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Payment innovation: the next frontier in US healthcare models



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About this report

Payment innovation: the next frontier in US healthcare models is a report by Economist Impact that investigates the structure, nuances and impacts of alternative healthcare payment models in the US. Considering the complexity and fragmentation of the US health system, we sought to analyse the limits of the currently dominant payment system and the emerging alternatives that could shape the future of US healthcare.

Academics and healthcare workers across the US were interviewed to help with this analysis, and we extend our sincere appreciation to the following participants for their time and contributions to this work (in alphabetical order):

- **Elliott Fisher**, professor of medicine and Health Policy at Dartmouth College
- **Elizabeth Fowler**, deputy administrator and director of The Center for Medicare & Medicaid Innovation

- **Hoangmai Pham**, president of the Institute for Exceptional Care
- **Sri Lekha Tummalapalli**, nephrologist, assistant professor of population health sciences and medicine at Weill Cornell Medical College, and health services researcher at Weill Cornell Medicine
- **Melissa O'Connor**, M. Louise Fitzpatrick endowed professor in community and home health nursing at Villanova University, Betty Irene Moore fellowships for nurse Leaders and innovators
- **Alan Sager**, professor of health law, policy and management at Boston University

Various stakeholders who are not listed here are thanked for their contributions, and referrals to experts and other resources in the space. This work was commissioned by the Department of Veterans Affairs (VA) Center for Care and Payment Innovation and conducted by Economist Impact.

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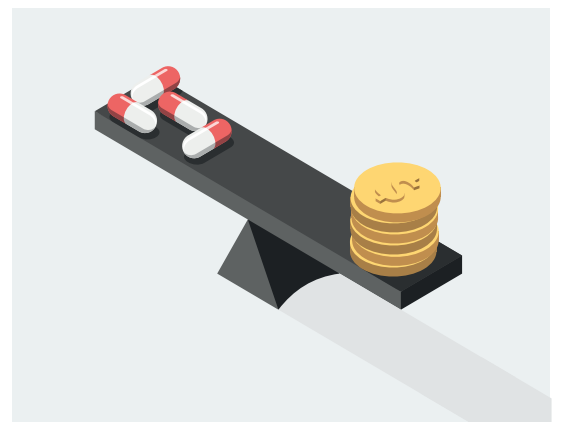
Executive summary

The US leads the world in health spending per capita, but ranks among the least efficient healthcare systems in terms of outcomes, complexity and cost. Health-related out-of-pocket spending by the patient is a primary cause of bankruptcy, often leaving the socioeconomically disadvantaged least able to access affordable medical support.

The dominant model for payments, fee-for-service (FFS), compensates providers for each good and service a patient receives. This model is based on treating people after they get sick, as there are few incentives for keeping people healthy. Providers are incentivized by the FFS model to provide a high volume of goods and services to patients, whether the care is warranted or beneficial. Further, there is little emphasis placed on preventative and early intervention measures, which reduce the demand for long-term health goods and services otherwise required by patients. Alongside the prioritization of billable treatments over good health outcomes, insurance companies can contest fees and leave patients with unexpected bills for treatment.¹ This places too much financial risk on patients and has led to growing calls for alternative payment models (APMs) that shift risk from patients or payors (insurers) to providers and attempts to hold them more

accountable for the quality and costs of care, rather than the volume of services delivered.

Although APMs have existed in some form since reforms of Medicare that took place in the 1980s, only recently has there been an emerging consensus on the part of patients, advocates, policymakers and payors on their potential value to lower costs and improve outcomes. Experts believe that APMs, which look set to grow (see Figure 2), could reform the US health payments ecosystem. Some APMs consist of a bundled payment per episode of care, such as inpatient hospitalization, or most health maintenance organizations (HMOs). HMOs give a flat payment irrespective of healthcare



use, aiming to offer benefits such as fairer risk sharing and more rational incentives, but they have drawbacks.² Pay-for-performance, for example, may deter providers from serving disadvantaged populations whose health needs are more complex. It could also lead to ‘gaming’ of diagnoses to increase the complexity of a medical case and thereby the financial value of an intervention.

“The US leads the world in health spending per capita, but ranks among the least efficient healthcare systems in terms of outcomes, complexity and cost.”

Additionally, the bundled payment model, also known as episode-based payment, provides a price for all the care involved in addressing a medical episode, such as a heart attack, labor and delivery, or a joint replacement. This model shifts the financial risk of the cost of care and quality from the patient to providers, because bonuses through shared savings are now contingent on how providers address quality of care and coordination of care. But while many focus their attention to the challenges of APMs, most forget the increase in administrative tasks, which research has associated with higher burnout rates among physicians.^{3,4}

Yet taken together, interest is reinvigorating in APMs in the US indicates that stakeholders perceive a need for alternative payment options than those currently in existence. The fact that payment models vary across well-performing health systems in OECD countries shows there is no one model that yields the best results. For example, Sweden and Italy have different health system structures from each other. Both countries vary in provider payment models, mostly relying on capitation, per case or, in certain circumstances, hourly wages.^{5,6}

Both Sweden and Italy have better health outcomes than the US, ranking among the top five in Europe for life expectancy, mortality from cardiovascular diseases, chronic respiratory diseases, cancer, and diabetes, despite both countries spending nearly 5-8% less of their GDP on healthcare when compared to the US.⁷ Going forward, the US health payment models landscape will be shaped by, and should focus on, three key themes instead of a one-size fits all approach.

To build an inclusive model that works for diverse interests and agendas, stakeholder collaboration and political will are essential.

When health systems are fragmented, the system becomes more complex and costly, and incentives become misaligned. Experts argue that payment reform requires a multidisciplinary, multi-sector approach to harness diverse perspectives. This covers diversity in not just identity such as gender and race, but also specialisms including social workers, physical therapists, and health aides to ensure all actors have a voice. Reform also requires political will through regulation and allocations of federal funding to accelerate innovation by making the flawed status quo less appealing, such as through mandatory APMs, in some contexts.⁸

APMs should promote data and IT innovation.

Volume-based reimbursement does not incentivize sharing of data and electronic health information. APMs should, in theory, encourage it, because they require high-quality data, such as performance metrics, to guide payments in a value-based system. Due to their need to provide real-time, patient-level quality data that allow near real-time decision-making, the structural and policy requirements of different models may require a more advanced data and IT ecosystem, including common standards, interoperability and usability, and shorter lags between data production and payments.⁹⁻¹¹ The model would also require appropriate upskilling of healthcare personnel to allow them to use the IT/data systems.

All payment models need to tackle inequality through better risk metrics. Poorly functioning payment systems increase healthcare inequality with incentives biased against disadvantaged populations and geographies that offer lower reward ratios. The new payments landscape will need better risk-adjustment controls and mechanisms to ensure the US health system works for everyone regardless of socioeconomic circumstances. One author suggests that letting go of the status quo and embracing alternative models will result in an American success story, where healthcare is pluralistic, diverse and flourishing.¹²

There is not one perfect model, and change requires close engagement of all stakeholders to design the right system. A multistakeholder approach is critical to ensure that the problem of fragmentation in FFS and APMs, currently leading to high levels of cost and inefficiency, is addressed. However, to achieve this goal, coordination and alignment among leaders from different backgrounds and disciplines will need to happen. By working together, stakeholders will be able to have a holistic view of the persistent challenges in US health systems. Additionally, a mix of models can be designed for a specific service rendered, just as we see in the combination of pay for performance (P4P) and bundled payments.

Background

Spending more on health does not necessarily equate to better outcomes.^{13,14} Although the US leads in current health spending per capita, it has historically ranked among the most inefficient healthcare systems in the world, placing last in access, equity and administrative efficiency (Table 1).^{15,16} The US experiences the highest rates of preventable hospitalizations and avoidable deaths, and the highest chronic disease burden.¹³ Not only are patients experiencing high levels of disease burden, they are also encountering financial challenges. Currently ranked second

in out-of-pocket health expenditure per capita, patients can face significant debt as a result of receiving medical care. Approximately 79m Americans have some form of medical debt, one example being those seeking care outside of their insurance network who may pay unexpected costs.^{17,18} Critically, we must include social determinants of health in our consideration of health spending, which are directly responsible for up to 80% of health outcomes.¹⁹ One study reported that the US spent nearly \$2.5bn between 2017 and 2019 on community programs targeting the social determinants of health when compared to its \$3.8tr in national health expenditure in 2019—a low level of investment.^{20,21}

As the sector grapples with significant levels of inefficiency, high spending and poor health outcomes, there is a growing push towards a new approach in paying for care. The increasing popularity of APMs and the rising importance of evidence-based and cost-effective care has brought to light significant issues with the traditional, FFS reimbursement system. According to a Policy Research Perspective by the American Medical Association using data from its Physician Practice Benchmark survey, between 2014 and 2020 the FFS system consistently accounted for nearly 70% of practice revenue.²² This indicated that FFS remained the most prevalent payment method.



