



# Eligible Professional Meaningful Use Core Measures Measure 1 of 15

Stage 1

Date issued: November 7, 2010

CPOE for Medication Orders	
Objective	Use computerized provider 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.
Measure	More than 30 percent of all unique patients with at least one medication in their medication list seen by the EP have at least one medication order entered using CPOE.
Exclusion	Any EP who writes fewer than 100 prescriptions during the EHR reporting period.

## Table of Contents

- Definition of Terms
- Attestation Requirements
- Additional Information

## Definition of Terms

**Computerized Provider Order Entry (CPOE)** – CPOE entails the provider’s use of computer assistance to directly enter medication orders from a computer or mobile device. The order is also documented or captured in a digital, structured, and computable format for use in improving safety and organization.

**Unique Patient** – If a patient is seen by an EP more than once during the EHR reporting period, then for purposes of measurement that patient is only counted once in the denominator for the measure. All the measures relying on the term “unique patient” relate to what is contained in the patient’s medical record. Not all of this information will need to be updated or even be needed by the provider at every patient encounter. This is especially true for patients whose encounter frequency is such that they would see the same provider multiple times in the same EHR reporting period.

## Attestation Requirements

### NUMERATOR / DENOMINATOR / EXCLUSION

- DENOMINATOR: Number of unique patients with at least one medication in their medication list seen by the EP during the EHR reporting period.
- NUMERATOR: The number of patients in the denominator that have at least one medication order entered using CPOE.
- EXCLUSION: EPs who write fewer than 100 prescriptions during the EHR reporting period would be excluded from this requirement. EPs must enter the number of prescriptions written during the EHR reporting period in the Exclusion box to attest to exclusion from this requirement.

The resulting percentage (Numerator ÷ Denominator) must be more than 30 percent in order for an EP to meet this measure.

## Additional Information

- The provider is permitted, but not required, to limit the measure of this objective to those patients whose records are maintained using certified EHR technology.
- Any licensed healthcare professionals can enter orders into the medical record for purposes of including the order in the numerator for the objective of CPOE if they can enter the order per state, local and professional guidelines.
- The order must be entered by someone who could exercise clinical judgment in the case that the entry generates any alerts about possible interactions or other clinical decision support aides. This necessitates that the CPOE occurs when the order first becomes part of the patient's medical record and before any action can be taken on the order.
- Electronic transmittal of the medication order to the pharmacy, laboratory, or diagnostic imaging center is not a requirement for meeting the measure of this objective. However, a separate objective (EPCMU 04) addresses the electronic transmittal of prescriptions and is a requirement for EPs to meet Meaningful Use.

## Related FAQs

- [#10639](#) - How should an EP who orders medications infrequently calculate the measure for the CPOE objective if the EP sees patients whose medications are maintained in the medication list by the EP but were not ordered or prescribed by the EP?
- [#10134](#) - Who can enter medication orders in order to meet the measure for the CPOE meaningful use objective? When must these medication orders be entered?
- [#10462](#) - To meet the meaningful use objective for CPOE, should EPs include hospital-based observation patients whose records are maintained using the hospital's certified EHR system in the numerator and denominator calculation for this measure?
- [#10071](#) - Is the physician the only person who can enter information in the EHR in order to qualify for the EHR Incentive Programs?
- [#10095](#) - What do the numerators and denominators mean in measures that are required to demonstrate meaningful use?
- [#10068](#) - For EPs who see patients in both inpatient and outpatient settings, and where certified EHR technology is available at each location, should these EPs base their denominators for meaningful use objectives on the number of unique patients in only the outpatient setting or on the total number of unique patients from both settings?
- [#10151](#) - If an EP is unable to meet the measure of a meaningful use objective because it is outside of the scope of his or her practice, will the EP be excluded from meeting the measure of that objective?
- [#10466](#) - Should patient encounters in an ambulatory surgical center be included in the denominator for calculating that at least 50 percent or more of an EP's patient encounters during the reporting period occurred at practices/locations equipped with certified EHR technology?
- [#10475](#) - If an EP sees a patient in a setting that does not have certified EHR technology but enters all of the patient's information into certified EHR technology at another practice location, can the patient be counted in the numerators and denominators of meaningful use measures?



# Eligible Professional Meaningful Use Core Measures Measure 2 of 15

Stage 1

Date issued: November 7, 2010

Drug Interaction Checks	
Objective	Implement drug-drug and drug-allergy interaction checks.
Measure	The EP has enabled this functionality for the entire EHR reporting period.
Exclusion	No exclusion.

## Table of Contents

- Definition of Terms
- Attestation Requirements
- Additional Information

## Definition of Terms

None.

## Attestation Requirements

YES / NO

Eligible professionals (EPs) must attest YES to having enabled drug-drug and drug-allergy interaction checks for the length of the reporting period to meet this measure.

## Additional Information

None.

## Related FAQs

[#10077](#) - Can the drug-drug and drug-allergy interaction alerts of my EHR also be used to meet the meaningful use objective for implementing one clinical decision support rule for the EHR Incentive Programs?



# Eligible Professional Meaningful Use Core Measures Measure 3 of 15

Stage 1

Date issued: November 7, 2010

Maintain Problem List	
Objective	Maintain an up-to-date problem list of current and active diagnoses.
Measure	More than 80 percent of all unique patients seen by the EP have at least one entry or an indication that no problems are known for the patient recorded as structured data.
Exclusion	No exclusion.

## Table of Contents

- Definition of Terms
- Attestation Requirements
- Additional Information

## Definition of Terms

**Problem List** – A list of current and active diagnoses as well as past diagnoses relevant to the current care of the patient.

**Unique Patient** – If a patient is seen by an EP more than once during the EHR reporting period, then for purposes of measurement that patient is only counted once in the denominator for the measure. All the measures relying on the term “unique patient” relate to what is contained in the patient’s medical record. Not all of this information will need to be updated or even be needed by the provider at every patient encounter. This is especially true for patients whose encounter frequency is such that they would see the same provider multiple times in the same EHR reporting period.

**Up-to-date** – The term “up-to-date” means the list is populated with the most recent diagnosis known by the EP. This knowledge could be ascertained from previous records, transfer of information from other providers, diagnosis by the EP, or querying the patient.

