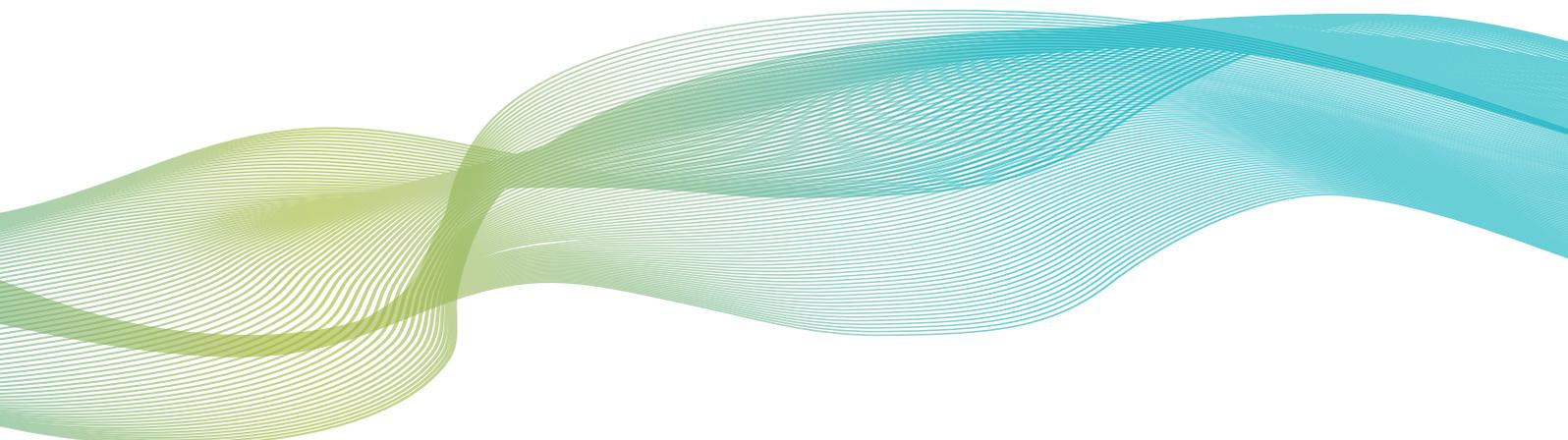


Integrated Care Conference 2012

McKinsey's Fifth Annual Integrated Care Conference

Summary of the conference proceedings



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Bringing integrated care to life

Introduction

Health systems around the world face common challenges, including the growing burden of chronic conditions (especially given population aging and the explosion of ‘lifestyle diseases’), the seemingly inexorable increase in hospital activity, unrelenting technological change, and costs rising at a rate faster than the general economy. In addition, many health systems have become concerned that they are failing to meet the expectations that many people—particularly the elderly and those with chronic conditions—have for service delivery. Common problems patients encounter include loss of independence, avoidable admissions, and the frustration that arises from having to deal with, and repeat information to, a confusing array of professionals. Against a backdrop of tough economic times, these challenges have led to a common feeling that the current trajectory is unsustainable and must be changed.

Many health systems are responding to these challenges in a similar way. Whether they call their new approach ‘integrated care’, ‘coordinated care’, or ‘accountable care’, health systems are increasingly encouraging groups to work together across organisational boundaries to help people maintain their health and independence, improve the outcomes achieved from care delivered, and change the trajectory of healthcare spending.

In September 2012, we convened our fifth annual Integrated Care Conference in Boston. At this conference, a select group of healthcare leaders from around the world met to discuss the complex issues they are facing in trying to deliver integrated care at scale and to share ideas on how innovations can be used to improve patient care and deliver value.

Although these leaders came from a range of healthcare organisations—with important differences in how they deliver and reimburse for care—their comments made it clear that the most successful integrated care efforts share three common traits (Exhibit 1). They focus their energies on the patient segments most likely to have high healthcare spending, such as the elderly and those with chronic conditions. They change their core care-delivery processes to enable multidisciplinary teams to function effectively. And they put in place several crucial components to support their integrated care efforts, including aligned incentives and reimbursement models, accountability and joint decision making, information

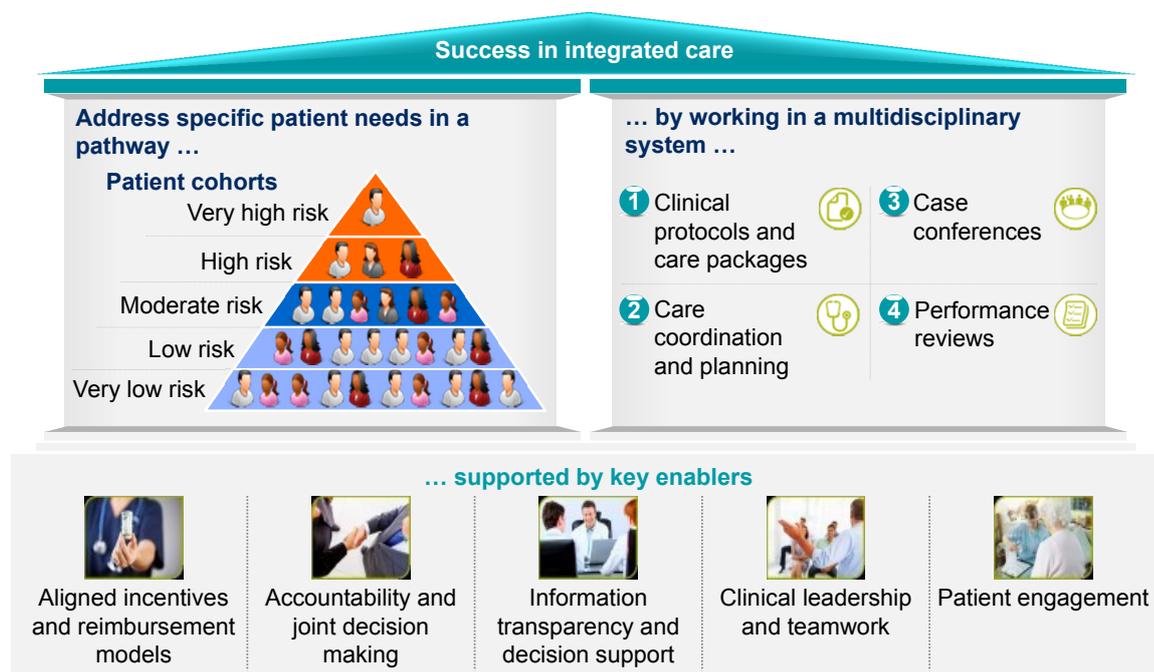
transparency and decision support, clinical leadership, and patient engagement. The conference participants agreed that implementation of these elements is difficult, and success cannot be achieved quickly. But if the elements are in place, integrated care can work in almost any organisation.

