

HITECH And The Wound Care Physician: What You Really Need To Know

By David Walker, President and CEO of Intellicure, Inc. and
Caroline Fife, MD, Chief Medical Officer, Intellicure, Inc.

On February 17, 2009, President Barack Obama signed the American Recovery and Reinvestment Act (ARRA), otherwise known as the “stimulus bill.” Among the many provisions in this huge bill was a piece of legislation known as HITECH, or the Health Information Technology for Economic and Clinical Health Act. Although most clinicians were unaware of it, this bill changed the world for every healthcare provider in the U.S. Unlike most legislative acts, HITECH is actually a funded mandate, to the tune of \$20 billion dollars spread across at least 11 different Federal agencies.

There are 4 Major Goals of HITECH:

1. Develop standards by 2010 that allow for the nationwide electronic exchange of health information.
2. Invest \$20 billion in health information technology infrastructure and incentives to encourage doctors and hospitals to use health information technology (HIT).
3. Save \$10 billion through improvements in quality of care and reductions in medical errors.
4. Strengthen Federal privacy and security law to protect identifiable health information (NOTE, the penalties for HIPAA violations just got MUCH bigger).

The ONC

The purpose of the HITECH act is to develop national standards for electronic health records, and then to provide financial incentives to get clinicians and hospitals to use them. To carry out these goals, the HITECH act formalized the Office of the National Coordinator for Health Information Technology (ONC). Under its jurisdiction, two important committees were formed, The Health Information Technology (HIT) Policy Committee and the HIT Standards Committee. The process of EHR certification was turned over to the National Institute for Standards and Technology (NIST), the same organization which handles our weights and measures and fixes the correct time.

Funding and Physician Incentives

Funds are distributed through two large programs, one via a series of grants and loans established by the States in cooperation with the Secretary of Health and Human Services. The second program which, at \$17.2 billion, represents the largest portion of the fund, is distributed through the Centers for Medicare and Medicaid Services (CMS). This program establishes incentive payments through Medicare for “the meaningful use of certified Electronic Health Record (EHR) technology by eligible professionals and hospitals.” There are two terms in that sentence which will be the focus of the rest of this article and which have become, quite literally, the “\$44,000 question” for healthcare professionals, namely “**meaningful use**” and “**EHR certification**.”

What is the “meaningful use of an EHR?”

There are three key elements which define the “meaningful use of an EHR and they are:

1. The EHR has to be CERTIFIED by a certifying body approved by the National Institute of Standards and Technology NIST (more on that below)
2. The EHR has to demonstrate Interoperability. This means that it has to electronically interfaced with other certified electronic health records and be connected to a health exchange network. (More on this below)
3. The clinician has to participate in Quality Reporting (see below)

What are the features of a certified EHR?

Remember that NIST has not yet begun approving the certifying bodies that will carry out EHR certification. So at this time, there are NO CERTIFIED EHRs. However, the ONC has identified the 41 key elements which are necessary for an EHR to become certified under NIST’s future program. You will note some redundancy with these features and the “meaningful use” definition in that these features are necessary in order to accomplish

meaningful use. **Presumably, systems which exhibit all these features will be able to obtain certification once the program commences.** However, at this time, no company can market an EHR as certified although the product may be “certifiable” if they possess all the necessary features.

We will briefly review what some of these features mean in an EHR.

The 41 key elements necessary for an EHR to become certified can be grouped in these seven categories:

1. Core clinical documentation
2. Computerized physician order entry (CPOE)
3. E-prescribing
4. Administrative Transactions (billing, see important note below)
5. Quality reporting (sharing de-identified data like participating in PQRI)
6. Sending data to a personal health record (PHR) including providing electronic records to the patient.
7. Exchanging data with Health Information Exchanges (HIEs) and/or the National Health Information Network (NHIN).

Core Clinical Documentation

Core Clinical Documentation is what clinicians have come to expect from electronic medical records (EMRs) and now electronic health records (EHRs). Although the concept is still evolving, we now speak of “EHRs” (rather than EMRs) as a **systematic collection of electronic health information that is capable of being shared across different health care settings.** To have “core clinical” documentation means that the clinician is able to fully document the entire clinical encounter, not just certain parts of it. Two things missing from the typical **EMR** that are now required in the EHR are the ability to provide “domain specific” **Clinical Decision Support** and to capture the clinician’s description of the encounter with **discrete, highly controlled vocabularies.** In other words, there are “pre-programmed” fields from which the clinician must choose, rather than using “free text.” The two most common controlled vocabularies in healthcare today are ICD-9-CM codes to describe diagnoses and Common Procedural Terminology (CPT) codes to describe clinical encounters and procedures.

