

**Option 46****Create Incentives in Medicare for the Adoption of Health Information Technology**

(MILLIONS OF DOLLARS)	2010	2011	2012	2013	2014	Total	
						2010-2014	2010-2019
<b>5 Percent Bonus for Adoption, Primary Care Physicians Only</b>							
Change in Mandatory Spending	0	60	100	110	110	380	1,170
Change in Revenues <sup>a</sup>	<u>0</u>	<u>*</u>	<u>*</u>	<u>5</u>	<u>5</u>	<u>10</u>	<u>75</u>
<b>Net Effect on the Deficit</b>		<b>60</b>	<b>100</b>	<b>105</b>	<b>105</b>	<b>370</b>	<b>1,095</b>
<b>2 Percent Bonus for Adoption, All Participating Physicians</b>							
Change in Mandatory Spending	0	50	70	80	90	290	880
Change in Revenues <sup>a</sup>	<u>0</u>	<u>*</u>	<u>*</u>	<u>*</u>	<u>5</u>	<u>5</u>	<u>55</u>
<b>Net Effect on the Deficit</b>	<b>0</b>	<b>50</b>	<b>70</b>	<b>80</b>	<b>85</b>	<b>285</b>	<b>825</b>
<b>5 Percent Penalties for Nonadoption, All Participating Physicians</b>							
Change in Mandatory Spending	0	0	0	-20	-40	-60	-4,620
Change in Revenues <sup>a</sup>	<u>0</u>	<u>0</u>	<u>0</u>	<u>*</u>	<u>5</u>	<u>5</u>	<u>130</u>
<b>Net Effect on the Deficit</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>-20</b>	<b>-45</b>	<b>-65</b>	<b>-4,750</b>
<b>Combined Penalties and Bonuses, All Participating Physicians</b>							
Change in Mandatory Spending	0	50	70	80	70	270	-4,240
Change in Revenues <sup>a</sup>	<u>0</u>	<u>*</u>	<u>*</u>	<u>5</u>	<u>10</u>	<u>15</u>	<u>160</u>
<b>Net Effect on the Deficit</b>	<b>0</b>	<b>50</b>	<b>70</b>	<b>75</b>	<b>60</b>	<b>255</b>	<b>-4,400</b>

Note: \* = less than \$5 million.

a. Some of those estimated revenues would come from Social Security payroll taxes and so would be classified as off-budget.

By helping health care providers manage information, health information technology (health IT) has the potential to significantly improve providers' efficiency and the quality of care they offer. Ultimately, such improvements could reduce costs and improve health care outcomes. Health IT refers to information technology applications specifically designed for the practice of clinical medicine, including electronic health records (EHRs), personal health records, health information exchange, computerized physician order entry, clinical decision support systems, and electronic prescribing.

Proponents of health IT have argued that adopting it on a nationwide basis could result in significant reductions in health care spending. Those reductions would be realized by, among other things, reducing the number of inappropriate tests and procedures, reducing paperwork and administrative overhead, and decreasing the number of

adverse events resulting from medical errors. Health IT could also improve the quality of care provided to patients by improving the information available to clinicians at the time of treatment, by encouraging the use of evidence-based medicine, and by helping physicians manage patients with complex, chronic conditions. Conversely, the savings associated with health IT could be offset by improved adherence to treatment protocols, which could increase the amount of care provided.

