United States Government Accountability Office

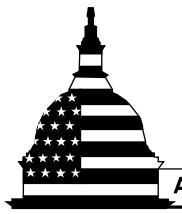
GAO

Report to Congressional Committees

April 2012

ELECTRONIC HEALTH RECORDS

First Year of CMS's Incentive Programs Shows Opportunities to Improve Processes to Verify Providers Met Requirements



G A O

Accountability * Integrity * Reliability

GAO-12-481

April 2012

ELECTRONIC HEALTH RECORDS

First Year of CMS's Incentive Programs Shows Opportunities to Improve Processes to Verify Providers Met Requirements

GAO Accountability * Integrity * Reliability

Highlights

Highlights of GAO-12-481, a report to congressional committees

Why GAO Did This Study

The Health Information Technology for Economic and Clinical Health (HITECH) Act established the Medicare and Medicaid electronic health records (EHR) programs. CMS and the states administer these programs which began in 2011 to promote the meaningful use of EHR technology through incentive payments paid to certain providers—that is, hospitals and health care professionals. Spending for the programs is estimated to total $30 billion from 2011 through 2019. Consistent with the HITECH Act, GAO (1) examined efforts by CMS and the states to verify whether providers qualify to receive EHR incentive payments and (2) examined information reported to CMS by providers to demonstrate meaningful use in the first year of the Medicare EHR program. GAO reviewed applicable statutes, regulations, and guidance; interviewed officials from CMS; interviewed officials from four states, which were judgmentally selected to obtain variation among multiple factors; and analyzed data from CMS and other sources.

What GAO Recommends

GAO is making four recommendations to CMS in order to improve processes to verify whether providers met program requirements for the Medicare and Medicaid EHR programs, including opportunities for efficiencies. HHS agreed with three of GAO's recommendations, but disagreed with the fourth recommendation that CMS offer to collect certain information on states' behalf. GAO continues to believe that this action is an important step to yield potential cost savings.

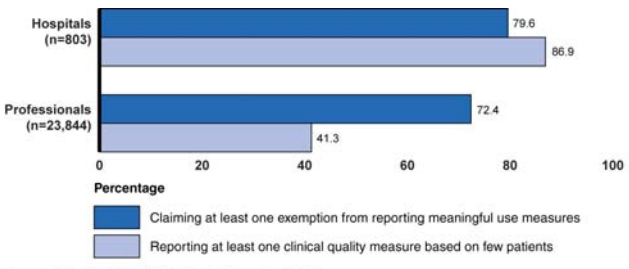
View GAO-12-481. For more information, contact Linda Kohn at (202) 512-7114 or kohnl@gao.gov.

What GAO Found

The Centers for Medicare and Medicaid Services (CMS), an agency within the Department of Health and Human Services (HHS), and the four states GAO reviewed are implementing processes to verify whether providers met the Medicare and Medicaid EHR programs' requirements and, therefore, qualified to receive incentive payments in the first year of the EHR programs. To receive such payments, providers must meet both (1) eligibility requirements that specify the types of providers eligible to participate in the programs and (2) reporting requirements that specify the information providers must report to CMS or the states, including measures that demonstrate meaningful use of an EHR system and measures of clinical quality. For the Medicare EHR program, CMS has implemented prepayment processes to verify whether providers have met all of the eligibility requirements and one of the reporting requirements. Beginning in 2012, the agency also has plans to implement a risk-based audit strategy to verify on a postpayment basis that a sample of providers met the remaining reporting requirements. For the Medicaid EHR Program, the four states GAO reviewed have implemented primarily prepayment processes to verify whether providers met all eligibility requirements. To verify the reporting requirement, all four states implemented prepayment processes, postpayment processes, or both. CMS officials stated that the agency intends to evaluate how effectively its Medicare EHR program audit strategy reduces the risk of improper EHR incentive payments, though the agency has not yet established corresponding timelines for doing this work. Such an evaluation could help CMS determine whether it should revise its verification processes by, for example, implementing additional prepayment processes, which GAO has shown may reduce the risk of improper payments. In addition, CMS has opportunities to improve the efficiency of verification processes by, for example, collecting certain data on states' behalf.

CMS allows providers to exempt themselves from reporting certain measures if providers report that the measures are not relevant to their patients or practices. Measures calculated based on few patients may be statistically unreliable, which limits their usefulness as tools for quality improvement. CMS and others acknowledged that the availability of measures that are relevant to providers' patients and practices and are statistically reliable is important to provide useful information to providers. Among participants in the first year of the Medicare EHR program, the majority of providers chose to exempt themselves from reporting on at least one meaningful use measure and many providers reported at least one clinical quality measure based on few—less than seven—patients.

Information on measures reported by first year participants



Source: GAO analysis of CMS data through December 9, 2011.

Contents

Tables

Figures

Abbreviations

CMS	Centers for Medicare & Medicaid Services
EHR	electronic health record
HHS	Department of Health and Human Services
HITECH Act	Health Information Technology for Economic and Clinical Health
OIG	Office of Inspector General
ONC	Office of the National Coordinator for Health Information Technology
Recovery Act	American Recovery and Reinvestment Act of 2009

GAO
Accountability * Integrity * Reliability

United States Government Accountability Office
Washington, DC 20548

April 30, 2012

Congressional Committees

Widespread use of health information technology, such as electronic health records (EHR), has the potential to improve the quality of care patients receive and reduce health care costs. Historically, patient health information has been scattered across paper records kept by many different providers in many different locations. When this occurs, health care professionals may lack ready access to critical information needed to make the most informed decisions on treatment options, potentially putting the patient's health at risk or leading to inappropriate or duplicative tests and procedures that increase health care spending. To help address these issues, EHRs can be used, for example, to electronically collect, store, retrieve, and transfer clinical information related to patients' care, allowing ready access to this information by multiple providers in different locations. Despite the potential benefits, studies have estimated that as of 2009, 78 percent of office-based physicians and 91 percent of hospitals had not adopted EHRs.[1]

The Health Information Technology for Economic and Clinical Health (HITECH) Act, enacted as part of the American Recovery and Reinvestment Act of 2009 (Recovery Act),[2] among other things, provided funding for various activities intended to promote the adoption and

[1]The following studies surveyed office-based physicians or hospitals' health information technology staff to determine the percentage that had adopted EHR systems: C.J. Hsiao, E. Hing, T.C. Socey, and B. Cai, "Electronic Medical Record/Electronic Health Record Systems of Office-Based Physicians: United States, 2009 and Preliminary 2010 State Estimates," *National Center for Health Statistics Health E-stat* (2010); and A.K. Jha, C.M. DesRoches, P.D. Kralovec, and M.S. Joshi, "A Progress Report On Electronic Health Records In U.S. Hospitals," *Health Affairs*, no.10 (2010):1951-1957.

[2]The HITECH Act was enacted as title XIII of division A and title IV of division B of the Recovery Act. Pub. L. No. 111-5, div. A, tit. XIII, 123 Stat. 115, 226-279 and div. B, tit. IV, 123 Stat. 115, 467-497 (Feb. 17, 2009).

meaningful use of certified EHR technology.[3] The largest of these activities, in terms of potential federal expenditures, are the Medicare and Medicaid EHR programs.[4] These programs aim to increase the meaningful use of EHR technology by providing incentive payments and, later, penalties for providers—that is, certain hospitals and professionals, such as physicians and nurse practitioners, who participate in Medicare or Medicaid.[5] To receive incentive payments under the EHR programs, providers must meet two types of requirements: (1) eligibility requirements that specify the types of providers eligible to participate in the programs and (2) reporting requirements that specify the information providers must report to the Centers for Medicare & Medicaid Services (CMS), an agency within HHS, or the states to demonstrate that they have adopted or meaningfully used the EHR technology.[6] For example, in 2011, Medicare professionals had to report 20 meaningful use measures

[3]Congress defined "meaningful use" in this context to mean that the user of health information technology demonstrates to the satisfaction of the Secretary of the Department of Health and Human Services (HHS) that the technology is certified and being used in a meaningful manner, that the technology is connected in a manner that provides for the electronic exchange of health information to improve the quality of health care, and that such information is submitted in a form and manner specified by the Secretary. See Pub. L. No. 111-5, § 4101(a) 123 Stat. 467-472. Certified EHR technology is technology that meets certain certification criteria established by HHS's Office of the National Coordinator for Health Information Technology (ONC). The certification criteria describe the minimum related standards and implementation specifications.

[4]See Pub. L. No. 111-5, §§ 4101-4201, 123 Stat. 467-494. Medicare is a federal program financing health care for individuals aged 65 and older, certain disabled individuals, and individuals with end-stage renal disease. In 2010, Medicare covered 47 million beneficiaries. Medicaid is a federal-state program financing health care for certain low-income children, families, and individuals who are aged or disabled. In fiscal year 2009, Medicaid covered over 65 million beneficiaries.

[5]See Pub. L. No. 111-5, § 4101(a)-(b), 123 Stat. 467-473.Beginning in 2015, the Medicare EHR program is to begin applying a payment adjustment, referred to in this report as a penalty, for hospitals and professionals that do not meet the Medicare EHR program requirements. The Medicaid EHR program does not impose penalties on Medicaid providers that do not meet the Medicaid EHR program's requirements by a specific date; however, if Medicaid providers also treat Medicare patients, they are required to meet the Medicare EHR program's requirements from 2015 onward to avoid penalties from the Medicare EHR program.

[6]In February 2012, CMS announced a proposed rule that would set out the next steps and criteria for providers participating in the Medicare and Medicaid EHR programs. Among other things, this proposed rule would revise certain reporting requirements that may take effect as early as 2013. See CMS, "Medicare and Medicaid Programs; Electronic Health Record Incentive Program—Stage 2" downloaded from http://www.ofr.gov/ofrupload/ofrdata/2012-0043_PI.pdf on February 24, 2012.

to CMS which encompass a variety of activities related to the delivery of health care and encourage providers to consistently capture information in their EHR systems, such as patient demographics and clinical conditions. In contrast, during the first year professionals participate in the Medicaid EHR program, they need only report having adopted, implemented, or upgraded to a certified EHR system. However, in subsequent years, Medicaid professionals will have to report on meaningful use measures.

The Congressional Budget Office estimated total spending for the Medicare and Medicaid EHR programs to be $30 billion from 2011, the year incentive payments began, through 2019.[7] Partial-year estimates for the 2011 program year show that 42,897 providers received approximately $3.1 billion in Medicare and Medicaid EHR incentive payments.[8] CMS is responsible for administering the Medicare EHR program. These responsibilities include ensuring providers meet program eligibility and reporting requirements, issuing payments, and ensuring the integrity of those payments. The states and U.S. insular areas are responsible for administering and overseeing the Medicaid EHR program, with additional oversight from and partial funding provided by CMS.[9]

[7]Congressional Budget Office, "Health Information Technology for Economic and Clinical Health Act" (Washington, D.C.: Jan. 21, 2009). This estimate includes spending estimates for bonuses and payment reductions from the penalties.

[8]Due to various reasons, such as the time needed to process providers' payments, at the time of our analysis, CMS and the states were still in the process of making payments to providers for the 2011 program year. Therefore, these totals reflect partial-year data and are expected to increase. See CMS, "Medicare and Medicaid EHR Incentive Program Payment and Registration Report, January 2012" downloaded from https://www.cms.gov/EHRIncentivePrograms/56_DataAndReports.asp on February 19, 2012. In the comments HHS provided on our draft report in April 2012, HHS reported that 57,765 professionals had attested to meaningful use. CMS projected that between 62,569 and 206,276 providers would receive Medicare or Medicaid EHR program incentive payments in 2011. See 75 Fed. Reg. 44548 – 44562 (July 28, 2010).

[9]CMS provides states 100 percent of the cost of incentive payments made to Medicaid providers and 90 percent of the costs related to reasonable administrative expenses and planning activities related to the Medicaid EHR program. 42 U.S.C. § 1396b(a)(3)(F)(i) and (ii).

States are not required to offer the Medicaid EHR program, although CMS anticipates that the majority of states will eventually participate.[10]

The HITECH Act requires us to report on the effect, among other things, of its provisions on the adoption of EHRs by providers.[11] As discussed with the committees of jurisdiction, our objectives for this report are to (1) examine efforts by CMS and the states to verify whether providers meet program requirements and can, therefore, receive incentive payments under the Medicare and Medicaid EHR programs; (2) examine information reported to CMS by providers to demonstrate meaningful use in the first year of the Medicare EHR program; and (3) describe providers' experiences during the first year of the Medicare and Medicaid EHR programs.[12]

To examine efforts by CMS and the states to verify whether providers met program requirements and qualify to receive incentive payments in 2011, we identified the eligibility and reporting requirements that providers must meet in order to receive incentive payments under the Medicare and Medicaid EHR programs.[13] To do this, we reviewed applicable statutes, regulations, and guidance. We also interviewed officials from CMS and four states (Iowa, Kentucky, Pennsylvania, and Texas) that we judgmentally selected to obtain more information about their specific efforts or processes used to verify whether providers met these eligibility

[10]According to a monthly report on CMS's website, through January 2012, 34 states issued incentive payments to providers that participated in the Medicaid EHR Program. The agency anticipates that 8 additional states will issue incentive payments for 2011.

[11]Pub.L. No. 111-5, § 13424(e), 123 Stat. 278-279.

[12]We also discussed with the committees of jurisdiction that we would report on, at a later date, the number and characteristics of providers that received incentive payments from CMS during the first year of the Medicare and Medicaid EHR programs.

[13]The HITECH Act created incentive programs for Medicare fee-for-service, Medicare Advantage, and Medicaid. Under the Medicare Advantage EHR program, Medicare Advantage Organizations—private companies that provide Medicare health insurance coverage to beneficiaries for hospital, physician, and other services—receive incentive payments for certain affiliated professionals and hospitals that meet program requirements. Pub. L. No. 111-5, § 4101(c), 123 Stat. 473-476. A review of the Medicare Advantage EHR program is outside the scope of this report. Throughout this report, we use the term Medicare EHR program to refer to the Medicare fee-for-service EHR program.

and reporting requirements.[14] In addition, we reviewed these states' State Medicaid Health Information Technology Plans, which describe how the states plan to implement and oversee their Medicaid EHR programs and which CMS is responsible for reviewing. We also reviewed an HHS Office of Inspector General (OIG) report, issued in July 2011, which describes the processes used and the challenges that selected states face in verifying whether providers meet the Medicaid EHR program's eligibility requirements.[15] Finally, as part of our review, we assessed the verification processes used by CMS and the four states in the context of federal standards for internal controls for risk assessment and control activities.[16] The internal control for risk assessment refers to an agency's identification, analysis, and management of relevant risks associated with achieving the agency's objectives, such as risks to program integrity. Control activities refer to an agency's ability to ensure that the policies and procedures that enforce management's directives—such as the processes used to verify that providers qualify to receive incentive payments—are carried out in an effective and efficient manner.

To examine the information reported to CMS by providers in the first year of the Medicare EHR program, we conducted several analyses of CMS's National Level Repository data from 2011.[17] Specifically, we analyzed the meaningful use and clinical quality measures providers reported to CMS through December 8, 2011, to demonstrate meaningful use under the Medicare EHR program. We analyzed the CMS data to identify

[14]From among the states that had started registering providers for their states' Medicaid EHR program as of June 6, 2011, we judgmentally selected these four states based on the variation in the following: geographic region, total state population, Medicaid enrollment as a percentage of state population, and whether the state had started making incentive payments as of May 31, 2011.

[15]HHS, OIG, "Early Review of States' Planned Medicaid Electronic Health Record Incentive Program Oversight," OEI-05-10-00080 (Washington, D.C.: July 15, 2011).The OIG selected 13 states because they had CMS-approved State Medicaid Health Information Technology Plans as of January 14, 2011, and were available for interviews at the time of OIG's review. The 4 states we reviewed were among those included in the OIG report.

[16]See GAO, *Standards for Internal Control in the Federal Government,* GAO/AIMD-00-21.3.1 (Washington, D.C.: November 1999) and GAO, *Internal Control Management and Evaluation Tool*, GAO-01-1008G (Washington, D.C.: August 2001).

[17]We analyzed data submitted by providers from April 18, 2011, the date CMS began collecting these data, through December 8, 2011.

- the extent to which providers claimed an exemption, as allowed under the program, from reporting certain meaningful use measures if, according to the providers, those measures were not relevant to their patient populations or clinical practices. The agency allows providers to claim exemptions from reporting certain meaningful use measures in 2011 to help ensure that providers with all types of patient populations and clinical practices could potentially demonstrate meaningful use;[18]

- the frequency with which providers reported meaningful use measures for which exemptions were allowed; and

- the extent to which providers had few patients—less than seven—who could be included in the calculation of at least one clinical quality measure.[19]

As part of our analysis, we also analyzed data from CMS and HHS' Health Resources and Services Administration to compare, among different types of providers, the percentage of providers that (1) reported an exemption from reporting certain meaningful use measures and (2) reported clinical quality measures based on few patients. To ensure the reliability of the various data we analyzed, we interviewed officials from CMS, reviewed relevant documentation, and conducted electronic testing to identify missing data and obvious errors. On the basis of these activities, we determined that the data we analyzed were sufficiently reliable for our analysis. In addition to conducting data analyses, we interviewed officials and reviewed documents from the following organizations to obtain information on measures providers were required to report to CMS to demonstrate meaningful use in 2011: the American Medical Association; the American Hospital Association; and the Health Information Technology Policy Committee and the Health Information Technology Standards Committee, both of which advise HHS's Office of

[18]See 75 Fed. Reg. 44328-44329 (July 28, 2010).

[19]Measures that capture a small number of patients may be unreliable measures of quality because relatively small changes in the number of patients who experienced the care processes or outcomes targeted by the measure can generate large shifts in the calculated percentage for the measure.

the National Coordinator for Health Information Technology (ONC) on a variety of health technology issues.[20]

To describe providers' experiences during the first year of the Medicare and Medicaid EHR programs, we interviewed six judgmentally selected providers (three professionals and three hospitals) about their experiences adopting and meaningfully using certified EHR technology in 2011.[21] To obtain additional information on providers' experiences participating in the Medicare and Medicaid EHR programs in 2011, we interviewed officials and reviewed documents from the following organizations: the American Medical Association; the American Hospital Association; and four judgmentally selected Regional Extension Centers.[22] The Regional Extension Center program was established by the HITECH Act and is administered by ONC to help some types of providers, such as those in rural areas, participate in CMS's EHR programs.[23] We also analyzed data reported as part of the Regional Extension Center program to identify the number of providers they helped participate in CMS's EHR programs. To ensure the reliability of the data we analyzed, we interviewed officials from ONC, reviewed relevant documentation, and conducted electronic testing to identify obvious errors. On the basis of these activities, we determined that the data we

[20]Both committees were established under the HITECH Act. The Health Information Technology Policy Committee is charged with making recommendations to ONC on a policy framework for the development and adoption of a nationwide health information infrastructure whereas the Health Information Technology Standards Committee is charged with making recommendations to ONC on standards, implementation specifications, and certification criteria for the electronic exchange and use of health information. Pub. L. No. 111-5, § 13101, 123 Stat. 228-242.