## Attestation Requirements

### NUMERATOR / DENOMINATOR

- DENOMINATOR: Number of unique patients seen by the EP during the EHR reporting period.
- NUMERATOR: Number of patients in the denominator who have at least one entry or an indication that no problems are known for the patient recorded as structured data in their problem list.

The resulting percentage (Numerator ÷ Denominator) must be more than 80 percent in order for an EP to meet this measure.

## Additional Information

- The Medicare and Medicaid EHR Incentive Programs do not specify the use of ICD-9 or SNOMED-CT® in meeting the measure for this objective. However, the Office of the National Coordinator for Health Information Technology (ONC) has adopted ICD-9 or SNOMED-CT® for the entry of structured data for this measure and made this a requirement for EHR technology to be certified. Therefore, EPs will need to maintain an up-to-date problem list of current and active diagnoses using ICD-9 or SNOMED-CT® as a basis for the entry of structured data into certified EHR technology in order to meet the measure for this objective.
- For patients with no current or active diagnoses, an entry must still be made to the problem list indicating that no problems are known.
- An EP is not required to update the problem list at every contact with the patient. The measure ensures the EP has a problem list for patients seen during the EHR reporting period, and that at least one piece of information is presented to the EP. The EP can then use their judgment in deciding what further probing or updating may be required given the clinical circumstances.
- The initial diagnosis can be recorded in lay terms and later converted to standard structured data or can be initially entered using standard structured data.

## Related FAQs

- [#10150](#) - To meet the meaningful use objective "maintain an up-to-date problem list of current and active diagnoses," are EPs, eligible hospitals, and CAHs required to use ICD-9 or SNOMED-CT®?
- [#10664](#) - How does an EP determine whether a patient has been "seen by the EP" in cases where the service rendered does not result in an actual interaction between the patient and the EP, but minimal consultative services such as just reading an EKG? Is a patient seen via telemedicine included in the denominator for measures that include patients "seen by the EP"?
- [#10665](#) - When a patient is only seen by a member of the EP's clinical staff during the EHR reporting period and not by the EP themselves, do those patients count in the EP's denominator?
- [#10466](#) - Should patient encounters in an ambulatory surgical center be included in the denominator for calculating that at least 50 percent or more of an EP's patient encounters during the reporting period occurred at practices/locations equipped with certified EHR technology?
- [#10475](#) - If an EP sees a patient in a setting that does not have certified EHR technology but enters all of the patient's information into certified EHR technology at another practice location, can the patient be counted in the numerators and denominators of meaningful use measures?





# Eligible Professionals Meaningful Use Core Measures Measure 4 of 15

Stage 1

Date issued: December 21, 2010

e-Prescribing (eRx)	
<b>Objective</b>	Generate and transmit permissible prescriptions electronically (eRx).
<b>Measure</b>	More than 40 percent of all permissible prescriptions written by the EP are transmitted electronically using certified EHR technology.
<b>Exclusion</b>	Any EP who writes fewer than 100 prescriptions during the EHR reporting period.

## Table of Contents

- Definition of Terms
- Attestation Requirements
- Additional Information

## Definition of Terms

**Permissible Prescriptions** – The concept of only permissible prescriptions refers to the current restrictions established by the Department of Justice on electronic prescribing for controlled substances in Schedule II-V. (The substances in Schedule II-V can be found at [http://www.deadiversion.usdoj.gov/schedules/orangebook/e\\_cs\\_sched.pdf](http://www.deadiversion.usdoj.gov/schedules/orangebook/e_cs_sched.pdf)). Any prescription not subject to these restrictions would be permissible.

**Prescription** – The authorization by an EP to a pharmacist to dispense a drug that the pharmacist would not dispense to the patient without such authorization.

## Attestation Requirements

### NUMERATOR / DENOMINATOR / EXCLUSION

- **DENOMINATOR:** Number of prescriptions written for drugs requiring a prescription in order to be dispensed other than controlled substances during the EHR reporting period.
- **NUMERATOR:** Number of prescriptions in the denominator generated and transmitted electronically.
- **EXCLUSION:** EPs who write fewer than 100 prescriptions during the EHR reporting period would be excluded from this requirement. EPs must enter the number of prescriptions written during the EHR reporting period in the Exclusion box to attest to exclusion from this requirement.

The resulting percentage (Numerator ÷ Denominator) must be more than 40 percent in order for an EP to meet this measure.

## Additional Information

- The provider is permitted, but not required, to limit the measure of this objective to those patients whose records are maintained using certified EHR technology.
- Authorizations for items such as durable medical equipment, or other items and services that may require EP authorization before the patient could receive them, are not included in the definition of prescriptions. These are excluded from the numerator and the denominator of the measure.
- Instances where patients specifically request a paper prescription may not be excluded from the denominator of this measure. The denominator includes all prescriptions written by the EP during the EHR reporting period.
- Although the Department of Justice recently published an Interim Final Rule that allows the electronic prescribing of controlled substances, these recent guidelines could not be incorporated into the Medicare and Medicaid EHR Incentive Programs. The determination of whether a prescription is a "permissible prescription" for purposes of this measure should be made based on the guidelines for prescribing Schedule II-V controlled substances in effect on or before January 13, 2010.
- EPs cannot receive incentive payments for e-prescribing under both the Medicare Improvements for Patients and Providers Act of 2008 (MIPPA) and the Medicare EHR Incentive Program for the same year. However, EPs can receive payments from both the MIPPA E-Prescribing Incentive Program and the Medicaid EHR Incentive Program for the same year.
- Providers can use intermediary networks that convert information from the certified EHR into a computer-based fax in order to meet this measure as long as the EP generates an electronic prescription and transmits it electronically using the standards of certified EHR technology to the intermediary network, and this results in the prescription being filled without the need for the provider to communicate the prescription in an alternative manner.
- Prescriptions transmitted electronically within an organization (the same legal entity) do not need to use the NCPDP standards. However, an EP's EHR must meet all applicable certification criteria and be certified as having the capability of meeting the external transmission requirements of §170.304(b). In addition, the EHR that is used to transmit prescriptions within the organization would need to be Certified EHR Technology. For more information, refer to ONC's FAQ at [http://healthit.hhs.gov/portal/server.pt/community/onc\\_regulations\\_faqs/3163/faq\\_22/21286](http://healthit.hhs.gov/portal/server.pt/community/onc_regulations_faqs/3163/faq_22/21286).
- EPs should include in the numerator and denominator both types of electronic transmissions (those within and outside the organization) for the measure of this objective.
- For purposes of counting prescriptions "generated and transmitted electronically," we consider the generation and transmission of prescriptions to occur constructively if the prescriber and dispenser are the same person and/or are accessing the same record in an integrated EHR to creating an order in a system that is electronically transmitted to an internal pharmacy.



