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## **Executive summary**

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Recent studies show that the U.S. health care system is not buying enough recommended care and is buying too much unnecessary care, much of it at very high prices, resulting in a system that costs significantly more per capita than in any other country. These facts strongly indicate that our health care system is not delivering value for its stakeholders. As a major payer, the Medicare program shares in these problems.

For decades, researchers have documented the wide variation across the United States in Medicare spending and rates of service use. For example, they find that rates of use for certain kinds of care, referred to as supply-sensitive services (i.e., likely driven by a geographic area's supply of specialists and technology), differ greatly from one region to another. The higher rates of use are often not associated with better outcomes or quality and instead suggest inefficiencies. One recent analysis shows that, at the state level, no relationship exists between health care spending per capita and mortality amenable to medical care, that an inverse relationship exists between spending and rankings on quality of care, and that spending is highly correlated with both preventable hospitalizations and hospitalizations for ambulatory-care-sensitive conditions. These findings point to inefficient spending patterns that result in poor value for our health care dollars. At the same time, they point to opportunities for improvement.

If current spending and utilization trends continue, the Medicare program is fiscally unsustainable. The share of the nation's gross domestic product committed to Medicare is projected to grow to unprecedented levels, squeezing other priorities in the federal budget. In addition, expenditures from the Hospital Insurance (HI) trust fund, which funds inpatient stays and other post-acute care, exceeded its annual income from taxes in 2008. In their most recent report, the Medicare trustees project that the assets of the HI trust fund will be exhausted in 2017. Rapid growth in Medicare spending has implications for beneficiaries as well as taxpayers. Between 2000 and 2007, Medicare beneficiaries faced average annual increases in the Part B premium of nearly 9.8 percent. Monthly Social Security benefits grew by about 4 percent annually over the same period.

Costs are high and increasing at an unsustainable rate in part because the health care delivery system we see today

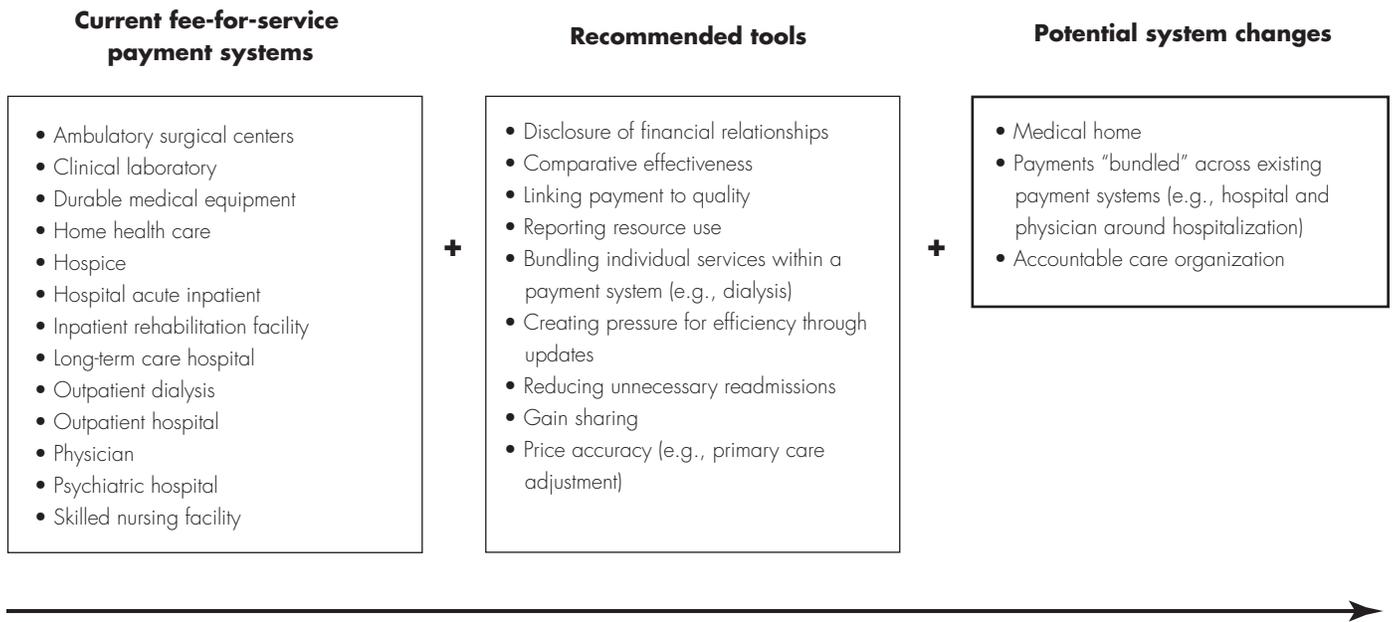
is not a true system: Care coordination is rare, specialist care is favored over primary care, and quality of care is often poor. Part of the problem is that Medicare's fee-for-service (FFS) payment systems reward more care—and more complex care—without regard to the quality or value of that care. In addition, Medicare's payment systems create separate payment “silos” (e.g., inpatient hospitals, physicians, post-acute care providers) and do not encourage coordination among providers within a silo or across silos. Medicare must address those limitations—creating new payment methods that reward higher quality, promote efficient use of limited resources, and encourage effective integration of care.

