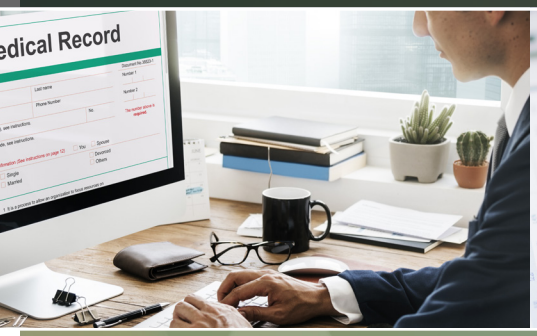
Volume 29
Number 2
Summer 2018

THE JOURNAL OF Legal Nurse Consulting



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Legal Nurse Consulting
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PURPOSE

The purpose of The Journal is to promote legal nurse consulting within the medicallegal community; to provide novice and experienced legal nurse consultants (LNCs) with a quality professional publication; and to teach and inform LNCs about clinical practice, current legal issues, and professional development.

MANUSCRIPT SUBMISSION

The Journal accepts original articles, case studies, letters, and research. Query letters are welcomed but not required. Material must be original and never published before. A manuscript should be submitted with the understanding that it is not being sent to any other journal simultaneously. Manuscripts should be addressed to JLNC@aalnc.org. Please see the next page for Information for Authors before submitting.

MANUSCRIPT REVIEW PROCESS

We send all submissions blinded to peer reviewers and return their blinded suggestions to the author. The final version may have minor editing for form and authors will have final approval before publication. Acceptance is based on the quality of the material and its importance to the audience.

The *Journal of Legal Nurse Consulting* is the official publication of the American Association of Legal Nurse Consultants (AALNC) and is a refereed journal. Journal articles express the authors' views only and are not necessarily the official policy of AALNC or the editors of the journal. The association reserves the right to accept, reject or alter all editorial and advertising material submitted for publication.

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ARTICLE SUBMISSION

The Journal of Legal Nurse Consulting (JLNC), a refereed publication, is the official journal of the American Association of Legal Nurse Consultants (AALNC). We invite interested nurses and allied professionals to submit article queries or manuscripts that educate and inform our readership about current practice methods, professional development, and the promotion of legal nurse consulting within the medical-legal community. Manuscript submissions are peer-reviewed by professional LNCs with diverse professional backgrounds. The JLNC follows the ethical guidelines of COPE, the Committee on Publication Ethics, which may be reviewed at: http://publicationethics.org/resources/code-conduct.

We particularly encourage first-time authors to submit manuscripts. The editor will provide writing and conceptual assistance as needed. Please follow this checklist for articles submitted for consideration.

INSTRUCTIONS FOR TEXT

- Manuscript length: 1500 – 4000 words
- Use Word© format only (.doc or .docx)
- Submit only original manuscript not under consideration by other publications
- Put title and page number in a header on each page (using the Header feature in Word)
- Place author name, contact information, and article title on a separate title page, so author name can be blinded for peer review
- Text: Use APA style (Publication Manual of the American Psychological Association, 6th edition) (https://owl.english.purdue.edu/owl/resource/560/01/)
- Legal citations: Use The Bluebook: A Uniform System of Citation (15th ed.), Cambridge, MA: The Harvard Law Review Association
- Live links are encouraged. Please include the full URL for each. Be careful that any automatic formatting does not break links and that they are all fully functional.
- Note current retrieval date for all online references.
- Include a 100-word abstract and keywords on the first page
- Submit your article as an email attachment, with document title articlename.doc, e.g., wheelchairs.doc

INSTRUCTIONS FOR ART, FIGURES, TABLES, LINKS

- All photos, figures, and artwork should be in JPG or PDF format (JPG preferred for photos). Line art should have a minimum resolution of 1000 dpi, halftone art (photos) a minimum of 300 dpi, and combination art (line/tone) a minimum of 500 dpi.
- Each table, figure, photo, or art should be submitted as a separate file attachment, labeled to match its reference in text, with credits if needed (e.g., Table 1, Common nursing diagnoses in SCI; Figure 3, Time to endpoints by intervention, American Cancer Society, 2003)

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GENERAL INFORMATION

Acceptance will be based on the importance of the material for the audience and the quality of the material, and cannot be guaranteed. All accepted manuscripts are subject to editing, which may involve only minor changes of grammar, punctuation, paragraphing, etc. However, some editing may involve condensing or restructuring the narrative. Authors will be notified of extensive editing. Authors will approve the final revision for submission.

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Kim Beladi,
BSN RN LNCC

President, AALNC

President's Update

I hope everyone returning from the forum arrived home to see tulips blooming and sunshine sprinkling down. I love spring, as it represents a new beginning, fresh thoughts, and time to reflect on change.

It is such a pleasure to be an active member volunteer for the American Association of Legal Nurse Consulting (AALNC). Honestly, it has been a wonderful journey of education, networking, friendships, and Aha! moments that I know will continue as long as I am a part of this organization. Each year after arriving home from the AALNC yearly forum, I am inspired by the knowledge and relationships I have been touched by.

I have learned that stepping out of my comfort zone is when I make the changes that lead me towards achieving my goals and developing new ones. This year as I stepped up to podium at the forum to accept my current role, I found myself outside of my comfort zone once again. As I write this President's Update, I am encouraged by my actions and ability to overcome fear of speaking in front of some of my many mentors and professional leaders I come behind. I look forward to many more such moments!

During my time on the AALNC Board of Directors, I have watched a group of creative leaders work through an evolving market to keep the goals of our organization front and center. This year we will continue to adjust our thoughts and actions to implement our strategic plans within the 2017 budget guidelines. We will continue our fiduciary responsibility to the members as we work to increase revenue.

Enough chatter of business. I want to help current and future members of this organization to have the tools and professional skills they need to be the best legal nurse consultants they can. This requires continued awareness campaigns with like-minded business professionals, seasoned RNs, growing consultants, legal students, attorneys, paralegals and educational institutions. One of the best ways to teach others is through word of mouth. Share what you do with anyone you know and talk about the organization that supports you. Remember, one person tells ten others … and that means lots of awareness. My last nugget: Please take a few minutes to respond to polls and feedback forms. Your feedback becomes our guideposts for products and services we develop for you, our membership.

Take a few minutes out of each day for yourself, too!

Sincerely,

Kim Beladi, BSN RN LNCC

Editor's Note: EHR Revisited

Wendie Howland
MN, RN-BC, CRRN, CNLCP, LNCC

Editor, JLNC

Welcome to the June 2018 JLNC, a reprise of the issue on EHR from June 2015. We felt it was time to take a second look at this topic three years later, to see how it's working out and see if new information and mind-sets will help LNCs think more broadly about how they use it.

Expertise here goes beyond our applying nursing knowledge to the usual (and still necessary) skillful review looking for what's in a medical record and what's not. We can't do that and call it a day anymore. Our skills need to keep growing as technology and research give us more to work with.

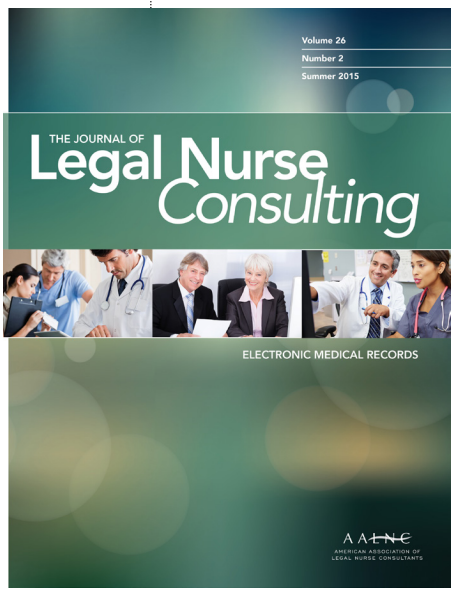
Think back to when we were new grads working clinically, growing in psychomotor proficiency as we learned to do more tasks, and then beginning to learn the whys and hows. It was a challenge at first. We knew somebody needed oxygen, how to apply it, auscultate breath sounds, and monitor dyspnea. But as we learned more about how things work in the physiology of breathing: arterial blood gases, ventilation/perfusion, compensation, acid-base balance, electrolytes, renal contributions to homeostasis, erythropoeitin, the Frank-Starling Law … we found ourselves moving along the continuum from novice to expert. We needed a far greater appreciation for the whys and hows of respiration and all the associated systems that interact with it. That is what made us better nurses.

So it's turning out to be with EHR. It's not as simple as we thought, a mechanized method of keeping information. Potential advantages and pitfalls are coming to light - if we haven't figured this out for ourselves, we have only to look in the newspapers. At this point we have to delve into learning the whys and hows more deeply to grow in LNC proficiency. So, what's our next area of study?

Metadata. That is, *data about data*: where it comes from, how it got there, and how to ferret that out. This is related to metacognition, *thinking about thinking*: knowing how you know something and developing higher-order thinking skills. When you are aware of how you think about something, you can change how you think, expand your scope, do it better.

We LNCs will always be looking for what's in a record and what ought to be (but isn't). Now its time to step beyond applying traditional chart review techniques originating in our hospital-based education and experience. We have to move towards grasping the whys and hows of EHR systems. We hope this issue will give you a head start on how to think about that.

You will find opinions here from different perspectives, from authors who think differently. One author says that knowing the details of EHR screens the clinicians see is imperative to understand the case. Another categorically opines that knowing the screens tells you nothing — it's the metadata if you're looking for the "who did what, who knew what, when, and where" that characterizes most investigative work. Another describes conflicting opinions handed down in two similar law cases. Another describes the LNC note-taking while going through records. A round table participant describes how to automate search and retrieve using the robust features of Adobe Pro. Your path may travel back and forth as different aspects of a given case unfold.



It may be important that some charting reflects that facts X, Y, and Z are not in dispute, and that's good to know. However, in another very similar case, it might be enlightening to discover that some of those facts weren't known or put into play at a critical time, having been added at a remote terminal where a clinician could not have seen events first-hand, or at a remote time. One speaker at our annual conference

We've learned that automation does not eliminate errors. Rather, it changes the nature of the errors that are made, and it makes possible new kinds of errors. The bottom line is this: Systems that integrate the best of human abilities and technology are the safest for all concerned. **– Captain Sully Sullenberger**

recommends getting all operator's manuals along with the data and metadata— reports available for physician access will not be the same as for nursing, lab, or IT access; knowing this is essential when an institution integrates multiple systems. This is another reason why "trust but verify" is fundamental in what we do. So often things are not as they seem; finding and examining that metadata can seem unnecessarily tedious, confusing (does the Krebs cycle still give you chills?), and maybe even unnecessary … but what if your client's theory of the case is wrong, because you didn't know that more information was there for the finding and didn't think about the search for it? The critical thinking process that stood you in good stead when you learned to be a better nurse will serve you well here.

The challenges of EHR are now in our court. Let us know what you think.

Wendie A. Howland MN RN-BC CRRN CCM CNLCP LNCC

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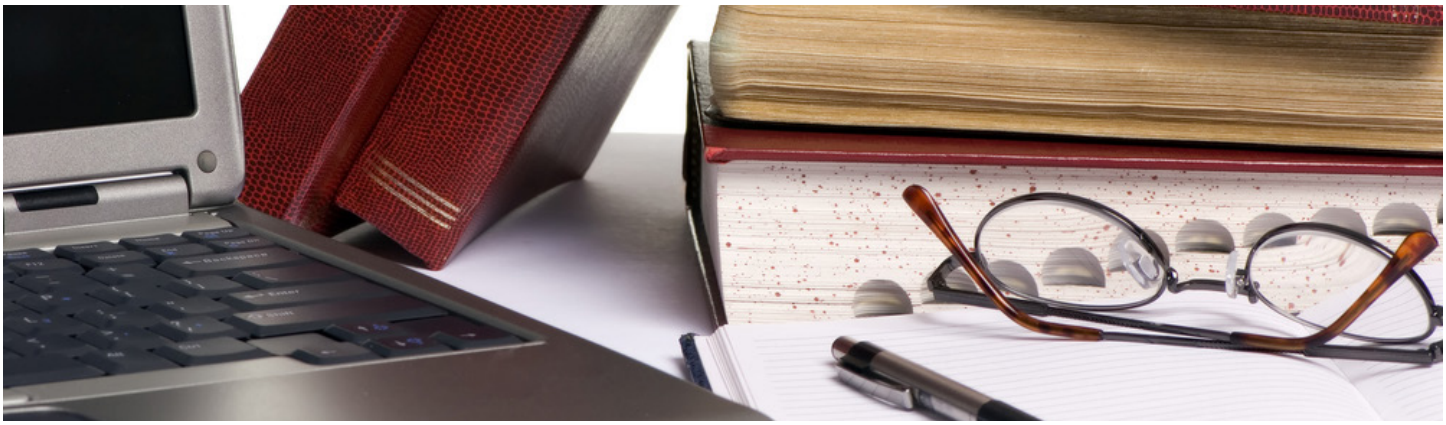

PEER REVIEW MATERIALS CONFIDENTIAL

Since the Journal of Legal Nurse Consulting is a peer-reviewed publication, I found noteworthy the news that Kentucky Governor Matt Bevin had signed a bill, HB 4, into law on March 9, 2018, that makes hospital and other health care organization peer review materials inadmissible as evidence in medical malpractice lawsuits. The bill resolved that records and findings of a peer review body may not be subject to discovery, subpoena, or introduction into evidence in any civil action, including medical malpractice actions.

As a witness to the work our subject matter experts and Journal Editorial Committee put into this publication, I find this new Kentucky law concerning. Personally, I did not understand the different publication terms of "Open Access" and "Peer Review" until I became more involved with JLNC when it became available without a subscription several years ago. At that time, I incorrectly described the JLNC as Open Access because it was now accessible to anyone in the community. I quickly learned that just because AALNC does not charge a subscription fee, that does not make the JLNC an Open Access publication. An Open Access publication charges a flat rate article processing charge that can range from $8 to as much as $5000 and is associated with less academic rigor, and more of a "pay to play" speed from acceptance to publication. The Journal of Legal Nurse Consulting and its group of professional and expert Legal Nurse Consultant volunteer peer review committee creates a quality publication that reflects the expert knowledge in our field. I would encourage all of our readers to research the laws related to peer review materials in your state and get involved in such matters affecting your profession.

Elizabeth Murray BSN, RN, LNCC, President-Elect, AALNC

FROM ECRI

ECRI Institute has worked under contract to the Agency for Healthcare Research and Quality (AHRQ) to develop and maintain the National Guideline Clearinghouse (NGC) since the late 1990's.

By now you may have heard that funding to support the National Guideline Clearinghouse has not been secured beyond July 16, 2018, when our contract ends. It is unclear what AHRQ will do with the NGC Web site after that date. At this time, there are no plans for its continued operation. ECRI is currently exploring ways to maintain a guideline repository. We are in a unique position to utilize our 20 years of expertise in assessing and summarizing guidelines for the research and medical communities. Before taking further steps, however, we are seeking input from people who use NGC or other guideline resources.

