HITECH Act Update:
An Overview of the Medicare and Medicaid EHR Incentive Programs Regulations

The Health Information Technology for Economic and Clinical Health Act (HITECH Act) was enacted as part of the American Recovery and Reinvestment Act on February 17, 2009. The HITECH Act is designed to improve the United States health care delivery system through the adoption and use of health information technology. These provisions aim to create a nationwide electronic health system that is efficient, secure and private in an effort to improve health outcomes and lower the cost of healthcare. To accomplish these goals, the federal government allotted $19.2 billion of funding to promote the adoption and meaningful use of interoperable health information technology and electronic health records (EHRs).

To fully implement the requirements of the HITECH Act, the Department of Health and Human Services (HHS) recently issued three final rules. The first final rule, the "EHR Incentive Program Final Rule," pertains to the Medicare and Medicaid Electronic Health Record (EHR) Incentive Programs. These programs offer incentives to eligible professionals and hospitals that adopt and demonstrate the meaningful use of EHRs to improve the quality, safety, and effectiveness of health care. Economic analysts estimate that the government will expend $9.7 billion to $27.4 billion in Medicare and Medicaid incentive payments over the next 10 years.[1] Under the EHR incentive programs, eligible professionals can receive as much as $44,000 over a five-year period through Medicare and up to $63,750 over a six-year period through Medicaid. Hospitals, on the other hand, can earn millions of dollars for implementing and being meaningful users of certified EHRs. In addition to outlining the payments participants may receive, the final rule also established the meaningful use objectives and associated metrics that eligible participants must meet to qualify for incentive payments.

The remaining final rules address EHR technology. "The Temporary Certification Program for Health Information Technology Final Rule" established a certification program and process to test and certify EHR technology. In addition, the "Health Information Technology: Initial Set of Standards, Implementation Specifications, and Certification Criteria for Electronic Health Record Technology Final Rule" outlined the standards and certification requirements for EHR technology. HHS has noted that although the regulations correspond to and complement the requirements under the HITECH Act's Medicare and Medicaid Incentive Programs, the regulations apply to all health information and EHR technology.

This brief provides an overview of the HHS regulations concerning the Medicare and Medicaid EHR Incentive Programs, as well as the EHR technology standards and certification requirements as they relate to these programs. Please note that although the HITECH Act is applicable to a variety of health care providers, this brief will focus on the laws and regulations related to hospitals.

[1] Department of Health and Human Services Centers for Medicare & Medicaid Services 42 CFR Parts 412, 413, 422 et al. Medicare and Medicaid Programs; Electronic Health Record Incentive Program; Final Rule, 75 Fed. Reg. 144, 44545 (28 Jul. 2010).

Overview of the Medicare and Medicaid EHR Incentive Programs

Medicare

Under the Medicare EHR Incentive Program, incentive payments are available to eligible hospitals that demonstrate meaningful use of certified EHR technology. An eligible hospital must be a critical access hospital or a subsection (d) hospital paid under the inpatient prospective payment system (i.e., an acute care hospital).[2] In addition, a hospital must be located in 1 of the 50 states or the District of Columbia to participate in the program.

According to the HITECH Act, eligible hospitals that fulfill all program requirements can begin to receive incentive payments in federal fiscal year (FY) 2011.[3] The last year eligible hospitals can receive incentive payments is in FY 2016. Furthermore, eligible hospitals can begin to participate in the Medicare EHR Incentive Program in any year from FY 2011 through FY 2015. It is important to note, however, that the HITECH Act and EHR Incentive Program Final Rule are designed to encourage early adopters of EHRs. Eligible hospitals that choose to participate in the program starting in FY 2014 or later will receive lower incentive payments. In addition, beginning in FY 2015, hospitals will be subject to reduced Medicare payments if they are not meaningful users of certified EHR technology. Therefore, there is an advantage for hospitals to enroll in the Medicare EHR Incentive Program early, adopt certified EHRs, meet the definition of meaningful use and continue to be meaningful users of EHRs. This will ensure maximum incentive payments under the EHR Incentive Program.