[21]We judgmentally selected these six providers in order to provide variation among the following: type of provider (hospital or professional), professional specialty (professionals only), whether the professional belonged to a group practice (professionals only), and geographic region. We selected these providers based on CMS data on providers that received incentive payments from the Medicare EHR program as of July 31, 2011.

[22]We judgmentally selected these four Regional Extension Centers in order to provide variation based on the following: total funding levels under the Regional Extension Center program, progress towards meeting the Regional Extension Center's goal for the number of professionals assisted, geographic region, and urban-rural population mixes.

[23]Pub. L. No 111-5 § 13101, 123 Stat. 246-250. We did not review all ONC or CMS efforts to educate providers about the Medicare and Medicaid EHR programs. For example, CMS created a website that provides various educational materials that we did not include in our review.

analyzed were sufficiently reliable for our analysis. Appendix I provides more information on our data analyses.

We conducted this performance audit from April 2011 through April 2012 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

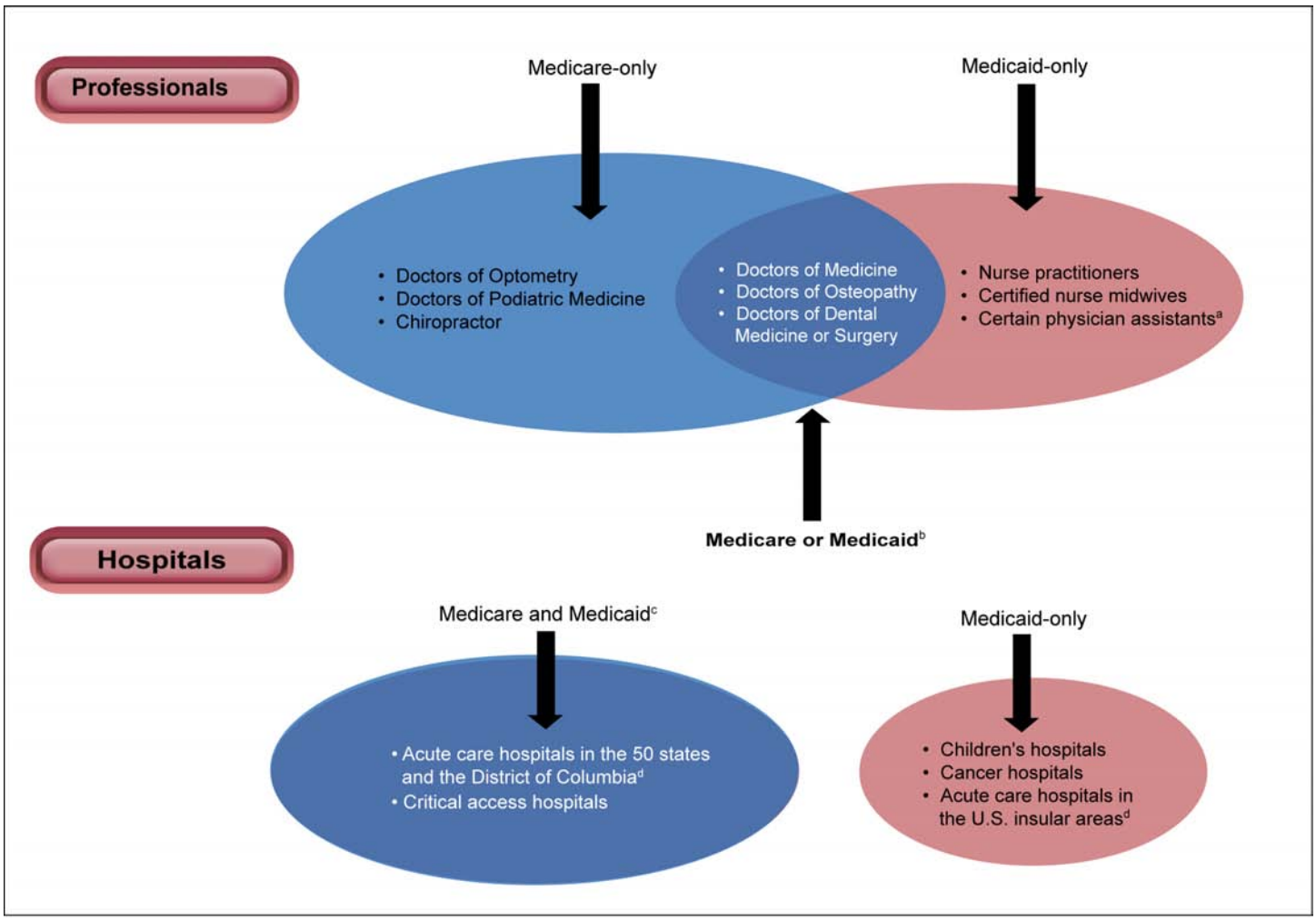
Background

Although the Medicare and Medicaid EHR programs are generally similar, there are some differences related to the types of providers that are permitted to participate, the duration and amount of incentive payments and penalties, and information providers must submit to satisfy the programs' requirements.

Permissible Providers

The types of providers eligible to participate in the Medicare and Medicaid EHR programs—referred to as permissible providers—differ. See figure 1 below.

Figure 1: Permissible Provider Types in the Medicare and Medicaid EHR Programs



Source: GAO analysis of CMS documents.

[a]Physician assistants are one of the permissible provider types if they also work in a federally qualified health center or rural health center that is led by a physician assistant.

[b]Professionals that are eligible to participate in both the Medicare and Medicaid EHR programs may only receive an incentive payment from one program per year.

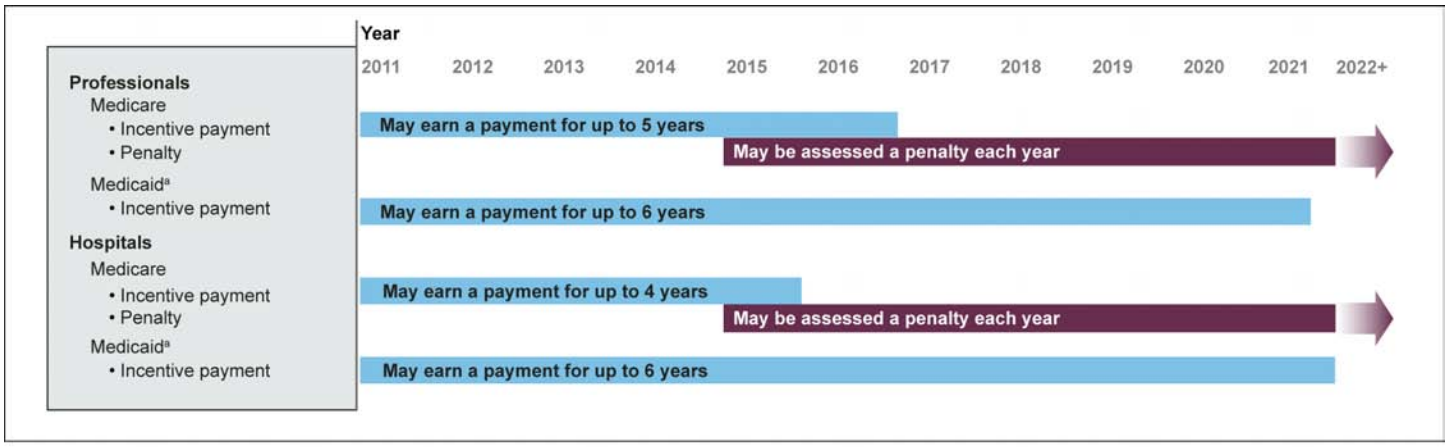
[c]In contrast to professionals, hospitals that are eligible to participate in both the Medicare and Medicaid EHR programs may receive an incentive payment from both programs in the same year.

[d]For the Medicare EHR program, acute care hospitals refer to hospitals described in Section 1886(d) of the Social Security Act, which are paid under the inpatient prospective payment system. For the Medicaid EHR program, acute care hospitals refer to hospitals with an average length of patient stay of 25 days or fewer with a CMS Certification Number that has the last four digits in the series 0001-0879 or 1300-1399 and excludes critical access hospitals and cancer hospitals.

Incentive Payments and Penalties

Beginning in 2011, the first year of the Medicare and Medicaid EHR programs, the programs have provided incentive payments to eligible providers that met program requirements. Beginning in 2015, the Medicare EHR program is generally required to begin applying a penalty for hospitals and professionals that do not meet the Medicare EHR program requirements. Figure 2 below provides information on the years that incentive payments are available and that penalties, if applicable, will be assessed for professionals and hospitals under the Medicare and Medicaid EHR programs.

Figure 2: Years in Which Incentive Payments Are Available and When Penalties Will be Assessed in the Medicare and Medicaid EHR Programs



Source: GAO analysis of the HITECH Act.

Note: Payment years are determined and awarded on a calendar year basis for professionals and on a fiscal year basis for hospitals. Professionals may not receive incentive payments under both the Medicare EHR program and the Medicaid EHR program during the same year; they must choose one of the two programs under which they will participate. In contrast, hospitals may qualify for incentive payments under both programs during the same year.

[a]The Medicaid EHR program does not impose penalties on Medicaid providers that do not meet the Medicaid EHR program's requirements by a specific date; however, if Medicaid providers also treat Medicare patients, they are required to meet the Medicare EHR program's requirements from 2015 onward to avoid penalties from the Medicare EHR program.

The amount of incentive payment varies depending on the type of provider (professionals or hospitals) and the program in which the provider participates (Medicare EHR program or Medicaid EHR program). For example, in the Medicare EHR program, professionals cannot earn more than $18,000 in incentive payments in their first year, and, over a 5-year period, payments cannot exceed a total of $44,000. In contrast, in the Medicaid EHR program, professionals cannot earn more than $21,250 in incentive payments in the first year and $8,500 during each of

5 subsequent years for a total of $63,750. (See app. II for more information on the amounts of incentive payments available under both programs and how the amounts are calculated.)

To receive incentive payments from either the Medicare or Medicaid EHR programs, providers must meet eligibility and reporting requirements.[24] To do so, providers report certain information to CMS, the states, or to both—a process referred to as "attestation"—by entering certain information into CMS's or the states' EHR program web-based attestation tools. Providers that, based on information submitted to CMS and the states, meet the requirements receive incentive payments. Some of the eligibility and reporting requirements for the Medicare EHR program differ from those in the Medicaid EHR program.

Medicare EHR Program Requirements

To receive Medicare EHR incentive payments in 2011, professionals had to meet three eligibility and three reporting requirements, while hospitals had to meet two eligibility and two reporting requirements. (See table 1.)

[24]CMS plans to make the requirements that providers must meet more robust over time. According to CMS, the current focus of the EHR programs includes electronically capturing health information in a structured format and tracking key clinical conditions.

Table 1: Medicare EHR Program's Eligibility and Reporting Requirements, 2011

Requirement	Professional	Hospital
Eligibility requirements		
Provider type		
Provider is a permissible provider type.	√	√
Professional is not hospital-based. *Professional cannot have performed 90 percent or more of his/her services in the prior year in hospital inpatient or emergency room settings*.	√	
Provider qualifications		
Provider is not excluded, sanctioned, or otherwise deemed ineligible to receive payments from the federal government.[a]	√	√
Reporting requirements		
Provider uses a certified EHR system.	√	√
At least 50 percent of a professional's patient encounters during the reporting period occurred at practice(s) or location(s) equipped with certified EHR technology.	√	
Provider demonstrates meaningful use. *Professionals must report 20 meaningful use measures*; *hospitals must report 19 such measures*.[b]	√	√

Source: GAO analysis of applicable CMS regulations and interviews with CMS officials.

Note: Providers attest to information submitted to CMS regarding the Medicare EHR program's eligibility requirements, which specify the types of providers eligible to participate in the program. To demonstrate that providers met the Medicare EHR program's reporting requirements, providers must report information to CMS to demonstrate that they have meaningfully used the certified EHR technology.

[a]Professionals may not receive incentive payments from both the Medicare and Medicaid EHR programs in the same year.

[b]One of the meaningful use measures requires professionals and hospitals to report clinical quality measures. The reporting period for the first year a provider demonstrates meaningful use is any 90 consecutive days during the year; for subsequent years, the reporting period is the full year.

One noteworthy reporting requirement for 2011 was that providers were required to demonstrate meaningful use of certified EHR technology by collecting and reporting information to CMS on various measures established by CMS. Specifically, in 2011, professionals had to report on a total of 20 meaningful use measures, and hospitals had to report on a

total of 19 meaningful use measures. This information had to be collected over 90 consecutive days during 2011.[25]

- *Professionals*. Of the 20 meaningful use measures for professionals, 15 are mandatory. Of those 15 mandatory measures, 6 measures allow professionals to claim exemptions—that is, they may report to CMS that those measures are not relevant to their patient populations or clinical practices.[26] One of the mandatory meaningful use measures—"report clinical quality measures to CMS"—requires professionals to report on at least 6 clinical quality measures identified by CMS.[27] Professionals have the flexibility to choose the remaining 5 meaningful use measures from a menu of 10 measures.

- *Hospitals*. Of the 19 meaningful use measures hospitals must report, 14 are mandatory. Of those 14 mandatory measures, 3 measures allow hospitals to claim exemptions. Similar to professionals, to satisfy the mandatory meaningful use measure "report clinical quality measures to CMS," hospitals must report on 15 clinical quality measures identified by CMS. Hospitals have the flexibility to choose the remaining 5 meaningful use measures from a menu of 10 measures.

See appendix III for a listing of the meaningful use measures and clinical quality measures for 2011.

[25]To receive incentive payments in 2011, providers must collect data related to the meaningful use measures and clinical quality measures in any 90 consecutive days during that year and report those data to CMS. To receive incentive payments in subsequent years, providers must collect data related to the meaningful use measures over a full year and report those data to CMS.

[26]In order to meet the definition of meaningful use, eligible professionals and hospitals must report on measures specified by CMS. An exclusion for a nonapplicable measure is permitted if the provider meets certain requirements specified in the regulation. 42 C.F.R. § 495.6. In this report we use the term "exemption" to refer to the exclusion of a nonapplicable measure.

[27]A clinical quality measure is a mechanism used for assessing the degree to which a provider competently and safely delivers clinical services that are appropriate for the patient in an optimal time frame. Professionals must report on 3 core clinical quality measures and 3 menu clinical quality measures from a list of 38 such measures. If professionals have zero patients that could be included in the calculation of any one of the core measures, they must report on up to 3 alternate core measures. In contrast to professionals, hospitals do not have the option of choosing which clinical quality measures they can report.

Medicaid EHR Program Requirements

To receive Medicaid EHR incentive payments during 2011, professionals had to meet seven eligibility requirements, hospitals had to meet six eligibility requirements, and both hospitals and professionals had to meet one reporting requirement. (See table 2.) Compared to the Medicare EHR program, the Medicaid EHR program requirements had two noteworthy differences in 2011.

- Providers had to meet a patient volume requirement.[28] This requirement was established to ensure that providers that receive incentive payments from the Medicaid EHR program serve a minimum volume of Medicaid patients, or, for certain professionals, a minimum volume of needy patients.[29] Specifically, professionals must have a Medicaid patient volume of at least 30 percent unless they are pediatricians or practice predominantly in a federally qualified health center or rural health center; hospitals generally must have a Medicaid patient volume of at least 10 percent.[30]

- Providers only had to adopt, implement, or upgrade to a certified EHR system in 2011 and did not have to demonstrate meaningful use during the first year they participate in the Medicaid EHR program. However, in subsequent years, they must demonstrate meaningful use.[31]

[28]No such patient volume requirement applies to the Medicare EHR program.

[29]Needy patients are defined by CMS as patients who are enrolled in Medicaid or the Children's Health Insurance Program, receive uncompensated care, or receive care at no cost or on a sliding scale determined by ability to pay.

[30]Pediatricians must have a Medicaid patient volume of at least 20 percent. Professionals who practice predominantly in a federally qualified health center or rural health center must have a needy patient volume of at least 30 percent. To be considered as practicing predominantly in a federally qualified health center or rural health center, a professional must treat over 50 percent of his or her total patient volume over a period of 6 months in a federally qualified health center or rural health center. Hospitals must have a Medicaid patient volume of at least 10 percent, except for children's hospitals, which do not have a patient volume requirement.

[31]In general, the meaningful use criteria for the Medicare and Medicaid EHR programs are identical. CMS is allowing states to require Medicaid providers to report additional information related to public health and data registries as a condition for receiving incentive payments.

Table 2: Medicaid EHR Program's Eligibility and Reporting Requirements, 2011

Requirement	Professional	Hospital
Eligibility requirements		
Provider type		
Provider is a permissible provider type.	√	√
Professional is not hospital-based. *Professional cannot have performed 90 percent or more of his/her services in the prior year in hospital inpatient or emergency room settings*.	√	
Hospital has an average length of stay of 25 days or less.[a]		√[a]
If professional is a physician assistant, s/he works in a physician assistant-led federally qualified health center or rural health center.	√	
Provider qualifications		
Provider is licensed to practice in the state.	√	√
Provider is a Medicaid provider in the state.	√	√
Provider is not excluded, sanctioned, or otherwise deemed ineligible to receive payments from the state/federal government.[b]	√	√
Provider meets patient volume requirements. *Professionals must have a Medicaid patient volume of at least 30 percent unless they are pediatricians or practice predominantly in a federally qualified health center or rural health center*.[c] *Hospitals must have a Medicaid patient volume of at least 10 percent*.[d]	√	√
Reporting requirements		
Provider has adopted, implemented, or upgraded to a certified EHR system.[e]	√	√

Source: GAO analysis of applicable CMS regulations and guidance.

Note: Providers attest to information submitted to CMS and/or the states regarding the Medicaid EHR program's eligibility requirements, which specify the types of providers eligible to participate in the program. To demonstrate that providers met the Medicaid EHR program's reporting requirement, providers must report information to the states to demonstrate that they have adopted, implemented, or upgraded to the certified EHR technology.

[a]Children's hospitals are not subject to this requirement.

[b]Professionals may not receive incentive payments from both the Medicare and Medicaid EHR programs in the same year. In addition, Medicaid professionals and hospitals cannot receive incentive payments from more than one state in the same year.

[c]Pediatricians must have a Medicaid patient volume of at least 20 percent. Professionals who practice predominantly in a federally qualified health center or rural health center must have a needy patient volume of at least 30 percent. A needy individual is defined as someone who is enrolled in Medicaid or the Children's Health Insurance Program, receives uncompensated care, or receives care at no cost or on a sliding scale determined by ability to pay. To practice predominantly in a federally qualified health center or rural health center means that a professional treats over 50 percent of his or her total patient volume over a period of 6 months in a federally qualified health center or rural health center.

