In this paper, the Urban Institute’s Robert Berenson interviews surgeon and The New Yorker columnist Atul Gawande to explore the potential benefits and drawbacks of “Big Medicine”—standardized, evidence-based health care delivered by large health care chains. Gawande is also executive director of Ariadne Labs, which seeks to transform how care is delivered around the world.

**Introduction**

*The Promise of Big Medicine*

After marveling at the Cheesecake Factory’s ability to produce high-quality restaurant meals at inexpensive prices, surgeon and *The New Yorker* columnist Atul Gawande made a case for bringing restaurant-chain efficiency to the health care sector in his “Big Med” article in 2012.1 Gawande’s core argument: “Big chains thrive because they provide goods and services of greater variety, better quality, and lower cost than would otherwise be available. Size is the key. It gives them buying power, lets them centralize common functions, and allows them to adopt and diffuse innovations faster than they could if they were a bunch of small, independent operations.”

“Big Medicine” would also produce more standardized approaches to diagnosis and treatment, replacing the current tolerance for physician autonomy—and wide variation—in clinical decision-making. As one doctor commented in Gawande’s article: “Customization should be 5 percent, not 95 percent, of what we do.” Relying on basic standardization of work processes and care protocols, the delivery organization then would devote increased attention to execution. This reorientation of care would be facilitated by population-based payments*2 that give providers an incentive to deliver care more efficiently and pay more attention to patient outcomes.

Gawande goes on to note that health care provider consolidation is already in place, with 90 “super-regional” health care systems forming across the United States, including chains of clinics, hospitals, and home care agencies, with physicians increasingly choosing to become employees of larger organizations instead of owning their own practices. Given this movement, he cites analysts’ expectations that successful mega-systems will likely drive independent medical centers out of business, either by buying them up or drawing away their patients with better quality and cost control. Only a few small practices and stand-alone hospitals will remain successful, perhaps catering to the luxury end of the care spectrum the way gourmet restaurants do for food. Gawande pronounces that “the theory the country is about to test is that chains will make us better and more efficient.”

Gawande anticipates commonly expressed concerns about Big Medicine. “We have no guarantee that Big Medicine will serve the social good. Whatever the industry, an increase in size and control creates the conditions for monopoly, which could do the opposite of what we want: suppress innovation and drive up keep a portion of the savings generated. However, if the provider delivers inefficient, high-cost care, then depending on the structure of the arrangement, it may be held responsible for some of the additional costs incurred.”
costs over time. In the past, certainly, health care systems that pursued size and market power were better at raising prices than at lowering them.”

A Discussion Between Atul Gawande and Robert Berenson

To sort through the potential benefits and drawbacks of Big Medicine, Atul Gawande and Robert Berenson, a former practicing internist, vice chair of MedPAC, and a current institute fellow at the Urban Institute, came together for a discussion. In this interview, Gawande talks about what different versions of Big Medicine could look like and addresses whether an organization needs to be big to adopt the positive aspects of Big Medicine.

“Of course, if all you scale up is a dysfunctional organization, then you just scale up dysfunction and that doesn’t solve anything.”

What Does It Mean to Be Big?

Berenson: Do health care organizations have to be big to offer the kind of innovative high-quality care you talk about in “Big Med”?

Gawande: We’re in the process of shifting from what I call “cowboys” to “pit crews” in medicine—doctors have to have a team that can be structured to make sure that everybody, including the doctor, has the right role, so they’re able to deliver results for populations. There is a size at which there is a clear advantage, but it’s not now clear how “big” Big Medicine needs to be. We’re moving in that direction based on the belief that “bigger” will have substantial advantages—because you have to have information technology and learning and structure, and in other industries being bigger has yielded important advantages, including economies of scale. Of course, if all you scale up is a dysfunctional organization, then you just scale up dysfunction and that doesn’t solve anything.