In previous reports, the Commission has recommended that Medicare adopt tools for increasing efficiency and improving quality within the current Medicare payment systems, including: encouraging the use of comparative-effectiveness information, linking payment to quality (pay for performance), measuring resource use and providing feedback, and improving payment accuracy within Medicare payment systems. However, the structure of the current FFS payment systems and the current payment silos limit the benefit of these tools.

To increase value for beneficiaries and taxpayers, the Medicare program must overcome the limitations of its current payment systems. A reformed system would pay for care that spans across provider types and time (encompassing multiple patient visits and procedures) and would hold providers accountable for the quality of that care and the resources they use to provide it. Our current view on this evolution is illustrated in Figure ES-1. This direction would create payment system incentives for providers that reward value and encourage closer provider integration, which in turn would maximize the potential of tools such as pay for performance and resource measurement to improve quality and efficiency.

In this report, the Commission discusses a number of issues and challenges for Medicare payment and delivery system reform. The issues range broadly but focus on how incentives in the current Medicare payment systems could be changed to reward value not volume.

We discuss paths to promote delivery system reform. First, we examine how medical education could be structured to better support the future needs of the Medicare program



for physicians trained in multidisciplinary teamwork and other skills aligned with the objectives of delivery system reform. We further develop the concept of accountable care organizations and how they could promote care coordination and delivery system organization and thereby higher quality and lower cost growth. We explore applying physician resource use measurement and how it might slow the rate of cost growth. We also examine two issues mandated in recent law: improving the care management of beneficiaries with chronic conditions, which will be essential for Medicare sustainability going forward, and using payment reforms to the Medicare Advantage program to encourage efficient, high-quality plans that would introduce innovative delivery systems into Medicare.

In addition we look ahead at the long-run challenge of controlling growth in spending for biologics, consider how to improve the benefit design of traditional Medicare to make cost sharing a tool for increasing value, and provide information on the extent to which self-referral increases spending on imaging.

Medicare ensures that the elderly and disabled have good access to high-quality medically necessary care. In

doing so, the program also must make sure the resources entrusted to the program by taxpayers and beneficiaries are used wisely. Without change, the Medicare program is fiscally unsustainable over the long term. Moderating projected spending trends requires fundamental reforms in payment and delivery systems to improve quality, coordinate care, and reduce cost growth.