Medicaid

The EHR Incentive Program Final Rule also addresses requirements for the Medicaid EHR Incentive Program. While this program is similar to the Medicare EHR Incentive Program, there are a few notable differences. First, implementation of a Medicaid EHR Incentive Program is strictly voluntary. In contrast to the federal government implementing and managing the Medicare EHR Incentive Program, states can choose whether or not to implement and manage a Medicaid EHR Incentive Program. Consequently, it is possible that not all states will have a Medicaid EHR Incentive Program.

Second, more types of hospitals are eligible for incentive payments under the Medicaid EHR Incentive Program. In states that implement an EHR Incentive Program, an eligible hospital is either an acute care inpatient hospital or a children's hospital. An acute care inpatient hospital is defined as a health care facility with an average length of stay of 25 days or less. In addition, the hospital must have a Centers for Medicare & Medicaid Services (CMS) Certification Number in which the last four digits fall in the series 0001-0879 or 1300-1399. Thus, an acute care hospital under the Medicaid EHR Incentive Program can include general short-term stay hospitals, cancer hospitals, and critical access hospitals.

Third, in order to qualify for Medicaid EHR incentive payments, the hospital must also meet a Medicaid patient volume requirement. Specifically, at least 10 percent of the hospital's patient volume must be Medicaid patients. CMS has established two methods for calculating a hospital's Medicaid patient volume. State Medicaid Agencies can either select one of CMS' methodologies or develop their own methodology. If a State Medicaid Agencies creates their own methodology for calculating patient

[2] Social Security Act § 1886(d)(1)(B).

[3] The federal FY starts October 1 and ends September 30 of the next calendar year. For example, federal FY 2011 begins October 1, 2010 and ends September 30, 2011.

volume, it must be approved by CMS. This minimum threshold, however, does not apply to children hospitals.

Fourth, under the Medicaid EHR Incentive Program, eligible hospitals can receive payments from FY 2011 to FY 2021; however, the last year a hospital can initiate participation in the program is FY 2016. In addition, hospitals will not face lower payments if they are not meaningful users of EHRs. This type of Medicaid fee schedule adjustment does not exist in the provisions for the Medicaid EHR Incentive Program.

Fifth, in their first year of participation in the program, eligible hospitals can qualify for incentive payments if they either: (1) adopt, implement, or upgrade to a certified EHR; *or* (2) demonstrate meaningful use of certified EHR. This gives hospitals some latitude to demonstrate meaningful use of certified EHR. Subsequent to the first year of participation, however, participants must demonstrate the meaningful use of certified EHR.

Medicare and Medicaid EHR Incentive Payments

Medicare Incentive Payments

Under the Medicare EHR Incentive Program, eligible hospitals can receive incentive payments for a maximum of 4 years beginning in FY 2011. The last year eligible hospitals can receive an incentive payment is FY 2016.

The incentive payment for eligible hospitals is calculated by multiplying the following three factors:

1. ***Initial Amount.*** This factor is equal to the sum of a discharge-related amount and the $2 million base amount statutorily established under the HITECH Act. The discharge-related amount is based on the total number of discharges of an eligible hospital. If the total number of discharges is between 1 and 1, 149 or is greater than 23,000, the discharge-related amount is $0; however, if the total number of discharges of an eligible hospital is between 1,150 and 23,000, the discharge-related amount is $200. Therefore, the Initial Amount is calculated as follows:

Discharges	Formula *(Initial Amount = Base amount + Discharge – Related Amount)*	Total Initial Amount
1 to 1, 149	*Initial amount = $2,000,000 + ($0 x total number of discharges)*	*$2,000,000*
1,150 to 23,000	*Initial amount = $2,000,000 + ($200 x total number of discharges)*	*Between $2,000,000 and $6,370,400*
Greater than 23,000	*Initial amount = $2,000,000 + ($200 x[23,001-1149])*	*Limited by law to $6,370, 400*