Table 1: Economic and health comparisons across the US, EU and OECD

Indicator, economic	USA	EU	OECD
GDP per capita in US\$ (2021)	69,288	38,234	42,099
Health expenditure as % of GDP (2019)	16.8	9.9	12.5
Out-of-Pocket expenditure per capita in US\$ (2019)	1,235	686	539
Indicator, health	USA	EU	OECD
Life expectancy, years (2020)	77	80	80
Infant mortality rate per 1,000 (2020)	5	3	6
Maternal mortality ratio per 100,000 (2017)	19	6	18
Mortality from cardiovascular disease, cancer, diabetes or chronic respiratory disease between ages 30 and 70 (%) (2019)	13	12	11
Diabetes prevalence (% of population ages 20 to 79) (2021)	10	6	9

Source: World Bank Open Data⁷

Fee-for-service: the need for new thinking

The creation of Medicare and Medicaid programs in 1965 laid the foundation of the traditional fee-for-service model.^{23,24} In this approach, every unit of care, from individual medical procedures to medications, is charged per unit. For example, a patient may seek care for chronic back pain. Every time the patient sees a primary care provider (PCP), there are individual costs for the visit, pain medications and follow-up with specialists—see Appendix 2 for an example patient.²⁵ Thus, PCP visits are paid based on predetermined codes (physician fee schedule) within the medical billing system for Medicare beneficiaries, regardless of patients’ health outcomes.²⁶ This approach was first embraced by Medicare, but public and private payers later adopted fee schedules.²⁷

The FFS model has several structural shortcomings. Since physicians are paid by volume and unit cost, there is a minimal incentive

for cost-efficient care. A physician-reported survey reported that nearly 20% of medical care was deemed unnecessary, “including 22.0% of prescription medications, 24.9% of tests, and 11.1% of procedures.”²⁸ Because payment and reimbursement structures depend on maximizing usage and cost, there is limited incentive for innovation in practice redesign that improves patient access and care at lower costs.²⁹ According to the Academy of Medicine, the US spends nearly US\$248bn annually on billing and insurance-related costs, twice as much as needed.³⁰

The FFS model offers no incentive for care coordination, besides a professional motivation to take good care of patients (Table 2). PCPs are paid for each service they provide and can refer to specialists whether the care is needed or not. Since they treat patients for a specific illness or condition, if a patient comes back seeking additional care, clinicians continue to receive additional payment per intervention and per visit. Traditional FFS does not offer mechanisms

of accountability for quality; rather it creates a space where doctors, hospitals, insurance companies and pharmaceutical companies are able to blame one another when things go wrong, leaving patients at risk and causing costs to rise. There is no need to coordinate quality care to improve outcomes, as an increase in patient visits is the financial incentive.²⁶ “The incentives are not to keep people from coming to see you,” says Elliott Fisher, professor of medicine, community and family medicine, and health policy at the Dartmouth Institute and the Geisel School of Medicine. “Keeping people healthy isn’t a great thing to do for your primary care practice because you want to keep them coming back.”

Fragmentation can occur along many dimensions. It refers to healthcare that focuses and acts in part without appreciating that there are multiple interacting factors that advance the health of individuals. An example is a patient who sees multiple medical specialists who each treat the organ in which they are expert in without looking at and treating the patient as a whole.³¹ Recognized as a problem contributing to the failings of the US healthcare

system, fragmentation is also defined as a misalignment of incentives that creates an inefficient allocation of resources or harm to patients.³² The fragmentation of the health system is a major driver of cost increase, poor quality and inequality.³³ Billing and coding costs, physician administrative activities, and insurance administrative costs are the primary drivers of these expenses.³⁴ Administrative costs of care (activities relating to planning, regulating, and managing health systems and services) account for 8% of health spending in the US, versus a range of 1-3% in the other ten highest-income countries.³⁵

Worse than fragmentation-driven cost, however, is gaming of the system. “Organizations benefit from flawed risk adjustment, which means they get paid more than they should because they’re gaming the risk adjustment system by finding more diagnoses for people,” says Dr Fisher. He notes that well-capacitated systems—those that are well-resourced and given sufficient capacity—might include roles such as community health workers, which are not incentivized in the FFS model. Dedicated teams including health

Table 2: Fee-for-service payment model characteristics

Fee-for-service	
Characteristic	
<ul style="list-style-type: none"> • Payment for each unit of care 	
Pros	Cons
<ul style="list-style-type: none"> • Well-established fee schedules • Fewer restrictions on the quantity of patient visits 	<ul style="list-style-type: none"> • High financial cost to the system • Minimal financial risk for providers • Low incentives for quality • Low incentives for efficiency • Minimal incentives for care coordination • Increase in volume of unnecessary care

Source: Economist Impact

coaches and specialists that are thinking about new approaches to improve health outcomes are not incentivized under FFS. But, says Dr Fisher, “organizational redesign is difficult under FFS.”

Dr Fisher adds that health insurance companies can actually improve commercial performance by avoiding taking care of sick people. One report suggests that they often agree to pay elevated prices and then find a way to pass those higher prices on to patients, while making a healthy profit.³⁶ Many Americans are unable to afford health insurance and, with the prevalence of employer-sponsored insurance dwindling, patients are faced with cost-related barriers to care.³⁷

“Because doctors and hospitals have learned to game the risks, that creates an adversarial relation between payers and caregivers, in which each side mistrusts the other.”

Alan Sager, professor of health law, policy and management at Boston University

Cost-related barriers to healthcare lead to the fragmentation of coverage models, where individual policymakers responsible for just one fragment of the healthcare process do not seem to understand the full picture or even use incentives to shift costs onto others. “One level of fragmentation occurs between different plans,” says Dr Fisher. “This creates competition to make people sicker by giving them more diagnoses. Market fragmentation lets people shift costs because not everybody is covered, so if healthcare costs go up, sicker people get left behind. The fragmentation of the market causes deep harm.” An example of these deep harms is where large insurers pay more to doctors who report their patients as sicker, leading to diagnoses of serious diseases that may not ever have existed, crossing the line into fraud.

Alan Sager, professor of health law, policy and management at Boston University echoes the sentiment. “Because doctors and hospitals have learned to game the risks, that creates an adversarial relation between payers and caregivers, in which each side mistrusts the other.” The gaming refers to the use of codes by hospitals and insurers. For example, a patient with a heart problem diagnosed as “heart failure” is given one code, while the diagnosis of “acute systolic heart failure” is another code that carries a more lucrative payment for care. The coders working for the hospital are said to be in a battle with coders working for the insurance companies, the former working to bring in as much revenue as possible, which the latter try to deny as overreaching.

Hoangmai Pham, president of the Institute for Exceptional Care at the University of Pennsylvania and former chief innovation officer at the Center for Medicare and Medicaid Services, says there has been little effort to evolve beyond FFS, even as alternatives are explored. “While [value-based payment] experiments have been happening, very little has been done to make traditional FFS payment less attractive,” she argues.

Reforms like the Medicare and Children’s Health Insurance Program (CHIP) Reauthorization Act have been too mild in their execution.³⁸ “The counterbalance to value-based payment has not been satisfactory,” says Dr Pham. “You can do fine staying in the status quo. Short of making participation mandatory or making FFS a lot less attractive, this is where we are going to live.” Parallels can be drawn with interventions to dissuade people from some activities, such as congestion charges to reduce urban traffic or bans on smoking indoors. These approaches increase the cost or hassle of an activity to accelerate transition away from it.

This report, combining literature and data analysis with an extensive interview program,

assesses the limits of the currently dominant system and the emerging alternatives that could shape the future of US healthcare. However, it is important to note that the information in this report focuses on the Centers for Medicaid and Medicare Services (CMS). CMS accounts for 38% of national healthcare spending, with Medicare and Medicaid outpacing growth in private health expenditure by 2.6% and 3.4% respectively.³⁹ In

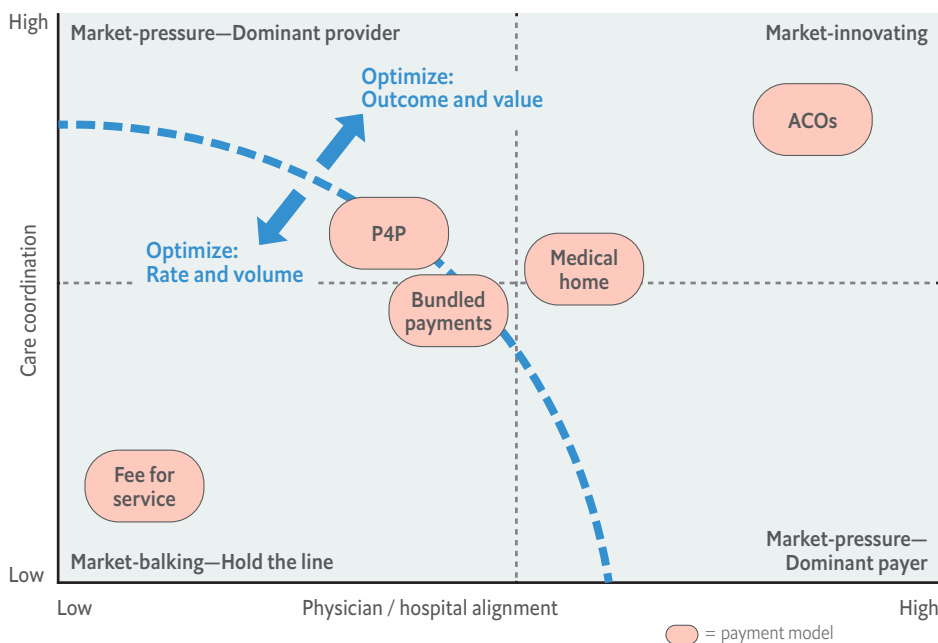
addition to their dominance and rapid growth in spending, our methodology uncovered various studies related to CMS models, and an imbalance of publicly available publications when compared to private-sector models. For these reasons, this report primarily focuses on Medicare and Medicaid systems.

