high performing providers and choose not to participate in the MESA WP. Doing so will not disqualify that employee from receiving benefits under the base portion of the MESA Plan.

Wellness programs are regulated under two sets of regulations. The primary regulatory authority is under the Tri-agency rules promulgated by HHS, DOL, and IRS under the ACA. Additionally, EEOC promulgated rules govern when employers may offer incentives for participation in a wellness program that requires an employee to answer disability-related questions or take medical examinations under the Americans with Disabilities Act. Under the Tri-agency rules as modified by the EEOC there are five general requirements for a health-contingent program:

- **Frequency of opportunity to qualify**
- **Size of reward**
- **Reasonable design**
- **Uniform availability and reasonable alternative standards**
- **Notice of other means of qualifying for the reward**



As described below, the MESA WP should meet the requirements for a qualified wellness program.

- ***Frequency of Opportunity to Qualify***

According to the regulations, enrollees must be eligible to qualify for the reward at least once per year. As designed, the MESA wellness program would measure an enrollee's use of the high performing network and adherence to the care paths on an annual basis. If the enrollee met the established criteria that individual would receive the full wellness reward. It is also important to note that if an individual did not experience an event triggering a MESA, they would receive the full wellness reward at the end of the year by adhering only to the preventive MESA requirements. Thus, the full wellness reward will be available to every enrollee that chooses to participate in the wellness program regardless of health status.

- ***Size of Reward***

The Tri-Agency regulations require that the total reward offered to an individual cannot exceed 30 percent of the total cost of employee-only coverage under the plan. The EEOC further articulated this standard allowing an incentive of up to 30 percent of the total cost for self-only coverage of the plan in which the employee is enrolled. From a design perspective, the MESA wellness program can be configured to ensure the total reward for any enrollee participating in a wellness program does not exceed 30 percent of the lowest cost of any medical self-only plan offered.

- ***Reasonable Design***

Both the Tri-Agency regulations and the EEOC regulations require that an employer-based wellness program be "reasonably designed." Under the Tri-agency rules a wellness program must be (1) reasonably designed to promote health or prevent disease, (2) not overly burdensome, (3) not a subterfuge for discrimination based on a health factor, and (4) not highly suspect in the method chosen to promote health or prevent disease. Similarly, the EEOC requires that wellness programs cannot (1) require an overly burdensome amount of time for participation, (2) involve unreasonably intrusive procedures, (3) be a subterfuge for violating the ADA or other laws prohibiting employment discrimination, or (4) require employees to incur significant costs for medical examinations.

There is ample empirical evidence that the selection of high quality providers and providing individuals with tools to manage disease leads to positive health outcomes. The MESA PLAN is designed to provide incentives to enrollees for choosing high quality providers and ensuring the enrollee receives the information and clinical interventions they need to effectively manage disease conditions. Thus, the MESA wellness program would likely be found to be reasonably designed to promote health and prevent disease under either the EEOC or the Tri-agency standard.

Given the goal of the MESA Plan, it is unlikely that regulators would view it as either overly burdensome or requiring an overly burdensome amount of time. The basis of the MESA wellness program is to eliminate consumer confusion and provide enrollees with the necessary tools to effectively chose providers and manage their disease condition. In fact, one of the main goals of the program is to lessen the amount of time enrollees would have to invest to properly manage disease.



It is also unlikely, that regulators would view the wellness program as a subterfuge for underwriting or violating employment discrimination laws. The wellness program is designed to steer individuals with disease conditions to a favorable network of providers, with eliminated or greatly reduced cost sharing which could provide a significant benefit to those with stated disease conditions. Furthermore, the program is entirely voluntary and no information can be used in the employment context, thus there is little fear that the program could be viewed as circumventing employment discrimination laws.

Finally, the program does not require intrusive procedures or payment to participate. As contemplated, the preventive MESA would use a standard health risk assessment, require simple biometric testing to determine if an individual has a disease that would qualify him or her for a condition-specific MESA, and provide certain preventive services. These types of screenings are common in wellness programs and would be provided to the employee free of charge.

- ***Uniform Availability and Reasonable Alternative Standards***

Under the Tri-agency rules any reward must be available to all “similarly situated individuals.” Employees who are not able to satisfy the initial standard must be able to earn the full reward by satisfying a “reasonable alternative standard.”

Under the MESA wellness program there is a single wellness reward that will be available to all enrollees that participate in the wellness program. Regardless of whether an enrollee qualifies only for the preventive MESA or has multiple MESAs triggered, the reward for adherence will be the same.

Furthermore, a reasonable alternative standard (or waiver of the otherwise applicable standard) must be made available to any individual for whom it is unreasonably difficult due to a medical condition to satisfy the otherwise applicable standard or for whom it is medically inadvisable to attempt to satisfy the otherwise applicable standard. In most cases, we anticipate the MESA program will not need an alternative standard because beneficiaries will choose a provider contracted under the high performing network because of the cost savings associated with the co-payment structure. However, for certain ongoing chronic diseases, we anticipate some enrollees will chose to remain with their physician and the MESA WP will just require them to engage in the clinical interventions and information sharing provided by the plan in order to receive the full reward.

- ***Notices***

Both the Tri-agency rules and the EEOC rules require group health plans that adopt the MESA wellness program to provide certain notices of the wellness program rewards in certain plan documents and notices. The MESA plan documents will contain all required notices.



## SUMMARY COMMENTS

Current discussions on potential changes to the ACA will likely not adversely affect this regulatory and legal review because most of the changes under consideration will, if anything, provide more flexibility on how benefits are designed. The upshot is that, while sophisticated in its design, the MESA Health Benefits Plan can be fully compliant with regulations that govern such plans. Clearly, prior to any implementation, supplemental reviews should be done to ensure that specific benefit design choices made by employers be analyzed in the context of the most recent regulations at that point.

Now that we have a better understanding of how the MESA PLAN can be designed in a regulatory-compliant fashion, let's understand how the model can deliver an actuarial value comparable to an existing high deductible health plan.



## SECTION 3 ACTUARIAL ANALYSIS

In Section 1 we saw an example of benefits comparison between a plan member with multiple chronic conditions in a high deductible health plan and one in a MESA PLAN. That comparison showed that the employer portion of the plan costs increased by about \$2,200. If that experience were repeated for all plan members, then the cost of the plan could never be equal to or below that of an existing high deductible health plan. However, and as mentioned in Section 1, you can't build an actuarial model on a single case.

In this section we will describe the approach taken to compare the expected premium difference between a MESA Plan and that of three different prototypical HDHPs. Importantly, there are several important limitations to any modeling effort when there are so many variables and unknowns, and prior to any implementation, more precise analyses should be conducted based on the specific make-up of the employer population involved.

### SUMMARY OF FINDINGS

TABLE 1: PREMIUM EQUIVALENT TO MESA PREMIUM COMPARISON

PLAN	DESIGN (Ded./MOOP/Coins.)	ACTUARIAL VALUE	HDHP Loaded Premium	MESA Loaded Premium	MESA Cost Difference
Plan 1	\$2,500/\$6,000/20%	69%	\$283.01	\$276.01	-2%
Plan 2	\$5,000/\$6,600/10%	63%	\$258.68	\$258.68	-5%
Plan 3	\$6,000/\$6,800/15%	61%	\$250.33	\$240.32	-4%

Ded: Deductible; MOOP: Maximum Out-Of-Pocket; Coins: Co-insurance

There are several assumptions that should make the findings in this table more obvious:

1. All MESA Plan Members go to contracted providers whose contracted amount is equal to the MESA. As a result, there is no cost sharing for the plan member.
2. All costs above the contracted amount are the responsibility of the provider.
3. Since the episode costs are not subject to any cost sharing, savings must be achieved on the cost of each episode in order for the MESA Plan premium to be cost effective, and the savings must equal or surpass the cost sharing specific to the benefit package selected for the premium equivalent. This may not represent an exact matched relationship between the Actuarial Value (AV) of the plan and the savings needed, but is a reasonable assumption.

### CALCULATING PREMIUM EQUIVALENTS, MESAS AND CORRESPONDING CONTRACTED EPISODES

A large commercial dataset covering HMO, PPO, and POS plans from CY2013 - CY2014 was used as the base data for this analysis. For each calendar year, the paid encounters and episode costs were grouped into specific categories of service. These categories included: Inpatient Behavioral Health; Inpatient Acute; Hospital Emergency Room; Outpatient Behavioral Health; Outpatient Acute; Preventive Care; Laboratory/Radiology; DME;



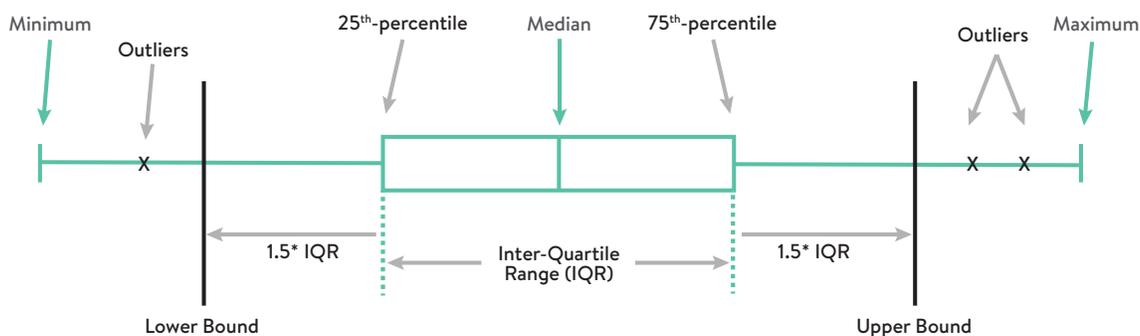
Professional Non-Preventive; Pharmacy; Other. The HMO and PPO experience for each calendar year was blended together using a 50%/50% blend, and the POS data was excluded as it did not represent the expected experience under the MESA program. This blended experience for each calendar year was then blended together across calendar years using a 50%/50% blend to develop the final base data that serves as the basis for both the premium equivalent development and the MESA premium development. The premium equivalent was priced out to reflect common benefit packages provided by a self-funded employer. Three high deductible benefit packages were chosen, with actuarial values (AV) ranging from 61% to 69%. This means that the premium equivalent paid by the member is expected to cover 61% to 69% of their medical expenditures, and the remaining 31% to 39% is expected to be paid out of the member's pocket throughout the year. The premium covers medical expenses—both episode and non-episode related—and includes provisions for administrative and other non-medical expenses.

**TABLE 2: PREMIUM EQUIVALENT**

PLAN	DESIGN (Ded./MOOP/Coins.)	ACTUARIAL VALUE	ALLOWED AMOUNT	PAID AMOUNT	NON-MEDICAL LOAD	LOADED PREMIUM
Plan 1	\$2,500/\$6,000/20%	69%	\$382.39	\$264.62	6.5%	\$283.01
Plan 2	\$5,000/\$6,600/10%	63%	\$382.39	\$241.86	6.5%	\$258.68
Plan 3	\$6,000/\$6,800/15%	61%	\$382.39	\$234.06	6.5%	\$250.33

Episodes were developed using the PROMETHEUS Analytics®. There are two unique features embedded in that analytic system that have an impact on the results. First, the PROMETHEUS model splits services for any given episode into typical and potentially avoidable complications (PACs). PACs can be expressed as a dollar-denominated rate per episode average costs and represent a natural cost compression point. In order to calculate target episode costs. The cost per episode used to analyze varying levels of contracting with participating providers was adjusted to reflect the removal of outliers, and was also adjusted to reflect a reduction in the PAC rate for each episode. The process to remove outliers used a standard Box-Plot methodology that auto-adjusts the outlier trim based on the inter-quartile range for each episode type as illustrated below.

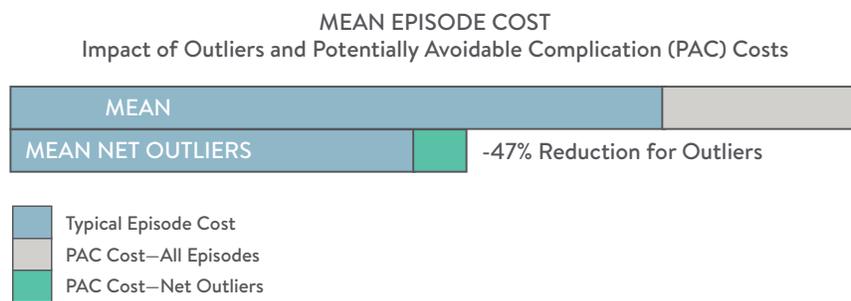
**FIGURE 1: BOX-PLOT OUTLIER ILLUSTRATION**



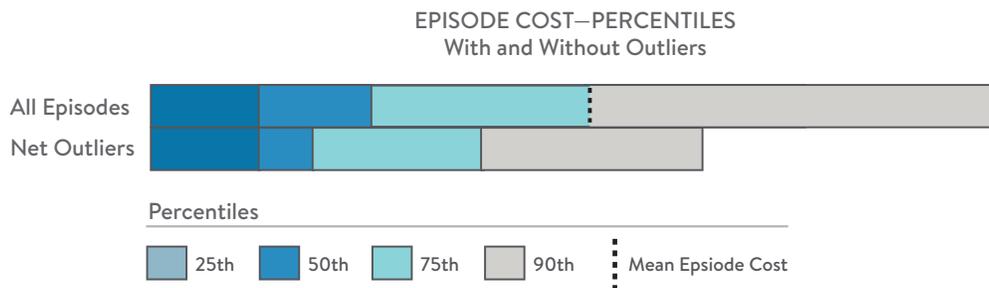


Outliers represent less than 10% of the total number of episodes in the base data, but can have a significant impact on the mean episode cost and the percentiles of episode cost. Figure 2 below shows the impact that outlier episodes have on mean episode cost, with reductions to the mean of 47%. Outlier episodes also have a much higher PAC rate, as can be seen in the reduction in the PAC rate between all episodes and non-outlier episodes. Figure 3 below shows how the percentiles of episode cost are impacted by outlier episodes, with the most significant impact occurring for the higher percentile—75<sup>th</sup> and 95<sup>th</sup>—episodes. PAC rates also vary by percentile, and tend to increase as a percentage of total episode cost as the percentile increases, indicating that PAC rates are a driver of increased expenditures.

**FIGURE 2: IMPACT OF OUTLIERS ON MEAN COST AND PAC RATE**



**FIGURE 3: IMPACT OF OUTLIERS ON EPISODE COST PERCENTILES**



The implications are significant because reducing complications, or shifting the costs of existing complications on the provider through episode of care contracting, significantly reduces the mean cost of episodes and, as a result, plan costs.

The cost per episode used to analyze varying levels of contracting with participating providers was adjusted to reflect the removal of outliers, and was also adjusted to reflect a reduction in the PAC rate for each episode. As can be seen in Figure 3, the impact of outliers is significant, as they are highly influential on the average cost of the episode but represent a small portion of total episodes. These episodes, as they are outliers, do not represent the normal expected cost of each episode, and so were excluded from the data used to determine the contract amount for each episode. We are assuming that outlier episodes will still exist in the coverage period, but fall outside the range of manageable episodes, and may ultimately be subject to stop-loss insurance purchased by providers. PAC rates were reduced



to incentivize providers to avoid these types of services, and to reflect a higher quality of care assumed to be provided by the MESA Network providers.

The current analysis selects the 50th percentile of non-outlier episode costs, with a 20% reduction to PAC rates as an initial starting point and results in a cost-effective MESA premium. All costs outside of those included in episodes were treated in a manner equivalent to the HDHP.

**TABLE 3: MESA PREMIUM DEVELOPMENT**

PLAN	DESIGN	ACTUARIAL VALUE	NON-EPISEDE RELATED ALLOWED AMOUNT	PAID AMOUNT	MESA PAID AMOUNT	TOTAL PAID AMOUNT	NON-MEDICAL LOAD	LOADED PREMIUM
Plan 1	\$2,500/\$6,000/20%	69%	\$321.46	\$215.63	\$42.44	\$258.07	6.5%	\$276.01
Plan 2	\$5,000/\$6,600/10%	63%	\$321.46	\$187.24	\$42.44	\$229.68	6.5%	\$245.65
Plan 3	\$6,000/\$6,800/15%	61%	\$321.46	\$182.26	\$42.44	\$224.70	6.5%	\$240.32

The upshot is that this analysis suggests that if providers were contracted at a certain level (e.g. that of high performers), the actuarial value of the MESA plan can be equivalent to a variety of high deductible health plans. There is however, another mechanism that can be used to reach a similar conclusion and that will depend on local market dynamics, namely to calibrate the MESA allowance in such a manner that it will, in fact trigger a deductible. That may be necessary when providers in the market require more than the 50th percentile of non-outlier episode costs modeled here. However, even with a \$1,000 deductible triggered on top of a MESA, the employee would be substantially better off than in the traditional high-deductible health plan.

In other words, actuarial equivalence can always be achieved by the combination of episode cost compression and post-MESA deductible, and the local market dynamics will likely dictate where to set the levels of each. As is the case for all actuarial analyses, there are some caveats and limitations. These include:

- **NETWORK ACCESS AND CONTRACTS**—the ability to achieve savings is highly dependent on the price per episode compared to the historical average and the corresponding number of providers willing to enter into downside financial risk contracts at that price.
- **RISK SELECTION**— the MESA Plan increases its likelihood of success by enrolling patients with higher risk profiles because that creates a higher target range for episode prices, which may attract more providers. But the opposite may happen.
- **PROVIDER EFFICIENCY**—providers that choose to participate may be skewed towards those that are efficient and currently able to provide care at a lower cost than the current average episode cost. Contracting with these providers at the median of the historical prices may lead to a net increase in medical costs. This suggests that pricing of the provider contracts should be reviewed carefully ex ante and modeled to determine effect on plan costs and AV.
- **EPISEDE MIX**—the use of episodes by MESA Plan members can vary between the historic claims period used to develop the MESA premium and the actual contract period that the premium covers. To the extent that this use varies significantly, then the MESA premium received may vary significantly from the expenses incurred for episode-related expenditures. This issue may be exacerbated by new practice patterns and/or adoption of new and more expensive technology with greater therapeutic impact.



- **INDUCED DEMAND**—the allowance provided to members for episode costs will allow them to receive services with little to no cost sharing, which removes significant financial hurdles. The result may be members choosing to participate in episodes that have a pent-up demand that they may not have otherwise chosen to incur services for if they had to pay a significant portion of the costs. This may result in a change in mix of utilization of episodes, and result in the MESA premium being inadequate in the short term. However, the cost of these “induced” episodes is likely, on average, to be lower than the historical average, which will lead to a decrease in the new average that will be used to contract the following plan year.
- **EMPLOYER REINSURANCE**—there is no allowance in the analysis for the cost of reinsurance, nor any assumption that reinsurance costs would vary significantly from current levels post MESA Plan implementation.
- **PROVIDER STOP-LOSS**—providers will be taking on financial risk relative to expenditures that are above the contracted amount they have agreed to for each episode, and should consider purchasing stop-loss insurance to protect against large outlier episode expenditures. This may be at the individual provider level, or at a convener level if there is a larger provider group taking on risk for individual providers. The unavailability of provider stop loss could increase the negotiated price of the episode.

## SUMMARY COMMENTS

The results of this initial modeling show that if providers accept a negotiated rate for their episode price that is lower than the historical population level, then the MESA concept may be able to curb the cost curve over time by encouraging efficient care through the use of a preferred provider panel—the MESA Network. However, it’s important to note that actuarial equivalence can always be achieved by the combination of where the episode prices and MESA allowances are set. That said, the key ingredient to success, volume of potential plan members in exchange for a negotiated episode contract, is addressed in the next section on how to scale the MESA program.



## SECTION 4

# USING TRUST BASED PLANS (TBP) TO SCALE OUT THE ADOPTION OF THE MESA HEALTH BENEFITS PLAN

The purpose of this section is to set out and explain a proposal designed to enable small and mid-sized employers and their employees to leverage their combined health care services purchasing power. The proposal revolves around the creation of individual Trusts by employers. These Trusts can aggregate their purchasing power without forming a Multiple Employer Welfare Arrangement (MEWA) and provide access to their respective Plan members to the MESA Network providers.

Since the passage of the Employee Retirement Income Security Act (ERISA) in 1974, many large employers have turned from the costly practice of purchasing insured health benefits coverage for their employee benefit plans from carriers in state-regulated marketplaces. By “self-funding” employee health benefits, these employers and the employees who participate in their benefit plans, can avoid paying for: (a) the weighted costs of state mandated benefits, (b) state premium taxes on the entire amount expended for health care coverage and (c) the built-in burden of state mandated reserve requirements.

While most of the innovations in health benefits plan designs have and continue to come from large self-insured employers, most of the nearly 155 million Americans who obtain health benefits from their employers receive them from medium and small-sized companies (i.e. companies of less than 1,000 employees). These companies rarely have enough of a critical mass in any given area to impact the local health care market. That’s especially true for the MESA Plan because it relies on the ability to contract with providers who will take financial risk for the management of patients. And since the budgets for patients are likely to be adjusted for their severity of illness, having a small number of covered plan members can create significant imprecision in those adjustments.

A Trust-Based Health Benefit Plan(TBP) can help these medium and small-sized employers achieve the goals of the MESA Plan by aggregating their purchasing power in a manner that maintains all of the advantages of an ERISA self-funded plan. Their aggregation is, as explained further, nominal, in the sense that risk and reward of each employer’s participation is not aggregated and averaged across all, but rather each employer’s individual actuarial experience is maintained. Importantly, the TBP can achieve the two principles goals of the MESA Plan: contracting with high quality providers accepting financial risk, and encouraging volume to shift to those providers.



The TBP structure<sup>24</sup> can achieve this volume through a variety of means:

- **Each TBP is sponsored by a Trust that is created by an employer. The Trust is the sponsor of the self-funded health benefit plan that is available to the employer’s eligible employees and their eligible dependents. The Trust is administered by a Trustee with whom the employer contracts to perform that function. That Trustee can be the Trustee of multiple Trusts, each of which have been created by a single employer and sponsors a benefit plan that is open only to the eligible employees of the employers and their eligible dependents. In that capacity, the Trustee can contract with providers (the “MESA Network Providers”) and provide access to the MESA Network Providers’ services to the Participants of each Trust’s plan.;**
- **Alternatively, the Trustee, again in its capacity as the Trustee of each Trust individually, can contract with a Third-Party Administrator on behalf of each Trust separately, and the TPA would contract with providers to include them in the MESA Network. The MESA Network provider would agree to offer its services to all of the Members of all Plans that are a client of the TPA pursuant to the contract with the TPA.**

### AGGREGATING EMPLOYERS THROUGH THE TBP

One way to picture the benefits of the TBP scaling solution, structurally, is to begin by looking at the relationship between isolated, self-funded purchasers (companies), represented on the left side of Figure 1, by bars of relative length that represent different company sizes with divided and uneven purchasing clout. The other side of Figure 1 depicts the fragmented delivery system that produces healthcare services in an uncoordinated environment where doctors, hospitals and ancillary providers typically work in discontinuous siloes. Even though these providers may be managing the care of the same patient for the same episode requiring a specific treatment, they typically are not designed to communicate with each other contemporaneously or efficiently to develop a joint optimal care protocol for the patient.

Nor, typically, can they know what happens to the patient once s/he leaves their walls. For a simple cold requiring a single office visit, this does not present much of a problem. But for complex episodes like surgeries or treatment of chronic diseases, where coordinated management is indispensable to quality care, this disconnection can have enormous adverse health and cost consequences. Most employers, if their attention were focused on health care delivery in the same manner that their attention is focused on purchases for their business operations, would correctly interpret this pattern as presenting an almost complete lack of supply-chain management.

Exacerbating and reinforcing the problem is how all these providers get paid, represented by the “nebula” of FFS reimbursements between the employers and provider “networks”. Since none of the providers is at economic risk for competing episode of care product lines, they only have two economic incentives: maximize both FFS retail unit prices and volume of services performed. This, in turn, creates a perverse incentive that rewards high defect rates in the delivery of care.

More to the point, the lack of purchasing aggregation among employers that comes as a result of the ERISA exemption (because each employer is its own independent plan) means that FFS is structurally “baked in”. The thousands of payment codes in the FFS “nebula” is

<sup>24</sup> See Appendix D for a detailed description of the Trust-Based Health Benefits Plan (TBP) legal, operational and financial structure



the only statistically defensible payment mode (from the providers' point of view) that can economically work given how small and divided the individual employer purchasing pools are. In other words, fragmentation on one side of the ERISA partition begets fragmentation on the other side, and so constitutes a mutually self-reinforcing feedback loop. While some of this is mitigated when employers contract with a regional or national TPA that acts as an aggregator, that TPA has very little incentive to actively reduce costs of care because all of the benefit of that cost reduction inures to the self-insured employer, and not the TPA.

**FIGURE 1: THE CURRENT TRANSACTIONAL RELATIONSHIP BETWEEN SMALL EMPLOYERS' HEALTH PLANS AND HEALTH CARE SERVICE PROVIDERS**



The TBP structure can help solve this problem by aggregating the employers (organized in their own individual Trusts, but assembled into a “Trust of Trusts”) and, by its very structure, making sure that all of the benefits of the MESA Plan and, in particular, the contracted MESA Network Providers, inures back to each employer. The ability of the TBPs to reap the benefits of the value based contracting that their Trustee/TPA can achieve conforms to the ERISA’s requirement that the assets of a benefit plan must be used exclusively for the benefit of the plan’s members and the plan’s administration.