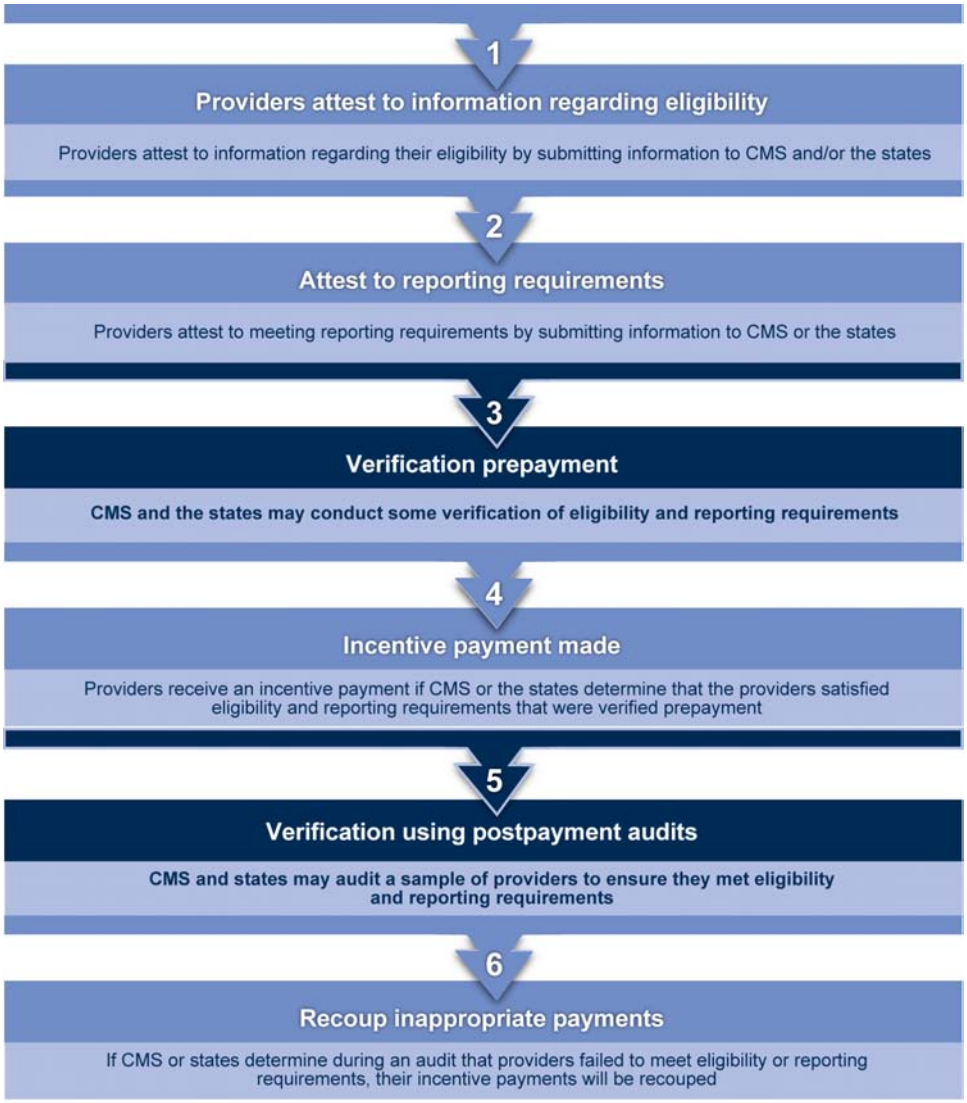
[d]Hospitals must have a Medicaid patient volume of at least 10 percent, except for children's hospitals, which do not have a patient volume requirement.

[e]During the first year providers participate in the Medicaid EHR program, they need only adopt, implement, or upgrade to a certified EHR system. In subsequent years, they must meet two other reporting requirements—demonstrate meaningful use and at least 50 percent of the professional's patient encounters during the reporting period occurred at practices or locations equipped with certified EHR technology.

Oversight Responsibilities for the EHR Programs

To help ensure the integrity of incentive payments, CMS and the states are responsible for developing oversight strategies, which may include conducting verifications of provider-submitted information before payments are made (prepayment) or after payments are made (postpayment). The latter consists of verifying provider-submitted information by auditing a sample of providers. See figure 3 for information on the sequence of pre- and postpayment verification.

Figure 3: Oversight Process CMS and States May Use to Verify Providers Met Eligibility and Reporting Requirements for the Medicare and Medicaid EHR Programs



Source: GAO analysis of CMS documents.

Regional Extension Center Program

The HITECH Act established the Regional Extension Center program and approximately $721 million in grants were awarded to Regional Extension Centers. Administered by HHS's ONC, the primary mission of the Regional Extension Center program is to assist providers with adopting, implementing, and meaningfully using EHRs, particularly those providers that may face challenges due to, for example, limited financial and staff resources.[32] This assistance is intended to facilitate providers' participation in the Medicare and Medicaid EHR programs. There are 62 Regional Extension Centers, covering all 50 states, the District of Columbia, and all U.S. insular areas.

The Regional Extension Center program targets professionals who work in certain settings for assistance:

- individual or group primary care practices with 10 or fewer professionals;
- public, rural, and critical access hospitals;
- community health centers and rural health clinics;
- collaborative networks of small practices;[33] and
- other settings that predominantly serve medically underserved populations, as defined by each Regional Extension Center.[34]

ONC also provides funding for Regional Extension Centers to provide assistance to certain hospitals—critical access and rural hospitals—to ensure that centers' services are available in those settings.

[32]Regional Extension Centers offer assistance to providers irrespective of whether they are eligible to receive incentive payments under the EHR programs.

[33]ONC defines collaborative networks of small practices as practices of 10 or fewer professionals who share services, purchasing arrangements, and/or patient coverage.

[34]In some of these categories, such as the category of "other settings that predominantly serve medically underserved populations," ONC required each Regional Extension Center to define the types of professionals they would assist by addressing local concerns, such as professionals in practices with a high percentage of uninsured patients.

ONC's overall goal for the Regional Extension Center program is to help 100,000 professionals meet the EHR programs' requirements for meaningful use by 2014 and to help a total of 1,777 critical access and rural hospitals meet the EHR programs' requirements for meaningful use by 2014. In its agreement with ONC, each Regional Extension Center established its own goal for the number of providers it would assist to help the program meet its overall goal.

For the First Program Year, Processes Are Being Implemented to Verify Requirements Were Met, and CMS Has Opportunities to Improve Them

CMS and the four states we reviewed are implementing processes to verify whether providers met the Medicare or Medicaid EHR programs' eligibility and reporting requirements and, therefore, qualified to receive incentive payments in the programs' first year. Although CMS is taking some steps to improve the processes CMS and states use to verify whether providers have met Medicare and Medicaid EHR program requirements, we found that CMS has additional opportunities to assess and improve these processes.

CMS and Selected States Are Implementing Processes to Verify Whether Providers Met Requirements to Receive Incentive Payments

For the first program year, CMS is implementing a combination of pre- and postpayment processes to verify whether providers have met all of the Medicare EHR program eligibility and reporting requirements. In addition, the four states we reviewed have implemented or plan to implement a combination of pre- and postpayment processes to verify whether providers have met Medicaid EHR program eligibility and reporting requirements.

Verification under the Medicare EHR Program

CMS has developed and begun to implement processes to verify whether providers participating in the Medicare EHR program have met all of the program's eligibility and reporting requirements and thereby qualify to receive incentive payments. In 2011, CMS implemented prepayment processes to verify whether providers have met all three of the Medicare EHR program's eligibility requirements. These processes consist of automatic checks that are built into CMS's databases to verify the information submitted by providers when they register for the program.[35]

[35]According to CMS officials, because a provider's status may change, CMS has also implemented processes to recheck whether the provider has met some of the Medicare EHR program's eligibility requirements before payments are issued to providers.

CMS also implemented a process to verify, on a prepayment basis, whether providers have met one of the Medicare EHR program's reporting requirements—to use a certified EHR system.[36] Specifically, CMS built an automatic check to compare the EHR certification numbers for the systems providers reported using during attestation against a list of EHR systems that have been certified by ONC.

In 2012, according to CMS officials, the agency plans to implement additional processes to verify, on a postpayment basis, whether a sample of providers has met all three of the Medicare EHR program's reporting requirements. To conduct these verifications, CMS has developed a risk-based approach that will be used to identify a sample of about 10 percent of professionals and 5 percent of hospitals for audits.[37] Under CMS's planned audit strategy, the agency may request that providers selected for postpayment audits submit documentation, such as patient rosters, EHR screenshots, and reports generated by the EHR system to support data the providers reported to CMS during attestation. If CMS determines during the audits that a provider has failed to meet any one of the reporting requirements, it plans to take steps to recoup incentive payments. CMS officials said that they decided to wait until 2012 to begin conducting audits of providers that received incentive payments in 2011, the first payment year, to ensure that the agency does not unfairly target a disproportionate number of early participants in the Medicare EHR program.[38] For an overview of CMS's processes to verify whether providers met the Medicare EHR program's eligibility and reporting requirements, see table 3.

[36]CMS also plans to verify whether providers have met this requirement on a postpayment basis by reviewing documentation that supports that providers have the EHR technology they attested to using.

[37]In addition, according to CMS officials, the agency plans to conduct a separate audit, beginning in 2012, to verify that providers had the certified EHR systems they attested to using. For these audits, CMS anticipates sampling roughly 20 percent of professionals and 10 percent of hospitals, identified through random sampling as well as some targeted selection.

[38]These officials also explained that, because this is a new program, the agency will continue to reevaluate and improve its audit process using the best information that is currently available.

Table 3: CMS's Processes to Verify Whether Providers Met Medicare EHR Program Eligibility and Reporting Requirements in 2011

Requirement	Verification through prepayment processes in 2011	Verification through postpayment audit processes planned for 2012
Eligibility requirements		
Provider is a permissible provider type.	√	
Professional is not hospital-based.	√	
Provider is not excluded, sanctioned, or otherwise deemed ineligible to receive payments from the federal government.	√	
Reporting requirements		
Provider uses a certified EHR system.[a]	√	√
Provider demonstrates meaningful use.		√[b]
At least 50 percent of a professional's patient encounters during the reporting period occurred at practice(s) or location(s) equipped with certified EHR technology.		√

Source: GAO analysis of CMS documents and interviews with CMS officials.

Note: Providers attest to information submitted to CMS regarding the Medicare EHR program's eligibility requirements, which specify the types of providers eligible to participate in the program. To demonstrate that providers met the Medicare EHR program's reporting requirements, providers must report information to CMS to demonstrate that they have meaningfully used certified EHR technology.

[a]CMS implemented a process to verify, on a prepayment basis, whether providers have met the requirement to use a certified EHR system. Specifically, CMS built an automatic check to compare the EHR certification numbers providers reported during attestation against a list of EHR systems certified by the Office of the National Coordinator for Health Information Technology. CMS also plans to implement a process to verify this requirement on a postpayment basis by reviewing documentation that supports that providers have the EHR system they claimed to use.

[b]CMS checks, after providers attest, that the information they submitted met the thresholds for the meaningful use measures, where applicable. However, the agency does not verify the accuracy of the information submitted until after payments are issued. For example, for the meaningful use measure that providers record demographic information for 50 percent or more of their patients, CMS checks that the information providers submitted met that threshold. However, the agency does not verify that all demographic information for at least 50 percent of the providers' patients has been populated in their EHR system until after payments are issued.

According to CMS officials, the agency is also developing processes to verify the accuracy of the incentive payment amounts made to hospitals in the first year of the Medicare EHR program. The Medicare EHR incentive payment amount is calculated based on information from Medicare cost reports. According to CMS officials, by mid-2012, the agency plans to audit this information to verify that the information is accurate. In contrast, CMS is not developing processes to verify the accuracy of incentive payment amounts made to professionals in the first

year of the program because those amounts are based on information from Medicare Part B claims that it has already audited.[39]

Verification under the Medicaid EHR Program

Three of the states we reviewed—Iowa, Kentucky, and Pennsylvania—have implemented processes to verify whether providers have met all the Medicaid EHR program's eligibility and reporting requirements and thereby qualify to receive incentive payments. The fourth state, Texas, has implemented processes to verify whether providers met most of the program's eligibility and reporting requirements and is in the process of developing additional verification processes as part of its postpayment audit strategy. Because CMS allows states flexibility in determining how they verify compliance with these requirements, the states vary in terms of whether they use prepayment or postpayment verification processes.

In order to verify whether providers have met the Medicaid EHR program's eligibility requirements, all four states have primarily implemented prepayment processes, some of which are automated checks built into their databases. Iowa, Kentucky, and Pennsylvania also conduct postpayment audits of samples of providers to verify whether they have met requirements that were not checked on a prepayment basis.[40] These states identify samples of providers to be audited using various risk-based approaches. Texas intends to conduct postpayment audits as well, but has not finalized its audit strategy.

Three states—Iowa, Kentucky, and Pennsylvania—use a combination of pre- and postpayment processes to verify whether providers have met the eligibility requirement regarding the Medicaid patient volume threshold, which is determined by dividing a professional's number of Medicaid patient visits by their total number of patient visits. For example, they use Medicaid claims data to verify, on a prepayment basis, the professionals' number of Medicaid patient visits over the reporting period. Then, on a postpayment basis for a sample of professionals, the states use

[39]Medicare Part B covers physician, outpatient hospital, home health care, and certain other services.

[40]These states also reverify, on a postpayment basis, whether providers have met some eligibility requirements that were checked prepayment. In addition, CMS officials told us that the agency checks some eligibility information submitted by Medicaid providers. For example, after a provider registers at the CMS EHR program website, CMS automatically validates that the provider has not been excluded from participating in federal health care programs.

documentation submitted by professionals, such as patient billing reports, to verify their total number of patient visits. Most states, including these three, must rely on provider self-reported information to verify compliance with this requirement, because states typically do not collect data on some of the professionals' patient visits, such as visits paid for by private insurance.[41]

To verify whether providers have met the Medicaid EHR program's reporting requirement to adopt, implement, or upgrade to a certified EHR system, the four states we reviewed use prepayment processes, postpayment processes, or both. The four states we reviewed have implemented processes, on a prepayment basis, that check the EHR certification numbers reported by providers against a list of EHR systems that have been certified by ONC.[42] Further, Kentucky takes additional steps to verify, on a prepayment basis, compliance with this requirement by reviewing documentation, such as EHR invoices. Iowa and Pennsylvania include a similar verification process as part of their postpayment audits. Texas has not yet determined whether it will conduct additional postpayment verifications. For an overview of the four selected states' processes to verify whether providers met the Medicaid EHR program's eligibility and reporting requirements, see table 4.

[41]CMS officials recognize that verifying whether professionals met the patient volume requirement is challenging for states, and the OIG report also found that states had difficulty verifying that professionals met this requirement. CMS plans to continue to provide additional guidance to states on how they can ensure professionals complied with this requirement.

[42]CMS expects states to check the certification number providers submitted against a list of such numbers maintained by ONC prior to issuing payments to providers. CMS State Medicaid Director Letter, Aug. 17, 2010 (SMD# 10-016), Enclosure B. Accessed at www.cms.gov on April 13, 2011.

Table 4: Four States' Processes to Verify Whether Providers Met Medicaid EHR Program Eligibility and Reporting Requirements in 2011

	Iowa		Kentucky		Pennsylvania		Texas	
Requirement	**Verified pre-payment**	**Verified post-payment**	**Verified pre-payment**	**Verified post-payment**	**Verified pre-payment**	**Verified post-payment**	**Verified pre-payment**	**Verified post-payment[a]**
Eligibility requirements								
Provider type								
Provider is a permissible provider type.	√		√	√	√		√	[a]
Professional is not hospital-based.	√	√	√	√	√	√	√	[a]
Hospital has an average length of stay of 25 days or less.		√	√		√		√	[a]
If professional is a physician assistant, s/he works in a physician assistant-led federally qualified health center or rural health center.		√		√	√			[a]
Provider qualifications								
Provider is licensed to practice in the state.	√		√		√	√	√	[a]
Provider is a Medicaid provider in the state.	√		√		√		√	[a]
Provider is not excluded, sanctioned, or otherwise deemed ineligible to receive payments from the state/federal government.	√		√		√		√	[a]
Provider meets patient volume requirements.[b]	√	√	√	√	√	√	√	[a]
Reporting requirement[c]								
Provider has adopted, implemented, or upgraded to a certified EHR system.[d]	√	√	√		√	√	√	[a]

Source: GAO analysis of State Medicaid Health Plans and other state documents, and interviews with state officials.

Note: Providers attest to information submitted to CMS and/or the states regarding the Medicaid EHR program's eligibility requirements, which specify the types of providers eligible to participate in the program. To demonstrate that providers met the Medicaid EHR program's reporting requirement, providers must report information to the states to demonstrate that they have adopted, implemented, or upgraded to certified EHR technology.

[a]As of December 2011, Texas had not finalized its postpayment audit strategy.

[b]Iowa, Kentucky, and Pennsylvania use a combination of pre- and postpayment processes to verify whether providers have met this requirement. For example, these states use processes to verify whether certain professionals have met the Medicaid patient volume requirement, on a prepayment basis, using Medicaid claims data to check the professionals' number of Medicaid patient visits. Then, they use processes to verify whether a sample of professionals have met this requirement, on a postpayment basis, using documentation submitted by providers, such as patient billing reports, to confirm their total number of patient visits.

[c]During the first year providers participate in the Medicaid EHR program, they need only adopt, implement, or upgrade to a certified EHR system. In subsequent years, they must meet two other reporting requirements—demonstrate meaningful use and at least 50 percent of the professional's patient encounters during the reporting period occurred at practices or locations equipped with certified EHR technology.

[d]Iowa, Pennsylvania, and Kentucky use two verification processes to check whether providers have met the reporting requirement to adopt, implement, or upgrade to a certified EHR system. Consistent with CMS guidance, these states as well as Texas implemented processes to verify, on a prepayment basis, whether providers have met this requirement by checking the EHR certification numbers providers reported during attestation against a list of EHR systems certified by the Office of the National Coordinator for Health Information Technology. CMS State Medicaid Director Letter, August 17, 2010 (SMD# 10-016), Enclosure B. Accessed at www.cms.gov on April 13, 2011. These states also verify whether providers have met this requirement by reviewing documentation that supports that providers have the EHR system they claimed to have. Kentucky conducts this additional verification prior to issuing payments to providers, and Iowa and Pennsylvania conduct it after payments are issued.

The four states we reviewed are also implementing processes to verify the accuracy of the incentive payment amounts made to hospitals under the Medicaid EHR program. CMS allows states flexibility in how they ensure the accuracy of these payments, and, according to CMS officials, states are implementing different approaches to verify the accuracy of this information. CMS officials told us that, for example, some states with Medicaid EHR programs use cost reports to verify the accuracy of hospital incentive payments and recheck the information using data from the state's Medicaid claims database and other sources. In contrast, for professionals, the amount of incentive payments received in any given year is, in general, a fixed amount—$21,250 in the first year and $8,500 in up to 5 subsequent years. Therefore, states do not need to implement processes to ensure the amount of incentive payments professionals receive is accurate.