Please take a few minutes to complete our survey, located at https://survey.ecri.org/ECRI-Institute-Guidelines-Survey-2018.aspx?i=d105bc646c034d739e9911dfca48d0e0. The full survey will appear when you answer question 2. If you have additional comments or perspectives you'd like to share, please contact:

Janice L. Kaczmarek, Senior Associate Director, Consulting and Contract Services ECRI Institute EPC and Health Technology Assessment Group ECRI Institute Headquarters

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Test Your Case Screening Skills

CASE #16

Molly was an RN and due to repetitive lifting of patients she developed impingement syndrome of both shoulders. Her right shoulder never felt right and she had adhesions. She had surgery with Dr. King on her right shoulder on 5/17/07 for capsulitis. A week after she was still in a lot of pain. She went to the ER and it was determined that she had an infection in her right shoulder and she was admitted. Dr. King opened her up and cleaned out her right shoulder and put her on IV antibiotics. He then went on vacation and none of the nurses could start an IV so they took it upon themselves to discontinue her IV antibiotics. Dr. King returned and ordered oral antibiotics times 2 months. He then wanted to do a right shoulder replacement. In October she had another x-ray which showed bone loss and complete loss of cartilage due to the infection. In November, 2007, she was scheduled for shoulder replacement but decided to change docs to Dr. Jones who did biopsies and found that she still had the infection within the bone and her bones were collapsing from the infection. She still has the infection today which she has reported to Infection Control.

CASE #17

Bernie had hand surgery with Dr. Brown in February, 2009 for a ganglion R hand and trigger finger R hand and to date he hasn't had any relief. Still has stiffness and can't close his hand when it's cold outside. PCP thinks its scar tissue buildup. Never sent for PT – does the exercises his PCP gave him at home. Claims he was never told of the complications – was told it was minor surgery – would never have opted. He was offered cortisone injections but he declined. Uses a computer all day long.

Check your answers on page 31.

Test Your Case Screening Skills

You decide: reject, or investigate?

EHR: A MedMal Minefield for Practitioners?

Joanne Walker BSEd, RN

The LNC must be mindful of many factors when reviewing an EHR. This article considers the many pitfalls in the EHR and includes case references where transcription errors caused actual patient harm.

Doctors are renowned for having bad handwriting. The electronic health record (EHR) was heralded as a change for the better in health care. No more misread medication dosages or strange diagnoses from someone's attempts to decipher the "chicken scratches" the MD made in the medical record.

There is an adage in computing I was taught back in the days of binary code and the mainframe: "Garbage in, garbage out." Flash forward to the present day. Errors in transcription and unreviewed EHR entries that have been "electronically signed" seem to bear this out. Then there's the devil of "cut and paste" to contend with. So has the automation of the U.S. health care system been a good or a bad thing with patient safety and allegations of substandard care leading to litigation? That depends very much on whom you ask.

These excerpts from a 2015 Politico article by Arthur Allen are relevant. "According to a review by The Doctors Company, the largest physician-owned U.S. medical malpractice insurer, EHR issues were involved in only 1 percent of a sample of lawsuits concluded from 2007 through 2013. But that could be deceptive since it takes five or six years to close a suit, and during that period the numbers of such cases grew rapidly as electronic health records became more pervasive in hospitals and physician offices. These cases doubled from 2013 to 2014.

The lawsuits allege a broad range of mistakes and information gaps — typos that lead to medication errors; voice-recognition software that drops key words; doctors' reliance on old or incorrect records; and nurses'

Understanding how using EHRs may help protect them from liability, and how misuse or nonuse may increase liability risk, should motivate them to do so.

misinterpretation of drop-down menus, with errors inserted as a result in reports on patient status.

In addition, discrepancies between what doctors and nurses see on their computer screens and the printouts of electronic records that plaintiffs bring to court are leading judges and juries to discredit provider testimony and hand out big awards. In one case, a patient in septic shock had suffered gangrene and a severe skin rash, but computer records read "skin normal." They also showed repeated physician interviews with the patient — when she was comatose.

The Electronic Health Record Association, which represents most EHR vendors, says it is working in collaborations to address EHR-related safety issues.

In about 200 EHR-related legal cases that the Harvard medical community liability firm Controlled Risk Insurance Company, Ltd., CRICO, analyzed, the glitches rarely led directly to patient harm, said Dana Siegal, the company's director of patient safety services. But she added, "We're seeing failures to communicate or providers acting on inaccurate information that was driven in part by an EHR issue."

Take the case of an elderly Illinois woman who stabbed herself with a garden fork. An emergency room nurse clicked the "unknown/last five years" tab for the woman's tetanus shot status, and a physician interpreted this to mean she did not need a shot. She had never been immunized. The woman later died of tetanus, said Chicago plaintiff's attorney Kenneth Lumb, who handled the case.

The cut-and-paste function of EHRs allows doctors to enter information without retyping it. That's useful for billing but can lead to inaccuracies and confusion. Many hospitals have unsecured audit trails—meaning that information in the record could be altered without detection. FDA already collects some EHR incident reports, as do Patient Safety Organizations created under a 2005 law.[1]

Cision PR Newswire of December 17, 2012 carried news from Cunningham Bounds LLC of this verdict:

"On December 13, 2012, a Baldwin County, Alabama, jury returned a $140 million wrongful death verdict against Thomas Hospital and its outsourced medical transcription companies for a woman's death caused by a transcription error, which resulted in a fatal medication dosage.

"In a complicated case that took more than four years to prepare for trial, Plaintiff's attorneys revealed the circumstances that led to the needless death of Sharon Juno, a former patient of Thomas Hospital in Fairhope, Alabama.

"On March 18, 2008, Ms. Juno was discharged from Thomas Hospital. Unbeknownst to her treating physician, the Discharge Summary he dictated was outsourced by the hospital and ultimately transcribed in Mumbai, India and New Delhi, India. The transcript contained three critical errors, including the dosage of Levemir insulin, which was written incorrectly as 80 units rather than eight (10 times the prescribed dose). The hospital violated its own procedures and multiple national patient safety standards by using the unreviewed, unsigned Discharge Summary to write admission and medication orders for Sharon Juno's admission to a local rehabilitation facility. Shortly after her admission to the rehab facility, on March 19, 2008, Ms. Juno was given a fatal dosage of insulin based on the admission paperwork the hospital had sent to the rehab facility. The medication caused an irreparable brain injury that resulted in cardiopulmonary arrest. Sharon Juno never regained consciousness and died on March 27, 2008.

"Beginning in 2007, Thomas Hospital authorized its U.S. based outsource transcription vendor — Precyse Solutions, LLC — to use overseas transcription in India to save 2 cents per line. Through a series of subcontracts, the actual transcription services were moved to India and performed by Medusind Solutions, Inc. in Mumbai and Sam Tech Datasys in New Delhi. Testimony at trial revealed that U.S. based employees of Precyse were highly critical of the poor accuracy of the transcription work performed overseas by Medusind and Samtech. Instead of instituting better quality control procedures, these employees were replaced with overseas reviewers. Consequently, no one in the United States reviewed the transcripts for critical errors before they were provided to Thomas Hospital.

"She died because the hospital administrators approved using transcriptionists in India to save 2 cents per dictated line. The problem was later compounded exponentially by the hospital preparing transfer orders for Ms. Juno from the unreviewed and unsigned transcription, which were then sent to a rehab facility in the form of

a doctor's order, all of which violated decades old and exceedingly clear national standards of care applicable to all U.S. hospitals."[2]

The March-April 2015 *RSNA RadioGraphics* contained this caveat: "Errors in radiology reports may result in lawsuits for many different reasons. Inappropriate wording and unsuitable terminology may lead to incorrect impressions, resulting in patient mismanagement. Transcription errors may completely alter a report, even if the error is limited to a single word. For example, "No evidence of acute appendicitis" may be erroneously transcribed as "Evidence of acute appendicitis," potentially resulting in unnecessary surgery. The importance of proofreading one's reports cannot be overestimated. Inadequate communication or even insufficient documentation of appropriate communication (including suitable recommendations) in the final report may result in grievances."[3]

In The New England Journal of Medicine article published November 18, 2010, *Medical Malpractice Liability in the Age of Electronic Health Records*, Sandeep S. Mangalmurti, M.D., J.D., Lindsey Murtagh, J.D., M.P.H., and Michelle M. Mello, J.D., Ph.D. "... explore the implications for malpractice liability of four core functionalities of EHR systems: documentation of clinical findings, recording of test and imaging results, computerized provider-order entry, and clinical-decision support. We also discuss the ramifications of secure messaging capabilities integrated into EHR systems and the overall effects that may occur as comprehensive EHR systems become standard.

"Medical errors and adverse events may result from individual mistakes in using EHRs (e.g. incorrectly entering information into the electronic record) or system-wide EHR failures or "bugs" that create problems in care processes (e.g. "crashes" that prevent access to crucial information). The interface between paper and electronic records may also create documentation gaps or other problems that affect clinical care.

"Messaging systems also affect liability risk by shaping patients' perceptions of their physician. E-mails that are answered slowly, use boilerplate language from staff members, or are otherwise unresponsive to patients' concerns are likely to provoke ire and dissatisfaction. Conversely, highly responsive physicians may strengthen their relationships with patients. This may have medicolegal benefits, since research has linked a propensity to sue with patients' satisfaction with their physician and the physician's communication skills.

"In some malpractice cases, EHR documentation may establish a provider's culpability, whereas in others it may help mount a defense. Hospitals can monitor system use after implementation for obvious problems. Physicians, for their part, must climb the learning curve. Understanding how using EHRs may help protect them from liability, and how misuse or nonuse may increase liability risk, should motivate them to do so."[4]

There are 8 *Malpractice Dangers in Your EHR*, according to an article in Medscape Nurses, August 26, 2014. These include copying and pasting, password sharing, ignoring clinical decision support (CDS), using an EHR in nonstandard ways, and making input errors. Some salient points to consider in the article:

"The Health Insurance Portability and Accountability Act (HIPAA) specifically states that the healthcare provider is the covered entity responsible for maintaining the integrity of the patient's medical record — not the EHR vendor, not the consultant, not the systems integrator.

"Copying and pasting information from one electronic record to another is among the worst things you can do, clinically as well as legally. One problem is that incorrect or outdated patient information may be copied from one record to another, which can undermine a malpractice defense. Another is that copied-and-pasted information can make patient histories so lengthy that it can be difficult for the doctor, or other clinicians, to quickly locate relevant facts.

"In addition, large blocks of text repeatedly copied in the EHR are easily revealed by a plaintiff attorney in the discovery phase of a malpractice suit. It suggests that you [i.e. the provider] were not really engaged in patient care and may cast doubt on anything else you may say in your defense."

"Case law establishes that physicians can be held liable for harm that could have been averted had they more carefully studied their patients' medical records," Sharona Hoffman, JD, Professor of Law & Bioethics at Case Western Reserve University School of Law in Cleveland, Ohio, and an expert on the potential pitfalls of EHR use in liability suits, wrote in the *Berkeley Technology Law Journal*. "For example, *Short v. United*

"Case law establishes that physicians can be held liable for harm that could have been averted had they more carefully studied their patients' medical records."
– Sharona Hoffman, JD

States involved a patient whose doctor failed to diagnose his prostate cancer in time for it to be cured. The court held that under Vermont law, the physician violated the standard of care by failing to review the patient's past visit notes, which would have elucidated the nature of his problem."

For all the problems it can cause, cutting and pasting just isn't worth it, Hoffman contends. Many experts urge doctors to disable the feature.

Clinical decision support (CDS) — which includes drug/drug and drug-allergy alerts — is an EHR's most annoying feature, as many doctors see it. They bridle at a computer telling them how to practice medicine, and the unending stream of alerts, many unnecessary, can be irritating.

Many doctors click through CDS recommendations and alerts with barely a glance, override them, set higher thresholds that trigger alerts to reduce their number, or don't install the CDS module for their EHRs.

Using autofill technology may exacerbate the problem of EHR inaccuracies by completing template fields when the doctor types in a letter or two. This may speed things along, but the information may be incorrect, and doctors, in their haste, may not check.

Hoffman cites a study of 60 patient records with 1891 notes from the Department of Veterans Affairs' EHR, generally regarded as one of the best. It found that 84% of the notes had at least one documentation error, and there were an average of 7.8 documentation mistakes per patient.

Legally risky input errors need not be inadvertent — just nonstandard. The journal *Health Data Management* reports that a family practice in Colorado found that its EHR was randomly deleting such words as "not" when the records were printed and shared with other physicians.

"As it turned out, the clinician entering the note was an old-fashioned typist who put two spaces rather than one after a period — once a standard practice. The extra space deleted the first word in the next sentence."

This final case study was shared by Kathleen C. Ashton, PhD, RN, ACNS-BC, from the report she gave in 2014 as an expert in Re: *Edward Thomas v. Jefferson Regional Medical Center, et al.*

"Edward Thomas was a 72-year-old gentleman who was living independently with his wife and adult son when he was brought to the emergency department of Jefferson Regional Medical Center on Thursday, September 15, 2011. He was complaining of generalized weakness, nausea, and night sweats, and his white blood count (WBC) was 13.6 (normal: 4.32 to 5.72). He was evaluated, rehydrated intravenously, and sent home with the diagnosis of a viral illness.

"On September 17th, Mr. Thomas' family reported that he was disoriented and refusing to get out of bed. They called the paramedics who again brought him to the emergency department and he was admitted to the hospital. At this time his WBC was 13.77. The record indicates that his chief complaints were confusion, fever, and dementia. His past medical history lists: "Seizure disorder, appendectomy, tonsillectomy, Alzheimer's disease, pacemaker". His social history states "He is a retired welder". Mr. Thomas had no pacemaker and he was a retired waiter, not a welder.

"A CT scan of the head was performed on September 17th and the attending physician, Dr. William Annear, visited Mr. Thomas the next morning. Dr. Annear ordered neurology and infectious disease consults and a brain MRI. The MRI was cancelled that morning due to the pacemaker in Mr. Thomas' history and the note he was a retired welder with the possibility of metal fragments in his body.

"On Sunday, September 18th, Dr. Colodny, the infectious disease physician, saw Mr. Thomas and ordered a CT of the chest, abdomen, and pelvis. These studies were performed at 1:56 PM and showed no evidence of infection. On Monday, September 19th at 10:15 AM Dr. Annear noted that Mr. Thomas was 'OK for MRI brain with contrast,' but the MRI originally ordered the previous day was not performed until 11:07 PM that evening. The MRI results showed a 'medial left temporal lobe infarct likely in the subacute phase with borderline restrictive signal.' Mr. Thomas' WBC was elevated to 15.4 on Tuesday, September 20, 2011.

"Acyclovir, an antiviral medication, was begun at 9:39 PM on September 20, 2011, some three days after Mr. Thomas was admitted to the hospital.