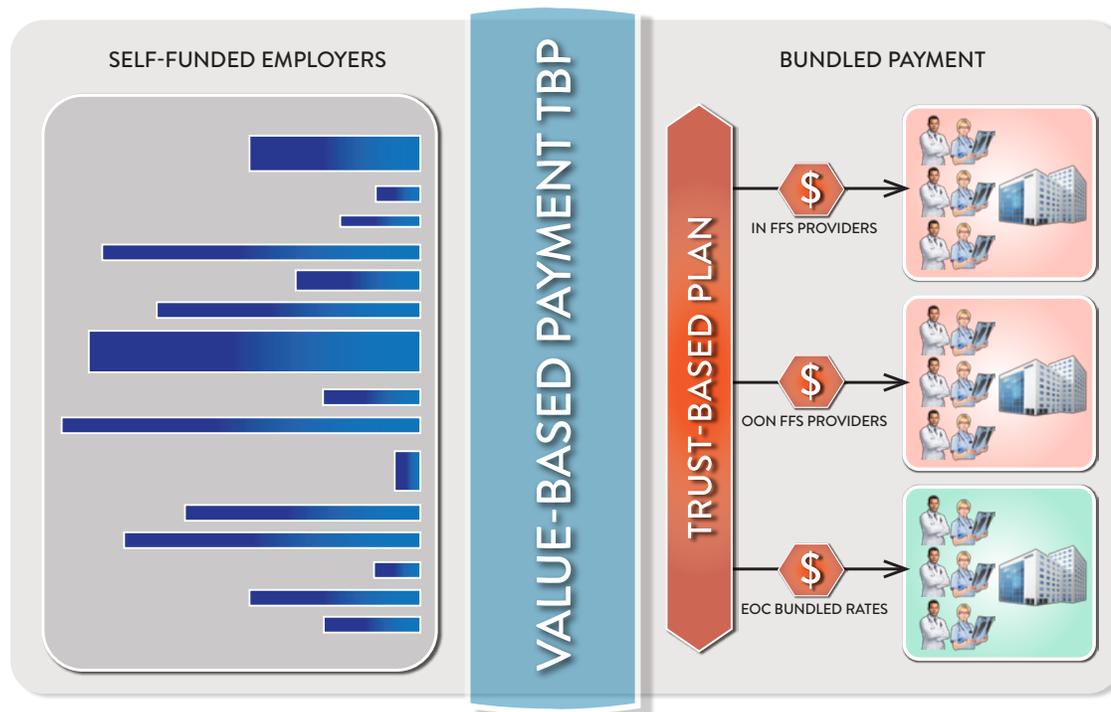
This arrangement is legally and financially indistinguishable from the self-funded Administrative Services Only (ASO) contracts ERISA plans have with TPAs through which the plans obtain access to the network providers’ services and rates that have been negotiated by the TPAs. And thanks to this aggregation, providers are offered access to a large population of covered. Critically, from the perspective of the providers, this structure offers them the same administrative efficiencies that exist when they are dealing with a single very large payer. All of the accounting work for the proper attribution of the payment obligation for a provider’s covered services to the appropriate TBP is performed by the Trustee/TPA. All disputes concerning payment and coverage of services involving the providers that arise are handled by a single entity—the Trustee/TPA. This is the essence of MESA network contracting.



In Figure 2, we see the same basic structure as in Figure 1, except that the many TBPs, operating through the Trustee/TPA, are now presented to providers as a single large purchasing and administrative entity. Notably, neither the employers nor the Trusts integrate their businesses or financial affairs in any manner or for any purpose. Each of the plans created by the employers through the sponsoring Trusts retains its separate legal identity, and only utilizes its assets and resources exclusively for the benefit of its plan members and the administration of that plan alone.

The only “integration” that occurs is virtual and affects only the providers’ perception of the purchasing leverage the plans represent to them. Under the status quo, the employers are perceived by providers as small and uncoordinated purchasers having 50 or 100 or 450 employees. When employers create TBPs administered by a common Trustee/TPA, they now “appear” to providers as a unified bloc of thousands of employees.

**FIGURE 2: TRUST BASED PLAN CONTRACTING ON BEHALF OF ALL PARTICIPATING EMPLOYERS**



### SUMMARY COMMENTS

The Trust Based Plan approach could help to significantly and rapidly scale the adoption of the MESA Health Benefits Plan by enabling a number of small and medium-sized self-insured employers to create the market impact that is most often reserved to larger employers. But beyond the ability to scale in participation, the MESA Plan must be operationalized in such a manner that it can be scaled operationally. In the next section we will describe how the MESA Operating Environment can be built in such a way to enable that scaling.



## SECTION 5

# THE MESA PLAN OPERATING ENVIRONMENT

This section will describe the PROMETHEUS contracting and MESA Benefits system. Before we delve into the architecture described below, we note that ultimately the MESA OE must be agnostic as to metadata models and contracting methods; that is, to be fully scalable, it must incorporate models other than PROMETHEUS. We focus on PROMETHEUS because this is the system we are most familiar with, and to our knowledge, is the most fully developed model suitable to early stage implementation. Hopefully, with accelerating adoption, other models will be quickly incorporated.

As a part of the Blueprint operational scope, it is important to render an understanding of how a MESA group health plan benefits fits into overall plan mechanisms, i.e., TPA, Provider Networks and ASO arrangements. Initially, at its core, a MESA Plan will revolve around PROMETHEUS Analytics® in order to build out the contracting, information systems and benefits modules around an episode of care analytical system. As the proof of concept matures over time, other episode of care analytical systems could and should work as well as the PROMETHEUS Analytics® approach. Over time, our intent is not to make MESAs PROMETHEUS-centric, but rather episode of care centric, irrespective of the episode of care analytical system. However, given that our starting point is to leverage the PROMETHEUS Analytics®, much of the content in this section relies on the underpinnings of that software, including its episode definitions, referred to as the Evidence-informed Case Rate (ECR) metadata.

As described in Sections 2 and 3, the MESA benefits plan is a group health plan that includes specific and unique features. One of those features is the triggering of a spending allowance for specific events and/or conditions. Another is a comprehensive wellness program. And of course, for those who simply require a modest amount of health care services, the underlying base group health plan offers traditional coverage. It is, for all intents and purposes, a stand-alone plan and not an “add-on” to an existing plan. As a result, employers would offer a MESA benefits plan as an alternative to their current plan, and the MESA operating environment is the technical solution required to administer the plan.

The MESA OE can be bolted onto an existing third-party administrator or built with embedded TPA functions. This provides employers with the flexibility to leverage existing TPA relationships, to the extent the TPA has the technical wherewithal (and the administrative will) to seamlessly integrate with the MESA OE.

The most important concept embedded in the MESA OE is that of rapid-cycle feedback loops to employers, plan members, and providers. The success of the MESA Plan is tightly linked to the ability of patients to make informed decisions, manage and track their care, as well as adhere to recommendations given by their clinicians on how best to manage their condition(s). The success is also tightly linked to the ability of providers to track incurred



costs against contracted budgets, patient progress along the continuum of care, and patient compliance with treatment protocols and guidelines. The more precise and frequent the reports to providers and patients, the better the results will likely be, because both parties are actively engaged and wedded to the positive outcomes of care.

Further, providers need information on how best to contract for risk-based arrangements, which other clinicians they should partner with to manage the patient's condition(s), and the effectiveness and efficiency of downstream providers. All these information flows require the development of new tools that give the ultimate decision-makers—clinicians and their patients—the data they need to make the best possible decisions. That's what the MESA OE is designed to produce.

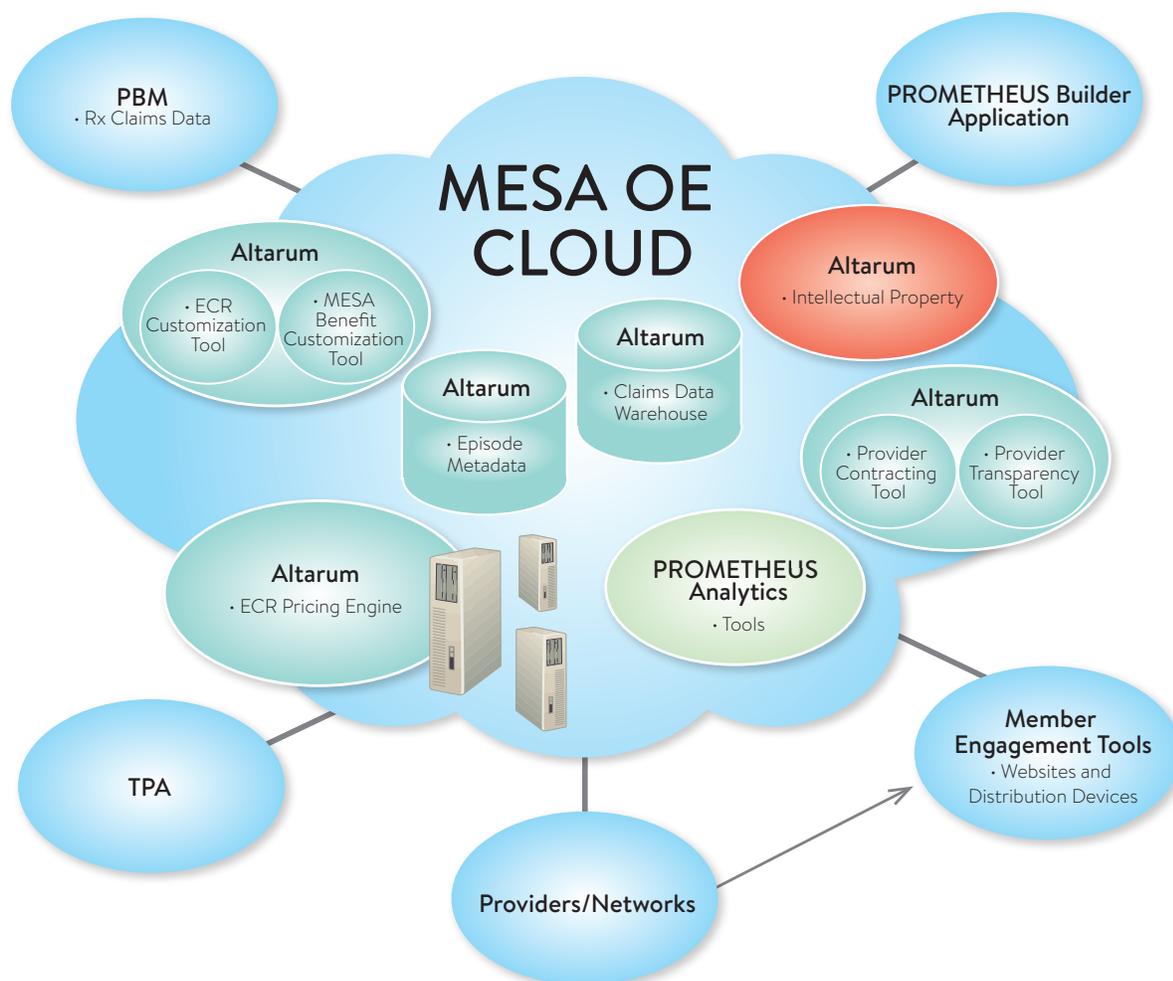
Combined in one operating environment, the MESA OE will provide TPAs with the software systems necessary to allow customization and administration of MESA contracting processes and benefits administration tools to facilitate provider network development & ECR contracting, along with a full spectrum of member engagement tools to operate MESA benefits. Providing these services requires several integrated subsystems that will be outlined in this section. The MESA OE will be implemented using Cloud-based services and processing facilities that can be customized to provide TPAs with isolated environments (where required), along with a full service, multi-tenant environment to pool resources and provide lower cost solutions to execute the MESA system for self-funded employers. The subsystems are:

- 1) **ECR/MESA Definition Maintenance (Builder)**—ECR definitions are central to this innovative healthcare reimbursement model. Details of ECR's, their composition and how they operate can be obtained through the PROMETHEUS Metadata API, but the system for establishing the base metadata and customizing the base ECR definitions to meet individual plans and provider/network contracting needs is the starting point for the ECR/MESA OE. Data warehousing, analysis and modeling tools, along with a web-based UI interface for customizing ECR metadata is one of the two primary components this subsystem. MESA benefits structure will require the capability for the Healthcare organization to define and maintain multiple benefit plans. The second component of this subsystem will be a web-based UI to define and maintain the benefit plans. It is based on the Altarum PROMETHEUS Builder.
- 2) **ECR/MESA Processing Engines**—Consists of a scalable ECR contracting engine and a plan benefits processing engine implemented using a service based design model that will allow performance scalability and load handling capacity capable of servicing small, medium, and large plan clients. The ECR/MESA metadata and construction logic will be implemented using component objects and interface classes, allowing quick and easy modification of the ECR rule and MESA metadata values and structure as this processing model matures. The Engines will process the business rules for operating MESA episode of care contracting and benefits regimes.
- 3) **Provider/Network Development & ECR Contracting**—Web-based ECR contracting tools are essential to a TPA successfully implementing a wide ranging ECR reimbursement system. The ECR tools will facilitate the introduction of ECR reimbursement to providers and healthcare institutions, by providing information, statistics, and interactive ECR examples. The demonstration example will include triggering of ECR budgets with selectable Potentially Avoidable Cost (PAC) adjustments for both Acute and Chronic episodes, and reimbursement scenarios interactively played out with the provider. The contracting tools will also allow providers to customize or case bind the ECR definitions to fit their care collaboration models. The contracting tool will feed exception based customizations to the ECR metadata database that will be the highest level override to the base ECR definitions.



- 4) **Provider Episode Management Tool**—This web-based tool will give the providers the capability to interact with the MESA benefits engine to provide supplemental clinical data that will enhance patient budget customization and proactively trigger MESA benefit budgets for patients when plan requirements have been met (non-claims based triggers).
- 5) **Provider Communications**—A website deployable standalone or integrated with the TPA's existing provider website. This site will provide ECR related information services such as the ability to monitor the status of the providers current and historical ECRs; review ECR contracts between the provider and TPA; communicate with TPA network management to resolve problems and conflicts in ECR reimbursement, and administer online ECR billing.
- 6) **Member Engagement Tool**—A website and personal device (smart phones, tablets, etc.) deployable tool, mentioned in the MESA Introduction Section. This capability will illuminate the reference benefit and provider cost/quality transparency tools that will allow selection of provider scenarios for Treatment MESAs, wellness programs and benefits, patient education content, and comparative out-of-pocket expense scenarios.

FIGURE 1: MESA OE CLOUD-BASED CONFIGURATION





The PROMETHEUS Analytics® package is the central technology core of the Blueprint MESA OE; all product features such as provider contracting tools, Medical Episode Spending Allowances, user interfaces (consumers, providers and employers), and analytics are based on the ECR metadata and episode construction rules.

In March 2012, CMS awarded a contract to a Brandeis University-led coalition to build a “grouper” for Medicare, as stipulated in the Affordable Care Act. The Grouper is designed for generating physician resource use reports and informing the fee schedule value modifiers. HCI3 (now Altarum Institute), part of the coalition, has taken the winning prototype model, PACES (Patient Centered Episode System), and adapted it for commercial and Medicaid populations. This revised system, PROMETHEUS Analytics®, is designed to generate metrics of costs and quality of care, and to function as a value-based provider contracting method. It is the first episode logic system designed to operate both as an analytics and contracting tool: the MESA OE will take it to scale for employers, TPAs and health plans.

The PROMETHEUS Analytics® system is a multi-tiered model that begins with individual patients and the episodes they trigger at the lowest level, to an association logic that ultimately rolls them up to global populations, permitting both specific individual drill-downs and global trend estimates. At all these various levels (there are 5), it is possible to distinguish clinically indicated care and its costs from the costs of care due to “defects” in the provision of care. And since reducing care defects is an important federal payment policy, the stage is set for a new operating platform that can make these goals a widespread reality. The leveling logic is important because it allows for a variety of Value-based Contracts with potential MESA provider contracts from simple, one-off bundled payments, to Medical Homes, and all the way to ACOs.

Each ECR includes all services performed for the care of a particular clinical condition (a Condition Episode) or for some subset of the condition, such as the services performed in association with a procedure (a Procedural Episode) or an acute event (an Acute Medical Episode). Episodes are limited in time, triggered by specific occurrences, and inclusive of defined types of services. They are designed to be clinically meaningful within themselves and relative to other Episodes.

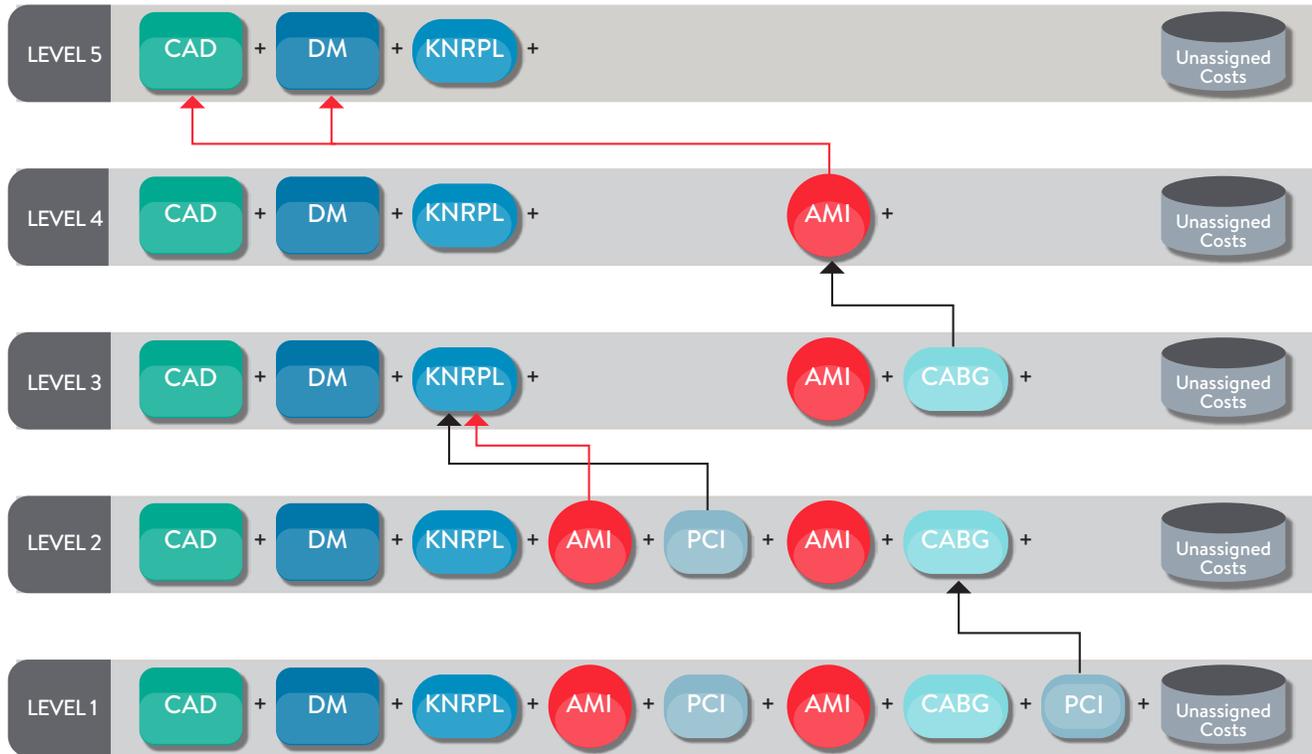
ECR building and reporting involves:

- a. Clinical Logic—which has to be fully vetted and reviewed by external stakeholders**
- b. Episode Construction Logic—which associates services to triggered episodes, and then associates episodes to one another, based on the clinical logic.**
- c. Risk Adjustment—which is needed to create the expected future costs of an episode in order to compare it to the actual costs.**

The boundaries of an episode are defined by time and granular codes, including ICD Diagnosis and Procedure, CPT, Revenue, DRGs, and Pharmacy codes. ECRs incorporate all ICD diagnosis and procedure codes (including ICD-10), CPT and revenue codes, DRGs and pharmacy codes. Wherever applicable, all codes are cross-linked to the AHRQ-Clinical Classification Software, the AHRQ-Clinical Analytical Model, the BETOS classification and all are tied to an MDC.



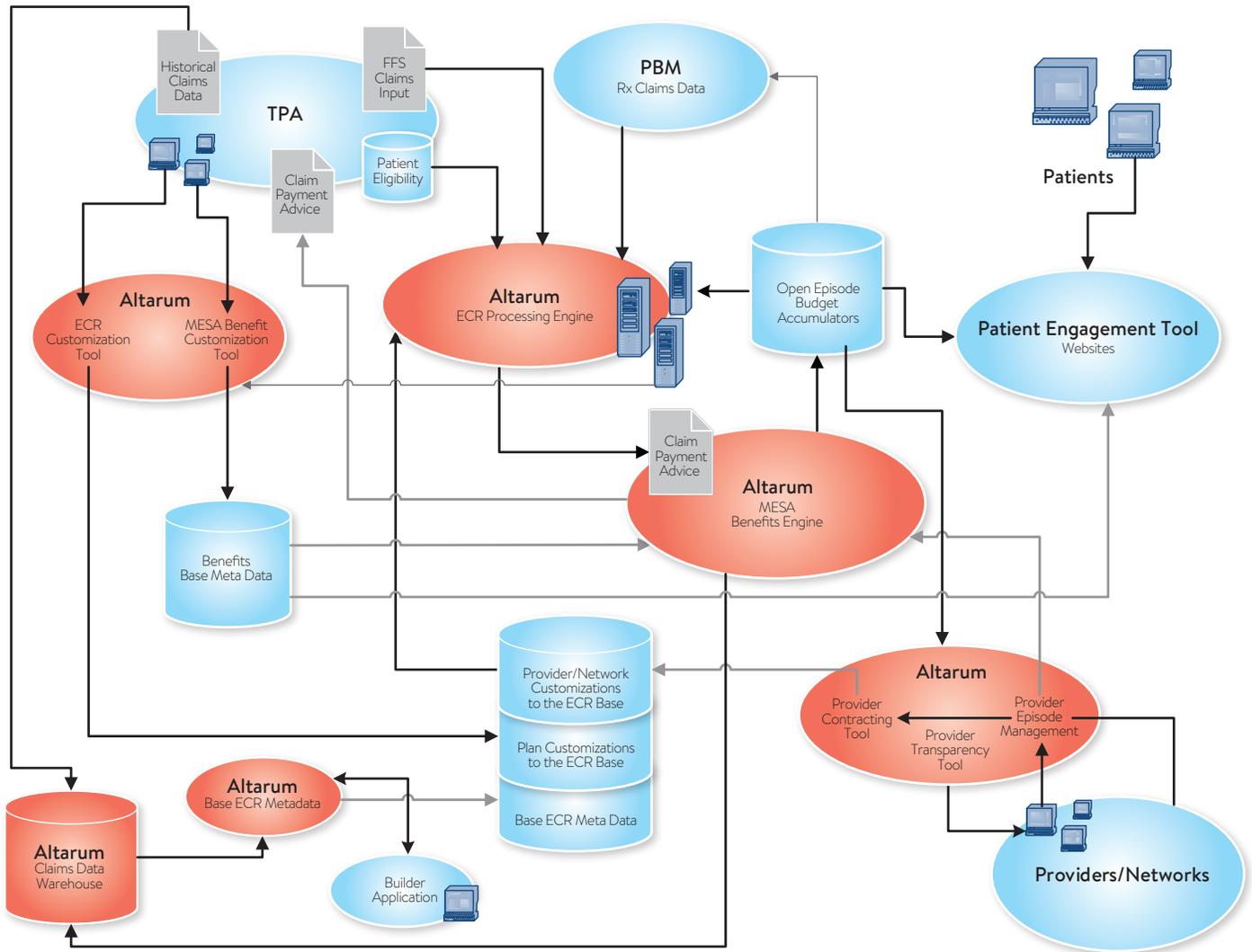
FIGURE 2: ASSOCIATIONS EXAMPLE FOR PROMETHEUS LOGIC



At each level, the sum of all episodes plus unassigned claims is equal to total costs of care. The association levels provide a better understanding for each provider of the manner in which certain episodes are linked to others (because one is a treatment for another, or one is a complication to another). For example, the Coronary Bypass is a treatment for the second AMI, and the AMI itself is a complication of the patient's CAD. We provide Figure 2 as a high-level example of the type of logic that will have to be programmed into the MESA OE. Full business rule documentation would go well beyond the scope of this Blueprint, but can be obtained from the Altarum Center for Payment Innovation under license.



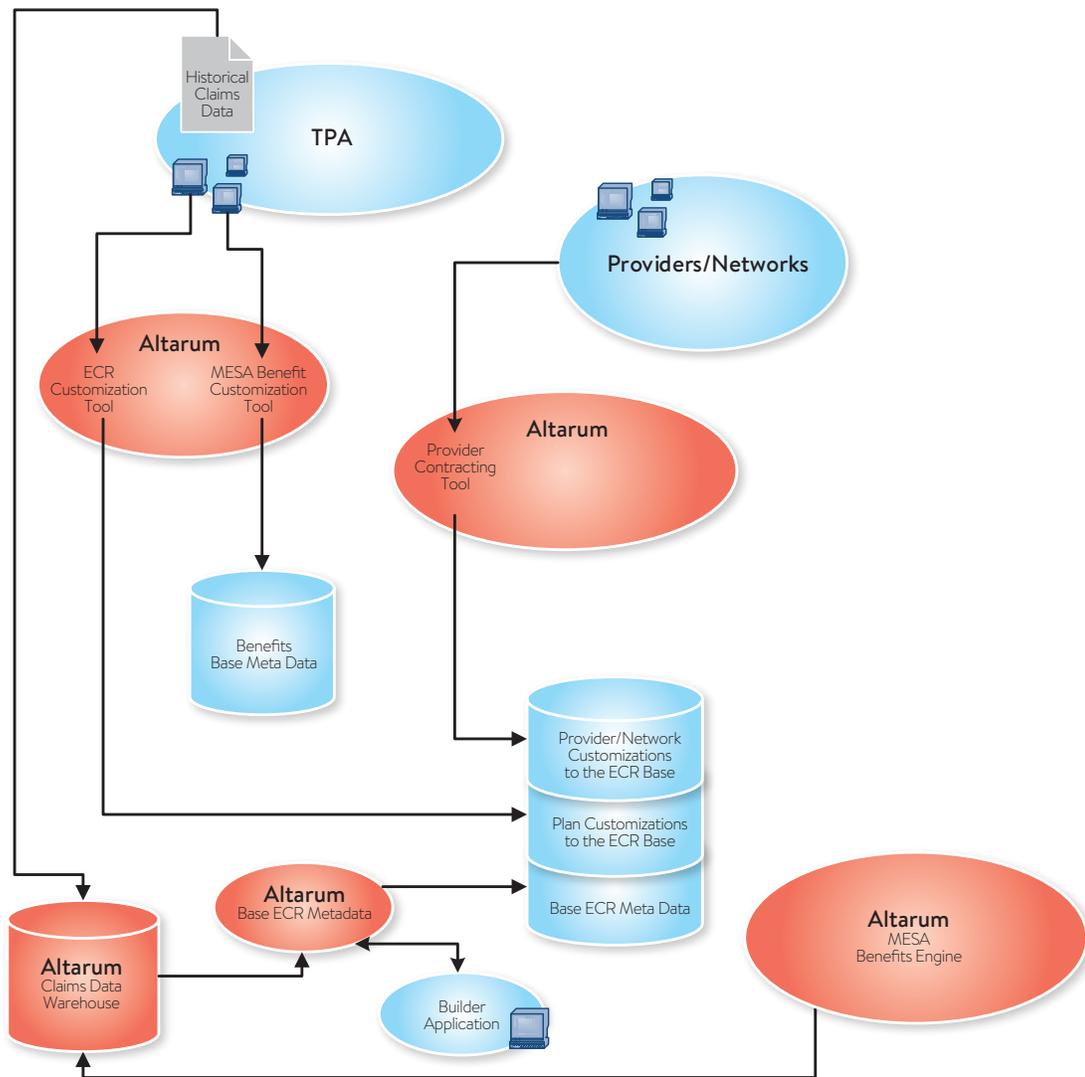
FIGURE 3: DATA FLOW ARCHITECTURE FOR MESA OE





## ECR/MESA DEFINITION MAINTENANCE

FIGURE 4: ECR/MESA DEFINITION MAINTENANCE SUBSYSTEM



- **The Builder Application**

This is a web-based application that will allow review, editing, and development of ECR definition metadata. In conjunction with Altarum, TPA administrators and contracting physician organizations will use this portal to review proposed changes to existing ECR or PAC definitions, develop new definitions, and provide clinical critique as input to the release process for base ECR metadata. Altarum analysts will review and mediate the submission process. Periodically new releases of the base ECR Metadata will be released from the Altarum Master Builder, and TPA's using the ECR/MESA OE will be able to load the release into their ECR definition database.