Both code sets have been around for many years, but have largely been the jurisdiction of professional coders and billers. However, EHRs now require the clinician to participate in the selection of the proper ICD-9 and CPT codes. There is another language that they must speak as well.

Sharing a common language means Goodbye to “free text”

Why is “free text” (typing whatever words you want to type) a “no no” in the world of certified electronic health records? The answer to that question pertains to the issue of “interoperability.” We need to discuss this in order to discuss quality reporting, sending data to a “personal health record” or sharing data with national networks below. As Americans we are spoiled because no matter where we go in the world, we are likely to find someone who speaks English. For the most part, English is the “universal language” of the modern day. To make electronic data sharing possible, all computers must speak a common language, and it is not English, or “free text” in ANY language. **All certified EHRs must use Clinical Document Architecture (CDA) which is part of the HL7 (Health Level 7) version 3 standard.** The CDA specifies that the content of a document consists of a mandatory textual part (which ensures human interpretation of the document) and structured parts (for software processing). The structured part relies on specific coding systems. One example of specific coding is SNOMED, the Systematized Nomenclature of Medicine, another is RxNorm (for prescriptions). All certified EHRs must create Continuity of Care Documents (CCDs). NONE of these standards can be met using “free text.” EHRs must have “pre-programmed” fields the meaning of which is “understood” by the computer. While the clinician might be able to add free text notes, **THE MAJORITY OF CLINICAL DOCUMENTATION IS PERFORMED WITHOUT THE USE OF FREE TEXT. This means that the use of cut and paste “templates” is not an option for certified EHRs.**

This transition away from “free text” is, and will continue to be a painful one for clinicians. Physicians understandably mourn the loss of the “art” of recording the patient history in narrative form with all the subtleties which can be conveyed in “free text” format. We want to be able to tell “the story” of the patient. However, the overwhelming demand for interoperability mandates that the majority of patient information be able to be exchanged in a structured format. Certainly, from the standpoint of BILLING, this transition has already occurred. Since 1995, physicians have been compensated according to a very specific “point” system which is impacted very little by the quality of

the narrative history. **Since 1997, nearly all physician compensation has been determined by very specific elements (in some cases actual “bullet points”) of documentation which are easily programmed into EHRs.** The HITECH act has simply mandated standard programming to ensure that patient data can be collected in similar fashion and shared between institutions.

The most useful EHR systems will be ones which capture clinical data in these vocabularies easing the barriers to data sharing and eliminating the need for unreliable, complex natural language processing algorithms to process clinical notes. In short, **EHRs which continue to capture data through dictation and free typing will be destined to fail their purchasers.**

“Administrative Transactions:” GOODBYE TO



The requirement for the EHR to automate “administrative transactions” deserves special discussion. In order for an EHR to be certified, the clinician must perform **NO ADDITIONAL TASKS IN ORDER FOR THE BILLED LEVEL OF SERVICE TO BE DETERMINED.** The determination of the billed level of service must be **AUTOMATICALLY CALCULATED** from the electronic documentation. This is a very important point. **If the nurse or doctor must fill out any type of “check list” or audit sheet in order for the billed level of service to be determined, then the EHR does not meet the certification standard.** In other words, at the conclusion of the clinical documentation, the EHR should automatically inform the clinician what level of service has been provided **BASED ON THE DOCUMENTATION FIELDS NOTED** and not based on the completion of any type of check list.

EHRs must maintain documentation in “pre-programmed” fields, often with menu options behind them. Numbers may be typed in (e.g. vital signs, measurements or pain scores), but otherwise, **DOCUMENTATION IS NOT PERFORMED WITH FREE TEXT.** The computer must be able to interpret the information entered into the fields so that it can run an internal calculation when documentation is finished.

For the physician level of service, the EHR is able to “add up” the fields for clinical history, physical examination and decision making, arrive at the appropriate level of service automatically, and then “tell” the doctor what level of service he or she has performed. The nurse or physician should never have to inform the EHR what level of service has been performed by filling out a form or check box! Similarly the EHR should be able to “add up” the various fields completed by the nursing staff during their documentation and **AUTOMATICALLY** determine the facility level of service without the use of a “check list.”