Using autofill technology may exacerbate the problem of EHR inaccuracies by completing template fields when the doctor types in a letter or two. This may speed things along, but the information may be incorrect, and doctors, in their haste, may not check.

The LNC who has the onerous task of organizing and reviewing these records must become familiar with the possibility of transcription errors affecting patient safety and the outcome of litigation.

He was transferred to Allegheny General Hospital on September 30, 2011 for further workup and treatment of herpetic encephalitis. He was discharged from Allegheny General Hospital to an inpatient rehabilitation facility on October 12, 2011, where he remains a resident to this day.

"The materials reviewed indicate that the nurses caring for Mr. Thomas deviated from accepted standards of nursing practice in several ways. They failed to obtain an accurate history; they failed to communicate vital clarifying information; and they failed to promptly follow a physician's order, thus delaying necessary diagnostic testing and interventions. Their actions fell below the standard of nursing care.

"Dr. Asma Syeda testified at her deposition that she has an accent and she dictated her history and physical to be transcribed into print form. She noted that Mr. Thomas "works as a waiter" and it appeared as welder (Syeda dep. p. 32). She noted an atrial pacemaker and it was added in as a permanent pacemaker (Syeda dep. p. 32).

"Nurse Lisa Droznek testified that she worked the 7 AM to 3:30 PM shift on September 18th (Droznek dep. pgs. 8, 16, 17) and clarified with Dr. Annear that Mr. Thomas was a retired waiter and did not have a pacemaker (Droznek dep. p. 32). Although she clarified these errors at 1:41 PM on September 18th (Droznek dep. p. 32), the brain MRI was not performed until 11:07 PM on September 19th, more than 35 hours later. Nurse Droznek did not communicate her clarification nor did she follow up to be sure the needed diagnostic testing was performed. She did not see that the physician's order was carried out. These actions delayed the opportunity for Mr. Thomas to receive vitally needed medical intervention and constituted a deviation from the standard of nursing practice.

"The hospital is responsible for having in place, and enforcing, proper policies and procedures to see that physician orders are carried out in a timely manner. It appears that Mr. Thomas was transferred from the 5th floor to the 4th floor around the time Dr. Annear and Nurse Droznek were clarifying the pacemaker issue. To the extent that changing the patient's room contributed to the delay in performing the brain MRI, this is not a valid excuse and is also completely unacceptable. The hospital must have in place, and enforce, appropriate policies and procedures to ensure there is proper communication among staff to ensure continuity of care for its patients as they move from one unit to another.

"In summary, the failures of the nurse caring for Mr. Edward Thomas, and the institution as outlined above, were deviations from accepted standards of care that substantially increased the risk of harm, and were direct causes in bringing about the injuries of Edward Thomas."

CONCLUSION

Using EHRs in the U.S. has become standard in many facilities. The LNC who has the onerous task of organizing and reviewing these records must become familiar with the possibility of transcription errors affecting patient safety and the outcome of litigation.

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The Intersection Between Medicine and Law: Legal Nurse Consultants' Roles and Responsibilities under HIPAA

Linn F. Freedman, Esq. and Kathryn M. Rattigan, Esq.

INTRODUCTION

The legal world and the medical world are often intertwined—notably in medical malpractice cases and personal injury litigation. Since many legal professionals, judges, and jury members are not always familiar with the world of medicine, they will often need help from an expert in that area. This is where legal nurse consultants fit into the equation. A legal nurse consultant is an experienced professional in the nursing field that is also qualified to work as a legal consultant on medical cases and is either current or former practicing nurses.

Legal nurse consultants help legal professionals understand and process information related to medical treatment and services and help bridge the gap between the fields of medicine and law. Legal nurse consultants may perform a variety of different services for legal professionals – from assisting with medical malpractice cases, toxic torts, insurance fraud cases, personal injury cases, and worker's compensation cases, to criminal cases – the point is that they have a wide range of knowledge that is useful in many different types of cases.

One role of a legal nurse consultant is to help lawyers gather and analyze evidence. For example, they will often obtain medical records, which they can analyze for any information relevant to the litigation at hand. They may be responsible for comparing an individual's medical records to the individual's allegations and deciding whether or not a claim has enough merit or evidence to justify a legal cause of action. They may also examine an individual's medical charts for signs of tampering or malpractice during a medical procedure. Legal nurse consultants may also review an individual's medical history to help determine whether a claim has merit in litigation involving health issues. Because legal nurse consultants have so much access to health information, we often get questions about what laws, including the Health Insurance Portability and Accountability Act of 1996 (HIPAA) apply to legal nurse consultants and when and how they may apply. Because there is so much confusion in this area, we will try to help clear up some of the confusion in this article.

THE HEALTH INSURANCE PORTABILITY AND ACCOUNTABILITY ACT OF 1996

With access to medical records and medical history information from legal professionals, legal nurse consultants straddle the line between the legal and healthcare industry, and therefore, also straddle the law. As a nurse consultant, one would assume that HIPAA applies, and in most circumstances, that would be a correct assumption. As a legal nurse consultant, one might assume that HIPAA would not apply because in that role, the legal nurse consultant is not rendering care. That may or may not be a correct assumption.

Under HIPAA, covered entities and business associates are required to implement certain privacy and security policies and procedures when accessing, using and disclosing health information. See 45 C.F.R. Parts 160, 164. "Covered entities" are health care providers, health plans or healthcare clearinghouse "who transmit [ ] any health information in electronic form in connection with a transaction covered" by HIPAA. See 45 C.F.R. 160.103. A nurse consultant who is providing care to a patient and is billing for that care would generally fall under HIPAA as a covered entity.

"Business associates" are entities who "on behalf of such covered entity… creates, receives, maintains, or transmits protected health information [("PHI")] for a function or activity regulated by this subchapter, including claims processing or administration, data analysis, processing or administration, utilization review, quality assurance, patient safety activities…billing, benefit management, practice management, and repricing; or [p]rovides legal, actuarial, accounting, consulting, data aggregation [ ], management, administrative, accreditation, or financial services to or for such covered entity… where the provision of the service involves the disclosure of protected health information from such covered entity or arrangement, or from another business associate of such covered entity or arrangement, to the person." Id.

"Business associates" also include "a subcontractor that creates, receives, maintains, or transmits protected health information on behalf of the business associate." See id. Legal professionals and law firms that receive PHI from their health care clients (for instance in a medical malpractice or employment law case) fall under HIPAA as a business associate, and therefore, will execute business associate agreements with their health care clients to comply with HIPAA regulations. If a legal nurse consultant is working for a lawyer or law firm that has health care clients and has entered into a business associate agreement with the health care client, the legal nurse consultant falls under HIPAA and must adhere to the privacy and security provisions set forth in HIPAA and the business associate agreement.

Business associate agreements require the business associate to appropriately safeguard PHI. See 45 CFR 164.502(e). The business associate agreement limits the uses and disclosures of PHI by the business associate, based on the relationship between the parties and the activities or services being performed by the business associate. See 164.504(e). A business associate may use or disclose PHI only as permitted or required by its business associate agreement or as required by law. A business associate is also required to execute subcontractor agreements (with the same requirements as their business associate agreements) with any and all subcontractors or vendors who will receive access to PHI the business associate receives from a covered entity.

A business associate is directly liable under HIPAA and subject to civil and, in some cases, criminal penalties for failing to abide by its business associate agreement or in accordance with the law. A business associate also is directly liable and subject to civil penalties for failing to safeguard electronic protected health information in accordance with the HIPAA Security Rule; therefore, business associates must also implement appropriate technical, physical and administrative safeguards for PHI in accordance with the HIPAA Security Rule in addition to abiding by the terms of their business associate agreements.

LEGAL NURSE CONSULTANTS AS EMPLOYEES AND/OR SUBCONTRACTORS TO COVERED ENTITIES OR BUSINESS ASSOCIATES

As described above, legal professionals and law firms can be business associates

Because legal nurse consultants have so much access to health information, we often get questions about what laws, including the Health Insurance Portability and Accountability Act of 1996 (HIPAA) apply to legal nurse consultants and when and how they may apply.

under HIPAA. Therefore, if a legal nurse consultant is an employee of a legal professional or law firm, s/he is required to adhere to HIPAA and the business associate agreement entered into between the health care client and the law firm business associate.

If the legal nurse consultant is hired independently by a legal professional or law firm to participate in litigation and that legal nurse consultant will have access to PHI that the law firm received from a covered entity client, HIPAA requires that the law firm execute a HIPAA subcontractor agreement—the legal professional/law firm as the business associate and the legal nurse consultant as the subcontractor--before any PHI is transmitted to the legal nurse consultant. The terms of a HIPAA subcontractor agreement are statutorily required and usually include:

- Development and use of appropriate physical, technical and administrative safeguards to protect PHI (see 45 C.F.R. 164.308, 164.310, 164.312, 164.314 and 164.316);
- Reporting breaches of PHI and/or security incidents involving PHI;
- Providing access to PHI in a designated record (see 45 C.F.R. 164.524);
- Making amendments to PHI in a designated record (see 45 C.F.R. 164.526);
- Documenting disclosures of PHI in order to respond to requests for an accounting of disclosures (see 45 C.F.R. 164.528);

What does this mean for legal nurse consultants? It means that if the legal nurse consultant is a solo consultant, and works as a subcontractor to a business associate law firm who may have access to PHI, the legal nurse consultant is required to sign a contract that says that s/he has a HIPAA compliance program in place. A HIPAA compliance program includes implementing required policies and procedures that comply with the HIPAA Security Rule, a written breach notification program, and HIPAA training for any personnel who have access to PHI. This is an important note as many legal nurse consultants are not aware of the legal obligations imposed on them when they sign a business associate agreement.

APPLICABILITY OF STATE LAWS

State laws also play a role in a legal nurse consultant's data privacy and security responsibilities, which are rapidly changing. Often, legal nurse consultants are not aware that state laws exist or are applicable to them:

- State data security regulations such as the Massachusetts Data Security Regulations, 201 CMR 17.00, the Rhode Island Identity Theft Protection Act, R.I.G.L. § 11-49.3-1, Connecticut data security regulations, Connecticut Public Act No. 15-142, and the California data security regulations, Cal. Civ. Code § 1798.81.5 may apply to a legal nurse consultant's handling of PHI and other personally identifiable information.
- State specific laws relating to sensitive health information including HIV/Aids, substance use disorder, sexually transmitted diseases, genetic, behavioral and mental health, family planning and minors' information have specific

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The bottom line is that legal nurse consultants are usually subject to HIPAA and state laws applicable to the access, use and disclosure of health information, as well as contractual provisions set forth in business associate agreements.

provisions around the use and disclosure of this information.

- State data breach notification laws could also be triggered – currently there are 50 different state laws related to notification of a breach to individuals and government and/or law enforcement agencies, and many of them include health information.

Legal nurse consultants who implement HIPAA policies and procedures may wish to confirm that there are no other obligations pursuant to state laws such as these.

CONCLUSION

Nurse consultants who provide health care services to patients are generally considered a covered entity under HIPAA and are required to follow and adhere to the HIPAA Privacy and Security Rules when accessing, using and disclosing PHI of patients.

As a legal nurse consultant, whether you are working for a law firm, or working on your own, when you have access to PHI from a covered entity client, your law firm or you are required by HIPAA to enter into a business associate agreement with the covered entity health care client that requires certain privacy and security measures be put in place to protect the PHI. As a business associate who is receiving PHI directly from a covered entity, you are independently required to comply with the HIPAA Security Rule, which includes having a HIPAA compliance program in place. Further, if your law firm employer or you as an independent consultant discloses PHI to subcontractors (which can be a business or an individual), you are required by HIPAA to enter into a HIPAA Subcontractor Agreement with that entity or individual. A common scenario would be sending medical records to an expert witness to review and provide an opinion. If PHI is sent to that expert witness, a subcontractor business associate agreement is required before the PHI can be sent to the expert witness. The way to think about it is to follow the PHI—if you are disclosing PHI to a third party, a written agreement that sets forth privacy and security provisions for the protection of the PHI, as required by HIPAA, must be secured before the PHI is disclosed.

The bottom line is that legal nurse consultants are usually subject to HIPAA and state laws applicable to the access, use and disclosure of health information, as well as contractual provisions set forth in business associate agreements. Therefore, it is important to be aware of and comply with the laws applicable to your work.

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EMRs and Litigation: Issues Decided and What's Next

Matthew P. Keris, The Legal Intelligencer

http://www.thelegalintelligencer.com/id=1202754544467/EMRs-and-Litigation-Issues-Decided-and-Whats-Next?slreturn=20160609173931

Following President George W. Bush's 2005 mandate, nearly every health care system has converted from hard copy paper records to an electronic medical records (EMR) system. We are now beginning to receive guidance from the appellate courts on how to handle some of the unique EMR litigation issues. The following is an overview of EMR cases that may impact the standard of care in medical professional liability cases.

ATTEMPTS TO DENY DOCTOR ACCESS TO EMR

One of the goals of EMR adoption was to make the patient's entire chart accessible so physicians would have a complete medical history at their fingertips. In a novel argument, a patient sought to limit his doctors from accessing his complete EMR record in Ortega v. Colorado Permanente Medical Group, 265 P.3d 444 (Colo. 2011), arguing that he did not waive the privilege to records for treatment rendered in another state at an earlier time.

In Ortega, the plaintiff sued his Kaiser physicians, who were a part of a multi-state provider of health services. Kaiser boasted an integrated EMR that enabled the plaintiff's Colorado physicians to access his records from a California Kaiser facility. The plaintiff notified the defendants that he did not waive the physician-patient privilege regarding his California records. The Colorado Supreme Court held that Ernest Ortega could not prevent the defendants from accessing the California EMR information in preparing their defenses. Because Mr. Ortega's Kaiser physicians had access to the complete EMR when treating him, all of the plaintiff's EMR information was relevant to the defendants in preparing their defenses. The Ortega decision illustrates that a patient cannot raise privilege and deny a physician's use of the entire EMR in preparing a medical defense if it was accessible at the time of treatment.

FAILURE TO FOLLOW EMBEDDED EMR WARNINGS

EMR systems typically have embedded warning systems that provide health care providers with notice of potentially detrimental patient outcomes, most commonly to prevent medication errors. When this occurs, the EMR will require acknowledgement of the warning and either a modification of the treatment based on the warning or an override that allows the treatment as suggested, despite the warning.

Failure to acknowledge the embedded warnings may create a new standard of care theory of liability. In Kolozsvari v. Doe, 943 N.E.2d 823 (Ind. Ct. App. 2011), pharmacists repeatedly ignored and overrode embedded warnings regarding medications and failed to provide the suggested instructions to be given to the patient from the EMR. The pharmacists moved to have the matter dismissed, arguing that there was no duty to warn the plaintiff of the dangers from the embedded EMR warnings, but the Indiana Court of Appeals disagreed. The court held that the standard of care could include the duty to acknowledge and report the embedded EMR warnings to the patient. Other courts, when posed with this issue, may make an identical ruling and recognize the failure to acknowledge EMR warnings as a factor for the jury to consider in determining whether the standard of care has been breached.