Alternative payment models

Since the passage of the Affordable Care Act (ACA) in 2010, the CMS has sought to transform healthcare from a system that incentivizes volume to one that rewards value.⁴⁰ APMs are defined by the CMS Center for Medicare and Medicaid Innovation (CMMI) as any arrangements in which providers are held accountable for the

quality and costs of care, rather than paid based on the volume of services they deliver. Owing to the restrictions of the traditional FFS model, APMs offer different compensation schemes by redesigning payment structures and offering performance incentives.

Figure 1: Transitions to value-based payment models varying by market



Source: American College of Cardiology, Larry Sobal, The Transition to Value, 2018
Graphic insight: Economist Impact, adapted from source listed above.

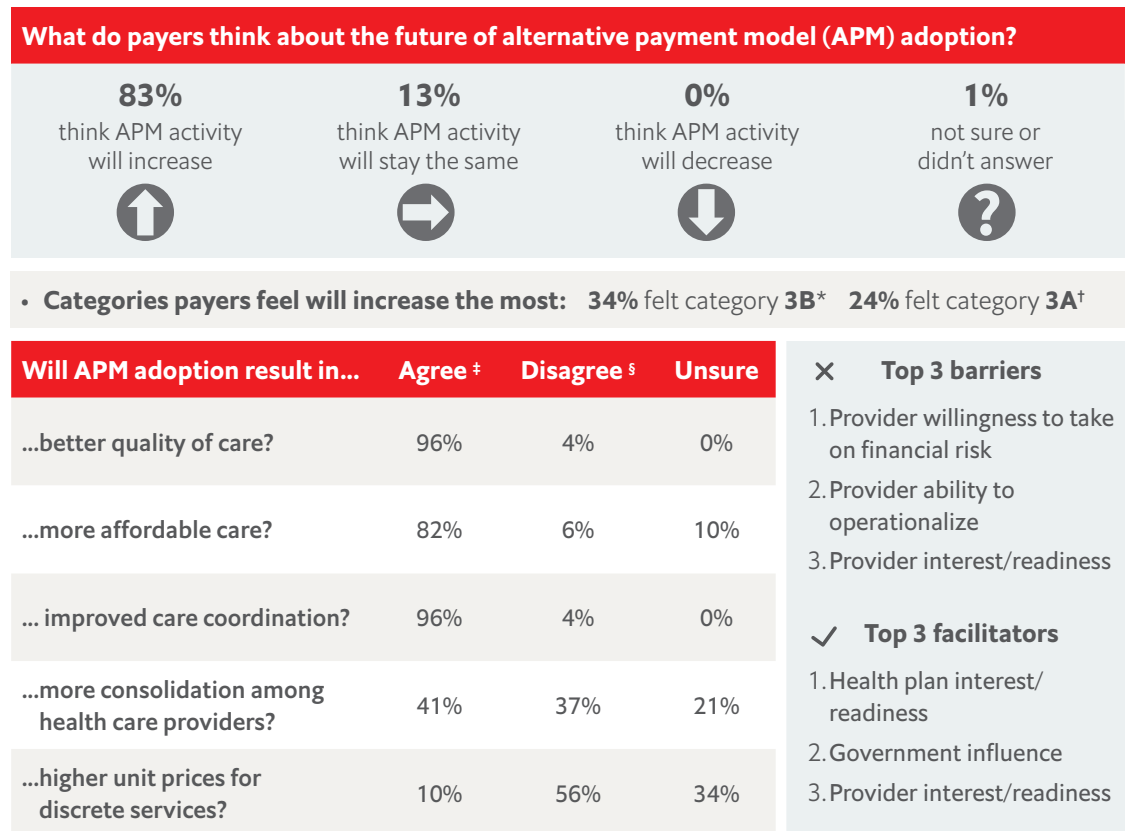
APMs have been used in the private, commercial healthcare market and in federally backed programs by the CMS. Additionally, the CMMI has tested pilot models to explore mechanisms that achieve better patient outcomes and reduce overall costs.⁴¹ Figure 1 shows how different APMs contrast when considering rate and volume of care coordination, as well as outcome and value of physician and hospital alignment. Understanding the different mechanisms that can impact value, costs and outcomes are critical to design a more equitable model.

The agency has pledged to promote fairer healthcare by making it easier for providers

...serving racial and ethnic minorities to participate in APMs. In October 2021 the CMMI announced a goal of having every Medicare beneficiary and the majority of Medicaid beneficiaries covered by some type of APM by 2030.^{42,43}

Although APMs have existed in some form since reforms of Medicare that took place in the 1980s, only recently has there been an emerging consensus on the part of patients, advocates, policymakers and payers on their potential value to lower costs and improve outcomes. Experts believe that APMs, which look set to grow (see Figure 2), could change the US health payments ecosystem.²

Figure 2: US alternative payment model (APM) landscape assessment



Source: Health Care Payment Learning and Action Network, 2022 ⁴⁴
 Graphic insight: Economist Impact, adapted from source listed above.

* Category 3B: APMs with shared savings and downside risk
 † Category 3A: APMs with shared savings
 ‡ Strongly agree / Agree
 § Strongly disagree / Disagree

“I see reason for optimism about APMs,” says Liz Fowler, deputy administrator and director of the CMMI. “We’ve created more opportunities for providers to participate in them and we’re going to continue to build on those.” She adds that providers with APM- and value-based care models have proved more resilient and successful in navigating the covid-19 era than those reliant on pure FFS. “Coming out of the pandemic, we saw a lot of potential for positive movement in this direction, but we’re still in the recovery mode,” says Dr Fowler. According to the American Medical Association, 66.8% of physicians report receiving payment from at least one APM in 2020.²²

This chapter explains and defines a selection of four APMs, although these can be paired, altered and adapted with different aspects of FFS and conditionally attached to alternate reimbursement methods. To better understand the nuances of each APM structure, this chapter explains the advantages and disadvantages of each, evaluating them based on risk, quality care, cost-effectiveness, care coordination and innovation.



Bundled (episode-based) payments

The bundled payment model, also known as episode-based payment, provides a price for all the care involved in addressing a medical episode, such as a heart attack, labor and delivery, or a joint replacement. The total allowed acute and post-acute spending or the target price for a single episode of care are predetermined, and providers share losses and savings that result in the difference between the target price and the actual costs.⁴⁵ This means that instead of paying separately for the individual costs of treatments, tests and appointments, patients and payors pay a sum for all the services related to the episode. This model requires a clear definition of the episode of care that considers the length of time of care (typically 30 to 90 days post-discharge) as well as the range of providers, treatments and services offered.⁴⁶ Under bundled payments, the provision of care for each episode can be seen as a product, allowing for competition in cost and quality.⁴⁷ A 2020 American Hospital Association survey reported that 954 community hospitals (29%) were participating in bundled payment models, with the majority being minor-teaching hospitals in urban areas.⁴⁸

Bundled payment is given based on clinically defined episodes of care and expected cost of service. As a result, this model shifts the financial risk of the cost of care and quality from the patient to providers, because bonuses through shared savings are now contingent on how providers address quality of care and coordinate care.⁴⁹ This model offers intermediary financial risk for providers when compared to FFS and capitation models, as providers must cover any costs above the target price while still providing the same quality of care.⁴⁸

Bundled payment can be retrospective or prospective. Retrospective payments are based on the actual costs of care after the completion of care, where payors retain an FFS arrangement and pay the providers.⁵⁰ However, if costs exceed the predetermined target price, the payors

reduce the payments made to the providers. For example, if a patient needs cardiac surgery, the patient will most likely see a cardiac surgeon and anesthesiologist, as well as use inpatient, outpatient and rehabilitation services. In this case, the bundled payment covers all services, interventions and specialists that were used. In contrast, prospective payments, established by the CMS, are based on the expected costs for each type of episode where the target price is set for all services provided over a specified time for a specific admission, procedure or service provided.⁵⁰ Since payments are set at the average cost of an episode, prospective payments incentivize efficiency and the minimization of unnecessary episodes of care to ensure higher profit margins. If providers can keep overall costs below risk-adjusted target prices, they are eligible to receive additional financial rewards based on savings from CMS, for example. However, if costs

are above the target price, they can be subject to financial penalties due to the difference between expected and actual costs.⁴⁹

Bundled payments have improved integration and coordination among providers based on their incentive structure.²⁵ Studies indicate that bundled payments induce favorable outcomes for conditions that have well-defined quality metrics and predictable spending patterns, which is the case for procedure-based bundles, such as for orthopedic conditions—the most common bundle.^{48,49} For example, the Medicare Comprehensive Care for Joint Replacement model was found to reduce the average episode payments “while maintaining or improving performance on quality measures”.⁵¹

For chronic conditions, however, the impact of bundled payments is still uncertain, owing to limited research.⁴⁹ One study evaluated

Table 3: Bundled (episode-based) payments characteristics

Bundled (episode-based) payments	
Characteristic	
<ul style="list-style-type: none"> Sum of individual unit costs of care into one payment for an episode of care 	
Example	
<ul style="list-style-type: none"> The Comprehensive Care for Joint Replacement Model designed for patients undergoing lower-extremity joint replacements 	
Pros	Cons
<ul style="list-style-type: none"> Higher efficiency than FFS Incentivizes lower cost of care Incentive for higher quality Clearer upfront costs (prospective payments) Incentive for hospitals to establish stronger relationships with providers Risk-adjusted payment options 	<ul style="list-style-type: none"> High financial risk for providers Incentives for avoiding high-risk patients Incentives for increasing volume of services Favors common procedures Limited evidence for chronic conditions Shift costs in separately paid portions of overall care

Source: Economist Impact

the Bundled Payments for Care Improvement initiative from the CMMI on five common medical bundles (congestive heart failure, pneumonia, chronic obstructive pulmonary disease, sepsis and acute myocardial infarction) and reported no statistically significant savings and minimal differences in readmission, mortality and other metrics.⁵²

There are other challenges associated with bundled payments. First, even as the structure of this model can improve integration and coordination, it can inhibit some types of care coordination, providing mixed results.⁵³ Although providers can receive additional payments for shared savings or face penalties for going over the average cost per episode, the total cost of care that a hospital is responsible for depends on the individual actions and decisions of its physicians. Unless a hospital has strong care coordination mechanisms, bundled payments will depend on the ability for many individual providers to integrate, coordinate care and keep costs low.

