

Lessons to Apply to National Comprehensive Healthcare Reform

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Abstract

Fragmentation, insufficient coordination of care, and absence of unified accountability for patient care has resulted in medical errors, rehospitalizations, and preventable complications, all of which increase costs and negatively affect patient outcomes. The current US healthcare system is unsustainable and the national healthcare reform package must address cost containment and quality improvement. Four innovative healthcare models—integrated delivery systems, pay for performance, value-based insurance design, and the medical home—strive to improve quality of care and contain costs. None of these models will solve all healthcare problems alone, nor will they all work everywhere. Different regions, patient populations, and purchaser/payer/provider coalitions may respond to different innovations and modified combinations of the models may eventually predominate. Initial evidence from the Centers for Medicare & Medicaid Services and private sector demonstrations suggests that payment system changes and other innovations would do more than help control runaway healthcare costs. If widely implemented, value-based reforms might achieve long-term improvements in public health. Congress will soon decide whether changing the entire system would be the most value-based reform of all.

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Most observers agree that the current US healthcare system is unsustainable.¹ Fragmentation, insufficient coordination of care, and absence of unified accountability for patient care transitions and handoffs yield unacceptable levels of redundant testing, emergency department utilization, medical errors, rehospitalizations, and preventable complications,² all costly in dollars and patient outcomes. A national healthcare reform package should address cost containment and quality improvement.³

Proposed bills before Congress have concentrated primarily on insurance coverage.⁴ However, different bills have included Centers for Medicare & Medicaid Services (CMS) patient-centered medical home projects, accountable care organizations, financial incentives for primary care, comparative effectiveness research, “quality measure development processes,” and testing of innovative payment structures within CMS.⁴ The legislative proposals mention these value-based innovations briefly and sometimes nonspecifically. Caution is appropriate, because several innovations have not yet been tested for robustness over adequate time periods or diverse geographic areas, and definitions may yet change. It is wise for national legislation to leave details up to states, payers, provider organizations, and other stakeholders. Indeed, many of the initiatives already under way are privately funded and reflect the need for variation and local flexibility in implementation. However, federal embrace of innovations in quality improvement and cost containment, with CMS models and incentives for the private sector, can encourage widespread adoption.

Essential Elements for a Value-Based Healthcare System

Two recent reports described the essential components of an ideal, high-performance healthcare delivery system^{5,6}:

- Payment reform which induces improved patient outcomes
- Patient care that is coordinated among providers and managed across transitions in care settings; healthcare teams for individual patients incorporate physicians, nurses, and other health professionals
- Accountability for total care of the patient which is clearly established
- Clinically relevant information that is available to patient and provider through electronic records and clinical decision support systems

- Patient engagement which is facilitated with easy access to care and information, including after hours and multiple points of entry
- Providers that are culturally competent and provide appropriate education and counseling
- Systems which are continually innovating, monitoring results, and learning to improve quality, value, and patient experience

Incentives, information, evidence-based care processes, and responsiveness to patient and family conditions are fundamental to cultural and structural changes in healthcare delivery.

US Healthcare Components That Require Fundamental Change

Value-based healthcare means maximizing individual and population health outcomes at minimum cost. To achieve this duality of cost containment and quality improvement, several components of the system require fundamental restructuring.

Emphasis on Outcomes

The lack of focus on patient and population outcomes is a major shortcoming of the healthcare system. Enormous sums of money are spent without apparent benefit,⁷ while outcomes such as life expectancy lag behind other industrialized nations. The solution involves cultural shifts among providers and payers. Individual outcomes can improve through accountability for each patient, and public health outcomes through application of evidence-based practice recommendations. Both changes require adequate incentives, information, and accountable organizational structures.

Financial Incentives

Current payment systems offer *general* financial incentives based on volume, creating a conflict between the economic interest of the provider and the health interests of the patient.⁸ Straight fee-for-service (FFS) motivates high-cost versus high-value care, whereas straight capitation motivates minimal, even insufficient, care. Reformed payment systems should include *selective* financial incentives, such as those described by Glickman and Peterson⁹ for quality improvement.