## Related FAQs

- [#10284](#) - For the meaningful use objective of "generate and transmit prescriptions electronically," how should the numerator and denominator be calculated?
- [#10067](#) - Do controlled substances qualify as "permissible prescriptions" for meeting the electronic prescribing meaningful use objective?
- [#10137](#) - In order to satisfy the meaningful use objective for electronic prescribing, can providers use intermediary networks that convert information from the certified EHR into a computer-based fax for sending to the pharmacy? Should these transactions be included in the numerator for the measure of this objective?
- [#10095](#) - What do the numerators and denominators mean in measures that are required to demonstrate meaningful use?
- [#10068](#) - For EPs who see patients in both inpatient and outpatient settings, and where certified EHR technology is available at each location, should these EPs base their denominators for meaningful use objectives on the number of unique patients in only the outpatient setting or on the total number of unique patients from both settings?
- [#10151](#) - If an EP is unable to meet the measure of a meaningful use objective because it is outside of the scope of his or her practice, will the EP be excluded from meeting the measure of that objective?
- [#10466](#) - Should patient encounters in an ambulatory surgical center be included in the denominator for calculating that at least 50 percent or more of an EP's patient encounters during the reporting period occurred at practices/locations equipped with certified EHR technology?
- [#10475](#) - If an EP sees a patient in a setting that does not have certified EHR technology but enters all of the patient's information into certified EHR technology at another practice location, can the patient be counted in the numerators and denominators of meaningful use measures?



# Eligible Professional Meaningful Use Core Measures Measure 5 of 15

Stage 1

Date issued: November 7, 2010

Active Medication List	
Objective	Maintain active medication list.
Measure	More than 80 percent of all unique patients seen by the EP have at least one entry (or an indication that the patient is not currently prescribed any medication) recorded as structured data.
Exclusion	No exclusion.

## Table of Contents

- Definition of Terms
- Attestation Requirements
- Additional Information

## Definition of Terms

**Active Medication List** – A list of medications that a given patient is currently taking.

**Unique Patient** – If a patient is seen by an EP more than once during the EHR reporting period, then for purposes of measurement that patient is only counted once in the denominator for the measure. All the measures relying on the term “unique patient” relate to what is contained in the patient’s medical record. Not all of this information will need to be updated or even be needed by the provider at every patient encounter. This is especially true for patients whose encounter frequency is such that they would see the same provider multiple times in the same EHR reporting period.

## Attestation Requirements

### NUMERATOR / DENOMINATOR

- DENOMINATOR: Number of unique patients seen by the EP during the EHR reporting period.
- NUMERATOR: Number of patients in the denominator who have a medication (or an indication that the patient is not currently prescribed any medication) recorded as structured data.

The resulting percentage (Numerator ÷ Denominator) must be more than 80 percent in order for an EP to meet this measure.

## Additional Information

- For patients with no active medications, an entry must still be made to the active medication list indicating that there are no active medications.
- An EP is not required to update this list at every contact with the patient. The EP can then use his or her clinical judgment to decide when additional updating is required.

## Related FAQs

- [#10095](#) - What do the numerators and denominators mean in measures that are required to demonstrate meaningful use?
- [#10068](#) - For EPs who see patients in both inpatient and outpatient settings, and where certified EHR technology is available at each location, should these EPs base their denominators for meaningful use objectives on the number of unique patients in only the outpatient setting or on the total number of unique patients from both settings?
- [#10664](#) - How does an EP determine whether a patient has been "seen by the EP" in cases where the service rendered does not result in an actual interaction between the patient and the EP, but minimal consultative services such as just reading an EKG? Is a patient seen via telemedicine included in the denominator for measures that include patients "seen by the EP"?
- [#10665](#) - When a patient is only seen by a member of the EP's clinical staff during the EHR reporting period and not by the EP themselves, do those patients count in the EP's denominator?
- [#10466](#) - Should patient encounters in an ambulatory surgical center be included in the denominator for calculating that at least 50 percent or more of an EP's patient encounters during the reporting period occurred at practices/locations equipped with certified EHR technology?
- [#10475](#) - If an EP sees a patient in a setting that does not have certified EHR technology but enters all of the patient's information into certified EHR technology at another practice location, can the patient be counted in the numerators and denominators of meaningful use measures?



# Eligible Professional Meaningful Use Core Measures Measure 6 of 15

Stage 1

Date issued: November 7, 2010

Medication Allergy List	
Objective	Maintain active medication allergy list.
Measure	More than 80 percent of all unique patients seen by the EP have at least one entry (or an indication that the patient has no known medication allergies) recorded as structured data.
Exclusion	No exclusion.

## Table of Contents

- Definition of Terms
- Attestation Requirements
- Additional Information

## Definition of Terms

**Active Medication Allergy List** – A list of medications to which a given patient has known allergies.

**Allergy** – An exaggerated immune response or reaction to substances that are generally not harmful.

**Unique Patient** – If a patient is seen by an EP more than once during the EHR reporting period, then for purposes of measurement that patient is only counted once in the denominator for the measure. All the measures relying on the term “unique patient” relate to what is contained in the patient’s medical record. Not all of this information will need to be updated or even be needed by the provider at every patient encounter. This is especially true for patients whose encounter frequency is such that they would see the same provider multiple times in the same EHR reporting period.

## Attestation Requirements

### NUMERATOR / DENOMINATOR

- DENOMINATOR: Number of unique patients seen by the EP during the EHR reporting period.
- NUMERATOR: Number of unique patients in the denominator who have at least one entry (or an indication that the patient has no known medication allergies) recorded as structured data in their medication allergy list.

The resulting percentage (Numerator ÷ Denominator) must be more than 80 percent in order for an EP to meet this measure.

## Additional Information

- For patients with no active medication allergies, an entry must still be made to the active medication allergy list indicating that there are no active medication allergies.
- An EP is not required to update this list at every contact with the patient. The measure ensures that the EP has not ignored having a medication allergy list for patients seen during the EHR reporting period and that at least one piece of information on medication allergies is presented to the EP. The EP can then use their judgment in deciding what further probing or updating may be required given the clinical circumstances at hand.