Secondly, a byproduct of prospective bundled payments is the possibility of avoiding high-risk patients (to stay within the average episode

payment), increasing volume of services, or changing the patient population toward a less-complex, healthier group, which can lead to lower cost per episode.⁵⁴ Picking and choosing patients, or adding more diagnostic codes to patients to increase the risk score of a provider's patient population are problems that this model shares with other APMs.

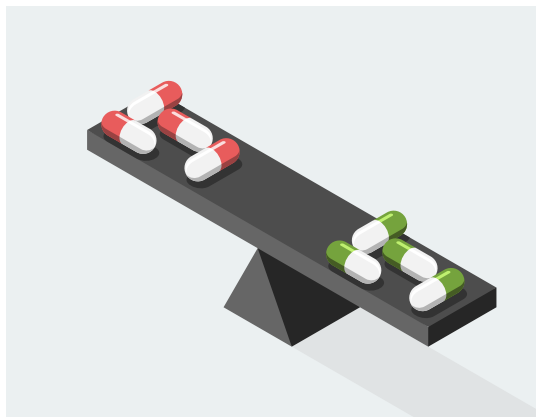
Since this report indicates that there is not one perfect model, a mix of models can be designed for a specific service rendered, such as implementing elements of P4P with bundled payments. Innovation depends on the environment that enables experimentation, such as trying new methods and strategies to improve overall efficiency, quality and cost. However, innovation can be hampered if there are not enough safeguards in place.⁵⁵ As financial risk is shifted towards providers, there may be limited space for physician-led innovation, as they are subject to keeping costs low to maximize savings. Further research is needed to directly measure the impact of bundled payments on an innovation ecosystem.



Global (capitation) payments

The global payment model is specifically for the delivery of integrated health care. It is a fixed prepayment given for a predetermined length of time for a specific population group that covers at least part of the cost of care (for example, only primary care). Payments can be risk-adjusted to reflect the health profile of the patient population. If costs are kept low, providers, healthcare facilities and payers can keep a portion of savings; conversely, they would be liable for going over budget.⁵⁶ The breadth of coverage can either be comprehensive, covering all care or targeted, covering a specific service such as primary care.⁵⁷

The most common receivers of global payments in managed care organizations are health maintenance organizations (HMOs).⁵⁸ The main structural difference between HMOs and accountable care organizations (ACOs, discussed in a later section of this report) is that HMOs are insurance groups that contract with clinicians, while ACOs consist of clinician groups that contract with insurers.⁵⁸



There are two categories of global budgets: population-based and facility-based budgets.⁵⁹ A population-based global budget offers an agreed payment on a predetermined cadence to cover costs associated with a particular population group. Depending on the agreement, population-

based global budgets may exclude specific services from the budget that the provider is not responsible for, such as behavioral health or medications. On the other hand, facility-based payments establish a prospective budget for a healthcare facility based on “either the historical spend of a facility or the anticipated resource needs for a facility as a function of the expected or desired set of healthcare services and utilization rates.”⁵⁹

There are two types of cost controls associated with global budgets.⁵³ A hard global budget ensures that the payee is limited to a prospective predetermined amount. In this case, the payee should be incentivized to keep costs low to avoid going over budget—a similar incentive to the bundled payment model. To ensure that budgets are balanced, if the cost of care increases, the volume would need to decrease. On the other hand, a soft global budget allows “the purchaser or payer to assume part or all of any overruns.”⁵³

Global payments offer several advantages.⁵³ Since payments are given out every time there is an individual cost (for example, every time a patient sees a specialist), this model facilitates simpler administration of payment and reporting compared with FFS, which requires a complex code-specific billing system. Simpler administration also allows HMOs and healthcare facilities to balance budgets to reflect the health profile of their patient population. For example, a hospital might focus on rehabilitation for a patient population with higher levels of orthopedic conditions. However, it is important to note that these budgets are given for predetermined conditions and may be attached to other performance measures such as efficiency and cost control for which there are incentives.⁶⁰

In addition, the structure of this payment model also makes payments more predictable for patients, providers, healthcare facilities and HMOs. When considering volume and cost of care, HMOs will benefit by decreasing the use of services by patients, meaning that less use would

lead to lower costs. This not only incentivizes preventive care for the community and individual patients, it can also induce higher levels of efficiency and waste reduction.⁶¹ As a result, these incentives can encourage providers to find new cost-effective ways to offer services and decrease health episodes.

On the other hand, there are also several disadvantages of this model. Since the payee receives a predetermined budget amount, there can be a minimal incentive to increase the level of care where warranted and instead focus on limiting costs. This can happen if the contractual agreement with the payee does not include any assessment or performance evaluation.⁵³ Additionally, prospective global budgets could also create budgetary challenges if the health profile of the patient population changes, as costs are predetermined using historical data. If the

patient cohort is healthier, the payee benefits through shared savings, but if the population tends to be unhealthier, the payee can expect financial loss. This can be mitigated by risk-based contractual agreements due to a facility's or HMO's patient cohort. Another consideration is the nature of enrollment and restrictions imposed by HMOs.⁵³ Depending on the HMO, patients can be restricted from utilizing medical services and accessing providers outside an HMO's network. This can limit freedom of choice.

Despite this, global payments are the best APM model, says Dr Fisher, who thinks that a primary care model under a global payment structure can help to reduce cost and utilization. "Under global payment for a defined primary care population, you are encouraged to do a better job on episodes, because you want to reduce costs. The best way to reduce the total cost of

Table 4: Global payments (capitation) characteristics

Global payments (capitation)	
Characteristic	
<ul style="list-style-type: none"> • Payment based on a predetermined roster of patients 	
Example	
<ul style="list-style-type: none"> • Health maintenance organization (HMO) 	
Pros	Cons
<ul style="list-style-type: none"> • Waste and inefficiency reduction • Focus on preventive care • Predictable payments for patients and providers • Simpler administration • Encourages innovation in care delivery outside of the office • Flexibility in balancing budget • Community over individual management 	<ul style="list-style-type: none"> • Shift in the health profile of population can impact payments • Optimizing cost over quality • HMOs may limit patient access to providers and facilities outside of their network

Source: Economist Impact

care is to find sick people and keep them healthy or reduce their complication rates,” he says. “Hospitalizations are incredibly expensive to a health system that’s accountable for the health and care of its population. I cannot think of another way with alternative payment models to start to make progress toward improving care and lowering costs because that single incentive does both.”

The Michigan Quality Improvement program is an example of a global payment model. It works on improving performance measures of clinical practice to affect positive health outcomes.⁶² Applying this model to just one segment of the population could be problematic, as the FFS side of provision, which has no budgetary constraints, will go up and healthcare spending will not slow. In the current systems, there is a competitive bidding market with rules that are tilted toward the private payers, and therefore subsidizing the private payers at the expense of the US public. A global payment model will require delivery system leadership, to prevent bankrupting our communities.

“Under global payment for a defined primary care population, you are encouraged to do a better job on episodes, because you want to reduce costs.”

Elliott Fisher, professor of medicine and Health Policy at Dartmouth College

The relationship between innovation and global budget models are mixed with tradeoffs between cost control and innovation (for example, medical equipment, new administrative processes, new community programs), as innovation can produce state-of-the-art technologies with a high price tag.⁶³ If hospitals are under strict budgets, costly new technologies may hinder the ability to share savings, and the tradeoff between efficiency, quality and cost of innovation should be further researched.

Pay for performance

P4P, also known as value-based care, links financial incentives or disincentives to a payment model based on a provider’s performance and cost.⁶⁴ Incentives can be designed to either provide a bonus for reaching predetermined targets or a penalty for not reaching determined measures.

By establishing performance targets, P4P focuses more on the quality of care over volume. Metrics can be designed as an attachment to other payment models, reducing the need for changes in model structure. As an add-on, performance targets highlight progress at the patient care level, increasing the visibility of micro-level data, which can result in greater transparency on quality metrics and help hold providers accountable.

