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UNDERSTANDING MEDICAL RECORDS IN THE TWENTY-FIRST CENTURY

Samuel D. Hodge, Jr. and Joanne Callahan***

“We’ve got 21st century medical practices, but 19th century paperwork . . . So, medical electronic records is going to be one of the great innovations in medicine.”¹

–President George W. Bush

The practice of medicine has undergone a metamorphous in the past few years with little fanfare. The patient is no longer greeted by a healthcare provider carrying the person’s chart. Instead, the doctor enters the room with a laptop and the encounter begins with a few moments of silence as the physician reviews the computer to ascertain the patient’s medical history. For you see, the days of a paper chart and the clinician handwriting an impression or diagnosis are a thing of the past. Healthcare professionals have transitioned to electronic medical records (EMR).²

I. AN INTRODUCTION TO ELECTRONIC MEDICAL RECORDS

The computer has dramatically altered most facets of life, but the medical profession has lagged behind other industries in utilizing digital technology. The government decided to remedy that deficiency by enacting The Health Information Technology for Economic and Clinical Health (HI-TECH) Act to encourage the implementation and meaningful use of healthcare information technology.³ The government was mindful of the associated costs and inconvenience to make such a

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1. Rich McManus, *President Makes Third NIH Visit*, NIH RECORD, https://nihrecord.nih.gov/newsletters/2005/02_15_2005/story01.htm (last visited June 19, 2017).

2. *Medical Record Keeping for Health Care Providers*, NURSING LINK, <http://nursinglink.monster.com/training/articles/352-medical-record-keeping-for-health-care-providers> (last visited June 19, 2017). Medical records are vital in the proper care of a patient. They detail the patient’s subjective complaints, results of the physical exam, and diagnosis. Medical records are the primary communication between healthcare providers and serve as the foundation for all those who become involved in the patient’s care.

3. Health Information Technology for Economic and Clinical Health Act, Pub. L. No. 111–5, 123 Stat. 115, 226 (2009); *HITECH Act Enforcement Interim Final Rule*, U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES, <https://www.hhs.gov/hipaa/for-professionals/special-topics/HITECH-act-enforcement-interim-final-rule/> (last visited June 19, 2017).

conversion,⁴ so it provided financial incentives to implement these changes.⁵ Hospitals and eligible professionals were able to receive payments of up to \$44,000 through the Medicare EHR Incentive Program, or as much as \$63,750 through the Medicaid EHR Incentive Program to make the conversion to a digital system.⁶ Conversely, those who did not switch to an electronic based system and show a meaningful use of digital technology by 2015 forfeited part of their Medicare payments.⁷ As a result, most health organizations have moved to electronic healthcare records.⁸

An electronic or computerized medical record is a digital version of the patient's paper chart and represents a medical record for a single facility, such as the family doctor, group practice, or hospital.⁹ The electronic record will include such things as biographical information, the patient's past medical history, test results including blood and diagnostic studies, summaries of office visits, and other information relevant to the person's health. The document may also include reports or encounters with other healthcare providers.¹⁰ In turn, these records are organized in a data-gathering configuration that allows for the retention and transfer of confidential health information in a protected fashion.¹¹

Numerous advantages are espoused for a digital file, such as improved legibility of handwriting, increased quality of patient care, better departmental communications, less paper confusion and lost charts, instant access to potential lifesaving information, and the reduction in medical errors.¹² Paper charts also had to be stored, so a dedicated space had to be maintained. Every time a patient came to the office, someone had to locate and pull the patient's file.¹³ A computer based storage system eliminates these issues, provides instant access to a patient's records, and allows the medical file to be accessed from a remote location.¹⁴

The digital version of a patient's chart, however, is not without problems. Setting aside the high startup and maintenance costs, there are major privacy and security issues with EMRs. For example, the American Health Information Management Association estimates that during a hospital stay, about 150 individuals will have

4. It is estimated that the average cost for a small medical practice to implement an electronic records system is from \$50,000 to \$80,000. Stephen H. Johnson & Gene M. Ransom, III, *A Guide to Federal and State Incentives for a Health Care Technology Implementation*, MD. B. J., March/April 2013, at 4, 6.