## Related FAQs

- [#10095](#) - What do the numerators and denominators mean in measures that are required to demonstrate meaningful use?
- [#10068](#) - For EPs who see patients in both inpatient and outpatient settings, and where certified EHR technology is available at each location, should these EPs base their denominators for meaningful use objectives on the number of unique patients in only the outpatient setting or on the total number of unique patients from both settings?
- [#10664](#) - How does an EP determine whether a patient has been "seen by the EP" in cases where the service rendered does not result in an actual interaction between the patient and the EP, but minimal consultative services such as just reading an EKG? Is a patient seen via telemedicine included in the denominator for measures that include patients "seen by the EP"?
- [#10665](#) - When a patient is only seen by a member of the EP's clinical staff during the EHR reporting period and not by the EP themselves, do those patients count in the EP's denominator?
- [#10466](#) - Should patient encounters in an ambulatory surgical center be included in the denominator for calculating that at least 50 percent or more of an EP's patient encounters during the reporting period occurred at practices/locations equipped with certified EHR technology?
- [#10475](#) - If an EP sees a patient in a setting that does not have certified EHR technology but enters all of the patient's information into certified EHR technology at another practice location, can the patient be counted in the numerators and denominators of meaningful use measures?



# Eligible Professional Meaningful Use Core Measures Measure 7 of 15

Stage 1

Date issued: November 7, 2010

Record Demographics	
Objective	Record all of the following demographics: (A) Preferred language (B) Gender (C) Race (D) Ethnicity (E) Date of birth
Measure	More than 50 percent of all unique patients seen by the EP have demographics recorded as structured data.
Exclusion	No exclusion.

## Table of Contents

- Definition of Terms
- Attestation Requirements
- Additional Information

## Definition of Terms

**Preferred Language** – The language by which the patient prefers to communicate.

**Unique Patient** – If a patient is seen by an EP more than once during the EHR reporting period, then for purposes of measurement that patient is only counted once in the denominator for the measure. All the measures relying on the term “unique patient” relate to what is contained in the patient’s medical record. Not all of this information will need to be updated or even be needed by the provider at every patient encounter. This is especially true for patients whose encounter frequency is such that they would see the same provider multiple times in the same EHR reporting period.

## Attestation Requirements

### NUMERATOR / DENOMINATOR

- DENOMINATOR: Number of unique patients seen by the EP during the EHR reporting period.
- NUMERATOR: Number of patients in the denominator who have all the elements of demographics (or a specific exclusion if the patient declined to provide one or more elements or if recording an element is contrary to state law) recorded as structured data.

The resulting percentage (Numerator ÷ Denominator) must be more than 50 percent in order for an EP to meet this measure.

## Additional Information

- Race and ethnicity codes should follow current federal standards published by the Office of Management and Budget ([http://www.whitehouse.gov/omb/inforeg\\_statpolicy/#dr](http://www.whitehouse.gov/omb/inforeg_statpolicy/#dr)).
- If a patient declines to provide all or part of the demographic information, or if capturing a patient's ethnicity or race is prohibited by state law, such a notation entered as structured data would count as an entry for purposes of meeting the measure. In regards to patients who do not know their ethnicity, EPs should treat these patients the same way as patients who decline to provide race or ethnicity— identify in the patient record that the patient declined to provide this information.
- EPs are not required to communicate with the patient in his or her preferred language in order to meet the measure of this objective.

## Related FAQs

- **#10095** - What do the numerators and denominators mean in measures that are required to demonstrate meaningful use?
- **#10068** - For EPs who see patients in both inpatient and outpatient settings, and where certified EHR technology is available at each location, should these EPs base their denominators for meaningful use objectives on the number of unique patients in only the outpatient setting or on the total number of unique patients from both settings?
- **#10664** - How does an EP determine whether a patient has been "seen by the EP" in cases where the service rendered does not result in an actual interaction between the patient and the EP, but minimal consultative services such as just reading an EKG? Is a patient seen via telemedicine included in the denominator for measures that include patients "seen by the EP"?
- **#10665** - When a patient is only seen by a member of the EP's clinical staff during the EHR reporting period and not by the EP themselves, do those patients count in the EP's denominator?
- **#10466** - Should patient encounters in an ambulatory surgical center be included in the denominator for calculating that at least 50 percent or more of an EP's patient encounters during the reporting period occurred at practices/locations equipped with certified EHR technology?
- **#10475** - If an EP sees a patient in a setting that does not have certified EHR technology but enters all of the patient's information into certified EHR technology at another practice location, can the patient be counted in the numerators and denominators of meaningful use measures?



# Eligible Professional Meaningful Use Core Measures Measure 8 of 15

Stage 1

Date issued: November 7, 2010

Record Vital Signs	
Objective	Record and chart changes in the following vital signs: (A) Height (B) Weight (C) Blood pressure (D) Calculate and display body mass index (BMI) (E) Plot and display growth charts for children 2-20 years, including BMI
Measure	For more than 50 percent of all unique patients age 2 and over seen by the EP, height, weight, and blood pressure are recorded as structured data.
Exclusion	Any EP who either see no patients 2 years or older, or who believes that all three vital signs of height, weight, and blood pressure of their patients have no relevance to their scope of practice.

## Table of Contents

- Definition of Terms
- Attestation Requirements
- Additional Information

## Definition of Terms

**Unique Patient** – If a patient is seen by an EP more than once during the EHR reporting period, then for purposes of measurement that patient is only counted once in the denominator for the measure. All the measures relying on the term “unique patient” relate to what is contained in the patient’s medical record. Not all of this information will need to be updated or even be needed by the provider at every patient encounter. This is especially true for patients whose encounter frequency is such that they would see the same provider multiple times in the same EHR reporting period.

## Attestation Requirements

### NUMERATOR / DENOMINATOR / EXCLUSION

- DENOMINATOR: Number of unique patients age 2 or over seen by the EP during the EHR reporting period.
- NUMERATOR: Number of patients in the denominator who have at least one entry of their height, weight and blood pressure are recorded as structured data.

- **EXCLUSION:** An EP who sees no patients 2 years or older would be excluded from this requirement. Additionally, an EP who believes that all three vital signs of height, weight, and blood pressure have no relevance to their scope of practice would be excluded from this requirement. EPs must select NO next to the appropriate exclusion, then click the APPLY button in order to attest to the exclusion.