However, P4P has its limits. There may be a negative relationship between P4P and health equity. Socioeconomically and ethnically disadvantaged populations experience poorer health outcomes based on their level of access to care and life expectancy.⁶⁵⁻⁶⁷ Lower health outcomes can impact performance scores of providers that are required to reach performance targets, leading to the possibility of cherry-picking patients or gaming the system.^{66,68-71} One study reported that in California, safety-net hospitals are found to experience more financial penalties from Medicare’s Value-Based Purchasing Program and Hospital Readmissions Reduction Program than non-safety-net hospitals, despite adjusting a 30-day mortality metric.⁶⁶ In other words, risk-adjustments for P4P in locations and facilities with patients with poorer health outcomes are necessary to mitigate any efforts of providers avoiding treating socioeconomically disadvantaged groups. However, there are new variations and proposed alternatives that aim to tackle this problem.⁶⁹

“Coding for comorbidities means adding codes to make patients look sicker, thus increasing the

potential value of treatment”, notes Sri Lekha Tummalapalli, a nephrologist and health services researcher at Weill Cornell Medicine. “Coding data is also full of confounding risks related to the social circumstances of the patient. Excessive diagnostic coding in P4P is somewhat analogous to a construction company exaggerating the flaws of a to-be-renovated property in order to charge more for the work.” Data informing social circumstances—the social determinants of health—and equity, or lack thereof, is in short supply. A more nuanced way to measure value and outcomes is required.

A further consideration is that P4P requires data to be produced at previously unimaginable levels and, as a result, calls for an effective way to collect, process and analyze massive amounts of accurate information.^{72,73} It is akin to examining

a student’s performance based on a continuous real-time monitoring of multiple learning outcomes across different projects and tasks, compared to a once-a-year exam. This approach offers a far more accurate assessment of their learning gain or “value” attained, but requires much more data and innovation to capture all of the relevant outcomes.

Adoption of P4P requires the integration of siloed digital systems, efficient and targeted data collection, and improving data source collection (deduplication of reporting).⁷³ Once high-quality data is obtained, it is critical to use it for data-driven decision-making to drive change. Training programs are also needed to help medical professionals modernizing their digital literacy skills to enable them to utilize reporting systems and adhere to new standards. However, better

Table 5: Pay for performance (value-based payments/purchasing) characteristics

Pay for performance (value-based payments/purchasing)	
Characteristic	
<ul style="list-style-type: none"> • An attached financial incentive or disincentive to a payment model based on a provider’s performance 	
Example	
<ul style="list-style-type: none"> • Hospital Readmissions Reduction Program 	
Pros	Cons
<ul style="list-style-type: none"> • Greater focus on quality over quantity • More transparency • No need to alter payment model structure • Develops strategic targets • Greater visibility offered by micro-level data 	<ul style="list-style-type: none"> • Administrative complexity • May not reflect community need • Limited impact on patient outcomes • Challenges with socioeconomically disadvantaged populations • Data lag • Delayed payments • Gaming the system through cherry-picking and other methods

integrated data systems are needed across community programs and resources to include the healthcare system and beyond (for example, housing, nutrition and so on). This may require altering workflows to accommodate higher levels of administrative work, as some facilities depend on manual reporting mechanisms. Better integrated data systems across community programs and resources would also be required.

As more data collection is necessary to measure the success or failure of performance targets, the model could require significant administrative complexity and an interoperable information technology system to collect and report at a greater scale. Finding ways to share data will be important, says Dr Fisher, as well as capturing non-claims data to find out what care is given and not billed. “Establishing a unit, a uniform identifier, that makes it easy for you not to have to use huge algorithms to figure out it’s exactly

the same person, is hard,” he says. “There is no better way to measure costs than with claims data. However, electronic health records can regenerate encounters for most of the key services that are done, and capture those things that you don’t bill for, like a community health worker visit. It can help with figuring out what services we want to document and record.”

There are challenges with payment and data lags in value-based payments (VBP), which can be up to two years in the US context. This is analogous to a company’s audited accounts being delivered two years after the analysis was completed, by which time key personnel have come and gone and many other aspects of the business may have changed. The patients on which a provider was graded may have moved on and doctors might have left the practice. “The system is not built in a way to act on the scores in real-time,” says Dr Tummalapalli. Studies argue that the payment lag between the moment that care is delivered and the receiving of payment should be minimized.⁷⁴ For example, providing a monthly bonus rather than one large sum at the end of the year may increase the strength of the incentive, especially among risk-averse groups.⁷⁵ However, this may prove to be a problem due to significant challenges with data lag.⁷⁶ An inherent challenge with P4P reporting is the time that it takes for the data to be analyzed to assess performance and impact. This not only impacts payment, it can certainly also affect quality assurance and changes in population health management. Overall, despite specific examples of benefits of P4P, statistically significant evidence continues to be limited of its impact on patient outcomes and costs in the US and other countries.⁷⁷⁻⁷⁹

A further challenge, says Dr Sager, is to encourage effective physician self-regulation and self-improvement. He says that P4P currently lacks a mechanism for identifying the small share of doctors who might commit a disproportionate share of clinical harm and who need to be identified, re-educated or extruded.



Accountable care organizations (ACOs)

ACOs are a group of health professionals or healthcare facilities that voluntarily agree to work together and coordinate care.⁸⁰ ACOs establish a network where patients can seek care within the patient care continuum and health professionals share information, resources and administrative responsibility. They were created by the ACA, although as an institution they already existed in various forms, says Dr Pham. “Their existence has helped to change healthcare culture broadly [towards embracing the concept of] total cost of care,” she adds. ACOs have helped drive care around value-based payment. The American Medical Association reported in 2020 that 54.9% of physicians participated in at least one form of ACO—an 11% increase since 2016.²²

Similar to bundled or global payment models, ACOs establish an average expected cost for

care. To do so, ACOs depend on historical cost data to establish prospective benchmarks in conjunction with key quality indicators (these are CMS-selected metrics for ACOs participating in a CMMI program), typically attaching a P4P mechanism.^{81,82} Depending on the contractual agreement, ACOs may start with upward risk during the first two years, where they are not required to assume any risk of financial penalty if care costs are greater than the agreed target. Two-sided risk, where the arrangement includes both upward and downward risk, is automatically implemented with the addition of downward risk, an arrangement where providers pay a financial penalty for costs that exceed an agreed target.⁸³ The use of downward risk can motivate ACOs to move away from an FFS model because it requires quality metrics to be attained.⁸⁴ ACOs under the CMS APMs may receive shared savings, as well as be penalized for going over predetermined costs.

Table 6: Accountable care organizations, characteristics

Accountable care organizations	
Characteristic	
<ul style="list-style-type: none"> “Groups of clinicians, hospitals and other health care providers who come together voluntarily to give coordinated, high-quality care a designated group of patients.”⁸⁵ 	
Example	
<ul style="list-style-type: none"> Kaiser Permanente 	
Pros	Cons
<ul style="list-style-type: none"> Care coordination Focus on quality Technology integration Patient-centric care Waste reduction Shared decision-making 	<ul style="list-style-type: none"> High administrative complexity Restrictions from non-ACO referrals Decrease of physician autonomy Incentivizes volume Risk of coding intensity

Source: Economist Impact



Several advantages have led to the increase in ACOs over the past decade.⁸⁶ First, ACOs take accountability for collaborating with stakeholders and coordinating care throughout a patient's journey.^{81,87} Effective care coordination depends on a relationship between clear communication and patient-centered decision-making, and shared medical records help to facilitate this relationship.^{88,89} The goal of care coordination is to reduce waste and increase overall care efficiency, leading to a decrease in errors and costs.⁸⁷ Another advantage of ACOs is the inclusion of P4P mechanisms attached to quality metrics, and those operating under CMS have clear and well-defined indicators. As of January 2022 the CMS Shared Savings Program alone reached over 11m enrolled in Medicare through over 500,000 providers.⁹⁰ Coordinating care at this level requires the use of interoperable information technologies paired with efficient case management.⁸² As a result, ACOs require mass data collection to report all quality metrics as well as ensure that they are able to accurately account for costs.⁸²

However, there are various disadvantages to ACOs. Significant care coordination, as well as data collection and reporting, can increase administrative complexity. ACOs must find ways to accurately collect, process, analyze and report information among different providers and

facilities. Additionally, there are struggles with restricting out-of-network care, which can be beneficial to patients and mixed to providers, as it may lead to higher spending for providers but decrease the risk of non-payment from insurance companies for those within the same network.^{89,91}

"Most quality metrics are based on clinical guidelines," says Dr Pham. "They tend to be reductionist and condition specific, even when they are focused on outcomes. But we don't live as a blood-pressure figure walking around, we live as a whole person. We don't live as just a diabetic—we may be a diabetic who's also disabled and frail and elderly. There's complexity, especially in the Medicare population where I worry that these reductive metrics actually become counterproductive because it distracts clinicians from thinking about the whole person and what they need." Another challenge is physician autonomy.⁸⁹ Since ACOs have a particular set of performance benchmarks that need to be attained, clinical guidelines may reflect those metrics and remove the ability of physicians to focus on treating each patient holistically.⁸⁹

Since shared savings within an ACO may reflect and be distributed based on the quantity of billable services, ACOs may encounter similar issues to the other APMs with volume, or accuracy of coding intensity, rather than incentivizing visit-reducing activities.⁸⁹ This can lead to disproportionate payouts. Over the next decade, it is estimated that CMS will overpay Medicare Advantage plans by over US\$200bn owing to the current coding intensity adjustment of approximately 6%.⁹²