- **ECR Customization Tool**

Plan administrators will use this web-based tool to make override customizations to the base ECR Metadata. It will allow the review of the ECR and PAC definitions in the base metadata as well as insert exception based customizations to any base definition in the data base as proscribed by the plan administrator.

- **Provider Contracting Tool**

One of the functions of the Provider Contracting tool will be to allow provider and networks to make exception based customizations to any of the Base or plan customized ECR and PAC definitions in the ECR database. This will allow contracted providers to customize the definitions where necessary to ensure claim adjudication will match contracted parameters. Allowing this type of customization is expected to increase the adoption rate and comfort level of the providers with innovative nature of ECR based pricing.

- **ECR Definition Database**

This 3 tiered architecture in the ECR Definition Database will allow the greatest flexibility for customization while minimizing the maintenance required in implementing desired customizations. During production the pricing engine will apply the customizations in a hierarchical order, provider ECR definitions first, plan customizations second, and if no customizations are present using the base ECR metadata. This will allow for implementation of new base releases as they are delivered from HCI3 without altering any custom definitions that exist in the data base. This will be particularly powerful as it allows immediate adoption of new ECR's as they are developed and released.

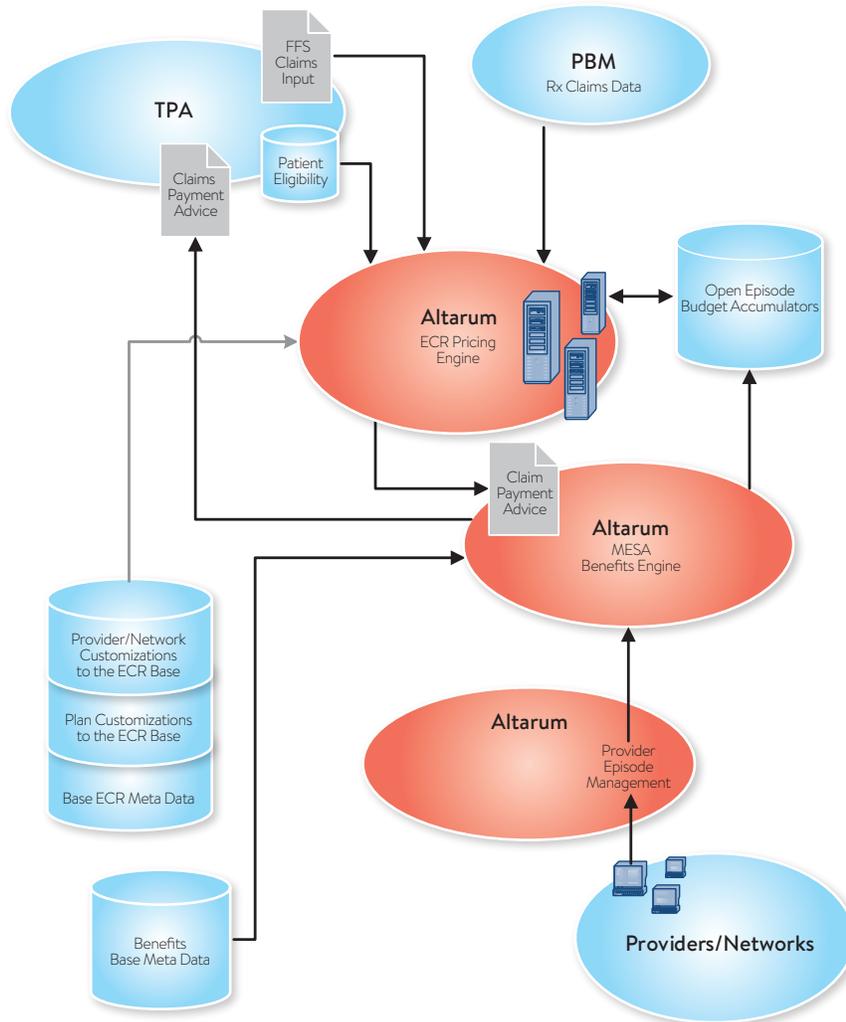
- **MESA Benefit Customization Tool**

This web-based tool will allow plan administrators to enter the benefits metadata that will define the episode based benefits for each of the employer plans that they offer. The plan benefit definitions will be stored in the benefits database and will be accessed by the benefits engine as one of the steps in claims pricing and final claim payment advice that will be delivered to the plan payment systems. These definitions will also be accessed to support the provider contracting tool, provider transparency website and patient transparency websites.



## ECR/MESA PROCESSING SERVICES

FIGURE 5: ECR PROCESSING SERVICES SUBSYSTEM



This sub-system is central to the processing of the ECR/MESA OE and consists of two rules-based engines, a Workflow Manager and a Claim Loader utility. The ECR processing engine determines patient eligibility and applies the ECR metadata to evaluate incoming claims along with PBM prescription claims. The engine establishes new episode budgets when necessary in the Open Episode Budget Accumulator database and determines proper reimbursement pricing recommendations. Re-priced claims are then passed to the MESA benefits engine where the benefit metadata is applied to make final claim payment recommendations and the completed claim payment advice is delivered back into the TPA payment systems. The Workflow Manager provides dynamic control of ECR and MESA engine instances to provide scalability in the cloud environment. As processing demand fluctuates, cloud resources increase and decrease within configured capacity parameters. Claims can be submitted either as batch files or in real time from the TPA to a Claims Loader utility. The Claims Loader generates a claim data object and submits the claim data object to the Workflow Manager. The Workflow Manager controls ECR and MESA processing engines as needed to maintain desired processing throughput.



- **Claims Loader**

Healthcare claims either submitted as batch files or in real time are formatted as individual claim data objects. The Claims Loader then broadcasts a request for processing. One of the available Workflow Managers responds with its readiness and passes its connection information to the Loader. The Claims loader then delivers the claim object to the Workflow Manager.

- **Tools**

C# .net file watcher application that picks up and processes each batch file, by reading 1 claim at a time from the file and submitting it as an object for processing in real time. A separate web service receives inbound real-time claims and submits them to a Workflow Manager.

- **Workflow Manager**

Multiple Workflow managers can be configured to start during ECR/MESA OE startup. The Workflow Manager receives a processing request from a Claims Loader and responds if it is available; otherwise, the request is forwarded to a peer instance of the manager. An available workflow manager will respond with its connection information and receive the claim object from the Claims Loader. The claim object is then processed through the re-pricing workflow.

- **Tools**

C# .net implementation of a Windows Communication Foundation (WCF) service, to receive service requests, responds to the requester if available, or passes the request on to a peer. The claim loader connects and delivers the claim object for processing and the service processes it through a re-pricing workflow.

- **ECR Rules Engine**

At startup each ECR rules engine connects to its Workflow Manager and waits for claim objects to be delivered for processing. When a claim object is received, the engine applies the ECR definitions from the ECR database to the claim data. When necessary the ECR rules engine will open a new episode budget accumulator and records the effect of the claim on the open episode budget/s that are stored in the Open Episode Budget Accumulator database. Claim payment advice is added to the Claim object and passed back to the Workflow manager for hand off to the next processing step.

- **MESA Benefits Engine**

At startup each MESA benefits engine connects to its Workflow Manager and waits for Claim objects to be delivered for processing. When a claim object arrives with ECR payment advice populated, the MESA engine applies the benefits definitions from the MESA benefits database and when necessary modifies the claim payment advice appropriately. Once all benefits rules have been processed for the claim object, it is passed back to the Workflow manager for return to the TPA systems. The MESA engine is also responsible for servicing the provider benefits manager web pages and, after all proper criteria are filled out by a provider, it can trigger the opening of a new episode budget in the Open Episode Budget Accumulator database. Subsequent claims will be properly applied to that open budget as they are received through the Claims Loader process.



- **Tools**

C# .net implementation of Windows Workflow Foundation (WWF) to allow rapid and flexible rule creation and modification for either the ECR or MESA engines. The engines themselves are simple programs to execute the base WWF workflows to properly apply the ECR and MESA metadata to the claim objects. The WWF workflow receives the claim object and executes the defined template of “rules” as required by the metadata. The rule template contains a list of WWF workflows to execute. Each workflow implements 1 “rule” definition and the base workflow loops through the template executing each rule in the template as needed.

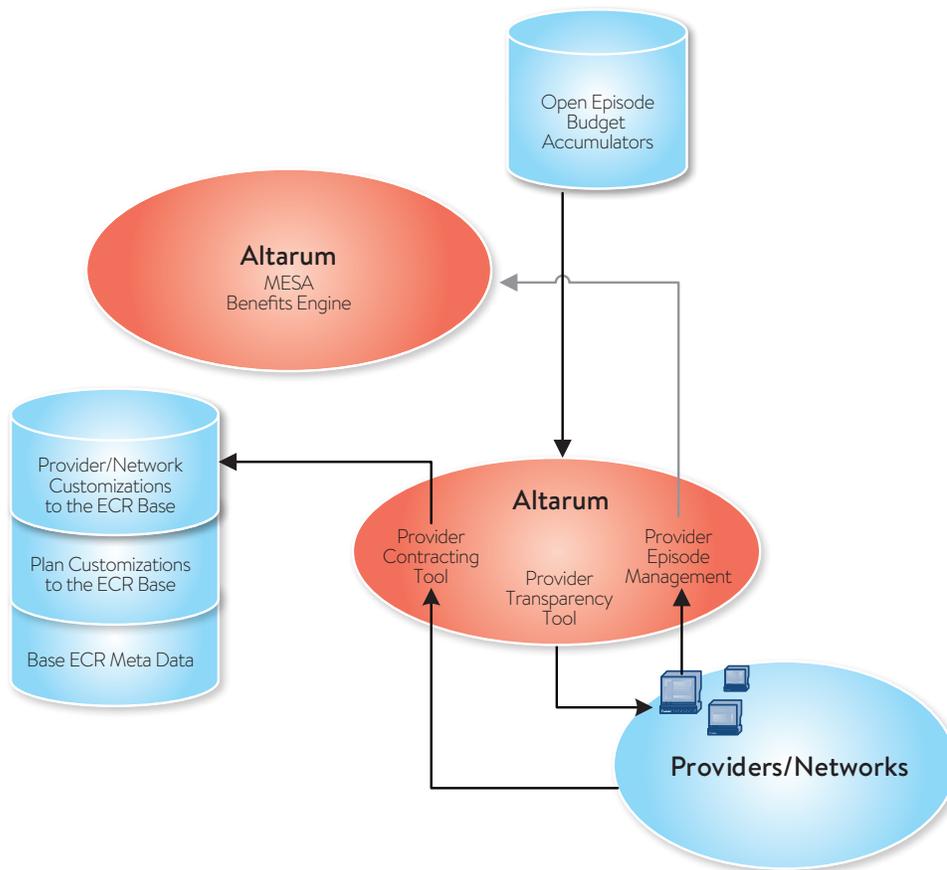
- **Data Sources Used**

- ♦ Healthcare Claims - HIPAA compliant X12 837 batch files. (whenever possible)
- ♦ Real-time Healthcare claims - HIPAA compliant X12 837 batch files. (whenever possible)
- ♦ TPA Computer Systems—Data will be accessed in one of the following ways: 1) regular file dumps of Provider and Subscriber information (least desirable); 2) direct access through stored procedure calls to the plan databases (carries some security concerns), 3) web service calls to web services developed by the TPA to provide this data in real time (most desirable)
- ♦ Claims Data Warehouse - repository for historical claims to be used in the review, analysis, and improvement of the basic ECR models.
- ♦ ECR Metadata—Definitions for ECR’s and PAC’s from the ECR database with plan and provider specific overrides.
- ♦ MESA Metadata—Employer benefits definitions for the TPA.
- ♦ Open Episode Budget Accumulators—Scorecard where the current budget balances are stored.



## PROVIDER/NETWORK TOOLS

FIGURE 6: PROVIDER/NETWORK CONTRACTING TOOLS SUBSYSTEM



This sub-system has 3 web-based UI interface tools, namely the Provider Contracting website, the Provider Transparency website, and the Provider episode management website. The Provider Contracting website will be a major contributor to the expansion of ECR reimbursement into the self-funded employer marketplace. Its purpose is to provide tools for TPA network contracting managers that will facilitate provider education, showing the innovative way in which episode budgets will be applied to their practice of medicine. The site will also facilitate contract negotiation, and contract customization. The Provider Transparency website will allow providers visibility into the reimbursement process to allow more effective control of their practice. The Episode Management website will allow the development of physician triggered episodes directly from their office by inputting test results and uploading clinical artifacts necessary to document the patient's clinical condition and provide additional data points that are not currently communicated by FFS claims alone.

- **Provider Contracting Website**

Web-based marketing materials will allow trained TPA network managers to present the basic concepts of ECR contracting and reimbursement and how it benefits the providers practice and patients. These materials will include papers, statistics, comparison of common reimbursement methodologies, and various other marketing materials as they are produced.



In addition to this general information there will be an interactive demonstration of how ECRs work and can be contracted.

The website will include a demo that will begin by requesting typical diagnosis and procedure codes for an initial contact with a patient. Specialty specific defaults will be supplied for convenience but the provider will be allowed to customize the input. This data will then be formed behind the scenes into a claim that will then be submitted in real time to an ECR rules engine. The resulting ECR information will be plugged into a visual representation of an ECR budget scorecard. The provider can then proceed in the same fashion to simulate the process of a typical ECR allowing complications and co-morbid conditions to be input to the Demo. After each “claim” submission the visual scorecard will be redisplayed to illustrate how the conditions have modified the unfolding ECR. Finally, a closing condition will be entered and the final scorecard will be displayed. There will be a demo framework for each ECR type.

Part of the ECR contracting process will include the opportunity for the provider to customize the ECR definition to the actual treatment plans that they will be using to provide ECR services to patients. The allowed modifications will be within parameters defined by the Altarum Master Builder. Pricing and reimbursement parameters will be discussed and all details captured to complete the contracting process for one or more ECRs.

- **Tools**

C#, Java#, .net, Ajax UI Framework, to present the standard ECR definition and allow permitted contract and ECR definition parameters to be captured. All captured information will be stored in real-time to the contracting data base for application to any claims coming from the contracted provider as of the contract effective date.

- **Provider Transparency Website**

The website will provide general information and communications from the plan provider relations personnel to all network providers as well as provider specific messages. Authorized users will be able to look up and view provider specific information pertaining to active and historical ECR budget scorecards for the provider’s patients. The provider community as a whole will have access to information about general issues of ECR-based contracting, and the overall performance of the provider contractors participating in the program relative to old baselines. It would inform the provider contractors about changes in treatment patterns due to following ECR guidelines.

The website will also enable providers to inform themselves of their performance in the ECR-based contract. Further, it enables comparison of a specific provider with providers managing similar patient populations under ECR contract. This will assist the provider to make immediate decisions about managing patients and future contracts.

- **Tools**

C#, Java#, .net, Ajax UI Framework, to provide content in interactive pages.

- **Episode Management website**

It is important to initiate and terminate some ECRs based on provider input rather than waiting for claims, e.g. Inpatient ECRs. Also, a provider could be a source of timely outcome information. This component will serve as a channel for such information.



- **Tools**

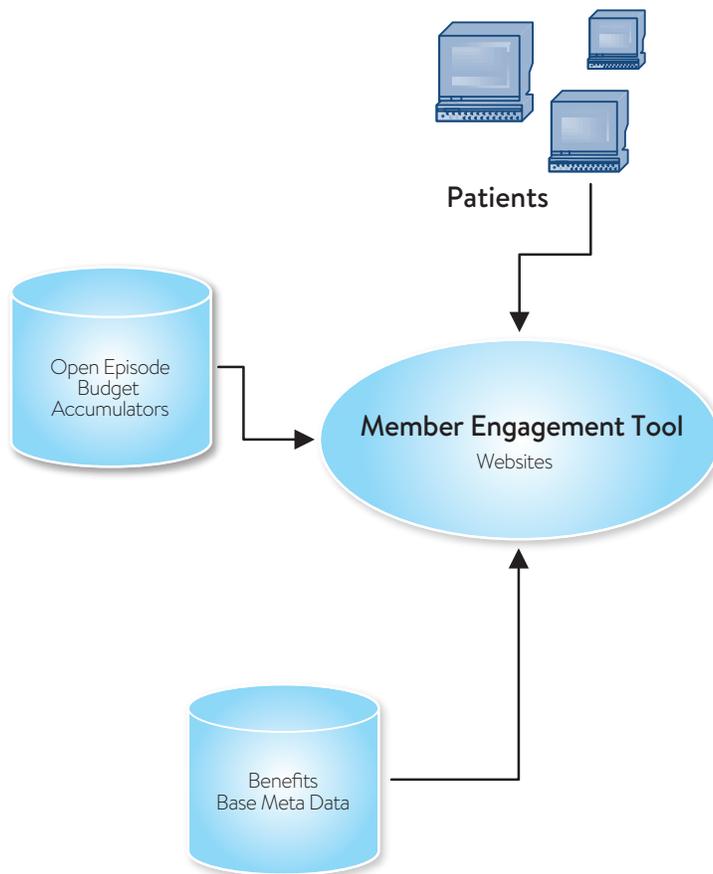
C#, Java#, .net, Ajax UI framework, to provide content in interactive pages.

- **Data Sources Used**

- ♦ **Open Episode Budget Accumulators**—Scorecard where the current budget balances are stored.
- ♦ **ECR Metadata**—Definitions for ECR's and PAC's from the ECR database with TPA and provider specific overrides.
- ♦ **MESA Metadata**—TPA definitions for the ECR Outcomes—outcome data gathered from providers and patients to supplement and enhance the ECR analysis and modeling.

## PATIENT TRANSPARENCY WEBSITE

FIGURE 7: MEMBER ENGAGEMENT TOOL SUBSYSTEM





## MESA MEMBER ENGAGEMENT TOOL

Figure 7 is the basic configuration for the internal MESA OE; however, it will complexify as outside tools from external vendors are added to bring greater employee capabilities and content.

- **Tools**

C#, Java#, .net, Ajax UI Framework, to provide content in interactive pages.

- **Data Sources Used**

- ♦ **Open Episode Budget Accumulators—Scorecard where the current budget balances are stored.**

MESA Metadata—Plan definitions for patient compliance outcomes—outcome data gathered from providers and patients to supplement and enhance wellness rewards.

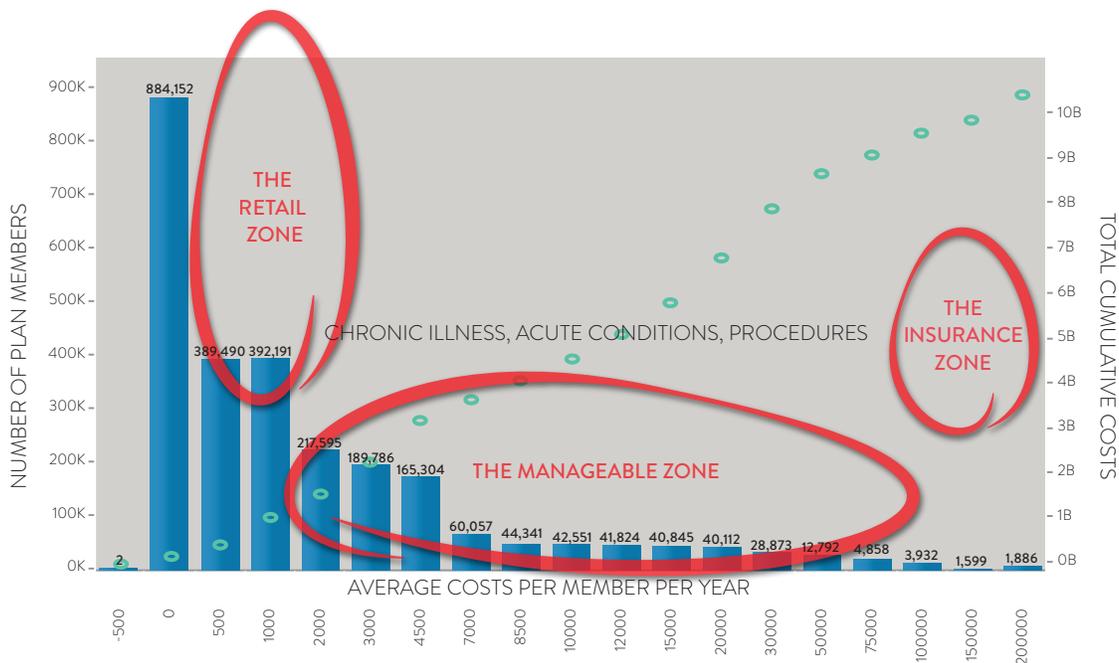


# APPENDIX A THE PROBLEM OF HDHP AND PRICE TRANSPARENCY

## WHY STANDARD HIGH DEDUCTIBLE PLANS CAN NEVER BE FULLY TRANSPARENT

This is a story that is not that hard to tell. We begin with Figure 1, which is an analysis of a very large health plan we performed that shows the distributions of costs and plan members who incur those costs. It is instructive because just about all large populations reveal these statistical characteristics. On the left, we see the “Retail Zone” where costs from 0 to about \$3,000 are incurred by the vast majority of plan members. It is Retail because the complete costs of services can be shown in full under most plan deductibles, and because the variance of costs for the same service across multiple providers can be displayed to consumers.

FIGURE 1: THE RETAIL ZONE, THE MANAGEABLE ZONE AND THE INSURANCE ZONE



So, for instance, the cost of an MRI in a given locality can range from \$450 to \$2,450, even within the same health plan. If consumers can see the price spread between providers of identical services, and the money comes out of their own pockets, it makes little sense to pay five times the lowest retail price to get the same result. But this only happens because these retail services come in under the deductible and are fully visible. As a result, numerous new business models are cropping up all around the country to contract for these types of services and make them available to plan members (often at discounts) as well as pharmacy chains building retail clinics with set prices displayed at the clinic entrance.<sup>1</sup> In The Retail Zone, a competitive marketplace is beginning to develop—as we would expect.

<sup>1</sup> See, for instance, new startups such as MDsave (<https://www.mdsave.com>), Sherpaa (<https://sherpaa.com/subscription/plans>) or pharmacy chains like CVS, Walgreens and big-box national stores like Walmart. The sick care budget in the Preventive Care MESA could be applied against these offerings.



On the right of Figure 1, we see members incurring costs at \$100,000 and above—and for a very small set at the extreme right, well above. For both commercial plans and especially self-funded employers, re-insurance mechanisms exist to cap their exposures at individual and aggregate levels. The point here is that these costs represent often tragic forms of sickness, accident and injury.

Sometimes we refer to these types of patients as “Dr. House” patients because they often present with bizarre and extremely complex conditions with very difficult diagnoses, hanging on to life itself.

Compared to the rest of the population, they are infrequent and super expensive, and completely out of scope for pricing and consumerism. No one should ever ask people in such dire medical situations to “shop” for care or their doctors to sign risk contracts for their care. Thus, we call this “The Insurance Zone” because, by its very nature, these patient are off limits for consumerism and their intensive care is the *raison d’être* for insurance.

But spanning across “The Management Zone”, from about \$2,000 to \$75,000, we observe a sharp increase in the cumulative cost trend (represented by the ovalar circles) starting from “The Retail Zone” that only starts to flatten out over “The Insurance Zone”. Approximately 66% of plan spending occurs on plan members with chronic conditions, acute illnesses and medical/surgical procedures. We call this “The Management Zone” because this is the area of healthcare costs most amenable to MESA benefits and provider contracting. From the perspective of employers, “The Retail Zone” is not a big worry because so few of their dollars are spent there, and market- like mechanisms are evolving to make those costs transparent. They can’t worry about “The Insurance Zone” because 1) bad things happen and there’s nothing they can do about that, 2) they already have re-insurance to cap their losses, 3) they are very infrequent, and 4) employees in such circumstances should have the peace of mind that their care will be paid for without undue financial burden or administrative hassles.

Since cost transparency is the theme of our story, we noted that this is already occurring in “The Retail Zone” and is irrelevant to “The Insurance Zone”, but what about “The Management Zone?”

Unfortunately for employers, the bulk of their employee medical expenses are flowing through a benefits and payment system that is inherently inflationary, produces nowhere near the value they need relative to how much they spend, and that is almost completely opaque. It may as well be called The Twilight Zone.

But to find out why, let’s drill in a little deeper. Table 1 displays a benefits plan that would be recognizable to most people and is fairly standard in the industry. The actual numbers may vary from plan to plan, depending on how generous the plan sponsor wants it to be. But the numbers and percentages are not what capture our attention. Except for a few preventive care services like Mammogram, Pap Smear and Prostate Screening, note how just about every feature of the benefits structure has little bearing on underlying clinical conditions. Notice how much of the plan description centers on care settings, types of physician, and facilities. This is because it is institution-centered and not patient-centered. It is completely calibrated for fee-for-service (FFS) medicine. In reality, it is an institution-centered FFS Sickness Plan, not a patient-centered Wellness Plan. It is designed to be reactive and passive, not proactive and engaged.



Note also how deductibles, whether individual or family, apply across the board, In-network and Out-of-Network. This type of unilateral deductible concept is flawed, and looking back to Figure 1, it's not hard to see why. All cost categories in "The Manageable Zone" for the plan listed below are either above the deductible or well above the deductible. And it is completely lacking in clinical nuance.