The resulting percentage (Numerator ÷ Denominator) must be more than 50 percent in order for an EP to meet this measure.

## Additional Information

- The provider is permitted, but not required, to limit the measure of this objective to those patients whose records are maintained using certified EHR technology.
- The only information required to be inputted by the provider is the height, weight, and blood pressure of the patient. The certified EHR technology will calculate BMI and the growth chart if applicable to patient based on age.
- Height, weight, and blood pressure do not have to be updated by the EP at every patient encounter. The EP can make the determination based on the patient's individual circumstances as to whether height, weight, and blood pressure need to be updated.
- Height, weight, and blood pressure can get into the patient's medical record as structured data in a number of ways. Some examples include entry by the EP, entry by someone on the EP's staff, transfer of the information electronically or otherwise from another provider or entered directly by the patient through a portal or other means.

## Related FAQs

- [#10593](#) - For the meaningful use objective to "record and chart changes in vital signs", can an EP claim an exclusion if the EP regularly records only one or two of the required vital signs but not all three?
- [#10156](#) - In recording height as part of the core meaningful use objective "Recording vital signs" for EPs, eligible hospitals, and CAHs, how should providers account for patients who are too sick or otherwise cannot be measured safely?
- [#10151](#) - If an EP is unable to meet the measure of a meaningful use objective because it is outside of the scope of his or her practice, will the EP be excluded from meeting the measure of that objective?
- [#10095](#) - What do the numerators and denominators mean in measures that are required to demonstrate meaningful use?
- [#10068](#) - For EPs who see patients in both inpatient and outpatient settings (e.g., hospital and clinic), and where certified EHR technology is available at each location, should these EPs base their denominators for meaningful use objectives on the number of unique patients in only the outpatient setting or on the total number of unique patients from both settings?
- [#10664](#) - How does an EP determine whether a patient has been "seen by the EP" in cases where the service rendered does not result in an actual interaction between the patient and the EP, but minimal consultative services such as just reading an EKG? Is a patient seen via telemedicine included in the denominator for measures that include patients "seen by the EP"?

- [#10665](#) - When a patient is only seen by a member of the EP's clinical staff during the EHR reporting period and not by the EP themselves, do those patients count in the EP's denominator?
- [#10466](#) - Should patient encounters in an ambulatory surgical center be included in the denominator for calculating that at least 50 percent or more of an EP's patient encounters during the reporting period occurred at practices/locations equipped with certified EHR technology?
- [#10475](#) - If an EP sees a patient in a setting that does not have certified EHR technology but enters all of the patient's information into certified EHR technology at another practice location, can the patient be counted in the numerators and denominators of meaningful use measures?



# Eligible Professional Meaningful Use Core Measures Measure 9 of 15

Stage 1

Date issued: November 7, 2010

Record Smoking Status	
Objective	Record smoking status for patients 13 years old or older.
Measure	More than 50 percent of all unique patients 13 years old or older seen by the EP have smoking status recorded as structured data.
Exclusion	Any EP who sees no patients 13 years or older.

## Table of Contents

- Definition of Terms
- Attestation Requirements
- Additional Information

## Definition of Terms

**Unique Patient** – If a patient is seen by an EP more than once during the EHR reporting period, then for purposes of measurement that patient is only counted once in the denominator for the measure. All the measures relying on the term “unique patient” relate to what is contained in the patient’s medical record. Not all of this information will need to be updated or even be needed by the provider at every patient encounter. This is especially true for patients whose encounter frequency is such that they would see the same provider multiple times in the same EHR reporting period.

## Attestation Requirements

### NUMERATOR / DENOMINATOR / EXCLUSION

- **DENOMINATOR:** Number of unique patients age 13 or older seen by the EP during the EHR reporting period.
- **NUMERATOR:** Number of patients in the denominator with smoking status recorded as structured data.
- **EXCLUSION:** An EP who sees no patients 13 years or older would be excluded from this requirement. EPs must enter ‘0’ in the Exclusion box to attest to exclusion from this requirement.

The resulting percentage (Numerator ÷ Denominator) must be more than 50 percent in order for an EP to meet this measure.

## Additional Information

- The provider is permitted, but not required, to limit the measure of this objective to those patients whose records are maintained using certified EHR technology.
- This is a check of the medical record for patients 13 years old or older. If this information is already in the medical record available through certified EHR technology, an inquiry does not need to be made every time a provider sees a patient 13 years old or older. The frequency of updating this information is left to the provider and guidance is provided already from several sources in the medical community.

## Related FAQs

- [#10151](#) - If an EP is unable to meet the measure of a meaningful use objective because it is outside of the scope of his or her practice, will the EP be excluded from meeting the measure of that objective?
- [#10095](#) - What do the numerators and denominators mean in measures that are required to demonstrate meaningful use?
- [#10068](#) - For EPs who see patients in both inpatient and outpatient settings, and where certified EHR technology is available at each location, should these EPs base their denominators for meaningful use objectives on the number of unique patients in only the outpatient setting or on the total number of unique patients from both settings?
- [#10664](#) - How does an EP determine whether a patient has been "seen by the EP" in cases where the service rendered does not result in an actual interaction between the patient and the EP, but minimal consultative services such as just reading an EKG? Is a patient seen via telemedicine included in the denominator for measures that include patients "seen by the EP"?
- [#10665](#) - When a patient is only seen by a member of the EP's clinical staff during the EHR reporting period and not by the EP themselves, do those patients count in the EP's denominator?
- [#10466](#) - Should patient encounters in an ambulatory surgical center be included in the denominator for calculating that at least 50 percent or more of an EP's patient encounters during the reporting period occurred at practices/locations equipped with certified EHR technology?
- [#10475](#) - If an EP sees a patient in a setting that does not have certified EHR technology but enters all of the patient's information into certified EHR technology at another practice location, can the patient be counted in the numerators and denominators of meaningful use measures?



# Eligible Professional Meaningful Use Core Measures Measure 10 of 15

Stage 1

Date issued: November 7, 2010

## Clinical Quality Measures (CQMs)

Objective	Report ambulatory clinical quality measures to CMS.
Measure	Successfully report to CMS ambulatory clinical quality measures selected by CMS in the manner specified by CMS.
Exclusion	No exclusion.