Coding intensity refers to the difference in risk scores for a group of beneficiaries if they were enrolled in Medicare Advantage or in FFS. In FFS, payments are made based on procedures conducted, while Medicare Advantage plans offer incentives for the number of diagnoses reported. The average beneficiary

has a risk score of 1.0 in FFS, so if a Medicare Advantage plan bids US\$1,000/month for a beneficiary with a risk score of 1.0, but then enrolls a beneficiary with a risk score of 1.2, the plan is paid \$1,200/month instead of \$1,000. These plans seek opportunities to increase risk scores by finding diagnoses for beneficiaries through means such as nurses conducting health assessments and reporting their findings, or searching through medical records and reporting diagnoses that were previously not reported by physicians on other healthcare claims.⁹³

With regard to accuracy of coding intensity, Dr Pham believes that gaming the system is an inherent flaw that will require congressional action. “Coding games have been played since the inception of Medicare Advantage more than 30 years ago when ACOs faced risk-adjusted benchmarks,” she says. “Unfortunately, ACOs face financial benchmarks that are influenced by the same risk coding approach. They cannot sit back and choose to not play the coding game because their numbers are being adjusted relative to the market. CMS can impose caps on risk or growth, but it won’t eliminate that problem until there is a political will in Congress to do it. I say Congress because the agency will do it tomorrow, the agency hates it. But the agency gets political blowback every time it tries to limit Medicare Advantage in any way. To do this, you have to do it in Medicare Advantage. You can’t just do it for ACOs. An alternative path, which also requires political will, is to find a method of risk adjustment that doesn’t rely on the provider.”

“You can structure incentives to get people to pay attention to social drivers and record them, [but] until you change the performance metrics to be more holistic and outcomes-focused, there isn’t an incentive for the ACO to take action.”

Hoangmai Pham, president of the Institute for Exceptional Care

Dr Pham also thinks that metrics on social determinants of health can be implemented, but there are currently no incentives to do so within ACOs. “You can structure incentives to get people to pay attention to social drivers and record them, [but] until you change the performance metrics to be more holistic and outcomes-focused, there isn’t an incentive for the ACO to take action,” she says. Dr Pham also notes that taking action to address the social determinants of health requires more time per patient, and requires new partnerships such as with community-based organizations, and home and community-based service providers. It also requires changing care processes. All of this is expensive. “We have not structured payments to do that,” says Dr Pham.

Payment to providers is done through FFS despite the ACO receiving capitated payments. Dr Pham believes that this will cause organizations to leave the ACO Realizing Equity, Access, and Community Health (REACH) model: “You will see a whole bunch of exits, because I suspect that these [new Entrant] organizations will spend the first two years collecting the money and directing their providers to recruit FFS beneficiaries into Medicare Advantage. When they’ve gotten what they need to get out of the program they’ll leave. Or, if they want to try it, they’ll stay a year, they’ll do poorly, and then they’ll leave. That’s my prediction.

Within the structure of ACOs, some include care facilities while others do not. When comparing them, there is some degree of overlap in performance and one is not necessarily better than the other. “Over time the margins start to plateau and diminish, and some of that is dependent on the technicalities of how [ACOs’] financial targets are set by CMS and by other payers,” says Dr Pham. “If you reset the benchmark each year ... such that the baseline that [ACOs] are compared to is always how much they spent the previous year, then you can see why margins start to diminish over time. Some

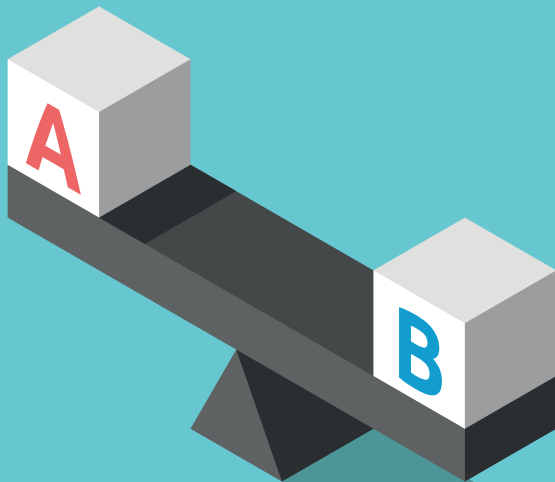
programs will give back some of those savings that the ACO generates and feed it back into the baseline so that it's not a complete reset each time. Nevertheless, over time, it gets harder and harder to find those savings. Also ACOs are finding that payers are constantly pushing them to go from upside-only risk, meaning they only get shared savings but they share none of the downside risk, to two-sided models. That is another point at which you start to see drop-offs in participation. Some of that is from lack of confidence."

Data could help to reduce costs and hospital admissions.⁸² Therefore, actionable data is a must to allow ACOs to track, analyze and accurately report information.⁸⁴ Innovation in data dashboards, management software, data storage infrastructure and other technologies is necessary to reap the benefits of an ACO model.⁸⁴ As a result, the increased dependency on digital technologies will require expansion of training key stakeholders to contribute to the

sustainability of the data ecosystem and further investment to acquire, improve and expand current systems.^{94,95}

As the health burden evolves in the years ahead as a result of demographic change, this highlights the need to address the shortcomings of current payment models. Population aging could lead to more pressure for reimbursement models for technologies like telemedicine. "Older adults are growing in number by leaps and bounds. We know that by 2034 for the first time in the history of the world, older adults will outnumber children," says Melissa O'Connor, professor in community and home health nursing at the Villanova University College of Nursing.⁹⁶ Dr O'Connor expects patient-centered medical homes to increase in importance alongside the rising burden on health systems due to the aging population, but also sees the need to reimburse modalities like telemedicine, which proved their worth and value during the pandemic.

Conclusion: a new model for US healthcare payments

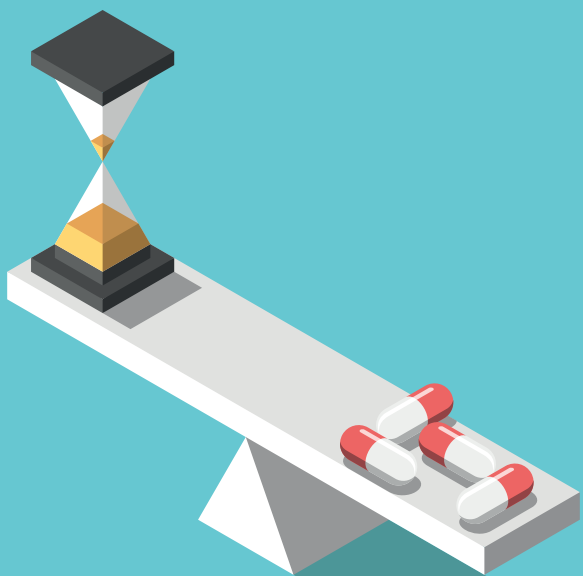


The US spends the most on health per capita among its peers but has among the most inefficient and unfair health systems in terms of access, equity and administrative efficiency. The US has scored in the top ten countries in only one out of three domains for the Economist Impact's Health Inclusivity Index.

There is not a single solution, and one model should not prevail. Well-performing health systems across the OECD have a variety of payment approaches. The key is for health stakeholders to work together to balance access, equity and financial sustainability. This conclusion highlights key themes and considerations for productive US payments reform going forward.

There is not one perfect model, and change requires close engagement of all stakeholders to design the right system.

Fragmentation is a recurring problem affecting FFS and APM models, leading to poor coordination, inferior care and high costs. It increases complexity and incentivizes gaming of systems. Coordination requires stakeholders to work together to design a more integrated approach. Dr O'Connor believes a multidisciplinary, multisector movement can facilitate a transition from FFS. "It will take a seismic, innovative shift," she says. "We need innovative leaders of all disciplines, cultures, backgrounds to be working on this problem. Not just men and women, but [people from] different cultural and ethnic backgrounds, as well as disciplines—not just physicians, not just nurses, we need physical therapists, occupational health therapists, social workers and home health aides". Dr Tummalapalli notes that administrators and physicians also need to work in alignment to ensure that physicians buy into any new payment system that requires them to change workflows or processes. This approach could also help all sector participants to take a



more holistic view of waste and inefficiency in the system as a whole rather than only viewing it from their vantage point.

Although systemic change means greater collaboration, it does not equate to moving to a single approach. “Other rich democracies have, through different structures, learned to pay hospitals and doctors in ways that balance the books financially and clinically,” argues Dr Sager. “Pursuing one model is the wrong approach. The challenge is for payers and caregivers to negotiate a financial arrangement they can both live with. That entails political bargaining and a commitment to find a way to put the money behind us so we can get on with the job of spending it carefully and taking care of sick people.”

The status quo does not incentivize data-sharing, and APMs will need advancements in technical knowledge and tools to drive an IT evolution that ensures efficiency.

Volume-based reimbursement models do not incentivize sharing of data and electronic health information across the healthcare system, such as between hospitals and post-acute care. APMs, by rewarding providers for improving quality and cost-efficiency of care, could in theory tackle this problem, as data is necessary to track performance and realize gains.

However, APMs face data challenges including lack of common standards, poor usability, flawed data security and misaligned incentives.⁹⁸ P4P, for instance, requires high-quality micro-level data on patient care at an unprecedented scale, requiring the integration of currently siloed systems alongside improvements in data collection. Payment and data lag must also be addressed; the longer the gap between performance data and payment, the higher the likelihood of risk-aversion among care providers and the harder it is to act on performance data given the churn of patients and medical staff. Medical professionals need training to utilize new data entry and reporting systems.