CPOE

If your hospital has an EHR then you have seen CPOE at work on the in-patient side. The clinician **personally selects the appropriate order(s) from a set of pre-programmed menu options usually linked to a given diagnosis.** These menu driven options prevent “translational errors” which can occur as a nurse or clerk interprets a clinician’s handwritten orders. To meet this standard, outpatient wound and hyperbaric EHRs must **provide pre-programmed menu driven** order sets. If a physician types in “free text” orders, this does not meet the standard for CPOE.

e-Prescribing:

The benefits of e-Prescribing include the ability to check drug-drug interactions with the patient’s current medication list, send the prescription directly to the patient’s local pharmacy, and check coverage policy (and co-pay) with the patient’s payer while the patient is still in the exam room. In most cases e-Prescribing is a program which is “bolted on” to another EHR. This brings up the point that an EHR can be certified as long as it contains all the necessary elements even if it licenses some components from other vendors, like e-Prescribing and “bolts” them on to the original product.

Quality Reporting

In December 2006, President Bush signed the Tax Relief and Health Care Act (TRHCA) which authorized the establishment of a pay-for-performance program known as the Physician Quality Reporting Initiative (PQRI). In this program, clinician incentive payments are linked to whether the clinician performs certain tasks in a given time frame for specific patients (not whether they get well). Right now, PQRI is a voluntary reporting system but it is likely that in the future, as bonus money paid to participants increases it will be funded by taking money **AWAY** from clinicians who don’t report quality measures. The Medicare Improvements for Patients and Providers Act (MIPAA) of 2008 authorized a 2% bonus for those who successfully report quality

measures, increasing to 3% in 2009. The program began using a “claims based” system which was not very successful (e.g. evaluating the insurance claims to determine whether women got their mammograms, for example).

In April 2008, CMS expanded the data collection process to include reporting data via “Qualified Patient Registries.” Thousands of organizations showed interest, but only 32 made it through CMS’ complex vetting process. Intellicure is the only Registry related to wound care at this time. In 2008, only 10,000 eligible providers (EP) in the entire U.S. were represented in quality measure reports (in other words, PQRI is not going very well, overall). Anyone with a national provider identification number (NPI) is an eligible provider so some physical therapists, nurse practitioners or even chiropractors might be able to submit quality data. The real problem with the reporting system is with the QUALITY MEASURES themselves. The 2009 PQRI contained 153 measures applicable to primary and specialty physicians, but only ONE measure was directly related to wound care. (That one is the percentage of patients with venous ulcers who received compression ONE time in a 12 month period.) The good news is that right now, the incentive money is currently awarded just for participating in reporting, regardless of whether the clinician actually “passed” the measure. In other words, at this stage of the program, it is really “Pay for Reporting,” rather than performance. As a registry, Intellicure has submitted data since the inception of the program (2008) on behalf of all its users who are eligible providers and who agree to participate. Eligible providers have to sign an attestation that they wish to have data submitted on their behalf. Checks are mailed to the address associated with the EP’s tax identification number, so the registry does not have direct access to data on payment amounts. However, Intellicure Registry physicians stated that they received about \$3,000 a piece, although one clinician received \$6,000 (2% of total Medicare billing for the year).

Registries must validate that the provider is eligible to participate that year (there are specific requirements), collect all the data from the EHR on their patients, obtain the attestation from the provider, calculate the measures from clinical data, and de-identify, then transmit the data to CMS in a secure fashion.

The lack of good measures relating to wound care is frustrating for all wound and hyperbaric physicians. Intellicure submitted 6 measures to CMS as a potential “measures set” but measures have to be approved by the National Quality Forum (NQF) and they do not have wound care on their radar screen for measures review. How long it will be before wound care doctors get more relevant measures is impossible to predict. It is still possible for

wound care physicians to participate in PQRI, but they will end up reporting on measures less directly relevant to wound care, such as the percentage of smokers who were advised to stop smoking.

However, it is nearly impossible to submit PQRI data without using an EHR. Clinicians need to report on 80% of eligible patients with whatever the condition IS relating to the measure in order to get a score. This would be almost impossible with paper charting. Later, when PQRI matures and the clinicians must actually “pass” the measure (e.g. successfully complete some task) it will probably be impossible to do this successfully without an EHR. Furthermore, certified EHRs will have “decision support” built into them so they will actually help guide clinicians to perform the PQRI measures in the first place. Using decision support within the EHR, clinicians will not have to just “remember” all the relevant things the patient needs.

