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Research Insights

Payment and Delivery Reform: Can Implementation Keep Up with Policy?

Summary

Payment and delivery reform are essential to containing costs in the U.S. health care system while addressing the need for improved quality. These efforts are directed at both the demand-side (patients and employers) and the supply-side (payers, physicians, clinical organizations), and the success of future reform relies on the evaluation of current and prior experiments to improve value. However, most of this experimentation has been piecemeal and voluntary, embedded in widely varied local environments usually characterized by competitive insurance, hospital, and medical service markets. So, while the Affordable Care Act of 2010 seeks to promote the most promising innovations, little is known generally about what the most effective supply-side strategies are, how ready payers and providers are to implement changes, or what policymakers should expect from ACA initiatives.

This paper summarizes key points from an expert panel AcademyHealth convened to identify how the knowledge from existing research can inform policy development and implementation in this area. The meeting discussion covered a range of supply-side strategies to improve value, including: Accountable Care Organizations (ACOs), bundled, capitated, and performance-based payment, and guideline- or education-based initiatives. During the meeting, the need for more precise performance measurement and better data emerged as key issues for successful payment reform efforts. Participants also noted that prior delivery system reform has largely occurred in receptive environments that were well-situated to implementing needed changes. Future research should focus on the potential for success from these efforts in more typical provider settings.

Introduction

In the 1990s, employers and insurers pushed to remake the U.S. health system in the image of integrated delivery organizations like Kaiser Permanente. The effort stalled in the face of consumer and provider resistance, but concerns about cost and quality continued to grow. In the aftermath, attention shifted to the development and assessment of tools that could help produce results like those observed in integrated organizations, but without a convulsive destabilization of the existing system.

These tools included guideline- or education-based strategies, payment reform, performance-based payment, and coordination and integration of the delivery system. During this time, research establishing correlations between treatment pathways and patient outcomes flourished, making it possible to define preferred standards of practice. Aided by slow but steady growth in the use of electronic health records, collection of data on provider performance increased, paving the way for new provider payment incentives tied to performance data. Recognition of the importance of care coordination led to revived interest in organizational and financing innovations like bundled payment, medical homes, and most recently accountable care organizations.

Comprehensive research on the effectiveness of pay-for-performance and disease management strategies, for example, has been difficult to conduct because of the small scale of most programs, their diverse settings, and the myriad of potentially confounding factors surrounding them. Many efforts are of recent origin, creating further difficulties for researchers who have only limited data to work with, and must in many cases rely on insights from payers and providers from their front-line experience in implementing payment and delivery system changes.

The varied experiments to-date provide a unique opportunity to look at current and prior efforts to improve value and evaluate their success in order to inform future implementation. In December, 2012, AcademyHealth's *Research Insights* project brought together analysts with key public sector experts and leaders from the payer community, clinical organizations, and the medical profession to review existing evidence and to assess research needs. Key questions addressed at the meeting included:

- What is known about how payers, clinical organizations, and physicians are responding to external incentives to improve value?
- What are the challenges or barriers to implementing promising strategies?
- Is there evidence from existing research or current experience on the effectiveness of particular strategies employed by payers, clinical organizations, and physicians?

This brief presents a summary of the December meeting. Because the session was "off-the-record," this document is intended to convey the general content of the meeting without attributing specific comments to particular participants. The discussion was informed by existing research, though neither it nor this brief incorporates a systematic review of the literature on supply-side strategies to improve value. We incorporate a bibliography of important current literature on the topic at the end of the brief, a subset of which is specifically referenced in the text.

The Payer Perspective

Initiatives by payers to improve the value of the health services they buy are increasingly common, as are efforts to collaborate with providers in implementing new payment strategies. Since the effectiveness of incentives is dependent on the share of a provider's patients that a given payer represents, much of what is known about the effectiveness of new payment strategies comes from large payers like Medicare and a handful of private insurers who count their members by the millions. In a few instances, multipayer initiatives have been launched to achieve comparable leverage. But multipayer collaborations are hedged by antitrust rules and competitive realities.