**Medical education in the United States: Supporting long-term delivery system reforms**

Medicare is the largest financial supporter of graduate medical education, spending an estimated \$9 billion in 2008. Despite this spending, a number of reports and articles have expressed concern that our health professionals are not learning certain skills necessary to work optimally in delivery systems that provide the kinds of care that will best serve the public’s needs. Reforming medical education will be a key component to transforming the nation’s health care delivery system from one that historically has focused on care for acute illness to one that values patient-centered care, quality improvement, and resource conservation. Our medical schools and residency training programs need to emphasize a set of skills and knowledge that will

equip students and residents to practice and lead under reformed payment incentives.

Although medical education encompasses a variety of professionals, in Chapter 1 we focus on physicians. In a study of internal medicine residency programs, we found that formal curricula are not well aligned with objectives of delivery system reform. Although most programs provide at least some training in selected topics essential for delivery reform (e.g., care coordination across settings), overall, their curricula fall far short of the instruction recommended by the Institute of Medicine and other experts.

Of particular concern is the relative lack of formal training and experience in multidisciplinary teamwork, cost awareness in clinical decision making, comprehensive health information technology, and patient care in ambulatory settings. Residency experience in nonhospital and community-based settings is important because most of the medical conditions that practicing physicians confront should be managed in nonhospital settings. However, inherent financial incentives and Medicare regulations strongly encourage teaching hospitals to confine their residents' learning experiences to within the hospital.

Future Commission work on medical education policy issues may include exploring ways to link delivery system reforms to medical education incentives and structuring medical education subsidies to produce the optimal balance of generalists and specialists. Another issue to examine is enlisting all payers to contribute explicitly to medical education.

### **Accountable care organizations**

In Chapter 2, we define an accountable care organization (ACO) as a set of providers held responsible for the quality and cost of health care for a population of Medicare beneficiaries. An ACO could consist of primary care physicians, specialists, and at least one hospital. It could be formed from an integrated delivery system, a physician-hospital organization, or an academic medical center. If the ACO achieves both quality and cost targets, its members receive a bonus. If it fails to meet both quality and cost targets, its members could face lower Medicare payments. Ideally, these financial incentives would lead the ACO to judiciously constrain the use of health care services and capacity in contrast to the incentive in FFS payment systems to always increase the volume of services.

Chapter 2 provides an overview of the ACO model. For ACOs to successfully improve quality while constraining cost growth:

- Spending targets for an ACO should be set in advance. Targets could be based on the ACO's past experience plus a single national allowance for spending growth per capita. Alternatively, the allowance could be set as a function of prior utilization trends, with low-service-use areas receiving a higher allowance, and high-use areas receiving a lower allowance (which would provide a greater incentive to control utilization).
- ACOs would have to be fairly large (at least 5,000 patients) to make it possible to distinguish actual improvement from random variation.
- ACOs would need a formal organization and structure that allows them to make joint decisions, because savings would primarily result from the joint incentive to change overall practice patterns and eventually constrain capacity.
- Private insurers may have to provide ACO-type incentives, because a large share of the patients in a practice would need to be in an ACO to overcome FFS incentives to expand capacity and volume.

We discuss two variations on the ACO model, one in which providers volunteer to form an ACO and one in which participation is mandatory. In a voluntary, bonus-only ACO model, ACOs receive bonuses for meeting cost and quality targets. FFS rates will likely have to be constrained for Medicare to fund those bonuses at a sufficient level to change provider behavior without increasing its overall spending because of random variation. Under a mandatory, bonus-and-withhold model, bonuses could be funded by shared savings and by penalizing providers who fail to meet cost and quality targets.

### **Physician resource use measurement**

In 2005, the Commission recommended that Medicare measure physician resource use and share the results with physicians in a confidential manner to address variation in physician practice patterns and Medicare's unsustainable rate of spending growth. The Congress enacted the Commission's recommendation in the Medicare Improvements for Patients and Providers Act of 2008 (MIPPA), and CMS has begun a phased implementation of the program.