5. *Id.* at 6–8.

6. *EHR Incentives and Certification*, HEALTHITGOV, <https://www.healthit.gov/providers-professionals/ehr-incentive-programs> (last visited June 19, 2017).

7. Lydia Andrasz, *HIPAA and Electronic Medical Records: Benefits and Security Issues*, 25 DCBA BRIEF, Nov. 2012, <http://www.dcba.org/mpage/vol251112art3> (last visited June 19, 2017).

8. George Palma, *Electronic Health Records: The Good, the Bad and the Ugly*, BECKER'S HOSPITAL REVIEW, Oct. 14, 2013, <http://www.beckershospitalreview.com/healthcare-information-technology/electronic-health-records-the-good-the-bad-and-the-ugly.html> (last visited June 19, 2017).

9. *Definition of Electronic Medical Record*, HEALTHCARE IT GLOSSARY, <http://whatis.techtarget.com/definition/electronic-medical-record-EMR> (last visited June 19, 2017).

10. KRISTYN S. APPLEBY & JOANNE TARVER, *MEDICAL RECORDS REVIEW*, § 1.9 (Aspen, 4th ed. 2010).

11. *Id.*

12. Melissa Steward, *Electronic Medical Records—Privacy, Confidentiality, Liability*, 26 J. LEGAL MED. 491, 491, (2005).

13. Palma, *supra* note 8.

14. *Id.*

access to a patient's chart.¹⁵ While most will have a legitimate reason for viewing the record, there is a paucity of laws that regulate who these people are, what information they may access, and what they are able to do and not do with the patient's information once they have viewed it.¹⁶ There are a number of stories about the unauthorized viewing of electronic medical records, such as Kim Kardashian and the delivery of her baby at a Los Angeles hospital.¹⁷ Kardashian's medical records were inappropriately accessed on several occasions, resulting in the termination of a handful of employees.¹⁸ In another instance, the Allina Health System in Minnesota had to notify almost 4,000 patients that one of its medical assistants had improperly reviewed patients' medical information.¹⁹

Unexpected medical errors have arisen because physicians have utilized the computer's cut and paste function to record office notes.²⁰ It is estimated that between 74–90% of doctors use this function in their electronic medical records, and between 20–78% of physician entries are copied paragraphs.²¹ This practice may save time, but it compromises patient safety and prejudices the level of care since changes in the person's status between examinations may go unnoticed or not be properly recorded.²²

II. OBTAINING ELECTRONIC MEDICAL RECORDS

The ability to obtain medical records has become exceedingly more difficult since the passage of the Health Insurance Portability and Accountability Act (HIPAA).²³ This federal legislation creates rules to protect the unauthorized disclosure²⁴ of a patient's personal health information.²⁵ HIPAA mandates the implementation of prophylactic steps to insure the confidentiality of a patient's

15. Steward, *supra* note 12, at 5.

16. *Id.*

17. Scott Greene, *Electronic Health Record Forensics Expert Witness: Nosy Healthcare Employees Snoop Electronic Medical Records!*, EVIDENCE SOLUTIONS, INC., <http://evidencesolutions.com/web/index.php/Articles-by-ESI/nosy-healthcare-employees-snoop-electronic-medical-records.html> (last visited June 19, 2017).

18. *Id.*

19. *Id.*

20. *Preventing Copy-And-Paste Errors in Ehrs*, THE JOINT COMMISSION, 10 Quick Safety 1 (Feb. 2015), https://www.jointcommission.org/assets/1/23/Quick_Safety_Issue_10.pdf (last visited June 19, 2017).

21. Erin McCann, *EHR Copy and Paste? Better Think Twice*, HEALTHCAREITNEWS, Oct. 8, 2013, <http://www.healthcareitnews.com/news/ehr-copy-paste-better-think-twice> (last visited June 19, 2017).