However, the discussions revealed that healthcare leaders have been making very different strategic choices as they have applied these elements within their organisations. The differences involve five key questions:

- *On whom should you focus?* A large majority (68%) of the leaders who attended the conference said they focus on the top 20% of patients (those who utilise 80% of healthcare resources) in hope of delivering better care and controlling costs; many also expressed the view that this focus could avoid further deterioration in the patients’ conditions. An additional 11% of the leaders said they use an even more focused approach: they concentrate only on the very sick, very expensive top 2% of patients to ensure that their interventions are as cost-effective as possible. Just 21% of the leaders said that they include all patients, because they believe that they would miss the opportunity to prevent disease if they focused on only the top 20% or 2% of patients.
- *How prescriptive should you be?* At the conference, 62% of leaders said that the most effective way to drive standardised, high-quality care is to disseminate explicit guidelines and protocols that physicians are expected to follow. For example, ChenMed, a primary care-led physician group in the southern United States, ‘hard wires’ its clinical protocols into its electronic workflow; it also holds case conferences three times a week in each market to ensure that best-practice care is implemented. The remaining 38% of leaders thought it would be quite challenging to engage physicians meaningfully unless the physicians retained the autonomy to make clinical decisions. These leaders also suggested that the use of stringent clinical guidelines would make it difficult to innovate based on emerging evidence or to tailor care delivery to local needs. These leaders said that they would prefer to establish clear accountability for care quality and cost but allow considerable clinical autonomy within those boundaries. One of the best examples of such an approach that was cited is Intermountain Healthcare,

EXHIBIT 1

The core building blocks for an integrated care system are the same, regardless of where you are in the world.



an integrated system in the western United States that uses a blend of autonomy and protocols. Physicians are not required to follow the system's standardised protocols, but they are expected to achieve good outcomes. If they consistently achieve better outcomes than the protocols are delivering, their approach is incorporated into the protocols, thereby creating an ever-evolving set of guidelines based on feedback from physicians and the emerging evidence base.

- *What share of spending should be allocated to innovative reimbursement mechanisms?* Notably, not a single one of the healthcare leaders at the conference thought that a purely fee-for-service world is best. However, the majority (57%) said that health systems should take a relatively cautious approach to risk-based payment models by initially allocating only 5% or 10% of reimbursement to innovative value-based reimbursement

mechanisms. Their rationale is that the shift from fee-for-service to capitation is such a major change that health systems should develop an understanding of what works before they roll out the change more broadly. Health systems should continue to test and pilot these models; as (and if) the evidence builds, they can move providers slowly along the risk spectrum. Some of these leaders even thought that their organisations might choose to keep the risk-based proportion low over the longer term, on the belief that physicians will waste time optimising specific metrics if too much of their reimbursement is performance-based. However, the remainder of the leaders at the conference (43%) preferred a much bolder approach—a rapid shift of more than half of provider reimbursement to risk-based models. These leaders stated that the time for pilots is over; because significant scale is required to overcome inertia, more than half a provider's total revenue should be tied to outcomes or value.

- *What incentives should you provide to individual physicians?* Even within value-based models, there are different degrees of risk that physicians are exposed to. At the conference, 58% of the leaders said that they choose to focus purely on upside incentives—they reward good performance to encourage innovation and avoid defensive behaviour. These leaders believe that when used in combination with performance transparency, upside incentives are a highly effective lever. However, 42% of the leaders said that they would be willing to impose a downside risk for poor performance, because they thought that this will be more effective in the long term. (Many people, they noted, respond to upside rewards only for a short period before expecting the rewards as a baseline.) These leaders also shared a fundamental belief that you should not reimburse poor-quality, inefficient care.
- *How should you engage patients?* Only 30% of leaders at the conference thought that information and support are enough to encourage patients to change their behaviour and lead healthier lives. In comparison, 70% said that incentives are necessary. Evidence of the need for incentives, they noted, can be found in public-health campaigns (antismoking efforts, for example), which have found that education alone is not sufficient to shift people's behaviour. A series of positive and negative incentives has been required to lower smoking rates, including easier

availability of nicotine-replacement products, higher cigarette taxes, and restrictions on where people are allowed to smoke.

As these examples illustrate, there is no single right answer as to how integrated care should be implemented. As long as the basic elements are in place, healthcare leaders have the flexibility to tailor solutions to their own context and to how they believe healthcare delivery will evolve.