Thus, Medicare has often been a leader in payment innovation. The program has been a pioneer in quality reporting, often seen as a necessary first step toward value-driven payment. Under the Affordable Care Act, Medicare launched the most ambitious pay-for-performance (P4P) plan yet, the Hospital Inpatient Value-Based Purchasing (VBP) Program, in late 2012. The program will involve more than 3,000 hospitals and have $850 million in quality bonuses to distribute in its first years.

But results of a forerunner program, the Premier Hospital Quality Incentive Demonstration, were disappointing. Furthermore, a recent study projecting impacts of the VBP program estimated that two-thirds of participating hospitals would see payment changes of less than 1 percent.[1] These results raise several questions that were reiterated by participants in the AcademyHealth meeting. How large a reward or penalty is needed to impact provider performance? More importantly, will payers have to spend so much to get providers' attention that they lose money on such projects? Using penalties to fund rewards is logical but difficult in practice given the need to balance P4P incentives between organizations already performing at a high level and others that are less accomplished but improving.

Private Initiatives

As a public, national program, Medicare is constrained by a need for uniformity across regions and populations. Private payers are freer to shape their initiatives to specific market conditions. Large private payers have invested heavily in electronic information systems to guide market-specific strategies. Like integrated delivery organizations that use their own data systems to research treatment effectiveness, some large private payers can tailor provider contracts to reflect the specific needs of their covered populations and the readiness of local providers for performance incentives or the assumption of risk and responsibility for care quality, patient outcomes, and costs.

One such effort is UnitedHealth Group's Premium Physician Designation Program, which began in 2005 and involves about 250,000 physicians in 41 states. Using a large suite of measures developed by the National Quality Forum and the National Committee for Quality Assurance, UnitedHealth uses claims data to rate contracting physicians' quality by determining whether their patients receive care that conforms to evidence-based standards. Those whose performance scores rank in the top 25 percent receive a quality "star" and are eligible for incentive payments.

For purposes of this discussion, what is perhaps most notable about the program is what its very robust aggregation of data reveals about variations in cost within and across regions and markets. For some chronic conditions, there were ten- and twenty-fold differences in cost between the 10th and 90th percentiles of participating physicians, all of whom had first to receive a quality designation to be rated on efficiency. Cost differences for major procedures were significant, but not as large.[2]

For UnitedHealth, these cost differences represent important opportunities for improvement and savings. But these findings also have cautionary implications for other efforts to improve performance on quality and cost. One is that higher measured

quality does not necessarily translate into lower costs. Another is that with such large differences in performance, bringing a majority of providers toward a reasonable norm is not likely to happen quickly. Meeting participants observed readiness varies widely, and policymakers need to set realistic expectations for the pace of the "change wave."

Limitations

Not all observers are satisfied with the adequacy of the measures on which most value-based payment projects are based. There are few measures that capture diagnostic accuracy, waste, overuse, surgical outcomes, or the management of severely ill and complex patients with multiple co-occurring conditions. Challenges exist as well for the construction of reliable and consistent measures of episode costs on which the value equation must also rest.[3]

So after a decade of experimentation, some inherent limitations of performance-based incentives are apparent. First and foremost, they are generally designed to fit together with fee-for-service payment and therefore can do little, per se, to displace a payment mechanism widely believed to be responsible for the excesses of the U.S. health system. Further, many payers lack enough market presence to influence providers strongly. The sensitivity of providers to rewards is difficult to observe and calibrate. Existing performance measures are incomplete. In fragmented markets, payers will have difficulty assessing the performance of small provider organizations with too few patients for statistically valid evaluation. Where P4P has been in place over a period of years, measured differences in performance among providers may flatten out and blunt payment differentials. Robust data capture and careful, creative research will be ever more in demand to guide payers through such uncertainties.