NO PRECOMPLAINT DISCOVERY OF 'LIVE' EMR SYSTEM USE

The majority rule regarding pre-complaint discovery is that it shall be limited to what is necessary for a plaintiff to draft his or her initial pleading, and this general rule has not been disturbed with the adoption of EMR systems. In re Clapp, 241 S.W.3d 913 (Tex. App. Dallas 2007), is another example where a court seems reluctant to break from long-standing precedent despite the adoption of new technology.

In Clapp, the plaintiffs sought to conduct precomplaint discovery, which included requests for a videotaped deposition of a custodian of records utilizing the EMR system and a copy of the entire native EMR data. The defendants objected to the request of the patient information as violative of Texas R. Civ. P. 202.1, which sets the parameters of precomplaint discovery.

Although Rule 202.1 permitted the discovery of medical records pre-suit, it did not allow depositions or production of computerized data in native form. Applying strict construction of the precomplaint discovery rule to the new EMR system, the court did not permit the plaintiffs to engage in an extensive discovery process of the EMR system before the complaint was drafted and denied their requests.

DUTY OF CARE TO COORDINATE HEALTH CARE THROUGH THE EMR

In Laskowski v. U.S. Department of Veterans Affairs, 918 F. Supp. 2d 301 (M.D. Pa. 2013), expert witnesses from both parties agreed that the EMR provides health care providers the ability to manage a patient's entire course of treatment from a computer station. Because this issue was undisputed, the court formally recognized that physicians had the duty to monitor and coordinate patient care of others through the EMR.

Stanley P. Laskowski brought an action against the Department of Veteran Affairs for the mismanagement of his post-traumatic stress disorder (PTSD) following his military service in Iraq. It was alleged that he was over- and under-medicated in his PTSD treatment by the staff of the local veterans hospital. At trial, the experts for both sides agreed that the physicians had a duty to coordinate care by certified registered nurse practitioners through the EMR, and, in light of the agreement, the district court found that the plaintiff met his burden of proof on this issue.

The Laskowski case is unique because both sides acknowledged that the benefit of being able to monitor all care through the EMR system brings the added responsibility to ensure that the total care is managed appropriately. Physicians may not only be held accountable for their part in caring for the patient, but they may also be deemed responsible for others in coordinating the total care of a patient.

EMR systems are not perfect, and neither are the health care practitioners tasked with their usage.

WHAT IS NEXT?

EMR systems will continue to incorporate the latest technological advances, and there will be new areas ripe for litigation controversies that we cannot predict today. One area in medical malpractice that will become more of an issue is the incorporation of smart devices into the practice of medicine. Between patients and health care providers increasingly communicating via text messaging and social media, scrutiny and requests for information from these devices will increase. Further, smart phones are also being used as medical devices for remote patient monitoring and, for some health care providers, are another way of recording patient information, including the use of a camera to document how a patient appears at a given time. Whether the information from these mobile smartphones finds its way into the official patient chart or in answers to discovery remains to be seen.

Another foreseeable issue is the use of patient treatment metrics based on leveraged information from the EMR. As EMR systems provide treatment recommendations based on patient treatment metrics, it may result in a large group of patients being impacted by an error. Also, as EMR systems become larger and more integrated, a computer error could trigger certain classes of patients to seek compensation for their injuries.

Lastly, issues will persist as to the hard copy printout of the EMR. To this day, EMR developers have not made the hard copy easy to follow, and this is unlikely to change. Further, and unlike the pre-2005 paper record, it may be impossible to preserve the precise record available to a health care provider at a given time due to system upgrades, changes in "drop-down" options and EMR template changes. For all the time, money and effort invested in EMR development, it does not appear that the designers contemplated how to reproduce the record as it appeared in the past, especially to those who do not have access to the "live" EMR system.

EMR systems are not perfect, and neither are the health care practitioners tasked with their usage. EMRs will continue to challenge medical professional liability practitioners for years to come. Moving forward, let's not forget that patients and their attorneys share the common goal of determining the relevant facts in a cost-efficient manner without burdening the courts. Old-fashioned courtesy, common sense and reliance on those with specialized technological knowledge of the EMR can help us achieve those goals.

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The EHR Files: The Truth is Out There

Michael Seaver RN

Just as every word in an English dictionary comprises various combinations of the same 26 letters, discrete data elements make up the components of an Electronic Health Record (EHR). Those individual pieces of data within the EHR are combined to create every note, flowsheet, order, medication administration record, table, or graph eventually generated as part of the medical record we see. While the same group of letters can be combined to form numerous words, and the same group of words can be combined to form numerous sentences, paragraphs, pages, chapters, and books, they all start as discrete letters in the alphabet.

The same holds true for the elements within the EHR, a collection of discrete pieces of data that can be organized into a wide variety of reports. These reports can be organized into a wide variety of outputs depending on the requirements established by the person or group who will be using the data. And just as you would not be surprised to see the same combination of letters used in different words, or the same words used in different sentences, the same should hold true for the data within the EHR. It would not be a surprise to see the same piece of information – for example, a patient temperature – appear in a nurse's note, a vital signs flowsheet report, a physician's rounding or progress note, the results report of an arterial blood gas analysis, or the many "pages" of the EHR, whether viewed within the actual computer system or a compilation of reports combined to produce the medical record we receive.

While comparing the electronic health record to a dictionary may be useful in many respects, there is a significant difference. That difference, simply, is that virtually every action taken with the development, deployment, maintenance and use of the electronic health record system (not just the unique EHR of a specific individual) is tracked. If that sounds a little spooky, a little "big brother-ish," or even a little scary, well…it should.

If every action is tracked, regardless of who, what, when, where, and how, then by what wizardry or sorcery are those actions or activities recorded or discovered? The answer to the first part is simple enough. Every action, no matter how simple or innocent or private, leaves a digital fingerprint. How all those fingerprints and associated actions are discovered, well, that's more complex.

Here we introduce and explore the concept of the audit trail, audit report, audit summary, audit log, or any other variation of the title of the record of all that discrete data. Going back to that single bit of patient data – a temperature from a moment in time – a

detailed audit or history will reveal the *metadata, or data about the data*:

- Who entered or viewed it
- What was entered or viewed and if it was ever modified or deleted
- When the temperature was reported to have been taken
- When the temperature was actually entered into the record
- Where the entry took place (the workstation and/or location, e.g., a remote office)
- How the entry was made, e.g., manually on flowsheet activity or automatically (electronically) via an integrated or interfaced device

Besides all that information about the outward facing, end-user entered data (the data which makes up what we see as the medical record), one can often determine even more specific information about what we might consider the "guts" of the EHR system. This would include the raw data behind the various reports in which any single piece of data appears, and the detailed history (audit report) of the infrastructure, or build elements of the system. We can often see:

- Who built the flowsheet or report
- Who has access to enter, modify, or simply view the data
- What forms and conditions the data must meet
- When the data entry point was last modified and in what way
- Where the data appears within the EHR
- How the data appears in various reports and summaries

A well-qualified individual can also follow the details of orders and notes. An analyst with broad experience (an expert) can determine when a diagnostic imaging exam started and finished, and when preliminary and final results were filed and viewed, and by whom. A knowledge of how any EHR operates allows a qualified individual to identify when lab specimens were collected, received, and resulted by the specific lab personnel and equipment. Identifying when dictation was submitted, transcribed, and signed is actually fairly easy if you know where to look. Yes, there are audit records of these things. There are even audit records of the audit records.

WHY DO EHRS HAVE THESE AUDIT TRAILS OR REPORTS?

The two main reasons for audit reports are: 1) data integrity and 2) data privacy and integrity. Audits for data integrity help assure that what comes out of the system accurately reflects what went in. If a patient temperature shows up in a graph of serum potassium levels, we have a problem. If system-generated parameters don't allow decimal points in a vital signs report (respiratory rates, heart rates, and blood pressures only require whole numbers) the patient's temperature likely will not be reflected appropriately.

Audits for data privacy and security help assure that only those people who should be accessing records, in whole or in part, are doing so. Automatic auditing in EHR systems can alert users to possible infractions of patient privacy and may produce reports and details to management when unusual or suspicious access takes place. If a celebrity or other well-known figure has an electronic health record at a particular facility or organization, that facility will likely run periodic audits to make sure that only those who need to know have actually accessed it.

Similarly, systems may establish security for specific elements of a medical record. Users may need to have specific permission to view records related to behavioral health issues or encounters, or there might be restricted access to sensitive lab results, such as HIV status, pregnancy, or substance abuse assays.

What about the needs of our attorneys and all their medical-legal discovery requests? Well, those cases could benefit from the types of information generated by reports based on the already-established criteria. Data from audit trails and reports reflect the truth, the whole truth, and nothing but the truth. Audit trails and reports can prove valuable in litigation, but only if someone can understand and interpret the data.

WHY ARE THERE SO MANY NAMES AND FORMATS?

At this time, there are no industry standards for how audit data is produced when requested. While that might not make much sense to the medical-legal community, remember these audit reports, and the technology behind them, were not developed for outside review. These reports were intended to assure compliance with facility- and industry-based standards. EHR audits are also used to track actions and results against local, state, and national policies and laws. The reports are often used to produce information and statistics on many levels, including large health delivery system-levels, individual facility levels, user levels, and even specific patient chart level.

- An accreditation agency may want to know the national average for the time between emergency department arrival and initial ECG for all patients over the age of 40 later admitted as inpatients with a diagnosis of acute myocardial infarction (AMI)
- The state department of health is interested in the same data, broken down by hospital size (number of impatient beds).
- A healthcare organization with multiple emergency departments might want its own statistics with cumulative and individual facility results
- A specific hospital wants to monitor that same parameter by day of the week and time of day of patient arrival
- The medical director could be interested in that data but wants to see a report based on which attending physician was on duty
- The nurse manager might be interested in evaluating triage competency in terms of recognizing AMI symptoms and the time to place a protocol order versus the physician-placed order.

None of those reports will fit a "standard" format, but the ability to produce reports based on actual data is of significant value across the board.

Our colleagues in the medical-legal community, regardless of which side they represent, may benefit from the availability of that data. For example, wouldn't it be good to know:

- When and where the ECG order was placed
- Who placed the order
- What specific order form was used
- When and where the procedure was started and completed,
- When the ECG reading was documented
- How many attempts were made to get a reading of acceptable quality

WHY CALL AN EXPERT?

It is not enough to know how to use the system or how data is entered. In fact, that is often irrelevant. From the medical-legal perspective, there is often a need for an expert who can assist in identifying and obtaining the information and can then find the facts to either support or rebut allegations. That expert knows how the data is generated, how it is reported, and how it can be of value to either plaintiff or defense teams. These specially qualified individuals know how to read and translate seemingly endless rows and columns of letters and numbers, and how those individual data points relate to what is seen when the medical record is produced. Those experts also understand how the sub-systems, integrated applications, and interfaced third-party programs can provide additional and highly relevant data.

It is of significant interest to note there has been some discussion of late about locating experts knowledgeable about the EHR systems from the user's vantage point. From the clinical perspective, it might be important to locate someone familiar with the data entry avenues and elements, such as what the flowsheets look like, what drop-down menus are available, or what default text or settings are in use.

In reality, no attorney or legal nurse consultant should assert fault or

With the ever-increasing number of cases that rely on the accuracy and completeness of the data within the electronic health record, the importance of locating and retaining a healthcare IT expert has never been greater.

claim defense based on the perceived limitations of an EHR system. Many of us have heard a clinician state that the printout of the medical record doesn't look like what they see when using the system in a live environment. In addition, those flowsheets, menus, defaults, restrictions, and various other data entry conditions are rarely, if ever, static. Many factors can affect the look and feel of the medical record system from the user's perspective. But remember, standards of care and best practice principles existed long before electronic health records, and will continue to exist regardless of how we might document.

Identifying facility-specific policies and procedures is important, and clinicians are all responsible for accurate, complete, and timely documentation. But does it matter what the computer screens look like, what the drop-down menus include, or whether a specific wording option is available or easily retrievable? If we don't see what we feel is a clinically appropriate documentation option, are we absolved of the responsibility to provide it? If we make a spelling error, or enter incorrect vital signs information, do we blame the computer system? These are rhetorical questions. If we have no computer, or the screen does not offer the documentation options we require, we can still enter a "free-text" note. And if that fails, we can even document on paper and have that paper documentation scanned into the electronic record system later.

So with all the talk about experts needing to be familiar with a particular EHR system, or a particular version or customizations to that system, my advice is… **don't look for an EHR expert**.

If you have questions about the integrity of the documentation, any facts, or explanations, you don't need an expert on a given EHR system. You need a *healthcare information technology expert*.

I have provided expert testimony and consulting services on many cases involving EHR systems I have never used clinically. My credibility as an expert has never been refused, or denied based on my experience with or knowledge of a specific EHR system. Remember, the end-user's view of any EHR system is not static. It changes constantly, sometimes subtly, sometimes dramatically. Many systems have dynamic features that will change based on many factors, from patient age or sex, to chief complaint or diagnosis, or even time of day. What doesn't change is the underlying nature of how any system works, be it Epic, Cerner, Allscripts, Meditech, McKesson, CPSI, or many other vendors. And the sources of data extend well beyond the screens on which clinicians document.

With the ever-increasing number of cases that rely on the accuracy and completeness of the data within the electronic health record, the importance of locating and retaining a healthcare IT expert has never been greater. Identifying someone who can understand and analyze audit reports and is also knowledgeable about the broader issues of healthcare information technology can make or break a case.

Obtaining and understanding all the facts will reveal the truth. Those facts may come from a record of human keystrokes and mouse clicks and produced as an audit trail or report. Or they may be machine-generated messages from within the EHR system or the myriad associated systems and networks associated with the healthcare system. Legal nurse consultants, and the attorneys with whom they work, know that the truth is out there; the right expert knows how to find it.

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Audit Logs

Scott Greene

Keywords: EHR, electronic medical records, audit logs

Audit logs and metadata are key to proving when changes were made in a patient's electronic chart. This is a brief discussion about audit logs, what might be contained in them, and how to ask for them. In addition, we will examine a case example to show how changes were covered up. The biggest items to be covered are how to ask for records and to recognize the ease in which they can be altered.

AUDIT LOGS ANYONE?

Besides the meaningful use audit log requirements (CMS, 2014), the HIPAA Security Rule and the HITECH Act (OCR, n.d.) and the Joint Commission each put forth specific requirements pertaining to audit logs and patient privacy.

The Office of the National Coordinator's 2014 Health Information Technology Certification (ONC, n.d.) programs mandate that EHR technology meet certain audit log requirements. Changes and actions to the patient record. dates and time of the action, user identification and ID of the patient record being accessed must all be accessible.

WHAT DOES ELECTRONIC AUDIT TRAIL MEAN?