22. Palma, *supra* note 8.

23. Attorneys need to obtain medical records because they help document the course of treatment, detail or disprove the injury or medical problem, and help establish the value of a claim. The records also reveal prior medical problems that may have an influence on a claim as well as prior claims or pre-existing injuries. For more information on medical records, see SAMUEL D. HODGE, JR., *ANATOMY FOR LITIGATORS* 17–31 (2006).

24. The confidentiality of medical records has always been a cornerstone in the practice of medicine. The concept was first espoused by Hippocrates and is part of the American Medical Association's Code of Ethics, which notes that information disclosed to a physician during the course of treatment is "confidential to the utmost degree." This mandate provides the patient with the ability to make a complete disclosure to a physician of very personal information with the knowledge that what is said in the examining room will not be revealed. In turn, this rule of confidentiality has been made into law by various federal and state statutes which protect the disclosure of patient information unless certain specific conditions have been satisfied. *Id.* at 17.

25. *The HIPAA Privacy Rule*, U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES, <https://www.hhs.gov/hipaa/for-professionals/privacy/> (last visited June 19, 2017).

records, and sets forth the requirements and restrictions on the release, disclosure, and use of that information without the patient's consent.²⁶

The key to obtaining a person's medical records is the phrase "without the patient's consent." HIPAA provides the patient with the right to inspect, review, and receive a copy of his or her medical chart in the possession of a healthcare provider.²⁷ In addition, the law allows for a patient's representative, such as an attorney, to obtain a copy of the documentation.²⁸ The days of the one paragraph authorization, however, are long gone. The form is now two pages in length, specifically notes what information can and cannot be disclosed, and covers a stated period of time.²⁹ As long as counsel for the patient uses the correct HIPAA form, the covered entity will usually send the medical records after the payment of the appropriate fee. Defense counsel, however, has a much more difficult row to hoe. It is common for a healthcare provider to ignore a court issued subpoena for a claimant's medical records and demand that an approved authorization be provided.³⁰ This resistance is based upon the stiff penalties imposed by the legislation for the wrongful disclosure of medical information. In fact, some medical records custodians will not yield on releasing the chart unless their own medical authorization is used.³¹ This forces the defense to ask opposing counsel to have the claimant execute the demanded authorization. This can be a problem, especially in contentious litigation, and may force the defense to seek a court order forcing the plaintiff to sign the authorization.

The Department of Health and Human Services considered issues of patient privacy as they relate to electronic medical records in their HIPAA Security Rule.³² This pronouncement created national standards to "protect the confidentiality, integrity, and availability of electronic protected health information."³³ The rule includes the need to frequently review likely risks and susceptibilities to privacy and integrity in view of the information stored in the electronic record system.³⁴ Audit logs should also be maintained that record activity, including who accessed and made entries in the records.³⁵

Obtaining electronic medical records presents unique challenges not encountered with the paper file. Counsel must make sure that a complete copy of the

26. *Id.*

27. Your Medical Records, U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES, <http://www.hhs.gov/hipaa/for-individuals/medical-records/> (last visited June 19, 2017).

28. *Id.*

29. For an example of a HIPAA release form, see *HIPAA Privacy Authorization Form*, ATHENAEUM, <https://www.athenaeum.edu/pdf/free-hipaa-release-form.pdf> (last visited June 19, 2017).

30. H. Philip Grossman & Anne K. Guillory, *A Year in the Life of HIPAA: New Tips, Observations and Suggestions for Improvement*, GP/SOLO LAW TRENDS AND NEWS, 1, Oct. 2004, http://www.americanbar.org/content/newsletter/publications/law_trends_news_practice_area_e_newsletter_home/hipaa.html (last visited June 19, 2017).

31. *Id.* This information is also based upon the authors' personal experiences in trying to obtain medical records; the healthcare provider will claim that federal law supersedes the court issued subpoena.

32. 45 C.F.R. §§ 164.302-.318.