Shared Risk

To repeat, the limitations of P4P programs reflect the limitations of fee-for-service payment as a vehicle for promoting value. The 1990s demonstrated mixed results in scaling up the use of capitated payment associated with exemplary integrated delivery organizations. In general, it was evident that while well-managed provider organizations could control their costs per case, they lacked the actuarial expertise and access to capital with which insurers negotiate the random incidence of disease and mischance. Health maintenance organizations tended to use per-capita payment in limited ways. Some large provider organizations were paid full capitation, but more often HMOs capitated just hospitals or just physicians, and in the latter instance more often primary care physicians than specialists.[4] Despite a brief spate of enthusiasm for provider-based health plans, few of these were successful or lasting.

Payers have this experience to remember as they seek to encourage provider organizations such as medical homes and accountable care organizations to take responsibility for the overall health of their attributed service populations – on a budget. Risk sharing, a well-travelled concept that has at times been referred to as "risk corridors", has recently emerged as a testable middle ground between fee-for-service and fully capitated payment.

As an example, Blue Cross Blue Shield of Massachusetts, with about a 50-percent share of the state's private insurance market, initiated its Alternative Quality Contract in 2009, with 11 provider organizations signed up by 2010. The approach is similar to that of the Medicare Shared Savings Program and payment design for accountable care organizations under the Affordable Care Act. The key to the shared risk approach is prospective estimation of an enrolled populations' expected yearly costs, based on past spending of individuals in the group, their demographic characteristics, and their health status. The contracting organization shares savings with the payer if actual costs are less than the estimate, and shares the extra cost if spending is greater.

The concept is simple but requires significant technical capabilities —especially in data management—and a willingness to work collaboratively between payers and providers. Detailed patient data must be marshaled to make accurate estimates of future costs, the notoriously difficult challenge for any system of risk adjustment. Movement of patients in and out of provider groups must be tracked and adjusted for. Measurement and attribution can be especially complicated when shared risk enrollees are only part of a provider organization's patient panel. Accounting for care received outside the participating organization represents an additional challenge.

A survey of 27 payer and provider organizations who have participated in shared risk programs paints a picture of an arduous negotiation process, stretching out over years in some cases, to arrive at agreements in which both payers and providers are satisfied that their interests are served and protected. "Each design choice exhibits tensions between conflicting goals and interests," a report on the survey concludes. "Payers' desire to protect themselves from overpayment by imposing statistically defensible confidence limits on payment thresholds conflicts with the notion that nascent programs may need to offer first-dollar incentives to attract early adopters."[5]

An analysis of the first two years' experience with the Alternative Quality Contract in Massachusetts found that spending was reduced by 2 percent relative to a matched comparison group. Quality scores also improved, but it is not clear that the savings were associated with improved clinical performance. Some reduction in utilization was observed, but gains were made primarily by shifting procedures, tests, and imaging to lower-

priced facilities. Moreover, the analysis found that with the infrastructure support paid to participants by Blue Cross Blue Shield, along with the budget savings retained by them, the insurer's total costs probably exceeded its savings.[6]

A Multipayer Approach

A counterfactual example illustrates in more detail the challenges of taking payment innovation to scale in competitive markets where no single payer can dictate change. With the state acting as convener, Maryland initiated an unusual Multipayer Patient Centered Medical Home program in 2011. A unique infrastructure existed in the state's Health Care Cost Commission, which administers Maryland's all-payer rate-setting system and maintains an all-payer claims database. The state's five largest private payers, Medicaid, and state and federal employee groups participated. The program made infrastructure contributions to 52 geographically-dispersed practices of varying size, with 250,000 attributed patients. Modest savings were achieved in the early months, but measurement challenges were encountered in the course of meeting the program's quality and NCQA certification goals.

