(m) **Patient-specific education resources.** Enable a user to electronically identify and provide patient-specific education resources according to, at a minimum, the data elements included in the patient’s problem list; medication list; and laboratory test results; as well as provide such resources to the patient.

(n) **Automated measure calculation.** For each meaningful use objective with a percentage-based measure, electronically record the numerator and denominator and generate a report including the numerator, denominator, and resulting percentage associated with each applicable meaningful use measure.

(o) **Access control.** Assign a unique name and/or number for identifying and tracking user identity and establish controls that permit only authorized users to access electronic health information.

(p) **Emergency access.** Permit authorized users (who are authorized for emergency situations) to access electronic health information during an emergency.

(q) **Automatic log-off.** Terminate an electronic session after a predetermined time of inactivity.

(r) **Audit log.** (1)—Record actions. Record actions related to electronic health information in accordance with the standard specified in §170.210(b).

(2) **Generate audit log.** Enable a user to generate an audit log for a specific time period and to sort entries in the audit log according to any of the elements specified in the standard at §170.210(b).

(s) **Integrity.** (1) Create a message digest in accordance with the standard specified in §170.210(c).

(2) Verify in accordance with the standard specified in §170.210(c) upon receipt of electronically exchanged health information that such information has not been altered.

(3) **Detection.** Detect the alteration of audit logs.

(t) **Authentication.** Verify that a person or entity seeking access to electronic health information is the one claimed and is authorized to access such information.

(u) **General encryption.** Encrypt and decrypt electronic health information in accordance with the standard specified in §170.210(c), unless the Secretary determines that the use of such algorithm would pose a significant security risk for Certified EHR Technology.

(v) **Encryption when exchanging electronic health information.** Encrypt and decrypt electronic health information when exchanged in accordance with the standard specified in §170.210(a)(2).

(w) **Optional. Accounting of disclosures.** Record disclosures made for treatment, payment, and health care operations in accordance with the standard specified in §170.210(d).


§ 170.304 Specific certification criteria for Complete EHRs or EHR Modules designed for an ambulatory setting.

The Secretary adopts the following certification criteria for Complete EHRs or EHR Modules designed to be used in an ambulatory setting. Complete EHRs or EHR Modules must include the capability to perform the following functions electronically and in accordance with all applicable standards and implementation specifications adopted in this part:

(a) **Computerized provider order entry.** Enable a user to electronically record, store, retrieve, and modify, at a minimum, the following order types:

(1) Medications;

(2) Laboratory; and

(3) Radiology/imaging.

(b) **Electronic prescribing.** Enable a user to electronically generate and transmit prescriptions and prescription-related information in accordance with:

(1) The standard specified in §170.205(b)(1) or §170.205(b)(2); and

(2) The standard specified in §170.207(d).

(c) **Record demographics.** Enable a user to electronically record, modify, and retrieve patient demographic data including preferred language, gender, race, ethnicity, and date of birth. Enable race and ethnicity to be recorded in accordance with the standard specified at §170.207.

(d) **Patient reminders.** Enable a user to electronically generate a patient reminder list for preventive or follow-up
§ 170.304  45 CFR Subtitle A (10–1–11 Edition)

care according to patient preferences based on, at a minimum, the data elements included in:

(1) Problem list;
(2) Medication list;
(3) Medication allergy list;
(4) Demographics; and
(5) Laboratory test results.

(e) Clinical decision support—(1) Implement rules. 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 list, medication list, demographics; and laboratory test results.

(2) Notifications. Automatically and electronically generate and indicate in real-time, notifications and care suggestions based upon clinical decision support rules.

(i) Electronic copy of health information. Enable a user to create an electronic copy of a patient’s clinical information, including, at a minimum, diagnostic test results, problem list, medication list, and medication allergy list in:

(1) Human readable format; and
(2) On electronic media or through some other electronic means in accordance with:

(i) The standard (and applicable implementation specifications) specified in §170.205(a)(1) or §170.205(a)(2); and
(ii) For the following data elements the applicable standard must be used:

(A) Problems. The standard specified in §170.207(a)(1) or, at a minimum, the version of the standard specified in §170.207(a)(2);

(B) Laboratory test results. At a minimum, the version of the standard specified in §170.207(c); and

(C) Medications. The standard specified in §170.207(d).

(i) Exchange clinical information and patient summary record—(1) Electronically receive and display. Electronically receive and display a patient’s summary record, from other providers and organizations including, at a minimum, diagnostic tests results, problem list, medication list, and medication allergy list in accordance with the standard (and applicable implementation specifications) specified in §170.205(a)(1) or §170.205(a)(2). Upon receipt of a patient summary record formatted according to the alternative standard, display it in human readable format.