CMS Has Opportunities to Assess and Improve Processes to Verify Whether Requirements Have Been Met

CMS has taken some steps, consistent with federal internal control standards, to assess how states have implemented the Medicaid EHR program, including their efforts to prevent improper payments by verifying whether providers have met the program's requirements.[43] According to CMS officials, the agency has entered into two contracts to conduct an assessment and to identify tools and resources states could use to improve their implementation and oversight of the Medicaid EHR programs. In the case of the Medicare EHR program, CMS officials recognize that because the program is also in the early stages of implementation, it is important to continually assess the extent to which CMS's audit strategy mitigates the risk of improper payments. These officials told us that the agency intends to evaluate whether its Medicare EHR program audit strategy is effective in reducing the risk of improper payments. However, the agency has not yet determined what this evaluation will entail or established corresponding timelines for initiating this evaluation.[44]

If completed, this evaluation provides an opportunity for CMS to assess whether or to what extent the agency should revise its verification processes to further mitigate the risk of making improper payments by, for example, implementing additional prepayment processes as appropriate to verify whether providers have met the Medicare EHR program's reporting requirements. As we have noted in our prior work, it is more effective and efficient to prevent improper payments than to detect and recoup them later.[45] Verifying that providers qualify for incentive payments on a prepayment basis—that is, before disbursing an incentive payment—is one way to prevent improper payments. Furthermore, conducting this evaluation is important because we have designated the

[43]See GAO, *Standards for Internal Control in the Federal Government*, GAO/AIMD-00-21.3.1 (Washington, D.C.: November 1999) and GAO, *Internal Control Management and Evaluation Tool*, GAO-01-1008G (Washington, D.C.: August 2001).

[44]CMS officials told us that the agency plans to determine what its evaluation of the Medicare EHR program audit strategy will entail and develop a corresponding timeline for beginning this work after it begins conducting Medicare EHR program postpayment audits.

[45]GAO, *Improper Payments: Status of Agencies' Efforts to Address Improper Payment and Recovery Auditing Requirements*, GAO-08-438T (Washington, D.C.: Jan. 31, 2008).

Medicare program as being vulnerable to making improper payments.[46] The EHR programs may be at greater risk of improper payments than other, more established CMS programs because they are new programs with complex requirements that providers must meet to qualify for incentive payments.

In addition, CMS has two opportunities to improve the efficiency of processes to verify whether providers met requirements for the Medicare and Medicaid EHR programs. Ensuring program efficiency is consistent with federal internal control standards.

- First, while CMS took steps to improve the efficiency of postpayment audits under the Medicaid EHR program, it has not done so for the Medicare EHR program. For example, in the case of the Medicaid EHR program, CMS asked states to obtain additional information, when they begin collecting meaningful use attestations from providers in 2012, in order to ensure that providers satisfied the meaningful use reporting requirement to submit electronic data to immunization registries or immunization information systems.[47] CMS officials explained that collecting this information at the time of attestation would increase the amount of information available to the states when they conduct postpayment audits. However, while CMS officials recognized that the Medicare EHR program could benefit from taking steps to collect similar information from Medicare providers, the agency has not yet done so.

- Second, although states were directed by CMS to develop tools to collect information reported by providers when they attest that they have met the meaningful use requirements, according to a senior CMS official, CMS could potentially collect this information for Medicaid providers on the states' behalf. All states with an EHR program will have to begin collecting meaningful use attestations in

[46]*High-Risk Series: An Update*, GAO-11-278 (Washington, D.C.: February 2011). GAO has designated Medicare as a high-risk program since 1990 recognizing that the size of the program, its rapid growth, and its complexity continue to present vulnerabilities that challenge CMS's ability to safeguard against improper payments. GAO has designated Medicaid as a high-risk program since 2003 because of concerns about the program's size, growth, diversity, and fiscal management.

[47]CMS suggests states ask providers to indicate during attestation (a) the name of the immunization registry they submitted their information to and (b) if they did so successfully.

the second year of their program as the Medicaid reporting requirements are increased to be more like Medicare's. Several states have already developed web-based meaningful use attestation tools, while other states have not yet done so. Were CMS to collect this information on states' behalf, federal and state cost savings could potentially be realized inasmuch as states are reimbursed by CMS for 90 percent of the costs related to planning for and administering the Medicaid EHR program, including the cost of creating their attestation tools.[48] Furthermore, CMS currently collects this information on behalf of the states for some Medicaid providers, in addition to collecting this information for all Medicare providers.[49] If CMS were to offer to collect this information from all Medicaid providers on behalf of states, as the agency currently does for some Medicaid providers, it could alleviate the need for some states—especially those that have not yet developed their attestation tools—to have to create similar web-based attestation tools, which could potentially yield cost savings at both the federal and state levels. Furthermore, even states that have already developed these tools to capture meaningful use attestations in 2012 will need to make changes to their attestation tools in subsequent years of the program. Having CMS capture meaningful use attestations on the states' behalf in subsequent years would alleviate the need for them to make these changes.

[48]The HITECH Act appropriated $300 million over the course of fiscal years 2009 through 2016 for carrying out the Medicaid EHR program. Pub. L. No. 111-5, § 4201(b), 123 Stat. 494 (2009). The costs associated with carrying out the Medicaid EHR program, which CMS generally refers to as administrative costs, vary across states. For example, to develop web-based attestation tools, officials from one state we reviewed reported that the state will spend more than $1 million whereas officials from another state reported spending considerably less because they shared costs with other states.

[49]CMS already collects meaningful use attestation information on behalf of the states for hospitals that are eligible to receive both Medicare and Medicaid EHR incentive payments. CMS has not reported that this process delayed incentive payments to hospitals.

Most Medicare Providers Exempted Themselves from Reporting Certain Measures and Many Reported Others Based on Few Patients

Most providers participating in the first year of the Medicare EHR program through December 8, 2011, exercised program flexibility to exempt themselves from reporting on at least one mandatory meaningful use measure. In addition, many providers also reported at least one clinical quality measure based on few patients.

Most Providers Exercised Program Flexibility to Exempt Themselves from Reporting on Certain Mandatory Measures

During the first year of the Medicare EHR program through December 8, 2011, most participating providers exercised flexibility allowed under the program to claim an exemption from reporting at least one mandatory meaningful use measure. Specifically, 72.4 percent of professionals and 79.6 percent of hospitals claimed such an exemption.[50] Providers may exempt themselves from reporting certain mandatory meaningful use measures—up to six measures for professionals and up to three measures for hospitals—if they report to CMS that those measures are not relevant to their patient populations or clinical practices.

We found that a greater percentage of some professionals reported at least one exemption than other professionals. Specifically, we found that

- a greater percentage of chiropractors, dentists, optometrists, specialists, and other eligible physicians reported at least one exemption compared to generalists; and
- a greater percentage of professionals with 2010 Medicare Part B charges at or below the 75th percentile reported at least one exemption compared to those with charges above the 75th percentile.

[50]We analyzed full-year data for hospitals and partial-year data for professionals. For more information on the data we analyzed, including information on providers we included and excluded from our analysis, see app. II.

We also found that among specialists, the largest specialty group of participating professionals, over three-quarters claimed at least one exemption. (See table 5.)

Table 5: Percentage of Professionals Who Participated in the Medicare EHR Program That Claimed an Exemption for at Least One Meaningful Use Measure, through December 8, 2011

Professional characteristics	Number of participating professionals	Percentage reporting at least one exemption
Overall	23,844	72.4
Professional specialty		
Dentist	14	100.0
Chiropractor	202	99.0
Optometrist	737	92.0
Specialist	11,046	75.9
Podiatrist	1,212	75.5
Generalist	9,569	66.2
Other eligible physician[a]	900	69.0
Practice location[b]		
Rural	2,725	78.1
Urban	21,099	71.7
Amount of 2010 Medicare Part B charges		
≤ 25th percentile	1,027	83.0
> 25th percentile, but ≤ 50th percentile	3,392	77.9
> 50th percentile, but ≤ 75th percentile	7,867	75.6
> 75th percentile	11,199	67.5

Source: GAO analysis of CMS and Health Resources and Services Administration data.

Note: This analysis is based on partial-year data for professionals. Specifically, we analyzed data professionals reported to demonstrate meaningful use for the Medicare EHR program from April 2011, when CMS began collecting these data, through December 8, 2011. To demonstrate meaningful use for the 2011 program year, professionals could continue to report these data through February 29, 2012. The sum of the number of professionals listed by professional specialty, practice location, and amount of 2010 Medicare Part B charges is not equal to the overall number of professionals due to missing data. Unless otherwise noted, all differences among groups are significant at the 0.05 level.

[a]"Other eligible physician" includes physicians for whom the information on professional specialty needed to classify them into one of the other professional specialty categories was not available in CMS's National Plan and Provider Enumeration System.

[b]The difference between the percentage reporting at least one exemption for professionals practicing in urban and rural locations is not statistically significant.

We found that a greater percentage of some hospitals reported at least one exemption than other hospitals. Specifically, we found that

- a greater percentage of critical access hospitals reported at least one exemption compared to acute care hospitals, and
- a greater percentage of hospitals with less than 200 beds reported at least one exemption compared to hospitals with 200 beds or more.

We also found that among acute care hospitals, the largest type of participating hospital, slightly over three-quarters claimed at least one exemption.[51] (See table 6.)

[51]Acute care hospitals refer to hospitals described in Section 1886(d) of the Social Security Act, which are paid under the inpatient prospective payment system.

Table 6: Percentage of Hospitals That Participated in the Medicare EHR Program That Claimed an Exemption for at Least One Meaningful Use Measure, 2011

Hospital characteristics	Number of participating hospitals	Percentage reporting at least one exemption
Overall	803	79.6
Type of hospital		
Critical access hospital	174	85.1
Acute care hospital[a]	626	78.1
Ownership type[b]		
Proprietary	169	84.6
Government-owned	189	78.8
Nonprofit	442	78.1
Bed size		
1 to 49 beds	240	84.2
50 to 99 beds	128	79.7
100 to 199 beds	145	82.1
200 or more beds	287	74.6
Hospital location[b]		
Rural	300	81.0
Urban	500	78.8

Source: GAO analysis of CMS and Health Resources and Services Administration data.

Note: The sum of the number of hospitals listed by type of hospital, ownership type, bed size, and location is not equal to the overall number of hospitals due to missing data. Unless otherwise noted, all differences among groups are significant at the 0.05 level.

[a]Acute care hospitals refer to hospitals described in Section 1886(d) of the Social Security Act, which are paid under the inpatient prospective payment system

[b]The difference in the percentage of hospitals reporting at least one exemption based on this variable was not statistically significant.

Of the mandatory meaningful use measures for which providers may claim exemptions, we found that the majority of providers claimed an exemption from the mandatory measure “provide patients with an electronic copy of their health information.” Providers may claim an exemption from this measure if they receive no requests from patients for an electronic copy of their health information. This measure was the least frequently reported mandatory measure for both professionals (32.7 percent) and hospitals (30.3 percent). In contrast, the most frequently reported mandatory measure for which exemptions were permitted was “record smoking status for patients 13 years old or older” for both professionals (99.4 percent) and hospitals (99.5 percent).

Our finding that a majority of providers claimed exemptions from reporting at least one mandatory meaningful use measure is consistent with comments made by stakeholders in response to CMS's Rule on the Electronic Health Record Incentive Program.[52] Specifically, those stakeholders stated that certain providers, including specialists and small hospitals, would not be able to report all mandatory meaningful use measures, since some measures would be outside the scope of their practice. While CMS currently allows providers the flexibility to claim exemptions from reporting certain mandatory meaningful use measures, in future years of the EHR programs, CMS stated that it may not allow providers the same flexibility.[53] It is unclear what effect, if any, such a change would have on participation levels in future program years.

Many Providers Reported Clinical Quality Measures Based on Few Patients

Our analysis of clinical quality measures found that many providers reported at least one such measure based on few patients—less than seven—during the first year of the Medicare EHR program through December 8, 2011.[54] Providers were required to report these measures to satisfy one of the mandatory meaningful use measures—"report clinical quality measures to CMS." Specifically, 41.3 percent of professionals and 86.9 percent of hospitals reported at least one clinical quality measure based on few patients. Clinical quality measures calculated using few patients may be statistically unreliable, which, according to the American

[52]See CMS, Final Rule, *Medicare and Medicaid Programs: Electronic Health Record Incentive Program*; 75 Fed. Reg. 44314 (July 28, 2010).

[53]In the preamble to CMS's Rule on the Electronic Health Record Incentive Program, the agency stated that it allowed providers to claim exemptions from reporting certain meaningful use measures in 2011 to help ensure that providers with all types of patient populations and clinical practices could potentially demonstrate meaningful use. See 75 Fed. Reg. 44328-44329 (July 28, 2010).

[54]The meaningful use reporting period is 90 days in the first year; providers will be required to report meaningful use for an entire year during subsequent years. Assuming a steady rate of change, providers that had fewer than seven patients meet inclusion criteria for calculating clinical quality measures during the 90-day reporting period would have fewer than 25 patients meet these criteria during the full-year reporting period.

Hospital Association and others, could detract from providers' abilities to use those measures as meaningful tools for quality improvement.[55]

We found that a greater percentage of some professionals reported measures based on few patients than other professionals. Specifically, we found that

- a greater percentage of chiropractors, dentists, optometrists, specialists, podiatrists, and other eligible professionals reported at least one clinical quality measure that was calculated using few patients compared to generalists;
- a greater percentage of professionals practicing in urban locations reported at least one clinical quality measure that was calculated using few patients compared to those practicing in rural locations; and
- a greater percentage of professionals with 2010 Medicare Part B charges at or below the 50th percentile or above the 75th percentile reported at least one clinical quality measure that was calculated using few patients compared to those with charges above the 50th percentile, but at or below the 75th percentile.

We also found that about half of specialists, the largest specialty group of participating professionals, reported at least one clinical quality measure based on few patients. (See table 7.)

[55]In other programs, CMS has recognized that including a small number of patients in the calculation of a measure is a reliability issue. For example, on the agency's Hospital Compare website, which publicly reports clinical quality measures by hospital, CMS indicates whether the number of patients included in a particular measure calculation was based on less than 25 patients and is thus too small to reliably tell how well the hospital was performing.

Table 7: Percentage of Professionals Who Participated in the Medicare EHR Program That Reported at Least One Clinical Quality Measure That Was Calculated Based on Few Patients, through December 8, 2011

Professional characteristics	Number of participating professionals	Percentage reporting at least one clinical quality measure using fewer than seven patients[a]
Overall	23,844	41.3
Professional specialty		
Dentist	14	78.6
Chiropractor	202	79.7
Optometrist	737	87.7
Specialist	11,046	52.8
Podiatrist	1,212	52.8
Generalist	9,569	21.2
Other eligible physician[b]	900	51.7
Practice location		
Rural	2,725	35.7
Urban	21,099	42.0
Amount of 2010 Medicare Part B charges		
≤ 25th percentile	1,027	62.3
> 25th percentile, but ≤ 50th percentile	3,392	44.3
> 50th percentile, but ≤ 75th percentile	7,867	35.5
> 75th percentile	11,199	42.0

Source: GAO analysis of CMS and Health Resources and Services Administration data.

Note: This analysis is based on partial-year data for professionals. Specifically, we analyzed data professionals reported to demonstrate meaningful use for the Medicare EHR program from April 2011, when CMS began collecting these data, through December 8, 2011. To demonstrate meaningful use for the 2011 program year, professionals could continue to report these data through February 29, 2012. The sum of the number of professionals listed by professional specialty, practice location, and amount of 2010 Medicare Part B charges is not equal to the overall number of professionals due to missing data. All differences among groups are significant at the 0.05 level.

[a]For our analysis, we identified clinical quality measures as unreliable if fewer than seven patients met inclusion criteria for the calculation. Measures that capture a small number of patients may be unreliable measures of quality because relatively small changes in the number of patients who experienced the care processes or outcomes targeted by the measure can generate large shifts in the calculated percentage for the measure.

[b]"Other eligible physician" includes physicians for whom the information on professional specialty needed to classify them into one of the other professional specialty categories was not available in CMS's National Plan and Provider Enumeration System.

We found that a greater percentage of some hospitals reported measures based on few patients than other hospitals. Specifically, we found that

- a greater percentage of critical access hospitals reported at least one clinical quality measure that was calculated using few patients compared to acute care hospitals,
- a greater percentage of government-owned and proprietary hospitals reported at least one clinical quality measure that was calculated using few patients compared to nonprofit hospitals,
- a greater percentage of hospitals with less than 200 beds reported at least one clinical quality measure that was calculated using few patients compared to hospitals with 200 beds or more, and
- a greater percentage of hospitals located in rural areas reported at least one clinical quality measure that was calculated using few patients compared to hospitals located in urban areas.

We also found that among acute care hospitals, the largest type of participating hospital, more than 80 percent reported at least one clinical quality measure based on few patients. (See table 8.)

Table 8: Percentage of Hospitals That Participated in the Medicare EHR Program That Reported at Least One Clinical Quality Measure That Was Calculated Based on Few Patients, 2011

	Number of participating hospitals	Percentage reporting at least one clinical quality measure using fewer than seven patients[a]
Overall	803	86.9
Type of hospital		
Critical access hospital	174	99.4
Acute care hospital[b]	626	83.5
Ownership type		
Government-owned	189	95.2
Proprietary	169	89.9
Nonprofit	442	82.4
Bed size		
1 to 49 beds	240	100
50 to 99 beds	128	93.0
100 to 199 beds	145	85.5
200 or more beds	287	74.2
Hospital location		
Rural	300	96.7
Urban	500	81.2

Source: GAO analysis of CMS and Health Resources and Services Administration data.

Note: The sum of the number of hospitals listed by type of hospital, ownership type, bed size, and location is not equal to the overall number of hospitals due to missing data. All differences among groups are significant at the 0.05 level.

[a]For our analysis, we identified clinical quality measures as unreliable if fewer than seven patients met inclusion criteria for the calculation. Measures that capture a small number of patients may be unreliable measures of quality because relatively small changes in the number of patients who experienced the care processes or outcomes targeted by the measure can generate large shifts in the calculated percentage for the measure.

[b]Acute care hospitals refer to hospitals described in Section 1886(d) of the Social Security Act, which are paid under the inpatient prospective payment system.

The American Medical Association and others stated that some providers may experience challenges selecting clinical quality measures to report. CMS has acknowledged that the availability of clinical quality measures that are relevant to providers' patient populations and clinical practices is important to inform providers' efforts to improve quality of care and to measure potential impacts of the EHR programs. In an effort to increase the availability of such measures, officials from the Health Information

Technology Policy Committee and the Health Information Technology Standards Committee, which advise ONC on the development of meaningful use reporting requirements, noted that additional clinical quality measures may be added to the EHR programs over time. This action would help to ensure that there are a sufficient number of measures that providers can report on.

For the First Program Year, Providers Experienced Challenges and Used Strategies and Services to Facilitate Participation

Providers identified challenges to participating in the first year of the Medicare and Medicaid EHR programs and strategies used to help providers participate. Numerous professionals and hospitals have signed agreements with Regional Extension Centers for technical assistance, which includes services to facilitate providers' participation in the Medicare and Medicaid EHR programs.