The enabling conditions on which the Maryland program was built can only be imagined in most other settings. Multipayer rate alignment and data flows, a culture of collaboration, an organizational framework for program implementation, and a legislatively-mandated evaluation component are all assets that other multipayer endeavors must, for the most part, build from scratch with sustained and vigorous effort.[7]

The AcademyHealth discussants identified several aspects of recent payer innovations that will need scrutiny. One is how providers are responding in terms of organizing care processes, managing population health, coordinating across care sites, and the like. How are consumers responding to changes in cost-sharing and patient engagement efforts? What are the effects of provider consolidation on local markets?

Based on all these experiences with payment reform, one question looms above all others in assessing the prospects for transformation: Can new payment and delivery models that have achieved modest success in conducive environments replicate their accomplishments across a national landscape marked by fragmentation and fractiousness? Evaluating the progress of diverse experiments across varied environments was one of the research challenges most often noted by meeting participants.

The Patient Perspective*

Payers may also direct incentive strategies toward consumers. Disease management (DM) programs began to develop more than a decade ago to educate chronic illness patients about how to manage their condition and adhere to their medication regimes. The effectiveness of the DM programs has been difficult to ascertain. Program data has often been held back for proprietary reasons. Controlled trials that can isolate DM program effects from comorbidities and behavioral factors are operationally daunting and likely to be prohibitively expensive.

Recent years have also seen renewed interest in workplace wellness programs to incentivize illness management and healthy behaviors. Again, many confounding variables have attenuated research findings on the effectiveness of these programs, as firms seek to determine their return on investment. It is both enlightening and challenging that behavioral economists have entered the conversation about patient incentives. They bring a revitalized understanding of how people make decisions that promises new incentive approaches, but which also calls into question some current practices.

More integrative approaches to leveraging patients' energies are moving forward under the rubric of patient "engagement" or "activation." Some early studies show promise for patient engagement strategies, but results again are difficult to disentangle in complex behavioral environments. The consensus among exponents is that patient engagement efforts need multi-channel reinforcement and a committed effort from provider organizations. So payers may choose to invest in them but for the most part cannot themselves control their implementation.

* Although demand-side or patient strategies were not a topic of discussion during the December 2012 Research Insights meeting, patient/consumer engagement strategies will be the primary agenda item in a related but separate Research Insights meeting to take place in June 2013.

The Provider Perspective

Clinical Organizations

Payer initiatives are generally voluntary for clinical organizations and tend to attract provider groups that already have some experience with P4P, risk contracting, preferred referral networks, and developed information technology systems. With the interest that Medicare and many large private insurers now have in contracting with relatively large-scale accountable care organizations, providers will be under increased pressure to participate or risk losing patients. Physicians and hospitals will be, to some extent, thrown together without necessarily having long experience of working closely together, although the premise on which the ACO concept is built is that there are naturally occurring constellations of providers defined by which hospitals community physicians send their patients to most often.

Financial incentives may bring physicians to the table with hospitals and diverse specialties. But most preliminary research suggests that aligning responsibilities and finances with new partners and implementing improved clinical functioning is a slow and stressful process that requires determined leadership and, ultimately, culture change. The hope for ACOs is that they will mimic the performance of integrated organizations that have often succeeded in improving quality and curbing costs. But in the 1990s, it proved to be difficult to overcome the legacy of a fragmented system in which generalist physicians, specialists, nurses, and hospitals pursued separate agendas.

Stimulated in part by interest in patient-centered medical homes, some small organizations have achieved modest successes in implementing care teams, adopting electronic information systems, and expanding the roles of nurses, physician assistants, and medical assistants. Medical and nursing schools have increased efforts to foster interprofessional education, although often in the face of frustrating institutional inertia and territoriality.

