

Issue **BRIEF**

Mary Laschober, Eugene Rich, Timothy Lake, Angela Merrill, and Candace Natoli

Developing Alternative Payment Models: Key Considerations and Lessons Learned from Years of Collaboration with CMS

Controlling health care's rising cost, while simultaneously expanding its availability and quality, is a top priority for policymakers at all levels of government. Increasingly, both private and public payers are experimenting with alternative payment models designed to improve care and slow spending. The U.S. Department of Health and Human Services (HHS), for example, recently announced measurable goals and a timeline to move the Medicare program, and the health care system at large, toward paying providers based on the quality, rather than the quantity, of care they give patients. As well, the Centers for Medicare & Medicaid Services (CMS) has invested significant resources to move away from traditional fee-for-service (FFS) payment models to models that reward efficient, high quality, and patient-centered care.

Alternative Payment Models

Linking financial incentives to providers' performance on a set of defined measures.

Shared Savings

Offer a percentage of savings to encourage providers to assume financial responsibility and coordinate care for a defined population (often paired with ACOs).

Pay for Performance

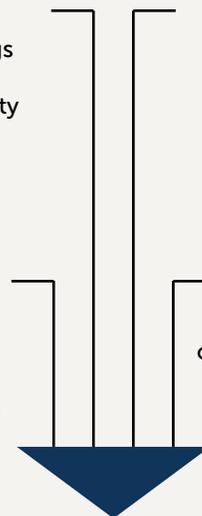
Use quality and resource use measures within the framework of a fee-for-service financial model.

Primary Care Services Payment

Enhance provider payments to encourage more comprehensive or advanced primary care (often paired with patient-centered medical homes).

Bundled Payments

Pay a lump sum for a set of services rather than paying for each individual service separately.



Better Care, Better Health, Lower Costs

U.S. Department of Health and Human Services (HHS) goals.

For the first time in the history of the Medicare program, HHS has set explicit goals for alternative payment models and value-based payments. By the end of 2016, it wants 30 percent of traditional fee-for-service Medicare payments to be tied to quality or value through alternative payment models, such as accountable care organizations or bundled payment arrangements. By the end of 2018, it wants 50 percent of payments tied to these models. HHS has also set a goal of linking 85 percent of all traditional Medicare payments to quality or value by 2016, and 90 percent by 2018, through programs such as the Hospital Value-Based Purchasing Program and the Hospital Readmissions Reduction Program.

Support for payment reform has spread throughout Congress, which recently passed the bipartisan Medicare Access and CHIP Reauthorization Act of 2015. This legislation repeals the sustainable growth rate formula—which sought to limit growth in spending for physicians’ services by linking Medicare physician fee updates to target rates of spending growth—and gradually replaces it with a system designed to reward physicians and allied health professionals for efficiently delivering high quality care. The legislation establishes the Merit-Based Incentive Payment System, which will consolidate three existing incentive programs for health care clinicians. The legislation also provides strong financial incentives for clinicians to participate in alternative payment models.

Mathematica Policy Research has long supported innovative payment reform efforts by federal, state, and private organizations, helping them to identify, test, implement, monitor,

evaluate, and scale up numerous new payment models for health care providers. This issue brief draws specifically on “lessons learned” through our work on recent payment reform initiatives undertaken by CMS to which Mathematica has applied its deep practical and policy knowledge. The key considerations presented here could benefit a variety of stakeholders. Projects to design and implement payment reforms (such as CMS’s physician value-based payment modifier (VBM) program and hospital-based bundled payments) offer lessons for program leaders and managers. Projects to evaluate primary care practice and payment reforms (such as CMS’s Comprehensive Primary Care (CPC) initiative) generate lessons for primary care practices and policymakers. Finally, projects that support providers participating in payment reforms (such as the accountable care organization (ACO) learning system) provide important lessons for health care delivery system leaders.