An electronic audit trail in electronic medical records (EMR) or electronic health records (EHR) is used for:

- Security purposes: To determine who has logged into patient records: Viewed, Edited, Created, Printed, Etc.
- Medical billing purposes: To ensure proper billing, including proper charges for services or procedures.
- Data gathering for public health reporting and medical research: This is related to "Meaningful Use" (ONC, n.d.). Laws are firmly in place that guide healthcare administrators and staff on ethics surrounding medical records and patient confidentiality. Included in these laws are rules around what should be collected in an Audit Log or Audit Trail. Failure to follow the rules can result in hefty penalties including jail time.

WHAT IS IN AN AUDIT LOG

For this article, let's define just a few of the typical fields and explain why they may be important.

The **time stamp** is critical piece of an audit that provides the reader with the date and time that something occurred in the record. Each change should have a single line. A typical time stamp looks like this: "11/20/2011 16:42:05 EST." In this example, the time zone is "EST," Eastern Standard Time. If the facility where the entry occurred is in another time zone, then make an adjustment to determine the local time.

The evaluation should include a physical examination, assessment of organs and systems for systemic adverse events in cardiovascular, nervous, endocrine (especially thyroid) and renal systems.

The **Medical Record Number** (MR#) of the patient can be inconsistent. If you see multiple numbers, you may have more than one patient's audit log information.

The **facility** or department can be an abbreviation for a facility such as a hospital or it can be a department within a facility. A sample facility field may contain an abbreviation, e.g., "GH." The EMR system likely has another reference table or list that can translate "GH" to "General Hospital."

Nursing Unit is typically related to the facility, but may also be a department within the facility if the system uses the Facility field as a location. A Nursing Unit Entry may look like this: "EMRM." Like the Facility field, you may need to request a reference table or list to translate a code.

User, User Name, Person, Personnel Name, etc., are most likely the users making the entry. These fields are usually populated with either the person's login id, e.g., "jdoe," or name, e.g., "John Doe." However, these fields may also contain "System," "Imaging Server," "Chart Server," or the like. While the entries that refer a person are obvious, these others may not be. Typically these other entries show that some automated access was used to either access or create information. Larger facilities may use multiple computer systems from different companies. When these disparate systems communicate with each other these user fields may be filled in with entries like "System" or "Imaging Server," a clue to where the data originated.

Role concerns security permissions. Put another way, a Role is a group of users that have a particular set of access rights to each medical record. When this field is filled in with something like "Physician," the person logged into this session has the permissions assigned to the "Physician" role. Typically, a physician can see everything in the patient's medical record. A user whose role is "Radiology Technologist", however, may only see information about the patient's radiology images and results. Each organization's roles can differ from another organization's roles.

Device, Device Name, or **Server** refer to the computer or device used to access the record. Normally there are two fields used. One field identifies the device, e.g., terminal or bedside computer, that the user is actually using. The second field indicates which computer system inside the organization's Information Technology department is being accessed by the device.

An **Application, Module, Sub-System** field generally holds information about which module or subsystem of the EMR system the caregiver is using. These fields can contain entries such as "Microbiology" or "Radiology," or they may be more descriptive such as "Microbiology: Result Entry" or "Imaging: Transcription."

Event, Event Name, Event Type, and **Task** fields are usually abbreviations or codes that relate to the screens that the user is using to view or make entries, such as "View Encounter: Open Chart," or "Lab Inquiry: View Results."

Ask for what we call the **lookup tables** for each field that contains code, so we can translate "ED" to "Emergency Department" and know whether "SGreene" translates to "Scott Greene" or "Sarah Greene."

SO YOU WANT AN AUDIT LOG… WHAT MUST YOU ASK FOR?

Typically firms ask for an "Audit Log" or an "Audit Trail" for the desired patient or MR# from the time of admission through the present date. This will show whether any changes were made to the medical record after the patient was discharged or was no longer under the care of the physician.

Ask for the information in two different formats. First ask for the data in a printed format. This may be a PDF version. Also ask for a Comma Separated Value (CSV) file to be imported into Excel for sorting, filtering, and further analysis. Comparing the PDF with the CSV can help ensure the integrity of the data in the CSV. However, if the PDF is merely a printout of the CSV file, this integrity check is impossible.

If it is possible, and generally it is, we also obtain the data in its native format. While this will not be helpful to the average lay person, from a digital forensics viewpoint, it can be very telling. It contains additional information, including metadata, that will generally not be exported by the audit log production module of the EMR system.

REQUEST FOR PRODUCTION.

A typical request for production may look like this:

All information in your possession regarding your patient Jane Smith. This is specifically intended to require production of information beyond what may be deemed the medical records or the "designated record set." If you maintain an electronic medical records system, this request for production is intended to require the production of every possible data set (or categories of data) that your electronic medical record system can provide. If you claim that information in your possession is privileged or work product, provide a privilege log specifying the privileged items.

OBTAIN PRINTOUTS AND PRINT SCREENS OF THE EMR

There are generally print functions built into the EMR system. The outputs from these vary. As a general rule each module prints a report of activity sorted in chronological order. These printouts should be a complete detailed register of the information entered by health care personnel. It should also include all data and entries from all connected systems and standalone data collection points, such as vitals collected for the patient from monitoring systems.

Sometimes print screens can give the parties additional information that may not print out. Further, print screens can show what the EMR system displays in its various modules. Print screens also help show how the users see the data on the screen. Note, however, that what the screens look like today is probably not what they looked like when the patient was in care. Systems and their screens are constantly updated.

USING AN AUDIT LOG IN LITIGATION

Audit logs can help bolster or refute a claim that procedures were performed at the times that the physician states they were performed. In addition, audit logs can sometimes show if someone involved with the patient's care altered or modified data when they shouldn't have.

BACK-DATED ENTRIES

A female patient went to see her Primary Care Physician (PCP). An issue was discovered during a mammogram. The patient maintained she never spoke to the PCP about visiting a specialist regarding the breast mass. The PCP, however, maintained she had contacted

Data should be generally consistent throughout the production. Changes in formatting, columns, and the data in the columns may be cause for concern.

6/18/2012 3:05:29 PM	[redacted]	F800209	View	[redacted]	5769395		CCF IP NURSING ORDERS ONE DAY [120100760]	MR_REPORTS
6/18/2012 3:05:21 PM		F800209	View		5769395		CCF IP NURSING ORDERS ONE DAY [120100760]	MR_REPORTS
6/18/2012 3:05:16 PM		F800209	View		5769395		FLW ORD ACKNOWLEDGEMENT [120101031]	MR_REPORTS
6/18/2012 3:05:00 PM		F800209	View		5769395		Weston All Report [120101450]	MR_REPORTS
6/18/2012 3:05:59 PM		F800209	View		5769395	HOSPITAL ENCOUNTER 05/11/2012		UCW_RELATED_ENCOUNTERS
6/18/2012 3:05:53 PM		F800209	View		5769395		FLW IP ENCOUNTER REPORT [120100378]	MR_REPORTS
6/18/2012 3:05:52 PM		F800209	View		5769395		REGISTRATION REPORT (HTML) [90051003]	MR_REPORTS
[redacted]		F800209	View		5769395			MR_PATIENT_SELECT
[redacted]			Exit			HOSP ENC 5/11/2012		Clinical Notes
6/15/2012 19:52			Exit			HOSP ENC 5/11/2012		Inpatient MAR
6/15/2012 19:52			Exit			N/A		Allergies
6/15/2012 19:52			Exit			HOSP ENC 5/11/2012		Encounter
6/15/2012 19:52			Exit			HISTORY 6/12/2012		History
6/15/2012 19:47			View			N/A		Chart Review Imaging tab
6/15/2012 19:47			View			N/A		Chart Review Encounters tab
6/15/2012 19:47			View			N/A	Weston All Report [4045002]	Report
6/15/2012 19:43			View			HOSP ENC 5/11/2012		Inpatient MAR

Figure 1.

the patient and told her she needed to see a specialist and gave the patient the names of two specialists.

However, the data told a different story. The system allowed for phone encounters to be logged into the EMR of a patient. As part of the phone encounter, the data entry form allowed the user to choose a date and time of when the Phone Encounter occurred. Here, it was abused. The audit log revealed that the Phone Encounter was entered into the system three years after the physician stated this telephone call occurred.

EDITED OLD ENTRIES

It is not unusual for health care professionals to examine charts after a suit is filed. However, this can tempt the professional to make or try to make changes to the record. This access, and the fact that modifications were made, are recorded in the audit trail.

ISSUES AND RESOLUTIONS

It is not uncommon for facilities to develop systems not directly connected to or part of the core EMR system. For instance, a radiology department may be contracted with the facility that maintains their own computer system. This system, however, should not be overlooked. It likely has its own audit log function that can be produced from that standalone system.

In addition, standalone systems can communicate with the core EMR system via the HL7 Interface, a standard communication interface. The HL7 interfaces will likely also have logs for tracking the data exchanges between systems and the EMR.

These interfaces sometimes fail. The evidence of such failures will be stored in the HL7 interface logs. (http://www.hl7.org/)

WHAT TO LOOK FOR WHEN EXAMINING EMR AUDIT LOGS

Data should be generally consistent throughout the production. Changes in formatting, columns, and the data in the columns may be cause for concern.

In Figure 1, the date-time column changes format from an AM/PM to a 24-hour clock midway. Some columns change format or are missing data all together. This indicates that the production was disjointed. It is possible there were two productions and that the second production was performed with different menu choices. It could also indicate that data between 3:05pm and 7:52pm is missing or has been left out of the production.

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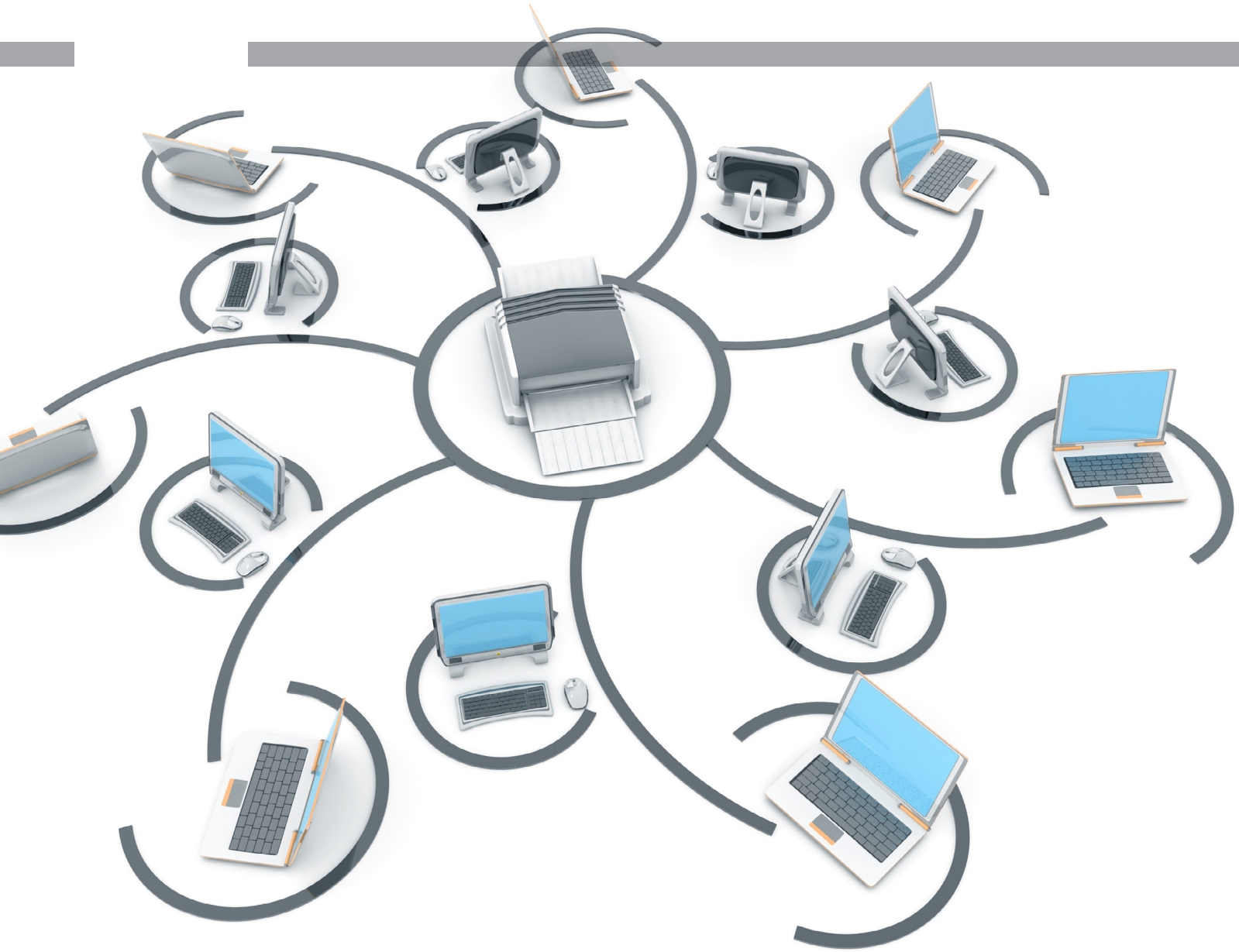

Navigating the Electronic Medical Record Audit Trail

Lesley E. Niebel, JD

With the rise and implementation of electronic medical records (EMR), new challenges have emerged in the legal field regarding the discoverability and use of audit trails. This article will explore what an audit trail is, its application to a particular case, and highlight other issues.

DEFINITION

With all electronically stored information, there is also metadata or "data about data" that describes that electronically stored information.[1] An audit trail, sometimes called an audit log, is metadata for an EMR. It records all accesses to or actions taken within an EMR and is automatically created by the software.[2] In some respects, audit trails provide information identical to the EMR. In others, the audit trail illuminates alterations or deletions not depicted in the EMR. Therefore, an audit trail is an integral part of the EMR.