Certain unintended consequences of quality-related incentives can be minimized. Broad outcomes measures, adjusted for patient risk factors, and blending FFS and capitation schemes decrease the potential for treating to the test.^{10,11} Case-mix adjustment discourages “cream skimming” (selecting patients for whom achieving performance tar-

gets is easier) by compensating providers for patients with complex conditions and comorbidities.⁸ This is particularly important in such coordinated care initiatives as integrated delivery systems (IDS) or the medical home, which attract higher-risk patients.²

Evidence supports several conclusions about provider financial incentives⁹⁻¹³:

- Rewards and penalties both get results. Continuous incentives for *absolute* performance relative to achievable targets are more likely to promote improvement than incentives based on performance relative to other providers or all-or-none targets that fail to incent incremental improvement.
- Incentives primarily should target evidence-based care processes known to improve health outcomes (again, because such processes are controlled by the provider), with a secondary emphasis on outcomes *per se*.
- The best results derive from blending incentives to groups and individuals. Group incentives allow distribution according to group values and support infrastructure improvement, while individual incentives mitigate free-rider problems.
- To sustain active participation of providers, incentives must be attuned to medical professional norms, achievable, certain, frequent, and progressive over the long term.
- Continuous monitoring and reevaluation of performance measures ensures their attainability while improving quality; risk adjustment of patient populations sustains the program.
- To enhance their implementability, payment incentives should be aligned with provider organization structures.¹⁴ For example, capitation and episode-based payments are more conformable with large multispecialty medical groups and IDSs, which have the internal capacity and scope of services to coordinate care across settings and providers and to assume economic risk for the continuum of care. In contrast, FFS is a more natural fit for small, independent practices. Provider infrastructure grants could compensate practices that achieve economies of scale in modifying infrastructures for performance improvement, thus encouraging expansion of smaller practices.

It should be noted that provider financial incentives are less effective for healthcare goals of population access and equity.¹⁰ The Senate and House bills focus on broadening insurance coverage to attain those goals.

Value-Based Insurance Design

A unique consumer incentive mechanism, value-based insurance design (VBID) motivates greater patient engagement.¹⁵ When targeted patient groups have lower out-of-

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pocket costs for medications and services of evidence-based high value, compliance becomes less burdensome. When payers switch from generalized to value-based cost-sharing, the cost of increased use of high-value medications and services can be offset by increasing copayments for lower-value services and other benefit design changes.¹⁵ Overall costs can decrease through decreased use of lower value services and less need for emergency department visits, hospitalizations, and treatment for later-stage disease.¹⁵ Employers can realize decreased productivity losses and disability expenses.¹⁵

Care Teams and Coordination of Care

Evidence (mostly cross-sectional) has shown higher quality with large group practices and greater care integration.¹⁶ However, uncoordinated treatment by multiple individual providers remains the norm in most areas. Of US physicians, 32% still practice alone or in 2-person partnerships, 60% in groups of 50 or less.² Inadequate coordination of care may relate to lack of financial incentives for additional communications, long-standing hierarchies in decision making, and the difficulty of establishing committed care teams. Superior efficiency and outcomes occur with teams of primary care and specialist physicians and other professionals (pharmacists, nurses, physical therapists, home health aides) in a variety of inpatient and outpatient settings. However, currently predominant payment models reimburse individual providers for attention to the immediate specialized need at hand without concern for longitudinal outcomes or the “whole person.”

Coordinated care requires an organized structure. Although structures vary among the newer models—vertical integration requiring team care, “virtual” integration leaving coordination up to the primary care provider (PCP)—all include care coordination as a means to quality improvement and cost containment. The patient-centered medical home represents an organizational design seeking primary care that is consistently accessible, family-centered, and culturally competent, comprehensive, and well coordinated.¹⁷

Accountability

With multiple providers per patient and insufficient coordination, individual providers remain unaccountable for outcomes. FFS has rewarded unaccountability and poor quality by reimbursing additional care resulting from adverse events and medical errors.¹⁸ CMS recognized this when it began withholding payment for “never events.”¹⁹ Quality improvement occurs when payers and all providers share a focus on evidence-based measures of optimal care and patient outcomes. By assuming responsibility for total care of each assigned patient, accountable care organizations (ACOs)

change provider focus to ongoing, overall progress and outcome.^{20,21} ACO delivery involves a collaboration of a PCP, specialists, allied health professionals, and a hospital. Enforcement of agreed-upon principles and processes for quality improvement depends on instituting a governance structure. Academic medical centers, extended hospital staff organizations, or the IDSs are examples. ACOs can be vertically or “virtually” integrated, and formed by cooperative agreements among independent providers. With the patient-centered medical home, a PCP, specialist, or hospital may assume the assigned responsibility, depending on the condition of the patient. For a complete clinically and financially accountable care system, an ACO would include a sponsored or owned health plan; however, ACOs can work with other payment sources.¹ To realize their potential, the market and regulatory environment must form a hospitable “neighborhood” for these collaborative organizational forms.²²