Mathematica is a leader in supporting all facets of alternative payment model reform:

- **Program design.** The first step to reforming provider payment is to broadly conceptualize the new system. Will it consist of rewards and/or penalties that build on the current FFS payment model, or will key financial model aspects be modified (e.g., through an all-inclusive per diem, episode of care, per-patient payment, or shared savings)? Which health care delivery settings (e.g., ambulatory versus inpatient hospital services) will the reform affect, and which providers (e.g., physicians, home health agencies)? Which beneficiaries will the reform target (e.g., those with specific chronic conditions, dual Medicaid-Medicare eligible beneficiaries, or hospitalized patients)? Once these questions are answered, a large number of design decisions must be made to bring the broader concepts to life. These include decisions about methodological elements such as measure adjustment for health risk, patient attribution to providers, and benchmarks for measuring progress, to name only a few.
- **Program implementation and support.** The implementation phase can be the most challenging, because this is when program details and implications not considered in the design phase become evident. Sponsoring organizations might face a range of operational complexities: for example, they might need to phase in implementation; design reliable, meaningful, and fair measures and performance reports; build financial systems to make or receive new types of provider payments; and develop innovative avenues for provider engagement, training, technical assistance, and shared peer-to-peer learning opportunities. The initial implementation period is also often the time when key barriers and facilitators to reform become most apparent. Such factors might be market-based (e.g., driven by the composition of the marketplace); governmental (e.g., caused by the state’s role as a convener of payment reform, or a regulator or purchaser of health care); or organizational (e.g., influenced by the characteristics of organizations leading or simply participating in the effort). Or they could be inherent in the payment model design itself, related to its complexity and potential impact.
- **Program monitoring and evaluation.** Determining the success of a payment reform—or fine-tuning the program or even changing its direction after it is well under way—requires real-time monitoring and evaluation. This entails making decisions about the methods, data, and tools that will be used to monitor and evaluate the program, which might encompass rapid cycle feedback to providers or sponsors, alternatives to randomized controlled trials, and longer-term performance reports with policy recommendations for model refinement.

Given recent legislative actions and HHS goals, it is clear that alternative payment models will increasingly be a part of health care transformation for all payers. It is therefore important for third-party payers, clinician professional associations, provider delivery organizations and networks, congressional support agencies, and CMS partners—as well as others following the debate on payment reform—to fully understand the challenges that accompany these new payment models.

PAY FOR PERFORMANCE

Mathematica has long supported CMS in designing and executing models that link FFS payment to quality and resource use indicators,

including Medicare’s relatively new physician VBM program. Payment modification—and Mathematica’s assistance to CMS—began in 2008 with confidential Resource Use Reports for physicians under the Medicare FFS Physician Feedback Program. These reports, and the later Quality and Resource Use Reports (QRURs), provide physicians with information on the quality and cost of care provided to Medicare beneficiaries. The program has evolved over the past three years, and now develops and applies a value modifier—a composite of physician quality and cost indicators—to the Medicare Physician Fee Schedule (MPFS). The value modifier will affect Medicare payments to all physicians and allied health care professionals by 2017.

Mathematica’s role in payment system reform: Physician value-based payment modifier.

Under CMS direction, Mathematica has developed, tested, and implemented key value modifier features that include alternative approaches to measuring physician quality and resource use based on Medicare administrative claims data, compositing quality and resource-use measures to create a single value modifier fee adjustment factor, risk-adjusting cost and quality outcome measures, determining comparison groups for benchmarking purposes, assigning cost and quality outcomes to individual physician and physician groups, standardizing “prices” for comparing resource use across geographically dispersed providers, and determining statistical reliability and outlier status for individual and composite performance measures.

Most of the quality measures for the physician value modifier are from Medicare’s Physician Quality Reporting System (PQRS). Mathematica researchers evaluated the precursor to the PQRS program when the Physician Voluntary Reporting Program (PVRP) began collecting quality measures in 2006. Mathematica and its partners studied the initial investments, changes to work flows, and time associated with reporting PQRS measures; examined operational and implementation issues related to physician data collection and reporting; investigated barriers to reporting among providers treating a disproportionate share of vulnerable and underserved patients; and proposed alternative methods for verifying measure reporting. We continue to support CMS with research on PQRS eligibility, participation, incentive eligibility, payments, and clinical performance, while also providing operational assistance and vetting activities for registries, electronic health record (EHR) vendors, and Group Practice Reporting Option groups. We also assist CMS with its efforts to integrate the PQRS and Medicare EHR Incentive programs.

...balance the trade-off between methodologically-sophisticated measures and measures that are most accessible to providers

Lessons learned for program leaders and managers: Physician value-based payment modifier

Balance methodological considerations with acceptability to clinicians.