The articles in this publication, which are based on the presentations at our September conference, are designed to help payors, providers, and health systems overcome the challenges ahead and leverage integrated care effectively to deliver better patient care at a lower cost. If you would like more information about any of the topics discussed in these articles, please contact one of the McKinsey partners you work with regularly. He or she will be happy to connect you to the right experts.

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The impact of transparency on healthcare value

Substantive obstacles, including misaligned incentives, information silos, and resistance to change, have long prevented most healthcare organisations from taking full advantage of transparency's power to transform operational and clinical performance. However, the industry is now at a tipping point. Clinical data are becoming increasingly 'liquid' as a result of electronic health records and healthcare information exchanges. Significant technical advances have made it much easier to link claims and clinical data. Demand for cost and quality transparency is growing rapidly, driven by rising cost pressures and consumerism. Many governments have committed themselves to making data publicly available.

Therefore, the drive for transparency is gaining momentum—despite on-going challenges—throughout the public and private healthcare sectors.

Making data publicly available

At present, most health systems are essentially 'flying blind', admitted Niall Brennan from the US Centers for Medicare & Medicaid Services (CMS). Information is trapped in siloed clinical IT systems and remains largely inaccessible to payors, providers, and consumers. This must change if efforts to improve healthcare value are to succeed, he said, and added that CMS is committed to unleashing the power of liberated data.

To illustrate the current problem, Mr Brennan noted that the average Medicare beneficiary sees nine different providers a year. These providers generally have no way to obtain an integrated picture of the journey a patient makes across different care settings. However, they do have to cope with a range of separate reports various payors are releasing on cost and quality performance, most of which use different methodologies and often draw different conclusions.

Mr Brennan, a director in the Office of Information Products and Data Analytics at CMS, described what that organisation is doing to improve the situation. He and his colleagues have been working on several innovative ways to integrate and release the information CMS routinely collects about beneficiaries.

One example is the Blue Button Initiative, a joint effort undertaken by CMS, the US Veterans Health Administration, and the US Department of Defense to

give patients access to their own data. To date, 300,000 CMS beneficiaries have downloaded their raw claims data from the Blue Button Web site. This is just a first step, Mr Brennan acknowledged; the raw data are quite hard for most people to interpret. He is hoping that private-sector innovators will find ways to translate the data into a more user-friendly interface.

Another example is the Health Indicators Warehouse, which provides a single, user-friendly source for national, state, and community-level health-indicator data. This Web site enables stakeholders to better understand a community's health status and the health resources available to it; as a result, stakeholders are better positioned to prioritise interventions. The Web site also serves as the data hub for the Community Health Data Initiative, a flagship program sponsored by the US Department of Health and Human Services (DHHS) as part of its open-government initiative. At present, the Health Indicators Warehouse provides data about more than 1,000 indicators; 172 of them are available at the hospital-referral-region level, and 81 are available at the county level.

Progress in the development of these Web sites has been slow but steady, Mr Brennan said. Strong leadership is crucial for getting these sites off the ground, as are small steps to demonstrate that 'the sky is not falling' as data are gradually made available. However, it is also critical that patient privacy is preserved as data are made available. Robust information governance can assure this.

Other emerging innovations

If the owners of the data are liberating it, how will others make sense of it? Vishal Dixit, an associate principal in McKinsey's London office, provided an overview of recent research the Firm has undertaken in partnership with the US's Health Data Initiative Forum. The forum is a public-private collaboration that was launched in 2010 through the efforts of the Institute of Medicine and the DHHS. Its goal is to encourage innovators to utilise health data to develop applications that would raise awareness of health and health-system performance and spark community actions to improve health.

To develop a deeper understanding of the types of innovative health-data applications being developed, McKinsey reviewed more than 200 submissions to the Health Data Initiative Forum and classified them into one

of five ‘value pathways’, depending on which aspect of care delivery they focused on:

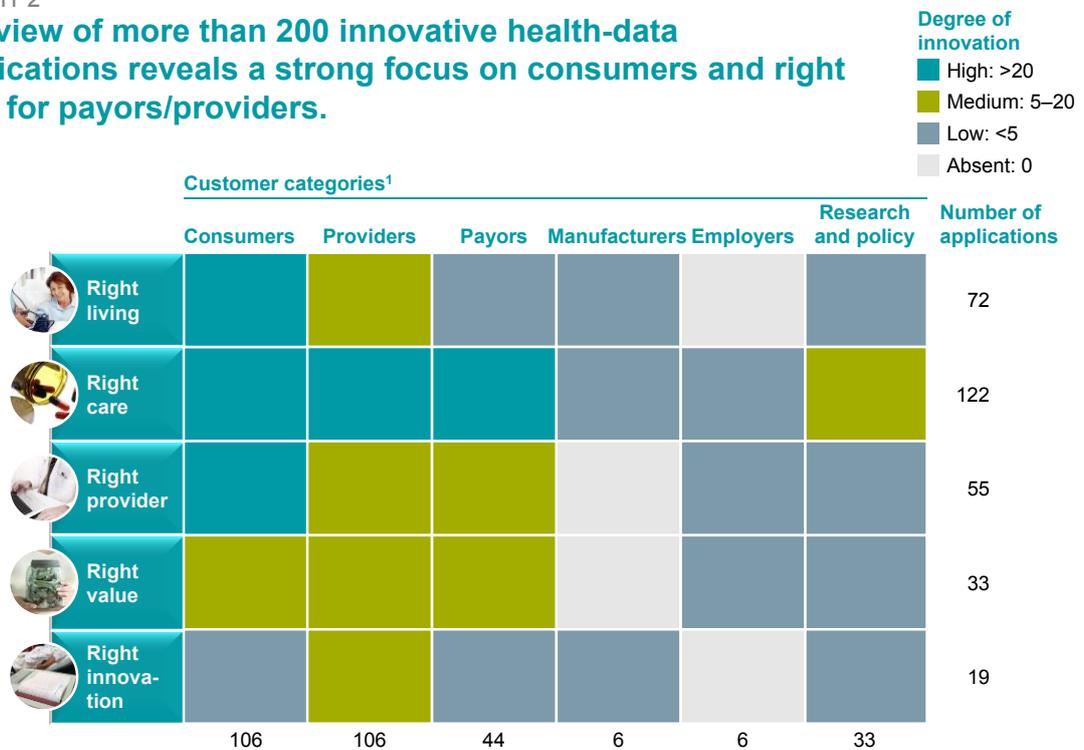
- *Right living*: applications that inform consumers about lifestyle choices that promote well-being and engage them actively in their own care
- *Right care*: innovations that encourage the delivery of evidence-based care to ensure that good outcomes are obtained and patient safety is ensured
- *Right provider*: initiatives designed to ensure that care is delivered by the provider (e.g., a nurse or physician) and in the setting that is most appropriate for the desired outcomes