There are definitely those who bet differently. The trend right now has been toward consolidation, creating more market power, but there are interesting organizations such as AthenaHealth that, at least in ambulatory settings, are trying to construct a way that relatively small groups can have all of the advantages of big organizations by offering electronic health records (EHRs), billing capability, and quality operations that can become a backbone for practices. In many ways, all health care is local. To be successful at increasing quality, decreasing costs, and being accountable for results requires learning, structure, and a backbone that is locally adaptable but capable of the benefit that comes from large size. So, it is possible that Big Medicine will be based in a more disaggregated world rather than a consolidated one.

Berenson: So what does being big get you?

Gawande: Those driving innovation are creating new systems for improving communications, finding the right care, and getting people to really work as teams toward what is best for the patient.

One way I’ve seen Big Medicine work is when a hospital takes their systems and stretches them out into the community. With new payment approaches, they become incented to reach out to the primary care physician, they put a nurse on it, they connect, they make the doctor-to-doctor conversation happen, and a plan is made. Hospitals are reaching out and also connecting to pharmacies and other kinds of services. For example, for the first time I’m seeing pharmacies start to do hospital delivery of patients’ meds—which addresses the absurdity of discharging sick people and then telling them to go to their pharmacy without ever thinking, “oh, how about we connect them so that their home pharmacy does a delivery at discharge so they have their meds when they go home.” And then they’re connected to their home-based system. We’re starting to see this outreach actually happen now, out of recognition that penalties for readmissions reward developing more innovative ways of providing that care. This approach does have disadvantages. Hospitals haven’t had the needed links to the community, they have a very high cost structure, and they have a tremendous amount of capital sunk into keeping the hospital alive.

A second way is a practice-led model. I wrote about it in “The Hot Spotters”—physicians typically aren’t even notified when a patient has been admitted to the hospital, so they are every day bird-dogging: “Our several thousand patients, have any of them been admitted to the hospital?” They call around to the hospitals and have a staff member whose sole purpose is to ask: “Did any patient of ours get admitted?” If they did, a clinician goes to the hospital to see them and find out what’s going on; they get a plan together so that they’re there with a net to catch the patient when they come back out of the hospital. It is incredibly labor-intensive work just to know what happened to a physician’s patients. The large physician groups, in particular, have been quite effective at being able to be
on top of the care, reduce the cost of the care, avoid any avoidable hospital admission altogether, or move the patient back out if he or she was admitted. But physician groups have not had the necessary systems of care—the information technology, the ways of measuring performance. Hospitals at least have some ability to look around and ask: “Are we preventing infections? Are people washing hands? Are we making sure people have their flu shots? Are we really following through on those things?” When you consider integrated organizations like Kaiser Permanente and Geisinger Health System, much of what they’ve provided is structure around ambulatory care that allows one to see what happens with populations, and what improves care, while also addressing costs.

Insurers are also getting into this, creating a third model. Many are connected to physicians’ practices, and looking at existing systems and notifying practices to let them know when their patient has been admitted. Insurance approval is usually one of the first ways to know if someone has been admitted, so it might be that they are creating these linkages. Some are going much further. Highmark Blue Cross in Pennsylvania has now bought an entire network of hospitals and clinics in western Pennsylvania, including Allegheny General Hospital. The aim of insurers like these is to drive stronger vertical integration of patient care while avoiding price increases.

The fourth possibility is that outside vendors enable small groups to succeed in producing integration. These are vendors of information systems, such as a health information exchange or EHR systems that cross from outpatient to inpatient, or full-fledged population management companies that put people and technologies on the ground. With these vendors, such as AthenaHealth and Evolent Health, clinicians both know what’s happening without needing to bird-dog it, and know what to do about what’s happening. These organizations provide a backbone that permits

### Getting the Benefits of Big Medicine Through Vendors

AthenaHealth, based in Massachusetts, offers Web-based EHRs, medical billing, and patient communication tools. AthenaHealth attempts to bring some of the advantages of being part of a large health care organization to smaller independent practices by:

- giving them access to a product that continuously embeds lessons learned from other practices’ denied claims into its medical billing application;
- helping providers meet clinical quality targets tied to pay-for-performance measures;
- reducing “no-shows” by sending automated appointment reminders by phone, email, or text message; and
- providing practices with a patient portal that can be used for scheduling, viewing lab results, and collecting patient payments.