## Table of Contents

- Definition of Terms
- Attestation Requirements
- Additional Information

## Definition of Terms

None

## Attestation Requirements

YES / NO

Eligible professionals (EPs) must attest YES to reporting to CMS ambulatory clinical quality measures selected by CMS in the manner specified by CMS to meet the measure.

## Additional Information

- The provider is permitted, but not required, to limit the measure of this objective to those patients whose records are maintained using certified EHR technology.
- Attesting to the measure of this objective indicates that the EP will submit complete ambulatory clinical quality measure information as required during the attestation process. During attestation, EPs will also attest to the numerators, denominators, and exclusions for individual ambulatory clinical quality measures.
- For requirements and electronic specifications related to individual ambulatory clinical quality measures, EPs should refer to:  
[http://www.cms.gov/QualityMeasures/03\\_ElectronicSpecifications.asp#TopOfPage](http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage).

## Related FAQs

- [#10142](#) - One of the measures for the core set of CQMs for EPs is not applicable for my patient population. Am I excluded from reporting that measure?
- [#10143](#) - Can I use the electronic specifications for CQMs to satisfy both the PQRS and the EHR Incentive Programs?
- [#10144](#) - I am an EP for whom none of the core, alternate core, or additional CQMs adopted for the EHR Incentive Programs apply. Am I exempt from reporting on all CQMs?
- [#10145](#) - If the denominators for all three of the core CQMs are zero, do I have to report on the additional CQMs for EPs?
- [#10072](#) - My practice does not typically collect information on any of the core, alternate core, and additional CQMs listed in the Final Rule on the EHR Incentive Programs. Do I need to report on CQMs for which I do not have any data?
- [#10075](#) - Can EPs use CQMs from the alternate core set to meet the requirement of reporting three additional measures?
- [#10153](#) - If a provider feeds data from certified EHR technology to a data warehouse, can the provider report on meaningful use objectives and clinical quality measures from the data warehouse?
- [#10648](#) - If the certified EHR technology possessed by an EP generates zero denominators for all CQMs in the additional set that it can calculate, is the EP responsible for determining whether they have zero denominators or data for any remaining CQMs in the additional set that their certified EHR technology is not capable of calculating?
- [#10649](#) - If certified EHR technology possessed by an EP includes the ability to calculate CQMs from the additional set that are not indicated by the EHR developer or on the CHPL as tested and certified by an ONC-ATCB, can the EP submit the results of those CQMs to CMS as part of their meaningful use attestation?



# Eligible Professional Meaningful Use Core Measures Measure 11 of 15

Stage 1

Date issued: November 7, 2010

Clinical Decision Support Rule	
Objective	Implement one clinical decision support rule relevant to specialty or high clinical priority along with the ability to track compliance with that rule.
Measure	Implement one clinical decision support rule.
Exclusion	No exclusion.

## Table of Contents

- Definition of Terms
- Attestation Requirements
- Additional Information

## Definition of Terms

**Clinical Decision Support** – HIT functionality that builds upon the foundation of an EHR to provide persons involved in care processes with general and person-specific information, intelligently filtered and organized, at appropriate times, to enhance health and health care.

## Attestation Requirements

YES / NO

Eligible professionals (EPs) must attest YES to having implemented one clinical decision support rule for the length of the reporting period to meet the measure.

## Additional Information

- CMS will not issue additional guidance on the selection of appropriate clinical decision support rules for Stage 1 Meaningful Use. This determination is best left to the EP taking into account their workflow, patient population, and quality improvement efforts.
- Drug-drug and drug-allergy interaction alerts cannot be used to meet the meaningful use objective for implementing one clinical decision support rule. EPs must implement one clinical decision support rule in addition to drug-drug and drug-allergy interaction checks.

## Related FAQs

**#10077** - Can the drug-drug and drug-allergy interaction alerts of my EHR also be used to meet the meaningful use objective for implementing one clinical decision support rule?



# Eligible Professional Meaningful Use Core Measures Measure 12 of 15

Stage 1

Date issued: November 7, 2010

Electronic Copy of Health Information	
Objective	Provide patients with an electronic copy of their health information (including diagnostic test results, problem list, medication lists, medication allergies) upon request.
Measure	More than 50 percent of all patients who request an electronic copy of their health information are provided it within 3 business days.
Exclusion	Any EP that has no requests from patients or their agents for an electronic copy of patient health information during the EHR reporting period.

## Table of Contents

- Definition of Terms
- Attestation Requirements
- Additional Information

## Definition of Terms

**Business Days** – Business days are defined as Monday through Friday excluding federal or state holidays on which the EP or their respective administrative staffs are unavailable.

**Diagnostic Test Results** – All data needed to diagnose and treat disease. Examples include, but are not limited to, blood tests, microbiology, urinalysis, pathology tests, radiology, cardiac imaging, nuclear medicine tests, and pulmonary function tests.

## Attestation Requirements

### NUMERATOR / DENOMINATOR / EXCLUSION

- **DENOMINATOR:** Number of patients of the EP who request an electronic copy of their electronic health information four business days prior to the end of the EHR reporting period.
- **NUMERATOR:** Number of patients in the denominator who receive an electronic copy of their electronic health information within three business days.
- **EXCLUSION:** An EP who has no requests from patients or their agents for an electronic copy of patient health information during the EHR reporting period would be excluded from this requirement. EPs must enter '0' in the Exclusion box to attest to exclusion from this requirement.

The resulting percentage (Numerator ÷ Denominator) must be more than 50 percent in order for an EP to meet this measure.

## Additional Information

- The provider is permitted, but not required, to limit the measure of this objective to those patients whose records are maintained using certified EHR technology.
- When responding to patient requests for information, the EP should accommodate patient requests in accordance with the HIPAA Privacy Rule, as specified at 45 CFR 164.524, Access of individuals to protected health information. HIPAA contains requirements for providing patients copies of their health information.
- Information that must be provided electronically is limited to that information that exists electronically in or is accessible from the certified EHR technology and is maintained by or on behalf of the EP. At a minimum, this would include the elements listed in the ONC final rule at 45 CFR 170.304(f) for EPs and 45 CFR 170.306(d) for eligible hospitals and CAHs as required for EHR technology to become certified.
- An EP may withhold information from the electronic copy of a patient's health information in accordance with the HIPAA Privacy Rule, as specified at 45 CFR 164.524.
- An EP should provide a patient with all of the health information they have available electronically, subject to withholding as described in the HIPAA Privacy Rule, as specified at in 45 CFR 164.524.
- Form and format should be human readable and comply with the HIPAA Privacy Rule, as specified at 45 CFR 164.524(c). The media could be any electronic form such as patient portal, PHR, CD, USB fob, etc. EPs are expected to make reasonable accommodations for patient preference as outlined in 45 CFR 164.522(b).
- The charging of fees for this information is governed by the HIPAA Privacy Rule at 45 CFR 164.524(c)(4) (which only permits HIPAA covered entities to charge an individual a reasonable, cost-based fee for a copy of the individual's health information).
- If provision of the copy involves the mailing of physical electronic media, then it would need to be mailed by at least the third business day following the request of the patient or their agents.
- Third-Party Requests: Only specific third-party requests for information are included in the denominator. Providing the copy to a family member or patient's authorized representative consistent with federal and state law may substitute for a disclosure of the information to the patient and count in the numerator. A request from the same would count in the denominator. All other third-party requests are not included in the numerator or the denominator.