Providers Identified Challenges and Used Strategies to Facilitate First Year Participation

Acquiring and implementing a certified EHR system are among the first challenges providers face as they take steps to qualify for a Medicare or Medicaid EHR incentive payment. Challenges to acquiring EHR systems described by providers and officials from the American Medical Association and American Hospital Association we interviewed included the following: the cost of purchasing or upgrading to a certified EHR system; obtaining sufficient broadband access, which can affect providers' abilities to exchange health information; and obtaining buy-in from professionals. Challenges to implementing EHR systems described by providers we interviewed included needing to train staff on how to use the EHR systems and getting professionals to use the systems.

Officials we interviewed from hospitals described strategies providers used to overcome some of the challenges related to acquiring and implementing EHR systems. For example, one hospital official stated that, in order to implement a certified EHR system, hospital officials designated "super users" as a strategy to help their professionals transition to the EHR system. For instance, one hospital appointed a nurse as a "super user" who assisted others in learning how to use the EHR system. Additionally, the chief information officer of another hospital stated her organization obtained buy-in from professionals and encouraged them to use the system by presenting the EHR system as a way to improve

patient safety and quality of care rather than as only an information technology project.

Once a certified EHR system is acquired and implemented, ensuring the system is effectively used to meet the Medicare meaningful use reporting requirements can also be challenging for some providers. Specifically, providers and others we interviewed identified challenges related to capturing data needed to demonstrate meaningful use, such as lacking a workflow that allowed the needed data to be collected electronically at the right time by the right staff member.

Examples of strategies providers used to capture data in a way that helped them demonstrate meaningful use

- One professional explained how she learned the importance of understanding which fields in the EHR system must be completed. After learning that she was not meeting the requirement on a particular meaningful use measure, she conducted an investigation and learned that even though she captured comparable information in other fields in the EHR, her system would not correctly compute the meaningful use measure in question unless she made a notation in a specific field that had been created by her vendor.
- One chief administrative officer of a group practice told us that the practice's EHR system alerted providers if any data required for the meaningful use measures were not captured. The officer explained that this feature helped to ensure that the professionals in the practice collect the information needed for the meaningful use measures before the patient visit ended.
- The chief medical information officer of a hospital discussed the importance of conducting an early gap analysis to understand what data were being collected and what data needed to begin to be collected.

Providers we interviewed noted several strategies they used to capture data in ways which helped them demonstrate meaningful use, including the following:

- understanding which fields of the EHR system must be completed and collecting additional data, as necessary;
- revising forms, retraining staff so they knew how to complete the forms, and conducting quality assurance training to ensure that the appropriate data were being captured consistently; and
- analyzing workflow, including understanding which staff members are to enter information into the EHR system and when data entry must occur.

One provider we interviewed elaborated on the strategy she used to change the workflow in her practice so that she could satisfy the meaningful use measure—"provide patients with clinical summaries for each office visit." She decided that to meet this meaningful use measure she would provide the clinical summary to her patients before they left her office. To do so, she changed her workflow by spending an additional 45 minutes each morning preparing parts of her patient notes in advance of the patient visit and by scheduling additional time in between patient visits in order to complete the clinical summaries.

Numerous Providers Have Signed Agreements with Regional Extension Centers for Services to Facilitate Participation

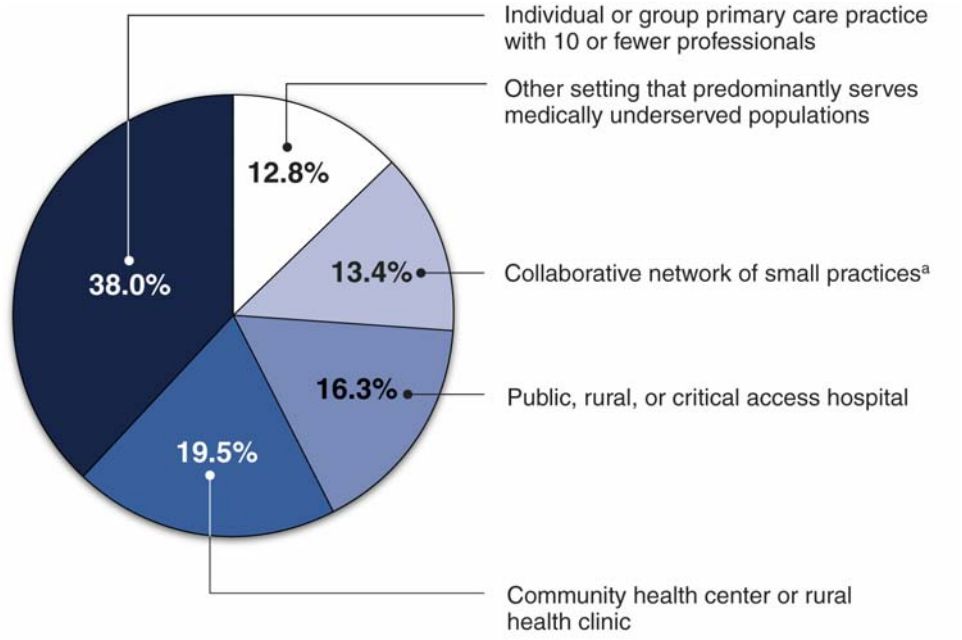
As of December 2011, about 115,000 professionals and about 1,000 hospitals have signed agreements to receive technical assistance from one of the 62 Regional Extension Centers.[56] This assistance includes services to facilitate providers' participation in the Medicare and Medicaid EHR programs.[57] Of these professionals, 54,241 had implemented an EHR system, of which 4,072 had demonstrated meaningful use.[58] The professionals assisted by the Regional Extension Center program work in targeted settings, such as individual primary care practices or rural health clinics. See figure 4, which illustrates the practice settings of professionals who have agreements with the Regional Extension Centers.

[56]We analyzed Regional Extension Center program data as of December 19, 2011.

[57]Providers sign technical assistance agreements with the Regional Extension Centers that specify the services that will be provided to them and the terms and amount (if any) of payment the centers will charge for these services.

[58]These data are reported by the Regional Extension Centers to ONC and do not necessarily mean that the provider received an incentive payment from either the Medicare or Medicaid EHR programs.

Figure 4: Practice Settings of Professionals with Signed Technical Assistance Agreements with Regional Extension Centers, through December 19, 2011



Source: GAO analysis of Office of the National Coordinator for Health Information Technology data.

Note: The figure shows the distribution of the 115,921 priority primary care professionals that signed agreements with one of the 62 Regional Extension Centers.

[a]The Office of the National Coordinator for Health Information Technology defines collaborative networks of small practices as practices of 10 or fewer professionals that share services, purchasing arrangements, and/or patient coverage.

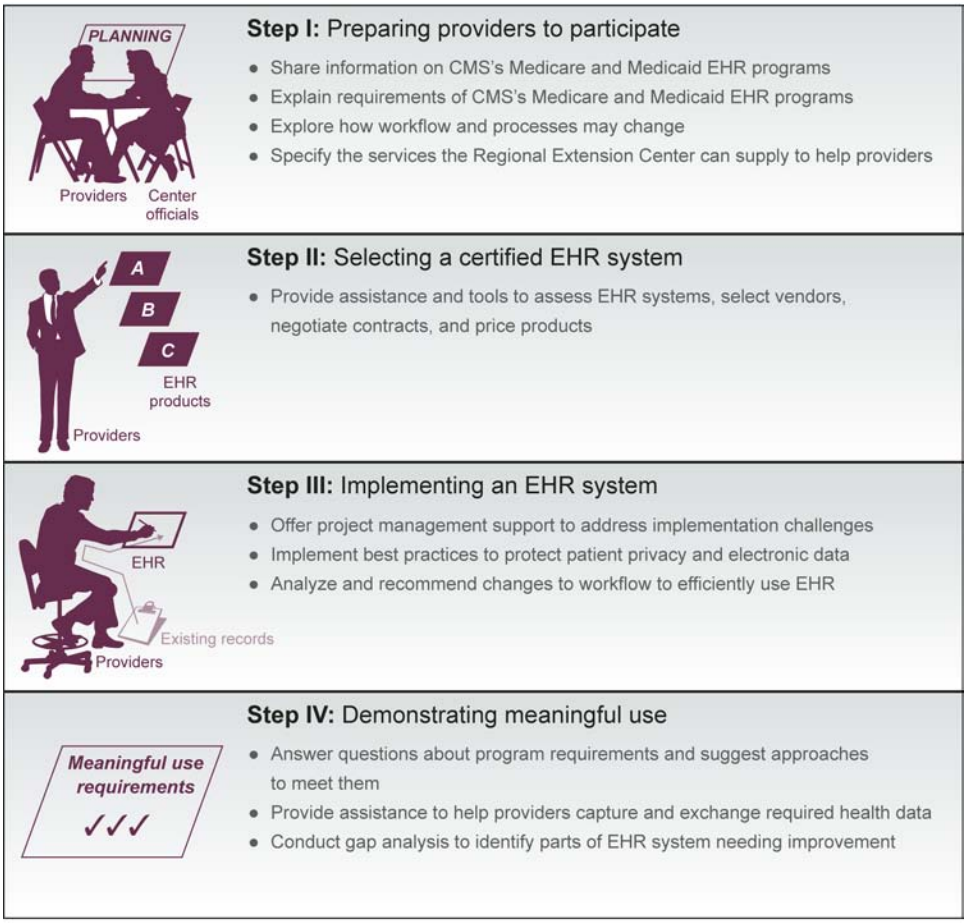
In addition, 1,001 rural hospitals and critical access hospitals have signed agreements with a Regional Extension Center for technical assistance, through December 19, 2011. Of these hospitals, 243 had implemented an EHR system and of those, 41 had demonstrated meaningful use. For more information on each Regional Extension Center's progress in assisting providers to demonstrate meaningful use, see appendix IV.

Regional Extension Centers offer various services to providers with whom they have agreements to facilitate the providers' participation in the EHR programs by helping them meaningfully use EHR systems. Providers trying to demonstrate meaningful use generally follow a four-step process, throughout which Regional Extension Centers may provide

assistance to providers. These steps are: (1) prepare to participate in the CMS EHR programs, (2) select a certified EHR system, (3) implement the selected EHR system, and (4) demonstrate meaningful use.[59] Examples of the services offered by the Regional Extension Centers during each of these steps are described in figure 5.

[59]Some services provided by the Regional Extension Centers, such as sharing information on the Medicare and Medicaid EHR programs, workflow support, and project management, may be offered to providers during more than one step. In addition, not all providers need the Regional Extension Centers' assistance at all steps. For example, some providers have selected and implemented a certified EHR system before retaining the services of one of the centers.

Figure 5: Examples of Services Provided by Regional Extension Centers



Sources: GAO analysis of interviews with Regional Extension Center officials and program documentation (data); Art Explosion (images).

During the first step, Regional Extension Center officials can help providers prepare to participate in the EHR programs by explaining those programs' requirements and helping providers identify how their workflow and processes may change with the introduction of an EHR system.[60] For example, officials from one Regional Extension Center told us they helped providers determine whether they would qualify for the Medicare

[60]Regional Extension Center officials generally identified providing information and guidance on the EHR programs and workflow redesign services as the services that providers value most highly.

or Medicaid EHR programs. During the second step, the Regional Extension Centers can help providers select a certified EHR system. For example, officials from one Regional Extension Center told us they shared a vendor evaluation tool with providers, which helped providers evaluate factors such as EHR systems' capabilities and cost. During the third step, Regional Extension Center officials can help providers implement an EHR system by, for example, suggesting best practices for securing and protecting the privacy of personal health information stored and processed by the EHR system. During the fourth step, the Regional Extension Centers provide services that help providers to meet the EHR programs' meaningful use criteria. For example, the Regional Extension Centers may help their clients identify approaches for satisfying certain program reporting requirements by helping providers capture and exchange health data.

Conclusions

The aim of the Medicare and Medicaid EHR programs is not just to increase EHR adoption, but to support the meaningful use of EHR technology to improve quality and reduce the cost of care. As a result, the programs have the potential to affect the millions of people who receive care through Medicare or Medicaid. Since the programs began in 2011, CMS has issued $3.1 billion in incentive payments to providers. As a new program with particular complexities—such as the number and types of measures providers must report—there are risks to program integrity, and CMS could take steps, beyond those already taken, to assess and mitigate the risk of improper payments and to improve program efficiency. It is encouraging that CMS has awarded contracts to evaluate states' implementation of the Medicaid EHR program, including their efforts to prevent improper payments. However, CMS, while planning to assess its audit strategy for the Medicare EHR program, has not yet specified time frames for implementing this assessment. As CMS moves forward, it is important that the agency assess whether verifying additional reporting requirements on a prepayment basis could improve the integrity of the Medicare EHR program. Conducting prepayment verifications may be more effective in minimizing improper payments because CMS's planned postpayment audits will be conducted for only a small sample of providers, whereas CMS's prepayment verification processes are conducted for all providers that apply for incentive payments. In addition, prepayment verifications help to avoid the difficulties associated with the "pay and chase" aspects of recovering improper payments.

We identified two opportunities for CMS to improve the efficiencies of the Medicare and Medicaid EHR programs. First, CMS identified and took action to improve the efficiency of audits under the Medicaid EHR program but did not take a similar action in the Medicare EHR program. Specifically, although CMS suggested that states collect additional information from providers at the time of attestation to improve the efficiency of the postpayment audit process, CMS has not done so for the Medicare EHR program, but acknowledged that this action would be beneficial. Doing so would improve the efficiency of the postpayment audit process for the Medicare EHR program. Second, CMS could offer states the option of having CMS collect Medicaid providers' meaningful use attestations on their behalf rather than requiring states to collect this information on their own. CMS, by offering to collect this information from all Medicaid providers on behalf of states, as the agency currently does for some Medicaid providers, could alleviate the need for many states to create and maintain similar web-based attestation tools and could potentially yield cost savings at both the federal and state levels.

Recommendations for Executive Action

In order to improve the efficiency and effectiveness of processes to verify whether providers meet program requirements for the Medicare and Medicaid EHR programs, we recommend that the Administrator of CMS take the following four actions:

- Establish time frames for expeditiously implementing an evaluation of the effectiveness of the agency's audit strategy for the Medicare EHR program.
- Evaluate the extent to which the agency should conduct more verifications on a prepayment basis when determining whether providers meet Medicare EHR program's reporting requirements.
- Collect the additional information from Medicare providers during attestation that CMS suggested states collect from Medicaid providers during attestation.
- Offer states the option of having CMS collect meaningful use attestations from Medicaid providers on their behalf.

Agency Comments and Our Evaluation

We provided a draft of this report to HHS for comment. In its written comments (reproduced in app. V), HHS concurred with three of our recommendations to CMS. Specifically, we are encouraged that HHS said that to help implement these recommendations, CMS will evaluate the effectiveness of the audit strategy for the Medicare EHR program on an ongoing basis and document results quarterly, beginning approximately 3 months after the audits begin. In addition, CMS will evaluate the feasibility of conducting additional prepayment verifications under the Medicare EHR program. Further, CMS will explore collecting additional information from Medicare providers during attestation that CMS has suggested that states collect under the Medicaid EHR program.

HHS disagreed with our fourth recommendation that CMS offer to collect meaningful use attestations data from Medicaid providers on behalf of the states, citing two reasons. First, HHS does not believe there are significant barriers to states implementing attestation tools. It stated that the 43 states participating in the Medicaid EHR program have established a means for providers to attest to eligibility requirements and the adoption, implementation, or upgrade of their EHR. In HHS's view, incorporating the meaningful use attestations tools into the states' existing systems does not pose a barrier in part because HHS says CMS has taken steps to help the states design their attestation tools and has approved designs developed by vendors that the states can use. Second, HHS does not believe that implementing this recommendation would create a streamlined attestation process for Medicaid providers. It states that Medicaid providers would have to provide certain information to CMS and other information to the states, requiring providers to submit data to multiple sites. HHS believes this change could result in confusion and payment delays. In addition, HHS believes a more compelling challenge is designing a way for providers to report clinical quality measures electronically from their EHRs to the states and CMS. HHS stated that CMS established pilots that are intended to help providers leverage existing infrastructure to electronically exchange data on clinical quality measures directly from their EHRs to CMS.

Despite HHS's objections, we continue to believe that our recommendation should be implemented. In response to HHS's first reason, we believe that while some states have created tools to collect Medicaid attestation data, over the long run implementing our recommendation could improve the efficiency of the Medicaid EHR program and thereby minimize additional administrative costs, especially in the program's future years. Currently, both CMS and states create and maintain meaningful use attestation tools. The Medicaid EHR program

requirements in the second year of the program and through the rest of the decade will become increasingly similar to the requirements for the Medicare EHR program as will the information collected from providers by the states and CMS. Having both CMS and states design and maintain systems to collect much of the same information is inefficient. Further, it is expected that in future years, to demonstrate meaningful use, Medicare and Medicaid providers will be required to report additional information, and both CMS and the states will need to expend resources to update the attestation tools used to collect this information, a point we clarified in our report. By collecting meaningful use attestations on behalf of some states and U.S. insular areas, CMS could help ensure effective use of the $300 million that Congress provided for administrative costs of the Medicaid EHR program from 2009-2016.

In response to HHS's second reason, the report notes that under the current process for registering for the Medicaid EHR program, providers must already submit information on eligibility to both CMS and the states. Therefore, providers are familiar with submitting information to multiple sites. Furthermore, CMS currently collects meaningful use attestations for some Medicaid providers and has not reported that the transfer of this information to the states has delayed payments.

We agree with CMS that designing a means to electronically transmit meaningful use information, including clinical quality measures, directly from providers' EHRs to CMS and the states may present challenges. It is encouraging that the agency is attentive to electronic data exchange issues and is working with providers in the Medicare program to identify ways to leverage existing infrastructure to accomplish this goal. However, it is important for CMS to consider all approaches, including collecting meaningful use data on behalf of states, to ensure the Medicare and Medicaid EHR programs are administered as efficiently as possible.

As part of HHS's written response, the department also provided other general comments, which we incorporated as appropriate.

We are sending copies of this report to the Secretary of Health and Human Services, the Administrator of CMS, the National Coordinator for Health Information Technology, and other interested parties. In addition, the report will be available at no charge on GAO's website at http://www.gao.gov.

If you or your staff have any questions about this report, please contact me at (202) 512-7114 or at kohnl@gao.gov. Contact points for our Office of Congressional Relations and Office of Public Affairs can be found on the last page of this report. Other major contributors to this report are listed in appendix V.

Linda T. Kohn
Director, Health Care

List of Committees

The Honorable Max Baucus
Chairman
The Honorable Orrin G. Hatch
Ranking Member
Committee on Finance
United States Senate

The Honorable Tom Harkin
Chairman
The Honorable Michael B. Enzi
Ranking Member
Committee on Health, Education, Labor, & Pensions
United States Senate

The Honorable Fred Upton
Chairman
The Honorable Henry A. Waxman
Ranking Member
Committee on Energy and Commerce
House of Representatives

The Honorable Dave Camp
Chairman
The Honorable Sander M. Levin
Ranking Member
Committee on Ways and Means
House of Representatives

Appendix I: Scope and Methodology

This appendix provides additional details regarding our analysis of (1) measures providers reported to the Centers for Medicare and Medicaid Services (CMS) to demonstrate meaningful use and (2) Regional Extension Center data.