Some recent research suggests that the difficulties these efforts have encountered may be due in part to unexplored depths of social and behavioral factors. Sensitivity and communications training, for example, might fail to change physicians' disinclination to work collegially with nurses if physicians identify themselves and their peers as authorities to whom nurses are meant to be subordinate. Physicians may also resist the efforts of the management of clinical organizations to impose new workflows and clinical processes, even if logically designed, if they perceive management as less educated and less competent than themselves, or suspect that efficiency measures undermine medical objectives. In such instances, financial incentives may fail to gain traction.[8]

A study of four start-up ACOs participating in a learning collaborative jointly facilitated by Dartmouth University and the Brookings Institution describes a deliberate strategy of harnessing social identity, rather than threatening it:

> An independent practice association preserved members' cherished value of autonomy by emphasizing coordination, not "integration"; a medical group promoted integration within its employed core, but not with affiliates; a hospital, engaging community physicians who mistrusted integrated systems, reimagined integration as an equal partnership; an integrated delivery system advanced its careful journey toward intergroup consensus by presenting the ACO as a cultural, not structural, change.[9]

All four sites employed a shared savings model and worked collaboratively with motivated insurance partners seeking value enhancement. Success factors were identified as: committed leadership, strong payer-provider relationships, and experience with performance-based payment.[10] But, as with Maryland's multipayer experiment, such conditions are the exception rather than the rule.

Intensive organizational commitment and a strong supporting environment are the hallmarks of other early efforts at care transformation. In many experiments, bilateral arrangements between large payers and providers show promise when both parties commit to working out the complexities of new payment arrangements. The University of North Carolina Health Care System and Blue Cross and Blue Shield of North Carolina formed a jointly-owned enterprise to deliver team-based care to a subset of chronically-ill BCBS patients, staffed by pharmacists, nutritionists, behavioral therapists, and case managers as well as physicians and nurses. Reimbursement to the practice is based on both a standard, fee-for-service claims payment and a shared savings payment that compares the attributed group's total medical costs relative to a matched comparison group. This is supported by a robust, same-day data-sharing platform.

Even with two such dominant partners—BCBS has a North Carolina market share just above 50 percent—Carolina Advanced Health started up on a limited scale. Other provider groups have expressed interest in participating. UNC's Shep Center and the RAND Corporation are assisting with evaluations that will help to determine if the model can be expanded.[11] Of particular interest will be seeing how viable interprofessional teams will be in rural areas often marked by small physician practices, health workforce shortages, and lagging information technology resources.

All along the learning curve, there is a need for understanding the success factors for organizations that aspire to improve their clinical and financial performance. Here there is a notable absence of magic bullets. A recent survey of large multispecialty medical groups that are arguably the organizations best positioned to do well in a shared-risk environment—all are members of the Council of Accountable Physician Practices—found that only sustained experience with risk contracting seemed to produce the capabilities needed for transforming care.

The study compared groups with a relatively low share of revenue from shared risk and full or partial capitation (less than 34 percent) to others with a higher share (more than 45 percent). Among all the surveyed groups, the average was three to four times greater than in a national survey. Key characteristics of the groups doing more risk contracting differed markedly from the comparison groups, even though the latter had much more experience than the national average. The risk-based practices had almost five times as many salaried physicians; more than two times more use of computerized order entry; ten times more data warehousing and analytic software;

three times more disease registries; seven times more practice variation analysis; and twice as many preferred relations with specialists. "There is a tipping point at which the operating approach of organizations begins to change," the study authors concluded.

Conversely, the authors noted a drop-off in risk-based contracting after the disappointments of the 1990s and a widespread lack of mature capabilities as a result. Partnerships between physicians and hospitals as envisioned for ACOs have the potential to improve medical groups' access to capital and information technology, and better manage care coordination across sites of care. But such relationships are perennially challenged by conflicting imperatives, as hospitals seek to maximize admissions while care managers seek to reduce them. And despite increased efforts at collaboration between payers and providers, a long history of adversarial relations breeds skepticism, while high-performing groups that emerging incentives may disadvantage them relative to lesser organizations that will feast on low-hanging fruit. "The difficulty of implementing these changes in complex health care organizations should not be underestimated."[12]

Individual Physicians

Research on individual physician responses to performance-based payment and risk sharing suggest that many are still on the lower rungs of the "ladder of maturity" that leads to care transformation. In principle, most now accept the notion of value-driven payment and have at least some experience with performance measurement. But incentive payments alone are not generally considered to be sufficient motive for thorough-going behavior change. Some say they have already achieved many of the quality targets common to P4P programs and may have difficulty making further improvement, although guideline adherence continues to fall below expectations in the eyes of many payers and policymakers. Many are skeptical about the validity and importance of commonly-used measures, and about whether quality improvement is more likely to be cost-reducing than cost-increasing. They want a greater role in designing practice-change models, and they worry about the impact of externally imposed changes on their relationships with their patients.