2. ***Medicare Share.*** The Medicare Share is a fraction. The numerator of this fraction is the number of acute care inpatient-bed-days for which the hospital received a Medicare Part A payment plus the number of acute care inpatient-bed-days for beneficiaries enrolled in Medicare Part C. The denominator is the product of the total number of acute care inpatient-bed-days and the percentage of the hospital's total charges that are not attributed to charity care. Thus, the Medicare Share is calculated as follows:

$$\frac{(\#\ of\ \ Inpatient\ Part\ A\ Bed\ Days) + (\#\ of\ Inpatient\ Part\ C\ Bed\ Days)}{(Total\ Inpatient\ Bed\ Days) \times (\frac{Total\ Charges - Charges\ Attributed\ to\ Charity\ Care}{Total\ Charges})}$$

3. ***Transition Factor.*** This factor reduces the amount of the incentive payment a participant can receive for each year of the program. HHS provided the following table denoting the transition factors for the Medicare EHR Incentive Program:

Table 1. Transition Factor for Medicare Fee-For-Service Eligible Hospitals.

Fiscal Year that Eligible Hospital Begins Participation in EHR Incentive Program.	Transition Factor for Fiscal Year of Incentive Payment					
	2011	**2012**	**2013**	**2014**	**2015**	**2016**
2011 October 1, 2010 to September 30, 2011	1.00	0.75	0.50	0.25	--	--
2012 October 1, 2011 to September 30, 2012	--	1.00	0.75	0.50	0.25	--
2013 October 1, 2012 to September 30, 2013	--	--	1.00	0.75	0.50	0.25
2014 October 1, 2013 to September 30, 2014	--	--	--	0.75	0.50	0.25
2015 October 1, 2014 to September 30, 2015	--	--	--	--	0.50	0.25

Based on the table above, if a hospital enrolls in the program on October 1, 2010 and is eligible to receive its first incentive payment in FY 2011, the Transition Factor is 1. In contrast, if a hospital enrolls in the Medicare EHR Incentive Program on October 1, 2013 and will receive its first incentive payment in FY 2014, the transition factor is reduced to 0.75. Overall, the transition factor "phases down the incentive payment over time."[4] This reiterates the importance of enrolling in the Medicare EHR Incentive Program early to obtain the maximum incentive payment.

Medicaid Incentive Payments

The methodology for calculating incentive payments under the Medicaid EHR Incentive Program is similar to the methodology used in the Medicare EHR Incentive Program. The main difference is that under the Medicaid EHR Incentive Program, states may pay eligible hospitals up to 100 percent of an aggregate EHR hospital incentive amount over a three to six year period. The aggregate EHR hospital incentive amount is a theoretical incentive amount hospitals could receive over a four year period. This theoretical incentive amount is based on two factors: (1) the overall EHR amount; and (2) the Medicaid Share.

The ***overall EHR amount*** is calculated using the same formula used to calculate the Medicare EHR Incentive Payment. However, under the HITECH Act, when calculating the overall EHR amount for Medicaid, the Medicare Share is equal to one. All other factors remain the same.

[4] "EHR Incentive Program Tip Sheet for Medicare Hospitals." Centers for Medicare & Medicaid Services: Fact Sheet. Jul. 2010.