## Related FAQs

- [#10269](#) - To meet the meaningful use objective "provide patients with an electronic copy of their health information," how should the numerator and denominator be calculated for patients who see multiple EPs in the same practice (e.g., in a multi-specialty group practice)?
- [#10663](#) - What information must an EP, eligible hospital or CAH provide in order to meet the measure of the meaningful use objective for "provide patients with an electronic copy of their health information"?
- [#10095](#) - What do the numerators and denominators mean in measures that are required to demonstrate meaningful use?
- [#10068](#) - For EPs who see patients in both inpatient and outpatient settings, and where certified EHR technology is available at each location, should these EPs base their denominators for meaningful use objectives on the number of unique patients in only the outpatient setting or on the total number of unique patients from both settings?



- [#10151](#) - If an EP is unable to meet the measure of a meaningful use objective because it is outside of the scope of his or her practice, will the EP be excluded from meeting the measure of that objective?
- [#10466](#) - Should patient encounters in an ambulatory surgical center be included in the denominator for calculating that at least 50 percent or more of an EP's patient encounters during the reporting period occurred at practices/locations equipped with certified EHR technology?
- [#10475](#) - If an EP sees a patient in a setting that does not have certified EHR technology but enters all of the patient's information into certified EHR technology at another practice location, can the patient be counted in the numerators and denominators of meaningful use measures?



# Eligible Professional Meaningful Use Core Measures Measure 13 of 15

Stage 1

Date issued: April 18, 2011

Clinical Summaries	
Objective	Provide clinical summaries for patients for each office visit.
Measure	Clinical summaries provided to patients for more than 50 percent of all office visits within 3 business days.
Exclusion	Any EP who has no office visits during the EHR reporting period.

## Table of Contents

- Definition of Terms
- Attestation Requirements
- Additional Information

## Definition of Terms

**Clinical Summary** – An after-visit summary that provides a patient with relevant and actionable information and instructions containing the patient name, provider’s office contact information, date and location of visit, an updated medication list, updated vitals, reason(s) for visit, procedures and other instructions based on clinical discussions that took place during the office visit, any updates to a problem list, immunizations or medications administered during visit, summary of topics covered/considered during visit, time and location of next appointment/testing if scheduled, or a recommended appointment time if not scheduled, list of other appointments and tests that the patient needs to schedule with contact information, recommended patient decision aids, laboratory and other diagnostic test orders, test/laboratory results (if received before 24 hours after visit), and symptoms.

**Office Visit** – Office visits include separate, billable encounters that result from evaluation and management services provided to the patient and include: (1) Concurrent care or transfer of care visits, (2) Consultant visits, or (3) Prolonged Physician Service without Direct (Face-To-Face) Patient Contact (tele-health). A consultant visit occurs when a provider is asked to render an expert opinion/service for a specific condition or problem by a referring provider.

## Attestation Requirements

### NUMERATOR / DENOMINATOR / EXCLUSION

- DENOMINATOR: Number of office visits by the EP during the EHR reporting period.

- **NUMERATOR:** Number of office visits in the denominator for which the patient is provided a clinical summary within three business days.
- **EXCLUSION:** EPs who have no office visits during the EHR reporting period would be excluded from this requirement. EPs must enter '0' in the Exclusion box to attest to exclusion from this requirement.

The resulting percentage (Numerator ÷ Denominator) must be more than 50 percent in order for an EP to meet this measure.

## Additional Information

- The provider is permitted, but not required, to limit the measure of this objective to those patients whose records are maintained using certified EHR technology.
- The provision of the clinical summary is limited to the information contained within certified EHR technology.
- The clinical summary can be provided through a PHR, patient portal on the web site, secure e-mail, electronic media such as CD or USB fob, or printed copy. If the EP chooses an electronic media, they would be required to provide the patient a paper copy upon request.
- If an EP believes that substantial harm may arise from the disclosure of particular information, an EP may choose to withhold that particular information from the clinical summary.
- Providers should not charge patients a fee to provide this information.
- When a patient visit lasts several days and the patient is seen by multiple EPs, a single clinical summary at the end of the visit can be used to meet the meaningful use objective for "provide clinical summaries for patients after each office visit."
- The EP must include all of the items listed under "Clinical Summary" in the above "Definition of Terms" section that can be populated into the clinical summary by certified EHR technology. If the EP's certified EHR technology cannot populate all of these fields, then at a minimum the EP must provide in a clinical summary the data elements for which all EHR technology is certified for the purposes of this program (according to §170.304(h)):
  - Problem List
  - Diagnostic Test Results
  - Medication List
  - Medication Allergy List

## Related FAQs

- [#10558](#) - What information must an EP provide in order to meet the measure of the meaningful use objective for "provide a clinical summary for patients for each office visit"?
- [#10095](#) - What do the numerators and denominators mean in measures that are required to demonstrate meaningful use?
- [#10068](#) - For EPs who see patients in both inpatient and outpatient settings, and where certified EHR technology is available at each location, should these EPs base their denominators for meaningful use objectives on the number of unique patients in only the outpatient setting or on the total number of unique patients from both settings?



- [#10151](#) - If an EP is unable to meet the measure of a meaningful use objective because it is outside of the scope of his or her practice, will the EP be excluded from meeting the measure of that objective?
- [#10466](#) - Should patient encounters in an ambulatory surgical center be included in the denominator for calculating that at least 50 percent or more of an EP's patient encounters during the reporting period occurred at practices/locations equipped with certified EHR technology?
- [#10475](#) - If an EP sees a patient in a setting that does not have certified electronic EHR technology but enters all of the patient's information into certified EHR technology at another practice location, can the patient be counted in the numerators and denominators of meaningful use measures?