In contrast to some other EHR vendors, AthenaHealth does not require a large up-front investment in software or hardware, but instead bills providers a small percentage of their ongoing monthly collections. According to AthenaHealth’s Executive Vice President and Chief Operating Officer, Ed Park, their product is a disruptive innovation because it uses “technology instead of ownership to bind health care organizations together.” Building on this philosophy, AthenaHealth has submitted a proposal to Congress to create “independent risk managers” (IRM)s that would take on duties that physicians must normally be responsible for in accountable care organizations, arguing that such IRMs would enable physicians to participate in value-based payment models, such as shared savings, without sacrificing their independence. IRMs would use claims data to identify providers who care for common patients, facilitate information-sharing between them, and calculate and share quality measure data with these providers.

Other companies that sell products and services that can help independent practices better manage their patients’ care include EHR vendors such as NextGen, Epic, and Cerner, and firms that offer consultants and software to facilitate better population management, such as Evolent Health, Explorys, and Gennius.

physicians or hospitals to remain relatively small. In other words, they are taking back-office systems used for things like billing and extending them into front office systems that support clinical care.

Which of these four models of Big Medicine will make it work? You could say, arguably, the insurers have the most financial interest in making it work, because they already have business in managing risk. But they don’t have the patient or physician relationships. The physicians have the patient relationships, and if they have the means to turn the care goals that they have for the patient into actual reality, through more supportive payment approaches or as accountable care organizations, I think you’d see huge advantages in that way. In many ways, your ideal world is that you have lots of small hospitals and practices that somehow have these large backbones behind them.

But it’s not obvious which of these four will make it work the best.

“"When patients don’t have elsewhere to go, the pressure on the system to ensure they have quality is also just as affected as the prices.""

**Berenson: What responses have you gotten to the “Big Med” article? Any surprises?**

**Gawande:** Well, there’s an interesting divide. The comparison to the ways something as comparatively simple as a restaurant is managed is striking for many, and people react differently. Many people in health care management felt like, “Yes, this is what we’re talking about!” The concept of a learning system that can deliver care, be responsible for results, have training and quality assurance mechanisms, use information technology, and offer ways for introducing new innovations—that generally has resonated with people who are in leadership and management.

For physicians, there’s been a different opinion. For many, it doesn’t necessarily feel that appealing to be part of Big Medicine. Large systems can be bureaucratic. You see some of the complexity in what I depicted in an intensive care unit in the article, where you have remote monitoring of the care being offered, and double-checking to make sure that mistakes aren’t being made—people suddenly zooming in to ask questions via monitors and cameras in every room. So, there’s the concern about loss of autonomy, balanced by the recognition that we don’t have that much quality control in our systems.

**Berenson: It’s been two years since publication of your “Big Med” article. The delivery system has been evolving. From your current vantage point, what have you recently learned that might affect how you would write that article today?**

**Gawande:** I think the forces remain the same, and the puzzle remains the same. Nonetheless, recent journal articles suggest that the trends are not quite as dramatic toward physicians’ practices being bought out; there are still a large number of physicians in practices composed of fewer than five physicians.5 That suggests we’re moving more slowly toward team-based care and toward systems that drive quality of care. But the direction of travel and the concerns and the opportunity remain the same, so it feels like it would be very much the same article if I wrote it today.

**The Risks of Big Medicine: Monopolies**

**Berenson:** I think you’ve made a pretty good case for the merits of larger organizations capable of doing lots of things that smaller organizations are not capable of doing. But large organizations usually have more market share, and the ability to raise prices in their negotiations with third-party payers. Can we get the benefits of bigness without an adverse effect on prices?