DISCOVERABILITY

Federal and many state laws mandate that covered entities have hardware, software, and procedural mechanisms in place to maintain audit trails for electronically protected health information.[3] In addition, there are requirements to retain this information for a certain amount of time.[4] Courts have required parties to produce electronically stored information in a format that includes metadata.[5] In *Hinshaw*, the court reasoned, "While certainly metadata is discoverable to determine if and when documents may have been altered, that is not the only reason for production. General information about the creation of a document, including who authored a document and when it was created, is pedigree information often important for purposes of determining admissibility at trial."[6]

Similarly, in *Irwin*, the court concluded that "system" metadata constituted a "record" subject to disclosure under the Freedom of Information Law (FOIL).[7] Although that case involved a FOIL request and did not specifically address whether metadata is subject to disclosure under the New York's Civil Practice Law and Rules, the court recognized that the production of a document electronically without metadata limited the information provided.[8] Specifically, the information would be limited to the "actual text or superficial content of the document," whereas when system metadata is included, there is a complete record.[9]

Where discoverability of the EMR audit trail was the only issue, in *Vargas v. Lee*, the court held that the plaintiff did not satisfy his burden of establishing the necessity and utility of the requested audit trail because he did not distinguish the audit trail's utility from that of its corresponding EMR.[10] At issue was the timing and substance of the plaintiff's care from May 1 through May 17, 2012; so the plaintiff requested the hospital's EMR audit trail.[11] The defense objected to disclosing the audit trail as overreaching, overbroad, unduly burdensome, and not relevant.[12] The court reasoned that the plaintiff could presumably obtain the patient treatment details from the already produced EMR and that the plaintiff did not argue there were authenticity issues or analogous salient considerations.[13] Further, the court articulated, "system metadata production has been considered relevant when the process by which a document is created is in issue or there are questions concerning a document's authenticity."[14]

In contrast to *Vargas v. Lee* is *Gilbert v. Highland Hospital*.[15] There, plaintiff sought discovery of the EMR audit trail to determine: (1) whether certain physicians were involved in her care and treatment and the extent of that involvement; (2) names and times of certain entries missing from the EMR; (3) the accuracy of the information in the EMR; and (4) the times, locations, and actions taken by various staff members not provided on the face of the EMR.[16] In granting plaintiff's motion to compel discovery of the EMR audit trail, the court found defendant's broad objections to production unpersuasive.[17] Specifically, the court reasoned the EMR audit trail was relevant to the allegations as pleaded by

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1 *Vargas v. Lee*, 2015 NY Slip Op 31048(U), at *3-4 (N.Y. Kings Cty. 2015).

2 Jeffrey L. Masor, *Electronic Medical Records and E-Discovery: With New Technology Come New Challenges*, 5:2 HASTINGS SCI. AND TECH. L. J. 245, 253-54 (2013) (citations omitted); Brodnik, Melanie, et al., *Fundamentals of Law for Health Informatics and Information Management*, AHIMA, 2009, 215; Sandra Nunn, Managing Audit Trails, AM. HEALTH INFO. MGMT. ASS'N, http://library.ahima.org/doc?oid=93266#.WCoK4hEjpyU (last visited February 27, 2018); Hall v. Flannery, No. 313-cv-914-SMY-DGW, 2015 WL 2008345, *4 (S.D. Ill. May 1, 2015).

3 45 C.F.R. §§ 164.312, 170.210; see 10 N.Y.C.R.R. 405.10.

4 45 C.F.R. § 164.105 (mandating six year retention from the date of creation or date last effect, whichever is later).

5 See *Hinshaw & Culbertson, LLP v. e-Smart Tech., Inc.*, No. 113108/09, slip op. at 5 (N.Y. Sup. Ct. Mar. 27, 2012); *Irwin v. Onondaga Cnty. Res. Recovery*, 72 A.D.3d 314, 321 (4th Dep't 2010); *Eason v. Sentara CarePlex Hosp.*, 88 Va. Cir. 291, 292 (Va. Cir. Ct. 2014); *Osborne v. Billings Clinic*, 2015 U.S. Dist. LEXIS 38716, *7-12 (Mont. Dist. Ct. 2016); *Hall v. Flannery*, 2015 U.S. Dist. LEXIS 57454, at *10-12 (S.D. Ill. 2015) (finding audit trail is not covered by the peer review privilege nor the work product doctrine).

6 *Hinshaw & Culbertson, LLP v. e-Smart Tech., Inc.*, No. 113108/09, slip op., at 4-5 (N.Y. Sup. Ct. Mar. 27, 2012).

7 *Irwin v. Onondaga Cnty. Res. Recovery*, 72 A.D.3d 314, 322 (4th Dep't 2010).

8 *Id.* at 321-22.

9 *See id.*.

10 *Vargas v. Lee*, No. 507923/2013, slip op., at *4 (N.Y. Sup. Ct. June 5, 2015).

11 *Id.* at *2.

12 *Id.*

13 *Id.* at *4-5 (N.Y. Sup. Ct. June 5, 2015).

14 *Id.* at 4 (citing *Aguilar v. Immigration & Customs Enforcement Div.*, 255 F.R.D. 350, 354 (S.D.N.Y. 2008)).

15 31 N.Y.S.3d 397 (Monroe Cty. March 24, 2016).

16 *See generally id.*

17 *Id.* at 558-60.

When requesting an audit trail, be specific in your request. This will not only prevent you from getting useless information, but will also make it more difficult for the opposing party to object. One court ruled that "system" metadata constitutes a "record" subject to disclosure under the Freedom of Information Law.

the plaintiff, was material and necessary, and constituted no fishing expedition.[18] Because who received what information and when was important to the claims or defenses of a party, plaintiff met the standard articulated by *Vargas v. Lee*.[19]

PRODUCTION

Parties should consider requesting an audit trail in every case, and to do so during the beginning stages of litigation. In doing so, however, always be prepared to deal with objections and resulting motion practice. An opposing party might raise objections, such as:

- *The request is overly broad or unduly burdensome*
- *The information does not exist*

  The objection that production of the audit trail is overly broad, unduly burdensome, or does not exist is combated by reference to the federal provisions and any state laws mandating the existence of the audit trail and its availability upon request. If no such audit trail is maintained, a complaint with the Office of Civil Rights of the U.S. Department of Health and Human Services should be filed.
- *The audit trail is not relevant*
- *The audit trail is not part of the medical record*

  The response to the production of the audit trail as being irrelevant or not part of the medical record is that the audit trail provides a complete record of the client's EMR, as articulated by the cases above. The information in the audit trail can lead to potential witnesses, specific timelines, and locations of events within the healthcare facility. The information can also refresh or challenge the recollections of the witnesses involved and create reasonable inferences about what knowledge witnesses had and when the knowledge was acquired. By understanding the actions taken by certain providers, when, and where, more meaningful discovery can be uncovered.

When requesting an audit trail, be specific in your request. This will not only prevent you from getting useless information, but will also make it more difficult for the opposing party to object. To enable you to be specific in the request, first obtain the policies, procedures, and legends maintained by the facility on electronically stored information, metadata, and audit trails and research the facility's software system. Equipped with this knowledge, you can customize your request using the specific language relevant to your particular facility and case. The request should be made for the unaltered native electronic format of the audit trail.

While there are many benefits to requiring the creation of EMR audit trails, there can also be downsides. For instance, an audit trail may be undermined if healthcare providers allow the audit function to be turned off, the software to be modified, or if alterations are made deliberately or because of error. Keep these potential downsides in mind when analyzing the information provided in the audit trail and carefully scrutinize the data produced for correctness and accuracy. It may be useful to request the capabilities of heath care facilities to edit or disable the audit trail or whether the audit trail has been customized.

18 *Id.*

19 *Id.*

20 *See* Hon. John M. Curran and Mark A. Berman, *Gremlins and Glitches Using Electronic Health Records at Trial*, NYSBA Journal, at 23 (May 2013); *Karam v. Adirondack Neurosurgical Specialists, P.C.*, 93 A.D.3d 1260 (N.Y. 4th Dep't 2012).

21 *Id.* at 1260-61.

22 *Id.* at 1260.

23 *Id.* at 1261.

24 *Id.* at 1262.

Based on the circumstances of a particular case, it may also be pertinent to request audit trails for specific providers. If an issue arises from around the care given by a specific provider, consider getting the audit trail for that specific provider and analyzing the data produced. This can be achieved by requesting such information without patient identifiers or with protected health information of other patients redacted.

ETHICAL CONSIDERATIONS

Requesting EMR audit trails may also implicate ethical considerations for attorneys. Commentators interpreting the case of *Karam v. Adirondack Neurosurgical Specialists, P.C.*, 93 A.D.3d 1260, have theorized that for plaintiffs' attorneys to competently represent clients and fulfill their ethical obligations, they must have all available electronically stored information that may be relevant to their case, which would necessarily include the audit trail.[20] See Hon. John M. Curran and Mark A. Berman, *Gremlins and Glitches Using Electronic Health Records at Trial*, NYSBA Journal, at 23 (May 2013). In *Karam*, the plaintiff administratrix alleged defendants were negligent in failing to apprise the neurosurgeon of the changes in decedent's medical condition promptly, which allowed a subdural hematoma to grow and eventually cause the death of decedent.[21] On appeal, plaintiff administratrix sought relief from a judgment that dismissed the medical malpractice and wrongful death action.[22] Ultimately, the appellate court found that the administratrix failed to preserve her contention that the defendants' presentation of evidence regarding computer problems denied her a fair trial, as she sought no adjournment of the trial or mistrial.[23] Since the relief was not sought when it was available during trial, the court declined to grant the relief on appeal.[24] Therefore, plaintiffs' attorneys should be regularly asking for such metadata and determining whether it is useful in their case.

CONCLUSION

As more healthcare facilities utilize electronic medical records, audit trails will continue to grow in importance for quality and litigation purposes. Both plaintiffs' and defense attorneys and those that work with them should be educated on the value of EMR audit trails and how they can be used in the investigation and litigation of particular cases.

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As more healthcare facilities utilize electronic medical records, audit trails will continue to grow in importance for quality and litigation purposes.

Check Your Answers

Test Your Case Screening Skills Page 7

Case #16: Investigated

*Favorable expert reviews on both liability and causation

*Significant damages

*Defendant known to be a "frequent flyer" with multiple claims against him

*Plaintiff a nurse

Disposition: Settled for $750,000 prior to trial

Case #17: Reject

*The fact that surgery didn't fix the problem does not mean there was malpractice

*Generally don't take lack of informed consent cases if that is the only claim – in NYS, have to show that a "reasonable" person (not the plaintiff) would likely have not undergone the procedure had they been properly informed.

On the following pages, a defense attorney and LNC offer their complementary perspectives on defending electronic medical record cases.

Defending the Electronic Medical Record: Challenges and Approaches

Edward Clausen JD

In lawsuits alleging medical malpractice or other healthcare negligence, any aspects of the electronic medical record may come into play. Soon after a lawsuit is filed, formal requests for production of documents are served. Historically, the paper medical chart was requested, pulled and provided by the healthcare provider. All other information was provided by written interrogatories or through deposition. However, with the conversion to Electronic Health Records (EHR) throughout the healthcare industry, plaintiffs' counsel are increasingly looking to the technological advances in the electronic medical record to obtain information previously unavailable, straight from the medical record itself. Modern requests include thing such as "audit trails" and "metadata" – words foreign to many treating health care providers. These requests seek bits of information stored deep in the electronic record that can shed light on things like who accessed the record, and whether modifications or changes were made after the fact. Understanding these hidden pieces of information is the first step to successfully defending the electronic medical record.

Discovery is governed by a set of procedural rules. Depending on the jurisdiction where a lawsuit is filed, different rules apply. For lawsuits filed in Federal Court, the Federal Rules of Civil Procedure apply. Under these rules, the emphasis for production of documents is proportionality. Sometimes, production of the electronic medical record may not be proportional to the needs of the case; in other cases, it may be. Each case should be judged on its merits. In state court, the test is relevance. If the requests are likely to lead to the discovery of admissible evidence and are not seeking privileged or otherwise protected documents, they will be allowed.

Continue reading the Challenges and Approaches shaded in blue.

Defending the Electronic Medical Record: The LNC Perspective

Deborah S. (Susie) White, RN, LNCC

Electronic medical records have presented both enhancements and challenges. As with paper charting, the EMR still contains the information to document patient treatment and ensure continuity of care – the familiar medical and nursing plans of care and notes, medication administration records, test results, surgery and procedure notes, and ancillary services notes. However, the EMR has introduced factors that require adjustments by an LNC in ferreting out the information needed to investigate and best defend a medical malpractice case. Crucial information can be deeply buried within the virtual bulk of the EMR. The ability of LNCs to fine tune their thought processes, investigative skills, and time management techniques in approaching the EMR can be a substantial asset to an attorney defending a healthcare provider in medical malpractice litigation.

WHAT DOESN'T CHANGE WITH EMR

The LNC's clinical background provides a unique view of the healthcare system and how it operates. We know the logistics of how things get done in the clinical setting, whether they're nursing's or other departments' tasks. We know the language of medical terminology and acronyms, which allows us to not only read but interpret the medical record. In our roles as nurses taking care of our patients, we've had to develop a sense of the "big picture" surrounding them. Nurses are

Continue reading the LNC Perspective shaded in purple.

Once counsel formally tenders a request for production of documents, opposing counsel may object for many reasons – they may be privileged, meaning they are protected from disclosure, or contain trade secrets or other proprietary information, or they may not be relevant. And counsel can seek protective orders from the court prohibiting the plaintiff from generally sharing or disclosing the produced information. Protective orders are especially important when disclosed information could be harmful to your client. The attorney's job is to sort through what documents or information should be produced, what objections should be raised, and guiding their client through the discovery process as seamlessly as possible. However, to do that, the attorney must appreciate what information exists.

One problem with the requests for and production of EHR data is there is a "pervasive disconnect" between the native data and how they appear when produced in litigation (Artigliere et al., 2017). "Native" refers to data files in their original format – for example, word documents in .DOC format or medical records as they are saved directly into the EMR. Because the cost of an EMR system is enormous, it is generally impossible for litigators, consultants, experts or other participants in litigation to access files in native format. To achieve that, the participants would have to purchase the same or similar software used to run that EMR. And given the plethora of different systems used, it would be virtually impossible for non-heathcare providers to access files in native format.

Problems arise because the information displayed on the EHR computer screens inside facilities is impossible to recreate when produced in paper format. This can lead to claims that the healthcare provider was not forthcoming when they produced the medical records.

the ones staffing hospitals 24/7 to ensure continuity of care. Historically, nurses have signed off on physician's plans of care, documenting that line items were transcribed, implemented, and ultimately completed. As patient advocates, nurses coordinate patient care and help tie up loose ends. It may be a nurse who notes a final culture report indicates the need for a change of antibiotic for a newly discharged patient and notifies the physician.

This transfers well to performing retrospective medical record reviews. Even though others involved in the litigation may have paged through and read all available records, our clinical nursing experience gives us an insider view of how certain scenarios typically evolve. While not attempting to make medical diagnoses, we recognize and anticipate patient needs. For example, based upon an emergency room nursing triage assessment that detects dyspnea, unilateral breath sounds, and falling oxygen saturation, a nurse can quickly anticipate what may follow – stat arterial blood gases and chest x-ray, chest tube insertion, and follow-up chest x-ray.

An LNC reviewing the medical record for wrongful death litigation will actively anticipate what documentation should be present. If a post-procedure chest x-ray report is not found, the search determines why not. Was the request properly entered by the doctor? Was it sent to Radiology? Was it received? Was the x-ray actually done? When? Was it interpreted by the radiologist? Who? When? Was a written report generated?

Before EHR, the LNC could find whether the x-ray report was transcribed, dated by the transcriptionist, and printed promptly But there would have been no way to know that is wasn't physically placed in the paper chart until days after the patient expired. Now, with the EMR, the investigation would not end there.

Work products should still be professional, well-written, organized, and easy-to-read, thorough yet concise. LNCs still employ critical thinking and investigative skills to determine what really happened and how it happened, whether defensible or not. Whether working for defense or plaintiff, the LNC must review the EMR with an unbiased eye. To best inform and prepare a defense attorney, an LNC should present both case strengths and case weaknesses in the final summary and analysis.