# Eligible Professional Meaningful Use Core Measures Measure 14 of 15

Stage 1

Last Updated: June 8, 2011

## Electronic Exchange of Clinical Information

Objective	Capability to exchange key clinical information (for example, problem list, medication list, medication allergies, and diagnostic test results), among providers of care and patient authorized entities electronically.
Measure	Performed at least one test of certified EHR technology's capacity to electronically exchange key clinical information.
Exclusion	No exclusion.

## Table of Contents

- Definition of Terms
- Attestation Requirements
- Additional Information

## Definition of Terms

**Diagnostic Test Results** – All data needed to diagnose and treat disease. Examples include, but are not limited to, blood tests, microbiology, urinalysis, pathology tests, radiology, cardiac imaging, nuclear medicine tests, and pulmonary function tests.

**Different Legal Entities** – A separate legal entity is an entity that has its own separate legal existence. Indications that two entities are legally separate would include (1) they are each separately incorporated; (2) they have separate Boards of Directors; and (3) neither entity is owned or controlled by the other.

**Distinct Certified EHR Technology** – Each instance of certified EHR technology must be able to be certified and operate independently from all the others in order to be distinct. Separate instances of certified EHR technology that must link to a common database in order to gain certification would not be considered distinct. However, instances of certified EHR technology that link to a common, uncertified system or component would be considered distinct. Instances of certified EHR technology can be from the same vendor and still be considered distinct.

**Exchange** – Clinical information must be sent between different legal entities with distinct certified EHR technology and not between organizations that share a certified EHR technology. Distinct certified EHR technologies are those that can achieve certification and operate independently of other certified EHR technologies. The exchange of information requires that the eligible professional must use the standards of certified EHR technology as specified by the Office of the National Coordinator for Health IT, not the capabilities of uncertified or other vendor-specific alternative methods for exchanging clinical information.

**Patient Authorized Entities** – Any individual or organization to which the patient has granted access to their clinical information. Examples would include an insurance company that covers the patient, an entity facilitating health information exchange among providers, or a personal health record vendor identified by the patient. A patient would have to affirmatively grant access to these entities.

## Attestation Requirements

YES / NO

Eligible professionals (EPs) must attest YES to having performed at least one test of certified EHR technology's capacity to electronically exchange key clinical information prior to the end of the EHR reporting period to meet this measure.

## Additional Information

- The test of electronic exchange of key clinical information must involve the transfer of information to another provider of care with distinct certified EHR technology or other system capable of receiving the information. Simulated transfers of information are **not** acceptable to satisfy this objective.
- The transmission of actual patient information is **not** required for the purposes of a test. The use of test information about a fictional patient that would be identical in form to what would be sent about an actual patient would satisfy this objective.
- When the clinical information is available in a structured format it should be transferred in a structured format. However, if the information is unavailable in a structured format, the transmission of unstructured data is permissible.
- EPs can use their clinical judgment to identify what clinical information is considered key clinical information for purposes of exchanging clinical information about a patient at a particular time with other providers of care. A minimum set of information is identified in the HIT Standards and Criteria rule at 45 CFR 170.304(i), and is generally outlined in this objective as: problem list, medication list, medication allergies, and diagnostic test results. An EP's determination of key clinical information could include some or all of this information, as well as information not included here.
- An EP should test their ability to send the minimum information set in the HIT Standards and Criteria rule at 45 CFR 170.304(i). If the EP continues to exchange information beyond the initial test, then the provider may decide what information should be exchanged on a case-by-case basis.
- EPs must test their ability to electronically exchange key clinical information at least once prior to the end of the EHR reporting period. Testing may also occur prior to the beginning of the EHR reporting period. Every payment year requires its own, unique test. If multiple EPs are using the same certified EHR technology in a shared physical setting, testing would only have to occur once for a given certified EHR technology.
- An unsuccessful test of electronic exchange of key clinical information will be considered valid for meeting the measure of this objective.



## Related FAQs

- [#10638](#) - For the meaningful use objective of "capability to exchange key clinical information," does exchange of electronic information using physical media, such as USB, CD-ROM, or other formats, meet the measure of this objective?
- [#10691](#) - For the meaningful use objective of "capability to exchange key clinical information," what forms of electronic transmission can be used to meet the measure of the objective?
- [#10270](#) - To meet the meaningful use objective "capability to exchange key clinical information," can different providers of care (e.g., physicians, hospitals, etc.) share EHR technology and successfully meet this objective?



# Eligible Professional Meaningful Use Core Measures Measure 15 of 15

Stage 1

Date issued: November 7, 2010

Protect Electronic Health Information	
Objective	Protect electronic health information created or maintained by the certified EHR technology through the implementation of appropriate technical capabilities.
Measure	Conduct or review a security risk analysis in accordance with the requirements under 45 CFR 164.308(a)(1) and implement security updates as necessary and correct identified security deficiencies as part of its risk management process.
Exclusion	No exclusion.

## Table of Contents

- Definition of Terms
- Attestation Requirements
- Additional Information

## Definition of Terms

**Appropriate Technical Capabilities** – A technical capability would be appropriate if it protected the electronic health information created or maintained by the certified EHR technology. All of these capabilities could be part of the certified HER technology or outside systems and programs that support the privacy and security of certified EHR technology.

## Attestation Requirements

YES / NO

Eligible professionals (EPs) must attest YES to having conducted or reviewed a security risk analysis in accordance with the requirements under 45 CFR 164.308(a)(1) and implemented security updates as necessary and corrected identified security deficiencies prior to or during the EHR reporting period to meet this measure.

## Additional Information

- EPs must conduct or review a security risk analysis of certified EHR technology and implement updates as necessary at least once prior to the end of the EHR reporting period and attest to that conduct or review. The testing could occur prior to the beginning of the first EHR reporting period. However, a new review would have to occur for each subsequent reporting period.
- A security update would be required if any security deficiencies were identified during the risk analysis. A security update could be updated software for certified EHR technology to be

implemented as soon as available, changes in workflow processes or storage methods, or any other necessary corrective action that needs to take place in order to eliminate the security deficiency or deficiencies identified in the risk analysis.