(2) Electronically transmit. Enable a user to electronically transmit a patient summary record to other providers and organizations including, at a minimum, diagnostic test results, problem list, medication list, and medication allergy list in accordance with:

(i) The standard (and applicable implementation specifications) specified in §170.205(a)(1) or §170.205(a)(2); and
(ii) For the following data elements the applicable standard must be used:

(A) Problems. The standard specified in §170.207(a)(1) or, at a minimum, the version of the standard specified in §170.207(a)(2);

(B) Laboratory test results. At a minimum, the version of the standard specified in §170.207(c); and

(C) Medications. The standard specified in §170.207(d).

(g) Timely access. Enable a user to provide patients with online access to their clinical information, including, at a minimum, lab test results, problem list, medication list, and medication allergy list.

(h) Clinical summaries. Enable a user to provide clinical summaries to patients for each office visit that include, at a minimum, diagnostic test results, problem list, medication list, and medication allergy list. If the clinical summary is provided electronically it must be:

(1) Provided in human readable format; and
(2) Provided on electronic media or through some other electronic means in accordance with:

(i) The standard (and applicable implementation specifications) specified in §170.205(a)(1) or §170.205(a)(2); and

(ii) For the following data elements the applicable standard must be used:

(A) Problems. The standard specified in §170.207(a)(1) or, at a minimum, the version of the standard specified in §170.207(a)(2);

(B) Laboratory test results. At a minimum, the version of the standard specified in §170.207(c); and

(C) Medications. The standard specified in §170.207(d).
(j) Calculate and submit clinical quality measures—(1) Calculate (i) Electronically calculate all of the core clinical measures specified by CMS for eligible professionals.

(ii) Electronically calculate, at a minimum, three clinical quality measures specified by CMS for eligible professionals, in addition to those clinical quality measures specified in paragraph (1)(i).

(2) Submission. Enable a user to electronically submit calculated clinical quality measures in accordance with the standard and implementation specifications specified in §170.205(f).

§ 170.306 Specific certification criteria for Complete EHRs or EHR Modules designed for an inpatient setting.

The Secretary adopts the following certification criteria for Complete EHRs or EHR Modules designed to be used in an inpatient setting. Complete EHRs or EHR Modules must include the capability to perform the following functions electronically and in accordance with all applicable standards and implementation specifications adopted in this part:

(a) Computerized provider order entry. Enable a user to electronically record, store, retrieve, and modify, at a minimum, the following order types:

(1) Medications;

(2) Laboratory; and

(3) Radiology/imaging.

(b) Record demographics. Enable a user 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. Enable race and ethnicity to be recorded in accordance with the standard specified at §170.207(f).

(c) Clinical decision support—(1) Implement rules. 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 list; medication list; medication allergy list; and laboratory test results.

(2) Notifications. Automatically and electronically generate and indicate in real-time, notifications and care suggestions based upon clinical decision support rules.

(d) Electronic copy of health information. (1) Enable a user to create an electronic copy of a patient’s clinical information, including, at a minimum, diagnostic test results, problem list, medication list, medication allergy list, and procedures:

(i) In human readable format; and

(ii) On electronic media or through some other electronic means in accordance with:

(A) The standard (and applicable implementation specifications) specified in §170.205(a)(1) or §170.205(a)(2); and

(B) For the following data elements the applicable standard must be used:

(i) Problems. The standard specified in §170.207(a)(1) or, at a minimum, the version of the standard specified in §170.207(a)(2);

(ii) Procedures. The standard specified in §170.207(b)(1) or §170.207(b)(2);

(iii) Laboratory test results. At a minimum, the version of the standard specified in §170.207(c); and

(iv) Medications. The standard specified in §170.207(d).

(2) Enable a user to create an electronic copy of a patient’s discharge summary in human readable format and on electronic media or through some other electronic means.

(e) Electronic copy of discharge instructions. 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.

(f) Exchange clinical information and patient summary record—(1) Electronically receive and display. Electronically receive and display a patient’s summary record from other providers and organizations including, at a minimum, diagnostic test results, problem list, medication list, medication allergy list, and procedures in accordance with the standard (and applicable implementation specifications) specified in §170.205(a)(1) or §170.205(a)(2).

Upon receipt of a patient summary record formatted according to the alternative standard, display it in human readable format.