Another daunting obstacle is practice size. While employment of doctors by hospitals is increasing, most recent growth in average practice size has been in single-specialty groups that may do little to facilitate care coordination. One third of all physicians were still in solo or two-physician practices in 2004-2005; and in 2009, two thirds of all office visits were to practices of five or fewer physicians, according to the National Ambulatory Medical Care Survey. Significant investments in information technology and ancillary staff are often beyond the means of these smaller practices, leaving them without important tools to control costs. In some cases, their patient panels are too small to generate statistically meaningful quality measurement.

Many of the underlying barriers to influencing physician practice emerged early in the drive to promote evidence-based medicine, practice guidelines, performance measurement, and the aspirational science of quality improvement. In some cases, physicians rebelled openly against the promulgation of evidence-based standards by the U.S. Agency for Health Care Policy and Research (now the Agency for Healthcare Research and Quality) and its patient outcome research teams, the PORTs, in the 1980s and '90s. Those skirmishes were layered over a contentious history of tensions originating with the advent of third-party payment in the 1930s, which was widely perceived by physicians at the time as an imminent threat to professional sovereignty. Medicare's statutory ban on interference with the practice of medicine was a carry-over from the terms medicine extracted from private insurers from the '30s onward.

An authoritative literature review in 1999 summarized the difficulties with practice standards and associated measurement issues. The findings present a complex picture that goes even beyond this legacy of bilateral tensions. Knowledge barriers were identified as important in many surveys, often with reference to an explosion of clinical research and journal articles, which many physicians simply did not have enough time to read. The literature on barriers to guideline adherence found a wide range of evidence on how frequently non-adherence is associated with disagreement with guidelines. Physicians may interpret existing evidence differently, worry about patient risk, or reject the premises of standardization, among other explanations. Some physicians don't believe recommended changes will make a difference or achieve promised outcomes. Some are bound by inertia; others feel constrained by the time, effort, and financial resources they can spare for improvements, or by factors beyond their control such as referral outcomes and patient behavior.[13]

Even within larger groups, where supports are available, individual physicians may not be engaged with organizational strategies to improve quality scores or control spending. The change agenda may be perceived as externally-imposed – the concern of a practice manager, not a physician working at the sharp edge of care. At one large, sophisticated independent practice association in Western New York, physicians in the mid-2000s balked at productivity rewards based on a ratio of actual to expected costs. They resented the judgmental character of the system, and the fact that it did not recognize that quality improvement and cost reduction don't always go hand in hand. Global measures did not capture important specialty- and condition-specific services, and physicians were held accountable for events beyond their control. The outcome was a redesign and creation of a more granular—if also labor-intensive—

system for identifying outlier costs, and improved receptivity from group members.[14] Another study of the same group found that some of its member physicians saw value in the improvement system, agreed with its goals, and responded cooperatively, demonstrating the variability of physician views even within the same practice.[15]

The difficulty of controlling patient behavior is a persistent theme in studies of the effectiveness of practice change programs, and reflects a dimension of patient-physician relations that may be difficult to reach with many change strategies. A study of a hypertension control program involving more than 80 physicians as well as other non-physician clinicians at 12 Veterans Administration clinics found that financial incentive seemed to have no impact on provider behavior. Clinicians believed that outcomes depended on patient behavior more than anything they did themselves. "We need mamas," one frustrated physician complained. "If the VA could find someone to make the patients take their medicine, like a dorm mother or something, the numbers would look a lot better."[16] A study of regional, multi-stakeholder quality-reporting collaboratives found that consumers and plans valued report cards on individual physicians, but that the physicians themselves were resistant because they perceived that they were being held accountable for patient behavior that was beyond their control.[17]

A consensus of recent research seems to support the view that multiple interventions and multi-dimensional support systems are needed to drive aggregate physician performance toward a tipping point where payment and delivery of care can be fundamentally changed. As observed elsewhere in this report, payers, hospitals, large practices, and community institutions including universities and government can help supply an enabling infrastructure for individual physicians and small practices.