In spite of such advantages, few physicians have adopted health IT; only about 5 percent have adopted comprehensive systems, according to a recent survey.<sup>1</sup> In response to the low rate of adoption, the federal govern-

1. Catherine M. DesRoches and others, "Electronic Health Records in Ambulatory Care—A National Survey of Physicians," *New England Journal of Medicine*, vol. 359, no. 1 (July 3, 2008), pp. 50–60.

ment has undertaken several different efforts to encourage providers to use health IT, including recognizing an EHR certification process; setting standards for interoperability (enabling different health IT systems to communicate with each other); providing grants and loans for providers to purchase the technology; and, through the Medicare program, offering financial incentives that both reward adoption and penalize nonadoption. Barriers to the adoption of health IT still remain, however—primarily financial ones. High-quality systems can cost \$20,000 to \$25,000 per physician, not including implementation and annual maintenance costs. Overall, startup costs can exceed \$40,000 per physician. Currently, large group practices find health IT the most attractive, and the Congressional Budget Office expects that they will continue to have the highest adoption rates over the 2010–2019 period. CBO projects that under current law, about 40 percent of physicians will have adopted health IT systems by 2019, with near-universal adoption anticipated over the next quarter century. Health IT initiatives could affect the degree of health care spending by speeding the adoption of such technologies; however, any such effects would diminish in later years, when the use of health IT was more pervasive.

This option would create an incentive program through Medicare to increase providers' use of health IT. The option comprises four alternatives that have several common features. To meet the requirements for any of the incentive programs, the provider would have to first purchase a "qualifying electronic health record" system with a standard package of functionalities. (Those capabilities would include, for example, clinical notes with medical history and follow-up, computerized physician order entry for diagnostic and other services, electronic prescribing, management of diagnostic testing results, and clinical decision support.) The product would have to be certified by the Certification Commission for Healthcare Information Technology (CCHIT) as having met the current-year requirements for interoperability.<sup>2</sup> Each incentive mechanism considered here would have a potentially different effect on adoption and a different budgetary impact. Although adoption would be encouraged through Medicare's payment incentives, all health

2. CCHIT is the only organization recognized by the Department of Health and Human Services as qualified to certify the capabilities of health IT products. More information is available at [www.cchit.org](http://www.cchit.org).

care spending—both public and private—would be affected by the increased use of health IT.

The mechanisms considered here through which the adoption of health IT could be accelerated are as follows:

- **Bonuses for Primary Care Physicians.** Under this alternative, CMS would pay participating primary care physicians that use a qualifying health IT system a bonus of 5 percent on top of the amount it would otherwise pay for an office visit by a Medicare beneficiary. (The bonus calculations would not apply to fees for injections, X-rays, or any other services that are provided in an office setting but billed separately from the office visit itself.) By the end of the 10-year budget window, CBO estimates, this alternative would increase the share of primary care physicians who adopted electronic health record systems by 12 percentage points over the adoption rate projected under current law (and would increase by 5 percent the share of all physicians adopting health IT). The net cost of this option over the 2010–2014 period would be an estimated \$370 million (including increases in spending for bonus payments, decreases in spending resulting from reduced utilization of services, and increases in federal revenues because of the reduction in private health insurance premiums); the net cost over the 2010–2019 period would be \$1.1 billion.
- **Bonuses to Support Adoption.** Under this alternative, CMS would pay all participating physicians that used a qualifying health IT system a bonus of 2 percent on top of the amount it would otherwise pay for each office visit. (The bonus calculations would not apply to other services that were provided in an office setting but billed separately from the office visit itself.) By the end of the 2010–2019 period, CBO estimates, this alternative would lead an additional 5 percent of all participating physicians to adopt electronic health record systems. The net cost of this alternative would be an estimated \$285 million over the 2010–2014 period and \$825 million over the 2010–2019 period.
- **Penalties for Nonadoption.** Under this alternative, CMS would penalize physicians who participated in the Medicare program but did not use a qualifying health IT system, beginning 5 years after the policy was enacted. The penalty would be implemented by reducing payments for office visits by 5 percent. (The penalty calculations would not apply to other services

that are provided in an office setting but billed separately.) In CBO's estimation, this alternative would spur an additional 14 percent of all participating physicians to adopt electronic health record systems compared with the number who would adopt them under current law. The net savings of this option would be an estimated \$65 million over the 2010–2014 period and \$4.8 billion over the 2010–2019 period.