One important payment design challenge that has often arisen for developing the VBM and QRURs is how to balance the trade-off between methodologically-sophisticated measures and measures that are most accessible to providers. As important as it is for quality and cost measures to exhibit strong scientific validity and reliability, these properties must be weighed against

providers’ comprehension of the measures and their perceived validity. Statistical reliability tests might justify using a low minimum case size for a given performance indicator, for example. But perceptions matter, and if physicians do not accept that such a small case size is truly valid, then another way to establish minimum case sizes might be needed. As another example of measure compromise, use of shrinkage estimators to improve the efficiency of a small-sample provider’s quality or cost indicators involves a trade-off between providers’ discomfort with this approach, weighed against CMS’s desire to construct long-term stable measures. These types of challenges call for continued testing with

Because medical professionals have heavy workloads, it is important to gradually phase in any new financial incentive.

physicians to discover what they will and will not accept as credible, and require in turn that CMS articulate policy decisions about which criteria drive measure adoption in the VBM program.

Experience with the value modifier program also highlights the need to balance conflicting goals for an alternative payment system. Physicians have an immediate need for actionable information, for example, and they have sought cost measure benchmarks that allow them to compare their own behavior to the behavior of a narrowly defined group of peers (who have a similar specialty and location). CMS has also sought to incorporate actionable performance measures into the value modifier, but recognizes that other longer-term program goals require comparing physician outcomes over a broader care network; this approach reduces unwarranted geographical variation and motivates different physician specialties treating the same type of patients to be equally cost-efficient. CMS has continually worked to create value modifier measures that are both valid and reliable—and yet that are still acceptable and meaningful to physicians.

Address information overload. If providers are to adjust their behavior to address negative outcomes, they must be able to pinpoint the key performance drivers. For CMS, this need involves decisions about whether it is better to provide physicians with large volumes of statistical information or instead to limit and tailor the information so that it is less detailed, and hence more meaningful and easier to understand. Mathematica has taken a number of steps to help CMS achieve the right balance: we have designed reports that layer information (first providing broad information to reduce information overload and make navigating QRUR reports easier, and then allowing for data drill-downs with more detail for those who want it); we have collaborated with CMS to develop online dashboards to complement the paper-based reports; and we have provided mid-year reports in addition to the original annual QRURs to add detail and timeliness to provider performance information.

Consider payment reforms in larger context. The physician value modifier program also highlights the importance of considering incentive design for a single program in the larger context in which providers work and interact with payers. For example, physicians subject to the value modifier at the same time are dealing with Meaningful Use, the Physician Quality Reporting

System, and other Medicaid and private payer pay-for-reporting or performance initiatives. VBM design has needed to consider whether aspects of these other programs will work at cross purposes with value modifier incentives and whether the VBM program aligns with other public and private initiatives.

Strategically communicate and implement alternative payment program rollout. Because medical professionals have heavy workloads, it is important to gradually phase in any new financial incentive. This approach ensures that providers have time to become aware of the new incentive, learn how it will affect their own practice and financials, and incorporate it into their practice. It is equally important to explain the new incentive in simple language and to send examples, preliminary data or measure outcomes, reports, etc., well before the change goes into effect. These steps reduce physicians' uncertainty about what the change requires and prevent misunderstanding. Gradual phase-in also makes it easier for CMS to test, evaluate, and improve the new initiative before it is fully implemented. For example, CMS first began distributing resource use and quality measures to physicians through confidential feedback reports back in 2008, which gave it time to improve value modifier measures and the VBM program before bringing it to full scale in 2017.

Overview of payment system: Hospital incentive programs

The passage of the 2010 Affordable Care Act (ACA) allowed Medicare to move from paying hospitals based solely on volume to rewarding or penalizing hospitals based on the quality of care and health outcomes of their Medicare patients. In particular, the ACA established three new hospital pay-for-performance programs: the Hospital Value-Based Purchasing (HVBP), the Hospital Readmissions Reduction (HRR), and the Hospital-Acquired Conditions (HAC) Reduction programs. Each uses a different strategy to adjust individual hospital payments to encourage improving the quality of care for Medicare beneficiaries. The HVBP program pays hospitals for inpatient acute care services based on the quality of care, not just the quantity of services, they provide; the HRR Program reduces payments to hospitals with excess readmissions; and the HAC Reduction Program encourages hospitals to reduce HACs, which are a group of reasonably preventable conditions that patients can develop during a hospital stay.

Choices about measures designed for public reporting programs may not be the right choices for these same measures as applied to provider payment.