The ***Medicaid Share*** is a fraction where the numerator is the sum of the estimated number of Medicaid inpatient-bed-days and Medicaid managed care inpatient-bed-days. The denominator of the Medicaid Share is the product of the estimated total number of inpatient-bed-days for eligible hospital and the estimated total amount of the eligible hospital's charges (not including charges attributed to charity care), divided by the estimated total amount of the hospital's charges. Accordingly, the Medicaid Share formula is detailed below:

$$\frac{(Estimated\ \#\ of\ Medicaid\ Inpatient\ Bed\ Days) + (Estimated\ \#\ of\ Medicaid\ Managed\ Care\ Inpatient\ Bed\ Days)}{(Estimated\ Total\ \#\ of\ Inpatient\ Bed\ Days) \times \frac{(Estimated\ Total\ Charges - Charges\ Attributed\ to\ Charity\ Care)}{Estimated\ Total\ Charges}}$$

Meaningful Use

In order to qualify for payments under the Medicare and Medicaid EHR Incentive Programs, hospitals must be meaningful users of certified EHR. The HITECH Act outlines three components of meaningful use:

- Certified EHR must be used in a meaningful manner;
- Certified EHR technology must be used for electronic exchange of health information to improve quality of health care; and
- Certified EHR technology must be used to submit specified quality measures.

In the EHR Incentive Program Final Rule, HHS further clarifies the definition of meaningful use and created three stages to implement the HITECH Act meaningful use components. The three stages, referenced as Stages 1, 2, and 3, are designed to reflect the advancement in EHR technology. Stage 1 is classified as the data capture and sharing stage. The final rule establishes the baseline for electronic capture and information sharing during this phase. Stage 2 is the advanced clinical processes phase and Stage 3 is the improved outcomes phase. To date, HHS has developed the meaningful use criteria for Stage 1 and will establish the criteria for the other stages in future rulemaking.

Stage 1 Meaningful Use Objectives and Measures

To demonstrate the meaningful use of EHRs, hospitals must meet 19 of the 24 objectives identified in the regulations.[5] These objectives are divided into two groups to ensure that the fundamental elements of meaningful use are adopted by all hospitals while "allowing latitudes in other areas to reflect providers' needs and their individual path to full EHR use."[6]

The first group is a core set of 14 required objectives that eligible hospitals must fulfill to receive an incentive payment. These required objectives are:

[5] Exception: In the Medicaid EHR Incentive Program, participants can qualify for incentive payments if (1) they demonstrate adoption, implementation, or upgrading certified EHR technology; or (2) demonstrate meaningful use of certified EHR technology. This only applies in the first year of participation. In subsequent years, participants must demonstrate meaningful use of certified EHR technology.

[6] Department of Health and Human Services Centers for Medicare & Medicaid Services 42 CFR Parts 412, 413, 422 et al. Medicare and Medicaid Programs; Electronic Health Record Incentive Program; Final Rule, 75 Fed. Reg. 144, 44313, 44588 (28 Jul. 2010).

1. Use Computerized Provider Order Entry (CPOE) for medication orders directly entered by any licensed healthcare professional that enter orders into the medical record per state, local, and professional guidelines.
2. Implement drug-drug and drug-allergy interaction checks.
3. Record patient demographics (sex, race, ethnicity, date of birth, preferred language, and in the case of hospitals, date and preliminary cause of death in the event of mortality).
4. Implement one clinical decision support rule.
5. Maintain up-to-date problem lists of current and active diagnoses.
6. Maintain active medication lists.
7. Maintain active medication allergy list.
8. Record vital signs and chart changes (height, weight, blood pressure, body-mass index, growth charts for children).
9. Record smoking status for patients 13 years or older.
10. Report hospital clinical quality measures to CMS or States.[7]
11. Provide patients with an electronic copy of their health information upon request.
12. Provide patients with an electronic copy of their discharge instructions at the time of discharge upon request.
13. Have electronic capability to exchange key clinical information among providers of care and patient-authorized entities.
14. Implement systems to protect the privacy and security of patient data in the EHR.