The Commission has proposed several policy principles to guide Medicare’s physician resource use measurement program. These principles include adopting a methodology for measuring resource use that is transparent to all physicians under observation, ensuring that physicians are able to actively modify their behavior on the basis of the feedback provided, risk adjusting clinical data to ensure fair comparisons among physicians, and obtaining ongoing feedback from the physician community on CMS’s measurement methods and other aspects of the program.

In Chapter 3 we examine several technical aspects of measuring physician resource use. We find a high degree of stability in physicians’ efficiency scores over time, suggesting that the episode grouper software identifies outlier physicians consistently across years. We also find that various methods for attributing episodes to physicians have both advantages and drawbacks, suggesting that CMS may want to consider more than one attribution method when its physician resource use measurement program is fully implemented.

### **Impact of physician self-referral on use of imaging services within an episode**

The Commission recognizes that there has been rapid technological progress in diagnostic imaging over the past several years, which has enabled physicians to diagnose and treat illness with greater speed and precision. Between 2002 and 2007, the volume per beneficiary of imaging services paid under the physician fee schedule grew nearly twice as fast as all physician services. Although the rate of growth slowed in 2007, there are reasons to be concerned that some of the increased use in recent years may not be appropriate, which contributes to Medicare’s growing financial burden on taxpayers and beneficiaries. First, the Government Accountability Office found an almost eightfold variation in per beneficiary spending on in-office imaging services across the states. Second, there is evidence that costly imaging services are mispriced under the physician fee schedule, thereby creating financial incentives to provide more imaging. Rapid growth in imaging may also be driven by technological innovation, defensive medicine, inconsistent adherence to clinical guidelines, an increase in imaging performed in physician offices, and other factors.

Although increased in-office imaging may improve access and convenience for patients, it might also lead to higher volume through additional capacity and financial incentives for physicians to refer patients for more tests. Several studies have found that physicians who furnish

imaging services in their offices refer patients for more tests than other physicians. In Chapter 4, we expand upon earlier research by analyzing whether physician self-referral is related to higher use of imaging by type of clinical episode. We find that:

- A higher proportion of episodes with a self-referring physician received at least one imaging service than episodes with no self-referring physician.
- Episodes with a self-referring physician have higher ratios of observed-to-expected imaging spending than episodes with no self-referring physician (the ratios control for variations in beneficiaries’ clinical condition and disease severity, market area, and physician specialty).

We also investigated whether greater use of imaging within an episode is associated with higher or lower total episode spending. Although in specific cases an imaging study may substitute for other services, our findings suggest that greater use of imaging (and specific types of imaging) is associated with greater overall resource use during an episode, adjusting for type of episode, patient severity, and other factors.

### **Medicare payment systems and follow-on biologics**

Medicare spending on biologics—drug products derived from living organisms—was about \$13 billion in 2007. The top six biologics account for 43 percent of spending on separately billed drugs in Medicare Part B. Biologics account for a relatively small—but rapidly growing—share of Part D spending. Currently, the Food and Drug Administration (FDA) does not have an approval process for follow-on versions of most biologics, and the price of these products has not fallen over time. The Congressional Budget Office estimates that an expedited approval process for follow-on biologics (FOBs) could save the federal government \$9 billion to \$12 billion over the next 10 years. Much of that savings would accrue to Medicare.

Medicare spending on biologics is substantial and is expected to grow significantly. Therefore, the establishment of a process to approve FOBs has important implications for Medicare. In Chapter 5, we summarize key issues that are being discussed as policymakers and stakeholders consider the potential establishment of a regulatory pathway for FOBs. FDA would have jurisdiction over approval of FOBs. However, as a large payer for biologics, Medicare has a strong incentive to ensure that it gets value for the money it spends on these products.

Establishment of a regulatory approval process for FOBs is necessary to provide more competition among biologics and generate cost savings. The amount of savings would also depend in part on how biologics are treated under the Medicare payment systems. In Chapter 5, we discuss coding and payment strategies that could be pursued to ensure that Medicare Part B realizes the maximum benefit from competition between FOBs and innovator biologics. The Part D benefit would also need to be restructured to take advantage of the potential savings offered by FOBs. While Medicare Part D should achieve savings on FOBs for older biologics, the current benefit structure is likely to limit savings for newer products.