Analysis of measures providers reported to CMS to demonstrate meaningful use. We conducted several analyses of data from CMS's National Level Repository that providers reported to CMS to demonstrate meaningful use under the Medicare electronic health records (EHR) program in 2011.[1] We analyzed data submitted by providers from April 18, 2011, the date CMS began collecting these data, through December 8, 2011.[2] As a result, the data we analyzed for hospitals included full-year information because they were required to report these data by November 30, 2011, to receive a Medicare EHR incentive payment for 2011. In contrast, the data we analyzed for professionals did not include full-year information because CMS permitted them to submit these data through February 29, 2012, to receive a Medicare EHR incentive payment for 2011. We included all hospitals and professionals that, according to data from CMS's National Level Repository, had successfully demonstrated meaningful use even though some of those providers had not received Medicare EHR program incentive payments from CMS as of December 8, 2011.

Specifically, we analyzed meaningful use and clinical quality measures providers reported to CMS and which we obtained from CMS's National Level Repository to identify the following:

- *Frequency of measures reported*. We identified the frequency with which providers reported the mandatory meaningful use measures for

[1]The National Level Repository is a database that contains information on providers pertaining to the Medicare EHR program, including information on providers that registered for the incentive program; whether those providers attested to meaningfully using an EHR system; and the amount of incentive payments, if applicable. The National Level Repository also contains some information on providers pertaining to the Medicaid EHR program, which we did not include in our analysis.

[2]In general, our analysis does not include data providers affiliated with Medicare Advantage Organizations reported to demonstrate meaningful use. However, we did analyze data reported by professionals who may ultimately qualify for incentive payments under the Medicare Advantage EHR program. At the time of our analysis, CMS had not yet determined whether the professionals or the Medicare Advantage Organizations would receive the incentive payments.

which providers may claim exemptions. Six measures allow professionals to claim exemptions and three measures allow hospitals to claim exemptions if, according to the providers, those measures are not relevant to their patient populations or clinical practices.

- *Extent to which providers claimed allowable exemptions from reporting certain mandatory measures*. We determined the percentage of providers that claimed an exemption from reporting at least one mandatory meaningful use measure. As part of this analysis, we examined whether a greater percentage of certain types of providers reported at least one exemption compared to other types of providers.

- *Extent to which providers had patients who could be included in the calculation of clinical quality measures*. We examined the extent to which providers had few patients who could be included in the calculation of at least one clinical quality measure.[3] Measures that capture a small number of patients may be unreliable measures of quality because relatively small changes in the number of patients who experienced the care processes or outcomes targeted by the measure can generate large shifts in the calculated percentage for the measure. CMS has recognized in other programs that including a small number of patients in the calculation of a measure is a reliability issue. For example, on the agency's Hospital Compare website, which publicly reports clinical quality measures by hospital, CMS indicates whether the number of patients included in a particular measure calculation was based on less than 25 patients and thus too small to reliably tell how well the hospital was performing. For our analysis, we identified clinical quality measures as unreliable if fewer than seven patients met inclusion criteria for the calculation. The reporting period for the first year a provider demonstrates meaningful use is any 90 consecutive days during the year; for subsequent years, the reporting period is the full year. Assuming a steady patient population, providers that had fewer than seven patients meet inclusion criteria for calculating clinical quality measures during the 90-day reporting period would have fewer than 25 patients meet these criteria during the full-year reporting period. As part of this analysis, we examined whether a greater percentage of certain types of providers reported at

[3]Some clinical quality measures are comprised of more than one submeasure. In these cases, we analyzed the submeasure for which providers reported the greatest number of patients in the denominator of the measure.

least one clinical quality measure based on few patients compared to other types of providers.

We also analyzed other data sources to determine whether the reporting of meaningful use and clinical quality measures varied based on providers' characteristics, such as whether critical access hospitals were more likely than acute care hospitals to claim an exemption from reporting at least one mandatory meaningful use measure. We used Chi-square likelihood tests to determine whether differences in provider characteristics were statistically significant. In particular, we analyzed data from the following sources: CMS's Online Survey, Certification, and Reporting System (downloaded May 2011);[4] CMS's National Plan and Provider Enumeration System Downloadable File (downloaded October 2011); the Health Resources and Services Administration's 2009-2010 Area Resource File (released August 2010);[5] and CMS's 2010 Medicare Part B claims (downloaded February 2012). Using these data, we examined the following provider characteristics:

- *Hospital type*. We obtained data on hospital type—acute care or critical access hospital—from CMS's Online Survey, Certification, and Reporting System.[6]

- *Hospital ownership type*. We obtained data on hospital ownership type from CMS's Online Survey, Certification, and Reporting System. We created the ownership type of proprietary by selecting proprietary; the ownership type of nonprofit by combining voluntary nonprofit – church, voluntary nonprofit – private, and voluntary nonprofit – other; and the ownership type of government-owned by combining the four

[4]During the course of our work, CMS transitioned from using the Online Survey, Certification, and Reporting System to using the Certification and Survey Provider Enhanced Reports System to store certain data on hospital characteristics, and we were unable to obtain more recent data from the latter in time for our analysis.

[5]Although the Area Resource File is typically released annually, at the time of our analysis, the 2010-2011 Area Resource File had not yet been made publicly available.

[6]Three hospitals (less than 0.4 percent) are missing from our analysis of hospital characteristics because we were unable to match the hospitals to records contained in CMS's Online Survey, Certification, and Reporting System. CMS later provided clarification on this issue, which enabled us to match the hospitals to records contained in the Online Survey, Certification, and Reporting System, though we did not receive this information in time to include those hospitals in our analysis.

government designations (federal, state, local, and hospital district or authority).

- *Hospital number of beds*. We obtained data on the number of beds in hospitals, which includes beds that are certified for payment for Medicare and/or Medicaid, from CMS's Online Survey, Certification, and Reporting System. Using those data, we created four categories for the number of beds: (a) 1 to 49 beds, (b) 50 to 99 beds, (c) 100 to 199 beds, and (d) 200 or more beds.

- *Professional specialty*. We obtained data on professionals' primary specialty from CMS's National Plan and Provider Enumeration System Downloadable File. Then, with the assistance of a crosswalk that we obtained from CMS that aggregates specialty taxonomy codes into a smaller number of specialties, we created the following seven professional specialty categories: (a) chiropractor, (b) dentist, (c) generalist, (d) optometrist, (e) podiatrist, (f) specialist, and (g) other eligible physician.[7] Of those professionals who demonstrated meaningful use in the Medicare EHR program in 2011, we were unable to identify a primary specialty for 164 professionals (less than 0.7 percent) using the CMS downloadable file. The 900 professionals that were classified as "other eligible physicians" (about 3.8 percent) includes physicians for whom the information on professional specialty needed to classify them into one of the other professional specialty categories was not available in CMS's National Plan and Provider Enumeration System; however, we determined that those professionals had specialty types that were eligible to receive incentive payments using other CMS databases.[8]

- *Professionals' Medicare Part B charges*. We obtained all 2010 Medicare Part B charges from CMS.[9] For each professional (identified

[7]We classified doctors of medicine and osteopathic medicine that specialize in family practice, general practice, or internal medicine as generalists; all other doctors of medicine and osteopathic medicine were classified as specialists.

[8]Of the 900 professionals who were classified as other eligible physicians, 856 had permissible professional specialties listed in a July 2011 extract from CMS's Provider Enrollment, Chain, and Ownership System, which is the system that CMS uses to verify whether professionals are a permissible provider type. CMS provided documentation to support that the remaining 44 professionals also had permissible professional specialties.

[9]Medicare Part B charges refer to payments for physician, outpatient hospital, home health care, and certain other services.

by National Provider Identifier), we summed the amount of Medicare Part B charges over the year. Subsequently, we created four categories by aggregating total charges by professional: (a) less than or equal to the 25th percentile, (b) greater than the 25th percentile and less than or equal to the 50th percentile, (c) greater than the 50th percentile and less than or equal to the 75th percentile, and (d) greater than the 75th percentile.[10] Of those professionals who demonstrated meaningful use in the Medicare EHR program in 2011, information on the amount of Part B charges was missing for 359 professionals (about 1.5 percent).

- *Provider location*. We obtained zip codes for facility or practice locations for hospitals and professionals from CMS's Online Survey, Certification, and Reporting System and CMS's National Plan and Provider Enumeration System, respectively.[11] Then, with the assistance of a zip code to Federal Information Processing Standard code crosswalk file we obtained from CMS, we used the Health Resources and Services Administration's Area Resource File to identify whether providers were located in a metropolitan area—an area that has at least one urbanized area of 50,000 people. We then categorized providers located in metropolitan areas as being located in urban areas and providers that were not as being located in rural areas. We were unable to match 20 providers' zip codes to the Area Resource File (which is less than 0.1 percent of participating professionals).

To ensure the reliability of the data we analyzed, we interviewed officials from CMS, reviewed relevant documentation, and conducted electronic testing to identify missing data and obvious errors. On the basis of these activities, we determined that the data we analyzed were sufficiently reliable for our analysis.

Analysis of Regional Extension Center data. We analyzed data we obtained from the Office of the National Coordinator for Health Information Technology (ONC) in December 2011. The data, which the

[10]Percentiles were created using information on 2010 Medicare Part B charges for all professionals who had greater than $0 in charges.

[11]Practice location zip codes contained in CMS's National Plan and Provider Enumeration System are self-reported by professionals to CMS. We did not independently verify that professionals' practices were located in the self-reported zip code.

agency collects from Regional Extension Centers, contains information about the providers to whom the centers provided technical assistance. We determined the number of providers assisted by the Regional Extension Center program as well as the percentage of those providers overall and for each center that had (1) signed an agreement with a center, (2) implemented an EHR, and (3) demonstrated meaningful use. In addition, we determined the types of professionals who had signed an agreement for technical assistance with a center.

We made some adjustments to the data we obtained for professionals based on information obtained from officials at ONC. Specifically, we limited our analysis to professionals identified by a Regional Extension Center as being priority primary care providers, which are types of professionals for which ONC reimburses centers for providing technical assistance. This excluded 7,019 professionals (about 5.7 percent) from our analysis. We also excluded from our analysis professionals whose data we determined were unreliable based on information obtained from ONC officials. Specifically, we excluded any professionals who were missing or had anomalous entries for both an individual national provider identifier and an organizational national provider identifier. This excluded 355 professionals (about 0.3 percent) from the analysis. We also excluded another 2 professionals (less than 0.1 percent) who were identified in the data as being a type of professional that was not considered to be a priority primary care provider even though the professional was designated as such in the ONC data.

We also made some adjustments to the data we obtained for hospitals based on information obtained from officials at ONC. Specifically, we limited our analysis to hospitals identified by a Regional Extension Center as being a type of hospital targeted for outreach—that is, a critical access hospital or rural hospital. This excluded four organizations (about 0.4 percent) from the analysis.

To ensure the reliability of the data we analyzed, we interviewed officials from ONC, reviewed relevant documentation, and conducted electronic testing to identify obvious errors. On the basis of these activities, we determined that the data we analyzed were sufficiently reliable for our analysis.

Appendix II: How Medicare and Medicaid EHR Program Incentive Payments Are Calculated

Provider type	EHR program	Incentive payment
Professionals[a]	Medicare EHR program	The amount of incentive payment in any given year is equal to 75 percent of the professional's Medicare Part B charges for the year, subject to an annual limit which varies by year. The amount of the incentive payment in the first year cannot exceed $18,000 and the total over a 5-year period cannot exceed $44,000.[b] To earn the maximum amount, professionals must first demonstrate meaningful use in calendar year 2011 or 2012. Professionals who first demonstrate meaningful use in calendar year 2015 or later will not receive an EHR incentive payment.
	Medicaid EHR program[c]	The amount of incentive payment that a professional receives in any given year is, in general, a fixed amount; $21,250 in the first year and $8,500 in up to 5 subsequent years and the total amount over a 6-year period cannot exceed $63,750.[d] Professionals must receive an incentive payment by calendar year 2016 in order to receive incentive payments in subsequent years.
Hospitals[e]	Medicare EHR program	*For acute care hospitals*, the amount of incentive payment in any given year is generally based on the hospital's annual discharges and Medicare share (i.e., percentage of inpatient days at the hospital in a given year attributable to Medicare patients).[f] Incentive payments are awarded over periods of up to 4 years. To earn the maximum amount, acute care hospitals must first demonstrate meaningful use in fiscal year 2011, 2012, or 2013. *For critical access hospitals*, the incentive payment amount is generally based on the hospital's Medicare share and the reasonable costs incurred for the purchase of depreciable assets necessary to administer certified EHR technology, such as computers and associated hardware and software. Critical access hospitals can earn payments for up to 4 years. To earn the maximum amount, critical access hospitals must first demonstrate meaningful use in fiscal year 2011 or 2012.
	Medicaid EHR program[c]	The amount of incentive payment that a hospital receives in any given year is generally based on the hospital's annual discharges and Medicaid share. The number of years over which incentive payments are awarded (between 3 to 6 years) is at the discretion of the state.

Source: GAO analysis of CMS documents.

[a]Professionals may not receive incentive payments under both the Medicare and Medicaid programs during the same year; they must choose in which program to participate. Until 2015, professionals eligible for both the Medicare and Medicaid EHR programs may switch programs only once after the first incentive payment is initiated.

[b]CMS will increase the incentive payments that would otherwise apply by 10 percent each year for Medicare professionals that predominantly furnish services in geographic areas designated as health professional shortage areas, such as areas that have a shortage of primary medical care.

[c]Medicaid providers can only receive incentive payments from one state in the same payment year.

[d]Pediatricians with at least 20 percent Medicaid patient volume, but less than 30 percent Medicaid patient volume only qualify to receive $14,167 in the first year, $5,667 in subsequent years, and the total amount over a 6-year period cannot exceed $42,500.

[e]Hospitals may qualify to receive incentive payments under the Medicare EHR program and the Medicaid EHR program during the same year.

[f]Acute care hospitals refer to hospitals described in Section 1886(d) of the Social Security Act, which are paid under the inpatient prospective payment system.

Appendix III: Meaningful Use and Clinical Quality Measures for the Medicare EHR Program, 2011

To demonstrate meaningful use in the first year of the Medicare EHR program, professionals must report on a total of 20, and hospitals must report on a total of 19, meaningful use measures.[1] For certain meaningful use measures, providers may report to CMS that the measures are not relevant to them; this is referred to as claiming an exemption. Furthermore, to satisfy the requirement for one of the meaningful use measures "report clinical quality measures to CMS," providers must report on clinical quality measures identified by CMS.[2] Table 9 below provides the number of meaningful use measures and clinical quality measures providers must report for the first year of the Medicare EHR program. Table 10 describes the meaningful use measures, and table 11 and table 12 describe the clinical quality measures for professionals and hospitals, respectively.

[1]To receive incentive payments during the first year of the Medicare EHR program, providers must collect data related to the meaningful use measures in any 90 consecutive days during that first payment year and report those data to CMS. To receive incentive payments in subsequent years, providers must collect data related to the meaningful use measures over a full year and report that data to CMS.

[2]According to CMS, clinical quality measures help quantify health care processes, outcomes, patient perceptions, and organizational structure.

Table 9: Number of Measures Providers Must Report or Claim Allowed Exemptions from Reporting for the Medicare EHR Program, 2011

Type of measure	Professionals	Hospitals
Meaningful use measures		
Mandatory[a]	15 (*6 allowed exemptions*[b])	14 (*3 allowed exemptions*[b])
Menu	5 from a menu of 10 (*8 on menu allowed exemptions*[b])	5 from a menu of 10 (*4 on menu allowed exemptions*[b])
Total meaningful use measures that providers must report if no exemptions claimed	20	19
Clinical quality measures		
Core measures and/or alternate core measures[c]	3 to 6	15
Menu	3 from a menu of 38	N/A
Total clinical quality measures that must be reported	6 to 9	15

Source: GAO analysis of CMS documents.

[a]One of the mandatory meaningful use measures requires professionals and hospitals to report clinical quality measures.

[b]Professionals and hospitals may report to CMS that certain measures are not relevant to them; this is referred to as claiming an exemption.

[c]Professionals report all three core clinical quality measures, even if none of their patients could be included in the calculation of the measures. However, for any core clinical quality measure for which zero patients could be included in the calculation, professionals must pick a replacement from the alternate core measures.

Table 10: Meaningful Use Measures for Professionals and Hospitals in the Medicare EHR Program, 2011

	Professionals		Hospitals	
Meaningful use measure	**Mandatory**	**Menu[a]**	**Mandatory**	**Menu[a]**
Use computerized provider order entry for medication orders: At least one medication order entered using computerized provider order entry for more than 30 percent of patients with at least one medication in their medication lists	X[b]		X	
Implement drug-drug and drug-allergy interaction checks: Enable the EHR system's ability to check for these interactions	X		X	
Maintain an up-to-date problem list of current and active diagnoses: Record list of current and active diagnoses or indicate no known problems for more than 80 percent of patients	X		X	
Generate and transmit permissible prescriptions electronically: Generate and transmit more than 40 percent of permissible prescriptions electronically	X[b]			
Maintain active medication list: Record at least one entry or indicate no current prescriptions for more than 80 percent of patients	X		X	
Maintain active medication allergy list: Record at least one entry or indicate no known medication allergies for more than 80 percent of patients	X		X	
Record demographics: Record preferred language, gender, race, ethnicity, and date of birth for more than 50 percent of patients; hospitals must also record date and preliminary cause of death in the event of mortality	X		X	
Record and chart changes in vital signs: Record height, weight, and blood pressure for more than 50 percent of patients age 2 and older; calculate and display body mass index and plot and display growth charts for children age 2 though 20	X[b]		X	
Record smoking status for patients 13 years old or older: Record smoking status for more than 50 percent of patients age 13 and older	X[b]		X[b]	
Report clinical quality measures to CMS[c]	X		X	
Implement one clinical decision support rule: Implement one clinical decision support rule related to specialty or high clinical priority along with the ability to track compliance with that rule	X		X	
Provide patients with an electronic copy of their health information: Provide information (for professionals and hospitals, provide diagnostic test results, problem list, medication lists, and medication allergies, and for hospitals also provide discharge summary and procedures) within 3 business days to more than 50 percent of patients who requested that information	X[b]		X[b]	
For professionals, provide patients with clinical summaries for each office visit within 3 business days; for hospitals, provide patients with electronic copy of discharge instructions at the time of discharge, upon request: For professionals, provide information for more than 50 percent of visits; for hospitals, provide information for more than 50 percent of patients who requested that information	X[b]		X[b]	
Exchange key clinical information electronically: Perform at least one test of EHR technology's capacity to exchange key clinical information	X		X	
Protect electronic health information created or maintained by the certified EHR technology: Conduct or review a security risk analysis, implement security updates as necessary, and correct identified security deficiencies	X		X	

	Professionals		Hospitals	
Meaningful use measure	**Mandatory**	**Menu[a]**	**Mandatory**	**Menu[a]**
Implement drug formulary checks: Enable this functionality and maintain access to at least one internal or external formulary		X[b]		X
Incorporate clinical lab-test results into EHR as structured data: Incorporate into the EHR technology more than 40 percent of the clinical lab test results ordered whose results are positive, negative, or in numerical format		X[b]		X
Generate patient lists by specific conditions: Generate at least one report listing patients with a specific condition to use for quality improvement, reduction of disparities, research, or outreach		X		X
Send patient reminders per patient preference for preventive or follow-up care: Send appropriate reminders to more than 20 percent of patients age 65 and older or age 5 and younger		X[b]		
Provide patients with timely electronic access to their health information: Provide electronic access to health information (including lab results, problem list, medication lists, and allergies) to at least 10 percent of patients within 4 business days		X[b]		
Use certified EHR technology to identify patient-specific education resources and provide those resources to the patient if appropriate: Provide to more than 10 percent of patients		X		X
Perform medication reconciliation for patients received from another setting of care or provider of care: Perform for more than 50 percent of transitions of care		X[b]		X
Provide summary care record for each transition of care or referral care: Provide for more than 50 percent of transitions of care and referrals		X[b]		X
Submit electronic data to immunization registries or immunization information systems: Perform at least one test of EHR technology's capacity to submit electronic data to immunization registries and follow up submission if the test is successful		X[b]		X[b]
Submit electronic syndromic surveillance data to public health agencies: Perform at least one test of EHR technology's capacity to submit electronic syndromic surveillance data to public health agencies		X[b]		X[b]
Submit electronic data on reportable lab results to public health agencies: Perform at least one test of EHR technology's capacity to submit electronic reportable (as required by state or local law) lab results to public health agencies and follow up submission if the test is successful				X[b]
Record advance directives for patients 65 years or older: Record indication of advance directive status for more than 50 percent of all unique patients age 65 and older				X[b]
Total measures	**15**	**10**	**14**	**10**
Measures with exemptions	6	8	3	4

Source: GAO analysis of CMS documents.