WHAT'S DIFFERENT WITH EMR.

With the EMR, the "big picture" has gotten even bigger, with much more medical (e.g., imaging, labs, procedures) and computer technology. The bulk of records in a paper chart was visual; the bulk of records in the EMR is virtual and can be overwhelming. The EMR now comprises many more Bates-stamped pages than a paper chart ever contained.

Problems arise because the information displayed on the EHR computer screens inside facilities is impossible to recreate when produced in paper format. This can lead to claims that the healthcare provider was not forthcoming when they produced the medical records. For example, drop down menus and their various content do not appear on paper charts, only the final selection. This can be important when a provider is given a list of choices, none of which are ideal, and they pick the closest one. While the action is appropriate, a misunderstanding of what is available leads to claims that the provider wasn't being "accurate" with their description. Unfortunately, many lawyers and judges do not appreciate how fundamentally different a printed version of the EMR is from the native version.

Along with understanding and explaining the differences in the native EMR and the paper EMR, participants in litigation must know and walk their clients through the preservation and production of hidden data in the EMR, including metadata and audit trails, the first step of which is understanding the underlying data.

"HIDDEN" DATA IN THE EMR:

Metadata in Relation to Electronic Medical Records. The EMR contains volumes of data hidden from direct view in both native format and in the paper production. It contains metadata, information about the underlying functions of the EMR. Many are familiar with the term "data about data" (Ball, 2011). Metadata, however, goes beyond this. There are two types: *application metadata and system metadata* (Ball, 2011).

- Application metadata: Created by computer programs and embedded in files they use. For example, Microsoft Word stores information in .DOC or .DOCX documents about the author of a document, when the document was created, and how recently it was modified.
- System metadata: Stored within computer file management systems. Tracks file locations and sort files.

Metadata is important not only because it provides information about files, but can be used to sort them. When production of metadata is required in litigation, a producing party should be able to provide (Ball, 2011):

- Custodian
- Source device
- Originating path (File path of the file as it resided in its original environment);
- Filename (including extension)
- Last modified date
- Last modified time

The daunting challenges presented by the EMR can translate into an exciting opportunity for LNCs who will take on a grueling task that others are not willing or qualified to undertake.

With the EMR, a several-day hospitalization can easily produce thousands of pages. Nursing notes and medication administration records alone generate multiple pages per shift. The EMR also contains much duplication as data is actively and/or passively imported and auto-filled into various sections. Therefore you can expect this to take much longer to review. This presents a challenge: how to find the proverbial needle in the haystack. As LNCs, we try to be very diligent and thorough, concerned about missing a critical detail. However, we can't read and digest thousands of pages of often repetitive records.

With voluminous EHRs, it is even more important to clarify work product scope and expectations before accepting a case. Is a complete chronology of the entire hospital stay needed? Would a narrative summary suffice? Does the entire case hinge on a single issue that can be explored in depth without examining the entire medical record?

Both attorney and LNC need to set parameters for the EMR review to provide necessary information for the attorney and time management controls (and no-surprises billing) for the LNC.

Once expectations are agreed, you can decide how to proceed. It is vital to have background information on the issues. Ideally, you will have a copy of the petition and any other pertinent information regarding allegations brought by the plaintiff. Based upon this, do some quick research to refresh yourself on the issue at hand, e.g., diagnosis, presenting symptoms, treatment, etc. Referring to the example above, refresh yourself on the technique and risks of an emergency chest tube insertion for a pneumothorax. This can provide invaluable insight on possible scenarios to explain the alleged event. This will help you avoid wasting time backtracking through the EMR later as the facts unfold. It can be very difficult and frustrating to hunt down a single, elusive entry

The most important thing for practitioners to know about metadata is what metadata is available on each system. This can only be ascertained by working with your clients to determine what data is saved on their particular systems. Knowing this in advance increases protection of sensitive data and/or accurate production in discovery. Practically, the most common "hidden" data requested in litigation are audit trails.

Audit Trails and the EMR "Audit trails are reporting functions built into EHR systems that can operate like metadata" (Artigliere et al., 2017). However, audit trails vary greatly depending on the system used by the hospital. Typically, audit trails will allow practitioners to acquire data on when a chart was accessed, when specific information was inputted and by whom, and if changes were made at or near the time of the incident or later. Some electronic health systems may not produce the information Plaintiffs want – for example, showing what information was changed in a health record at what time. And due to data storage limitations, many providers only save audit trail information for a specified period. Know these limitations at the outset of litigation so spoliation arguments do not arise later. Spoliation is the intentional or negligent destruction of evidence and can create serious problems for a healthcare provider if a Court finds it has occurred.

PRODUCTION OF THE AUDIT TRAIL AND CASE EXAMPLES

One way attorneys predict the outcome of cases is by looking at cases that dealt with similar issues. This can provide insight into how court in facing similar issues would handle them. In *Hall v. Flannery*, 2015 WL 2008345 (S.D. Ill. May 1, 2015), the Court addressed two potential objections to

Nurse consultants must be mindful when analyzing copies of medical records that they may not be complete and be able to go to the EHR to fill in the "gaps" sooner rather than later.

you remember having seen in the EMR but cannot recall exactly where you saw it. If an entry "jumps out" at you upon initial review, jotting down a page number for future reference can be a huge time saver later if it proves to relate to the case, or bookmark it in the PDF file.

If a chronology is wanted and there are thousands of pages of the EMR to be reviewed, try not to panic! Take a few minutes to visually scan the records overall to determine how many providers' records you have, and which are from the defendant(s) versus providers on the periphery. Try to get a sense of the time range and decide whether you want to work them in chronological order or start with the records surrounding the issue in question and then expand. You may choose to incorporate summaries of less critical portions while still providing a specific timeline for critical events.

PRINTOUTS VS. ONSITE/REMOTE ACCESS

Two big advantages of the EMR is its legibility and its ability to be converted and searched (e.g., for a specific medication or diagnosis at issue). However, visually, the EMR also looks very "vanilla", especially when scrolling over page after page of a medication administration record. All the pages look the same. As an LNC, we need to purposefully train our eyes to be alert for any variation from the norm, such as an entry made in all capital letters, indicating an anecdotal or narrative entry. If a provider takes the time to enter free text, it is likely significant and worthy of attention. However, repetitive copy-and-pasting that exact narrative entry (e.g., a detailed wound description) over the next three days definitely "looks bad." Even worse, hasty copy and paste or auto-fill can perpetuate dangerous inaccuracies, e.g., repeatedly documenting that a patient had quit smoking when he had actually resumed a pack-a-day habit. If nothing else, these errors bring into question the thoroughness and accuracy of patient assessment and history-taking, leading one to question whether other shortcuts may have been taken by that provider. Risk managers, take note!

It can be very advantageous to see the EMR on site or via secure remote access. Depending upon choices made by a medical records custodian when copying the EMR to disk, what you see can be very different and harder to explore than the EMR on site. For instance, if a case involves the frequency of vital signs taken, on site you may directly pull up the summary of all vitals taken during a hospital stay. However, with the EMR on a disk, you may have to sift through many pages of repetitive and eye-straining nurses notes to find the vital signs indeed taken every two hours.

LNCs have had to adapt to different EMR systems and their customized variations, depending upon how facilities had their

Know these limitations at the outset of litigation so spoliation arguments do not arise later. Spoliation is the intentional or negligent destruction of evidence and can create serious problems for a healthcare provider if a Court finds it has occurred.

the audit trail portion of the medical record. The Court found that peer review privilege and work product doctrine did not prevent production of the audit trail. Peer review privilege generally applies to portions of the medical record generated by a peer review committee. The work product doctrine applies to documents prepared in anticipation of litigation. "The audit trail is not interviews or memoranda, or even minutes of any meeting: rather it only shows what person viewed portions of Plaintiff's medical and when." So, based on *Flannery*, the objections to production of the audit trail were unsuccessful. However, the decision in *Flannery* is not binding on courts in other jurisdictions – and there are very few cases nationwide that address the production or admissibility of an audit trail in litigation.

In *Picco v. Glenn*, 2015 WL 2128486 (D. Colo. May 5, 2015), the defendant hospital sought to avoid having to produce an audit trail report. The hospital argued producing the audit-trail report would be overly expensive. However, as the court noted, parties producing information must produce it in a reasonably useful format; the hospital was ordered to produce an audit trail report.

In *Moan v. Massachusetts Gen. Hosp.*, 2016 WL 1294944 (Mass. Super. Mar. 31, 2016), another recent case addressing audit trails, Massachusetts General Hospital was ordered to produce:

> All audit trails or other documents sufficient to identify each person who accessed (a patient's) medical records from October 2, 2014 to the present date; when they accessed it; during and for what periods of time they accessed it; what they accessed; and all changes or

systems built. Some facilities have EMR systems that are not compatible with their own satellite clinics, making integration of the two systems complex. LNCs have to remain flexible and open to quickly learning how to locate and pinpoint the information we need in the hybrid version we're reviewing.

LNCs also need to remember that the EMR on our computer screens looks far different from what providers see as they are making entries in the clinical setting. We don't see the drop-downs, pop-up alarms, warnings, options, etc. that appear as a clinician progresses through multiple steps of an entry. For example, how easy would it be for a physician to make an inadvertent click of a mouse and order an adult dose of a potent medication for a pediatric patient? We've all seen such catastrophic cases on the evening news. While we could try to obtain visuals of computer screen shots from the facility to help explain and defend how such an error may have occurred, with the inevitable delays of litigation, LNCs need to realize that EMR system upgrades may have occurred meanwhile and made retrieval of that exact screen no longer available. This is another reason of why metadata is so important.

AUDIT TRAIL CHALLENGES

Using audit trails is a hot topic getting a lot of attention in this journal and others. (*See Greene, p. 24, Niebel p. 28, and Seaver, p. 20, Ed.*) There are experts to detect when data is added, deleted, or otherwise manipulated. On a basic level, the LNC needs to know that the audit trail can be very helpful in determining which providers did what, where they did it, and exactly when they did it. The audit trail can provide a precise timeline of when tasks are recorded. However, defense may note that this function may not be true of all EMR systems or may be overly burdensome to access and/or provide (*See Niebel, p. XX, Ed.*).

Because of the precision of the audit trail information, timelines in the EMR can be difficult to defend. Obviously, a task cannot be performed and recorded on a computer simultaneously. The EMR documents entries to the very minute. Often, however, the documentation reflects some time delay. If a nurse actually inserts an intravenous catheter into a patient's vein at 1145, it will take a few more minutes before it is secured and locked or fluids or medications begun. Realistically, the time could be 1200 or later before the entire task is completed and an EMR entry made. Depending upon the order of entry, it may appear a stat intravenous medication was given before the IV was started. Defense LNCs need to provide a reasonable explanation of how such apparent discrepancies can occur.

One such apparent discrepancy results when hospitals integrate continuous bedside monitoring systems into the

Relevance and proportionality are key to electronic discovery. The court noted that the medical record was relevant because negligence by doctors was alleged, and that the on-site inspection was appropriate because the Plaintiff alleged negligence in the management of the defendant clinic's health care practice.

additions made to the patient's medical records by each such person at each time each such person accessed it.

ON-SITE INSPECTION OF ELECTRONIC MEDICAL RECORDS

To deal with the issues of native display of electronic health systems, some Plaintiffs may seek to view medical records in electronic format on a health care provider's computer system, typically called "on-site inspection." A recent case, *Borum v. Smith*, 2017 WL 3014487 (W.D. Ky. July 14, 2017), addressed this issue. Plaintiff sought to inspect patient records on a hospital clinic's computer system. The defense objected and argued that allowing the Plaintiff access would violate the Computer Fraud and Abuse Act and HIPAA restrictions. These objections were rejected by the court.

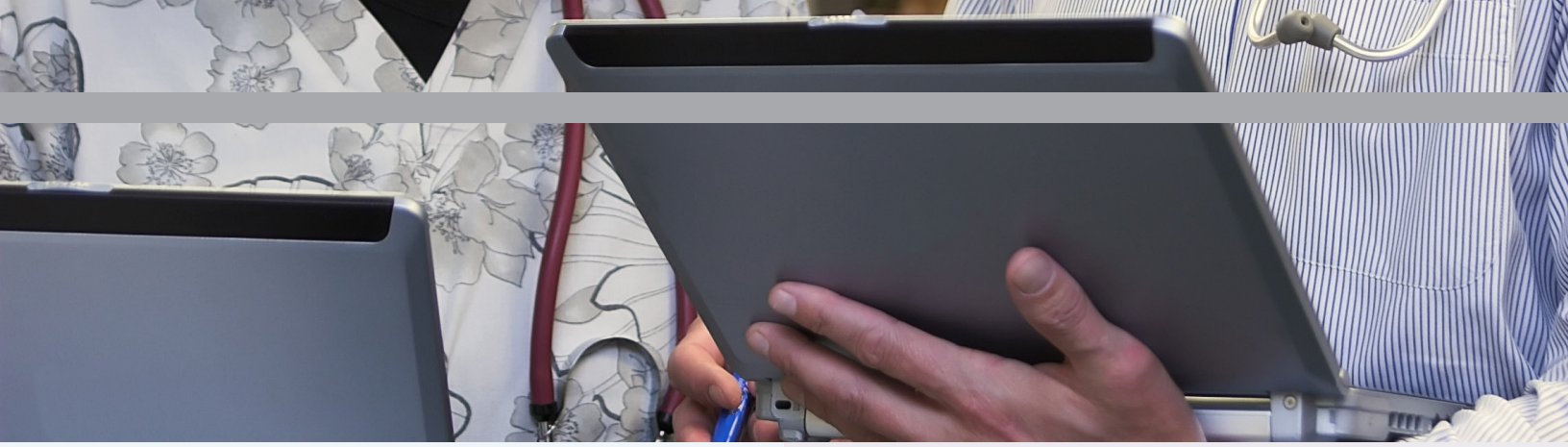
Relevance and proportionality are key to electronic discovery. The court noted that the medical record was relevant because negligence by doctors was alleged, and that the on-site inspection was appropriate because the Plaintiff alleged negligence in the management of the defendant clinic's health care practice. But the court did not allow the Plaintiff to access the computer system during the depositions of the defendant health care professionals, finding it was overly burdensome. As before, proportionality and the allegations made by the Plaintiff are key to determining what is permissible in discovery.

EHR. The system may note a drop in blood pressure began at 1838, but if the patient is on hourly vital signs checks, it may be charted at 1900. Looking at what alarm parameters were set, and when, will be helpful in defending a response. Confusion can also accompany an integrated medication administration cabinet, e.g., Pyxis, when times medications are signed out do not exactly correspond to times given.