An approval process for FOBs can create the opportunity for competition among manufacturers of biologics and, combined with payment system changes, will lead to savings for Medicare. However, given the magnitude and growth of spending for drugs, policymakers may want to look at other ways for Medicare to achieve savings. To help improve the value of Medicare spending, we discuss three pricing strategies:

- *Reference pricing:* Set a drug's payment rate no higher than that for currently available treatments unless evidence shows that the drug improves beneficiaries' outcomes.
- *Payment for results:* Link a drug's payment to beneficiaries' outcomes through risk-sharing agreements with manufacturers.
- *Bundling:* Create payment bundles for groups of clinically associated products and service.

### **Improving traditional Medicare's benefit design**

FFS Medicare does not protect beneficiaries against catastrophic levels of out-of-pocket spending. Medicare's significant cost-sharing requirements and its lack of catastrophic protection have been important catalysts behind the widespread use of supplemental coverage. Yet coverage that fills in most or all of Medicare's cost sharing can lead to higher use of services and Medicare spending, and its prevalence prevents Medicare from being able to use cost sharing as a policy tool. Chapter 6 explores these issues.

We find that Medicare spending for beneficiaries with supplemental insurance tends to be higher than for those without such coverage. We also find that beneficiary spending for premiums and cost sharing varies as a function of supplemental coverage. Beneficiaries with high

health care costs and no supplemental coverage generally spend a larger share of their incomes on health care than those with supplemental coverage.

In the future, cost sharing could be used as a tool to complement various policy goals such as: improving financial protection for Medicare beneficiaries and distributing cost-sharing liability more equitably among individuals with differing levels of health care costs, encouraging use of high-value services and discouraging use of low-value ones, and reinforcing payment system reforms that seek better value for health care expenditures. An additional goal may be to improve Medicare's financial sustainability. Steps toward each of the goals would be more effective if Medicare's deductibles and coinsurance were changed at the same time that the role of supplemental coverage were redefined.

### **Medicare Improvements for Patients and Providers Act of 2008 Medicare Advantage payment report**

The Commission supports private plans in the Medicare program and the innovative delivery systems and care management techniques they potentially can bring to beneficiaries. But plans will innovate only if Medicare Advantage (MA) payment benchmark rates encourage them to do so; currently, benchmarks are set higher than FFS spending. Paying more than FFS is unfair to taxpayers and beneficiaries not enrolled in MA plans who subsidize those payments. We estimate that in 2009 Medicare is paying about \$12 billion more for the beneficiaries enrolled in MA plans than it would have spent if they were in FFS Medicare and that the Part B premium is increased by about \$3.00 a month for all beneficiaries, whether or not they are enrolled in an MA plan. Encouraging efficient plans is a key step. Plans that can provide the basic Medicare benefit more efficiently than FFS Medicare can by definition provide extra benefits yet be financially neutral to FFS Medicare. They can then compete with each other on quality and benefits and provide meaningful choices for beneficiaries.

Section 169 of MIPPA requires a Commission study and report on the MA payment system and alternatives to it. Our findings are presented in Chapter 7. We analyze four options for setting MA payment benchmarks administratively—all financially neutral to FFS Medicare in the first year. We also report a modification to those options that differentiates payment for extra benefits between higher and lower use areas. This modification would help balance extra benefits among areas and

thus help mitigate some of the concerns about equity under the new options. Another alternative is setting benchmarks through a competitive bidding process. We present the fundamental decisions that would have to be made when designing a competitive bidding system and outline some possible ways that plans might respond. To further improve quality, we also discuss how plans could be paid for higher quality through the transition to new benchmarks.