Quality Reporting, the ‘Trojan Horse?’

Many argue that healthcare reform is actually insurance reform, and they are partly right. Remember, if you want the extra Medicare and Medicaid payments for being a “meaningful user” of an EHR, you’re going to have to report quality and outcomes data. That data may be used for comparative-effectiveness research within the Agency for Healthcare Research and Quality (AHRQ), per the American Recovery and Reinvestment Act. AHRQ will work with CMS and, presumably, medical specialty boards, to develop “best practices.” This is part of the movement towards “quality based” reimbursement, which many feel is necessary if we are really going to improve our healthcare system.

The fact is, right now even “experts” in the wound and hyperbaric field do a rather poor job of basic wound care. We found that patients with venous ulcers were placed in adequate compression during only 17% of their visits to outpatient wound centers. Compliance with adequate off-loading of diabetic foot ulcers was even worse.¹ Clearly, we need to do a better job delivering good, basic wound care, and developing quality measures pertaining to these activities, anticipating the day that payment will be linked to such a model.

Sending data to a Personal Health Record (PHR)

HITECH mandates that the clinician be able to provide an electronic copy of the patient’s record within 48 hours of their requesting it. So, two monoliths of the electronic era have created repositories for personal health data. Check out “Microsoft HealthVault” or “Google Health” on

the Internet. The patient creates an account in one of these repositories so that the clinician with a certified EHR can transmit data to it, likely in the form of that “Continuity of Care Document” previously mentioned. Data from the patient’s pharmacy and insurer can also be transmitted to the PHR. The patient can then provide secure access information to their clinician. The clinician can review the patient’s records from all these sources, as well as uploading information about the care which they have provided.

Nation-wide exchange of HealthCare information?

Anyone who has been unable to get patient records from a hospital across the street will understand the conceptual appeal of “nationwide exchange of healthcare information.” Let’s assume for a moment that the enormous obstacle of the HIPAA privacy issue could be managed and consider the obstacles with information exchange. The real challenge is one without an obvious ‘fix’ on the horizon. When one of us (DW) was in college there were six other students with the relatively common name of David Walker, at the author’s institution of 30,000 students. Fortunately, we could be distinguished by date of birth or social security number, but even this did not prevent us from occasionally receiving each other’s grades and invoices. By what mechanism will we agree to identify each person in the United States to determine that the medical records belonging to each one represent only that person? We cannot use Social Security numbers since non-citizens do not have those. A universal “key” to allow unique patient identification has not yet been created, the actual creation of such an identifier is prohibited by an Executive Order signed by President Clinton, and yet there is a legislative deadline for performing this task, after which physicians might be financially penalized.

What does all this mean to wound care clinicians?

Initially, physicians working in hospital based outpatient clinics were not eligible for HIT incentives, but recent legislation provided for their inclusion. In exchange for meeting all of the requirements mentioned above, an eligible physician will receive incentive payments for the first five years (FY 2011 – FY 2015) of the program. In the first payment year, the physician will receive \$15,000. In subsequent years the payment changes to \$12,000 (FY 2012), \$8,000 (FY 2013), \$4,000 (FY 2014), and \$2,000 (FY 2015). However, this is not just something that physicians can just sit idly by and note that they are missing out on a bonus. If eligible physicians have not become “**meaningful EHR users**” by 2014, they will not

receive full Medicare payments beginning in 2015. Their fee schedule will be reduced by 1% each year until 2017 where they will continue to receive only 97% of their reimbursement until they meet the definition of a meaningful user.

Table 1. Physician Incentive Funds

Year	Bonus	Penalty
2011	\$15,000	0%
2012	\$12,000	0%
2013	\$8,000	0%
2014	\$4,000	0%
2015	\$2,000	1%
2016	\$0	2%
2017	\$0	3%

Hospital Incentives



Hospitals are also going to receive incentive payments through the legislation, for the first five years of the CMS program. The hospital has to meet the same definitions of meaningful use, but the payment formula is different. Hospitals who meet the meaningful use definition will receive an incentive payment between \$2 million and \$6.4 million depending on the number of inpatient discharges. Multiplying it by your Medicare case-mix and the program year, which will reduce payments each year, further reduces that amount. Finally, with a bigger carrot comes a bigger stick. Hospitals that fail to demonstrate meaningful use by 2015 will see their Market Basket Adjustment percentage reduced substantially, dropping by thirds over three years until it is nonexistent by 2017.