Information Technology Infrastructure

Small practices with paper records have perpetuated incomplete provider communication with resulting duplicative testing, missed comorbid diagnoses, drug–drug interactions, and worse. According to the Joint Commission on Accreditation of Healthcare Organizations, almost 70% of adverse events arise from poor communication and half of those from poor communication during patient handoffs.²³ To improve efficiency, facilitate coordination, and protect patient safety, healthcare reform must include investment in electronic medical records (EMRs) with interoperability standards, shared among each patient’s providers, and accessible to the patient. Extant evidence demonstrates that the use of clinical information management and decision support tools within an EMR can improve performance when data are readily retrievable and translatable in context-specific clinical decision applications.²⁴

Standardized EMRs also generate a database of quality-related evidence. This can help care organizations to monitor and improve practice standards and can be used for research on best practices for nationwide quality improvement.

Consumer/Patient Education and Engagement

Because success of substantive reform requires the collaboration of all stakeholders including patients, consumer education is needed to explain the benefits of delivery changes.² As one example of the need for education, focus groups found resistance to the medical home concept because the term reminds people of nursing homes.^{2,22} As another example, most of the information in this supplement is unknown to the general public and absent from media coverage of healthcare reform.

Table. Common and Unique Features of Select Healthcare Models

	P4P	VBID	Medical Home	IDS
Requires or motivates structures or processes intended to improve patient outcomes	X	X	X	X
Designed to reduce duplication and waste	X	X	X	X
Employs electronic medical record for efficiency, coordination of care, and systemwide evaluation	X	X	X	X
Particularly well suited to patients with multiple comorbidities or complex needs		X	X	X
Encourages prevention and early treatment, reducing disease exacerbation and resource utilization and resulting costs	X	X	X	X
Targets a limited number of chronic and/or high-cost conditions with evidence-based treatment guidelines	X	X		
Integrates healthcare delivery goals with finances (health plans)	X	X	X	X
Requires buy-in and active involvement of participating providers for success	X		X	X
Provides financial incentives, steps, or structures to providers for improved quality of care	X		X	X
Provides financial incentives to patients for treatment adherence		X		
Requires or rewards team care, coordination, and avoidance of errors	X		X	X
Specifies separate payment for care coordination and consultation outside face-to-face visits			X	
Design emphasizes primary care, accessible from multiple points of entry			X	X
Requires or works best with large multispecialty practices and large, well-funded hospitals	X		X	X
Can contribute data for evidence of effective treatments in populations	X	X	X	X
Requires or motivates a patient-centered, culturally competent focus			X	X
Requires or motivates patient participation in care decision making		X	X	X
Includes accountability of a principal provider for total care of individual patient, including long-term direction and outcome			X	X
Takes advantage of economies of scale to provide latest technology and equipment, high productivity, lower operating and unit costs				X
IDS indicates integrated delivery systems; P4P, pay for performance; VBID, value-based insurance design. Sources: References 9-16 and 24-28.				

Patient-centered care relies on engagement of well-informed patients. Understandable, culturally competent education must be designed into all care processes for accurate ascertainment of patient treatment preferences.² Active patient engagement may also include after-hours Internet-enabled electronic “visits.”² Disease management programs, principal accountable providers, public outcomes reporting, and patient access to the EMR can all further patient understanding and compliance and may improve outcomes.

Shared decision making between clinicians and their patients is an important catalyst for patient engagement. Extant empirical evidence suggests that shared decision

making, coupled with the use of patient decision aids, can lead to changes in ultimate treatment choices²⁵ and that the field of practice may be approaching a “tipping point” in the adoption of these patient-centered practices.^{26,27} Systematic reviews of the evidence further suggest that the use of patient decision aids in the context of a shared decision-making process improves patient knowledge, reduces patients’ decisional conflict associated with feeling uninformed or unclear about personal values, reduces patient passivity in decision making, reduces the proportion of patients who remain undecided, and tends to result in reduced rates of elective invasive surgery compared with more conservative treatment options.²⁸

System Monitoring and Adjustment

Healthcare reforms that began as CMS demonstration projects or local business coalition initiatives may require years to prove their benefits. Ongoing reporting and design changes in response to aggregate results can ensure long-term viability and value for the investment of businesses and/or taxpayers. Process and outcomes measures should evolve to reflect ongoing advances in medical research. Changes in structure and processes will also reflect local circumstances including demographics, market conditions, and regulatory environments.

