CHEST Topics in Practice Management

Copy, Paste, and Cloned Notes in Electronic Health Records

Prevalence, Benefits, Risks, and Best Practice Recommendations

Justin M. Weis, MD; and Paul C. Levy, MD

The modern medical record is not only used by providers to record nuances of patient care, but also is a document that must withstand the scrutiny of insurance payers and legal review. Medical documentation has evolved with the rapid growth in the use of electronic health records (EHRs). The medical software industry has created new tools and more efficient ways to document patient care encounters and record results of diagnostic testing. While these techniques have resulted in efficiencies and improvements in patient care and provider documentation, they have also created a host of new problems, including authorship attribution, data integrity, and regulatory concerns over the accuracy and medical necessity of billed services. Policies to guide provider documentation in EHRs have been developed by institutions and payers with the goal of reducing patient care risks as well as preventing fraud and abuse. In this article, we describe the major content-importing technologies that are commonly used in EHR documentation as well as the benefits and risks associated with their use. We have also reviewed a number of institutional policies and offer some best practice recommendations. ***CHEST 2014; 145(3):632–638***

Abbreviations: CIT = content importing technology; EHR = electronic health record

The evolution of electronic health records (EHRs) has created new and varied means of documenting patient care.[1] Copy and paste as a technique has been around much longer than computers. The terms were originally coined in reference to the physical process of cutting and pasting paragraphs in different locations during the process of manuscript editing. Now the common keyboard commands for copying text from one source and moving the copied material into the same or an entirely different document have morphed into complex methods of recording patient care information.[2] The technologic explosion in the software industry has created a myriad of techniques that function as content importing technology (CIT). In the health-care setting specifically, these documentation tools facilitate importing clinical information into the chart, moving it to other sections within a patient's record, or even exporting the material for use outside the clinical arena. Templates, macros, automated data points, and copy forward of an entire old note are just a few of the CIT techniques that we will discuss that enable providers to quickly move information throughout a patient's record and document a clinical encounter. Though these tools offer care providers many new efficiencies as well as opportunities to improve care delivery, they also can be misused or deliberately abused, resulting in the misrepresentation and misattribution of a provider's effort and guidance of patient care. This is of particular importance in today's complex care environment, with services provided by many members of a broader care team

For editorial comment see page 444

Manuscript received April 11, 2013; revision accepted July 16, 2013.
Affiliations: From the University of Rochester Medical Center, Rochester, NY.
Correspondence to: Justin M. Weis, MD, University of Rochester Medical Center, 601 Elmwood Ave, Box 692, Rochester, NY 14642; e-mail: justin_weis@urmc.rochester.edu

DOI: 10.1378/chest.13-0886

including nurses; physical, occupational, and respiratory therapists; and home health coordinators, as well as nurse practitioners and/or physician assistants. Since almost all EHR software allows for information to be moved from virtually any part of a patient's record into another section, these documentation tools create an environment where accurate tracking, attribution of authorship, or both can be lost. Numerous quality-of-care concerns arise, as well as additional risks of malpractice liability and billing fraud and abuse. In academic health centers, these practices could also impact a trainee's educational experiences and even result in errors in data extraction in medical research.

Methods of Importing Content in EHRs

Advances in computer technology have created multiple ways a provider may copy or generically import information from prior entries of the medical record (Table 1). While it is beyond the scope of this article to address in detail the specific mechanics and functionality of each company's CIT, we aim to describe in general terms the more common techniques available today. For more information, the reader is referred to specific EHR software companies.

The keyboard command Ctrl-C followed by Ctrl-V duplicates highlighted content from almost anywhere in a document or health record, enabling insertion of the copied content into another part of the record. When Ctrl-C/Ctrl-V is used, attribution of the original author and source of the copied material is lost, as is the date and time it was originally created, unless the copied material has this information embedded within it. A macro is a predefined string of text that may be inserted via keystroke or command phrase. Templates are documentation tools that contain predefined text or other options and can be developed for specific types of encounters or medical conditions.

Table 1—*Content Importing Technologies: Functionality*

Technology	Action
Copy and paste	Keyboard commands: Ctrl-C (copy) and Ctrl-V (paste) Unidentified author/unlinked data
Macro	Insertion of preset text
Automated data import	Patient data such as vital signs or laboratory data from sections of an EHR inserted into note
Template note	Preset text and data drawn to preset note
EHR facilitated copy paste	Duplication of text and/or data; may have attribution and automated data update
Copy note forward	Duplication of note; may have attribution and automated data update
Authorship change	Complete change of note creator/signature

EHR = electronic health record.

Templates can be created with various levels of complexity, including the use of macros, automated data import, data entry fields including check boxes and drop down menus, and place holders for future text entry. Templates may be used to rapidly create a note for a patient encounter with any degree of preset completion. EHRs can also be configured to automatically draw data from other locations in the record and insert it upon specific command. For example, a patient's vital signs, medications, and allergies can be imported with a key stroke or embedded within a template. These data may automatically update as the EHR updates or with user commands. The term "copy forward" is sometimes applied when copying is applied to a portion or an entire EHR entry. This involves taking a past record entry and duplicating it while updating data fields that are linked within the EHR. There are also versions of copy forward in which a provider may take over entirely the prior user's note and assume authorship with variable attribution of time, date, and original author of the original source material.

Some EHRs have improved attribution by a facilitated version of copy and paste that tracks information being moved throughout the record. For example, upon importing or pasting information, the EHR will insert author or source information as well as its date and time of origin. This is done using metadata, which is essentially the capability of program software to track users' activities as they navigate and/or modify a patient's record. Generation of metadata occurs to a variable degree with each CIT and is often not readily apparent to the average user, being discoverable only by making a more in-depth audit of the electronic record.

CIT: Benefits

EHRs have benefits for patients, physicians, and the broader community.[3] Benefit may be realized through improved access to records facilitating communication, increased quality of care through clinical decision support and safety engineering, financial incentives, or potential gains in medical research and education. The benefits specifically attributable to CIT, however, have not been well studied. Even though EHRs have been linked to reductions in productivity, there is a general sense among clinicians that documentation of individual patient encounters is facilitated by using CIT (Table 2). Being able to build the required components of an encounter by importing information from other parts of a patient's record can save time and potentially eliminate errors introduced by a provider attempting to summarize information obtained from a chart review. Additionally, clinical data entered into specific fields in an encounter template can help with clinical research, allowing for rapid and more