Meaningful Use in Radiology

Tom Gibbings, MBA, Dan Konigsbach, BS, Murray A. Reicher, MD

With an estimated $1.5 billion in potential stimulus bonus payments for radiologist professionals at stake, and penalties looming farther down the road, radiologists would be wise to study and respond to recent federal regulations related to meaningful use of complete certified ambulatory electronic health records and their equivalents. Many radiologists mistakenly believe that they were "left out" of the meaningful use rewards or that compliance is technically impractical. With diligent preparation, including the adoption of new technology and workflows, the vast majority of radiologists can qualify before October 2012 to capture the full available rewards and avoid later penalties.

Key Words: Meaningful use, incentive bonus, exemption

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INTRODUCTION

"Meaningful use" is now a hot health care topic because of the significant financial incentives available to providers who meaningfully use certified electronic health record (EHR) systems, as well as the looming penalties for those who do not. Although the current available information from the ACR and other sources is substantial, many radiologists remain confused about their eligibility and requirements for potential rewards. Many radiologists today have the perception that radiology was "left out" of meaningful use, which is incorrect. Nevertheless, the current regulations require radiologists, who represent arguably the most computerized physician specialty, to still add additional technology and use this technology is very specific ways to obtain the incentive bonus payments.

To the contrary, each radiologist who receives Medicare payments of a minimum of $24,000 per year is eligible for up to $44,000 in bonus payments per physician over the next 5 years, provided that >10% of services are performed in the outpatient setting as defined by the following CMS place of service (POS) codes [1]:

- POS 11, office;
- POS 20, urgent care facility;
- POS 22, outpatient hospital;
- POS 24, ambulatory surgery center; and
- POS 49, independent clinic.

Given that even most hospital-based radiologists provide care for urgent care centers and clinics or offices, the ACR estimates that perhaps 90% of radiologists will be eligible for the CMS incentives, totaling a potential of $1.5 billion. Of course, eligibility based on billing criteria does not mean that most radiologists will receive stimulus payments (or avoid later penalties), which depends further on the capacity of radiologists to rapidly adopt essential technology and practice workflows.

KEY FACTS

Meaningful use regulations are based on two closely related but separate set of regulations. First, the Office of the National Coordinator for Health Information Technology published the final rule providing the functional criteria for certified EHRs. Second, CMS provided clinical objectives that define how eligible professionals must use EHR technology to qualify for the incentive payments. The criteria and objectives will be rolled out in 3 stages, each with a different focus. Stage 1 focuses on standardizing the format of captured health information, tracking key clinical conditions, communicating information, implementing clinical decision support tools, and reporting clinical quality measures and public health information. Stage 2, which takes effect in 2013, focuses on continuous quality improvement and structured information exchange. Stage 3, anticipated in 2015, further promotes improvements in quality, safety, and efficiency, including decision support for national high priority conditions, as well as patient self-management tools, access to comprehensive patient data, and population health improvement. The technology criteria are not met by the vast majority (perhaps all) of present-day radiology information systems (RIS) and PACS, so that radiologists must add technology and modify their clinical practices to comply. For example, most radiology practices have not typically recorded vital signs during outpatient imaging visits, but to comply with meaningful use, radiologists must not only use technology that can store vital signs but must record vital signs in at least 50% of their patients during the reporting period. Because meaningful use compliance requires changes in most ra-

DR Systems, Inc, Rancho Santa Fe, California.

Corresponding author: Murray A. Reicher, MD, DR Systems, Inc, PO Box 832, Rancho Santa Fe, CA 92067; e-mail: reicher@pacbell.net.

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diologists' IT and clinical practices, many are left with the perception that radiologists were left out. Although it is certainly true that radiologists will need to adapt, there is perhaps a silver lining: the requirements for interoperability of such items as the patient problem list, allergies, medications, and immunizations may finally provide radiologists the critical clinical information needed to provide the best possible patient care. Plus, the collection of more clinical data may improve medical imaging billing performance because reimbursement is often tied to documented clinical indications, not the "rule-out pneumonia" type indication that radiologists often receive today.

For hospital-based radiologists, the use of hospital information systems may help satisfy some of the clinical objectives. This option will not work for hospital information systems that are certified as inpatient EHRs because qualification depends on the use of fully certified ambulatory EHRs (or, alternatively, a set of certified ambulatory modules that together meet the criteria of a fully certified ambulatory EHR). Although, a radiologist might be able to qualify through the meaningful use of combined systems, most physicians intuitively recognize that compliance and associated administrative processes would be far more efficient if a single technology could satisfy all the required objectives. Therefore, a radiology-centric solution seems required not only to obtain the incentive bonus but to do so in manner that is efficient and cost effective.