ACOs, meanwhile, require calculations of average expected cost for care, in turn requiring historical cost data to establish prospective benchmarks in conjunction with key quality indicators. Data collection and reporting can lead to high levels of administrative complexity as ACOs find ways to accurately collect, process, analyze and report information across different providers and facilities. Innovation in data dashboards, management software, data storage infrastructure and other technologies are necessary to meet all the expectations of an ACO model.

Broadly, IT systems need greater interoperability of relevant software and systems to provide data repositories needed for optimal financial allocations and reimbursement. Health actors should also avoid overly customized

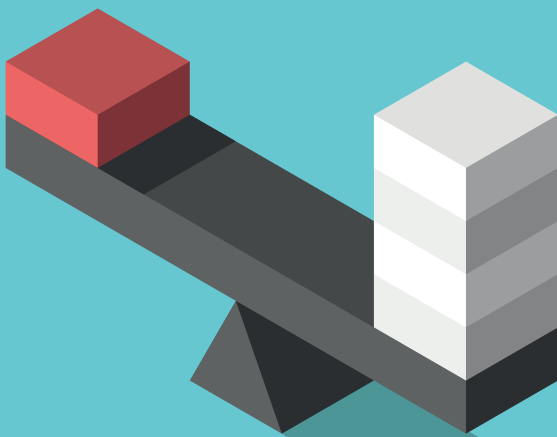
IT solutions that create barriers to participation and increase the burden on providers.

Promising trends towards a well-functioning data ecosystem include the evolution of the US Core Data for Interoperability towards common representations of data.⁹⁹ The Fast Healthcare Interoperability Resources standard and the Trusted Exchange Framework and Common Agreement are other areas of progress. “The bottom line is we have to aim for our models to use standards whenever possible and I think we’re moving in that direction,” says Dr Fowler. Another promising implication of APMs is that some can incentivize the adoption of better health information technology systems. Dr Tummalapalli observes that dashboards and quality reports are useful in value-based care to allow physicians to take a population health approach, rather than solely looking at patients as individuals. Although informatics tools like registries and dashboards require upfront time and investment, they may generate cost savings in the longer term. A term coined over 15 years ago to represent a new healthcare delivery model, value-based care creates incentives to save costs, and it encourages the time and investment involved in tools like registries and dashboards.

All payment models need to tackle inequality through more sophisticated risk adjustments.

Owing to the financial disincentive, FFS is biased against disadvantaged patients because they are more likely to require lower-margin services such as primary care or support for chronic conditions like diabetes.² In theory, APMs should reduce health inequality where, for instance, higher-cost patients present the greatest opportunity to achieve savings through better care, as in the case of modifiable conditions like hypertension. In reality, neither APMs nor VBPs are designed to eliminate or mitigate health disparities.¹⁰⁰ The focus on value can, perversely, incentivize providers to avoid serving disadvantaged populations who are more likely to have poor treatment outcomes.² There are also incentives that lead to excessive patient coding to add comorbidities to a patient to maximize the cost of care offered. “[There are] health systems that see more socially vulnerable individuals score worse on value-based performance metrics, and we are seeing the same pattern across all programs,” says Dr Tummalapalli. This sets off a vicious cycle where penalized providers cannot increase their resources to offer better services owing to their fiscal constraints. Investment, not penalties, is needed in safety-net systems. Yet such systems should not be held to a lower standard through the use of performance adjustments. Conversely, this challenge reinforces the importance of using financial models to incentivize service improvements.

Without adequate risk-adjustment controls, providers with a larger share of disadvantaged patients are penalized by VBP-based models. Addressing





the social determinants of health requires more time with patients, more partnerships in society and changing care processes. As Dr Pham points out, these are all expensive and the structured payments that are required are lacking.

Innovations in risk-adjustment mechanisms could ensure that APM and VBP approaches are more equitable. Possible solutions could include 1) stratifying performance across race, ethnicity and/or socioeconomic status, 2) comparing similar providers to each other and 3) employing metrics that incentivize providers to narrow disparities. “CMS is increasingly designing metrics with equity as a core tenet. I think this guiding principle is going to proliferate,” predicts Dr Tummalapalli. The Hospital Readmissions Reduction Program was among the first to explore this using stratified benchmarks.

Value itself also needs to be redefined to set the right benchmark for high quality care, says Dr O’Connor. “Some might define value as keeping someone at home and not having a readmission within 30 days, but is that really the best we can do for this country, is that all we’re aiming for? As a nurse and a clinician, I would say no, we need to do right by our citizens of the United States. To me, we’re not valuing the right things.”

Appendix 1: Methodology

Our research team designed and deployed a comprehensive research program to answer the question: What is the next frontier in US healthcare payment models? To do so, our research scope explored

1. APMs in the US
2. Challenges, opportunities and success with different models
3. Market trends and future projections
4. Patient and provider impact through APMs

Our mixed-methods qualitative methodology consisted of an evidence review stemming from a list of predetermined Medical Subject Headings (MeSH) (and its respective variations) conducted in various scientific databases and search engines, as described below.

Databases and search engines		
Medline via OVID	Trip Medical Database	National Institute of Health
EMBASE via OVID	Google Scholar	Health and Human Services
Web of Science	World Health Organization	Congressional Budget Office
Cochrane Library	Science.gov database	National Academy of Sciences

In addition to searching scientific databases, our team conducted a gray literature search to retrieve policies, guidelines and targeted information that were not uncovered by previously selected methods to investigate the current status of APMs. Our inclusion criteria included academic studies and gray literature published in the English language since 2012 focusing on payment innovations in the US. In contrast, our exclusion criteria included studies, reports, data, gray literature, and other sources not published in the English language before 2012. Finally, to supplement gaps in literature and to identify current market trends, our team identified leading experts from respected institutions. Expert interviews were individually conducted and content analyzed to supplement information gathered from the evidence review.

Appendix 2: Patient examples

To illustrate the impact of different payment models on patients and providers, Economist Impact has created two hypothetical scenarios comparing experiences and outcomes across traditional and alternative payment models.



Table 7: Impact on patient, hypothetical patient example 1 of 4

Impact on patient: traditional fee-for-service payment model			
Patient characteristics:		Patient characteristics:	
Name	Jose Garcia	Name	Sophia Miller
Sex	Male	Sex	Female
Age	55	Age	64
Race/ethnicity	Latino	Race/ethnicity	White
Health status	Diabetes, osteoarthritis	Health status	Stage I breast cancer, hypertension
<p>Jose is worried about his health and wants to get his type 1 diabetes under control. One of the most significant challenges for Jose is that he does not have ample resources to pay for medications or spend time in medical appointments. However, as he seeks care, he needs ongoing assistance with glucometer reading, periodic blood work and regular follow-ups with his provider. Jose is also confused about his nutrition and does not understand the importance of taking his insulin. Jose has a high co-pay for every medical appointment, blood draw and medical intervention. Charges are adding up and he is worried that he might need to cut back on insulin if costs become too expensive.</p> <p>In addition to his diabetes, Jose has been feeling a lot of pain even when resting his knee. After paying for imaging, his doctor recommends he gets knee replacement surgery. Jose worries that besides paying for the surgery, his bills will increase as he will need pre- and postoperative care, additional medications and, potentially, physical therapy. Jose had a previous negative experience where he felt that he was being charged for a duplicate test. He is also concerned because he will need to keep repeating his medical history and see new specialists throughout his healing journey.</p>		<p>Sophia was recently diagnosed with stage I breast cancer. She is worried that her cancer might progress, so she is taking a proactive approach to get as much care as possible. With the referral of her primary care provider, Sophia is seeing an oncologist who provided an aggressive treatment program through chemotherapy, radiation therapy, drug therapy and surgery. Sophia is also seeing a counselor to help her manage the stress of treatment. Sophia is upset with her treatment program because it seems that medical professionals are not communicating with each other about her treatment, leading to duplicated testing. If additional and unexpected costs appear, she is worried she will not have enough financial resources to continue with her treatment.</p> <p>Sophia is also trying to keep her blood pressure under control. Her recent diagnosis of breast cancer is causing significant mental health distress, and as a consequence, she forgets to take her hypertension medication. However, her medication is still not bringing down her blood pressure. Since she recently moved to a new health system, she struggles to transfer all her medical history so her provider can change the medication. The stress of the growing medical bills is increasing, causing her blood pressure to climb.</p>	