- *Right value*: applications designed to continuously and sustainably enhance healthcare value by reducing cost at the same or better quality
- *Right innovation*: innovations that advance the frontiers of medicine and boost R&D productivity in the discovery, development, and safety of new diagnostics and treatments

The submissions were then further categorised according to the primary groups they targeted: consumers, providers, payors, manufacturers, employers, and researchers/policymakers. The number of submissions within each category was used to assess the degree of innovation in each area (Exhibit 2).

EXHIBIT 2

A review of more than 200 innovative health-data applications reveals a strong focus on consumers and right care for payors/providers.



¹ Applications that fit into multiple customer categories were counted multiple times.

Source: 2011–12 applications to the Health Data Initiative Forum

The analysis revealed that innovators are currently focusing on consumer applications and on right-care initiatives for payors and providers. In addition, some innovators are now developing cross-stakeholder applications; these innovators are likely to play an integrative role across the healthcare value chain.

However, there is room for growth. Many of the applications focus on retrospective analysis of data. Forward-looking predictive modelling is the next horizon for value capture—it can be a very powerful tool for payors, providers, and health systems, but it requires a much greater level of analytic sophistication. Over time, as data density and technical capability evolve to enable better confidence in predictions, healthcare organisations will be able to use predictive-modelling results to strengthen population health management and clinical care.

Paying for quality and value: Options for reimbursement models

If health systems are to achieve sustainable cost reductions without adversely affecting patient care, two types of changes are needed: strategies that can be adopted at scale quickly and relatively easily (e.g., decreased variability in care delivery) and more challenging levers that require a longer time frame to produce results (e.g., closer care coordination). Innovative reimbursement models can support and encourage both types of changes, as two speakers at the conference demonstrated.

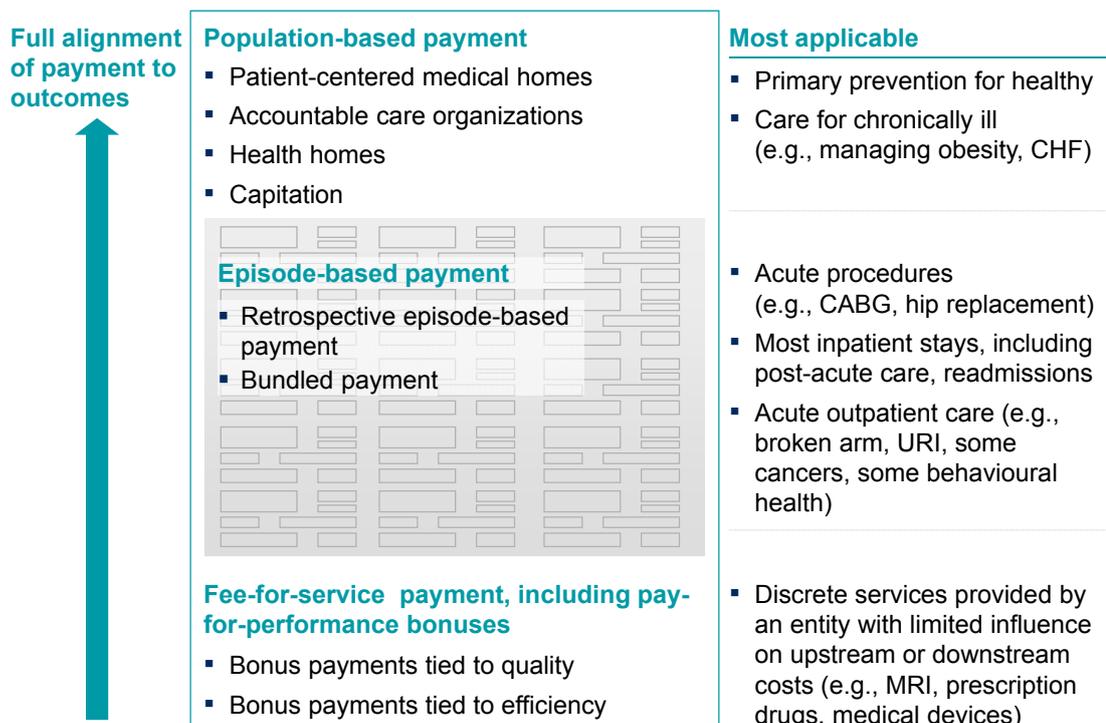
There are three basic types of payment innovation, each of which is applicable to different health services (Exhibit 3). Population-based payment models (e.g., capitation) are best for addressing primary prevention and the management of long-term conditions. Episode-based payments work well for most acute conditions—those

for which the start and end of service delivery can be defined (e.g., pneumonia or hip replacement). Innovative forms of fee-for-service reimbursement, such as pay-for-performance bonuses, should be used for discrete services (e.g., diagnostics) provided by entities with limited influence on upstream or downstream costs. The three types of innovation are not mutually exclusive, however. Rather, they should be used together to improve outcomes and control costs.