"GOTCHAS"

First, dual requirements of meeting both technological criteria and clinical objectives to qualify for meaningful use bonus payments introduce further issues. During stage 1, the CMS objectives include 15 required items (called the "core") and 10 more elective items (called the "menu"). This may change in stage 2, but at the present time, one can only speculate about stage 2 changes. There are exemptions for the clinical objectives but no matching exemptions for the technical criteria, yet eligibility depends on a radiologist's satisfying both the technical criteria and the clinical objectives. For example, the clinical objective related to e-prescribing does not apply to most radiologists because they do not prescribe medications at pharmacies more than 100 times per year (the administration of intravenous contrast material for a CT scan does not count in this regard). Yet, even though a radiologist may be exempt from the e-prescribing clinical objective, that same radiologist must also document use of a complete certified EHR (or equivalent). That means the hospital, office, or imaging center must own e-prescribing technology, even though the radiologist is exempt from using it. As illogical as this may seem, it is the law.

Second, hospital-based radiologists are no doubt aware of the tremendous efforts of their information systems teams to comply with meaningful use. For hospitals, meaningful use of complete certified inpatient EHRs can result in payments of $17,500 per bed. But remember, the physician payments require meaningful use of completely certified ambulatory EHRs. Even for radiologists serving hospitals that are implementing complete certified ambulatory EHRs, installation of the technology is not enough. Each radiologist must also meaningfully document the ongoing use of this technology to qualify. Therefore, for hospital-based radiologist compliance with meaningful use, a hospital must not only adopt essential technology but must also collaborate with radiologists to present this technology in the context of normal radiology workflow, so that radiologists can document meeting the use criteria.

Third, for radiologists who practice in both hospitals and separate outpatient offices or imaging centers, the locations where they have at least 50% of their patient encounters during the reporting period must be equipped with complete certified EHRs or their equivalent. For example, suppose you practice at a hospital where you meaningfully use a completely certified ambulatory EHR, but you also practice at an imaging center where you do not use an EHR. At least 50% of your outpatient encounters must occur at the hospital to qualify. Ideally, both facilities should provide a fully certified ambulatory EHR, but if not, physicians who wish to qualify will need to carefully track the POS of their activities.

Fourth, the bonus is paid per physician. For example, suppose a group of 10 radiologists covers a hospital and a separate imaging center, with 1 radiologist working predominantly in the hospital and 1 working predominantly in the imaging center. The imaging center-based radiologist must use a complete certified ambulatory EHR in the imaging center, and the hospital-based radiologist must use a complete ambulatory EHR in the hospital. What if only one of the two practice sites owns a complete certified ambulatory EHR? This might make for a tricky physician scheduling challenge for a group practice aiming to have all physicians qualify because each of the physicians would need to have more than 50% of their patient encounters (not aggregate group billings) at the site equipped with the complete certified ambulatory EHR.

MEANINGFULLY USING THE EHR

Meaningful use requires adherence to specific clinical objectives published by CMS (see Table 1). Remember, for each of the CMS clinical objectives, there are also technological criteria specified by the Office of the National Coordinator for Health Information Technology, although this is not a precise mapping between the two sets of regulations.

For each objective, one must achieve and document a specified percentage of use, meaning that there are numerators and denominators that must be reported to

Table 1. Meaningful use clinical objectives, exclusions, and compliance thresholds