Table 8: Impact on patient, hypothetical patient example 2 of 4

Impact on patient: alternative payment models			
Patient characteristics:		Patient characteristics:	
Name	Jose Garcia	Name	Sophia Miller
Sex	Male	Sex	Female
Age	55	Age	64
Race/ethnicity	Latino	Race/ethnicity	White
Health status	Diabetes, osteoarthritis	Health status	Stage I breast cancer, hypertension
<p>Jose is worried about his health and wants to get his type 1 diabetes under control. He is following a preventive health program that he understands. He is happy to see that his primary care doctor and nutritionist are incentivized to help him with the preventative health program and have been working closely to help him lose weight and ensure that his diet does not exacerbate his glucose levels. His primary care doctor is very helpful in ensuring that Jose understands the importance of nutrition, exercise and medication adherence as measures to control his diabetes and avoid any further complications. He sees improvements in his health, and he has reduced the number of visits to his outpatient clinic.</p> <p>Jose will need knee replacement surgery, but he clearly understands the cost of the entire program, from pre- to postoperative care. He knows that he will not need to worry about hidden costs or any unexpected expenses from unneeded treatment. He appreciates the efficiency that his medical team coordinates among themselves and sees a clear path for recovery.</p>		<p>Sophia has recently been diagnosed with stage one breast cancer. She heard positive feedback from other patients about the convenience of care from her provider, primarily due to the clear line of communication with patients and care coordination. She is confident that her medical team will take good care of her. She is happy that her primary care doctor, oncologist, and counselor are communicating regularly to ensure she is on track for recovery. She feels that she truly understands the need for each treatment and intervention.</p> <p>Sophia has also been trying to keep her blood pressure under control. Her doctor, counselor and nutritionist have been working closely together to ensure that she is following a healthy diet, exercising and keeping her stress low. Her medical team is keeping a close eye on her blood pressure levels as she is going through treatment for breast cancer.</p>	

Table 9: Impact on provider, hypothetical patient example 3 of 4

Impact on provider: traditional fee-for-service payment model			
Patient characteristics:		Patient characteristics:	
Name	Jose Garcia	Name	Sophia Miller
Sex	Male	Sex	Female
Age	55	Age	64
Race/ethnicity	Latino	Race/ethnicity	White
Health status	Diabetes, osteoarthritis	Health status	Stage I breast cancer, hypertension
<p>Jose's provider has been treating him for type 1 diabetes. During treatment, his provider ensures that Jose is taken care of, which results in additional appointments to check his glucose levels, follow up on his insulin, as well as answer any questions Jose may have. Jose's provider knows that he will get paid for every time that Jose visits his office. Since his clinic faced financial hardship during covid-19, he knows that he will need to recuperate his financial loss through additional appointments.</p> <p>Jose also needs knee replacement surgery. After surgery, Jose's primary care provider followed up with Jose and noticed that he had not started physical therapy yet. He informs Jose that he needs to start physical therapy for a speedy recovery.</p>		<p>As Sophia begins her treatments, her oncologist has been trying to communicate with her primary care doctor to better understand the additional medical complications for which she is being treated. After finally reaching her PCP, the oncologist discovered the PCP did not recommend that Sophia seek mental health support during her treatment. This explains why Sophia has been worried and reserved during their consultations. Sophia's oncologist recommends that she find a counselor, but does not follow up with the mental health counselor to make sure that Sophia is receiving the proper support. Sophia feels that she is not truly being understood by her oncologist, but she does not know how to approach this problem. She is concerned about her treatment, but the feelings that she expressed to her PCP were not communicated to her oncologist. In addition to Sophia having to pay every time she is treated, her medical team is not incentivized to coordinate care, leading to more burden on her. Her PCP may also add additional codes to receive additional payments.</p>	

Table 10: Impact on provider, hypothetical patient example 4 of 4

Impact on provider: alternative payment models			
Patient characteristics:		Patient characteristics:	
Name	Jose Garcia	Name	Sophia Miller
Sex	Male	Sex	Female
Age	55	Age	64
Race/ethnicity	Latino	Race/ethnicity	White
Health status	Diabetes, osteoarthritis	Health status	Stage I breast cancer, hypertension
<p>Jose's provider knows that they will earn a bonus by making sure that Jose is healthy and hitting key performance metrics. To make sure that they can see more patients, Jose's provider wants to take a preventive approach to Jose's treatment plan. The provider wants to make sure that Jose is taking medication and that his glucose levels are within normal range. The provider will work closely with Jose's nutritionist to ensure that they can develop a diet and exercise program that meets his needs, taking into consideration the need for low-impact activities owing to his recovery from knee replacement surgery. During his time in the hospital for surgery, the hospital is very keen on ensuring that Jose has a successful surgery without any complications. They want to ensure Jose is sent home to recover without overstaying as an admitted patient. In addition, they keep track of Jose as he gets surgery and coordinate with the physical therapist to make sure that Jose is recovering and does not have any postoperative complications. Overall, the efficiency and effectiveness of treatment caused by coordination and financial incentives have reduced the complications caused by Jose's diabetes and knee replacement surgery. He is on the path to recovery.</p>		<p>Sophia's medical team wants to make sure that she can control her hypertension while ensuring a successful treatment program for breast cancer. Her primary care provider is in continuous communication with her oncologist and counselor. Her team wants to ensure that they are attaining performance metrics, such as making sure that she is receiving the correct treatment at the right time. Care coordination has also helped Sophia to navigate her appointments and expected at-home treatments. She understands the importance of each treatment and adhering to her medication. She feels confident in her team and her stress is greatly reduced. Sophia's counselor supports her as she continues on her journey of healing, but her team is confident that she will be a success story.</p>	

Appendix 3: US payment models landscape

Table 11: Payment models landscape

Fee-for-service	
Characteristic	
<ul style="list-style-type: none"> • Payment for each unit of care 	
Pros	Cons
<ul style="list-style-type: none"> • Well-established fee schedules • Fewer restrictions on the quantity of patient visits 	<ul style="list-style-type: none"> • High financial cost to the system • Minimal financial risk for providers • Low incentives for quality • Low incentives for efficiency • Minimal incentives for care coordination • Increase in volume of unnecessary care
Bundled (episode-based) payments	
Characteristic	
<ul style="list-style-type: none"> • Sum of individuals unit costs of care into one payment for an episode of care 	
Example	
<ul style="list-style-type: none"> • The Comprehensive Care for Joint Replacement Model designed for patients undergoing lower-extremity joint replacements 	
Pros	Cons
<ul style="list-style-type: none"> • Higher efficiency than FFS • Incentivizes lower cost of care • Incentive for higher quality • Clearer upfront costs (prospective payments) • Incentive for hospitals to establish stronger relationships with providers • Risk-adjusted payment options 	<ul style="list-style-type: none"> • High financial risk for providers • Incentives for avoiding high-risk patients • Incentives for increasing volume of services • Favors common procedures • Limited evidence for chronic conditions • Shift costs in separately paid portions of overall care

Global payments (capitation)

Characteristic

- Payment based on a predetermined roster of patients

Example

- Health maintenance organization (HMO)

Pros

- Waste and inefficiency reduction
- Focus on preventive care
- Predictable payments for patients and providers
- Simpler administration
- Encourages innovation in care delivery outside of the office
- Flexibility in balancing budget
- Community over individual management

Cons

- Shift in the health profile of population can impact payments
- Optimizing cost over quality
- HMOs may limit patient access to providers and facilities outside of their network

Pay for performance (value-based payments/purchasing)

Characteristic

- An attached financial incentive or disincentive to a payment model based on a provider's performance.

Example

- Hospital Readmissions Reduction Program

Pros

- Greater focus on quality over quantity
- More transparency
- No need to alter payment model structure
- Develop strategic targets
- Greater visibility offered by micro-level data

Cons

- Administrative complexity
- May not reflect community need
- Limited impact on patient outcomes
- Challenges with socioeconomically disadvantaged populations
- Data lag
- Delayed payments
- Gaming the system through cherry-picking and other methods

Accountable care organizations

Characteristic

- “Groups of clinicians, hospitals and other health care providers who come together voluntarily to give coordinated, high-quality care a designated group of patients.”⁸⁵

Example

- Kaiser Permanente

Pros

- Care coordination
- Focus on quality
- Technology integration
- Patient-centric care
- Waste reduction
- Shared decision-making

Cons

- High administrative complexity
- Restrictions from non-ACO referrals
- Decrease of physician autonomy
- Incentivizes volume
- Risk of coding intensity

Source: Economist Impact

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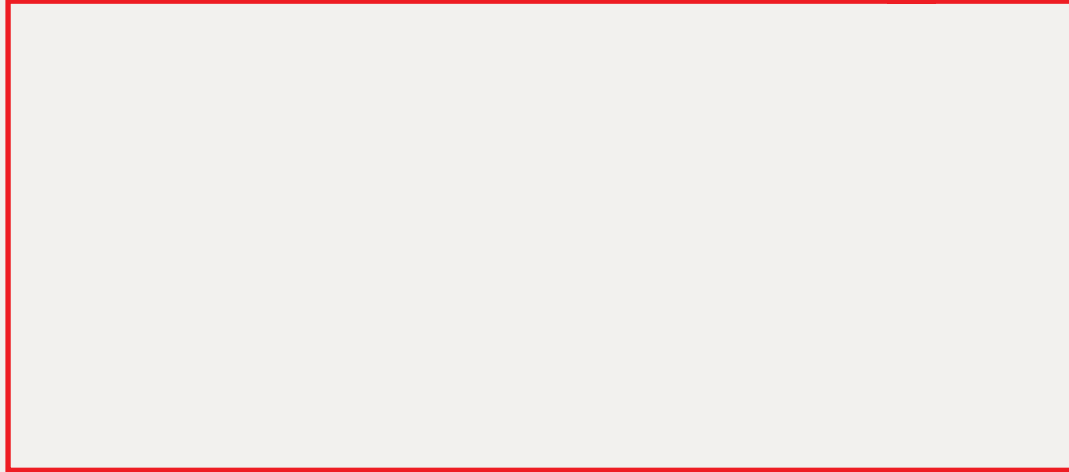
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