Electronic Records System: How Do You Select?

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Selecting, adopting, and implementing a documentation system for patient records is an increasingly complex endeavor in the age of health information technology. Often this undertaking is executed by health information management professionals and technology specialists employed by the health care organization; athletic trainers who do not work in a clinic or hospital setting, however, may find themselves responsible for this critical decision-making process with minimal consultation from electronic records experts. To gain an initial understanding of definitions and concepts associated with electronic records systems, please see *Electronic Records: What You Need to Know* from NATA.

The following are key considerations when reviewing, selecting and adopting or transitioning to a new electronic records system. These are not intended to be an all-inclusive list and each organization and athletic trainer may have additional implementation concerns specific to the work environment, patient population or institutional expectations.

Records Security

The privacy, security and confidentiality of the medical record is of utmost concern, as the use and disclosure of protected health information is subject to federal and state laws. A few questions to consider:

- ✓ Is the electronic record housed in the "cloud" or does it require secure storage on an organization's server?
- ✓ What are the necessary system requirements for securely accessing electronic records on a computer or electronic device?
- ✓ Will there be a need to purchase new hardware (tablet, laptop, computer workstations, scanners, digital card readers, etc.)?
- ✓ Is there a need for greater encryption to prevent security breaches?
- ✓ Are there additional security measures specific to device types that should be implemented in the event the device is ever lost or stolen?
- ✓ Will users be able to access the system remotely on personal devices or only on organization-owned devices?

Ultimately, each user of the electronic record should have unique login credentials, the system should track the accessing of patients' medical records by users, and there should be explicit policy creation for on-going protection of health information in an electronic format across devices, in addition to necessary Health Insurance Portability and Accountability Act (HIPAA)/Family Educational Rights and Privacy Act (FERPA) training for system users.

Legal Compliance

Care providers, health plans, and any third-party business associates that transmit health information electronically are considered "covered entities" that must comply with HIPAA. Therefore, all electronic records systems must be HIPAA-compliant when transmitting health information for either business purposes (billing) or as part of patient care. Records maintained by school-based entities may simultaneously or solely be subject to FERPA. (To further understand the intersectionality between these two federal laws and how each applies to student health records in a particular setting, please review the *Joint Guidance on the Application of the Family Educational Rights and Privacy Act (FERPA) and the Health Insurance Portability and Accountability Act of 1996 (HIPAA) to Student Health Records* from the U.S. Department of Health and Human Services and the U.S. Department of Education.)

The Health Information Technology for Economic and Clinical Health (HITECH) Act of 2009 was designed to encourage adoption of electronic records, further strengthened the existing privacy components of HIPAA by enhancing enforcement and corresponding penalties, and provided individuals the right to obtain their health information in an electronic format. However, these federal laws are considered the "floor" of legal expectations, as individual states may have more stringent laws regulating medical records. For instance, some states now require that all credentialed health care professionals adopt and use a certified electronic health record (EHR) for patient care.

The athletic trainer should be familiar with corresponding state laws regarding the privacy, security, release, and retention of health information. EHRs that have obtained certification from the Office of the National Coordinator (ONC) for Health Information Technology (IT) are subject to security testing in accordance with federal standards. Records systems that are not certified by ONC-approved accreditors may not be guaranteed to meet government specifications for the secure electronic transmission of health information. To determine if a health information technology product is certified, use the ONC Certified Health IT Product List (CHPL) to search by the product or vendor name, or simply ask the vendor to provide the product's CHPL ID number when reviewing product materials.

Health Information Exchange

The ability to securely transmit a patient's health information to another electronic record during the course of care is referred to as health information exchange (HIE); this interoperability promotes efficiency in the care continuum. However, not all electronic records systems are capable of the same degree of communication or interoperability with another health care organization's electronic record. Certified EHRs are tested to determine their capacity to accurately "talk" to another certified EHR, while a non-certified record or injury surveillance system may or may not being capable of such information exchange. Is there a desire for interoperability and the secure exchange of patients' health information with another health care organization or provider?

Information to be exchanged may include patient care summaries, electronic referrals, immunization records, allergy and medication lists, diagnostic imaging reports or images, operative reports, e-prescribing, and laboratory tests and results. The ability to securely transmit these items electronically between records systems, as authorized by the patient, enhances efficiency in patient care, aids in eliminating duplicate testing, and decreases delays related to records releases and communication issues across institutions and providers. If the facility or athletic trainer desires these features, it is important to ask questions around interoperability when reviewing products. Typically, the greatest capacity for HIE and interoperability occurs with certified-EHRs that are capable of attesting to CMS Meaningful Use measures.