Finally, we address two technical points in response to the mandate. First, we find that, for the most part, CMS's estimates of county-level spending in traditional FFS Medicare are reasonably accurate and plan payments include the appropriate level of administrative costs. However, further work remains on determining the effect of beneficiaries' use of Department of Defense facilities on county-level FFS spending estimates (CMS has not found a material effect from use of Department of Veterans Affairs facilities). To increase the reliability of FFS estimates, the size of the payment areas used in the MA program should be increased as the Commission has previously recommended. Second, we find that MA plan costs to deliver Part A and Part B benefits (as reflected in plan bids) and county-level per capita spending under FFS Medicare are highly correlated.

### **Improving Medicare chronic care demonstration programs: Section 150 of the Medicare Improvements for Patients and Providers Act of 2008 report**

There is a need for better ways to manage care for beneficiaries with multiple chronic conditions. A recent analysis by the Congressional Budget Office estimated that in 2001 the costliest 25 percent of Medicare beneficiaries accounted for 85 percent of total Medicare spending and that more than 75 percent of these high-cost beneficiaries had one or more of seven major chronic conditions. Section 150 of MIPPA directs the Commission to study the results of two of the largest Medicare chronic care coordination demonstration and pilot programs and advise the Congress on the feasibility of establishing a "Medicare chronic care practice research network" as another approach to testing new models of care coordination for beneficiaries with multiple chronic conditions. Our findings are presented in Chapter 8.

The Congress and CMS have initiated a number of demonstration and pilot programs to test different approaches to improve care coordination for Medicare

beneficiaries. Results suggest that some of these programs may have modest effects on the quality of care and mixed impacts on Medicare costs, with most programs increasing Medicare costs overall.

We have reviewed a specific proposal from a group of 12 organizations called the Medicare Chronic Care Practice Research Network (MCCPRN). The network would be financed by Medicare and its purpose would be to develop, implement, and evaluate the effects of evidence-based chronic care interventions. On the basis of our review, the Commission has several concerns about the submitted proposal, including the following:

- The initial group of network sites would not be competitively selected through a transparent public process, which could set an undesirable precedent for future proposals.
- The fees paid to network sites for their care coordination interventions would not be at risk for Medicare costs (or savings) attributable to the network's interventions.
- The role of CMS in selecting research projects and administering the network may not be prominent enough to ensure accountability for the Medicare funds spent on the network's activities.
- The proposed network could duplicate some of the existing financial and administrative resources the Agency for Healthcare Research and Quality currently devotes to its two practice- and delivery-system-based research networks.

While the Commission has concerns about the specific MCCPRN proposal, we very much share the concerns the proposal is trying to address. We must act expeditiously to find innovative ways to change the misaligned cost and quality incentives in the health care delivery system that result in high costs of treating beneficiaries with chronic medical conditions, with little emphasis on coordination of care that could lead to improved outcomes. The results of our review also suggest larger issues with the structure and funding of research and development in Medicare. Funding levels for Medicare research activities are low relative to the overall size of the program, CMS often has externally imposed constraints on redirecting research funding as program needs and priorities shift, and administrative process requirements are time-consuming. Medicare needs to be able to conduct demonstrations and implementation

in a rapid cycle to make fundamental payment system reforms. CMS will need the resources to do so.

### **Review of CMS's preliminary estimate of the physician update for 2010**

In CMS's annual letter to the Commission on the update for physician services, the agency's preliminary estimate of the 2010 update is a reduction of 21.5 percent. In Appendix A, we provide our required technical review of CMS's estimate.

The reduction is a combination of three factors. The first factor is the Medicare Economic Index, which CMS is estimating to be 1.0 percent. That estimate could change slightly. The second factor is the expiration of temporary bonuses enacted over several years; this factor will not change. (The bonuses were overrides of negative payment updates for 2007, 2008, and 2009 under the sustainable growth rate formula.) The third factor is the update adjustment of -7.0 percent for 2010, which is very unlikely to change. The combination of the three factors is thus unlikely to differ substantially from CMS's preliminary estimate of -21.5 percent. ■