There are eight key requirements for innovative reimbursement models to drive meaningful cost-reducing innovation. Changes in payment should have *clear goals*; should occur at *scale* (across individual providers, a region, and nationally); be *stable* (that is, they should have clear long-term targets to give providers an incentive to invest in the needed changes); and be

EXHIBIT 3

The universe of payment models are complementary.



Note: CABG, coronary artery bypass surgery; CHF, congestive heart failure; MRI, magnetic resonance imaging; URI, upper respiratory infection.

sustainable (by balancing risk and upside rewards, they should ensure the financial viability of most providers). In addition, the innovations should be *flexible* enough that they can be implemented under current regulatory rules, even if the long-term goal is significant structural change. Stakeholders should provide significantly more *support* to help clinical decision makers adopt best practices and innovate. Stakeholders should also make sure that *supply and demand are integrated* (the changes to provider reimbursement should be aligned with benefit and network design). Finally, stakeholders should use a *mix of population-based and episode-based reimbursement models*.

Healthcare payment innovations are not easy to implement. They require strong political support and a willingness to take risks. Furthermore, payment innovations are useful only to the extent that they alter the way healthcare is delivered. But the result can be both lower costs and higher care quality.

Delivering value through capitated payment

A number of years ago, the Spanish region of Valencia decided to contract some of its publicly funded health services on a capitated basis. Valencia is divided into a number of subregions, each of which has a department of health that is accountable for managing both hospital and primary care activity for the local population. In the past 10 years, Valencia has outsourced 5 of its 23 departments of health to private providers. It uses a capitation model to ensure that there is a clear budget for each panel of patients. If the budget is exceeded, no bonus is paid. This innovation has enabled Valencia to achieve savings of about 25% in care delivery, while improving quality and patient experience.

The reason for the innovation was simple, said Dr Elisa Tarazona Gines, director of care management at Ribera Salud, an integrated care company that provides services to Valencia. Healthcare leaders in that region were interested in testing whether capitation could control spending. They therefore permitted Ribera Salud together with Adeslas (the leading Spanish private health insurer) to lead the process of building and running a new hospital in one subregion (Alzira).

After two years, the company realised that it would achieve stronger results if it could integrate primary and hospital care, and thus it assumed responsibility for the

region's primary care services as well. Emergency-room utilisation has decreased significantly, and costs have been tightly controlled.

The public system gives Ribera Salud and the Insurance Company a fixed amount for each resident in Alzira; the company provides all needed health services (excluding primary care pharmacy, transportation, and oxygen therapy) from that budget. The public system also monitors Ribera Salud's performance closely and has found that both quality of care and patient satisfaction are high. Patients can choose their own providers.

Ribera Salud achieves these results through what it describes as a 'success triangle' focused on the interplay of three factors: careful clinical management, aligned human-resource policies, and IT systems that enable performance transparency. The company also takes advantage of its size to procure supplies centrally across multiple hospitals. By working closely with primary and secondary care providers to drive continuity of care, Ribera Salud is able to hold down its costs while paying doctors 30% of their total compensation based on health-system performance (first) and individual performance (second).

Establish episode-based payment

In early 2011, Arkansas Governor Mike Beebe determined that the state's Medicaid system was facing significant financial and quality challenges. Reluctant to impose the types of steep coverage cuts other US states were implementing, Governor Beebe brought together a number of Arkansas's payors and encouraged them to develop a new reimbursement model that would support a sustainable, high-quality system. Working with the state's providers, the payors created a new form of episode-based payment that launched statewide in July 2012. This effort has since been complemented by the launch of a statewide medical-home model.

Dr William Golden, medical director for Arkansas Medicaid, explained that the state's retrospective episode-based payment model focuses on the delivery of cost-effective, patient-centred, high-quality healthcare. It utilises the state's existing fee-for-service claims systems but makes one provider accountable for the total quality and cost of each episode of care. For example, an orthopaedic surgeon is accountable for the total quality and cost of a hip or knee replacement.

To identify all of the costs that should be attributed to a given episode of care, pathways were developed for the episodes included in version 1.0 of the new payment model, which included hip or knee replacement, pregnancy, and attention-deficit hyperactivity disorder. Under this model, all providers are reimbursed as they normally would be for the services they deliver during an episode. On a quarterly basis, they receive a report card detailing their average total costs and quality metrics for all similar episodes and how their performance compares with that of their accountable peer group. Accountable providers who meet all quality metrics and whose costs are lower than a given threshold are eligible for annual gain-sharing payments; those whose costs are higher than another threshold are subject to risk sharing. This approach offers an incentive to the accountable providers to ensure that all providers work together in an integrated way, minimise variability in care delivery, and control costs (both individually and collectively).

Arkansas has included several features in version 1.0 of its new model to promote fairness for providers. For example, it began sharing a wide range of performance metrics with providers in July 2012 and gave them a three-month grace period so they could adjust their performance before the financial incentives would be applied. The new model also uses case-mix adjustments where needed. And it eliminates outliers (cases with exceptionally high costs) to avoid penalising providers for unusually complex cases.