[a]Menu clinical quality measures refer to the set of 10 clinical quality measures from which CMS allows providers the flexibility to select 5 measures to report.

[b]Providers may claim exemptions from reporting the measure if, according to the providers, the measure is not relevant to their patient populations or clinical practices.

[c]Professionals generally must report on 6 clinical quality measures from a list of 44 measures identified by CMS. Hospitals must report on 15 clinical quality measures.

Table 11: Clinical Quality Measures for Professionals in the Medicare EHR Program, 2011

Clinical quality measure	National Quality Forum measure number[a]
Core measures (3)	
Blood pressure measurement for hypertension patients: Percent of visits for patients ages 18 years and older with hypertension who have been seen for at least two office visits and have had blood pressure recorded	0013
Tobacco use assessment and cessation intervention: Percent of patients ages 18 years and older who have been seen for at least 2 office visits who were queried about tobacco use and, if applicable, received a cessation intervention	0028
Adult weight screening and follow-up: Percent of patients ages 18 years and older with a body mass index documented within the past 6 months and, if the most recent body mass index is outside parameters, a follow-up plan is documented	0421
Alternate core measures (3)	
Weight assessment and counseling for children and adolescents: Percent of patients ages 2-17 years who had an outpatient visit with a primary care physician or obstetrician/gynecologist who had a body mass index documented and received counseling for nutrition and physical activity	0024
Influenza immunization for patients ages 50 years and older: Percent of patients ages 50 years and older who received an influenza immunization during the flu season	0041
Childhood immunization status: Percent of children aged 2 years who had recommended childhood immunizations by their second birthday	0038
Menu measures (38)	
Hemoglobin A1c poor control for diabetics: Percent of patients ages 18-75 years with diabetes who had hemoglobin A1c > 9 percent	0059
Cholesterol management and control for diabetics: Percent of patients ages 18-75 years with diabetes who had low density lipoprotein cholesterol < 100 mg/dL	0064
Blood pressure management for diabetics: Percent of patients ages 18-75 years with diabetes who had blood pressure <140/90 mmHg	0061
Treatment for heart failure: Percent of patients ages 18 years and older with heart failure and left ventricular systolic dysfunction who were prescribed an angiotensin-converting enzyme inhibitor or angiotensin receptor blocker	0081
Beta-blocker therapy for coronary artery disease patients: Percent of patients ages 18 years and older with a diagnosis of coronary artery disease and a prior myocardial infarction who were prescribed beta-blocker therapy	0070
Pneumonia vaccination for older adults: Percent of patients ages 65 years and older who have received a pneumococcal vaccine	0043
Breast cancer screening: Percent of women ages 40-69 years who had a mammogram to screen for breast cancer	0031
Colorectol cancer screening: Percent of adults ages 50-75 who had appropriate screening for colorectol cancer	0034
Oral antiplatelet therapy for patients with coronary artery disease: Percent of patients ages 18 years and older with coronary artery disease who were prescribed oral antiplatelet therapy	0067
Beta-blocker therapy for heart failure patients: Percent of patients ages 18 years and older with a diagnosis of heart failure and left ventricular systolic dysfunction who were prescribed beta-blocker therapy	0083

Clinical quality measure	National Quality Forum measure number[a]
Antidepressant medication management: Percent of patients ages 18 years and older who were diagnosed with a new episode of major depression, were treated with antidepressant medication, and remained on antidepressant medication	0105
Optic nerve evaluation for glaucoma patients: Percent of patients ages 18 years and older with primary open angle glaucoma who have been seen for at least two office visits and have had an optic nerve evaluation	0086
Diabetic retinopathy assessment: Percent of patients ages 18 years and older with diabetic retinopathy who had a dilated macular or fundus examination that included documentation of the level of severity of retinopathy and the presence or absence of macular edema	0088
Diabetic retinopathy communication: Percent of patients ages 18 years and older with diabetic retinopathy for whom the results of a dilated macular or fundus examination was communicated to the physician responsible for managing ongoing care	0089
Asthma pharmacologic therapy: Percent of patients ages 5-40 years with persistent asthma who were prescribed a preferred medication or acceptable alternative treatment	0047
Asthma assessment: Percent of patients ages 5-40 years with asthma who have been seen for at least two office visits and received an asthma symptom assessment	0001
Appropriate testing for children with pharyngitis: Percent of children ages 2-18 years with pharyngitis who were dispensed an antibiotic and received a group A streptococcus test	0002
Hormonal therapy for breast cancer: Percent of female patients ages 18 years and older with stage IC - IIIC estrogen receptor/progesterone receptor positive breast cancer who were prescribed tamoxifen or aromatase inhibitor	0387
Chemotherapy for stage III colon cancer patients: Percent of patients ages 18 years and older with Stage III colon cancer who are referred for, prescribed, or have previously received adjuvant chemotherapy	0385
Avoidance of overuse of bone scan for staging low-risk prostate cancer: Percent of patients with low-risk prostate cancer who were treated and did not have a bone scan performed since being diagnosed with prostate cancer	0389
Smoking and tobacco use cessation assistance: Percent of patients ages 18 years and older who smoked or used tobacco, were seen by a professional, and received advice to quit smoking or using tobacco or discussed cessation medications, methods, or strategies	0027
Eye exam for diabetics: Percent of patients ages 18-75 years with diabetes who had a retinal or dilated eye exam or a negative retinal exam by an eye care professional	0055
Urine screening for diabetics: Percent of patients ages 18-75 years with diabetes who had a nephropathy screening test or evidence of nephropathy	0062
Foot exam for diabetics: Percent of patients ages 18-75 years with diabetes who had a foot exam	0056
Cholesterol-lowering therapy for coronary artery disease patients: Percent of patients ages 18 years and older with coronary artery disease who were prescribed a lipid-lowering therapy	0074
Warfarin therapy for heart failure patients with atrial fibrillation: Percent of patients ages 18 years and older with heart failure and atrial fibrillation who were prescribed warfarin therapy	0084
Blood pressure management for patients with ischemic vascular disease: Percent of patients ages 18 years and older who had an acute myocardial infarction, coronary artery bypass graft, or percutaneous transluminal coronary angioplasty, or had a diagnosis of ischemic vascular disease and whose blood pressure was in control	0073

Clinical quality measure	National Quality Forum measure number[a]
Use of an antithrombic for ischemic vascular disease patients: Percent of patients ages 18 years and older who had an acute myocardial infarction, coronary artery bypass graft, or percutaneous transluminal coronary angioplasty, or had a diagnosis of ischemic vascular disease and who had documentation of use of aspirin or another antithrombotic	0068
Initiation and engagement of alcohol and other drug dependence treatment: Percent of adolescent and adult patients with a new episode of alcohol and other drug dependence who initiate treatment within 14 days of the diagnosis and had two or more additional alcohol and other drug services within 30 days of the initiation visit	0004
Prenatal screening for Human Immunodeficiency Virus: Percent of patients who gave birth who were screened for human immunodeficiency virus during the first or second prenatal care visit	0012
Prenatal anti-D immune globulin: Percent of D (Rh) negative, unsensitized patients who gave birth and received anti-D immune globulin at 26-30 weeks gestation	0014
High blood pressure control: Percent of patients ages 18-85 years with hypertension and whose blood pressure was adequately controlled	0018
Cervical cancer screening: Percent of women ages 21-64 years who received one or more Pap tests to screen for cervical cancer	0032
Chlamydia screening for women: Percent of women ages 15-24 years who were identified as sexually active who had at least one test for chlamydia	0033
Use of appropriate medications for asthma: Percent of patients ages 5-50 years with persistent asthma and were appropriately prescribed medication	0036
Use of imaging studies for low back pain: Percent of patients with low back pain who did not have an imaging study within 28 days of diagnosis	0052
Lipid panel and cholesterol control for ischemic vascular disease patients: Percent of patients ages 18 years and older who had an acute myocardial infarction, coronary bypass, or coronary angioplasty, or had a diagnosis of ischemic vascular disease who had a complete lipid profile performed and whose low density lipoprotein cholesterol < 100 mg/dL	0075
Hemoglobin A1c control for diabetics: Percent of patients ages 18-75 years with diabetes who had hemoglobin A1c < 8 percent	0575

Source: GAO analysis of CMS documents.

Note: To demonstrate meaningful use, professionals must report on all 3 core clinical quality measures and select an additional 3 measures from a menu of 38 measures to report. Professionals must report all 3 core clinical quality measures, even if none of their patients could be included in the calculation of the measures. However, for any core clinical quality measure for which zero patients could be included in the calculation, professionals must pick a replacement from the alternate core measures. As a result, professionals could report up to 6 core and alternate core clinical quality measures if zero patients could be included in the calculation of all 3 core measures. For additional information about these measures, see 75 Fed. Reg. 44314 (July 28, 2010).

[a]The measure number refers to a number that can be used to search for and review additional information regarding the quality measure on the National Quality Forum's website. See http://www.qualityforum.org/Measures_List.aspx. The National Quality Forum is a nonprofit member organization that fosters agreement on national standards for measuring and public reporting of health care performance data.

Table 12: Clinical Quality Measures for Hospitals in the Medicare EHR Program, 2011

Clinical quality measure	National Quality Forum measure number[a]
Emergency Department Throughput – 1: Median time from emergency department arrival to time of departure from the emergency room for patients admitted to the facility from the emergency department	0495
Emergency Department Throughput – 2: Median time from admit decision time to time of departure from the emergency department of emergency department patients admitted to inpatient status	0497
Stroke patients discharged on anti-thrombotics: Percent of ischemic stroke patients prescribed antithrombotic therapy at hospital discharge	0435
Stroke patients discharged on anticoagulants: Percent of ischemic stroke patients with atrial fibrillation/flutter who are prescribed anticoagulation therapy at hospital discharge	0436
Stroke patients that received thrombolytic therapy within 2 hours: Percent of acute ischemic stroke patients who arrived at the hospital within 2 hours of symptom onset and received thrombolytic therapy within 3 hours of symptom onset	0437
Stroke patients that received antithrombotic therapy within 2 days: Percent of acute ischemic stroke patients administered antithrombotic therapy by the end of hospital day 2	0438
Stroke patients discharged on statins: Percent of ischemic stroke patients with elevated low-density lipoprotein cholesterol, for whom cholesterol was not measured, or who were prescribed lipid-lowering medications prior to hospital admission that were prescribed a statin medication at hospital discharge	0439
Stroke patients that received stroke education: Percent of ischemic or hemorrhagic stroke patients or their caregivers who were given educational materials that address specific topics during the hospital stay	0440
Stroke patients that received a rehabilitation assessment: Percent of ischemic or hemorrhagic stroke patients who were assessed for rehabilitation services	0441
Venous thromboembolism prophylaxis within 24 hours: Percent of patients who received venous thromboembolism prophylaxis or have documentation of why no such prophylaxis was given the day of or the day after hospital admission or surgery	0371
Venous thromboembolism prophylaxis in intensive care units: Percent of patients who received venous thromboembolism prophylaxis or have documentation of why no such prophylaxis was given the day of or the day after admission to the intensive care unit or surgery	0372
Anticoagulation overlap therapy: Percent of patients with venous thromboembolism who received an overlap of parenteral anticoagulation and warfarin therapy	0373
Platelet monitoring for patients on heparin: Percent of patients with venous thromboembolism who received intravenous unfractionated heparin therapy and had their platelet counts monitored	0374
Venous thromboembolism discharge instructions: Percent of patients with venous thromboembolism who are discharged to selected settings with written discharge instructions that address four criteria	0375
Potentially preventable venous thromboembolism: Percent of patients with venous thromboembolism during hospitalization who did not receive venous thromboembolism prophylaxis between hospital admission and the day before the embolism diagnostic testing was ordered	0376

Source: GAO analysis of CMS documents.

Note: For additional information about these measures, see 75 Fed. Reg. 44314 (July 28, 2010).

[a]The measure number refers to a number that can be used to search for and review additional information regarding the quality measure on the National Quality Forum's website. See http://www.qualityforum.org/Measures_List.aspx. The National Quality Forum is a nonprofit member organization that fosters agreement on national standards for measuring and public reporting of health care performance data.

Appendix IV: Regional Extension Center Program, Goals, and Progress in Helping Providers Demonstrate Meaningful Use

Regional Extension Centers report to the Office of the National Coordinator for Health Information Technology (ONC) data that describes the progress they have made in providing technical assistance to professionals or hospitals to help those providers meaningfully use EHRs. The data the Regional Extension Centers report to ONC describe the following three milestones in the technical assistance provided:

- The professional or hospital signs an agreement with a Regional Extension Center to receive technical assistance.[1]
- The professional or hospital implemented an EHR which has electronic prescribing and measure reporting functionality.
- The professional or hospital demonstrated meaningful use, consistent with the Medicare and Medicaid EHR programs' requirements.[2]

When the program was established, ONC also required each of the 62 Regional Extension Centers to set a targeted numbers of professionals and hospitals each center would assist—that is, the center's goal for the number of providers it would help meaningfully use EHRs. ONC uses the data the Regional Extension Centers report for each of the three milestones in the technical assistance process as well as the goals each center established to evaluate the effectiveness of individual Regional Extension Centers and of the program as a whole. Tables 13 and 14 list the goals and number of professionals and hospitals, respectively, assisted towards meaningful use by each center.

[1]The technical assistance agreement specifies the services the Regional Extension Center will provide and the terms and amount (if any) of payment the center will charge for these services.

[2]This milestone is documented even if the professional or hospital is not eligible to receive incentive payments under the Medicare or Medicaid EHR programs.

Table 13: Goals and Number of Professionals Assisted in Progressing Towards Demonstrating Meaningful Use, by Regional Extension Center, through December 19, 2011

			Number of professionals (percent of the goal)		
Location	Regional Extension Center name	Goal number of professionals targeted for assistance	Signed an agreement with a Regional Extension Center	Implemented an EHR	Demonstrated meaningful use
AK	Alaska eHealth Network	1,000	338 (34)	184 (18)	30 (3)
AL	The Alabama Regional Extension Center	1,304	1,213 (93)	684 (53)	58 (4)
AR	Arkansas Foundation for Medical Care	1,280	949 (74)	515 (40)	23 (2)
AZ	Arizona Regional Extension Center	1,958	1,755 (90)	590 (30)	48 (3)
CA	California Health Information Partnership Services Organization North	3,403	719 (72)	333 (33)	0 (0)
CA	California Health Information Partnership Services Organization South	2,784	3,777 (111)	1,311 (39)	35 (1)
CA	CalOPTIMA Regional Extension Center	1,000	2,766 (99)	747 (27)	40 (1)
CA	Health Information Technology Extension Center for Los Angeles	3,000	2,575 (86)	1,038 (35)	27 (1)
CO	Colorado Regional Health Information Organization	2,295	2,435 (106)	1,548 (68)	226 (10)
CT	eHealthConnecticut Regional Extension Center	1,308	1,131 (87)	498 (38)	33 (3)
DC	District of Columbia Regional Extension Center	1,000	884 (88)	593 (59)	6 (1)
DE	Quality Insights of Delaware, Inc.	1,000	1,133 (113)	870 (87)	130 (13)
FL	Center for the Advancement of Health Information Technology	2,026	1,353 (67)	594 (29)	19 (1)
FL	Central Florida Health Information Technology Initiative	1,363	1,209 (89)	456 (34)	41 (3)
FL	PaperFree Florida Collaborative Health Information Technology Regional Extension Center	1,000	1,019 (102)	477 (48)	13 (1)
FL	South Florida Regional Extension Center	2,500	2,221 (89)	525 (21)	10 (0)
GA	Georgia Health Information Technology Regional Extension Center	5,200	4,099 (79)	2,433 (47)	83 (2)
HI	Hawaii Health Information Exchange	1,000	295 (30)	101 (10)	1 (0)
IA	Telligen	1,200	1,225 (102)	438 (37)	16 (1)
IL	Chicago Health Information Technology Regional Extension Center	1,486	1,449 (98)	447 (30)	18 (1)
IL	Illinois Health Information Technology Regional Extension Center	1,300	1,384 (107)	690 (53)	38 (3)