Applying Healthcare Innovations to the National System

None of the models described in this supplement will solve all healthcare problems alone, nor will they all work everywhere. Different regions, patient populations, and purchaser/payer/provider coalitions may respond to different innovations; modified combinations of the models may eventually predominate. However, the models in this supplement share the objectives of quality improvement and cost containment, with mechanisms that can be effective in a variety of circumstances. A comprehensive healthcare reform package should enable a broad spectrum of innovations to achieve true value-based healthcare spending. The [Table](#) illustrates unique and overlapping features of the 4 models discussed in this supplement.

Financial incentive options in different parts of the country must consider the sociodemographic, political, economic, cultural, and organizational environment and reflect the nature of healthcare funding and delivery of the area.¹¹ Where structures such as IDS and the medical home are possible, quality incentives can be designed into the structure. Where they are not, quality incentives can come from CMS or private insurers. Multipayer agreement on process and outcomes measures makes it easier for smaller providers to comply; therefore, CMS demonstration projects would be beneficial and serve as templates for other payers. Pay-for-performance (P4P) schemes are easier in large hospitals or provider groups and may not be universally scalable. Conversely, VBID is replicable and scalable anywhere for drugs and most places for other services, provided that those services are accessible to members.

Financial incentives have so far provided only modest quality improvements and cost savings, which may not be enough to offset the costs of structural changes and incentive payments.^{10,12,13} Larger incentives are likely to be necessary, yet resistance to tax and premium increases is strong, so substantial increases in *overall* levels of provider payment seem

unlikely. Thus, in a generally “budget-neutral” payment climate, positive incentives for superior performance inevitably will be balanced by penalties or withholds for inferior performance (or at least lower rates of increase). If CMS demonstration projects prove successful, passage of more federally funded incentives may be possible in the future. Meanwhile, P4P is expanding in the private sector along with such structures as IDS and medical homes. VBID sponsored by private employers, cities, and states is incorporating the patient into the financial incentive loop. These incentive projects are being watched closely by other payers and providers, and success could foster increased replication.

Vertical IDSs under unified ownership have generally been developed with large multispecialty physician practices and hospitals or academic medical centers. These vertically integrated systems will be more difficult to implement in areas with fewer provider resources. In those areas, “virtual ACOs” uniting independent providers are possible, but will require innovation in governance and care coordination arrangements.

Because EMRs are generally considered cost-effective or even cost saving,²⁴ implementation has been stressed as a goal of the Obama administration for any healthcare package. However, smaller physician practices and hospitals or clinics serving low-income populations may need additional funding to convert to EMRs and support the systems once installed.

Better patient education and engagement should be possible throughout the healthcare system. Disease-specific societies and government agencies already provide educational materials to providers, and this could be expanded. Government funding for the conversion to EMRs could be contingent on patient access to electronically based education and communication with providers. If providers must guarantee 24-hour electronic response, further financial support would be required for small practices and providers for low-income populations.

Ongoing monitoring and adjustment can be incorporated into all innovations. Privately and publicly funded analysis of data from universally adopted EMRs can identify what works locally and nationally. This research can enrich the evidence base and direct modification of process and outcomes measures, payment systems, and organizational structures.

Conclusion

Tasked with reforming healthcare, Congress has been embroiled in debates about funding. Proposals to increase insurance coverage, improve care quality, and even contain costs,

all cost money. As noted in a recent *New England Journal of Medicine* roundtable: "It would be nice to think that reductions in emergency-department utilization, more efficient use of primary and preventive care, would actually save us [enough] money...so that these bills would pay for themselves. They don't pay for themselves, if we're honest about it, and the CBO [Congressional Budget Office]...says no, you need to raise about a trillion dollars."³

Initial evidence from CMS and private sector demonstrations, however, suggests that payment system changes and other innovations in this supplement would do more than help control runaway healthcare costs. If widely implemented, value-based reforms might achieve long-term improvements in public health. All of these initiatives are possible with private funding under ideal circumstances (eg, large contiguous patient populations, well-funded business coalitions, and large provider groups). However, ACOs to implement the goals of outcomes emphasis, care coordination, patient involvement, and provider accountability may not arise without government help in some areas and for some populations. While the private sector continues to explore individual projects in value-based healthcare, Congress will soon decide whether changing the entire system would be the most value-based reform of all.

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