Transformation in primary care

Effective primary care has been consistently linked to better outcomes, as well as more appropriate and less costly care. However, effective primary care is hard to achieve. Although there are pockets of excellence and innovation in every health system, there is also a high degree of variability in performance on quality and productivity measures—not only between countries but also between regions in the same country, between different primary care practices, and even between individual physicians in the same office.

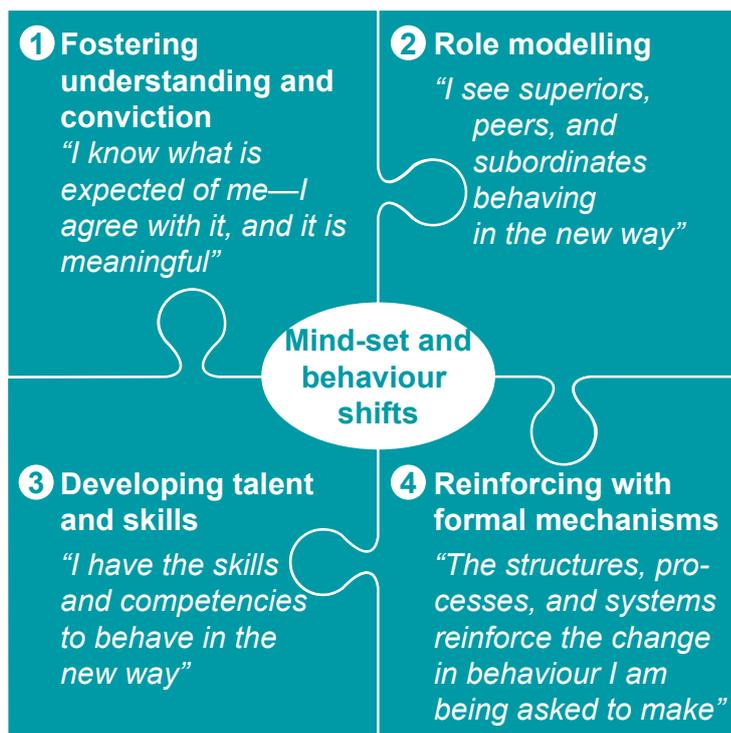
Transforming primary care to ensure that all patients have access to high-quality care requires a fundamental shift in the day-to-day practices of physicians, a shift that in some cases goes against the grain of prevailing incentive structures. For example, the physicians must adopt a population-health perspective to prioritise where to focus their energies, work as part of multidisciplinary teams, adhere to standardised evidence-based pathways,

educate patients to look after their own health, and consider cost when making trade-offs about which tests and treatments to order. Getting them to make these changes will not be easy, because most primary care physicians have developed ingrained behaviours and work independently in small practices, each with its own culture, motivations, and ways of working. In most health systems, there are few direct ways to influence their performance.

Nevertheless, driving change in primary care is possible. Extensive research in behavioural science suggests that four things matter most when it comes to changing people's behaviour: fostering understanding and conviction, reinforcing with formal mechanisms, developing talent and skills, and role modelling (Exhibit 4). In our experience, a multipronged approach that incorporates all four of these components delivers the best results—the absence of any one of them decreases

EXHIBIT 4

Four factors are required to influence change.



the chances of success. For example, it may be possible to get people to change with incentives and training, but without understanding and conviction, the change is likely to be fragile and difficult to sustain. Similarly, without the right talent, skills, or formal mechanisms, people may want to change but not be able to. And, of course, role modelling is essential; a single act from a leader that is inconsistent with what is being asked of people can undermine all other change efforts.

All three presentations in this session focused on how to change the mind-sets and behaviours of primary care physicians to improve quality and drive value.

Transforming care for diabetic patients

The Diabetes Care Project (DCP) is attempting to transform care delivery in Australia by incorporating the four elements just described, said Sara Drew, program manager of the General Practice Gold Coast in Queensland. The DCP involves 160 primary care practices and about 7,500 people with diabetes.

The DCP incorporates a number of elements in its effort, including:

- A *change narrative*, developed by clinicians, paints a picture of the typically chaotic primary care practice today to highlight its limited ability to risk stratify patients, target resources, or empower patients to be part of the care team.
- The *ambassadors program* selects GPs, practice nurses, and patients with diabetes (all of whom are chosen because they are respected by their peers) and then pays them an hourly rate to coach other practices, engage with the local community, and facilitate training events.
- A multichannel *capability-building program* includes online training (a series of self-paced e-learning modules), in-person workshops, and local support provided between and after the workshops to help practices implement improvements through small cycles of incremental changes.
- Formal *reinforcing mechanisms* include an information tool with an integrated patient record that enables participating practices to submit data monthly to an online reporting system and, in return, obtain analysis

and feedback on the impact of their improvements over time. In addition, the practices are given a dedicated care facilitator or care coordinator, as well as financial incentives for improving processes, outcomes, and patient experience.

- The practices participating in the DCP have been randomised into two groups: one is receiving only the IT tool and training program, while the other is being given all the interventions. As a result, the DCP is the largest randomised control trial to test a new model of care delivery in Australia. Over the course of three years, it will measure both the program's impact and the feasibility of scaling it up across the country.

Primary care networks

On the other side of the world, NHS Tower Hamlets in London is using primary care networks to increase care integration and give providers peer support, explained John Wardell, director for integrated care at that organisation. The program is focusing initially on diabetes, but if it is successful, it will expand to cover all major long-term conditions.