Clinical Objective	Exclusion Criteria	Compliance Threshold Stage 1
Core set (all required unless specific exclusions apply)		
§495.6(d)(1): CPOE	Any EP who writes <100 prescriptions during the EHR reporting period	30%
§495.6(d)(2): drug/drug, drug/allergy	No exclusion	Must be enabled
§495.6(d)(3): maintain problem list		80%
§495.6(d)(4): e-prescribing	Any EP who writes <100 prescriptions during the EHR reporting period	40%
§495.6(d)(5): maintain active medication list	No exclusion	80%
§495.6(d)(6): maintain active medication allergy list	No exclusion	80%
§495.6(d)(7): record demographics	No exclusion	50%
§495.6(d)(8): record changes in vital signs	Any EP who sees only patients aged ≤ 2 y or who believes that all 3 vital signs of height, weight, and blood pressure have no relevance to their scope of practice may attest and be excluded	50%
§495.6(d)(9): record smoking status	Any EP who sees only patients aged < 13 y	50%
§495.6(d)(10): report clinical quality measures	No exclusion	
§495.6(d)(11): clinical decision support	No exclusion	One rule
§495.6(d)(12): provide patient with electronic copy of their health information	Any EP who has no requests from patients or their agents for electronic copies of patient health information during the EHR reporting period	50%
§495.6(d)(13): provide clinical summaries for patients for each visit	Any EP who has no office visits during the EHR reporting period	30%
§495.6(d)(14): capability to exchange key clinical information	No exclusion	One test
§495.6(d)(15): conduct annual security risk analysis	No exclusion	
Menu set (5 of 10 required in stage 1)		
§495.6(e)(1): drug formulary checks	Any EP who writes <100 prescriptions during the EHR reporting period	One report
§495.6(e)(2): incorporate clinical laboratory test results into EHR	Any EP who orders no laboratory tests whose results are either in a positive/negative or numeric format during the EHR reporting period	40%
§495.6(e)(3): generate patient lists by specific conditions	No exclusion	One report
§495.6(e)(4): end reminders to patients for follow-up care	Any EP who has no patients aged ≥ 65 or ≤ 5 y	20% for patients aged >65 or < 5 y
§495.6(e)(5): provide patients with timely electronic access	Any EP who neither orders nor creates laboratory tests or information that would be contained in the problem list, medication list, or medication allergy list (or other information as listed at 45 CFR 170.304[g]) during the EHR reporting period	10%
§495.6(e)(6): identify patient-specific educational resources via EHR	No exclusion	10%
§495.6(e)(7): medication reconciliation	Any EP who was not the recipient of any transitions of care during the EHR reporting period	50%
§495.6(e)(8): summary of care for each transition of care or referral	Any EP who does not transfer a patient to another setting or refer a patient to another provider during the EHR reporting period	50%
§495.6(e)(9): submit electronic data to immunization registries	Any EP who administers no immunizations during the EHR reporting period or where no immunization registry has the capacity to receive the information electronically	One test
§495.6(e)(10): submit electronic syndromic data	Any EP who does not collect any reportable syndromic information on patients during the EHR reporting period or does not submit such information to any public health agency that has the capacity to receive the information electronically	One test

Note: CPOE = computerized physician order entry; EHR = electronic health record; EP = eligible professional.

CMS to receive the associated incentive payments. The process for calculating compliance is tricky as well. Suppose radiologist X reads an examination on patient A on January 1 and, at that time, the vital signs are not recorded. Then suppose radiologist Y reads an examination on patient A on December 31 of the same year, and the vital signs are recorded. If the reporting period includes the entire year, both radiologists "get credit" because the vital signs were recorded during the reporting period in which both examinations were obtained. Again, although this may seem quirky, the regulations in this case serve the main goal of providing an incentive to obtain vital signs at least one time during the reporting period. In a country with perhaps as many as 15 million undiagnosed hypertensive patients, one can at least appreciate the rationale for providing any and all physicians an incentive to measure blood pressure once a year.

REGISTRATION TO OBTAIN PAYMENT

Radiologists, as well as any eligible physician specialist, can register now at https://ehrincentives.cms.gov. Even if you do not use a complete certified ambulatory EHR, you can register, but be aware that you cannot qualify for the incentives until after you have used a complete certified ambulatory EHR for at least 90 days.

The first deadline is October 1, 2012; this is the very latest that a physician can begin using certified technology to qualify for the maximum incentives. If this date is missed, the maximum incentive drops from $44,000 over 5 years per physician to $39,000 over 4 years per physician and progressively decreases thereafter. The second important date is October 1, 2015, which is the last date to begin compliance before the penalties are set to begin if 2015 is your first year of participation.

RECOMMENDATIONS

The first recommendation is to become knowledgeable with regard to the required technology and clinical objectives. The ACR, CMS and the US Department of Health and Human Services all provide excellent on-line resources [2–4]. Even if meaningful use compliance seems to be too much trouble relative to the bonus payment available in the early stages, assuming the current regulations stay in effect, compliance will be required to avoid subsequent penalties. Given the likelihood that hospitals may be biased toward satisfying the inpatient criteria first, it would seem wise for radiologists to become active participants in their hospital information systems planning processes.

We believe that it may be easier and faster to access a cloud-based complete certified ambulatory EHR solution that is radiology-centric and interfaced to your existing RIS or PACS rather than attempting to deploy a disparate system that was not designed with radiologists in mind, yet such a solution is not yet commercially available to our knowledge. Another option may be to upgrade your existing RIS or PACS if the vendor offers an upgrade to a complete certified ambulatory EHR solution, but again, we are not yet aware of any RIS or PACS that qualifies as a completely certified ambulatory outpatient EHR. Radiologists and their administrators will need to keep careful surveillance of the marketplace as both cloud-based and non-cloud-based solutions emerge.

The bottom line is the regulations do not make it easy for radiologists and other specialists to qualify, but they will need to comply nevertheless, using existing and potentially emerging technologies. Ultimately, the requirement to collect and communicate clinical information in a standardized manner may finally provide radiologists the clinical integration required to provide ideal patient care.

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