The second group is a menu set that contains 10 objectives from which hospitals must select and meet 5 objectives to be eligible for incentive payments. One of the five objectives selected from the menu set must be a designated public health initiative. The 10 objectives in the menu set are:

1. Implement drug-formulary checks.
2. Record advanced directives for patients 65 years or older.
3. Incorporate clinical lab test results as structured data.
4. Generate lists of patients by specific conditions to use for quality improvement, reduction for disparities, research, or outreach.
5. Use certified EHR technology to identify patient-specific education resources and provide to patient if appropriate.
6. Perform medication reconciliation between care settings.
7. Perform summary of care record for patients referred or transitioned to another provider or setting.
8. Submit electronic immunization data to immunization registries or immunization information systems. *(Public Health Objective)*
9. Submit electronic data on reportable laboratory results to public health agencies. *(Public Health Objective)*
10. Submit electronic syndromic surveillance data to public health agencies. *(Public Health Objective)*

HHS also established specific measures for each meaningful use objective. In order to demonstrate meaningful use, hospitals must comply with the metric assigned to each meaningful use objective. For example, hospitals must use CPOE for medication orders that are directly entered by a licensed healthcare professional. To meet this meaningful use objective, the hospital is required to demonstrate

[7] See Appendix 2 for CMS clinical quality measures.

that more than 30 percent of patients have at least one medication in their medication list ordered through the CPOE system. Additional information regarding the meaningful use measures is available in Appendix 1.

Certification of EHR Technology

The EHR Incentive Program requires participants to use certified EHR technology to qualify for incentive payments. HHS recently issued two final rules related to health information and EHR technology. The final rules address two critical components regarding the implementation of EHR technology: (1) the EHR technology certification program and process, and (2) the standards and certification requirements for EHR technology.

The first rule titled "The Temporary Certification Program for Health Information Technology Final Rule" was issued on June 18, 2010. This final rule established a temporary EHR certification program and outlined the process organizations must follow to be authorized to test and certify EHR technology. Under the final rule, the HHS Office of the National Coordinator for Health Information Technology (ONC) is required to select organizations to be Authorized Testing and Certification Bodies (ATCBs). ATCBs will test and certify EHR technology for the EHR incentive programs. Although this EHR certification program is temporary, the program will ensure that certified EHR technology is available for health care providers to demonstrate meaningful use for the first year of the EHR incentive programs. HHS ONC intends to issue a final rule concerning a permanent certification program in Fall 2010, which will replace this temporary certification program. HHS ONC anticipates launching the permanent certification program in 2012.

As of August 30, 2010, HHS ONC selected two ATCBs to test and certify EHR technology.[8] According to HHS, the announcement of the ATCBs "means that EHR vendors can now begin to have their products certified as meeting criteria to support meaningful use."[9] HHS anticipates that eligible hospitals will be able to purchase certified EHR technology by Fall 2010. Providers should monitor communications from HHS as they intend to issue further instructions regarding EHR technology products in the near future.

The second final rule, issued on July 28, 2010, is titled "Health Information Technology: Initial Set of Standards, Implementation Specifications, and Certification Criteria for Electronic Health Record Technology Final Rule." This final rule finalized the initial standards and certification criteria for EHR technology. According to HHS ONC, the EHR technology criteria outlined in the final rule will support Stage 1 of meaningful use. This will ensure that the certified EHR technology health care providers adopt have the technical and functional capabilities required to fulfill the meaningful use objectives.

Generally, the standards HHS adopted under the final rule address the technical specifications for computer technology. Examples include, but are not limited to:

- Standards concerning content exchange;
- Vocabulary standards such as code sets, terminology, and nomenclature used to represent electronic health records; and

[8] The two ATCBs are Certification Commission for Health Information Technology (CCHIT) and Drummond Group Inc. (DGI).

[9] "Initial EHR Certification Bodies Named." Department of Health and Human Services: Press Release. 30 Aug. 2010.

- Standards regarding the protection of electronic health information that is created, maintained, and exchanged (e.g. encryption and decryption of electronic health information).

HHS also established certification requirements to address the functional specifications for EHR technology. These requirements represent the initial steps necessary to support the overall goal of developing an interoperable electronic health system. The EHR technology certification criteria for an inpatient setting are listed below:[10]

- **CPOE**: EHR technology must enable users to electronically record, store, retrieve, and modify at a minimum medication, laboratory, and radiology or imaging order types.