Billing of Third-Party Payers

Nearly all electronic records are capable of transmitting health information to another business entity as part of the health care revenue cycle unless the system is an injury surveillance program used only for research

and epidemiology purposes. Transmission of health information for billing requires HIPAA compliance, as well as appropriate diagnostic and procedural coding.

As of October 1, 2015 all communication of diagnoses and in-patient hospital procedures in the U.S. must be coded according to the International Classification of Diseases, 10th Edition, Clinical Modification/Procedure Coding System (ICD-10-CM/PCS). All outpatient or ambulatory treatments and procedures must be coded using the appropriate Current Procedural Terminology (CPT) CPT® code. In the United States, ICD-10 CM/PCS is maintained by the Centers for Medicare and Medicaid Services (CMS), while the American Medical Association (AMA) owns and maintains CPT® codes. It is pertinent that the electronic records system is inclusive of the most current version of these code sets and capable of receiving code set updates. When an athletic trainer is billing a third-party payer via the electronic record, a few questions to be considered:

- ✓ Will the athletic trainer be the individual selecting the appropriate diagnostic and procedural codes?
- ✓ Are these available in a search menu or picklist in the provider's side of patient documentation?
- ✓ Will coding and subsequent billing be performed by a non-provider employed at the institution who needs user access to the system or will billing and coding be outsourced to another business entity?
- ✓ Does the electronic record automatically code the patient encounter and/or generate bills to a third-party payer?
- ✓ Does notification of claim denials occur via the electronic record?

For further information on billing and coding for athletic training services, please see other NATA Practice Advancement Resources such as *Billing 101* and *CPT Codes Used by AT*.

Patient Access

Under the HITECH Act of 2009, all individuals are granted the right to receive their own health information in an electronic format when requested. However, there is variability in the ways this electronic access may occur. Electronic records may contain a patient portal, through which the patient has unique login credentials to access applicable information. The electronic record may provide varying degrees of patient portal activity, and may or may not allow the patient to maintain a personal health record (PHR). A PHR is controlled and owned by the patient, and allows the individual to import, transmit, or upload health information from other systems or electronic formats beyond what is generated on the provider's side of the electronic record.

Patient portals can be used to streamline the completion of online forms, allow the patient to securely message the provider, schedule appointments online, electronically request or authorize the release of medical record components to another entity, complete patient reported outcome measures electronically, and distribute patient satisfaction surveys. Determining the degree to which patients interact and engage with their medical record electronically is a necessary step that often receives less consideration in a paper documentation system. A patient's access to current diagnoses, care plans, immunization records, medication and allergy lists, and diagnostic imaging results can greatly enhance the patient's ability to transfer and transmit their own health information to another provider when needed.

Legacy Records and Records Retention

Whether transitioning to an electronic record for the first time or converting to a new system, there needs to be a process around what will occur with existing patient documentation or "legacy records."

- ✓ Will paper records be converted to a digital format or securely stored as hard copies for the necessary duration required for record retention under state law?
- ✓ Will existing electronic records be transferred to the new electronic system, and if so, who will execute this process?
- ✓ If not, will existing electronic records be maintained for the required duration under state law? In what format?

- ✓ How will these legacy records be accessed or retrieved if requested for audits or legal proceedings once the organization has transitioned to a new system?
- ✓ When transitioning from one electronic system to another is there vendor support for creation of patient profiles?
- ✓ Will the organization overlap in more than one system for a period of time during the implementation of a new electronic record?
- ✓ At what point will the previous system be phased out?

Planning for record retention in the event the organization discontinues its use of the currently selected system in the future is an often overlooked step when adopting and implementing a new product.

Athletic Training-Specific Usability

Ease of use is an important consideration for efficient clinician workflow. Electronic records may be athletic training-specific products or a more general system designed to be used across a spectrum of provider types. However, customization of an electronic records product to one discipline may result in decreased capacity for health information exchange with other records systems if that product is not a certified-EHR that has been deemed capable of interoperability with other certified-EHRs.