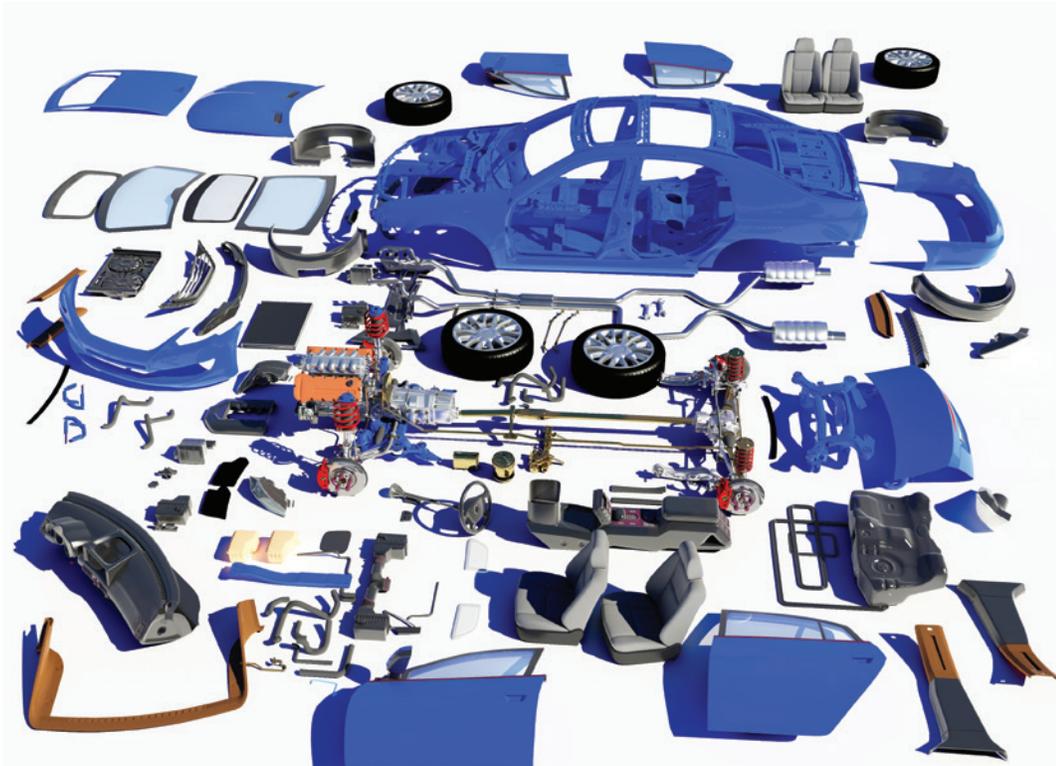
**TABLE 1: FFS SICKNESS PLAN BENEFITS**

<p><b>ANNUAL DEDUCTIBLE:</b>  <i>In-network</i> \$500 Individual / \$1,500 Family <i>Out-of-Network</i> \$5,000 Individual / \$15,000 Family</p>
<p><b>ANNUAL OUT-OF-POCKET MAXIMUM:</b>  <i>In-network</i> \$1,500 Individual / \$3,000 Family <i>Out-of-network</i> \$6,600 Individual / \$13,200 Family</p>
<p><b>CO-INSURANCE/CO-PAY:</b>  <i>In-network</i> 80% <i>Out-of-network</i> 60%</p>
<p><b>PRIMARY CARE PHYSICIAN SERVICES:</b>  <i>In-network</i> \$25 Primary Care \$80 Specialist <i>Out-of-network</i> Deductible, 60%</p>
<p><b>OTHER PHYSICIAN SERVICES:</b>  <i>In-network</i> Deductible, 80% <i>Out-of-network</i> Deductible, 60%</p>
<p><b>PREVENTIVE CARE (IN-NETWORK COVERAGE ONLY):</b>  Mammograms, Pap Smear, Prostate Screening, Well Child to Age 6, Physicals \$25 Copay, then 100%</p>
<p><b>HOSPITAL / SKILLED NURSING FACILITY CHARGES:</b>  <i>In-network</i> \$100 Copay, 80% <i>Out-of-network</i> \$500 Copay, 60%</p>
<p><b>OUTPATIENT FACILITY CHARGES:</b>  <i>In-network</i> Deductible, 80% <i>Out-of-network</i> Deductible, 60%</p>
<p><b>EMERGENCY ROOM:</b>  <i>In-network</i> Deductible, <i>Out-of-network</i> 80% Deductible, 60%</p>
<p><b>AMBULANCE:</b>  Deductible, 80%</p>
<p><b>OTHER SERVICES (OUTPATIENT FACILITY, HOME HEALTH, PHYSICAL THERAPY, MENTAL HEALTH):</b>  <i>In-network</i> Deductible, 80% <i>Out-of-network</i> Deductible, 60%</p>
<p><b>PRESCRIPTIONS:</b>  \$10 (Generic) / \$25 (Preferred) / \$60 (Non-Preferred)</p>
<p><b>LIFETIME MAXIMUM:</b>  \$1,000,000 (ACA has changed; no caps on essentials)</p>



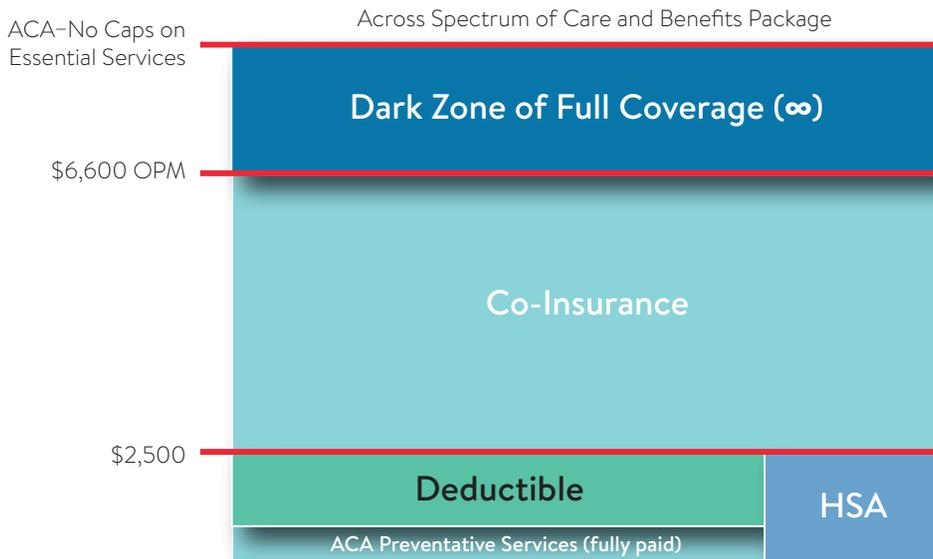
Making things even worse, as far as transparency is concerned, this plan is applied to provider FFS billings consisting of myriad thousands of diagnostic, revenue and procedure codes that no layperson can possibly comprehend. If we were to extend the way health care benefits plans and transparency tools want consumers to “shop” for care to shopping for cars, this is what we would see (Figure 2):

**FIGURE 2: HEALTH CARE SHOPPING APPLIED TO CARS**



Of course, the Figure 2 analogue assumes the full cost of all the parts summed up would fall under the car “deductible”. But if a high deductible health care plan were applied, we would only see some of the parts and their costs, another portion would be a percentage of costs, with the majority of parts completely in the dark. Figure 3 explains why.

In a high deductible plan, there are basically four coverage layers to consider. At the bottom are preventive services which the ACA mandated to be fully covered (more or less routine car maintenance for our comparison). Next is the deductible layer with HSA. The deductible is set at \$2,500 before the next layer of co-insurance hits the out-of-pocket maximum, set at \$6,600. After that, the Dark Zone of Full Coverage kicks in. We represent this layer with an infinity sign because there is no cap, and having no cap, cannot be fit into a graphic because it could go into the millions of dollars (and thus about a mile off the page). It is the Dark Zone because after it is met, consumers are in the blind and completely indifferent to costs; the employer bears everything from that point on.


**FIGURE 3: BLIND COVERAGE IN “THE MANAGEABLE ZONE”**


Now, given Table 1 and Figures 2 and 3, let’s take a fairly common surgical procedure from “The Manageable Zone,” a Total Knee Replacement (TKR). If patients needing hip replacement were presented with local area prices for TKR from multiple orthopedic groups, which currently average around \$27,000 in the commercial market, and had a benefits plan like one above (deductible of \$2,500, an out-of-pocket max of \$6,600, and then full coverage), what good would it do them?

Insofar as any consumer is concerned, it is meaningless how much it costs because the only thing they know for certain is that they will pay \$2,500, plus some percentage of \$4,100, and then after that, nothing. If one provider of hip replacements is very efficient and comes in on average at \$23,000, and another far less efficient provider comes in at \$40,000, from the consumer’s point of view, the out-of-pocket pain is the same. This is why so-called price transparency tools have so little uptake among employees: they’re irrelevant.

Unilateral deductibles, co-insurance, and out-of-pocket maximums splice up the medical TKR episode value, rendering much of it fuzzy or totally opaque, making price competition meaningless. Let’s face it, current high deductible health plan benefits are not designed for value. They are designed for pushing more and more of the premium cost to employees.

But what if we made the deductible layer smart? What if, instead of a single deductible that’s unintelligently applied across all services, the deductible could inflect itself according to clinical value? This is the idea behind MESA benefits: pre-deductible budgets are tuned to underlying conditions or procedures, and deductibles hit *after* the budget is spent.

In a MESA plan, those same patients needing a TKR surgery would receive a spending allowance reflecting the entire clinical value of the procedure. Though there are a number of ways to set the MESA budget, for transparency purposes, let’s say it is set at the local market average of \$25,000. (We can do that using PROMETHEUS Analytics.<sup>2</sup>) Now, a price transparency tool becomes not just relevant, but indispensable. Because through it,

<sup>2</sup> For more details on PROMETHEUS Analytics, go to: [www.HCI3.org](http://www.HCI3.org)

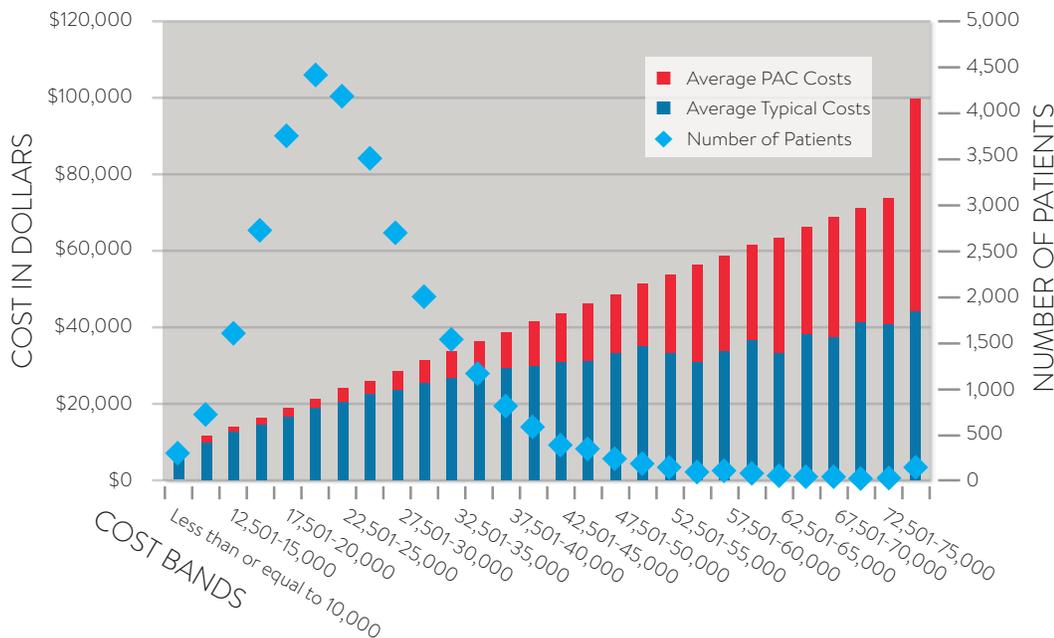


consumers can see competing provider alternatives, and the ones most likely to keep them at or under the MESA budget. If they do come under budget, they and their employers share the dividend. If they don't, they're on the hook for the deductible and co-insurance up to the out-of-pocket max. That can be quite a difference to a middle class family struggling to make ends meet. And for readers of this Blueprint who may be skeptical that price swings for TKR evidence such wild variances in cost by providers, using the PROMETHEUS Analytics,<sup>®</sup> we see it in the data all the time.

It is the norm, not the exception.<sup>3</sup>

And we haven't even mentioned quality. Unfortunately for high deductible plans and transparency, the news gets even worse. After many years of using PROMETHEUS Analytics<sup>®</sup> to study historical claims data, one striking pattern has emerged for all episodes of care. Without regard to episode type, chronic or acute, or provider setting, all episodes are characterized by sweeping right hand tails, as Figure 4 demonstrates for TKR cost distributions.

**FIGURE 4: TKR COST DISTRIBUTIONS<sup>4</sup>**



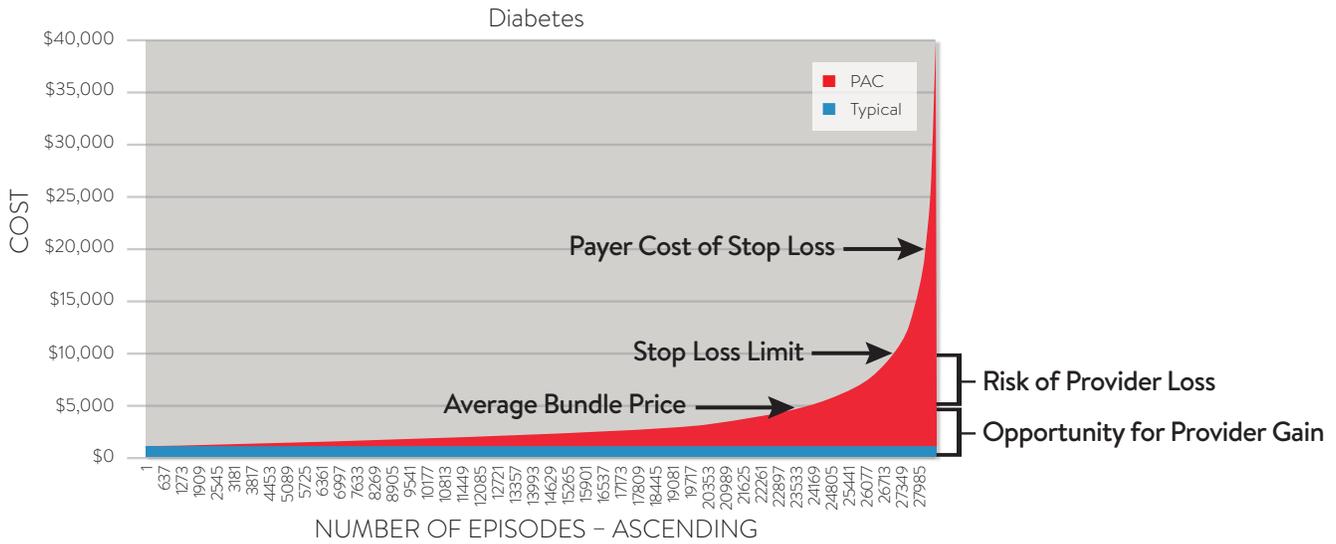
At the right hand of the episode cost distribution, costs to payers rapidly escalate in a hockey stick fashion, almost exclusively composed of costs due to Potentially Avoidable Complications (PAC), resulting from poorly managed, uncoordinated FFS care (in red). And for chronic diseases like Diabetes Mellitus, the tails are even more exacerbated (Figure 5). Current “network-centric” solutions such as narrow networks and ACOs do little to attack this problem. And, as we’ve been driving home, high deductible HSA plans are too blunt to tease this out.

<sup>3</sup> *The Price Ain't Right? Health Price and Health Spending on the Privately Insured*, Zach Cooper et al; [http://www.healthcarepricing-project.org/sites/default/files/pricing\\_variation\\_manuscript\\_0.pdf](http://www.healthcarepricing-project.org/sites/default/files/pricing_variation_manuscript_0.pdf)

<sup>4</sup> Typical, in blue, indicates the cost of high quality care as indicated by evidence-based guidelines and the recommendations of expert clinical working groups.



**FIGURE 5: COST DISTRIBUTION OF EPISODES WHEN INSTITUTING A STOP-LOSS**



The MESA economic proposition is simple: using PROMETHEUS Analytics,<sup>5</sup> contracting and benefits can be highly attuned to elite providers. As Figure 5 shows, there are bands of opportunity in provider contracting where making PAC reductions profitable and knowable lead to better quality outcomes and lower costs for both employers and employees. Providers can contract for episodes up to certain PAC rate levels (the Stop Loss Limit) and take the risk of being able to manage care at or below the average bundle price. They take the risk of absorbing costs up to the Stop Loss, which gives them a powerful incentive to improve both costs and quality.<sup>5</sup>

As The Institute of Medicine’s *Best Care at Lower Cost* projects, at least \$420 billion a year is wasted on costs tied to quality gaps. In light of Figures 1.5 and 1.6, most of those gaps occur in chronic diseases lodged firmly in The Management Zone. Our own analysis reveals that average PAC rates range from 20 to 40 percent across entire clusters of chronic diseases. While the average PAC rates across procedural episodes like TKR are much lower (around 5 to 7 percent), the real cost drivers are chronic diseases. Clearly, current network contracting methods available to employers are leaving a mountain of cash on the tablelands of employee medical care, which, in turn, negatively impacts workforce productivity. So they’re taking a double hit from the status quo. High deductible plans do very little to attenuate these problems.

Under MESA contracting, any provider entity that can substantiate documentation of implementing evidence-based care coordination programs (as the ACA wellness regulations make clear), and is willing to go at risk for lowering PAC rates is qualified to participate. Unlike narrow network configurations, the purpose is to generate ever-expanding networks of competing providers to build genuine, consumer-centric marketplaces for healthcare products and services. Further, MESA contracting is agnostic to delivery system form. Any provider grouping, whether ACO, Health Home, specialized single service groups (orthopedic total joint LLCs, for instance) or “virtual” models, are welcome to participate so long as the data derived from PROMETHEUS Analytics<sup>5</sup> supports their claims. In this way, Centers-of-

<sup>5</sup> See <http://www.hci3.org/wp-content/uploads/2016/08/PEBTF-Case-Study.pdf>, where we provide a detailed case study of a Total Hip Replacement bundled payment arrangement between a real payer and providers that was conducted in Harrisburg, PA in 2015. We explore how quality metrics are factored in and how they are scored for contracted provider reimbursement. The scoring was performed with a Bridges to Excellence formula that results – not in an A, B, or C type grade – but an actual number with a minimum and maximum threshold



Excellence (COE) can be both localized and scaled out all across the nation. Whereas now, if a Walmart employee living in Tulsa, Oklahoma wants to take advantage of the Walmart Total Hip Replacement COE program (which works much like MESA), he or she has to fly out all the way out to one of 6 contracted centers, say, Cleveland, Ohio, to have the procedure done at the Cleveland Clinic. The MESA model makes it possible to identify superior providers in any major city or region.

By tying wellness, MESA benefits, transparency and episode of care provider contracting to PAC rate reductions, what are currently highly siloed programs from an employer's point of view can be converted into a seamless, coherent employee productivity program beneficial to all parties involved. At its foundation, then, MESA is not so much about transforming benefits and payment as it is about transforming the nature of healthcare information. At its core, MESA is about formulating new, powerful feedback loops precision guided for the end-users who matter most: payers, providers and employees. When taken all together, Figure 2 transforms into Figure 6:

**FIGURE 6: FULL TRANSPARENCY**



It's now possible to revisit Section 1 of the Blueprint, take a fresh look at MESAs in action from the employee's point of view, and see how MESAs transform Figure 2 into Figure 6, so that health care consumption looks like any other market ordinary people are used to.



## APPENDIX B

# ASO NOTIONAL CONTRACTING

### SECONDARY RECONCILIATION PAYMENTS AND PARTITION RISK

While momentum and instances of VBP payments like episode of care bundles are accelerating, and TBP/MESA arrangements would accelerate VBP even faster, most episode of care bundling arrangements are still contracted and operated on a FFS chassis and retrospectively reconciled. For health plans like Horizon BCBS,<sup>1</sup> this does not present a major challenge (although they are migrating to more advanced solutions). But for small and medium sized employers, there are two issues that arise from retrospective reconciliation in an FFS environment that need to be addressed. The first is the problem of management of secondary reconciliation payments. The second issue is Partition Risk.

In an environment where self-funded employers do not have access to a Trust-Based Plan solution, certain problems arise from retrospective episode of care contracting for self-funded employers. One of these is the way dollars flow between benefit plans, TPAs and providers to make bundled payment work where providers are not sufficiently integrated to process a single payment for an episode of care. If healthcare providers were already clinically integrated around specialized episode of care product lines, bundled payment would present no problems. When an episode of care starts, a single payment is made, and the medical delivery firm manages the funds internally the way any other private sector company processes payment for an integrated product or commodity. Although some provider organizations are coming on line to accept payment this way, they are only a small fraction of the national market. No doubt the pace will accelerate as Medicare, health plans and large benefit plans increase the volume of dollars towards bundled payment. But for the time being, FFS fragmentation at the provider level will continue to be the major mode of delivery system organization.

Regardless, for those purchasers wishing to move ahead with bundled payment, a solution is required to bridge the gap between the FFS reality of today and the product revolution of tomorrow. In most instances, this means creating pre-budgeted episode contracts, paying contracted providers on a FFS basis, and comparing the actual cost of the medical episode to the FFS paid amount. In an upside only reconciliation, if the provider comes under the budgeted cost, an additional payment is made that usually splits the difference between payer and provider so that the payer realizes a savings, and the provider a reward. If the actual cost of the episode exceeds the budgeted amount, the provider is paid the excess amount as its compensation is traditional FFS payment. In a full risk contract, providers pocket the full amount of the savings if they come under the budget, but if they go over, they either absorb or owe the purchaser the cost of care that is over budget. In the context of TBP plans, under either of these modes, the Trustee/TPA that intermediates—i.e. administrates the payments on behalf of the self-insured TBPs—can create an accounting mechanism that reveals and reflects these basic effects.

<sup>1</sup> Nation's Largest Commercial Value Based Health Care Program Delivers on Triple Aim: <http://www.hci3.org/wp-content/uploads/2016/02/ Horizon-Prometheus-Case-Study-4-Feb-2015.pdf>



Upside only arrangements create an administrative difficulty because they involve a secondary payment to the provider. That is, in addition to the FFS charges that are paid to the provider, when those charges are less than the budgeted episode amount, the provider is entitled to a payment that reflects the amount of its share of any savings below the budgeted amount. Our field experiences, as well as the experience of others that we are informed about, have shown that the secondary payments are troubling for employers with self-funded benefit plans. They balk at what they perceive to be a “double payment” – even if it can be demonstrated that the overall amount paid represents a savings to the anticipated cost of care for the episode.

Problem 2, Partition Risk, is a little trickier to explain. If 50 employers band together to contract with multiple providers through a single TPA, for any given episode of care, each will have different actuarial experiences year over year, both as to the number of episodes triggered per company, and to the risk-adjusted costs per episode (some patients being more cost intensive to treat).

Think of it this way: the TPA, as the network-contracting agent, has a one-to-many relationship with the providers. Budgetary reconciliations are made to contracted providers as if they are dealing with a single health plan (not 50 employers). At the same time, the TPA, acting as a financial intermediary, also has a one-to-many relationship with the 50 employers. If we view the TPA as an intermediary virtually aggregating what are, in effect, 50 separate health insurance plans, then actuarially speaking, each employer will have unique cost exposures—not only in relation to the other similarly situated employers with a plan year, but in relation to itself, year over year.

Since each employer is actuarially partitioned from the others because they are all independent self-insured plans, but sharing in the reconciliation dollars paid out to contracted providers acting as a virtual collective, the contribution of an employer with a bad year will feel like an unfair subsidy to other employers who have good years. Like Problem 1, secondary reconciliation payment, partition risk is as much perception as it is reality. Where it matters, and should matter, is in the simple mathematical effect of the TPA’s many-to-one financial relationship with employers, and one-to-many relationship with providers. And to illustrate the point, let’s take a simple example of a TPA contracting an “upside-only” deal for total knee replacement bundles at \$30,000 apiece with a network provider on behalf of two employers:<sup>2</sup>

Employer A has 10 triggered bundles for a total budget of \$300,000 and the actual cost—claims paid—is \$250,000. In other words, the employer wins because Actual < Budget by \$50,000. Under the terms of the agreement with the provider, the Employer is expected to pay out \$25,000 or half the savings.

Employer B also has ten triggered episodes for a total budget of \$300,000, but the actual cost is \$350,000. As such, the provider overshot the budget by \$50,000. And since the deal is upside only, the employer does not save anything and the provider pockets the excess \$50,000.

<sup>2</sup> We choose \$30,000 because it is a nice, round number for the calculations below. It includes all clinically indicated services, not just inpatient facility and professional charges. For simplicity’s sake, we have not included severity adjustment calculations; however, we note that severity adjusted budgets would not materially change the overall method.



The total experience, from the TPA's and the providers' perspectives, is that there were 20 triggered bundles for a total budget of \$600,000 and the actual costs came in at budget (\$250,000 + \$350,000). As such, the provider is not entitled to any gain-sharing. If the employers insist on maintaining the artificial partition, then Employer A would pay out \$25,000 to the Provider when, in fact, the employer shouldn't pay anything. For employers, then, these differential exposures present a problem of economic fairness.

The TBP model addresses and resolves the employer perception issue because the employer simply has no involvement, direct or indirect, in the making of provider payments. They neither pay the providers directly nor advance funds to a TPA or to a carrier with whom they have an ASO arrangement to fund their payment to the provider. Under the TBP construct, employers make fixed contributions to the Trust they create and have no responsibility or involvement with the payment of providers' claims. An employer is never asked to make a secondary payment to the provider who has earned a savings bonus. The Trust is responsible for all payments to providers for the covered services they have provided to the Trust's plan members. The Trust pays the providers by drawing upon the funds in its Custodial account allocated to its "first dollar" liability and the reimbursement deposits made to that account by its stop-loss carriers.<sup>3</sup> The Trustee/TPA administers the provider claims and the payments due to the provider.

There is a further important aspect of the TBP structure as it relates to upside only arrangements in bundled contracts with providers. Whether a provider is entitled to a bonus because its FFS charges came below the budgeted amount for a procedure has implications *only for the benefit plan whose member received the care involved in the procedure.*<sup>4</sup> This outcome is determined completely in isolation from any care the provider may have given to any member of the same plan or a member of any other ERISA plan. The outcome also does not involve or affect the assets of other ERISA plans.

Value based contracts with providers that entitle them to bonuses if they meet certain performance criteria raise a different set of ERISA and perceived economic fairness issues; i.e., Partition Risk. The circumstance could arise in which a provider's performance measured with respect to all of the members of the TBPs that are administered by a Trustee/TPA satisfies the contractual criteria and the provider has earned a bonus. But, when the performance is viewed on a disaggregated plan by plan basis, it may appear that the criteria were not met with respect to a few plans. Are either the employers who created the Trusts that sponsor these plans, or the Trusts themselves, injured if the Trusts are required to pay their share of the bonus due to the provider? As to the employers, the answer clearly is "No." The employers' fixed contribution obligations to their Trusts are not affected. The Trusts cannot reasonably argue that whether they have been injured should be determined on their isolated disaggregated basis. The only reason these Trusts were able to elect to have access to the beneficial aspects of the contract—e.g. the discounted price and quality of care offered by the MESA providers—is that they knowingly elected to combine their purchasing power with that of the other TBPs. In their individual disaggregated capacity, those Trusts could not have negotiated the same contract terms with the same providers. The circumstance that, in retrospect, their individual experience diverged from the common

<sup>3</sup> Both the FFS payment and the secondary payment to the provider are a claim loss covered by the stop-loss policies. The records of the Trust maintained by the Trustee/TPA, documented by the ledgers of the Custodial Account, enable and support detailed reconstructions of all provider transactions involving Trust assets.