Tower Hamlets is a deprived inner-city borough; most patients there have poor access to primary care. Clinical outcomes for long-term conditions, particularly diabetes, are poor and deteriorating. Thus, NHS Tower Hamlets, the organisation responsible for commissioning health services in the borough, developed a program to provide individualised, integrated packages of planned care for diabetes patients. Services are delivered by a range of clinicians (including nurses, GPs, specialists, and others), who work together in multidisciplinary teams. To ensure care coordination, local primary, acute, and community care providers are organised into networks, each of which is responsible for the care of approximately 1,500 patients with diabetes. Each network also has a hub facility that provides diagnostic services, outpatient clinic space, and multidisciplinary team meeting space.

In addition, the borough invested in an integrated IT system to connect the providers with one another. The system includes automated, diabetes-specific performance dashboards; these dashboards track a range of clinical outcomes (e.g., HbA1C and cholesterol levels and the rate of renal complications) and cost indicators (e.g., number of primary care attendances and acute care services) across patients and primary care practices.

The program has already achieved significant impact. In its first 12 months, it produced an 11% increase in the number of patients with good blood-pressure control, a 10.4% increase in the number with healthy cholesterol levels, a 7.7% increase in the number with good glucose control, and a 600% increase in the number of patients who have diabetes care plans. Financial modelling suggests that these changes should reduce NHS Tower Hamlets spending on nonelective acute care by 12% to 14%.

A focused factory to manage risk

Yet another approach to transforming primary care is being used by ChenMed, a privately held, primary care–led physician group in the southern United States. ChenMed currently runs 21 centres in four states (Florida, Kentucky, Louisiana, and Virginia). Each centre is staffed by five primary care physicians and by 10 to 15 specialists who rotate through on a part-time basis.

ChenMed focuses primarily on low- to moderate-income, Medicare-eligible patients with multiple chronic conditions, said Dr Craig Tanio, the company's chief medical officer. This population of patients faces significant challenges, including uncoordinated care, limited access, and suboptimal outcomes. Giving these patients better care could be an important way to lower Medicare costs, because patients with more than five chronic conditions represent over 75% of that program's spending.

ChenMed has created a model that enables it to achieve better outcomes at lower cost in this group of patients. Among the factors that have led to its success are its emphasis on culture and relationship building (to shift the mind-sets and behaviours of both clinicians and patients), its nimble use of technology (all systems were built internally and tailored to the company's needs), its focus on a single patient segment, and its use of a single, capitated reimbursement model, which has allowed ChenMed to avoid much of the complexity related to claims and billing management.

Because their panel sizes are limited to no more than 450 people, ChenMed's primary care physicians are able to spend more time with each patient. These physicians lead the multidisciplinary teams and coordinate care; 95% of a patient's primary care visits are with the same physician.

An automated performance dashboard provides a 'star system' to track the daily performance of individual physicians and each centre as a whole. The physicians at each centre meet three times a week to discuss patients with poor outcomes. They are encouraged to challenge themselves and one another to consider whether catastrophic events (e.g., hospitalisations) could have been avoided.

The centres have also been carefully designed to strengthen care coordination and access to services. An open-plan layout encourages the primary care providers and on-site specialists to engage regularly in multidisciplinary dialogues. For patients, the centres offer 'one-stop shopping'—the services delivered there also include diagnostic testing, pharmacies, dental care, and acupuncture. In addition, patients are given door-to-door transportation to the centres. By making care delivery so much more convenient for patients, the centres encourage treatment compliance, which helps hold down costs.

Using this model of care, ChenMed has managed to lower the rate of hospital admissions among its patients by 18% in Florida (to 281 per 1,000 patients, compared with a national Medicare average of 341 per 1,000). It has also reduced its rate of readmissions by 17% in Florida.

Understanding and affecting patient behaviour

The choices consumers make have a massive effect on the overall cost of healthcare. Few, if any, health systems will be able to rein in their spending over the long term unless they find ways to get patients to engage more effectively in maintaining their own health.

In the United States, for example, more than two-thirds of all healthcare spending is influenced by consumers' choices—what they eat and drink, whether they get exercise and take medications as prescribed, whether they smoke or engage in other harmful behaviours, and when and where they seek healthcare (Exhibit 5). Unless consumers are willing to alter their behaviour, demand for health services will continue to rise, and changes to the supply of those services (their availability, cost, or effectiveness) will not be sufficient to lower healthcare spending in the decades ahead.

However, getting consumers to change their behaviour is often quite difficult, in part because most people think they are healthier than they actually are. For example, the rising prevalence of obesity in many countries may be making it easier for people to avoid thinking about the health consequences of weight gain. In one study, more than 70% of obese patients rated their health as good to excellent.

While changing patient behaviour can be hard, a number of practical options have been found to work. Several examples illustrate the potential:

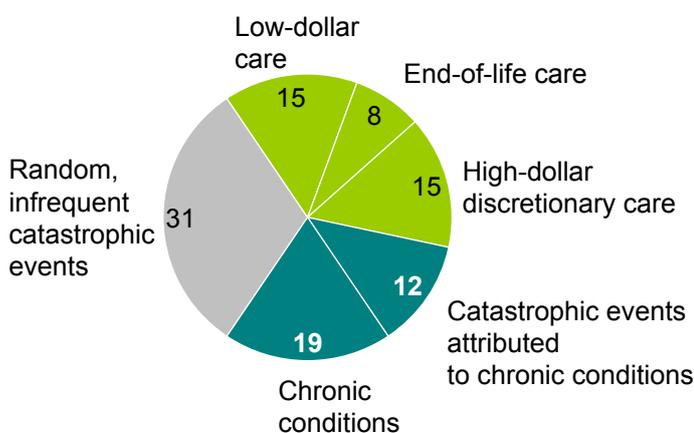
- Payors and providers can combine claims and consumer data and use predictive modelling to identify patients whose behaviour is increasing healthcare costs directly. Examples of such patients

EXHIBIT 5

The majority of healthcare spending is affected by consumer choices.