33. Lawrence Hughes, *HIPAA Compliance and Electronic Medical Records*, 2, MEDSCAPE, Sept. 20, 2005, <http://www.medscape.com/viewarticle/503652> (last visited June 19, 2017).

34. *HIPAA Impact on Electronic Health Records*, MCGUIRE WOODS, Aug. 21, 2008, <https://www.mcguirewoods.com/Client-Resources/Alerts/2008/8/HIPAA-Impact-on-Electronic-Health-Records.aspx> (last visited June 19, 2017).

35. *Id.*

patient's medical chart has been delivered. The electronic file should contain the same parts found in the traditional paper file, but that is not always the case. Some portions of the digital file will be combined and other parts will not automatically be printed.³⁶ One must also be mindful that the patient's paper file may not have been completely converted into a digital file and some of the patient's prior records may be missing. Therefore, any request for records should include a demand for all paper records as well as a printout of the electronic file.³⁷

Some medical records departments may not treat electronic records as the equivalent of a paper chart and may fail to copy electronic files in response to a demand for a hard copy of the records. Therefore, a request for the chart should contain wording that such demand includes "printouts of all patient records kept in electronic form or on computers, including all electronic medical records and health records."³⁸ Counsel should also request an accounting of disclosures or the "private health information (PHI) disclosure log."³⁹ This is a HIPAA required list of where, when, what, and to whom a chart has been given.⁴⁰ This log is important because it will assist counsel in ascertaining which healthcare providers and attorneys have accessed the record as well as locating other copies of the chart for comparison purposes.

One of the more frustrating features of electronic medical records is the obvious redundancy in the printout. For you see, the identical materials will be repeated on multiple occasions. Part of this problem is due to the copy and paste functions of the computer. For instance, one study demonstrated a 78% redundancy rate within sign-out notes, a 54% repeat rate within progress notes, and a 30% redundancy rate in the admission notes for the same person.⁴¹

Electronic medical records also lack uniformity in the computer printout. This is a reflection of the many different software systems being used, each with their own individual and varied platforms,⁴² as well as customization and upgrades that may change the look of the printed record.⁴³ Furthermore, medical providers differ in the number of electronic medical record systems they may use.⁴⁴ Some utilize a single platform while others maintain systems from a number of suppliers.⁴⁵ This absence

36. Tracey Dellacona, *Uncover the Complete Electronic Medical Record*, THE AMERICAN ASSOCIATION FOR JUSTICE, Trial, May 2011, at 28, 30.

37. Dan Tennenhouse, *Problems with Computerization of Records*, 1 Attorney's Medical Deskbook § 2:6.

38. Dan Tennenhouse, *Obtaining Electronic Medical Records*, 1 Attorneys Medical Deskbook § 1:2.10.

39. Dellacona, *supra* note 36, at 30.

40. *Id.*

41. Raphael Cohen, et. al., *Redundancy in Electronic Health Record Corpora: Analysis, Impact on Text Mining Performance and Mitigation Strategies*, BMC BIOINFORMATICS 2013, 14:10, 2, <http://bmcbioinformatics.biomedcentral.com/articles/10.1186/1471-2105-14-10> (last visited June 19, 2017).

42. There are more than 1,000 software systems available to medical care providers. Kirti Patel, *Electronic Health Records, Part 1: Challenges*, MEDTECH BOSTON, <https://medtechboston.medstro.com/blog/2015/02/17/electronic-health-records-part-1-challenges/> (last visited June 19, 2017).

43. Dellacona, *supra* note 36, at 30.

44. T. Payne, et. al., *Use of More Than One Electronic Medical Record System Within a Single Health Care Organization*, Appl. Clin. Inform. 2012; 3: 462-474, 462, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3613036/> (last visited June 19, 2017).

45. *Id.*

of consistency may make it difficult for an attorney to develop a comfort zone or rhythm in reading electronic medical records.