**Gawande:** I think there are actually two major concerns—one is that monopolies raise prices, and the second is that monopoly means you also lose the pressure on quality of care. When patients don’t have elsewhere to go, the pressure on the system to ensure they have quality is also just as affected as the prices. A McKinsey study called “Management Matters”6 looked at the number of hospitals available to patients in different areas of the United Kingdom. First, they found that how well a hospital managed for quality—tracked their data on quality, implemented standardized approaches to improve quality, and hired for talent—that generally has resonated with people who are in leadership and management.

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**Berenson: A recent U.S. literature review finds that, on net, consolidation has a negative impact on quality, although there is limited evidence available on this important topic.7 You emphasize the benefits of chains like the Cheesecake Factory, but it doesn’t
seem like the big national hospital chains have been at the cutting edge of improving quality and improving efficiency in the U.S. so far.

Gawande: You’re correct. Consolidation—increase in size and control—can produce capacity to compete (as it does in the food industry) but it can also create conditions for monopoly. In the past in health care, consolidation has therefore produced the opposite of what we want. It drove up costs, it drove up prices, and it also discouraged the drive for innovation. Do we have reason to think that this is likely to be different this time? I don’t think so. There are only certain situations in which monopoly circumstances end up being ones in which you don’t end up with inflationary consequences that need to be regulated. So it could end up driving more pressure for regulation.

It’s not clear what size is necessary to be able to achieve the kinds of scale we’re talking about—does this have to be an $8 billion organization that is highly consolidated? Part of the reason other industries get that consolidated is because there are some economies of scale that come from it. When I hear people say that for accountable care organizations to work, they can be as small as a 5,000-person population, I find it hard to imagine; the risk from one sick, expensive patient is significant. I hear people saying, “No, no, you need at least 500,000 patients to be able to make it work!” There is some genuine puzzle about the size required to create accountable care, but it’s going to be on the big side.

Our difficulty with health care is it is delivered locally, and the main concern is local monopolies. However, in certain parts of health care, there’s this interesting phenomenon—I don’t know if it will start to emerge as an evil power, but it’s certainly affecting thinking at the hospital where I work. You have these networks that have formed—for example, Cleveland Clinic, Geisinger, Intermountain Health Care, and Virginia Mason—that are contracting with big employers to take a handful of the often-profitable operations, such as transplants and knee replacements, and offering a fixed price, more predictability at lower cost and higher quality. Everybody—from Lowe’s to Walmart to Boeing—is signing up for these arrangements. These procedures are expensive enough that the cost of transport and putting a family up in a hotel is nothing compared to the cost of the service itself, so Lowe’s is sending people out of Charlotte, North Carolina, to Cleveland.

So, we’re starting to see the emergence in certain parts of medicine of competition between different local monopolies. That will drive both innovation and price. The more ways there are to drive that kind of competition, the better. Even at my own hospital, we’re finding that people will really travel. We’re increasingly a regional market now, if not larger. Some 20 percent of my patients come from out of state; some travel great distances. We’re figuring out a system for handling the international patients.

The monopoly question has less to do with size than it does with local markets. You can be small, but if you have 60 percent of the market in your city, if you’re the only hospital in town, then you’ve got a lot of leverage, and payers have a hard time cutting you out of their provider networks.

Berenson: That’s one of the reasons I don’t like framing this problem as provider consolidation. There are many stand-alone hospitals that haven’t merged or are not part of a system, but because of their reputation, location, clientele, or because they provide the trauma care for the community or whatever, they have a “must-have” status for payers. A health plan really can’t market without that institution in its network. So clearly, the literature shows that consolidation does lead to increased prices, but you can also have high prices without consolidation, if a provider organization has enough local market share.

Gawande: So what this is really about is competition and the local competition circumstances. So you can have big organizations and nonetheless face competition, like organizations such as Advocate, which is quite big in Chicago.

“There are trade-offs, but we can’t get out of where we are without creating size somewhere and then dealing with the repercussions.”

Berenson: So is this now a caution against bigness?

Gawande: While there are concerns around size, we have to shift to team-based medicine and the systems that you need to deal with that demand size somewhere; that size can be in the hospital, in the physician group,
it can be owned by the IT company that is the backbone to everybody, or it can be the insurers that get together and start consolidating the populations of patients. There are tradeoffs, but we can’t get out of where we are without creating size somewhere, and then dealing with the repercussions.