			Number of professionals (percent of the goal)		
Location	Regional Extension Center name	Goal number of professionals targeted for assistance	Signed an agreement with a Regional Extension Center	Implemented an EHR	Demonstrated meaningful use
IN	Indiana Health Information Technology Extension Center	2,200	2,125 (97)	1,226 (56)	61 (3)
KS	Kansas Foundation for Medical Care	1,200	1,266 (106)	634 (53)	92 (8)
KY	Kentucky Regional Extension Center	1,000	1,048 (105)	302 (30)	1 (0)
LA	Louisiana Health Care Quality Forum	1,042	1,091 (105)	231 (22)	8 (1)
MA	Massachusetts eHealth Institute	2,487	2,607 (105)	1,572 (63)	142 (6)
MD	Chesapeake Regional Information System for our Patients	1,000	1,408 (141)	461 (46)	16 (2)
ME	HealthInfoNet	1,000	1,036 (104)	357 (36)	10 (1)
MI	Michigan Center for Effective Information Technology Adoption	3,724	3,781 (102)	1,405 (38)	106 (3)
MN & ND	Regional Extension Assistance Center for Health Information Technology	3,600	4,352 (121)	2,202 (61)	76 (2)
MO	Missouri Health Information Technology Assistance Center	1,167	1,473 (126)	664 (57)	69 (6)
MS	Mississippi Regional Extension Center	1,000	1,167 (117)	736 (74)	26 (3)
MT & WY	Health Technology Services Regional Extension Center	1,000	880 (88)	322 (32)	0 (0)
NC	North Carolina Regional Extension Center	3,465	3,145 (91)	1,628 (47)	88 (3)
NE	Wide River Technology Extension Center	1,129	967 (86)	340 (30)	31 (3)
NH	Regional Extension Center of New Hampshire	1,000	1,108 (111)	800 (80)	107 (11)
NJ	New Jersey Health Information Technology Extension Center	5,000	5,271 (105)	2,417 (48)	263 (5)
NM	New Mexico Health Information Technology Regional Extension Center	1,035	970 (94)	498 (48)	14 (1)
NV & UT	HealthInsight	1,463	1,596 (109)	866 (59)	98 (7)
NY	New York eHealth Collaborative	5,107	3,624 (80)	1,864 (41)	49 (1)
NY	New York City Regional Electronic Adoption Center for Health	4,543	5,113 (100)	2,689 (53)	277 (5)
OH, IN, & KY	Greater Cincinnati Health Bridge Inc.	1,739	1,857 (107)	1,014 (58)	118 (7)
OH	Ohio Health Information Partnership	6,000	6,129 (102)	2,745 (46)	248 (4)
OK	Oklahoma Foundation for Medical Quality	1,000	1,089 (109)	544 (54)	39 (4)
OR	Oregon Health Information Technology Regional Extension Center	2,674	2,719 (102)	1,577 (59)	118 (4)

			Number of professionals (percent of the goal)		
Location	Regional Extension Center name	Goal number of professionals targeted for assistance	Signed an agreement with a Regional Extension Center	Implemented an EHR	Demonstrated meaningful use
PA	Pennsylvania Regional Extension & Assistance Center for Health Information Technology East	5,700	2,901 (51)	1,339 (24)	300 (5)
PA	Pennsylvania Regional Extension & Assistance Center for HIT West	3,000	2,106 (70)	990 (33)	111 (4)
PR	Ponce Medical School Foundation, Inc.	4,038	3,211 (80)	425 (11)	2 (0)
RI	Rhode Island Quality Institute	1,000	904 (90)	528 (53)	84 (8)
SC	South Carolina Regional Extension Center	1,000	1,133 (113)	628 (63)	17 (2)
SD	HealthPOINT	1,070	690 (65)	105 (10)	1 (0)
TN	Tennessee Regional Extension Center	1,343	1,474 (110)	1,179 (88)	44 (3)
Tribal lands	National Indian Health Board	2,925	843 (84)	405 (41)	24 (2)
TX	CentrEast	1,000	1,131 (40)	307 (11)	22 (1)
TX	Gulf Coast Regional Extension Center	2,855	952 (64)	444 (30)	86 (6)
TX	North Texas Regional Extension Center	1,498	729 (64)	201 (18)	0 (0)
TX	West Texas Health Information Technology Regional Extension Center	1,133	1,875 (64)	548 (19)	0 (0)
VA	Virginia Health Information Technology Regional Extension Center	2,285	2,320 (102)	1,432 (63)	196 (9)
VT	Vermont Information Technology Leaders, Inc.	845	828 (98)	553 (65)	17 (2)
WA & ID	Washington & Idaho Regional Extension Center	2,369	2,391 (101)	1,592 (67)	72 (3)
WI	Wisconsin Health Information Technology Extension Center	1,625	1,695 (104)	940 (58)	70 (4)
WV	West Virginia Health Information Technology Regional Extension Center	1,000	987 (99)	459 (46)	74 (7)

Source: GAO analysis of Office of the National Coordinator for Health Information Technology data.

Notes: Professionals who have signed an agreement with a Regional Extension Center to receive technical assistance include those who have implemented an EHR and demonstrated meaningful use, and professionals who have implemented an EHR include those who have demonstrated meaningful use. The data on the number of professionals at each milestone are reported by Regional Extension Centers to the Office of the National Coordinator for Health Information Technology and as a result do not necessarily mean that these providers received an incentive payment from either the Medicare or Medicaid EHR programs.

Table 14: Goals and Number of Hospitals Assisted in Progressing Towards Demonstrating Meaningful Use, by Regional Extension Center, through December 19, 2011

			Number of hospitals (percent of the goal)		
Location	Regional Extension Center name	Goal number of hospitals targeted for assistance	Signed an agreement with a Regional Extension Center	Implemented an EHR	Demonstrated meaningful use
AK	Alaska eHealth Network	14	4 (29)	2 (14)	0 (0)
AL	The Alabama Regional Extension Center	36	0 (0)	0 (0)	0 (0)
AR	Arkansas Foundation for Medical Care	35	9 (26)	2 (6)	2 (6)
AZ	Arizona Regional Extension Center	20	1 (5)	0 (0)	0 (0)
CA	California Health Information Partnership Services Organization North	28	23 (82)	5 (18)	0 (0)
CA	California Health Information Partnership Services Organization South	15	7 (47)	5 (33)	0 (0)
CO	Colorado Regional Health Information Organization	38	33 (87)	12 (32)	2 (5)
FL	Center for the Advancement of Health Information Technology	14	4 (29)	0 (0)	0 (0)
FL	South Florida Regional Extension Center	3	0 (0)	0 (0)	0 (0)
GA	Georgia Health Information Technology Regional Extension Center	56	34 (61)	1 (2)	1 (2)
HI	Hawaii Health Information Exchange	12	8 (67)	0 (0)	0 (0)
IA	Telligen	87	63 (72)	12 (14)	5 (6)
IL	Illinois Health Information Technology Regional Extension Center	60	36 (60)	15 (25)	0 (0)
IN	Indiana Health Information Technology Extension Center	32	30 (94)	14 (44)	0 (0)
KS	Kansas Foundation for Medical Care	95	95 (100)	24 (25)	9 (10)
KY	Kentucky Regional Extension Center	30	22 (73)	4 (13)	2 (7)
LA	Louisiana Health Care Quality Forum	64	20 (31)	2 (3)	2 (3)
MA	Massachusetts eHealth Institute	11	2 (18)	0 (0)	0 (0)
ME	HealthInfoNet	22	19 (86)	6 (27)	0 (0)
MI	Michigan Center for Effective Information Technology Adoption	36	24 (67)	9 (25)	0 (0)
MN & ND	Regional Extension Assistance Center for Health Information Technology	124	89 (72)	30 (24)	8 (7)
MO	Missouri Health Information Technology Assistance Center	55	54 (98)	0 (0)	0 (0)
MS	Mississippi Regional Extension Center	45	12 (27)	3 (7)	1 (2)

			Number of hospitals (percent of the goal)		
Location	Regional Extension Center name	Goal number of hospitals targeted for assistance	Signed an agreement with a Regional Extension Center	Implemented an EHR	Demonstrated meaningful use
MT & WY	Health Technology Services Regional Extension Center	68	43 (63)	6 (9)	1 (2)
NE	Wide River Technology Extension Center	66	38 (58)	4 (6)	0 (0)
NH	Regional Extension Center of New Hampshire	13	12 (92)	4 (31)	0 (0)
NM	New Mexico Health Information Technology Regional Extension Center	17	7 (41)	2 (12)	1 (6)
NV & UT	HealthInsight	39	9 (23)	0 (0)	0 (0)
NY	New York eHealth Collaborative	10	10 (100)	6 (60)	0 (0)
OH, IN, & KY	Greater Cincinnati Health Bridge Inc.	24	4 (17)	0 (0)	0 (0)
OH	Ohio Health Information Partnership	43	32 (74)	12 (28)	0 (0)
OK	Oklahoma Foundation for Medical Quality	62	25 (40)	5 (8)	2 (3)
OR	Oregon Health Information Technology Regional Extension Center	32	28 (88)	0 (0)	0 (0)
PA	Pennsylvania Regional Extension & Assistance Center for Health Information Technology East	15	5 (33)	1 (7)	0 (0)
PA	Pennsylvania Regional Extension & Assistance Center for Health Information Technology West	12	6 (50)	3 (25)	0 (0)
SC	South Carolina Regional Extension Center	13	4 (31)	0 (0)	0 (0)
SD	healthPOINT	48	45 (94)	1 (2)	0 (0)
TN	Tennessee Regional Extension Center	40	6 (15)	3 (8)	2 (5)
TX	CentrEast	32	6 (19)	0 (0)	0 (0)
TX	Gulf Coast Regional Extension Center	51	4 (8)	0 (0)	0 (0)
TX	North Texas Regional Extension Center	9	3 (33)	0 (0)	0 (0)
TX	West Texas Health Information Technology Regional Extension Center	76	19 (25)	5 (7)	1 (1)
Tribal lands	National Indian Health Board	26	22 (85)	9 (35)	0 (0)
VA	Virginia Health Information Technology Regional Extension Center	7	5 (71)	1 (14)	0 (0)
VT	Vermont Information Technology Leaders, Inc.	9	4 (44)	2 (22)	0 (0)
WA & ID	Washington & Idaho Regional Extension Center	47	33 (70)	16 (34)	0 (0)
WI	Wisconsin Health Information Technology Extension Center	69	41 (59)	17 (25)	2 (3)

Location	Regional Extension Center name	Goal number of hospitals targeted for assistance	Number of hospitals (percent of the goal)		
			Signed an agreement with a Regional Extension Center	Implemented an EHR	Demonstrated meaningful use
WV	West Virginia Health Information Technology Regional Extension Center	17	1 (6)	0 (0)	0 (0)

Source: GAO analysis of Office of the National Coordinator for Health Information Technology data.

Note: Hospitals that have signed an agreement with a Regional Extension Center to receive technical assistance include those that have implemented an EHR and demonstrated meaningful use, and hospitals that have implemented an EHR include those that have demonstrated meaningful use. The data on the number of hospitals at each milestone are reported by Regional Extension Centers to the Office of the National Coordinator for Health Information Technology and as a result do not necessarily mean that these hospitals received an incentive payment from either the Medicare or Medicaid EHR programs.

Appendix V: Comments from the Department of Health and Human Services

DEPARTMENT OF HEALTH & HUMAN SERVICES

OFFICE OF THE SECRETARY

Assistant Secretary for Legislation
Washington, DC 20201

APR 10 2012

Linda T. Kohn
Director, Health Care
U.S. Government Accountability Office
441 G Street NW
Washington, DC 20548

Dear Ms. Kohn:

Attached are comments on the U.S. Government Accountability Office's (GAO) correspondence entitled: "ELECTRONIC HEALTH RECORDS: First Year of CMS's Incentive Programs Shows Opportunities to Improve Processes to Verify Providers Met Requirements" (GAO-12-481).

The Department appreciates the opportunity to review this draft section of the report prior to publication.

Sincerely,

Jim R. Esquea

Jim R. Esquea
Assistant Secretary for Legislation

Attachment

GENERAL COMMENTS OF THE DEPARMENT OF HEALTH AND HUMAN SERVICES (HHS) ON THE GOVERNMENT ACCOUNTABILITY OFFICE'S (GAO) DRAFT REPORT ENTITLED, "ELECTRONIC HEALTH RECORDS: FIRST YEAR OF CMS'S INCENTIVE PROGRAMS SHOWS OPPORTUNITIES TO IMPROVE PROCESSES TO VERIFY PROVIDERS MET REQUIREMENTS" (GAO-12-481)

The Department appreciates the opportunity to review and comment on this draft report.

GAO Recommendation

CMS should establish timeframes for expeditiously implementing an evaluation of the effectiveness of the agency's audit strategy for the Medicare EHR program.

HHS Response

HHS concurs with this recommendation. CMS will evaluate the effectiveness of the audit strategy for the Medicare EHR program on an ongoing basis, and will document results quarterly. This process will begin approximately 3 months after the audit begins.

GAO Recommendation

CMS should evaluate the extent to which the agency should conduct more verification on a prepayment basis when determining whether providers meet Medicare EHR program's reporting requirements.

HHS Response

HHS concurs with this recommendation. CMS will evaluate the feasibility of conducting additional prepayment verifications of reporting requirements.

The current draft of the report does not acknowledge that, under the Medicare program, CMS not only verifies that a provider is an eligible provider type, but also verifies that a provider has an approved enrollment in the Provider Enrollment and Chain Ownership System. This verification ensures that a provider is licensed, and is not sanctioned or excluded from the Medicare Incentive Program. These items are noted on the Medicaid eligibility table, but not on the Medicare eligibility table. Please revise the report to accurately reflect this information.

GAO Recommendation

CMS should collect the additional information from Medicare providers during attestation that CMS suggested states collect from Medicaid providers during attestation.

HHS Response

HHS concurs with this recommendation. CMS will look into collecting additional information from Medicare providers, such as the name of the immunization registry, which was suggested to States under the Medicaid Incentive program.

GENERAL COMMENTS OF THE DEPARMENT OF HEALTH AND HUMAN SERVICES (HHS) ON THE GOVERNMENT ACCOUNTABILITY OFFICE'S (GAO) DRAFT REPORT ENTITLED, "ELECTRONIC HEALTH RECORDS: FIRST YEAR OF CMS'S INCENTIVE PROGRAMS SHOWS OPPORTUNITIES TO IMPROVE PROCESSES TO VERIFY PROVIDERS MET REQUIREMENTS" (GAO-12-481)

GAO Recommendation

CMS should offer states the option of having CMS collect meaningful use attestations from Medicaid providers on their behalf.

HHS Response

HHS does not concur with the recommendation that CMS collect attestation data for the States. All of the 43 States or Territories that have launched their Medicaid EHR Incentive Programs currently already have provider attestation portals where providers can attest to the eligibility requirements and the requirement to Adopted, Implemented or Upgraded (AIU) their Certified EHR Technology. To add additional screens to just capture the meaningful use data is not as laborious for States as was the initial work they have already completed. In fact, CMS shared the code we used for the design of our Medicare meaningful use attestation screens with the States, as well as a list of recommended meaningful use attestation design tips. The same multi-State vendor collaboratives that have supported the IT development for the States to accept registrations and make payments are supporting the integration of the meaningful use attestation screens. When we approve the screens as designed by a particular vendor, that approval is good for any State that subsequently uses that vendor's screens as-is. In addition, at least two States have offered their meaningful use attestation screens free to other States to use. Therefore, believe that there are not significant barriers to States in implementing meaningful use attestation.

Furthermore, in order for Medicaid providers to use CMS to attest for meaningful use, they would have to first register with CMS, then bounce to the State to verify eligibility requirements and complete an attestation related to patient volume, then bounce back to CMS for meaningful use attestation, and then bounce back to the State for payment, audits and appeals. This would not appear to streamline the provider experience, and likely would result in confusion and additional delays in providers receiving timely payments.

The crux of what remains to be designed, both by CMS *and* States is the method of reporting clinical quality measures electronically from electronic health records. CMS has established electronic reporting pilots for Medicare eligible professionals (EPs) and hospitals that leverage the Physician Quality Reporting System (for EPs) and Inpatient Quality Reporting (for hospitals) infrastructures. CMS has encouraged States to consider how to collect meaningful use clinical quality measure data from providers' EHRs with the goal of leveraging that infrastructure for CHIPRA, ACA 2701 and other State and Federal quality measurement and reporting initiatives. We are working with States and our Federal colleagues to consider any approaches that would leverage efficiencies and existing infrastructure, and those emphasize reusable IT and shared services.

GENERAL COMMENTS OF THE DEPARMENT OF HEALTH AND HUMAN SERVICES (HHS) ON THE GOVERNMENT ACCOUNTABILITY OFFICE'S (GAO) DRAFT REPORT ENTITLED, "ELECTRONIC HEALTH RECORDS: FIRST YEAR OF CMS'S INCENTIVE PROGRAMS SHOWS OPPORTUNITIES TO IMPROVE PROCESSES TO VERIFY PROVIDERS MET REQUIREMENTS" (GAO-12-481)

General Comments

In reviewing the report, HHS has identified several areas that we believe should be addressed:

- Although the analysis in the report relied on the most current available information, there have been significantly more providers who have registered and attested for the Medicare and Medicaid EHR Incentive Programs since December 8, 2011, the concluding date of the GAO analysis. In fact, more than double the number of providers (57,765 eligible professionals) have now attested to meaningful use. While we recognize that waiting for this data would have significantly delayed this report, given the significant disparity in numbers, we believe this report should acknowledge the difference more prominently, not only in the footnotes of the report.

- We encourage GAO to provide a more detailed explanation of meaningful use exclusions for particular measures prior to the analysis of exclusion data so that readers can understand exclusions within the context they were intended. Exclusions are available only for particular measures, and not to reduce requirements, but in order to accommodate all established scopes of practice for the wide variety of professionals and hospitals eligible for the EHR Incentive Programs. We discuss this in great detail at 75 FR 44328:

  For example, without any consideration of an EP's, eligible hospital's or CAH's capability to meet the measure associated with a core objective, any EP that could not order medications requiring a prescription would not be able to become a meaningful EHR user since e-prescribing is a core set objective.

  Similarly, any eligible hospital or CAH that did not have any requests for electronic copy of discharge instructions would not be able to become a meaningful EHR user.

  We view this context as especially important since the analysis conducted by GAO would seem to support the goal of the exclusions. For example, GAO found that specialists report more exclusions than generalists, which CMS expected because we included exclusions specifically for those providers who would not perform certain actions as a regular part of practice (e.g., chiropractors who do not prescribe and therefore could not meet the objective for e-prescribing).

- The report mentions the contributions of the Regional Extension Centers in facilitating providers' participation in the EHR Incentive Programs. However, it fails to acknowledge the efforts of CMS to promote the Incentive Programs. CMS has created a comprehensive website to provide a variety of educational materials for providers. We produced registration and attestation guides for eligible professionals and hospitals to walk them through the processes. We have issued over 250 frequently asked questions to address questions that providers continue to ask. We created a listserv and now have over 17,000 subscribers who receive regular program updates. We have an EHR

GENERAL COMMENTS OF THE DEPARMENT OF HEALTH AND HUMAN SERVICES (HHS) ON THE GOVERNMENT ACCOUNTABILITY OFFICE'S (GAO) DRAFT REPORT ENTITLED, "ELECTRONIC HEALTH RECORDS: FIRST YEAR OF CMS'S INCENTIVE PROGRAMS SHOWS OPPORTUNITIES TO IMPROVE PROCESSES TO VERIFY PROVIDERS MET REQUIREMENTS" (GAO-12-481)

Information call center to respond to questions and systems concerns. We have conducted many webinars and speaking engagements across the country to further educate providers on the requirements of the Medicare and Medicaid EHR Incentive Programs.

Appendix VI: GAO Contact and Staff Acknowledgments

GAO Contact

Linda T. Kohn, (202) 512-7114 or kohnl@gao.gov

Staff Acknowledgments

In addition to the contact named above, E. Anne Laffoon, Assistant Director; Julianne Flowers; Krister Friday; Melanie Krause; Shannon Legeer; Monica Perez-Nelson; Amanda Pusey; and Stephen Ulrich made key contributions to this report.