Mathematica's role in payment system reform: Hospital incentive programs.

Mathematica has played a key role in the implementation of each of these hospital pay-for-performance programs. Our experience includes: calculating risk-standardized outcome measures—such as 30-day readmissions and 30-day mortality; developing and distributing hospital reports with detailed results on program measures and patients; testing and designing alternatives to scoring algorithms used for the Hospital Readmission Reduction and Hospital-Acquired Conditions Reduction programs; exploring potential program improvements (such as including new measures and incorporating statistical uncertainty and scaling methods); and investigating the impact of scoring and program effects on hospitals. In addition, Mathematica staff members have extensive knowledge of the Agency for Healthcare Research and Quality patient safety indicators (PSIs) and their composite measure (PSI-90), and they have applied this knowledge to refine the PSI's risk- and reliability-adjustment models for use in several CMS initiatives.

Lessons learned for program leaders and managers: Hospital incentive programs

Understand how measure design interacts with program goals.

A central lesson learned from our hospital payment-reform work is that measure design interacts in important ways with program design and scoring approaches. For example, risk-standardized outcome measures were designed to allow for the inclusion of a broad range of hospitals by adjusting measure rates for small hospitals toward the national rate (an approach also known as shrinking or smoothing). As a result, however, it is more difficult for smaller hospitals than for larger ones to score very well (or very poorly) on these types of measures using current scoring approaches. Designing program scoring approaches that can account for measure updates over time is also critical to CMS's ability to include quality measures based on improvement, such as in HVBP, which uses both a baseline and performance period. Improvement on a quality or cost indicator cannot be easily measured from one performance period to the next if the indicator's

Developing ways to align common measures may help to reduce unintentional overweighting of such measures.

specifications changed between the two periods; and programs may need to develop approaches where baseline results and benchmarks can be updated to reflect changes in specifications.

Another important aspect of this work has underscored that choices about measures designed for public reporting programs may not be the right choices for these same measures as applied to provider payment. For example, a decision not to adjust for socioeconomic status (SES) in measures implemented for public reporting programs is understandable. But to the extent that SES characteristics are correlated with greater patient noncompliance and thus lower quality outcomes, the decision could have unintended harmful consequences in pay-for-performance programs for hospitals that serve larger numbers of low SES patients. Methodologic decisions about the way to benchmark measures and to combine diverse sets of measures will also interact with measure design and have implications for provider performance. For example, setting peer-group-specific (rather than national) benchmarks is one way to account for differences between small and large hospitals or those with high or low SES populations.

Be aware of interaction effects of different alternative payment programs.

Another important lesson gained from this body of work is that it is critical to understand the effects of the combination of programs influencing provider payment, including the interactions of incentives introduced by each program. Hospitals function under multiple payment initiatives, including the three pay-for-performance programs described above, and these initiatives also interact with pay-for-reporting, ACOs/shared savings, bundled payments, Medicare Advantage, and other public and private alternative payment reform efforts. As the number of such programs and measures increases, it will also be important to assess the effects of potential "double counting" of measures such as the Agency for Healthcare Research and Quality's patient safety indicator composite that is used in both the HVBP and the HAC Reduction programs. Hospitals can receive multiple results based on the same measures, but calculated for different but overlapping time periods or for different populations by different programs; hence they can be penalized multiple times for the same overall outcome. Developing ways to align common measures may help to reduce unintentional overweighting of such

measures. Moreover, there may be advantages to expanding quality outcome measurement in the three hospital incentive programs from Medicare FFS to other populations (such as Medicare managed care, Medicaid, and commercially insured populations). Doing so could not only reduce the burden on hospitals created by needing to track and report multiple measures to multiple providers, but could reduce interaction effects while providing a more complete picture of hospital performance.

Carefully assess data's role in measure

construction. Mathematica's experience has highlighted the importance of providing timely data to hospital administrators so they and policymakers can assess results from recently implemented quality-improvement practices. Administrators and policymakers need to understand, however, that reliable performance estimates cannot be rushed; they require a sufficiently long period for data collection and a sufficiently large data sample.

It is also important to ensure that measure data cannot easily be gamed or have unintended consequences. Consider, for example, that hospitals are not required to include diagnoses

on claims for conditions they will not receive payment for, such as certain hospital-acquired infections. This means that differences in coding across providers could lead to undercounting of negative outcomes in measures. It is also possible that differences in coding practices for chart-abstracted infection measures could affect the validity of measures used in payment programs. Thus scoring designs that can adjust for the validity of measures might be beneficial.