There is one important advantage, however, that counsel should not overlook: the patient portal. This is a protected online website that allows patients to access their medical records at any time so long as there is an internet connection. The patient is able to view and printout the notes from visits, results of diagnostic and blood tests, and discharge summaries.⁴⁶ This allows the patient to print out a part of his or her chart and show it to the attorney without counsel having to order, pay, and wait for the delivery of the medical records.⁴⁷

III. THE PARTS OF THE ELECTRONIC MEDICAL RECORD

The electronic medical record should be similar in content to the traditional paper chart, but some parts will be merged, duplicated, or not printed out.⁴⁸ The hard copy of the electronic record is also fundamentally different from what appears on the computer screen and the format of the chart may differ based upon the computer software used and the specialty of the healthcare professional.⁴⁹ This means that electronic medical records are not uniform, so it is important to know the components of a medical record so that a check can be conducted to make sure the entire file has been received.

There are three major types of medical charts—the practitioner, hospital, and nursing home—and each has its own format.

A. The Physician

The primary care physician (PCP) is routinely the gatekeeper of all medical care received by the patient. This is not to say their records will be complete, but the PCP's records are the best to acquire in order to obtain an overview of the patient's health. Claimant's counsel should always ascertain the name of the PCP at the initial interview as well as to ask about all other physicians the client has seen for a particular problem. It should be noted, however, that patients rarely stay with the same PCP over a lifetime, whether due to relocation or the previous PCP retiring or leaving his or her practice. Many times these earlier records are not forwarded to the new physician. Therefore, it may be necessary to obtain the records from the previous PCP.

Physicians outside of a hospital setting are not mandated to maintain their charts in any particular format, so their records will not be uniform across offices.

46. *What Is A Patient Portal?*, HEALTHITGOV., <https://www.healthit.gov/providers-professionals/faqs/what-patient-portal> (last visited June 19, 2017).

47. Cliff Rieders, Esquire disagrees with this assessment. He believes “the patient portal is very limited and generally is unsatisfactory either for patients or physicians.” His office has generally found the information on the patient portal to be “worthless.” Letter from Cliff Rieders, Esquire, to Samuel D. Hodge, Jr. (Nov. 22, 2016) (on file with the author).

48. Dellacona, *supra* note 36, at 30.

49. Jeffrey Masor, *Electronic Medical Records and E-Discovery: With New Technology Come New Challenges*, 5 HASTINGS SCI. & TECH. L.J. 245, 247-49 (2013).

Nevertheless, the chart should contain an intake form, progress notes, laboratory and test results, correspondence from other providers, and miscellaneous notes.

1. Intake Form

The intake form should be the first document in the file. It is the detailed questionnaire that asks the patient about his or her past medical history, family history, hospitalizations and surgeries, current medications, and the reason for the visit. It may also contain demographic information, the name of the person's employer, and insurance information.

2. Progress Notes

The progress notes are a chronological accounting of each examination written by the physician in a SOAP format.⁵⁰ SOAP provides a uniform way for doctors to record a patient's visit and stands for subjective data (the patient's complaint/concern), objective data (the findings from the physical assessment), the physician's assessment of the situation (the diagnosis or impression), and the plan for treatment (medication, physical therapy, diagnostic testing, or consultation with a specialist).⁵¹ The progress notes may also contain documentation by a medical assistant of the patient's vital signs, height, and weight.⁵²

It is a useful litigation technique to check the progress notes for consistency of complaints over time and among healthcare providers.⁵³ It is common to find variations in symptoms and observations between different healthcare providers for visits close in time.⁵⁴ These inconsistencies make for interesting cross-examination and create credibility issues.⁵⁵

3. Diagnostic Studies

All laboratory and diagnostic testing ordered by the doctor will be a separate part of the patient's chart. Sometimes the results from testing ordered by other physicians will also be present. These records can provide cues to other possible causes for a complaint or demonstrate a pre-existing problem. For instance, a patient whose complaint of numbness or a pins and needles sensation in his foot may not be related to a traumatically induced herniated disc, but be caused instead by a diabetic neuropathy. This section of the chart will reveal if a person is a diabetic and how long the person's blood sugar levels have been elevated.