<sup>4</sup> As explained in Section 1, if an employee with a MESA benefit chooses a contracted provider that comes in under budget, he or she is entitled to receive all or some of the savings.



experience of the other Trusts' plans is not evidence that the contract they chose to participate in is either unfair or imprudent. If the common experience of most of the other plans with respect to the providers' performance had not met or exceeded the contractual standards, the providers would not have been entitled to a bonus.<sup>5</sup>

A further factor is that even the Trusts whose experience was not as favorable as that of the other TBPs may derive benefits from the overall good performance of the providers. The loss experience of the stop-loss carriers that insure the Trusts administered by the Trustee/TPA has been favorably affected by the providers' achievement of the contract performance goals. That may have an effect on the carrier's premium levels for the all of the Trusts for future plan years. The favorable economic results for the providers resulting from their receipt of a bonus may result in more favorable contract terms, or competition from other providers that would have the same effect. None of those favorable effects could be experienced by these Trusts if they, or the employers that created them, stood alone. Thus, the potential sense of injury or economic fairness perceived by employers owing to Partition Risk is resolved.

Value based contracts in which the providers have both an upside and a downside are easily manageable under the TBP structure. Under the model of this form of contract in which the provider is at risk for all care costs that exceed the budgeted amount and keeps all of the savings when the FFS costs are less than that amount, there is no secondary payment calculation required. The TBP pays the budgeted amount for the covered procedure or treatment and there are no more financial calculations required by the transaction. If the FFS costs of the procedure exceed the budgeted amount paid to the provider, the provider alone is responsible for the excess cost. If the FFS costs come in under the budget amount, there is no reimbursement amount that needs to be calculated and reimbursed to the TBP as the provider retains the difference between the two amounts. These events affect only the TBP whose plan member received the treatment or procedure. They do not affect the obligations of other TBPs, the employer who created the TBP or of the employees who are participants of the TBP plan.

The model of this form of contract in which the provider and the payer share in both the savings and the risk that excess costs may be incurred also does not present complex secondary calculation issues. If the FFS cost of the contracted procedure or treatment exceeds the budgeted amount, the Trustee/TPA calculates the TBP's contractually specified share of the excess cost, tenders that amount as payment to the provider, and treats the payment as part of the Trust's loss attributable to the episode of care received by the plan participant. Conversely, if the FFS cost for the episode is less than the budgeted amount, the Trustee/TPA calculates the TBP's contractual share of the savings and either obtains reimbursement from the provider if the full budgeted amount had been paid in advance, or treats the reimbursement amount as a credit against any other obligation the TBP may have to the MESA provider. This event similarly has no effect on the obligations of other TBPs, employers or TBP plan participants. Thus, the problem of Secondary Reconciliation Payments is resolved.

<sup>5</sup> As a practical matter, the management of bonus payments to providers who meet performance criteria will require the involvement of stop-loss carriers. In order to maintain the level payment contribution obligations of employers and plan participants, and the fixed first dollar attachment point for a plan year that are key elements of the TBP construct, TBPs, employers and participants must be cushioned against variable costs. This cushioning can be achieved by factoring in potential provider compensation variables in the stop-loss carriers' actuarial analysis of the policies offered to the TBPs. This approach has two beneficial effects: (1) It maintains the stability of the fixed contribution/ fixed attachment point regime, and (2) The additional cost of any bonus compensation earned by providers is satisfied from the general assets of the stop-loss carriers, not from the plan assets of the TBPs.



## ASO NOTIONAL CONTRACTING

Having explained how the TBP model solves Secondary Reconciliation Payment and Partition Risk issues, we now proceed to explain how these two problems can be resolved where a TBP model is *not in place*. We call our solution “Notional Contracting” because it’s a way of pre-paying each triggered episode according to the pre-budgeted episode of care contract without requiring the need for a secondary reconciliation payment (if the actual comes under budget), and because of the method we have devised for TPAs to take the pre-paid pool of triggered episodes for gainshares that partially evens out any sense of unfair yearly cross-subsidization. In fact, there is no cross-subsidization under Notional Contracting and the individual experience of each employer is merely a reflection of the collective experience.

The idea of a “notional” account is not entirely alien to employers; it’s how Health Reimbursement Accounts (HRA) work. HRAs are a kind of an accounting fiction with no cash value and which employees do not own. It is a pre-determined amount of dollars set aside from which FFS medical services are paid, at no cost to the employee, so long as expenses are kept at or under the HRA amount. Unused amounts rollover to the next year, so long as the employee remains with the company. Thus, it is “notional”.

Like an HRA, a pre-budgeted episode of care is notional. When an episode triggers, the TPA makes a “draw” from the employer’s custodial bank, which it then holds as a notional account from which FFS contracted provider billings are deducted. But instead of rolling over unused amounts to the next year, unused amounts are rolled back to the employer based on the employer’s individual and collective experiences as a discount on the following year’s TPA transaction costs. In this way, at no time are the individual employer plan assets intermingled, thus avoiding the odor of functioning as a MEWA.

It is from this shared notional account, administered by the TPA, that a gainsharing formula is applied for provider distributions. Using a total knee replacement example, the remainder of this section will be dedicated to explaining the financial mathematics of how ASO Notional Contracting works for bundled payment in an “upside-only” contracting model and in a full risk model.



### EXAMPLE: TPA CONTRACTS TOTAL KNEE BUNDLE FOR 5 EMPLOYERS

In this example, a TPA has organized a total knee bundled contract with a local orthopedic group for \$30,000. That price is a discount from the actual average historical costs for knee bundles in that region, but the orthopedic group is willing to accept that discount because the TPA represents a large number of self-insured employers. The group does not own the hospital operating room facilities or rehab therapists, but has agreed with a national implant manufacturer to use only its implant device for a discount. Having looked over the claims data with the TPA, the orthopedic group feels confident that with the implant discount, the average inpatient charge from the hospital to which it refers, along with a sub-agreement with its favorite rehab group, that it can manage a minimum volume of 50 total knee patients at \$30,000 per episode. Since it is an early stage arrangement, the group is not willing to go at risk and absorb the costs of cases that go over \$30,000, but it does agree that at a later date, with program success and additional employers coming on board, it will consider accepting a contract with downside risk.

With contract in hand, the TPA succeeds in marketing the program to 5 mid-sized employers, who are willing to be early adopters, and who already have an ASO agreement with the TPA. All that is needed to engage the program is an addendum to the already existing ASO FFS agreement in place with the 5 employers that describes the bundled payment program, how the funds will flow, reporting activities, and each party's obligations.

Each time a patient selects the contracted orthopedic group and a total knee episode is triggered, the TPA will draw \$30,000 from the employer's account. Because it is a retrospectively reconciled contract, the \$30,000 is not paid directly to the orthopedic group, but from the employer's point of view, it feels like a prospectively paid bundle to an integrated provider. The TPA holds the \$30,000 as a "credit" in a notional account against which FFS claims from the orthopedic group, the hospital, implant device (which is usually buried in the hospital charge) and the rehab group are "debited". The TPA keeps a running tally of each triggered episode, all related total knee FFS billings, and reports back to the employer the over / under calculations. From those calculations, the TPA applies a formula that determines the gainshare with the orthopedic group and the employer as remittances (if under), and if over, nothing changes. The contract behaves like a normal FFS arrangement.



## EXPLAINING UPSIDE ONLY NOTIONAL POOLING IN PRACTICE<sup>6</sup>

Below, in Table 1, we see the running tally of each employer's experience under the total knee contract, expressed as actual FFS cost per triggered episode with an accompanying over / under amount to the right in the True Up column. Over is black; under is red. In the bottom row we see the totals per employer. Employer A experienced 14 complete episodes. The projected budget for the time period was \$420,000. The actual FFS performance of the contracted orthopedic group for Employer A was \$397,834, or \$22,166 under the projected total, with similar tallies for Employers B, C, D and E. For one Employer, B, the orthopedic group ran over the projected total by \$16,495.

**TABLE 1: ACTUAL EXPERIENCE BY EMPLOYER: UPSIDE ONLY**

Employer A	True Up	Employer B	True Up	Employer C	True Up	Employer D	True Up	Employer E	True Up
\$30,244	\$244	\$27,765	\$2,235	\$25,911	\$4,089	\$31,490	\$1,490	\$23,079	\$6,921
\$32,999	\$2,999	\$31,118	\$1,118	\$22,764	\$7,236	\$34,602	\$4,602	\$31,929	\$1,929
\$32,962	\$2,962	\$27,871	\$2,129	\$33,735	\$3,735	\$23,258	\$6,742	\$30,997	\$997
\$24,721	\$5,279	\$32,283	\$2,283	\$27,654	\$2,346	\$25,252	\$4,748	\$27,654	\$2,346
\$24,567	\$5,433	\$35,984	\$5,948	\$30,990	\$990			\$23,521	\$6,479
\$26,380	\$3,620	\$36,461	\$6,461	\$24,737	\$5,263			\$34,115	\$4,115
\$31,424	\$1,424	\$32,158	\$2,158	\$24,526	\$5,474			\$30,255	\$255
\$35,994	\$5,994	\$32,891	\$2,891	\$25,674	\$4,326			\$23,695	\$6,305
\$24,789	\$5,211			\$33,588	\$3,588			\$31,366	\$1,366
\$28,891	\$1,109			\$25,909	\$4,091			\$36,468	\$6,468
\$25,662	\$4,338			\$34,455	\$4,455			\$22,973	\$7,027
\$23,678	\$6,322							\$23,201	\$6,799
\$25,057	\$4,943								
\$30,466	\$466								
<b>TOTALS</b>									
\$397,834	\$22,166	\$256,495	\$16,495	\$309,943	\$20,057	\$114,602	\$5,398	\$339,253	\$20,747

<sup>6</sup> For those readers who wish to experiment with original spreadsheet calculations, please see (hyperlink to excel spreadsheet).



In Table 2, we analyze the method for distributing a year's end gainshare, and how Notional Pooling solves the twin problems of secondary reconciliation payments and partition risk. Since the total knee contract is with the TPA, and not with each individual employer, the first step is to total the actual FFS costs of all triggered episodes versus the total budgeted amount, which for the year measured was \$1,418,127 (Grant Total Actual) and \$1,470,000 (Grand Total Budget). In aggregate, the orthopedic group beat the budgeted amount by \$51,873 for the 5-company population of 49 total hip patients. Therefore, to make the orthopedic group whole under the contract, the TPA owes them \$51,873.

But notice that this amount does not square with the Sum of Employer Owed (\$68,368), which is the total amount that Employers A, C, D and E came under. In most proposals we have examined for multiple employers participating in a bundled payment arrangement, the gainshare formula is equally distributed amongst all employers, either from a pre-paid pool or a post hoc formula where the TPA goes back to the employers for their portion of the gainshare.

If the latter, we run into Problem 1: Secondary Reconciliation Payments, which we have seen, employers are loathe to do. But if the former, we must consider Table 1 in light of Employer B's experience. Employer B did not experience a savings, and so asking Employer B to contribute to the gainshare feels like adding insult to injury.

This describes Problem 2, Partition Risk. Because the TPA is functioning as a virtual aggregator to get the necessary volume of lives and dollars to interest providers in bundled payment contracts and make it statistically viable, it "appears" to be acting like a health plan collecting premiums. But, in fact, it is not; by definition, TPAs serving as administrators only for self-funded employers take no premium, or insurance risk. That risk falls on the employers and their reinsurance companies. This being the case, ERISA "partitions" self-insured employers on the other side of the virtual TPA aggregator as self-contained health insurance plans.

Table 2, ASO Account Reconciliations, shows how we solve for Problems 1 and 2. In the first two columns, we again see Grand Total Actual (\$1,418,127) and Grand Total Budget (\$1,470,000).

In the third and fourth rows, we see Owed By Plan (\$51,873) and Sum of Employer Owed (\$68,368). If the bundled payment arrangement treated each employer as directly contracted to the orthopedic group, then each employer that had a good experience would get back the exact amount of the underage for its own experience. But because the employers have agreed to pool their experience through the TPA to take advantage of their united purchasing power, the gainshare must also be pooled, but only amongst the employers who had a good experience. Employer B had a bad experience, so we extract them from the gainshare formula. In an upside only contract, the orthopedic group is not at risk for Employer B's total knee experience, so it functions like a regular FFS contract. Insofar as Employer B is concerned, there is no harm done from the pooling arrangement because this is no different than if they had no bundled payment contract. However, the negative experience of Employer B pooled with the positive experience of the other employers creates the overall experience from the provider's perspective and reduces the payout of the "winning" employers. In other words, the winning employers benefit from the bad experience of employer B, but Employer B is no worse off than if it contracted directly with the provider. It is, very literally, an upside only model for all concerned.



TABLE 2: ASO ACCOUNT RECONCILIATIONS: UPSIDE ONLY

Grand Total Actual	\$1,418,127	Employer A	Employer B	Employer C	Employer D	Employer E
Grand Total Budget	\$1,470,000					
Owed By Plan	\$51,873					
Sum Of Employer Owed	\$68,368					
Owed By Employer		\$16,818	\$0	\$15,218	\$4,096	\$15,741
Employer Gets Back		\$5,348	\$0	\$4,839	\$1,302	\$5,006

To determine the actual amount that will be owed to the provider by employers A, C, D and E, we divide each employer's underage amount by the Sum Of Employer Owed, and get the percentage share each owes from the pooling arrangement to the orthopedic group. Employer A's underage from the True Up column in Table 1 was \$22,166, which, when divided by Sum Of Employer Owed, comes out to \$16,818 (or, roughly 32% of the pot). And when done for Employers C, D and E, we get \$15,218, \$4,096 and \$15,741 respectively. In other words the formula is designed to calculate how much must be taken from each employer with realized savings to pay out to the provider. The sum paid out must equal \$51,873 which is the net amount owed to the provider across all employers.

The final calculation is to determine how much should be refunded to each employer. Remember, \$30,000 has been taken out from each employer's account for each episode triggered, and since the net amount owed to the provider is less than what each employer would have paid individually, there is a net "rebate" to each winning employer. As a result, an employer who actually saves under the bundled payment arrangement is likely to get some money back at the end of the year. The formula is quite simple:

1. Divide employer True Up ( $E_x, E_y, \dots, E_z$ ; from Table 1 True Columns, if under 0) by **SUM OF EMPLOYER OWED = OWED BY EMPLOYER** (which TPA distributes from notional pool to contracted provider in one lump sum);
2. Then subtract **OWED BY EMPLOYER (X,Y...Z)** from employer (x,y...z) True Up columns = bundled payment "rebate" per employer.

### EXPLAINING DOWNSIDE ASO NOTIONAL CONTRACTING IN PRACTICE

Even though we have solved for Secondary Reconciliation Payments and Partition Risk, it's easy to see why employers would press quickly towards downside risk: all employers want to eliminate FFS for total knees and move to fixed price contracting, limiting their exposure to unwarranted variation. So, for Section 3, let's assume that the first years' experience was acceptable to both employers and the orthopedic group. The overall employer experience was under the total projected amount, and the orthopedic group saw that, while some episodes went over budget, in sum, they could beat the contracted amount for the employers' collective total knee episodes.

They have not yet achieved sufficient integration for a prospective payment, and will retain FFS payment as day-to-day cash flow management, as well as the previous year's \$30,000 per episode budget, but the group will be at risk for the total contract price of total knee replacements. In the group's amended contract with the TPA, they agree to cut a check to the TPA if they run over the total budgeted amount; the TPA will take that check, plus any amounts left in the combined notional accounts of the employers, and make whole any employers whose actual FFS payment went over budget.



Note: There are other mechanisms to put contracted providers “at risk” in a FFS environment, but we choose this method for the sake of simplicity, not to mention the fact that it would send a strong signal of provider commitment to employers. Now, let’s see how this works.

In Table 3, we see (as in Table 1), the running FFS tallies for a year’s worth of total hip replacements for the five employers. Notice that, unlike the True Up columns in Table 1, the True Up columns in Table 3 reflect overages as zeros. Although the actuals went over, the downside contract keeps the employers capped at \$30,000 per episode in a notional accounting system. In Table 4, we see how the downside accounting is calculated.

**TABLE 3: ACTUAL EXPERIENCE BY EMPLOYER: DOWNSIDE**

Employer A	True Up	Employer B	True Up	Employer C	True Up	Employer D	True Up	Employer E	True Up
\$36,609	\$0	\$26,649	\$2,235	\$33,569	\$4,089	\$37,531	\$1,490	\$26,579	\$3,421
\$25,347	\$4,653	\$37,446	\$1,118	\$23,881	\$7,236	\$37,275	\$4,602	\$30,915	\$0
\$23,108	\$6,892	\$36,032	\$2,129	\$23,029	\$3,735	\$34,286	\$6,742	\$30,020	\$0
\$33,611	\$0	\$37,269	\$2,283	\$35,053	\$2,346	\$34,992	\$4,748	\$24,463	\$5,537
\$36,804	\$0	\$24,548	\$5,948	\$36,226	\$990			\$32,180	\$0
\$30,130	\$0	\$36,216	\$6,461	\$24,243	\$5,263			\$23,675	\$6,325
\$26,053	\$3,947	\$32,344	\$2,158	\$28,880	\$5,474			\$36,206	\$0
\$32,167	\$0	\$25,122	\$2,891	\$25,528	\$4,326			\$34,914	\$0
\$25,121	\$4,879			\$36,549	\$3,588			\$36,130	\$0
\$32,476	\$0			\$28,432	\$4,091			\$31,202	\$0
\$30,580	\$0			\$25,891	\$4,455			\$32,801	\$0
\$26,362	\$3,638							\$33,834	\$0
\$24,176	\$5,824								
\$37,426	\$0								
<b>TOTALS</b>									
\$419,970	\$30	\$255,626	\$15,626	\$321,308	\$8,692	\$138,084	\$18,084	\$372,925	\$12,925

Note that in Table 3 Employer A owes the providers \$30 and employer C owes the providers \$8,692, but Employers B, D and E are each owed money back because the providers went over budget. The total amount owed to the three employers is \$46,635. From the provider’s perspective, they know they owe the TPA, and Table 4 illustrates how the reconciliation works out.



As opposed to Table 2 (Upside Only), we see two new features in the first two left columns of Table 4: Owed By Provider and Sum Of Employer Below Budget. Owed By Provider is simple enough. It

is the difference between the total projected budget and actual, if over, across all episodes. In this case, the orthopedic group was over by \$37,913 (\$1,507,913 - \$1,470,000), and thereby owes the TPA that amount. But as we can see from Table 4, that would not be enough to make the employers whole. And here's where notional accounting comes into play. Because it's a fixed price contract and the providers are owed the difference between the contracted amount and actuals, there is a residual in Employer A's and C's accounts totaling \$8,722. That, combined with the \$37,913 owed by the providers makes Employers B, D and E whole. As a result, each employer's experience is exactly that of the contract: they paid a fixed amount of \$30,000 for each total knee. Not a penny more, and not a penny less.

**TABLE 4: ASO ACCOUNT RECONCILIATIONS: DOWNSIDE**

Grand Total Actual	\$1,507,913	Employer A	Employer B	Employer C	Employer D	Employer E
Grant Total Budget	\$1,470,000					
Owed By Plan	\$0					
Owed By Provider	\$37,913					
Sum Of Employer Below Budget	\$8,722					
Owed By Employer	\$0	\$0	\$0	\$0	\$0	\$0
Employer Gets Back From Plan	\$46,635	\$0	\$15,626	\$0	\$18,084	\$12,925

Except for the idea of a residual amount left in the ASO Notional Pool for total knee bundled payment (\$8,722), the downside reconciliation method is more straightforward than upside only. Formulaically, it can be expressed in this way:

1. Subtract **GRAND TOTAL BUDGET** from **Grand Total Actual**, (if over) = **OWED BY PROVIDER**;
2. Add **SUM OF EMPLOYER BELOW BUDGET** to **OWED BY PROVIDER** = **EMPLOYER GETS BACK FROM PLAN**;
3. Subtract employer experience ( $E_x, E_y, \dots, E_z$ , if over 0; in Table 3 True Up columns) from **EMPLOYER GETS BACK FROM PLAN** = bundled payment "rebate" per employer.

Of course, this only holds true if the contracted provider went over the total projected budget; if they come under, Rows 4-7 turn to zeroes, and the provider keeps the difference between **Grand Total Budget** and **Grand Total Actual** in columns 1-2. Everybody wins.



## SUMMARY CONCLUSIONS

While there are many ways to process reconciliations of actual to budget for various forms of value-based payments, there are significant advantages to employers for using ASO Notional Contracting where the TBP model is not in place (but has a similar effect):

- 1. Individual experience is reflected in the accounting while benefiting from the collective experience—**In the upside only model, employers who experience savings get money back and the “Notional Contracting” eliminates the potential for overpaying a provider when the collective experience of all employers in the program is considered. Put simply, employers contract with providers through TPAs to benefit from discounts and a collective purchasing power. Notional Contracting of bundled payments accomplishes that goal and eliminates the need for employers to pay out additional moneys when savings are realized.
- 2. Employers never pay out more than they should—that’s true in the upside only model and just as true in the upside/downside model.**
- 3. The collective purchasing experience is more likely to engage providers in true care transformation.**



## APPENDIX C

# PIERCING THE DARKNESS: A GENERALIZABLE APPROACH TO RELIABLY MEASURING QUALITY OF CARE

### BACKGROUND

In any other market, services and products that are supplied to consumers are well advertised and evaluated. Before purchasing any expensive item, most individuals tend to do their research, become informed and educate themselves on their options. Consumers are eager to know if they are getting the best product they can for the best price possible.

The healthcare market should function in the same manner, and yet it can't because there is a significant lack of consistently available physician-level quality of care data.<sup>1,2</sup> As a result, consumers can't really assess the quality of care they are receiving, nor are there easy ways of conducting research to make an informed decision before deciding to which hospital or doctor to entrust their wellbeing.<sup>3</sup> To an extent, the healthcare market is akin to a consumer entering a store blindfolded. They have no means of knowing if they are choosing the right item, if they are getting what they need or what price that item is even worth.

For all intents and purposes, the healthcare market is an economic failure. In the words of an economist: "The features of markets described in economic textbooks<sup>4</sup> are not found in the healthcare industry and thus inhibit efficient operations of supply and demand. These features include lack of price information and pricing transparency; lack of data on product quality; the resulting inability to assess the comparative value (defined as quality divided by cost) of products and services; asymmetric information between providers and consumers; imperfect agency relationships between physicians and their patients; the heavy role of government as both a buyer and regulator; and moral hazard flowing from insurance coverage leading to distortions in market efficiency."<sup>5,6</sup> Much of these distortions can, in fact, be straightened out with transparency, because better informed individuals lead to better health outcomes and lower healthcare costs.<sup>7</sup> And if the benefits are so clear, why is there a persistent lack of transparency?

<sup>1</sup> How to Shop for Medical Care 101 – Jun 2015: No more "Buying Blind" & Tackling Rising Healthcare Costs with Healthcare Transparency <http://thinkhealth.priorityhealth.com/tackling-rising-health-care-costs-with-health-care-transparency/> - Accessed Nov 1 2015.

<sup>2</sup> Suzanne DelBanco and Francois deBrantes – July 2015. Report Card on State Price Transparency Laws: [http://www.catalyzepaymentreform.org/images/documents/2015\\_Report\\_PriceTransLaws\\_06.pdf](http://www.catalyzepaymentreform.org/images/documents/2015_Report_PriceTransLaws_06.pdf) - Accessed Oct 30 2015.

<sup>3</sup> Dan Mangan CNBC 3 Feb 2015. Out of Pocket Healthcare Costs rise, but prices often remain hidden: <http://www.cnbc.com/2015/02/02/as-out-of-pocket-health-costs-rise-prices-often-remain-hidden.html> - Accessed Nov 1 2015

<sup>4</sup> Gregory and Stuart, Paul and Robert (2004). Comparing Economic Systems in the Twenty-First Century, Seventh Edition. George Hoffman. p. 538. ISBN 0-618-26181-8. "Market Economy: Economy in which fundamentals of supply also demand provide signals regarding resource utilization."

<sup>5</sup> Burns LR. "India's Healthcare Industry" Cambridge University Press, 2014

<sup>6</sup> Ari Mwachofi, Assaf F. Al-Assaf. Health Care Market Deviations from the Ideal Market. Sultan Qaboos Univ Med J. 2011 August; 11(3): 328–337. Published online 2011 August 15. PMID: PMC3210041

<sup>7</sup> Hibbard J, Greene J. "What The Evidence Shows About Patient Activation: Better Health Outcomes And Care Experiences; Fewer Data On Costs." Health Affairs. University of Chicago. March 1, 2013.



For years the process of defining measures for public use has been dominated by physician and hospital organizations as well as the federal government through its mandated reporting programs. The politicization of the process has generated a parsimonious set of quality measures that, by and large, fail to differentiate provider performance.<sup>8</sup> Moreover, there are significant gaps in what is being measured and reported with respect to relevance to under 65, commercially insured Americans. A recent report by Catalyst for Payment Reform highlights the deficiencies of the current measurement system and proposes some priority measures for employers and other purchasers to act on.<sup>9,10</sup> The upshot is that we lack quality measures on physicians, at a level that makes sense to the average consumer, because the national physician leadership organizations have resisted comprehensive and differentiating measurement. And unfortunately, payers in the public and private sectors, have failed to push back against “organized medicine” and demand greater accountability for the quality of care delivered in the US.

In response to latent consumer demand for physician quality measures and the unwillingness of policy-makers and industry leaders to respond to that demand, some not-for-profit organizations have stepped up. In our annual Physician Quality Transparency Report Card<sup>8</sup> we highlight community-based organizations that are collecting and reporting physician quality. In addition, ProPublica<sup>11</sup> and Consumers Checkbook<sup>12</sup> have both released quality ratings of surgeons on a defined set of hospital-based surgeries. And since the data used to calculate these ratings comes from Medicare, it is mostly focused on surgeries that are prevalent in that population and therefore not necessarily relevant to all Americans.<sup>13</sup> And yet, it’s the best the country has to offer to consumers seeking comparative information on the quality of physicians.<sup>14</sup>

With the advent of all-payer claims databases and statewide efforts to reform payment and delivery systems, the opportunity to push for greater physician quality transparency is at hand. The charge for all of us is to find a way to get it done in a manner that will be acceptable to consumers while keeping providers engaged. The first step is to understand how to best frame quality measures for consumers, and to understand the features of quality measurement and reporting that are important to consider when publishing ratings.

## FRAMING QUALITY MEASURES

Organizations like Consumer Reports have long understood through careful research how to frame quality metrics for all types of goods and services. The iconic half circles and full circles are the result of years of consumer testing on attitudes towards how to present quality data in an understandable way. Rating consumer goods, however, is not really dependent on the acceptability of the measures by the manufacturers of the products being measured. It was Ralph Nader and not the automobile industry who first called public attention to data

<sup>8</sup> Bennett L, de Brantes F, DiLorenzo J, McGuire W. HCl3 Dec 2014: “State Report Card on Transparency of Physician Quality Information. <http://www.hci3.org/content/physician-quality-transparency-report-2014> - Accessed Nov 1 2015.