PRIMARY CARE PAYMENT REFORMS

Much has been written about the importance of primary care and the barriers to its success under traditional FFS payment in the United States.¹ Good primary care is characterized by essential features like accessibility, continuity, comprehensiveness, and coordination. But the Medicare physician fee schedule has given primary care practices few incentives to provide these features. For example, typical FFS offers no rewards for enhanced patient access (e.g., no payments are made for phone calls or emails, and there is no additional payment for after-hours/weekend care). Continuity of care requires staff availability, computer systems, and care

Mathematica's role in payment system reform: Primary care services. Mathematica has been integral to a number of programs intended to strengthen primary care practice in the United States. For example, since 2009 we have supported efforts by the Agency for Healthcare Research and Quality to develop and implement models like the patient-centered medical home (PCMH) that aim to transform the organization and delivery of primary care. For that work, we developed a series of white papers describing better ways to deliver primary care and showcasing real-world examples. We also developed resources to support researchers as they evaluate PCMHs and other practice-based models of care delivery. These include briefs describing underused and novel methods, a guide to evaluation, and a seminal paper on how to accurately calculate statistical power.

Currently Mathematica leads the evaluation of several initiatives for the Center for Medicare and Medicaid Innovation ("the Innovation Center") that test alternative payment models intended to promote enhanced primary care. One of the largest is the Comprehensive Primary Care initiative, under which CMS collaborates with commercial and state health insurance plans in seven geographic areas. This initiative offers care management fees as well as the potential for shared savings to almost 500 primary care practices. Another innovative approach to enhancing primary care is the Independence at Home Demonstration, which Mathematica is currently evaluating for the Innovation Center. The demonstration assesses the benefits of providing in-home primary care to certain beneficiaries who have chronic conditions and need assistance with daily functional activities. Participating practices are eligible for financial incentives if they succeed in reducing costs for the Medicare program while meeting stringent quality standards. The Innovation Center's Health Care Innovations Awards program tests payment and regulatory options to promote enhanced primary care. These are cooperative agreements with programs proposing innovative ways to improve the quality and lower the cost of care for Medicare, Medicaid, and Children's Health Insurance Program enrollees. Mathematica is evaluating the redesign of the primary care focus area of these innovations.

on this page

¹ See for example R. A. Berenson and E. C. Rich, "US Approaches to Physician Payment: The Deconstruction of Primary Care," *Journal of General Internal Medicine*, vol. 25, no. 6, June 2010, pp. 613–18; Eugene Rich, Debra Lipson, Jenna Libersky, and Michael Parchman, "Coordinating Care for Adults with Complex Care Needs in the Patient-Centered Medical Home: Challenges and Solutions," AHRQ Publication No. 12-0010 (Rockville, MD: Agency for Healthcare Research and Quality, January 2012).

processes that ensure consistency in interpersonal relationships and facilitate information sharing, but fee schedules at best reward continuity for office visits (and only when there are appointments available with the patient's specific clinician).

Care coordination requires costly personnel time, even with sophisticated interoperable information systems; not until January 2015 (with the Chronic Care Management payment) did the Medicare fee schedule have a mechanism for supporting such care coordination efforts.² It is hardly surprising, then, that key aspects of primary care may be inadequate in the U.S. Numerous efforts are now under way to reinvigorate primary care practices through alternative payment models, such as enhanced payments to practices that provide comprehensive or advanced primary care using models similar to the "patient-centered medical home.

Lessons learned for policymakers: Primary care services

Additional payments to primary care can promote promising changes.

First-year results from the Comprehensive Primary Care (CPC) evaluation, which were released in January 2015, were promising. For attributed Medicare FFS beneficiaries through September 2013, results indicate that early effects of CPC on service utilization and costs were more favorable than might have been expected for the first 12 months of the initiative. Practices realized meaningful revenue from the care management fees paid under the CPC initiative, and they devoted a substantial

portion of these enhanced payments to supporting the efforts of care managers. Accordingly, the number of care manager full-time equivalents more than doubled in the first year, from 980 to 2,100, among the nearly 500 CPC practices.

Change requires work redesign as well as financial resources.