- **Record demographics**: EHR technology must allow users to electronically record, modify, and retrieve patient demographic data including preferred language, gender, race, ethnicity, date of birth, and date and preliminary cause of death in the event of mortality. Further, the EHR technology must be able to record race and ethnicity in accordance with the race and ethnicity standards.[11]

- **Clinical decision support:** EHR technology must implement automated electronic clinical decision support rules (in addition to drug-drug and drug-allergy contraindication checking) based on the data elements included in problem lists, medication list, demographics, and laboratory test results.

- **Notifications**: EHR technology must automatically and electronically generate and indicate in real-time, notifications and care suggestions based upon clinical decision support rules.

- **Electronic copy of health information**: EHR technology must enable the user to create an electronic copy of a patient's clinical information. At a minimum, this must include diagnostic test results, problem lists, medication lists, medication allergy lists, and procedures in human readable format and on electronic media, or through some other electronic means in accordance with technical specifications and the patient summary record standards.[12,13] In addition, the EHR technology must enable the user to create an electronic copy of the discharge summary in human readable format and on electronic media, or through some other electronic media.

- **Electronic copy of discharge instructions**: EHR technology must enable a user to create an electronic copy of the discharge instructions for a patient, in human readable format, at the time of discharge on electronic media or through some other electronic means.

- **Exchange Clinical Information and Patient Summary Records**. EHR technology must be capable of electronically receiving and displaying a patient's summary record from other providers and organizations including at a minimum, diagnostic test results, problem lists,

[10] Additional information concerning the EHR technology certification criteria is available in HHS Final Rule titled "Department of Health and Human Services 45 Part 170 Health Information Technology: Initial Set of Standards, Implementation Specifications, and Certification Criteria for Electronic Health Record Technology; Final Rule."
[11] 45 CFR § 170.207(f).
[12] 45 CFR § 170.205(a)-(b).
[13] 45 CFR § 170.207(a)-(d).

medication lists, medication allergy lists and procedures in accordance with the patient record summary standards.[14]

- **Electronically transmit**: EHR technology must enable users to electronically transmit a patient's summary record to other providers and organizations including at a minimum diagnostic results, problem lists, medication lists, medication allergy lists, and the applicable technical specifications, patient record summary, laboratory test results, and medication standards.[15,16,17,18]

- **Reportable lab results**: EHR technology must electronically record, modify, retrieve, and submit reportable clinical lab results in accordance with the standards that govern the electronic transmission of prescription information and laboratory test standards.[19,20]

- **Advance directives**: EHR technology should enable users to electronically record whether a patient has an advance directive.

- **Calculate and submit clinical quality measures**: EHR technology must electronically calculate all of the clinical quality measures specified by CMS for eligible hospitals and critical access hospitals.

- **Submission**: EHR technology must enable a user to electronically submit calculated clinical quality measures in accordance with the electronic submission of lab results to public health agencies standards.[21]

Conclusion

Overall, HHS is collaborating with a number of agencies such as OCR, CMS, and ONC to implement the provisions under the HITECH Act. The HITECH Act and its Medicare and Medicaid EHR Incentive Programs consist of several moving parts. Appendix 3 outlines key implementation dates of the EHR incentive programs.

As HHS continues to move forward with the Medicare and Medicaid EHR Incentive Program, providers are encouraged to regularly review CMS' EHR Incentive Program website for updated guidelines and instructions.

The EHR Incentive Program website is available at:
http://www.cms.gov/EHRIncentivePrograms/01_Overview.asp#TopOfPage.

[14] 45 CFR § 170.205(a)-(b).
[15] 45 CFR § 170.205(a).
[16] 45 CFR § 170.207(a)-(b).
[17] 45 CFR § 170.207(c).
[18] 45 CFR § 170.207(d).
[19] 45 CFR § 170.205(c).
[20] 45 CFR § 170.207 (c).
[21] 45 CFR § 170.205(f).