The Prospects for Big Medicine

Berenson: Since your “Big Med” article, we have seen further confirmation that health care costs are not rising very fast at all—indeed in the recent past, even less than the growth in GDP—though spending is picking up again as more people gain insurance through the Affordable Care Act (ACA). Even so, provider prices—which were rising because of consolidation—have been flat for the past two to three years. Is this just a cyclical phenomenon that will soon give way to rising health care costs or is there something more fundamental going on—“structural change” is what some are calling it?

Gawande: I’ll point out that you’ve described an interesting contradiction. Consolidation is increasing, yet prices and costs are lower than they’ve ever been. This is worth watching. I do see many signs of systemic change. In virtually every community, primary care is getting investment and becoming more focused on managing the health and care of their patients between doctor visits. And although the specialties have gotten little attention, they are beginning to change too.

This is just an anecdote, but it’s one I’d have never experienced a decade ago. The chief of general surgery at my hospital, not long after the passage of the ACA, said, “people are going to be expecting us to think a lot more about cost.” We ran some numbers and the mesh that we use for hernia operations, which are one of our most common operations, turns out to vary in cost from $123 to $15,000. The most common mesh we use is identical to the cheapest one, at $123—the only difference is that it’s precut into a certain shape that we like to patch into the wound. What the surgeon who used the $123 mesh said was "oh, I just cut it myself; I’ll show you guys how to do it.” In the course of an afternoon, we all agreed: “Hey, let’s not use the $15,000 bio-prosthetic mesh without approval from the chief of general surgery, because it should be for special circumstances, not routine cases.” We also agreed to try to use the $123 mesh, and to talk to the surgeon who uses that so he can show us how he cuts it into the shape that we all like. In the course of a few emails, it was done—no big deal.

Now, if our chief financial officer had made the same decision, we’d be like, “Who the hell do you think you are? Why don’t you come down here in the operating room and try doing this operation, buddy?” Is this a culture of an organization that is able to begin to have the surgeons on the same page as management? Because it’s a general surgeon who does these operations with us, we respect him. As the chief of general surgery and someone we believe knows the challenges in what we’re doing, we could listen to him.

These deep, micro-level concerns in organizations are really fundamental. You can have both small and large hospitals that become bureaucratic and disconnected from the needs of the patient, while some very large places have built-in cultures in which these are routine lines of discussion. What’s clear is that having the discussion is going to be crucial to moving forward—away from a world where you could use the $15,000 mesh with no questions asked.

Culture change is happening now. But if it’s purely culture change that doesn’t get reinforced by systemic change, it is very easy to flip back to the other direction. We’re having these hard conversations around switching to a salary model, but if people don’t believe there is any urgency to the need to deliver better care at lower costs, then I’m sure it would switch back to focus exclusively on things like how to expand our robotic surgery operation—in other words, business as usual.

“At every level, investment in producing better systems of care is not only not incented, it’s actually actively penalized under fee-for-service.”

Berenson: Do you think this culture change is mainly happening in places like Boston, where you work, or also in other parts of the country?

Gawande: I grew up in a little town—Athens, Ohio. There was no physician practice bigger than five people. It’s a community of a little over 20,000 people. My parents were two doctors whose practice was just the two of them together. They had no electronic records, their billing could be in shambles, and there were a variety of ways in which things could be suboptimal on the quality side. I’d have said Athens would have been one of the last to get information technology and integration of care. But to my surprise, in the past couple of years, the community has really started to transform—because of consolidation.
Suddenly, everybody has joined up with one of three medical groups, everybody’s got electronic medical records, and now there’s quality oversight and a level of accountability and professionalism not seen before. Also, there now is a kind of revenue cycle management not seen before. So lo and behold, some of the earliest areas of focus have been on increasing capacity for the traditional moneymakers under fee-for-service—such as cardiology and orthopedic services—alongside primary care redesign. How much of the health of the population is actually improved from this new culture, I don’t know. One of the groups has a broad commitment to trying to grow patient-centered medical homes and reduce reliance on the hospital, but the risk payment structures haven’t come in.