While alternative payment models may allow primary care practices to add new staff, they do not guarantee that these resources will lead to effective primary care teams. Many of the practices participating in CPC are small, with one-half having three or fewer primary care clinicians on site; in fact, over 40 percent of these practices have solo primary care physicians. Thus even with new financing, these small and busy practices may find it difficult to effectively integrate new team members. Other work by Mathematica researchers has explored how to overcome challenges to teamwork in medical homes,³ and current work for the Agency for Healthcare Research and Quality explores how to ensure that team-based care is patient centered.

Measurement of primary care's essential characteristics should be improved.

Another challenge Mathematica researchers have identified relevant to primary care payment reform initiatives is the lack of clear measures for such essential characteristics of primary care as coordination, accessibility, and whole-person care. Some of these challenges emerge from the changing processes in primary care: for example, how to measure interpersonal continuity via email or phone contacts when only face-to-face visits are currently

There is a lack of clear measures for such essential characteristics of primary care as coordination, accessibility, and whole-person care.

Mathematica's role in payment system reform: Bundled payment. As the payment reconciliation contractor for CMS's Bundled Payments for Care Improvement (BPCI) initiative, Mathematica is supporting Medicare's largest voluntary payment innovation program. Mathematica has assisted the Innovation Center over the past three years with one of the most important design features of the system: establishing methods for determining baseline, target, and performance period episode "prices" or bundle payment amounts. Mathematica developed several episode baseline and target pricing options for the initiative's retrospective models, as well as separate options for determining target prices for its prospective payment model.

Mathematica has also helped the Innovation Center with substantial implementation challenges. Examples range from adjusting episode prices to account for new incentive payment program bonuses or penalties for hospitals, to adjusting prices for new technology add-on payments that were not paid in the baseline period, to incorporating the unique payment system for anesthesia services into the Part B physician update factors for the prospective bundle pricing model. Additionally, our BPCI work involves post-expenditure monitoring to ensure that BPCI participants are not reducing episode costs by shifting services outside of the bundle. Mathematica is helping CMS determine whether cost shifting has occurred, accounting for chance variation in large post-episode costs in the performance period.

on this page

² See CMS.gov, "Details for Title: 2015-02-18," <http://www.cms.gov/Outreach-and-Education/Outreach/NPC/National-Provider-Calls-and-Events-Items/2015-02-18-Chronic-Care-Management-new.html>.

³ A. S. O'Malley, R. Gourevitch, K. Draper, A. Bond, and M. A. Tirodkar, "Overcoming Challenges to Teamwork in Patient-Centered Medical Homes: A Qualitative Study," *Journal of General Internal Medicine*, vol. 30, no. 2, February 2015, pp. 183–92.

reimbursed and recorded in claims data. Other challenges include developing validated metrics for comprehensiveness of primary care. Evidence suggests that these core features of primary care collectively enhance outcomes, so better assessment of them would likely improve future evaluations.

BUNDLED PAYMENT

A bundled payment strategy pays a lump sum for a set of services rather than paying for each individual service in the bundle separately. The service bundle might include all health services provided to a defined population (for example, a global annual budget) or all health services provided to a single patient (for example, a per-member per-month capitation rate). More typically, however, bundled payment involves paying for episodes of care; under this approach, also known as “case rate,” a single price for all health care services needed by a patient for a single condition, illness, or treatment procedure or process is established. A surgery and all related follow-up care for the next 30 days might be considered an episode of care; under another definition, an episode involves pre-surgery care, surgery, and all related care until a “clean period” (in which no further surgery-related care is provided) occurs. The episode bundled payment model is valuable primarily for two reasons: it reduces cost and variation within episodes, and it provides a financial incentive for a risk-bearing entity to improve coordination of services across health care settings and providers.

Lessons learned for program leaders and managers: Bundled payment

To increase incentives for program participants, reduce providers’ uncertainty. Mathematica’s assistance to CMS with the design, implementation, and monitoring of bundled payment systems provides numerous lessons about applying this type of payment to health care services. These include the importance of reducing participants’ uncertainty about which episode cases will ultimately be assigned to them before reconciling performance period targets and actual episode payments. It can be difficult for hospitals or other providers to determine whether a patient admitted to care is initiating a new episode or continuing an episode of care that was already begun. As designed, the Bundled Payments for Care Improvement (BPCI) retrospective models require a certain

amount of claims-processing time (“claims run-out”) before enough billing information is available to assign episodes that potentially could be attributed to more than one BPCI participant. From CMS’s viewpoint, this design might be desirable, because it gives participants an incentive to treat all potential beneficiary episodes with the same cost-saving protocols; from the participant’s viewpoint, however, it increases uncertainty risk and may reduce incentive to participate in the program.