- 5** ■ **Combined Penalties and Bonuses.** Under this alternative, CMS would pay all participating physicians that used a qualifying health IT system a bonus of 2 percent on top of the amount it would otherwise have paid for an office visit during the first five years following the alternative's implementation; during the next five-year period, physicians that did not use a qualifying health IT system would be assessed a 5 percent penalty. By the end of the 10-year period from 2010 to 2019, by CBO's estimates, this alternative would lead an additional 15 percent of all participating physicians to adopt electronic health record systems compared with the number projected under current law. The net cost of this alternative over the 2010–2014 period would be an estimated \$255 million, and the net savings over the 2010–2019 period would be an estimated \$4.4 billion. This alternative would produce somewhat fewer savings than would the penalty-only approach. Although adoption of health IT would be slightly greater, the savings in efficiency and utilization from that additional increment of adoption would be offset by the loss of penalty payments.

Creating incentives to adopt health IT would produce savings by increasing the efficiency with which care is delivered and by reducing the utilization of unnecessary services. However, the magnitude of those savings would

be overshadowed by the impact of the bonuses and penalties. Options that relied solely on bonuses to boost adoption would produce net costs, not savings. Options that used penalties would produce net savings—but primarily because of the application of the penalties. A key reason for that outcome is the lack of financial incentives for providers to control utilization and deliver health care efficiently. For example, in the fee-for-service component of Medicare, providers are paid for each service they provide. There is no benefit to them from eliminating unnecessary care, and, in fact, doing so causes them financial harm. That basic incentive problem is not affected by whether or not a provider uses a health IT system.

Each of the incentive mechanisms described above would have different advantages. Encouraging greater adoption of health IT through the use of penalties would result in the lowest federal expenditures, although most of the savings would come from reducing physicians' payment rates rather than from changes in the utilization of services. But providers would have to bear the full cost of adopting the technology, and many providers have not adopted health IT because the cost of doing so is greater than the potential savings in lower office costs or increased revenues. Bonuses, in contrast, would shift much of the cost of adoption to the government, with the net effect being an increase in expenditures. The combination of bonuses and penalties would strike the middle ground between the two extremes. Directing larger bonuses to primary care physicians might produce the greatest improvements in efficiency because such physicians may spend more time than do specialists in managing patient care. Moreover, because they are among the lowest paid of physicians, primary care providers may be least likely to adopt health IT without bonuses.

**Option 47****Require the Use of Health Information Technology as a Condition of Participation in Medicare**

(MILLIONS OF DOLLARS)	2010	2011	2012	2013	2014	Total	
						2010-2014	2010-2019
<b>Physicians</b>							
Change in Mandatory Spending	0	-60	-240	-490	-970	-1,760	-9,620
Change in Revenues <sup>a</sup>	<u>0</u>	<u>10</u>	<u>30</u>	<u>80</u>	<u>150</u>	<u>270</u>	<u>1,540</u>
<b>Net Effect on the Deficit</b>	<b>0</b>	<b>-70</b>	<b>-270</b>	<b>-570</b>	<b>-1,120</b>	<b>-2,030</b>	<b>-11,160</b>
<b>Hospitals</b>							
Change in Mandatory Spending	0	-280	-780	-1,210	-1,670	-3,940	-17,680
Change in Revenues <sup>a</sup>	<u>0</u>	<u>70</u>	<u>210</u>	<u>350</u>	<u>490</u>	<u>1,120</u>	<u>5,130</u>
<b>Net Effect on the Deficit</b>	<b>0</b>	<b>-350</b>	<b>-1,000</b>	<b>-1,560</b>	<b>-2,170</b>	<b>-5,080</b>	<b>-22,800</b>

a. Some of those estimated revenues would come from Social Security payroll taxes and so would be classified as off-budget.