<sup>9</sup> The Quality Measures that Matter: Action Brief: [http://www.catalyzepaymentreform.org/images/Action\\_Brief\\_QualityMeasure\\_Final\\_10.29.15.pdf](http://www.catalyzepaymentreform.org/images/Action_Brief_QualityMeasure_Final_10.29.15.pdf) - Accessed Oct 30 2015.

<sup>10</sup> CPR Employer-Purchase Guide to Quality Measure Selection: [http://www.catalyzepaymentreform.org/images/CPR\\_Employer-Purchaser\\_Guide\\_to\\_Quality\\_Measure\\_Selection\\_2015-10-23.pdf](http://www.catalyzepaymentreform.org/images/CPR_Employer-Purchaser_Guide_to_Quality_Measure_Selection_2015-10-23.pdf) - Accessed Oct 30 2015.

<sup>11</sup> Pro-Publica Surgeon Scorecard – July 2015: <https://projects.propublica.org/surgeons/> - Accessed Nov 1 2015

<sup>12</sup> Consumer Checkbook - Surgeon's Ratings: <http://www.checkbook.org/surgeonratings/?action=article&articleID=how-big-are-the-differences-among-surgeons> - Accessed Nov 1 2015

<sup>13</sup> Joynt KE, Gawande AA, Orav EJ, and Jha AK. “Contribution of Preventable Acute Care Spending to Total Spending for High-Cost Medicare Patients.” *JAMA* 309.24 (2013): 2572-2578. doi: 10.1001/jama.2013.7103.

<sup>14</sup> Jha, A. “The ProPublica Report Card: A Step in the Right Direction.” *An Ounce of Evidence: Health Policy*. Web.



that evidenced poor safety of American autos. The industry itself ultimately embraced the notion that safety matters, and went on to develop additional measures – but it was an external actor that got things started. Rating physicians or hospitals is, however, a different enterprise. That’s because patients interact with physicians and hospitals in a very different way than most other service providers.

The recent backlash to ProPublica’s surgeon ratings can serve as an example for the pitfalls of measuring individual physicians.<sup>15</sup> Starting in late 2014, HCI3 convened a panel of experts in quality measurement as well as experts in different domains of measurement, including patient attitudes to quality data. The group was tasked with identifying the critical features of quality measures that would make them acceptable to consumers and physicians. While the list is very similar for both, there are differences in how important each feature is to each group. The features, by order of importance, are summarized in Table 1.

**TABLE 1: ESSENTIAL FEATURES OF QUALITY MEASURES BY STAKEHOLDER**

IMPORTANT FEATURES FOR CONSUMERS:	IMPORTANT FEATURES FOR PHYSICIANS:
1. Measuring outcomes of care	1. Understanding who’s being measured
2. Distinguishing performance between providers	2. Having benchmarks
3. Having benchmarks	3. Measuring outcomes of care
4. Understanding who’s being measured	4. Ensuring appropriate risk adjustment
5. Clearly stating what condition, procedure or population is being measured	5. Using fully transparent methods for measuring, adjusting and rating

Overall, what’s important to consumers is intuitively understandable. They want to know whether they’re getting good care or bad care. Today’s commonly used “process measures” which simply tell consumers whether a test or screening was performed is simply not useful. They also want to clearly distinguish hospitals or physicians with simple rating systems like Consumer Reports or stars, and have benchmarks to understand whether the providers in their area are, overall, better or worse than national averages (or the national top quartile). And finally they want to know who exactly is being measured, whether it’s a facility, a practice, or an individual clinician, and what’s being measured, whether it’s an entire population, a single condition, or a procedure. Their preference is for facility measurement for the medical events that are staged in hospitals, and physicians for everything else. That, of course, contrasts and conflicts somewhat with what’s important to physicians.

Overall, physicians prefer that measurement be at the practice, medical group, hospital or health system level. They don’t particularly like individual physician measurement. They want benchmarks of performance so that they can compare theirs, in absolute terms, to the benchmark, because that’s more important to them than simply knowing they’re average, or below/above average. While they have preferred that public reports be on process measures, most physicians agree that outcome measures are important to report. And of course, if outcomes are to be measured, then they have to be adjusted for the illness of patients and all methods used have to be completely transparent so that there is trust in those methods, or at least a good ability to understand how the results were generated.

<sup>15</sup> Friedberg MW, Pronovost PJ, Shahian DM, et al. A Methodological Critique of the ProPublica Surgeon Scorecard Aug 2015: <http://www.rand.org/pubs/perspectives/PE170.html> - Accessed Nov 1 2015.



TABLE 2: TRANSLATION OF MEASURE FEATURES INTO A STAKEHOLDER NARRATIVE

FOR CONSUMERS:	FOR PROVIDERS:
<ol style="list-style-type: none"> <li>1. <b>Outcome Measure</b> – 20% rate of complications from delivery</li> <li>2. <b>Unit of Comparison</b> – Two star rating</li> <li>3. <b>Measure has a Benchmark</b> – The national rate is 10%</li> <li>4. <b>Level of Measurement</b> – This measures the Hospital's performance, not the individual Obstetricians</li> <li>5. <b>Measure Focus is Condition, Procedure or Population</b> – The measure focuses on Deliveries</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Level of Measurement</b> – This measures the Hospital's performance, not the individual Obstetricians</li> <li>2. <b>Measure has a Benchmark</b> – The national rate is 10%</li> <li>3. <b>Outcome Measure</b> – 20% rate of complications from delivery</li> <li>4. <b>Risk Adjustment</b> – The measure is fully adjusted for the severity of the population treated</li> <li>5. <b>Methodology is Transparent</b> – The complete definition of the measure and method for adjusting are published on <a href="http://www.hci3.org">www.hci3.org</a></li> </ol>

Practically, reconciling these features isn't particularly difficult and Table 2 is an example of how a measure on rates of complications for deliveries could be reported to both consumers and physicians to satisfy their requirements.

Since outcome measures are important for consumers, it stands to reason that they should be readily available and widely reported, and yet they're not. There are, in fact, very few outcome measures reported publically, and mostly for hospitals. There are virtually no outcomes measures on physicians apart from the ones recently published by ProPublica and Consumers' Checkbook. However, our work for the past decade has uncovered that outcome measures can, in fact, be calculated for most conditions and procedures, at the facility or physician level, if what you look at are complications of care that could be avoided with optimal management of the patient.<sup>16</sup> This approach is also supported by significant research from many in the field.<sup>17</sup>

## PRIOR RESEARCH AND FINDINGS

There's a reason why ProPublica and Consumers' Checkbook focused on complication rates of surgeons. In 2012, Professors Judith Hibbard of the University of Oregon, and Shoshanna Sofaer of the University of the City of New York, conducted several focus groups around the country to test ways in which pricing and quality information could be framed and presented to consumers in a way that would lead to making value-based decisions. They found that complication rates were the only measures that generated the desired effect because consumers intuitively understood that fewer complications could and should equate to lower costs of care.<sup>18</sup>

HCI3 started developing measures of potentially avoidable complications (PACs) as part of its nationally recognized work on the PROMETHEUS Payment model, which was funded by charitable foundations (such as the Commonwealth Foundation and the Robert wood Johnson Foundation). Since then, these measures have been broadly used, researched, and

<sup>16</sup> Yong, Pierre L., Robert Samuel Saunders, and LeighAnne Olsen. The Healthcare Imperative: Lowering Costs and Improving Outcomes: Workshop Series Summary. Washington, D.C.: National Academies, 2010. Institute of Medicine of the National Academies, 17 Dec. 2010. Web.

<sup>17</sup> James JT. A New, Evidence-based Estimate of Patient Harms Associated with Hospital Care. *J Patient Saf*, 2013 (Sept); 9 (3): 122-128.

<sup>18</sup> Hibbard JH, Greene J, Sofaer S, Firminger K, Hirsh J. "An experiment shows that a well-designed report on costs and quality can help consumers choose high-value health care." *Health Aff (Millwood)* 31.3 (2012): 560-8. doi: 10.1377/hlthaff.2011.1168.



analyzed.<sup>19, 20, 21, 22</sup> In 2011, following the NQF endorsement of these measures for certain acute medical conditions (AMI, Pneumonia and Stroke), and for chronic conditions,<sup>23</sup> they were adopted for various purposes, including the creation of related measures by other organizations.<sup>24, 25</sup> Some commercial payers have used them as a means for tracking outcomes and for tiering providers for pay for performance programs.<sup>26</sup> In addition, some provider organizations have used them in quality improvement efforts by homing in on the detailed specifications of the measures to reveal opportunities for care improvement.<sup>27</sup> Identification of PACs has spurred provider innovation<sup>28</sup> for practice re-engineering, to create proactive care pathways, and to focus on areas of high variability.<sup>29</sup> Some employers are also using measures of avoidable complications as public measures of quality<sup>30</sup> given the research that demonstrated the potential efficacy of these measures to differentiate provider quality and cost.<sup>18</sup>

Accountability for and measurement of PACs occurs at the individual provider/practice, medical group, provider system or purchaser/payer level. PAC rates are calculated as absolute values. For example, a health plan would report that 60% of its plan members with CAD incurred PACs in the study time window. The objective of the measure is to encourage the unit being measured to progressively reduce that amount over time. In addition, comparisons of PAC rates across plans or providers should be encouraged and publicly reported. An organization that uses the measure should be able to identify the leading causes of PACs and implement improvements to existing processes that will decrease PACs. There are several tools available for provider systems and health plans to impact PAC rates. These include care coordination across care settings; post-discharge planning and patient follow-up, active care management, sharing medical record data between care settings and providers, total quality management within hospitals and active reduction of patient safety failures. Reducing PACs has the potential to significantly improve the overall level of quality, while also reducing costs.<sup>31</sup>

Creating a single measure of accountability for physicians and hospitals tied to gaps in quality in the management of patients with a specific condition, illness or injury is likely to yield much improved outcomes for patients.<sup>32</sup> A measure of accountability for health plans helps them review trends over time and work with physicians and hospitals to improve the ways in

<sup>19</sup> de Brantes F and Rastogi A. Evidence-Informed Case Rates: Paying for Safer, More Reliable Care. *The Commonwealth Fund* 40, publ. 2008; 1146:1-14.

<sup>20</sup> de Brantes F, D'Andrea G, Rosenthal MB. Should health care come with a warranty? *Health Aff (Millwood)* 2009; 28:w678-w687.

<sup>21</sup> François de Brantes, M.S., M.B.A., Meredith B. Rosenthal, Ph.D., and Michael Painter, J.D., M.D. Building a Bridge from Fragmentation to Accountability –The Prometheus Payment Model. *NEJM* 2009; 361:1033 (Perspective)

<sup>22</sup> de Brantes F, Rastogi A, and Painter M. "Reducing Potentially Avoidable Complications in Patients with Chronic Diseases: The Prometheus Payment Approach." *Health Serv Res* 45.6.2 (2010 Dec): 1854-1871. doi: 10.1111/j.1475-6773.2010.01136x

<sup>23</sup> Diana Manos Healthcare IT News. NQF endorses four new patient quality care measures <http://www.healthcareitnews.com/news/nqf-endorses-four-new-patient-quality-care-measures> - Accessed Nov 1 2015.

<sup>24</sup> National Quality Forum – Quality Positioning System: <http://bit.ly/1MAR7Im> - Accessed Nov 1 2015. See, for example: NQF#1550: Hospital-level risk-standardized complication rate (RSCR) following elective primary total hip arthroplasty (THA) and / or total knee arthroplasty (TKA). Online version: <http://bit.ly/1BWQTRt>

<sup>25</sup> Robert Wood Johnson Foundation: <http://www.rwjf.org/en/library/research/2011/02/prometheus-payment/the-fundamentals-how-the-model-works.html> - Accessed Nov 1 2015.

<sup>26</sup> Blue Cross Blue Shield of North Carolina: [https://www.bcbsnc.com/assets/providers/public/pdfs/specialty\\_methodology.pdf](https://www.bcbsnc.com/assets/providers/public/pdfs/specialty_methodology.pdf)

<sup>27</sup> Community Campaigns for Quality Care. "Recommendations to Reduce Potentially Avoidable Complications (PACs) among CalPERS Employees." Editorial. *Calpers.ca.gov*, June 2012. Web. CAPLERS <http://bit.ly/1FGYk0M>

<sup>28</sup> 2015 Bundled Payment Summit – Day 1, Track IV: Washington DC June 3-5. <http://www.bundledpaymentsummit.com/agenda/day1.html>

<sup>29</sup> Micaela P. McVary. The Prometheus Model: Bringing Healthcare into the Next Decade. *Annals of Health Law Advance Directive*, 2010 (Spring); 19: 274-284.

<sup>30</sup> Colorado Business Group on Health: Healthcare Incentives Payment Pilot (HIPP): <http://www.cbghhealth.org/resources/reducing-costs/healthcare-incentives-payment-pilot-hipp/> - Accessed Nov 1 2015.

<sup>31</sup> de Brantes F, Gosfield A, Emery D, Rastogi A and G. D'Andrea, "Sustaining the Medical Home: How Prometheus Payment Can Revitalize Primary Care", Robert Wood Johnson Foundation Report, May 2009, <http://www.rwjf.org/pr/product.jsp?id=42555>, - Accessed October 30 2015.

<sup>32</sup> Cassel, Christine, MD et al. "Getting More Performance from Performance Measurement." *New England Journal of Medicine* 371 (2014): 2145-147. Web.



which they engage patients using more optimal care management and care coordination. In addition, PAC measures can be used as a comprehensive outcome measure in a consumer transparency tool to differentiate providers with regards to their performance.

Moreover, since these measures are claims based, there is no added burden for collecting the data, and it also avoids potential gaming that may occur for other measures that require reporting information to registries. Although use of administrative claims data in identifying conditions and measuring provider quality has been questioned, there are several studies in literature that acknowledge the validity of its use.<sup>33,34</sup> Until more readily available data are at hand, use of administrative data to measure provider performance has steadily increased.<sup>35</sup> Importantly, in the current fee for service system, services for most PACs are rewarded by continued payment and hence, to our advantage, adverse events surface in billing data. Claims based PAC measures; therefore serve as an alternative method to track adverse outcomes that occur and can cause harm to patients.<sup>36</sup>

The measurement of provider accountability for complications is not new. Medicare has instituted a number of penalty-based programs to curb some of them. For example, the “never events” payment policy eliminates any payment for a small number of egregious complications.<sup>37</sup> The more recent penalties for any readmission after a patient has been discharged following a hospitalization has shown some early promise.<sup>38,39,40</sup> And the implementation of new payment models such as bundled payments makes providers accountable for the full cost of any complication that might occur during the episode of care.<sup>41,42</sup>

There is therefore a solid body of evidence to support the use of complications as outcomes measures, and there are many measures of complications that are already being used.<sup>43,44,45,46</sup> Our work has continued to evolve to the point where we can meet the requirements of consumers and physicians in measuring rates of complications.<sup>47</sup>

<sup>33</sup> Normand, Sharon-Lise T., Yun Wang, and Harlan M. Krumholz. “Assessing Surrogacy of Data Sources for Institutional Comparisons.” *Health Services and Outcomes Research Methodology* Health Serv Outcomes Res Method 7:1-2 (2007): 79-96. We

<sup>34</sup> Quan, H., N. Khan, B. R. Hemmelgarn, K. Tu, G. Chen, N. Campbell, M. D. Hill, W. A. Ghali, and F. A. Mcalister. “Validation of a Case Definition to Define Hypertension Using Administrative Data.” *Hypertension* 54.6 (2009): 1423-428. Web.

<sup>35</sup> Miller MR, Elixhauser A, Zhan C, and Meyer G. “Patient Safety Indicators: Using Administrative Data to Identify Potential Patient Safety Concerns.” *Health Services Research* 36.6.2 (2001): 110-132.

<sup>36</sup> Leibson CL1, Needleman J, Buerhaus P, Heit JA, Melton LJ 3rd, Naessens JM, Bailey KR, Petterson TM, Ransom JE, Harris MR. Identifying in-hospital venous thromboembolism (VTE): a comparison of claims-based approaches with the Rochester Epidemiology Project VTE cohort. *Med Care*. 2008 Feb;46(2):127-32. doi: 10.1097/MLR.0b013e3181589b92.

<sup>37</sup> Arnold Milstein. Ending Extra Payment for “Never Events” – Stronger Incentives for Patients’ Safety *NEJM* 2009; 360:2388-2390 DOI: 10.1056/NEJMp0809125. <http://www.nejm.org/doi/full/10.1056/NEJMp0809125>

<sup>38</sup> US News – Oct 19, 2015: Medicare Incentives and Penalties: Critical Lessons Learned: <http://health.usnews.com/health-news/hospital-of-tomorrow/articles/2015/10/19/medicare-incentives-and-penalties-critical-lessons-learned> - Accessed Nov 1 2015

<sup>39</sup> Best way to Run a Hospital Readmission Program. <https://www.healthcatalyst.com/healthcare-data-warehouse-hospital-readmissions-reduction> - Accessed Nov 1 2015

<sup>40</sup> AHRQ: 2013 Annual Hospital-Acquired Condition Rate and Estimates of Cost Savings and Deaths Averted from 2010 to 2013. <http://www.ahrq.gov/sites/default/files/wysiwyg/professionals/quality-patient-safety/pfp/hacrate2013.pdf> - Accessed Nov 3 2015.

<sup>41</sup> Rastogi A, Mohr BA, Williams JO, Soobader MJ, de Brantes F. Prometheus Payment Model: Application to Hip and Knee Replacement Surgery. *Clin Orthop Relat Res* 2009; 467(10): 2587-2597.

<sup>42</sup> Hussey PS, Sorbero ME, Mehrotra A et al. Episode-based Performance Measurement and Payment: Making it a Reality. *Health Aff (Millwood)*. 2009; 28(5):1406-17; 10.1377/hlthaff.28.5.1406.

<sup>43</sup> S.F. Jencks, M.V. Williams, and E.A. Coleman: Rehospitalizations among Patients in the Medicare Fee-for-Service Program. *New England Journal of Medicine* 2009; 360: 1418-1428.

<sup>44</sup> Michael R. Eber; Ramanan Laxminarayan; Eli N. Perencevich; Anup Malani. Clinical and Economic Outcomes Attributable to Health Care-Associated Sepsis and Pneumonia. *Arch Intern Med*, 2010; 170 (4): 347-353

<sup>45</sup> J. Hughes, “Identifying Potentially Preventable Complications Using a Present on Admission Indicator,” *Health Care Financing Review* 27, no. 3 (2006): 63-82.

<sup>46</sup> David Blumenthal: Reflecting on Health Reform: Good News! High Performance in Action. The Commonwealth Fund Blog, April 16, 2014. <http://www.commonwealthfund.org/publications/blog/2014/apr/drop-in-infections> - Accessed Nov 1 2015.

<sup>47</sup> HCl3: Measuring Provider Performance: <http://www.hci3.org/content/measuring-provider-performance> - Accessed Nov 1 2015



## MEASURING & REPORTING COMPARATIVE RATES OF POTENTIALLY AVOIDABLE COMPLICATIONS

Broadly speaking, avoidable complications can be categorized into two types. Type 1 complications are directly related to the condition, illness or procedure being measured. For example, avoidable complications that are related to the management of heart failure may include hypotension, acute heart failure, or fluid and electrolyte disturbances. These complications can be avoided, in particular for patients under the age of 65, with active and continuous management and oversight of the patient. Similarly, avoidable complications that are related to a total knee replacement can include hemorrhage or a wound infection.

Type 2 complications are a broader set of patient safety-related complications such as drug-to-drug interactions, adverse effects to medication, line sepsis, deep vein thrombosis, phlebitis, falls, or other events that can occur when the system surrounding the patient fails.

Fieldwork has shown that physicians are far more likely to bristle at the inclusion of Type 2 complications because they feel they have less control over these events than Type 1 complications.<sup>48</sup> However, from the patient's perspective, all of these are complications, and almost all could be avoided if care were optimized.<sup>49</sup> From a more general policy perspective, if we are to move towards a truly patient-centered health care system, then the reduction of Type 2 complications are as important as Type 1 because they are more indicative of the lack of care coordination around the patient and of a functional system of care to support the patient through complete recovery.<sup>50</sup>

To illustrate the importance of measuring both types of complications, Table 3 summarizes the findings from a large commercial database on the frequency of potentially avoidable complications for patients with hypertension.

**TABLE 3: FREQUENCY OF PACS IN HYPERTENSION EPISODES**

RELEVANT CASES	# UNIQUE PATIENTS	% OF TOTAL CASES
Count of Episodes	31,093	100.0%
Episodes w Any PAC	13,081	42.1%
Episodes with a PAC of Type 1	5,237	16.8%
Episodes with a PAC of Type 2	10,516	33.8%
<b>Preventable Hospitalizations</b>	1,100	3.5%

It's important to note that some patients who have hypertension can experience PACs of Type 1 as well as Type 2 during the course of a single episode-of-care. As such, these are not mutually exclusive and the frequency of these events clearly indicates the importance to measure them. And the following graph lists out the top PACs in each type that make up the majority of complications for patients with hypertension in the population studied.

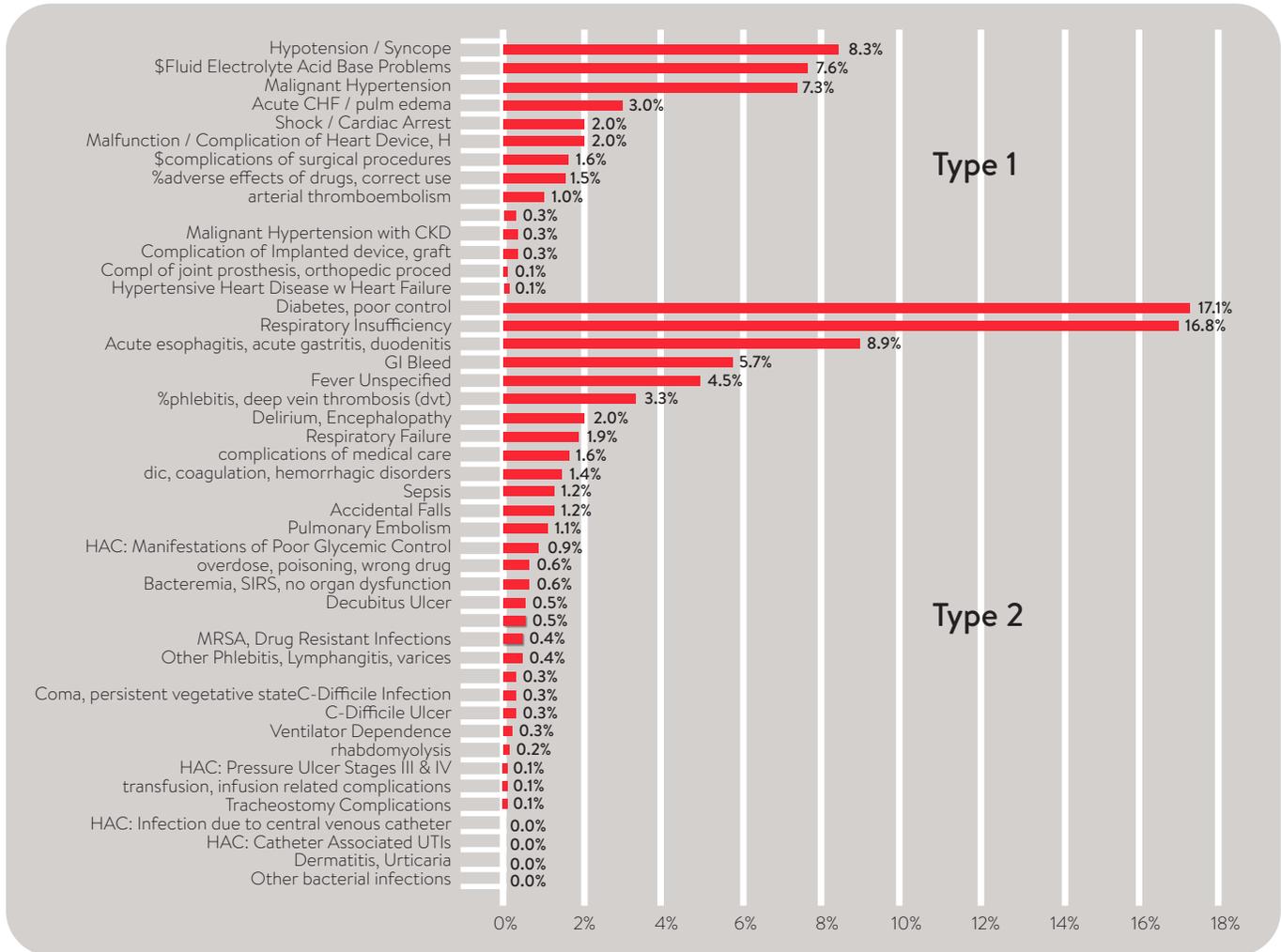
<sup>48</sup> NQF Draft Report: <https://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=80820> - Page 24, Oct 2015.

<sup>49</sup> The Commonwealth Fund. March 2011. OSF HealthCare: Promoting Patient Safety Through Education and Staff Engagement. <http://www.commonwealthfund.org/publications/case-studies/2011/mar/osf-healthcare>

<sup>50</sup> Wachter RM, Pronovost PJ, and Shekelle PG. Editorial. Strategies to Improve Patient Safety: The Evidence Base Matures. *Annals of Internal Medicine*, 2013; 158(5): 350-352.



FIGURE 1: FREQUENCY OF PACS FOR HYPERTENSION EPISODES



While the heterogeneity of Type 2 complications is evident from Figure 1, these represent the broader “system” failures that were decried in the series of reports on the quality of health care in America published by the Institute of Medicine at the turn of the century. The lack of comprehensive patient management, coordination between physicians around the care of the patient, and co-management of patient conditions creates the potential for adverse events. In this figure, for example, the single most frequent potentially avoidable complication is poor control of a patient’s diabetes. This is also a CMS-defined HAC (Hospital Acquired Condition) that needs to be addressed by hospitals to avoid facing a penalty.<sup>51</sup> While this would also appear as a Type 1 PAC for diabetes episodes, the co-existence of diabetes and hypertension creates a need to ensure the proper management of both conditions by primary and specialty care physicians. By including these Type 2 PACs, the signal sent to physicians managing a patient’s hypertension is that they should also work with the physicians managing the patient’s diabetes to minimize the potential for negative events tied to the poor control of diabetes.

<sup>51</sup> CMS defined Hospital-Acquired Conditions: [https://www.cms.gov/medicare/medicare-fee-for-service-payment/hospitalacqcond/hospital-acquired\\_conditions.html](https://www.cms.gov/medicare/medicare-fee-for-service-payment/hospitalacqcond/hospital-acquired_conditions.html) - Accessed Nov 1 2015.