Build in capacity to address data needs.

To date, low participation in the BPCI program has not been an issue. When the program began, CMS estimated that roughly a few hundred providers or provider groups would be interested. But after three years, over 6,000 provider groups had received historical and monthly episode and claims data to assess their viability of participation. This unanticipated increase in participants has presented substantial data processing challenges in terms of initial expectations of the resource capacity needed compared with implementation realities. Monthly and quarterly reports use national Medicare claims data for all Medicare claim types (except for Part D outpatient prescription drugs); and compiling national baseline data involves processing three years of national Medicare claims. Because the number of providers choosing to participate in a new voluntary program cannot be firmly predicted, it is important to draft plans for computer resource, data system, financial system changes, and labor requirements under different assumptions so that actual requirements can be met in a timely manner. However, it must also be recognized that this alternative scenario planning will require additional resources.

Balance increased information with providers’ ability to process and understand the information.

Given the large number and various types of BPCI participants (hospitals, skilled nursing facilities, home health agencies, provider groups, etc.), the value of providing participants with detailed and timely data for their analytic efforts must be balanced against participants’ need to interpret and successfully use the data. For example, soon after the start of the BPCI program, several participants requested episode and claims data more frequently than quarterly. To address their needs, CMS has provided monthly data. But recent months of data do not represent all

Because the number of providers choosing to participate in a new voluntary program cannot be firmly predicted, it is important to draft plans for computer resource, data system, financial system changes, and labor requirements under different assumptions so that actual requirements can be met in a timely manner.

of the claims that will eventually be billed, so all “potential episodes” are included in these monthly files. This causes confusion for some participants, who do not know in advance which episodes they will be assigned for reconciliation purposes, why some episodes appear in their files without full supporting claims, or why episodes appear or drop out of monthly files. The large amount of data, large number of files, and variation in participants’ analytic sophistication has led to many questions for the BPCI technical help desk. Under the circumstances, we have learned that a well-staffed and well-organized help desk system is essential for successful program implementation.

SHARED SAVINGS/ACCOUNTABLE CARE ORGANIZATIONS

Shared savings is a payment strategy that encourages providers to manage health care spending for a defined patient population over a period of time by offering them a percentage of net savings realized as a result of their efforts. Typically, a benchmark per capita cost is established for an attributed patient population, and if the patients’ costs fall below the benchmark—thus generating “savings”—the provider organization gets an added payment based on a share of those savings. In many of these arrangements, the amount of savings the payer shares with the provider is contingent on the level of performance achieved on quality measures for the same population.

Shared savings arrangements are often paired with accountable care organization initiatives, in which participating provider organizations—comprising physician groups, hospitals, post-acute care facilities, and/or other types of health care providers—agree to join together to care for a defined patient population. ACOs provide financial incentives for coordinating care, containing costs, and improving quality across multiple sites of patient care. In order to participate, an ACO must typically have certain basic organizational features, including size, provider composition, and governance structures tied to how shared savings will be received and distributed among multiple organizational components; it must also have the capacity to collect and analyze data and to exchange data among the organizational components. Nonetheless, the precise organizational configurations and process of care are usually left up to the provider participants, who are jointly “accountable” for the costs and quality of care for the patients they serve. They must decide

themselves about the best ways to achieve high performance under this new type of alternative payment model. They also must determine the level of risk they can tolerate. CMS’s initial ACO models offer both two-sided risk (that is, upside and downside) options and upside-only options.

Mathematica’s role in payment system reform: Shared savings/ACOs.

Mathematica has taken a leading role in supporting ACOs participating in four Innovation Center ACO models: Pioneer, Medicare Shared Savings Program (MSSP), End-Stage Renal Disease Seamless Care Organizations (ESCO), and the new Next Generation ACO model. Mathematica and our subcontractors are developing and implementing curricula for each model and providing research, technical assistance, and data analytics. We lead the development and implementation of a learning system that allows Medicare ACOs to share insights and lessons learned as they respond to the new incentives inherent in shared savings arrangements. The learning system offers peer-to-peer learning virtually (via webinars) and in-person (through an annual cross-model conference and regional meetings to which all ACOs are invited). We have also developed a performance measure dashboard that allows Pioneer ACOs to track performance and compare themselves with other Pioneer participants, and we are building similar dashboards for ESCOs and the Next Generation ACOs.