**Berenson:** What do you think about the importance of financial incentives to move the delivery system in the recommended direction? Can financial incentives, especially pay-for-performance, actually crowd out intrinsic motivation to do the right thing and provide the best care, as some behavioral economists argue?9

**Gawande:** Well, I clearly think incentives are a fundamental and important driver in the system, as I wrote about in my piece about McAllen, Texas,10 and others; it’s a complex one, though. I think the premise that the fee-for-service, fragmented system will manage just fine is dead. I think we’ve reached the point of wide agreement that we can’t go backward. In fact, we already have the financial incentives in place to encourage the creation of a more systematic approach to knee replacements, for example, because hospitals already are paid lump sums for all of the treatment and follow-up care associated with procedures like that. That means all of the cost savings that a group of clinicians can produce by trying to work together toward common standards of care increase their hospital’s margin. For the team I wrote about in “Big Med,” it wasn’t necessarily about reducing the number of knees and hips that get done, but rather about reducing the likelihood that a patient would have a complication and stay in the hospital, hurting the hospital’s bottom line and obviously the patient, too.

The irony is that even under what we call fee-for-service, there has been enormous savings left on the table by provider organizations, because of either an inability or discomfort with engaging clinicians about how they could be doing better. Orthopedics has been a significant money-maker for hospitals, so hospital leaders are not necessarily very comfortable talking to orthopedic surgeons about the way they do their job. That fundamental deference to physician autonomy has meant that even where the hospital bottom line is deeply affected, hospitals couldn’t ask them, “Why do you have 13 different prostheses for a standard procedure for nine different surgeons? Can we at least come to an agreement on having cost savings there?” Moving from a world where hospitals have driven their budgets based on how much increase in revenue they can get, to a revenue-constrained world where they are now going to make their budget and margin based on cost reduction—that is still, culturally, a revolution for us in medicine. We haven’t been aware of our costs; we have been uncomfortable putting that into the equation and trying to think about frugality.

**Berenson:** But you are describing a situation with employed physicians, who generally share the same interests as their hospital. For much of health care, physicians are independent and don’t have a particular concern about the financial well-being of the hospitals where they work. So that’s the interest in bundling payment?

**Gawande:** Well, our surgeons are in a fee-for-service model. But under standard fee-for-service payments for the physician’s services, their concern about the hospital costs that are run up are pretty limited; hospital leaders just have to count on intrinsic motivation to use resources efficiently. Putting in a bundled payment or other mechanism so physicians have an interest in paying attention to the overall cost, I think, makes some logical sense. But doing it in a way that is disconnected from the value of the care is my concern. The ultimate questions with knees and hips are: “Are patients walking at six months? Did their function improve?” If what we’re doing in orthopedics is making it so that patients are more likely to be functional in six months, and we have lower likelihood of major safety and quality problems along the way, then that’s a win, and having a bundled payment allows us to keep pushing in that direction.

My fear is losing people’s trust in how the specialist makes these kinds of choices. The application of financial incentives like these are going to be unavoidable, but what we’re going to have to track along the way is whether the consequences are ones that improve and do not harm the quality of care. More doesn’t necessarily produce better care, but people have faith that more is better, so when you have people who are taking costs into account as they’re making decisions—specialists with patients—that will become a locus of pressure.
“Solving these clinical problems is going to require engaging specialists in very difficult-to-track areas of care. It’s not just about improved primary care.”