Of course, this figure also points out the importance to adjust for patient severity when comparing rates of avoidable complications. Clearly, patients who only have hypertension are very unlikely to get PACs for poor control of diabetes, but patients who have both hypertension and diabetes are likely to experience these PACs. Adjusting for the severity of patients should help account for the existence of multiple conditions in a single patient and the greater potential for PACs to occur. So let's examine the specific methods used to account for patient severity, create benchmarks for comparison, and ensure that the measures used reliably and fairly represent a physician's or facility's performance.

## DESCRIPTION OF METHODS

**Data** The dataset used in all our analyses includes more than 3 million covered lives and over \$25 billion in claims. Included are patient-level medical and pharmacy claims covering two years, from 2012 through 2014.

**Episode Selection** The episodes we selected for this analysis, which include a combination of elective procedures and chronic conditions, are listed in Table 4. We chose these episodes due to their high incidence in non-elderly privately insured populations and their impact on total costs. We also explicitly chose not to consider acute conditions and events since patients typically have little choice over their providers in these situations. As such, we believe these episodes are the most salient for these populations and those for which an individual would be likely to use provider-level quality information to make an informed treatment decision. That said, rates of potentially avoidable complications can be calculated for any episode of care when there is evidence of variability in performance and strength in the severity adjustment models. For example, while we had initially considered vaginal deliveries in our list of episodes, we excluded it from further analysis for two reasons. First, the risk adjustment models were very weak for these episodes and none of the facility-level reliability scores met acceptable levels. Second, based on ongoing analyses, we believe rates of cesarean sections are a more useful measure of a facility's overall quality of care for deliveries than rates of potentially avoidable complications of vaginal deliveries or C-sections

**Triggering of Episodes and Inclusion and Exclusion Criteria** Episodes were identified or "triggered" based on the rules in the PROMETHEUS Analytics version 5.3<sup>52</sup> that take into consideration the combination of diagnostic and procedure codes contained in the patient claims. For procedures, episodes are triggered from an index hospitalization or outpatient claim, and condition episodes are triggered by a combination of ambulatory claims.

We excluded from the analysis episodes that failed to meet any of the following criteria:

1. Individuals less than 18 or more than 64 years of age;
2. Episodes in which the patient had a gap in enrollment of 30 days or more during the episode;
3. Episodes with total costs below the 1st percentile or above the
4. Episodes that did not complete the predefined episode time period.

**These purposeful exclusions prevented us from including incomplete episodes or those with claims that contained outlier codes or services. All condition episodes were annualized by taking the most recent 12 months of episode claims. The individual patient-episode is used as the base unit of analysis.**

<sup>52</sup> For more information on the episode definitions and trigger rules, please refer to the HCI3 web site ([www.hci3.org](http://www.hci3.org)).



TABLE 4: OVERVIEW OF SELECTED EPISODES

EPISODE	EPISODES PER 1000*	% OF EPISODES WITH A PAC	AVG \$ PER EPISODE	AVG PAC \$ PER EPISODE
<b>CHRONIC CONDITIONS</b>				
ASTHMA	28.8	40.2%	\$769.03	\$226.27
CORONARY ARTERY DISEASE	10.4	47.0%	\$1738.56	\$413.50
DEPRESSION	26.0	24.3%	\$1474.46	\$469.15
DIABETES	27.8	59.6%	\$1802.05	\$622.50
HYPERTENSION	88.3	31.6%	\$973.81	\$220.41
LOW BACK PAIN	59.0	14.5%	\$167.37	\$12.05
<b>PROCEDURES</b>				
BARIATRIC SURGERY	1.9	45.7%	\$19,598.42	\$1,623.88
CORONARY ANGIOPLASTY	1.9	48.6%	\$21,913.00	\$832.36
KNEE ARTHROSCOPY	5.4	13.1%	\$8,034.63	\$142.67
LUMBAR LAMINECTOMY	1.7	36.8%	\$38,839.55	\$1,450.81

\*Episodes per 1000 plan members – Prevalence rate of episodes in the database

## OCCURRENCE OF POTENTIALLY AVOIDABLE COMPLICATIONS

Each episode definition includes codes for potentially avoidable complications (PACs). As claims get included in an episode, the costs of those claims get parsed, at the service line level when available, between typical and PAC costs. The overall rate of PACs in any episode can vary from none to over 90%. **The main outcome used in our analysis is a dichotomous measure (0=no, 1=yes) of the occurrence of at least one PAC during the episode period.**

**Attribution of Episodes to Providers** Episodes were attributed to providers or inpatient facilities according to attribution rules built into the PROMETHEUS Analytics. For procedures, the episode is attributed to the unique inpatient facility identifier listed on the index hospitalization claim. While procedures can also be attributed to a physician (for example the surgeon), that form of attribution relies extensively on the specialty code, when included, on the claims data, or an extensive mapping of the provider ID, such as a NPI, with the national NPI database. Because of the inconsistency with which these identifiers are included in claims, there is greater reliability in attributing procedures to facilities. For conditions, episodes are attributed to the provider with the highest count of office visits for the condition. Because providers or facilities with small volumes may provide unstable and/or unreliable estimates, we excluded from all provider-level analyses those that had fewer than 10 episodes in the data. Defining the Measure Focus

As we discussed earlier, there are several features of quality measures that are essential to consumers and physicians. One is to clearly identify what the focus of the measure will be. Put simply, are we measuring the quality of multiple conditions at the same time, one condition at a time, or other combinations? To answer that question, let's first look at the results of the base analysis.



Descriptive Results As shown in Table 5, episodes vary widely in terms of the number of providers that take care of them and the number of episodes per provider. Moreover, there is significant variation in provider-specific PAC rates within each episode.

**TABLE 5: SUMMARY OF PROVIDER PAC RATES BY EPISODE**

EPISODE	# OF PROVIDERS	EPISODES PER PROVIDER		ACTUAL PAC RATES	
		AVERAGE	MIN - MAX	AVERAGE	MIN - MAX
<b>CHRONIC CONDITIONS</b>					
ASTHMA	1,230	44	10 - 2,442	39%	0% - 100%
CORONARY ARTERY DISEASE	457	42	10 - 1,157	45%	0% - 100%
HYPERTENSION	3,657	57	10 - 3,128	34%	0% - 100%
LOW BACK PAIN	3,280	42	10 - 1,448	13%	0% - 100%
DIABETES	1,659	33	10 - 889	60%	0% - 100%
DEPRESSION	1,151	28	10 - 481	23%	0% - 100%
<b>PROCEDURES</b>					
CORONARY ANGIOPLASTY	41	105	10 - 447	51%	32% - 80%
BARIATRIC SURGERY	47	106	10 - 518	44%	15% - 85%
KNEE ARTHROSCOPY	374	39	10 - 523	14%	0% - 50%
LUMBAR LAMINECTOMY	58	52	10 - 270	36%	6% - 60%

Because of that variation, it might make sense to aggregate some of these conditions together, especially if they are proximate clinically (i.e. in the same clinical family). However, our analyses discourage combining PAC rates across different episodes into a single measure. That's because we looked at the relationships between providers' PAC rates for pairs of episodes and found little correlation. High correlations would suggest that providers' PAC rates are similar across episodes – those with low PAC rates tend to have low PAC rates for every episode and vice versa – and would support combining rates into a singular measure. Low correlations would indicate that PAC rates should be kept separate.

Table 6 shows the pairwise correlations coefficients between PAC rates for providers treating patients for each pair of chronic condition and procedure. With a few exceptions, the analysis shows that the associations between most combinations of conditions are generally weak or very weak. Moreover, these associations hold even when the PAC rates are risk adjusted. We therefore recommend that those who adopt this method for evaluating provider performance carefully test pairwise correlations before combining PAC rates across episodes. When the associations are weak, as they are here, PAC rates across episodes should be reported separately.

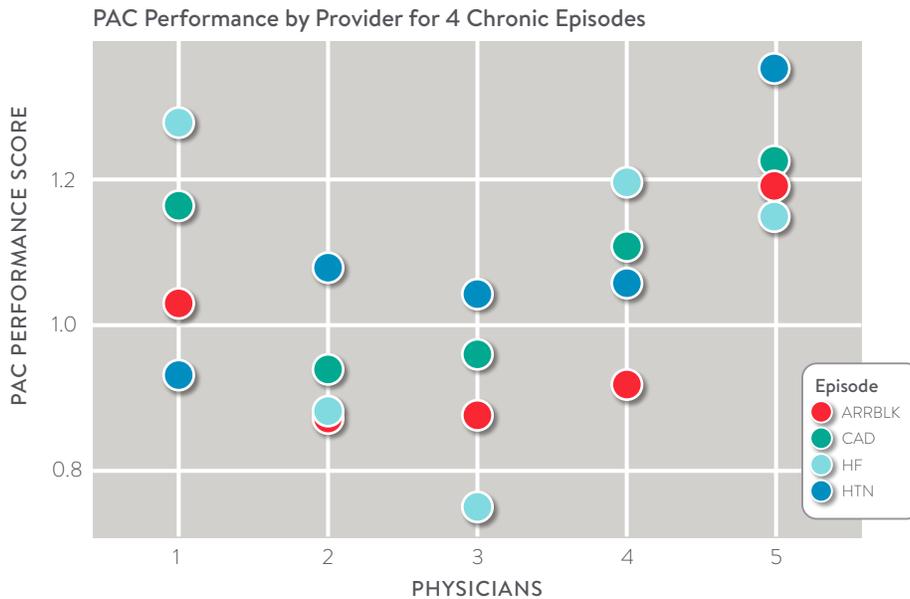


**TABLE 6: PAIRWISE CORRELATIONS BETWEEN PROVIDER PAC RATES**

CHRONIC CONDITIONS	ASTHMA	CAD	HYPERTENSION	LOW BACK PAIN	DIABETES	DEPRESSION
Asthma	1.00					
CAD	0.32	1.00				
Hypertension	0.30	0.49	1.00			
Low Back Pain	0.13	0.26	0.17	1.00		
Diabetes	0.25	0.34	0.36	0.14	1.00	
Depression	0.31	0.22	0.31	0.24	0.33	1.00
PROCEDURES	PCI	BARI SURG	KNEE ARTH	LUMBAR LAM		
PCI	1.00					
Bari Surg	0.35	1.00				
Knee Arth	0.10	-0.04	1.00			
Lumbar Lam	0.01	-0.05	-0.06	1.00		

The importance of calculating the scores separately for each episode is underscored in Figure 2 in which we show the performance of physicians for related condition episodes. Some of the physicians seem to have a better performance than average, one (5) has a poorer performance across the board, but most have mixed results.

**FIGURE 2: COMPARISON OF PAC RATES BY PHYSICIAN AND EPISODE**



As a result of these correlation analyses, we recommend that the measure focus be the individual condition or procedure, and not combinations thereof. Let’s now turn to another important feature, adjusting for patient severity.



## RISK ADJUSTMENT METHODS AND VALIDATION

In reporting any outcomes-based measure, it is important that the measure appropriately account for differences in the baseline health status of each provider's patient population. This ensures that providers are accurately and fairly compared in relation to their peers.

The risk adjustment models adjust for the following patient-related factors:

- 1. Patient demographics:** Age, gender, and an indicator of whether a member has enrolled within the previous 6 months. This latter risk factor is intended to account for the patient's lack of claims history, which limits the number of potential comorbidities that can be identified for the patient.
- 2. Comorbidities:** These are conditions or events that occurred prior to the start of the episode that could nonetheless have a potential impact on the patient's risk of having a PAC. These are universally applied across all episodes and identified from the diagnosis codes that appeared on an individual's claims prior to the start of the episode.
- 3. Episode Subtypes or Severity Markers:** These are markers that distinguish an episode as being more severe than another. They indicate either specific patient comorbidities that are known to make the procedure or condition more difficult to treat (e.g., obesity), or severity of the illness itself (e.g., Hypertensive Heart Disease, Renovascular and other secondary hypertension), or the setting in which the procedure is performed (e.g., heart attack leading to an urgent PCI). Subtypes are specific to each unique episode.

All comorbidities and subtypes are identified prior to or at the very start of the episode to reduce the potential for gaming by upcoding claims.

Using these factors as covariates, we fit a logistic regression model to predict the probability of occurrence of a PAC during an episode. To prevent unstable coefficients, comorbidities and subtypes are included in the models as covariates only if they are present in at least 10 episodes. No further model building is performed once the initial models are built. The model preserves a very large group of covariates. This reflects a desire to explain as much variation as possible in the probability of having a PAC, without tailoring the predictors and introducing unnecessary bias. This modeling approach allows for fewer potentially artificial constraints around the definitions of what constitutes severity of an episode condition, and lets each regression model determine for itself which of the factors are more significant for a specific episode.

Of note, non-significant covariates in episode cost models cannot overly influence predicted outcomes, nor is much harm realized if a group of correlated covariates work together to explain variation rather than having the variation explained by a single best factor. Separate models are fit for each episode and the predicted probabilities obtained from the models are used to construct the provider-level measures.

We validate our risk adjustment models using the split sample method. Specifically, episodes are randomly split into a development set (80% of episodes) and a validation set (20% of episodes).<sup>53</sup> The model is built on the development data set and then applied to the validation set. The outputs from these are then compared. We illustrate the strength of the models by reporting the Area Under the Curve (AUC) or c-statistics. The C statistic is a measure of the extent to which a statistical model is able to discriminate between a patient with and

<sup>53</sup> Iezzoni LI, ed. Risk Adjustment for Measuring Health Care Outcomes, 3rd ed. Chicago, IL: Health Administration Press, 2003.



without an outcome. Values can range from 0.5 to 1.0, with 0.50 indicating that the model is no better than random prediction (i.e., the patient risk factors do not predict probability of occurrence of the outcome). Conversely, a c-statistic of 1.0 indicates perfect prediction (i.e., patients' outcomes can be predicted completely by their risk factors). Models with c-statistic values of at least 0.7 are considered good and those above 0.8 are considered strong.<sup>54</sup>

Comparisons of the AUC statistics are given in Table 7. Two important observations can be made about the AUC statistics from the table: 1) the models for all episodes have good discriminatory power and many are at or above the threshold at which models are considered strong, and 2) the statistics are virtually identical between the development and validation data sets. Overall, these results show that our models are sufficiently robust for risk adjusting PAC rates.

**TABLE 7: AREA UNDER THE CURVE (AUC) COMPARISONS BY EPISODE**

EPISODE	DEVELOPMENT SET	VALIDATION SET
<b>Chronic Conditions</b>		
Asthma	0.750	0.752
Coronary Artery Disease	0.801	0.799
Depression	0.800	0.801
Diabetes	0.839	0.835
Hypertension	0.814	0.811
Low Back Pain	0.790	0.778
<b>Procedures</b>		
Bariatric Surgery	0.724	0.684
Coronary Angioplasty	0.709	0.686
Knee Arthroscopy	0.716	0.700
Lumbar Laminectomy	0.734	0.690

We can therefore calculate risk adjusted PAC rates for providers – physicians and facilities– for specific episodes, and Table 8 includes an overview of the range of those rates for providers, by episode.

**TABLE 8: RISK ADJUSTED PAC RATES ACROSS PROVIDERS:**

EPISODE	RSPR*	MIN – MAX
<b>Chronic Conditions</b>		
Asthma	38%	0 – 83%
Coronary Artery Disease	44%	0 – 89%
Depression	22%	0 – 86%
Diabetes	59%	0 – 99%
Hypertension	33%	0 – 98%
Low Back Pain	11%	0 – 66%
<b>Procedures</b>		
Bariatric Surgery	42%	16 – 68%
Coronary Angioplasty	52%	27 – 70%
Knee Arthroscopy	15%	0 – 59%
Lumbar Laminectomy	35%	9 – 67%

\*Risk-Standardized PAC Rate

<sup>54</sup> Hosmer DW, Lemeshow S. Applied Logistic Regression (2nd Edition). New York, NY: John Wiley & Sons; 2000.



Calculating the results of a measure, however important that might be, is all for naught if the results of one provider aren't distinguishable from another. Earlier we saw that the second most important feature of quality measures for consumers is the ability to distinguish performance. In scientific language, that feature is referred to as reliability.

## RELIABILITY OF PAC RATES AS OUTCOMES MEASURES

Reliability is a measure that distinguishes between the signal (the extent of performance variation between entities that is due to true differences in performance) and statistical noise. It is important because it is an indicator of a measure's risk of misclassifying providers' performance. For example, high reliability would indicate a high performing provider or facility will most likely be classified as a high performer using the risk adjusted PAC rates; while low reliability would suggest they could be classified as low performing providers, when in fact they are high performers.

To test the reliability of risk adjusted PAC rates, we restricted the data to providers with at least 10 attributed episodes. We assessed the reliability of PAC rates using the beta-binomial method, which is applicable to measures of this type. Our approach follows directly from the methods outlined in the technical report "The Reliability of Provider Profiling: A Tutorial" by J.L. Adams and suggested by the National Quality Forum. This method yields an individual score for each provider or facility ranging from 0 to 1 with higher scores meaning better reliability.

There is no clear cut-off for an acceptable minimum level of reliability. Values above 0.7, however, are considered sufficient to see differences between some physicians and the mean, and values above 0.9 are considered sufficient to see differences between pairs of physicians.<sup>55</sup>

Details of the reliability analysis are shown in Table 9. For all the providers caring for chronic conditions, the median reliability scores were at or above the 0.70 threshold and, for the majority of providers – as evidenced by the inter-quartile ranges – they were above this number (middle columns of Table 9). For facilities that were attributed the procedural episodes, however, just one episode, bariatric surgery, achieved an average reliability score above 0.7. For the other procedures, most, if not all, facilities had scores under the threshold.

Because reliability scores provide a reasonable measure of assurance that PAC rates for certain providers are statistically distinguishable from those of the others, they can be used to determine minimum patient sample requirements for more accurately reporting an individual provider's performance for each episode. In the last two columns of Table 9 we show the minimum sample sizes for which all provider reliability scores exceed 0.7, and the percentage of all providers that met the criteria.

In reporting episode PAC rates for these groups of providers, we recommend only reporting the scores of those whose sample sizes exceed the minimum thresholds to achieve a reliability of 0.7 for each episode. Although, in some cases, many providers could be excluded from a comparative analysis, this approach does ensure that providers with small sample sizes are protected from being inaccurately mislabeled as a high or low performer.

<sup>55</sup> Adams JL. The Reliability of Provider Profiling: A Tutorial. 2010. Rand Corporation: [http://www.rand.org/pubs/technical\\_reports/TR653.html](http://www.rand.org/pubs/technical_reports/TR653.html) - Accessed Nov 4 2015



TABLE 9: SUMMARY OF RELIABILITY SCORES BY EPISODE

EPISODE	TOTAL # OF PROVIDERS	OVERALL RELIABILITY		POINT AT WHICH ALL SCORES > = 0.70	
		MEDIAN	IQR*	# EPISODES	% PROVIDERS OR FACILITIES
<b>Chronic Conditions</b>					
Asthma	1,231	0.79	0.69 – 0.89	20	50.1%
Hypertension	3,658	0.80	0.68 – 0.89	25	54.0%
CAD	458	0.73	0.62 – 0.83	25	36.5%
Low Back Pain	2,994	0.81	0.64 – 0.96	40	27.7%
Diabetes	1,660	0.73	0.63 – 0.83	25	34.0%
Depression	1,053	0.69	0.57 – 0.81	35	19.8%
<b>Procedures</b>					
PCI	40	0.47	0.28 – 0.62	185	12.5%
Bariatric Surg	47	0.87	0.80 – 0.93	25	80.9%
Knee Arth	374	0.05	0.03 – 0.21	^	0.0%
Lumbar Lam	58	0.50	0.32 – 0.72	80	27.6%

\*Inter-quartile range (IQR)

In establishing minimum sample size requirements for PAC measures, it is important to point out that the reliability calculations will be determined by the unique data set on which the measures are applied. Our research suggests that minimum sample sizes to achieve high degrees of reliability in the measures are a function of the dataset analyzed, and as such may vary from dataset to dataset. One should not infer that a minimum sample size achieved in one dataset or population would apply to another.

## PROVIDER COMPARISONS AND BENCHMARKS

In this section, we show how to calculate provider PAC rates for comparison purposes and how to translate these into information that is understandable for consumers and important to physicians. To construct measures that allow for direct and meaningful comparisons between individual providers, risk-standardized PAC rates (RSPR) are used. This method is similar to the methods employed by the Centers for Medicare and Medicaid Services (CMS) and endorsed by the National Quality Forum (NQF) to construct similar facility- and practice-level measures such as for mortality and for readmission rates. The calculation of the RSPR is as follows:

- For each provider, the number of actual observed occurrences of the outcome is summed across all attributed patients with that episode, to give the observed PAC rates for the provider.
- Similarly adjusted probabilities from the risk adjustment models are summed across all attributed patients to give expected PAC rates for the provider.
- The observed sum is then divided by the summed probabilities (O/E). This number yields a performance ratio indicating whether the provider or facility had more PACs than expected (ratio>1), as expected (ratio=1), or less than expected (ratio<1).



- This ratio is then standardized to the community rate using the indirect method. Specifically, the provider-level rate is multiplied by the expected community rate, calculated as the sum of adjusted probabilities for every individual in the sample across all providers in the analysis. This measure, known as the standardized rate, represents what the unit's risk-adjusted PAC rate would be if its patient population was reflective of the of the overall community. The formula for this calculation is as follows:

$$\text{Risk Standardized PAC Rate}_j = \left( \frac{\sum \text{Episodes with a PACs}_{i,j}}{\sum \text{Probability of a PAC}_{i,j}} \right) * \left( \frac{\sum \text{Probability of a PAC}_{i,j}}{\text{Total \# of episodes}} \right)$$

Where individual *i* is attributed to unit of analysis *j* (e.g. physician, facility, etc.)

The application of the risk standardized PAC rates for reporting purposes should be tailored to the audience that will use the information. While a risk standardized PAC rate may be useful for the providers themselves, they may be hard to interpret for most consumers. Instead, consumers need a way to simply, yet intelligently, identify a high quality provider over a low quality provider. A more useful way to do this, for instance, is to categorize providers into groups based on their PAC rates in relation to some benchmark, such as the average.

In order to facilitate the use of PAC rates by consumers, we show, using asthma and hypertension episodes as examples, a simple way of categorizing providers into different levels of PAC rates. To start, we only included providers that met the minimum sample size requirements that were established in the reliability analysis above. In order for higher scores to translate into lower PAC rates, we also subtracted the risk-standardized rates from 1.

Providers for each episode were split into three categories: below average, average, and above average. Inclusion in the above and below average categories was based on whether a provider was above or below one standard deviation of the average risk-standardized PAC rate for all providers. Providers with PAC rates more than one standard deviation above the average were labeled as “below average.” Similarly, providers with PAC rates more than one standard deviation below the average were labeled as “above average.” Providers within one standard deviation of the average were considered “average” performers.

The breakdown of providers across performance categories for two sample episodes is shown in Table 10. Between two-thirds and three-quarters of providers are labeled as having average PAC rates. Because higher PAC rates equate to lower performance, the average risk standardized PAC rates decrease with higher performance categories.



**TABLE 10: PROVIDER PAC PERFORMANCE**

	BELOW AVERAGE (HIGH PAC RATE)	AVERAGE (AVERAGE PAC RATE)	ABOVE AVERAGE (LOW PAC RATE)
<b>Asthma</b>			
% of Providers	17%	67%	16%
Average RSPR	56%	38%	19%
Range (Min - Max)	51 - 73%	26 - 51%	0 - 25%
<b>Hypertension</b>			
% of Providers	14%	72%	14%
Average RSPR	49%	33%	19%
Range (Min - Max)	43 - 93%	23 - 43%	5 - 23%

A diagram showing the complete distribution of physicians’ PAC performance is provided in Figures 3 and 4, with physicians above the blue zone having worse performance and those below having better performance.

**FIGURE 3: DISTRIBUTION OF RSPR BY PHYSICIAN FOR ASTHMA**

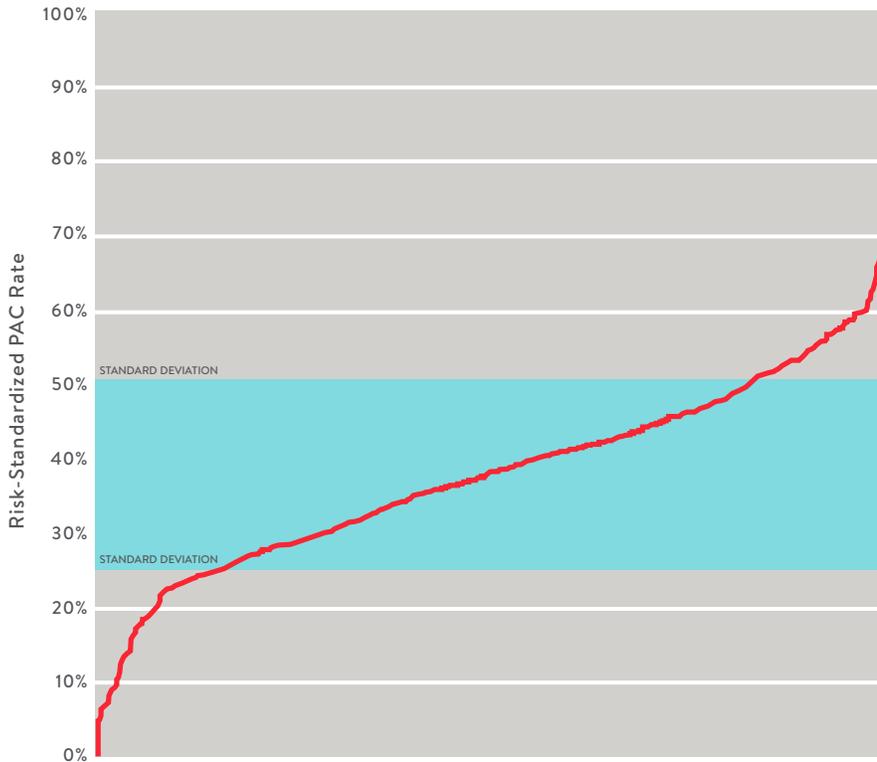
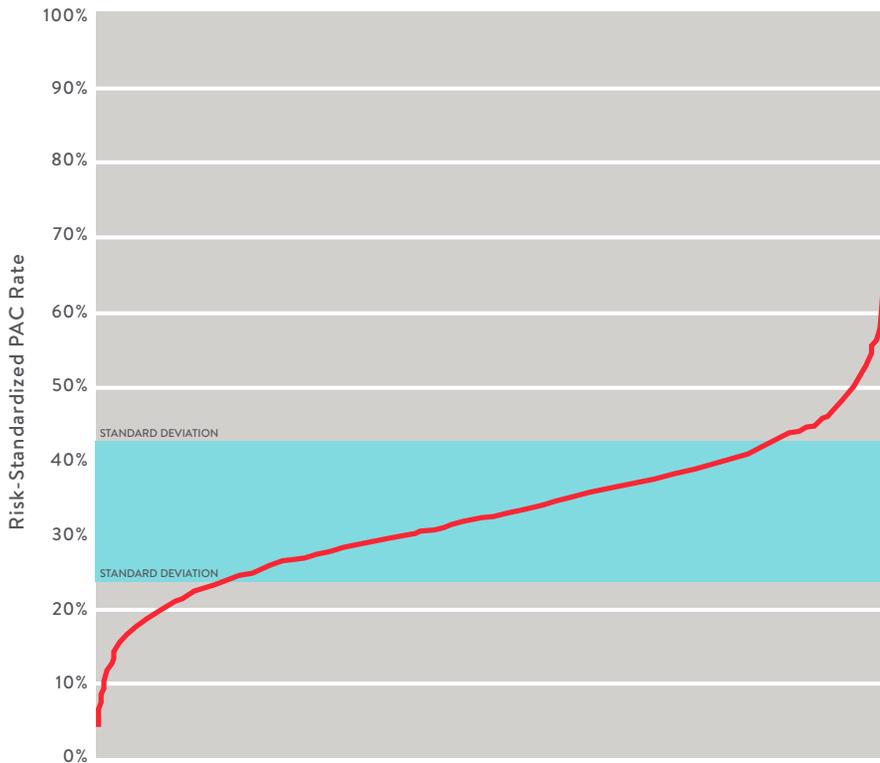




FIGURE 4: DISTRIBUTION OF RSPR BY PHYSICIAN FOR HYPERTENSION



## THE PATH AHEAD

With the introduction of a risk-standardized rate of potentially avoidable complications that can be measured at the individual condition or procedure level, and applied to individual physicians or facilities, we have the potential to enter into a new era of quality of care transparency. The data source for these comprehensive outcome measures is claims, which are plentiful and far easier to access than medical record data. In fact, the growing availability of Medicare claims data by CMS, and commercial insurance and Medicaid data by all-payer claims databases (APCD), provide a unique opportunity for a potential “big bang.” There are, however, some barriers to accessing those data.