To participate in the Medicare program, providers must meet certain requirements, such as holding licensed certification in their field of practice and agreeing not to bill Medicare beneficiaries for more than the amount specified under Medicare. The requirements are intended to ensure, among other things, that beneficiaries have access to health care services of a reasonable level of quality and at an appropriate price. Because of the positive effect that health information technology (health IT) is believed to have on the quality and efficiency of care, Medicare also could require that providers use electronic health record systems as a condition of participation.

This option would require that physicians and hospitals adopt and use health IT as a condition of participation in Medicare beginning in 2015. As described in related health IT options in this volume, to meet the requirements for participation in Medicare, the hospital or physician would have to purchase a “qualifying electronic health record” system with a standard package of capabilities. For physicians, the standard package would include, for example, clinical notes with medical history and follow-up, computerized physician order entry for diagnostic and other services, electronic prescribing, management of diagnostic testing results, and clinical decision support. For hospitals, the standard package would most likely include clinical systems for the major ancillary services (laboratory, pharmacy, and radiology), a clinical data repository, clinical documentation (including nurses’ and physicians’ notes), clinical decision support, and

computerized physician order entry. Products would have to be certified by the Certification Commission for Healthcare Information Technology (CCHIT) as having met the commission’s current-year requirements for interoperability.<sup>1</sup>

The Congressional Budget Office expects that, if implemented, this option would lead virtually all hospitals and physicians to adopt electronic health record systems. By reducing both administrative overhead and unnecessary utilization of services (including inappropriate tests and procedures) as well as adverse events resulting from preventable medical errors, the option, in CBO’s estimation, would produce savings in major federal health care financing programs, including both Medicare and Medicaid. Nearly universal adoption of health IT by physicians and hospitals would also lower health insurance premiums in the private sector, thereby shifting some compensation from tax-advantaged premiums to taxable wages and salaries. As a result, federal tax revenues would increase.

The new condition for participation in Medicare for physicians would reduce federal deficits by about \$2 billion over the 2010–2014 period and by \$11 billion over the 2010–2019 period. Applying the requirement to hospi-

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tals would reduce deficits by about \$5 billion over the 2010–2014 period and by \$23 billion over the 2010–2019 period. Those estimates include both reductions in expenditures for Medicare and Medicaid, arising from the reduced utilization of services, and increased federal revenues, resulting from the reduction in private health insurance premiums.

The savings included in the table reflect only those that would be achieved without any other change in federal law. Under Medicare's current payment rules, the only savings in Medicare's expenditures from the adoption of health IT would be from reducing some types of utilization, such as by reducing the probability of hospital admissions resulting from preventable adverse medical events. Health IT also helps hospitals reduce their internal operating costs by, among other things, improving nurses' productivity, lowering the cost of maintaining patients' medical charts, and reducing the utilization of unnecessary prescription drugs and diagnostic services. However, because Medicare pays for inpatient care on a per-admission basis, those savings would not result in lower expenditures for the Medicare program. Those savings would only be captured by reducing the annual updates to payment rates under the inpatient prospective payment system, which would require legislative action. If the updates were changed to reflect lower operating

costs for hospitals, the total savings related to the requirement that hospitals adopt health IT as a condition of Medicare participation would be \$14.0 billion over the 2010–2014 period and \$60.6 billion over the 2010–2019 period. Similarly, improvements in efficiency in physicians' offices would not accrue to Medicare unless physician payment updates were changed to take those lower operating costs for physicians into account. If those changes were made, total savings related to the requirement that physicians adopt health IT as a condition of participation in Medicare would be \$2.7 billion over the 2010–2014 period and \$14.3 billion over the 2010–2019 period.

An advantage of this option is that the expanded use of health IT would be likely to improve both the quality of health care services and health outcomes, perhaps markedly so. A disadvantage of this option is that it would impose a large cost on providers. In particular, many small practices would be hard-pressed to find the financial resources to purchase a health IT system. In addition, implementing this option would create a surge in demand for health IT systems, thereby bidding up the price of IT specialists and of the systems themselves. Thus, this option could create a strong incentive for providers to favor low-cost health IT systems over high-quality systems.