- ✓ Is the system capable of customized documentation templates, inclusion or expansion of various patient reported outcomes measures, and generating tailored reports to meet the athletic trainer's needs?
- ✓ What, if any, process is there for customization once the product has been implemented?
- ✓ Does the vendor, the EHR administrator, or individual users create customizations for new data fields, menu lists, documentation templates, electronic patient forms, and reports?

Most vendors offer a free simulation environment to prospective clients prior to purchase. It is a best practice to thoroughly explore these free trials to determine if it meets one's needs and determine how the clinician's workflow may be modified when transitioning to a new electronic record.

Back-end Data and Interchange Standards

Within an electronic record, health information is further coded on the back-end of the system so that it may be accurately and precisely searched and retrieved during the generation of reports or when electronically transmitting data. There are numerous clinical terminologies, vocabularies, nomenclatures, codes sets, and classification systems used to represent health data beyond ICD and CPT® codes (e.g. SNOMED CT, LOINC, RxNorm, CVX codes, etc.), as well as data interchange standards that guide the architecture and mapping of such data (e.g. HL7, UMLS, NCPDP, DICOM, etc.) within the electronic record. Although it is not pertinent for the athletic trainer to have familiarity with this back-end computer programming, it is important to know that this back-end design allows for accurate and reliable health information exchange between two interoperable electronic records systems.

Standardization of health information through these languages may limit free-text, menu list items, or other options in an electronic record in order to ensure precise information exchange. The easiest way to ensure the electronic records system meets these data interchange standards is to select a certified-EHR that has been tested according to government and industry standards. A searchable list of certified EHRs is available through the ONC Certified Health IT Product List (CHPL), or one may ask the vendor to provide the product's Certified Health IT Product List (CHPL) ID number to demonstrate the product's capacity for interoperability and meaningful use. Additional features around back-end data conversion may include speech-to-text that allows direct dictation of patient documentation, or the capacity for searchable free-text in a clinician's notes via natural language processing.

Clinical Decision Support (CDS) and Evidence-Based Practice

CDS refers to the electronic record's capacity to provide clinicians with knowledge, resources, and patient-specific information at appropriate instances to enhance the delivery of health care. This may include notifications to the clinician regarding preventative care (e.g. expired immunizations), alerts (e.g. medication interactions/side effects, treatment contraindications & safety precautions), or access to evidence-based resources when documenting the patient encounter. Such notifications and alerts are usually pre-programmed into the electronic records system and may or may not be disabled or managed at the organizational level.

Although CDS is intended to aid in the prevention of adverse events and medical errors, evolving and more comprehensive CDS systems provide a means for integrating evidence-based knowledge during care delivery. CDS systems may connect the clinician to scholarly research articles on clinical topics, present the clinician with established clinical guidelines for a condition, or even assist with diagnostic support by providing appropriate screenings tools. A CDS system in the electronic record provides the clinician with pertinent information tailored to the patient's health record data at relevant points in the patient encounter and are most useful when EHR technologies are directly used at the point-of-care.

Associated Cost

One of the biggest barriers to adoption and implementation of an electronic records system is the associated cost, both financially and in administrative time. Electronic records can range from being completely free to presenting a substantial on-going expense for the organization. There are high quality electronic record products available to health care professionals at no cost; others may require a one-time licensing fee per device, have recurring subscription costs, or a pricing menu determined by the number of users or patient profiles created in the system. It is important to budget for the initial start-up costs for the software system and potential new hardware, associated user training, potential archiving of old patient records, updating to new versions of software, and user support. It also is necessary to allocate the appropriate level of human resources and personnel time to execute the transition, as administrative and documentation time may initially increase prior to experiencing improved efficiency through the use of an electronic record.

Although athletic trainers are not considered a provider group eligible for incentive payments from CMS for the adoption and meaningful use of certified EHRs, there may be cost-sharing opportunities through collaboration with other health professionals or departments in a school-based setting (health services, school nurses, counselors), or potential for an outreach athletic trainer to have remote access to the health care organization's existing system at the school. The adoption of electronic records may aid in demonstrating the athletic trainer's value to the organization by further promoting data capture of the services provided and assist with third-party reimbursement activities.

The use of electronic records are central to achieving the Institute for Health Care Improvement Triple Aim Initiative to 1) improve patient experience of care; 2) improve population health; and 3) reduce per capita cost. As health information technology adoption and meaningful use continues to expand, the adoption and implementation of electronic records by athletic trainers will become increasingly important in the provision of and communication about services rendered.

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