Here's another example. A patient walks into a small community hospital ED at 1310 complaining of chest pain and is immediately triaged. The chest pain protocol is activated at 1314. An EKG at 1315 shows normal sinus rhythm with unifocal PVC's. However, the first documentation of continuous cardiac monitoring is at 1345 and is ventricular bigeminy, which is then followed by a run of ventricular tachycardia at 1347, which rapidly deteriorates into a code situation. The apparent delay in hooking the patient up to a cardiac monitor in the presence of chest pain and/or a dysrhythmia can be difficult to explain and justify. However, what if in reality the patient had been routinely placed on a monitor with alarms on at 1317, but in the rush of a busy ED it was simply not documented by the nurse at that time? The ED physician and nurses may even specifically remember that patient and the events surrounding that admission, but we all know the maxim, "If it's not documented, it wasn't done."

To further complicate this scenario, the ED nurse notes a code was called at 1347 and refers the reader to the Code Blue record. The code record is a paper form manually filled out and scanned into the EMR. The first time noted on the code record is 1351, which may be the time the code recorder arrived at the scene. How does one then account for the intervening four minutes? That gap in the records can be a problem. Even if the ED physician later enters a narrative note regarding the sequence of events as they occurred, it will probably not include a tight timeline that would clearly explain those four minutes. Rather, it will likely focus on the difficult intubation requiring several attempts, cardiac rhythms, medications administered, defibrillation attempts, etc. In reality, those "missing" four minutes will not even be noticed by anyone. The LNC may be the only one who notices that gap.

So, how could such a gap be defended? As nurses, we know code situations are very fast-paced with patient survival paramount. Documentation is important but not to the peril of the patient. We have all scribbled notes on bed sheets or paper towels, to be neatly entered into the paper chart afterward. LNCs can help a defense team and others visualize all the concurrent events and the urgency involved in a code situation, especially a complicated one that portends a poor outcome, illustrating how documenting it precisely in the EMR would not have been the first priority and could have been to the detriment of the patient. This situation can also



CONCLUSION

Healthcare providers, some still struggling with the transition from a paper chart to the EHR, are now transitioning to new systems. Often they do not appreciate that the good faith production of a patient's medical record can be twisted or construed as incomplete or even evasive. Nurse consultants must be mindful when analyzing copies of medical records that they may not be complete and be able to go to the EHR to fill in the "gaps" sooner rather than later.

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highlight the benefit of narrative free-text notes to supplement automatic systems.

Some facilities are already transitioning from their original or legacy systems to new systems. As this transition occurs, data from the legacy system will need to be integrated into the new EMR system, just as the paper chart had to be entered into the EMR at its inception. The LNC should know the records they receive from a legacy system may be abstracts, i.e., not the "complete" medical record. Rather, the abstracted records will contain information determined by that facility to be the most important or relevant to future patient care, e.g., discharge summaries, operative reports, consultation reports, etc. The abstracted EMR may be adequate for defense. It remains to be seen how lab results, medication administration records, nurses notes, etc. will be archived and how accessible they will be if required. EMR systems are fluid entities.

CONCLUSION

To conclude, LNCs bring a unique skill set to the EMR in litigation. The daunting challenges presented by the EMR can translate into an exciting opportunity for LNCs who will take on a grueling task that others are not willing or qualified to undertake. We can continue to be the ones who not only see the "big picture" surrounding a plaintiff's experience but also can convey our findings in a high-quality work product. Combining our clinical backgrounds and knowledge, our patience and tenacity in honing in on the issues of a case, and now an ongoing, conscious effort to stay abreast of the ever-changing landscape of the EMR allows us to be a valuable member of a defense team.

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Round Table: How LNCs Work With Electronic Health Records (EHR)

Patricia Ann "Stormy" Green, BSHS, RN, RNFA, LNC

Keywords: EHR, electronic medical records, legal nurse consulting, LNC

We polled practicing legal nurse consultants (LNCs) to learn how they manage electronic health records (HER). Their responses are summarized in this article.

ROUND TABLE: HOW LNCS WORK WITH ELECTRONIC HEALTH RECORDS (EHR)

We polled AALNC members and posted to popular LNC listservs to explore how practicing LNCs manage when working with electronic health records (EHR). Respondents were generous with offering their ideas and experience. Many responses were similar, so we summarize them here.

Question #1: You are given 12,000 pages of EHR and you cannot read them in the allotted time. How do you find, extract, and organize the information you need?

As one respondent pointed out, 12,000 pages on a disk will roughly translate to 24 reams of paper! While so many pages may seem overwhelming at first, take heart. Not every page will contain data you will need. Also, there is often much duplication in EHR so the actual information may be less than it first appears. Tips for working with the documents and how to home in on pertinent information will be presented throughout this article.

If the records have not already been organized and bookmarked, some responders suggest the attorney pay a paralegal to prepare the records, as an LNC will cost more. Most responders who organize the records themselves use Adobe Pro with PDF files. Preparation typically begins by using the optical character recognition (OCR) feature in Adobe Pro, and then an index is embedded. With these two actions completed, it is much easier to maneuver within the documents. The LNC can now search for terms, copy and paste, extract passages or pages, and more. To learn more about how to organize medical records, see "Organizing Hospital Medical Records" by Katy Jones at www.lnctips.com/MedRecHospital.

Even if the records arrived already organized or bookmarked, respondents often were not confident with the organization's method of classifying pages. Here, the LNC will usually apply personal bookmarks, highlight passages in yellow, or add "sticky notes" if the document allows. If the document does

not allow for this, the LNC may need to create a "skeleton" chronology or timeline not for submission.

Question #2: The attorney thinks there may be a case in the 12,000 pages of records the paralegal just gave you. How do you guide the attorney in determining the work product that will be most beneficial?

Respondents were unanimous: the first step in determining a work product is to ask! Be clear about the attorney's goal. Sometimes, the attorney does not know the optimal project, but the LNC can help determine the best work product. While experienced attorneys usually know what they need and how the work product will be used, the LNC can help less experienced attorneys by asking the right questions. Understand that different cases are worked up differently (e.g. medical malpractice vs. personal injury)

Points to consider and questions your colleagues ask include:

Basic information:

- What is the complaint/allegation?
- What are the claimed damages?
- What is the date of alleged incident(s), if applicable?
- On which details does the attorney want you to focus?
- What is the purpose of the review?
- What is the deadline?

What are the attorney's exact needs?

- Is this simply a "smell test" to determine if the case is worth pursuing and if so, what records are needed?
- A verbal first impression?
- A written report?
- An analysis of strengths/weaknesses?
- Names of providers found in the records?
- Will tables and graphs help to create a visual timeline?

Respondents were unanimous: the first step in determining a work product is to ask! Be clear about the attorney's goal.

- Perhaps a pain and suffering report will graphically describe the client's experience.

How does the attorney plan to use the work product? What is the purpose?

- Affidavit of Merit
- Outline of issues for an internal work product
- Cost projection
- Life care plan
- Standards and violations
- Pain and suffering report
- Chronology
- Analysis of strengths/weakness
- Opposition research
- Medical literature search
- Tables and graphs to create a visual timeline
- Pictures or diagrams to help visualize injuries

Who will be reading the work product?

- Will it be an expert report for disclosure?
- Is it for client/family explanation regarding merit or lack of merit?

Question #3: You have received an EHR with 12,000 pages. You have identified the appropriate work product with the attorney. How do you estimate the time you will spend on the project?

Estimating time can be challenging. It is important for the LNC and the attorney to be on the same page. Communication is critical. Once you have answers to your questions (listed above), you will be better prepared to address issues related to time.

As one respondent reminded us, a few records will not necessarily mean a few hours, or vice versa. Another pointed out that the volume of records may not accurately reflect the information contained within them due to significant duplication. Accurate time estimation comes with experience.

Again, ask appropriate questions. Our respondents suggested:

What is the budgeted time translated into dollars? Confirm with the attorney.

- If the budgeted time will not cover the assignment, talk with the attorney to agree on an altered budget or assignment. On which details would the attorney prefer you to focus?
- Inform the attorney you will work diligently until you are near the budgeted time, then discuss to determine whether the attorney wishes to provide more funds or you should alter the plan.
- Some LNCs do not estimate their time. They ask for the budget, and inform the attorney they will work diligently until they are close to the budgeted amount at which time the LNC will call the attorney. The conversation will clarify where the LNC is in the project.

Other helpful tips:

- Work with a memo or skeleton chronology with important details, not for submission.
- Use word searches to find and bookmark the documentation within the records.
- To save LNC time, list specific documents for review. Ask the

attorney to have a staffer locate and forward them.

- Suggest the attorney access an outside medical record service such as www.voxmedicus.net to organize the records. This can provide a significant cost savings for the attorney and may be more cost-effective than a paralegal.
- Another LNC suggests taking "snapshots" of a page or pages pertinent to the case and pasting them into a chronology or report. Don't waste time retyping something or trying to decipher illegible handwritten notes and signatures.
- Deciphering handwritten notes is challenging and time-consuming. If your assignment involves many of these, you may need to increase your time estimate.
- Certain aspects of the record can sometimes be better addressed in a summary (e.g., therapy records).
- To manage time when working as an expert, keep your initial evaluation to 4-6 hours. You can do this by honing in on the specific incident/s and formulating an opinion quickly.

Although the poll did not ask about how the LNC decides which specific records to review, respondents suggested the following to minimize the time needed:

- Discharge summary
- History and physical (H&P)
- Progress notes
- Consultations
- Operative reports
- Relevant radiology reports.

As the above records are reviewed, the LNC can identify additional relevant documents, such as laboratory reports, nurses' notes, vital signs, intake and output (I&O) records. One respondent reports this may reduce the volume of essential records to review by 80% to 90%. Reducing the volume will likely reduce the time required to analyze the records.

Question #4: How do you attach a link to a specific page in the EHR to your report in Word (PC)? in Pages (Apple)?

Several respondents said programs such as CaseMap are helpful in performing this task. However, there are options for those who do not use them. You can create links with Word and with Pages by using their hyperlink features.

Once you have processed your EHR using your preferred method (OCR, Bates stamp, etc.), follow these steps in Word (there will be a similar process in Pages):

1. Identify the relevant passage in the PDF using the Adobe Pro Edit tool.
2. Copy and paste the passage to the report. If the passage has not been OCR'd, use the Adobe Pro Edit tool.
3. Highlight the passage, then in the Insert tab, click Hyperlink.
4. In the window that opens, "Look in," click the down arrow, and navigate to the file for the link.
5. Send the report and the PDF files to the attorney on a disk or in a file with the report and the linked documents, including all 12,000 records that now have Bates numbers on them (if this was your preferred method).

In the report, the passage will appear as a link (underlined and change of color). The attorney can right click the extracted passage, choose "Open Hyperlink" in the window that opens, and see the corresponding page in the actual EHR. You are now the brilliant LNC that linked your report to the PDF files.

If that seems too complicated, the respondents suggested other options. While these three choices do not create actual links, they do cross reference text in reports with the text in documents.

- Within the report, type in the page number and put it in bold parentheses e.g. **(p. 1)**.
- Use Bates numbers in the report to identify specific pages. *Be sure the attorney is ready for the documents to be Bates stamped before doing this as the firm may still be procuring additional records.* Simply note the Bates number as [**name of facility, Bates#**] in the 'Provider' column of a chronology after the name of the MD or RN. For example, a passage in the file, 'Local Medical Center ER' written by AB Smith MD becomes [**LMC 1773-85**]
- When working with numerous files without Bates stamps, put the name of the document followed by a semi-colon and the PDF page number. Surround the information with brackets and use bold font: [**Local Medical Center; pg. 271**]

Question #5: An attorney wants to send you two banker's boxes of paper documents. How do you respond?

This question generated interesting responses from respondents at each

This question generated interesting responses from respondents at each end of the spectrum: Some LNCs love paper records and others hate them.

end of the spectrum: Some LNCs *love* paper records and others *hate* them. LNCs who love paper records prefer them in a printed EHR format because it is easy to flip through them, especially when the EHR has the title of the page listed at the top. For example, if "Respiratory Therapy' is listed at the top, you can be relatively certain the entire section will be the same.

Before reviewing records, respondents recommend that you know the basics of the project (see Question #2). Then you'll be ready to decide what you will tell the attorney. Suggestions included:

- "Please ask your office assistant to scan them into PDF files, Bates stamp them, and send them to me on disk or via secure FTP (File Transfer Protocol) site."
- "I charge $250/box for paper records for a secure disposal fee." Say this even if it means, "I burn them in the wood stove."
- "I would tell the attorney I will review paper records but have to double my time estimate". This would probably prompt the attorney to ask an assistant to transfer the records to an electronic version for file sharing (or to a disc).
- "Two banker's boxes is not much in my experience. In some cases I've had as many as a dozen. I ask about the case background, the focus of the case, if this is a "smell test" or a full chronology, what deadlines there are in the case."
- "I always ask if they can please scan it and send it on a disc. It's never been a problem."
- "Tell him to send the records out for scanning with separate PDFs for each provider and hospitalization. Or, you can offer to organize and get them scanned if the attorney wants to pay for this." See "Some tips that LNCs report as helpful" under Question #3.
- "If I get a set of paper records without page numbers, I inform the legal assistant on the case that I will hand number the pages. This will make finding the pages much easier for the attorney. Sometimes the legal assistant will send a runner to retrieve the records from me so that the pages can be numbered by one of their staff."

Question #6: How does the LNC find an expert that understands the customized dropdowns in a facility's EHR system, whatever the core system may be (Epic, Cerner, McKesson etc.)? When evaluating EHRs, do you consider how the screen may have looked to the user?

There seem to be more and more people holding themselves out as EHR experts. LNCs are resourceful in locating their experts. Suggestions included:

- Search past issues of the JLNC for articles written by experts. Ask them if they are willing to testify. If not, perhaps they can refer you to someone with the appropriate skills.
- Post a request for help on LegalMed, LNCExchange, LinkedIn, and other networking sites. Remember: these sites are discoverable.
- Use networking skills; ask peers and colleagues.
- Use the online resources from the local branch of the American Bar Association. Some will allow non-attorneys to be members or associate members, with access to resources.
- Speak with a friend, like Michael Seaver (Seaver.michael@gmail.com) or a co-worker who may be familiar with the system's dropdowns, or may be able to refer someone.
- This would require knowledge of a particular hospital's EHR system so it would have to be a nurse or doctor familiar with a particular institution.
- Possibly locate an IT person who advertises as an expert.
- Perform an internet search for an expert.

Some LNCs think that an expert must know a specific hospital's EHR system. This may be unnecessary if the expert has knowledge of how to obtain its best audit trail. Since there are many ways to create audit reports, the LNC needs to clearly define the required information to be evaluated. It is advisable to consult with the expert to establish the search criteria. (Ed.: See "The EHR Files, page 20)

SUMMARY

Respondents to this Round Table poll provided many suggestions about the ways LNCs work with an EHR. LNCs are advised to consider the responses and decide which methods work best with their business model.

The author wants to thank the LNCs that contributed to this article. While some respondents prefer to remain anonymous, the following LNCs also generously provided valuable information: Candace King, Lisa Mancuso, Cynthia Mascarenhas, Victoria Powell, Joanne Walker, Susie White, and Elizabeth K. Zorn.

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