An Opportunity

The use of a CERTIFIED electronic health record becomes mandatory by 2014. **Clinicians (including those working at hospital based outpatient wound centers) are eligible for \$44,000 each for adopting a certified EMR, but adoption must begin by 2011 to get the full amount of the money.**

For hospitals, the total amount of money is MILLIONS but adoption ought to have started this year. Those who have not adopted and demonstrated meaningful use by 2015 will face financial penalties by CMS.

The money is not just contingent on adopting or purchasing a certified EHR but **using** it in a “meaningful” way. This is a GREAT opportunity for wound care research. “Meaningful use” includes quality reporting. At this time, there is one type of quality reporting available and that is PQRI. We have a long way to go with PQRI because at this time there is only one wound care measure and it is a poorly written one. PQRI reporting is done through “registries” certified by CMS. At this time, only one company specializing in wound care documentation has done it (Intellicure) but no doubt others will do so in the future. The job of a registry is to receive the EHR data, extract the measures information, de-identify it, analyze the data (create the clinician “report card,” in effect) and then send that data on to the third party. The really good news for wound care has to do with the “interoperability standards.” This is the hardest to understand but the most important. The interoperability standards mandate a very specific type of programming. This negates the use of free text. All the programming is in machine interpretable fields, and these are programmed using standardized vocabularies.

In 2005, the Medicare Carrier Advisory Committee (MCAC) met to evaluate the “usual care” provided to Medicare beneficiaries. They recognized that randomized, controlled trials provided limited information on these patients and posed the following question: “What trial designs will support the development of sufficient evidence to determine the appropriate treatment of chronic wounds?” They answered this question by saying that the evaluation of “large comparative databases” would allow researchers to determine what treatment combinations are effective (Ronald Davis, MD, Chairperson). We feel the HITECH act and the standardization of electronic health records provides a wonderful opportunity for “practice based” clinical trials in wound care, perhaps through the use of registries.

In summary, to get incentive payments, an eligible physician or hospital must use a **certified EHR** (once certification is available), connect it to a regional or national health exchange network (which does not yet exist in 85% of the country), and must participate in one of CMS’s Pay for Performance (P4P)

programs. If you don’t have these items in place in the next 4 to 6 years, not only will you miss out on substantial bonus payments, you will soon experience financial penalties. If you currently use an EHR in your practice, now is the time to ask your provider how they plan to handle the requirements of the HITECH act. If you are shopping for an EHR, you do not want to commit to one that cannot manage e-Prescribing or the other requirements of HIT certification.

The most important lesson is that if you are copying and pasting from templates or dictating into a voice recognition engine, your EHR will never be a tool at your command, but always a burden to your efficiency and will not comply with certification requirements. The major provisions of the HITECH act can best be summed up with, “SAY GOODBYE TO FREE TEXT, and “SAY GOODBYE TO CHECK LISTS.

Acronyms for Meaningful Use²

As hospitals research more about how Meaningful Use will affect them, the following acronyms can serve as a helpful guide.

AQA	Ambulatory Care Quality Alliance
ARRA	American Recovery and Reinvestment Act (stimulus bill)
CDA	Clinical Document Architecture
CDSS	Clinical Decision Support System
CPOE	Computerized Provider Order Entry
EH	Eligible Hospital as defined by the CMS EHR Incentive Program
HIE	Health Information Exchange
HIT	Health Information Technology
HL7	Health Level 7
HQA	Hospital Quality Alliance
MU	Meaningful Use
NIST	National Institute for Standards and Technology
NPRM	Notice of Proposed Rule Making
NQF	National Quality Forum
ONC	Office of the National Coordinator for Health Information Technology
PHI	Protected Health Information
PHR	Personal Health Record
PI	Process Improvement
PQRI	Physician Quality Reporting Initiative
RHQDAPU	Reporting Hospital Quality Data for Annual Payment Update

References:

- ¹ Fife CE, Carter MJ, Walker D. Why Is it So Hard to Do the Right Thing in Wound Care? *Wound Rep Reg* (2010) 18 154–158.
- ² Wise, PB. The Meaning of Meaningful Use: Several Technology Applications Are Needed to Qualify. *Healthcare Executive* Vol 25, No. 3 May/June 2010 (p21).