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13. "HHS Strengthens Health Information Privacy and Security through News Rules." U.S. Department of Health & Human Services: News Release. 8 Jul. 2010.
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15. "Medicaid Hospital Incentive Payment Calculations." Centers for Medicare & Medicaid Services: Fact Sheet. Jul. 2010.

Appendix 1: Meaningful Use Objectives and Measures.

Appendix Table 1: Meaningful Use: Core Set of Objectives.

Objective	Measure
1. Use computerized physician order entry (CPOE) for medication orders directly entered by any licensed healthcare professional who can enter orders into the medical record per state, local, and professional guidelines.	More than 30 percent of patients with at least one medication in their medication list have at least one medication order through CPOE.
2. Implement drug-drug and drug-allergy interaction checks.	Functionality is enabled for these checks for the entire reporting period.
3. Record patient demographics (sex, race, ethnicity, date of birth, preferred language, and in the case of hospitals, date and preliminary cause of death in the event of mortality).	More than 50 percent of patients' demographic data recorded as structured data.
4. Implement one clinical decision support rule.	One clinical decision support rule implemented.
5. Maintain-up-to-date problem list of current and active diagnoses.	More than 80 percent of patients have at least one entry recorded as structured data.
6. Maintain active medication lists.	More than 80 percent of patients have at least one entry recorded as structured data.
7. Maintain active medication allergy list.	More than 80 percent of patients have at least one entry recorded as structured data.
8. Record vital signs and chart changes (height, weight, blood pressure, body-mass index, growth charts for children).	More than 50 percent of patients 2 years of age or older have height, weight, and blood pressure recorded as structured data.
9. Record smoking status for patients 13 years or older.	More than 50 percent of patients 13 years of age or older have smoking status recorded as structured data.
10. Report hospital clinical quality measures to CMS or States.[22]	For 2011, provide aggregate numerator and denominator through attestation; for 2010, electronically submit measures.
11. Provide patients with an electronic copy of their health information, upon request.	More than 50 percent of all patients who are discharged from inpatient department or emergency department of eligible hospital or critical access hospital and who request an electronic copy of their discharge instructions are provided with it.
12. Provide patients with an electronic copy of their discharge instructions at time of discharge, upon request.	More than 50 percent of requesting patients receive electronic copy within 3 business days.
13. Capability to exchange key clinical information among providers of care and patient-authorized entities electronically.	Perform at least one test of EHR's capacity to electronically exchange information.
14. Implement systems to protect privacy and security of patient data in the EHR.	Conduct or review a security risk analysis, implement security updates as necessary, and correct identified security deficiencies.

[22] See Appendix 2 for Meaningful Use Clinical Measures.

Appendix 1 Continued: Meaningful Use Objectives and Measures.

Appendix Table 2: Meaningful Use: Menu Set of Objectives.

Objective	Measure
1. Implement drug-formulary checks.	Drug formulary check system is implemented and has access to at least one internal or external drug formulary for the entire reporting period.
2. Record advanced directives for patients 65 years or older.	More than 50 percent of patients 65 years of age or older have an indication of an advance directive status recorded.
3. Incorporate clinical lab test results as structured data.	More than 40 percent of clinical laboratory test results whose results are in positive/negative or numerical format are incorporated into EHRs as structured data.
4. Generate lists of patients by specific conditions to use for quality improvement, reduction for disparities, research, or outreach.	Generate at least one listing of patients with a specific condition.
5. Use certified EHR technology to identify patient-specific education resources and provide to patient if appropriate.	More than 10 percent of patients are provided patient-specific education resources.
6. Perform medication reconciliation between care settings.	Medication reconciliation is performed for more than 50 percent of transitions of care.
7. Perform summary of care record for patients referred or transitioned to another provider or setting.	Summary of care record is provided for more than 50 percent of patient transition of referrals.
8. Submit electronic immunization data to immunization registries or immunization information systems.[†]	Perform at least one test data submission and follow-up submission (where registries can accept electronic submission).
9. Submit electronic data on reportable laboratory results to public health agencies.[†]	Perform at least one test of data submission and follow-up submission (where public health agencies can accept electronic data).
10. Submit electronic syndromic surveillance data to public health agencies.[†]	Perform at least one test of data submission and follow-up submission (where public health agencies can accept electronic data).