Lessons learned for health care delivery system leaders: Shared savings/ACOs

The curriculum of the Medicare ACO learning system highlights how delivery systems are being transformed in response to the new incentives offered by this alternative payment arrangement. Curriculum topics addressed over the course of the project—described below—provide valuable lessons for future ACO endeavors.

Engage providers and patients. Engaging providers and patients in transforming care is perhaps the most important step in ACO success. In particular, providers within the ACO need to understand and accept the ACO’s goals and its strategies for achieving them, as well

To achieve the goals of better care, lower costs, and improved population health, ACOs have found they require considerably more information than providers operating in an FFS environment.

ACOs have found that achieving population health requires proactive approaches to monitoring patients' health and significant outreach to patients living in the community to ensure better health practices.

as be willing to make the changes necessary to realize those goals. Similarly, physicians in the ACO must work in partnership with patients to improve the care provided within the ACO. Patient engagement is a particular challenge for Medicare ACOs because there currently is no affirmative enrollment process; patients are merely “attributed” to an ACO. ACOs need to be creative in explaining to patients how an ACO works and how it can improve quality and efficiency of care.

Enhance care coordination and manage transitions. ACOs have found it beneficial to share information and strategies about coordinating care. They have hired and trained care coordinators, have risk-stratified beneficiaries to target care coordination resources, and have sought to increase communication among providers. With responsibility for costs across the continuum of care for their assigned population, ACOs realize they must increasingly evaluate patterns of care and cost drivers across different care settings—especially in the areas of post-acute care and the transition of patients from inpatient care back into the community.

Improve population health. ACOs have found that achieving population health requires proactive approaches to monitoring patients' health and significant outreach to patients living in the community to ensure better health practices. ACOs have become innovative in using their payments to address certain patients' psychosocial needs as well as medical needs. For example, one Medicare ACO reduced a homeless person's health costs by 90 percent by finding him a home. Others provide air conditioners to patients with asthma. Such approaches are not generally feasible under FFS payments.

Promote evidence-based medicine and quality improvement. Evidence-based medicine is defined as a “core competency” of ACOs participating in the Medicare Shared Savings Program (MSSP), and it is critical to quality improvement. In particular, MSSP ACOs must define, establish, implement, and periodically update their processes to promote evidence-based medicine. The ACOs must therefore design and develop strategies for communicating evidence-based practices and tools to their clinicians and informing them of performance results. The ACOs have learned that it is not enough, though, to send reports to physicians—they need to train them in what the data mean as well as compare physicians with their peers.

Invest in health information technology, quality reporting, and data analytics. To achieve the goals of better care, lower costs, and improved population health, ACOs have found they require considerably more information than providers operating in an FFS environment. Improved access to and sharing of information requires investments in electronic health records, other health information technologies, data analytics methods, and capabilities for health information exchange and interoperability among participating providers. ACOs are also required to report quality performance measures in order to comply with program operations. All of these activities require considerable planning, technical assistance, and financial investments.

SUMMARY

Over the past several years, the number of alternative payment models and individuals receiving care through such models has grown rapidly. This has been fueled by the continued growth in national health care spending, blamed in part on FFS models of reimbursement. In 2010, the ACA mandated several changes in existing compensation programs and established the Innovation Center to develop and test alternative models, particularly those that change the focus of provider payment systems from volume-based to value-based care. There are continued signs that alternative payment models will play a prominent role in the future delivery of health care, including HHS's announced goal of moving 50 percent of Medicare payments into alternative payment models by 2018, and the recent high-profile legislation repealing the SGR formula that encourages physicians to participate in alternative payment models. These very recent reforms reflect the growing recognition that fundamentally different ways of paying for health care, including for physician care, are needed in order to improve quality and control costs.

Mathematica researchers have been instrumental in helping public and private payers—in particular CMS—understand and tackle the many challenges that arise in designing, implementing, monitoring, and evaluating alternative payment models. Valuable lessons learned from this work to date can aid in decisions about how to successfully structure and execute innovative payment systems to achieve quality outcomes and lower costs, while still maintaining flexibility in care delivery that meets the needs of both providers and patients.