Breakdown of US healthcare costs, 2007 (%)

100% = \$1.88 trillion¹



69% of spending is largely subject to individuals' choices and behaviour

Individual choices and behaviour affect several areas:

- Wellness and prevention
- Care utilization and treatment choice
- Management of acute disease and chronic conditions

¹ Excludes \$368 billion in public-health expenditures.

Sources: *Dartmouth Atlas; Health Affairs*; Medical Expenditure Panel Survey and National Health Expenditure data; US Centers for Medicare & Medicaid Services; physician interviews; US Office of the Actuary; McKinsey analysis

include those who frequently seek emergency-room care and those who are not compliant with treatment recommendations. Programs can then be designed to address the specific needs of these patients. This is the focus of many integrated care systems.

- Payors and providers can also offer incentives to a broader range of people to encourage them to alter the behaviours that can increase longer-term healthcare costs. How these incentives can best be used was discussed by Dr Kevin Volpp, the first speaker at this session.
- Technology (e.g., remote monitoring and smart pill boxes) can be used to better monitor patients' health and compliance with treatment. The second speaker, Dr Jasper zu Putnitz, discussed the role of remote monitoring in improving patient care.

Using behavioural economics to offer patients incentives

Dr Volpp, a professor of medicine at the University of Pennsylvania School of Medicine and of healthcare management at the Wharton School in Philadelphia, noted that traditional incentive programs (both within and outside healthcare) are rooted in standard economic theory, which assumes that people are rational. Yet people are often not rational; rather, they are predictably irrational—they deviate from rational behaviour in fairly consistent ways. For example, most people are biased towards the present; they value instant gratification much more highly than future benefits and tend to procrastinate when making choices that involve up-front costs. Similarly, most people are averse to losses; their decisions are much more likely to be influenced by the risk of loss than the possibility of a gain (even a larger gain). These types of predictable irrationality help explain why so many people have difficulty implementing the changes they need to make to better manage their health.

Incentive programs offered by payors and providers will have bigger impact if they do not assume that patients are fully rational, said Dr Volpp, who is also director of the University of Pennsylvania Center for Health Incentives and Behavioral Economics. He acknowledges that most patients will respond to economic incentives but added that incentives programs typically produce better results—they are more likely to change behaviour or are able to change behaviour at lower cost—when they take

predictable irrationality into account. For example, he suggested that payors and providers could help patients overcome decision errors based on present bias by giving them feedback and monetary rewards frequently rather than sporadically. He also noted that the more noticeable the monetary rewards are, the more effective they will be. Thus, rewards should be paid out directly to patients and not simply added to pay cheques.

Similarly, payors and providers can design incentive programs that take into account loss aversion and optimism bias (the confidence most people have at the start of a change program that they can meet their goals). For example, patients can be offered contracts that guarantee them rewards if they meet their goals but also require them to put their own money at risk before the program's start. The possibility of forfeiting their money if they do not meet their goals can be a powerful incentive in getting people to change their behaviour.

Dr Volpp also recommended that payors and providers remember that inertia biases most people towards the status quo. Thus, when they are designing incentive programs, they should carefully consider what they are offering patients as the default option, because that is the one most people will select.

Maintaining closer contact with patients

Some incentive programs are using remote monitoring as a way to encourage patients to meet their goals. These devices are also being used in other ways to improve treatment compliance and avoid exacerbations of many chronic diseases. Dr zu Putnitz, president of Bosch Healthcare Systems, discussed how this type of monitoring can be used to close the gap between doctors and patients.

Many patients who are elderly or have long-term conditions, for example, would benefit by having their vital signs assessed regularly to check for evidence of deterioration. Yet most of these patients do not see doctors very often. Remote monitoring can be used to bridge this gap. Devices remind patients to weigh themselves and check their blood pressure, blood-glucose level, or other clinical parameters daily; the process typically takes only a few minutes. The results are then transmitted to the patients' doctors, who can follow up with them as appropriate. In many cases, results are also monitored by a telehealth case manager, who will call

patients if a serious abnormality is spotted or if patients forget their daily assessments. These checks-ins help reassure elderly and chronically ill patients and make them feel less socially isolated.

More than 40 studies of these types of telehealth solutions have been conducted to date. Many of the studies show that remote monitoring helps improve clinical outcomes, increases patients' compliance with treatment and quality of life, and lowers the cost of care (primarily through fewer hospital admissions). Remote monitoring also reinforces desired behaviours, a change that often persists even if the monitoring device is removed.

Whether the benefit currently outweighs the technology's cost depends on how targeted the population is, the efficacy of the intervention, and the cost of each device. However, as device prices continue to drop, the cost-benefit calculation will improve. In coming years, the role of remote monitoring is likely to evolve, Dr zu Puttlitz said, possibly through joint ventures between healthcare

providers and telehealth equipment manufacturers. He believes that there will be a growing focus on risk stratification to identify younger people with chronic diseases; remote monitoring might help prevent disease progression in these patients. By focusing on areas of highest risk, the impact can be maximised. The efficacy of the interventions may also be enhanced through tighter connections with clinicians.

Furthermore, insights from behavioural economics may help increase the devices' effectiveness. Many patients are at high risk because they adhere poorly to therapy, and simply offering them remote monitoring devices may be insufficient to drive behaviour change. However, if the devices are used as part of a program that also includes incentives based on behavioural economics, they could help reinforce the desired changes. Indeed, this combination may present a real breakthrough opportunity for maintaining the independence of high-risk patients.

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