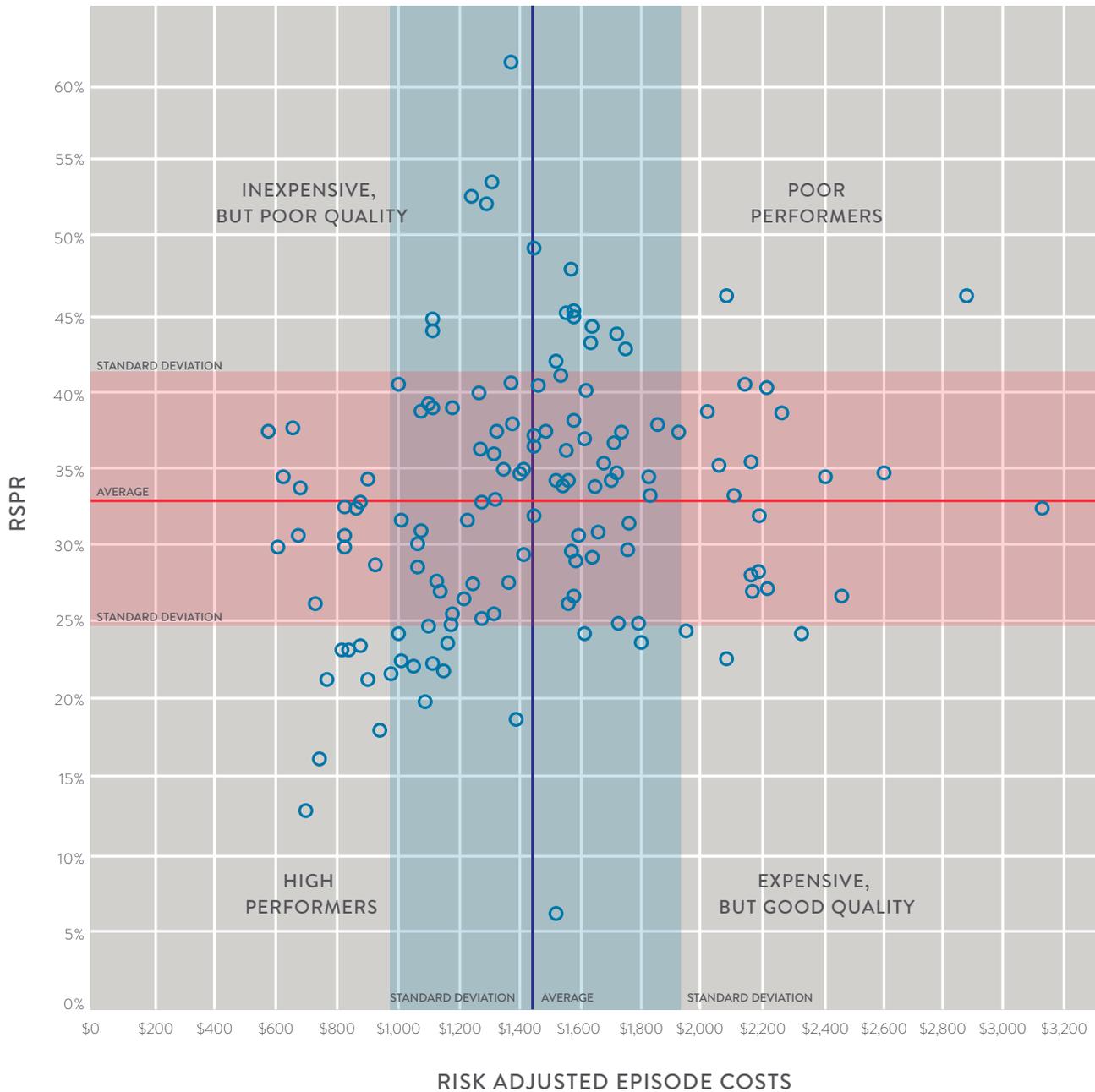
In some instances, the APCD data stewards are governed by committees that are dominated by physicians, and full and complete transparency of quality of care is still a scary proposition for many. As a result, the ability to freely use APCDs to publish measures such as risk-standardized PAC rates is likely to be a state by state fight, and one that we are ready to wage.

Conversely, private sector payers and state Medicaid agencies could leverage our work to make their own push for more complete quality transparency. Our Open Source episode definitions already provide all of the information on how to construct and define episodes of



care and identify potentially avoidable complications. Adjusting for severity and testing for reliability are relatively straightforward statistical methods that we will make widely available to facilitate these calculations. Further, as we show in Figure 5, by combining RSPR with Severity-adjusted Costs of Episodes, there is a unique opportunity to help consumers define value. For example, in Figure 5, physicians in the lower left quadrant have both low total episode costs and low rates of complications, while those in the upper right quadrant have high PAC rates and high episode costs.

**FIGURE 5: DISTRIBUTION OF PHYSICIANS BASED ON RSPR AND EPISODE COSTS**





## APPENDIX D

# TRUST BASED HEALTH BENEFITS PLAN STRUCTURE & OPERATIONS

### TBP STRUCTURE AND OPERATION

Employers, with appropriate professional guidance and consultation, would design a health benefit plan that satisfies the requirements of ERISA and the ACA. The design would include an actuarial determination of projected “losses”—i.e. claims for covered benefits likely to be incurred, plan administration costs and premium cost for stop-loss insurance. The benefit plan design selected by the employer would be the plan sponsored by the employer created Trust. The amount and type of stop-loss coverage required, and therefore the premium amount for the coverage, would require the determination of the amount of the plan losses that would be funded to the Trust from employer and employee contributions. Otherwise stated, the “first dollar” payment obligation of the Trust plan with respect to claim losses sets the attachment point for the stop-loss insurance.

The plan design also establishes the respective contribution amounts to be made by the employer and the employees who elect to participate in the plan. The employer’s contribution obligations are memorialized in an agreement between the employer and the Trust. The participating employee’s contributions are set out in the eligibility criteria for participation in the plan. An essential element of the plan benefit design is that it must offer material inducements to plan members to utilize the services of accessible MESA providers. The procedural steps for the establishment of a plan are:

1. **The employer, acting in a settlor capacity, creates a Trust that will be the sponsor of the plan design and responsible for its implementation;**
2. **The employer, also acting in a settlor capacity, appoints a Trustee for the Trust who is the Plan Administrator and is the primary fiduciary for the administration of the Trust;**
3. **The Trustee will have the authority to contract with third party vendors on behalf of the Trust. For example:**
  - a. **The Trustee may contract with a TPA to administer and pay eligible covered claims, be the claims fiduciary for the Trust, provide plan members access to provider networks with which the TPA has contracts, coordinate the performance of the stop-loss relationship between the Trust and the stop-loss carriers from whom the Trust has purchased individual policies and establish the appropriate relationship with the Trust’s Custodian Bank to pay covered claims. The Trustee may contract with the TPA for such reports and other services as are appropriate for the prudent management of the plan;**



- b. The Trustee will enter into a contract with a regulated financial institution to serve as the directed Custodian of accounts individually owned by each of the Trusts for which it is a Trustee. All contributions, remittances and reimbursements payable and made to a Trust will be deposited into that Trust's account only. All disbursements and payments of any kind made by a Trust for any purpose are to be drawn from only its account;**
  - c. The Trustee will purchase stop-loss insurance for each Trust from a licensed carrier as called for by the plan design. Each Trust shall be sole owner and insured under the policy or policies. The Trustee, or a TPA if there is one, will be responsible for assuring that the issuers properly perform all of their obligations owed to the Trust under the policy or policies issued to the Trust. The Trustee may enter into such contracts with professionals and consultants as seems prudent for the proper administration of the Trust and the plan it sponsors.**
  - d. The contract between the employer and the Trustee may require the Trustee to provide the employer with such reports and information as the employer, acting in its capacity as the Settlor of the Trust, may need to make decisions from time to time concerning the plan of benefits sponsored by the Trust; and**
  - e. The Trustee may enter into contracts with MESA providers in its individual business capacity, and not as a fiduciary of the Trust, pursuant to which plan participants can obtain access to the MESA providers' services as a benefit covered by the plan sponsored by the Trust.**
- 4. The Trusts will be sited in a State jurisdiction that offers the greatest flexibility in the selection of stop-loss coverage in order to assure that coverage based on the attachment points and benefit terms specified in the Trusts' individual plan designs is available for purchase by the Trusts.**

The Trustee of the Trusts, or a TPA retained by the Trustee, can effectively function as an aggregator of plan members who participate in benefit plan designs that offer material inducements to their members for the selection of MESA providers. Critically, the aggregation occurs without any pooling or sharing of either risks or assets among the separate health benefit plans sponsored by the Trusts. Each Trust deals only with its own risks, controls its own assets and utilizes those assets exclusively for the benefit of its plan's members and the administration of the plan it sponsors. Every Trust has its own stop-loss policy or policies in which no other plan or person has any interest of any kind.

This is not a MEWA arrangement subject to regulation by the states. Each plan is a self-funded ERISA plan that, because there is no pooling of risk or assets with any other benefit plans, persons or entities is not subject to state regulation. Any state attempts to regulate the structure or administration of the Trusts' plans would be preempted by ERISA.

With one exception, the states in which the employer settlors are located cannot indirectly attempt to regulate the plans through efforts to regulate the stop-loss coverage transaction. The one exception concerns employers located in the single jurisdiction in which all the Trusts are located. That state has regulatory authority over the stop-loss insurance transactions that occur within its borders. But, as noted, that state will have been selected as the site for the Trusts because of its favorable laws and regulations with respect to stop-loss coverage. All insurance transactions will occur only in that jurisdiction. No insurance transaction arguably subject to regulation will take place in any other jurisdiction.



Notably, even in the jurisdiction within which the Trusts are located, state interference is limited. Because the plans are self-funded as a matter of law in that they have first-dollar liability on claims, ERISA prohibits the states from deeming them to be insurance subject to state regulation. Second, the stop-loss policies are not health insurance policies. The only insured is the Trust that has purchased the policy. The members of the plan that is sponsored by the Trust are neither insureds nor third-party beneficiaries of the stop-loss policies.

The loss risk insured by the stop-loss carriers is not triggered because a covered medical condition affecting a plan member has arisen. The only risk that is insured is the Trust's liability for the payment of covered services exceeding specified attachment point amounts. The jurisdiction selected for the siting of the Trust will not purport to regulate ERISA health benefit plans other than MEWAs. As noted, the Trusts are not MEWA arrangements because there is no pooling of assets or risk between or among the Trusts. Each Trust plan bears its own risks only, and the Trust's assets can only be applied to meet its unique obligations.

### **TBP OPERATIONAL SCHEMATICS: CONTRACTUAL RELATIONSHIPS, CASH FLOWS, AND SCOPE OF EMPLOYER RISK**

The contracting process begins with each employer (Companies A, B, C in the following illustration) creating a Trust that is the legal sponsor of the benefit plan offered by each employer to its employees. These Trusts will hold and control the benefit plan's assets and administer the benefit plan selected by their settlor employer. Acting in their settlor capacities, the employer companies appoint and contract with the Trustee of the Trust (Trustee) they have created to act as the Trust's Plan Administrator and primary fiduciary of the Trust through agreement F/K. As a result, the members of each Trust's benefit plan gain access to the Trustee's contractual arrangements—at scale—with stop-loss carriers for both specific or individual stop-loss coverage (S-SLC) and aggregate stop-loss coverage (A-SLC), Custodial Bank(s) ("Bank") through a Directed Trustee Agreement (DirT/K), and with a TPA selected by the Trustee. The TPA will handle claims processing and pay claims through a Drawing Rights Agreement (Dr/K) with the Bank. Either the TPA or the Trustee will coordinate the financial transactions between the Trust and the stop-loss carriers.

It is through this initial contracting network that the real power of the TBP model begins to manifest itself. It gives thousands of small and medium sized employers who create Trusts, administered by the same Trustee and the same TPA, the potential to aggregate their membership and function with the same purchasing power as might be possessed by a single large payer of benefits. From an economic leveraging perspective, the Trustee/ TPA is enabled to function on behalf of each of the separate self-funded plans as if it were one large national purchaser for creating high value MESA contracts with providers. The Trusts, however, retain their status as individual self-funded ERISA plans without any pooling of risk or assets with other plans or sharing coverage with other plans under a single stop-loss policy. Thus, the TBP model solves the Small N problem all non-jumbo trusts have in creating VBP contracts with healthcare providers and are able to deploy the same strength-in-numbers purchasing power that large purchasers/ payors of health care services possess.



FIGURE 1: TBP CONTRACTUAL RELATIONSHIPS

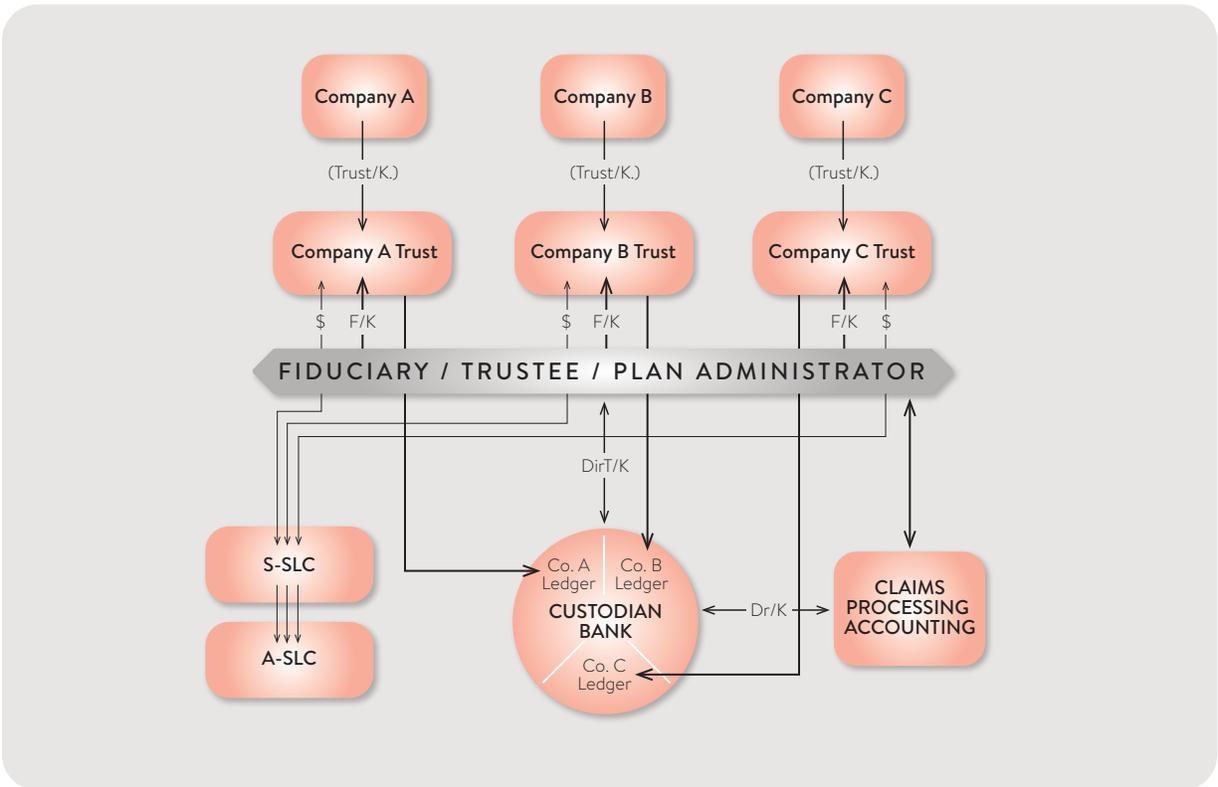
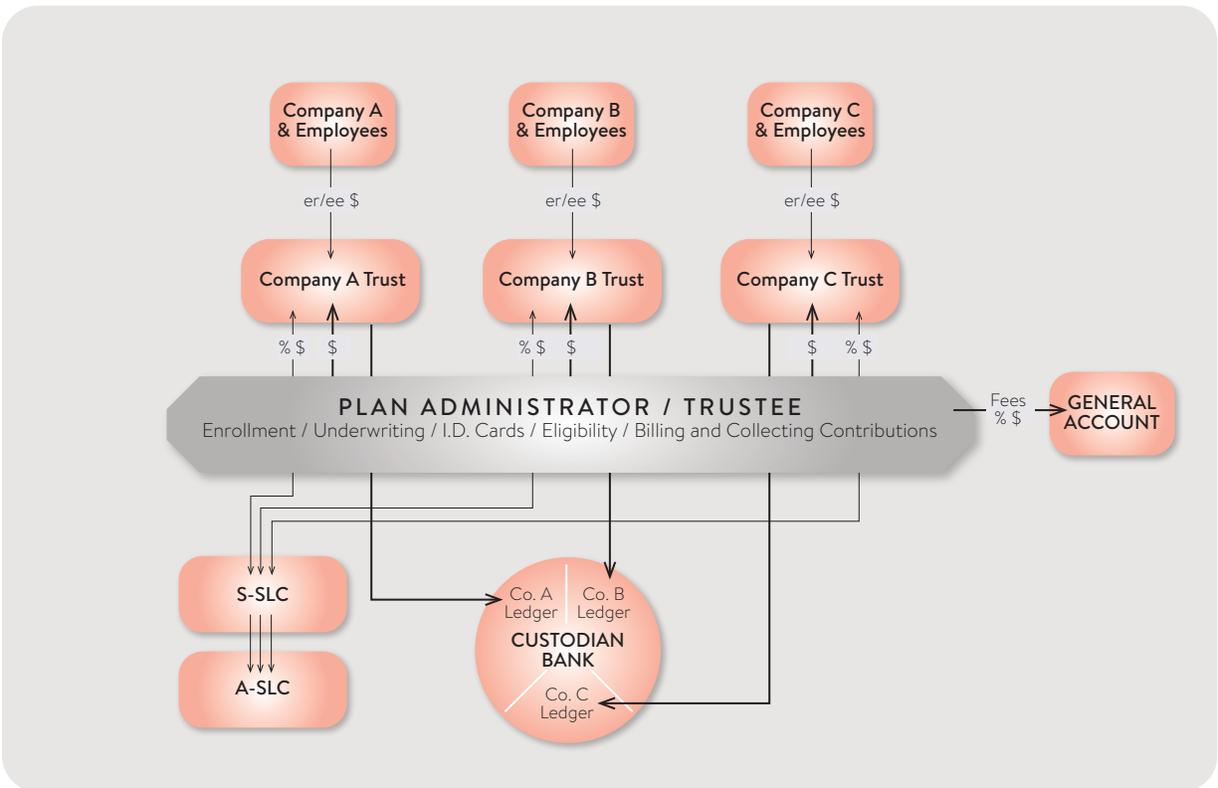


FIGURE 2: FLOW OF FUNDS TO AND FROM TRUSTS





In Figure 2, we see the direction of cash flows in the TBP configuration. Working with each employer's professional consultants when designing the plan of benefits the employer created the Trust will sponsor, actuaries determine projected losses to calculate employer/employee monthly contributions to the Trust, stop loss attachments points, stop-loss coverage required, premiums and plan administration costs (er/ee\$). The employer's contribution level fixes each company's plan year and monthly exposure to both health benefit costs ("medical losses") and plan administration costs. The calculated employee participant contribution fixes the plan year and per payroll period cost of participation in the plan they select for the employees. It does not, and could not, fix the cost to them of deductibles, co-payments and co-insurance payments as these are variables determined by their medical experience.

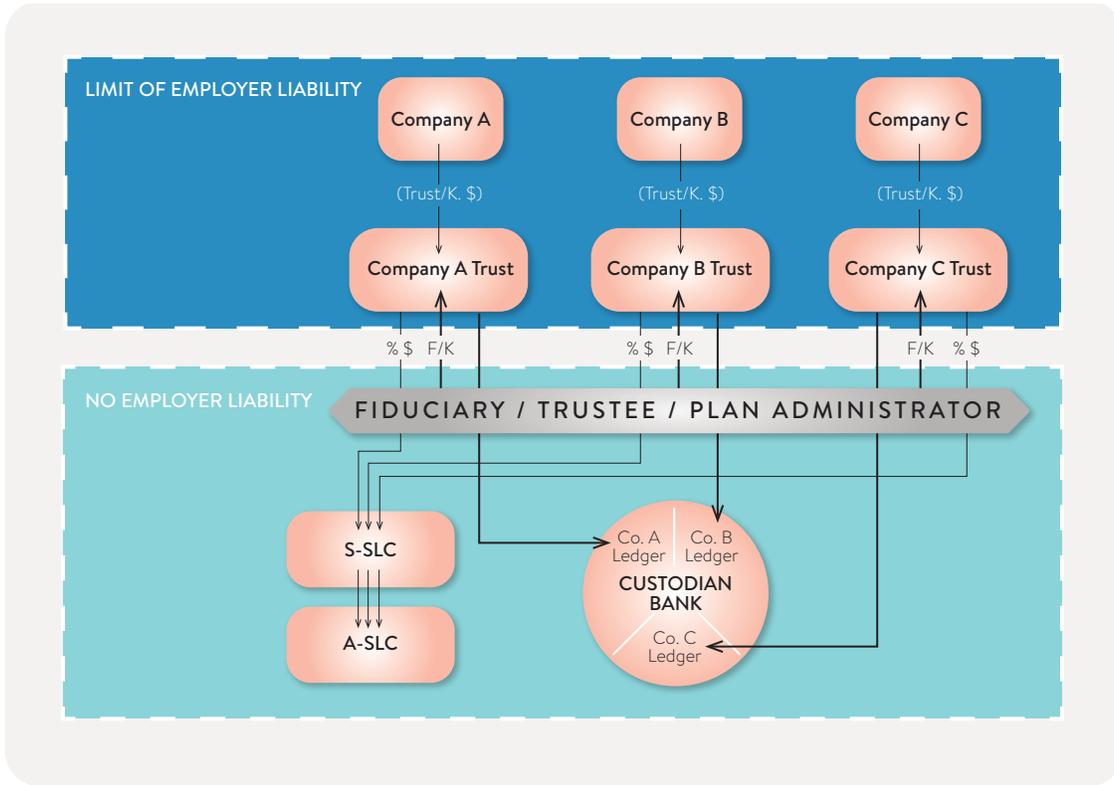
The Trustee, alone or in conjunction with a contracted TPA to whom it may delegate certain fiduciary and plan administration functions, administers the Trust and its benefit plan for a fee agreed to by the employer acting in its settlor capacity and performs the transactional and fulfillment responsibilities of the Trusts it serves a Trustee. All financial transactions are handled through and recorded in the Trust's Custodial account. The employer/employee contributions to the Trust, reimbursements to the Trust from the stop-loss carriers, refunds from providers and all other payments to the Trust of any kind are deposited in that account. All payments to providers for covered services, all premiums, all compensation paid to the Trustee, a TPA or other vendor to the Trust are made from that account and recorded in the Custodian Bank's ledgers for that account. Nothing described here departs from standard FFS processes common to all ERISA Administrative Service Organization (ASO) arrangements.

Figure 3 merely represents figuratively that any Trust's monthly medical spend is fixed in the TBP contractual network (Limit of Employer Liability) as demarcated by the dashed blue "risk containment box." Thus, individual trusts can both fix their health benefit plan support obligations and effectively realize the benefits of functioning as virtual consortia through the TBP model. This model enables them to take advantage of MESA benefits and VBP provider contracts, approaching local and regional providers as if they were contracting with a large group of potential users of their services. Any accrued savings, year-over-year, that come as a result of a more rationally structured health/wellness benefits and provider reimbursement dynamic are distributed uniformly through the risk containment box. The savings inure to the benefit of both trusts and their employee benefit plan participants.

First, the discounted provider service rates through MESA EOC contracts reduce the level of monthly contributions required to be made to the Trust by both the trust and the plan participants. The reduced rates also are a factor in the calculation of the stop-loss premiums to be paid by the Trust. Second, the MESA structure and VPB contracts effectively lower the cost of care covered by the benefit plan sponsored by the Trust by reducing the incidence of wasteful and unnecessary care expenditures. Of particular benefit to plan participants, their election to obtain services from MESA providers reduces their out of pocket costs attributable to deductibles and coinsurance payments. Obviously, this dynamic can only be achieved through scale as a function of time as new trusts come on board and widely diversified provider contracts accumulate. This is the business purpose of TBP entirely with regard to MESA benefits and provider contracting.



FIGURE 3: SCOPE OF EMPLOYER RISK





## CONCLUSION

As someone famously said, there are known knowns, known unknowns, unknown knowns, and unknown unknowns. In this blueprint we have tried to deal with known knowns, and we recognize that there are a lot of known unknowns that we will uncover as we apply this blueprint to real world pilots and uncover what we don't know (unknowns) while trying to solve for what we know we will uncover and can't plan for, including how providers will react to the potential for market share shift, how consumers will accept the new information presented in the form of a MESA, and whether any of the combination of incentives we are deploying will achieve the ambitious goals we are aiming for.

As we proceed, we will diligently record our experiences and inform the field. We will also endeavor to evaluate the effects of this approach as rigorously as we can. We hope some of you will join us on this important journey to help physicians and their patients achieve their common goal—improving outcomes of care.



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