**Berenson:** So, payment models need to give providers a clear business case for changing.

**Gawande:** At every level, investment in producing better systems of care is not only not incentivized, it’s actually actively penalized under fee-for-service. If it were a break-even proposition, we in the provider community would have massive readiness to invest in that ability, but it’s a severe financial penalty. What we find over and over is that financial incentives are weak drivers of change; they are extrinsic motivation. However, penalizing the care we want to achieve is a powerful driver of behavior, too; that is to say, people are more responsive to losses and risks than they are to gains. Right now, if you’re a practice or a hospital in the fee-for-service world, you lose tremendous amounts of money by investing in making care transitions work well, for example. We just published a paper a few months ago that found that for privately insured patients, for procedures that go without a complication, the profit margin is $17,000 for a hospital. But if the procedure has a complication then the profit margin is $56,000.$^{11}$

It’s not that the financial incentives lead clinicians to try to inflict complications. It’s just that the willingness to invest in creating systems that get that complication rate down is incredibly reduced. We have numerous staff in my office who make sure that referral numbers are filled in, but we have limited staff trying to reduce the likelihood of a major complication. New staff members who double-check referral numbers pay double their own way, so we’re constantly adding those staff. Not so for staff members who double-check the patient’s medication and make sure he or she has necessary support at home. We love having them because they save us time and make my patients happy and improve care, but they are a pure financial penalty under current fee-for-service payment.

**Berenson:** Should we make organizations bear financial risk, and reward prudent care?

**Gawande:** As that emerges, though, what is the entity that bears that risk? It seems to me that the bigger organizations are in the better position to take on that risk.

**Berenson:** So essentially, payment approaches that move care from inpatient to ambulatory care settings emphasize preventive care and support attention to proactively managing patients with chronic conditions?

**Gawande:** Yes, but we recently published a paper that looked at the top 10 percent of Medicare beneficiaries and where their costs lie. It was a surprisingly small amount of dollars that flowed from avoidable emergency room (ER) admissions and avoidable hospital admissions.$^{12}$ Instead, the big categories came from acute admissions related to acute events cared for by specialists—for example, orthopedic injuries, heart attacks, and new cancer diagnoses. A $75,000 event is not 10 avoidable ER admissions; the chronic conditions set up the patient for real problems that require the ER admission. The person with hypertension and diabetes ended up with a heart attack or severe arthritis from long-term obesity that led to the breakdown of her knees. So, yes, over time, if we’re able to work on the preventive remedies up front, we will be able to reduce the incidence of some of these problems.

Solving these clinical problems is going to require engaging specialists—orthopedic surgeons, cardiologists, and oncologists—in very difficult-to-track areas of care. It’s going to require them gaining an interest in participating in quality improvement and in driving out unnecessary expenditures of time and money. It’s not just about improved primary care.

The application of financial incentives is going to be unavoidable, but what we’re going to have to track along the way at a population level is whether the results support the quality of care. Are people able to see continuing improvements six months after knee and hip replacements? That is going to be crucial. There are always horror stories of someone who has been mistreated—perhaps undertreated—by an orthopedic surgeon or a cardiologist or an oncologist and that’s the one thing that could be really damaging to the whole effort to drive quality and cost—if we’re completely blind to what happens when you shift these incentives around. When you have specialists taking costs into account as they are making decisions with patients, that will become a locus of pressure.

**Looking Ahead**

**Berenson:** How do you think the health care delivery system will evolve and how can public policy help?
Gawande: There are reasons to be optimistic. We made a simple checklist for surgical care. It has cut death rates by 18 percent and up when people effectively implement it, and that’s just getting people organized to do a few critical things consistently. It’s not a major new drug; it’s not a major new device. It’s just a standardized way to insure communication and planning. The fact that we can do straightforward organizational improvement with such dramatic effects is a tremendous source of optimism for me.

Furthermore, we’ve stopped defending the old way of practicing medicine. There’s no one in the younger generation of medicine who wants to go back to that. It was broken, it was demoralizing, and it wasn’t delivering great patient care. The motivation that’s driving change is also the right one: the desire to give people better care. And huge numbers of clinicians are innovating in all kinds of ways.

“What is our ultimate plan for where we’re going? This is going to be a series of experiments and a little bit of Darwinian survival—a little bit like when the Internet launched: You knew there was a big market, a big opportunity, but it was very hard to read which way it was going to go. I think part of the reality is there’s not a game plan; it’s a series of chess moves.”

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