[†] Indicates a public health objective.

Appendix 2: Meaningful Use Clinical Quality Measures for Hospitals.

Hospitals must report the following 15 clinical quality measures under the EHR incentive program:

1. Emergency Department Throughput-Admitted Patients: Median time from emergency department arrival to emergency department departure for admitted patients;
2. Emergency Department Throughput-Admitted Patients: Decision time to emergency department departure time for admitted patients;
3. Ischemic stroke: discharge on anti-thrombotics;
4. Ischemic stroke: anticoagulation for A-fib/flutter;
5. Ischemic stroke: Thrombolytic therapy for patients arriving within two hours of symptom onset
6. Ischemic or hemorrhagic stroke: antithrombotic therapy by day two;
7. Ischemic stroke: discharge on statins;
8. Ischemic or hemorrhagic stroke: rehabilitation assessment;
9. Venous thromboembolism prophylaxis within 24 hours of arrival;
10. Intensive care unit venous thromboembolism prophylaxis;
11. Anticoagulation overlap therapy;
12. Platelet monitoring on unfractionated heparin;
13. Venous thromboembolism discharge instructions;
14. Venous thromboembolism discharge instructions; and
15. Incidence of potentially preventable venous thromboembolism.

Appendix 3: Key Implementation Dates of EHR Incentive Programs.[23.24]

June 24, 2010	This is the effective date for the Temporary Certification Program.
July 1, 2010	ONC accepting applications from entities that are seeking ONC-Authorized Testing Certification Body (ONC-ATCB) approval.
August 27, 2010	This is the effective date for EHR technology standards and certification requirements.
September 27, 2010	This is the effective date for the Medicare and Medicaid EHR Incentive Program Final Rule.
Fall 2010	ONC anticipates that eligible hospitals will be able to purchase certified EHR software.
January 2011	Eligible hospitals can begin to register for the EHR Incentive Programs. CMS will inform eligible participants that registration for the Medicare and Medicaid EHR Incentive Programs will be available on the Registration web page on http://cms.gov/EHRIncentivePrograms/. Further, the registration will be managed by CMS.
April 2011	Eligible hospitals can begin to make attestations for the Medicare EHR Incentive Program.
Mid May 2011	CMS will begin to issue Medicare EHR incentive payments.
November 30, 2011	This is the last day for eligible hospitals to register and attest to meaningful use in order to receive a Medicare EHR incentive payment for federal FY 2011.
Federal FY 2015	Medicare payment adjustments will begin for eligible hospitals that are not meaningful users of EHR technology.
Federal FY 2016	This is the last year to initiate participation in the Medicaid EHR Incentive Program.
Federal FY 2021	This is the last year to receive payment under the Medicaid EHR Incentive Program.

[23] Appendix Table 3 is based on a timeline provided in CMS presentation titled "Medicare & Medicaid EHR Incentive Program Specifics of the Program for Hospitals." The presentation is available at: <https://www.cms.gov/EHRIncentivePrograms/Downloads/EHR_Incentive_Program_Hospital_Training_FINAL.pdf>.

[24] Note that states will initiate their incentive programs on a rolling basis. Initiation of the Medicaid EHR Incentive Program depends on CMS' approval of the State Medicaid Health Information Technology (HIT) plan. The HIT plan outlines how the state will implement and supervise the incentive program.