Participants in the AcademyHealth meeting observed that recent research on individual physicians' performance and behavior often takes note of the localized and context-specific nature of their challenges and conditions. The physicians' own age, training, employment status, and experience are important influences. The sociodemographic and epidemiological make-up of patient populations may vary widely across and within communities. The balance of consolidation and competition among insurers, hospitals, and specialists may impinge on the operation of small independent practices.

The variability of local environments—"riotously pluralistic," as one respected academic has described it—poses a particular challenge for large-scale policy interventions. One example that is relevant for small practices was the allocation of some $644 million for establishment of a network of about 60 regional extension centers to assist primary care providers in the adoption of health information technology tools, under the American Recovery and Reinvestment Act of 2009. Modeled on state agricultural extension programs that have helped farmers keep up with agricultural science and best practices, the RECs are joint resource pools like Maryland's learning collaboratives, designed especially for small and individual practices, with an emphasis on those serving disadvantaged communities.

Based on the experience of larger organizations, most believe that health IT has the potential to provide clinical decision support, enable e-prescribing and access to test results, maintain patient registries, and facilitate communication with patients – all proven tools for improving care and efficiency. The centers encourage participation from universities with informatics and health professions programs; hospital, health center, and provider networks; Medicare quality improvement organizations; public health agencies; and professional organizations. They are available to help physicians with vendor and product selection, technical assistance with IT adoption, management expertise, workflow redesign, and meeting workforce needs.

With many centers still in their formative stages, there is apparently little research on their progress, and they were not discussed at the AcademyHealth meeting. A forerunner program, though, the Primary Care Information Project in New York City, has been in operation since 2007. The project subsidizes software costs for eligible practices in underserved neighborhoods, and provides technical assistance and "coaching" after that.

To date more than 3,300 physicians in 600 practices have enrolled, and the PCIP was designated a regional extension center in 2011. An analysis of quality scores for a sample of enrolled practices reached a sobering conclusion. No significant association was found between participation and quality until after 24 months; and no improvement was found for groups that received only one to three technical assistance visits. Significant quality improvement did occur in practices that received eight or more such visits. In other words, results do not come quickly or easily.[18]

Conclusion: Where to Invest?

Research on the progress of payment and delivery innovations is in critical demand from policymakers and stakeholders. The Affordable Care Act placed a large bet on accountable care organizations, but without robust participation of providers it will be difficult to achieve its goals. Many physicians and clinical organizations may sit on the sidelines to see how early adopters fare in terms of financial and clinical results. They also have concerns about being regimented by payers or being forced into uncomfortable relationships with other providers.

Because of their worries about being held accountable for outcomes that depend on patient behavior, physicians need to know—as do payers—whether emerging patient engagement strategies can successfully improve chronic illness management and primary prevention. Payers need to understand where they can achieve positive returns on investment with incentives for providers and patients, and how to cull meaningful data on quality and cost.

Robust data flow is essential for both payers and providers to manage cost and performance, but is difficult to achieve in fragmented markets. Payer-provider collaboratives can help meet this goal, but implementation of such arrangements in the absence of fortuitous enabling circumstances remains to be proven viable. On the other hand, ACOs may stimulate further consolidation of provider groups, with the attendant dangers of stifling competition and choice, and driving up prices.

The research agenda is thus open-ended. AcademyHealth meeting participants seemed to concur that prioritizing research investments should focus on identifying the most promising pathways to the "tipping point." There will be many options.

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