50. *SOAP Notes*, EMRSOAP, <https://www.emrsoap.com/definitions/soap/> (last visited June 19, 2017).

51. *Id.*

52. *Id.*

53. Hodge, *supra* note 23, at 20.

54. *Id.*

55. *Id.*

4. Correspondence

The correspondence section of the chart is exactly what its name implies. If the patient was seen by a specialist, the consulting physician will usually send correspondence to the referring doctor with the results of their evaluation and recommended treatment. Many times patients will seek out specialty care without consulting their primary care physician. In that case, the patient will have to specifically tell the specialist to send a copy of all results to the PCP unless the doctor asks for the name of the primary care physician. These reports can offer investigative clues as to other health issues or causes for a problem. For example, a pre-accident visit to an orthopedic surgeon for back pain can establish a pre-existing problem, and this specialist's report should be located in this section of the chart.⁵⁶

5. Miscellaneous Documents

The last portion of the chart will contain miscellaneous documents that do not fit into any other section of the chart. For instance, it is possible to find subpoenas from other cases as well as letters from an attorney, statements from the patient, or letters from an insurance company.

It is important to remember that many physicians have only recently switched to electronic medical records and the bulk of the record may still be in a paper format. Therefore, any discovery request should include a demand for both paper and electronic records.

B. Nursing Home Records

There are a number of federal regulations that control a skilled nursing facility. These rules are generally determined by The Centers for Medicare and Medicaid Services (CMS) and nursing homes must comply with these federal mandates.⁵⁷ In addition, state regulations may come into play.⁵⁸

One should not be surprised to find a nursing home's record to be voluminous, especially if the patient was a longtime resident.⁵⁹ Surprisingly, the medical chart for a short stay can also be hundreds of pages long.⁶⁰ Obtaining and analyzing these records can be a tedious task.

Many nursing homes do not have a medical records department so the chart is not organized in any special fashion.⁶¹ Nursing homes are currently not mandated to

56. *Id.*

57. See *Skilled Nursing Facility Center*, CTRS. FOR MEDICARE & MEDICAID SERVS., <https://www.cms.gov/Center/Provider-Type/Skilled-Nursing-Facility-Center.html> (last visited May 24, 2017); *Nursing Home Medical Records: A Primer for Litigators*, THE EXPERT INSTITUTE, (June 14, 2016), <https://www.theexpertinstitute.com/nursing-home-medical-records-a-primer-for-nursing-home-litigators/>. (last visited June 19, 2017).

58. *Nursing Home Medical Records*, *supra* note 57.

59. *Id.*

60. *Id.*

61. *Id.*

maintain electronic medical records so it is less likely to find these records in a digital format.

1. Administrative Information

The first portion of the chart is usually devoted to administrative information such as the “admission face sheet, leave of absence forms, consents, hospital transfer forms . . . and [] advance directives.”⁶²

2. Minimum Data Set

Nursing home records will contain the Minimum Data Set form.⁶³ The Long-Term Care Minimum Data Set (MDS) is a standardized, primary screening and assessment tool of [the] health status which forms the foundation of the comprehensive assessment for all residents (regardless of payer) of long-term care facilities certified to participate in Medicare or Medicaid. The MDS contains items that measure physical, clinical, psychological, and psycho-social functioning, and life care wishes.⁶⁴

3. Documentation of Care

Documentation of patient care includes physician progress notes, physician orders, nursing notes, vital signs, intake and output data, the medication administration record, treatment records (such as wound care), care plans, diagnostic testing results, and progress notes from other disciplines such as physical therapy, occupational therapy, recreational therapy, dietary and social work.

Vital signs and intake and output may be documented by nursing assistants. All medication administration and treatments should be documented only by a registered or licensed practical nurse.⁶⁵

C. The Hospital Chart

Hospital records tend to be much more formal than the practitioner’s files because they must comply with various mandates by the Joint Commission, a healthcare accreditation agency, to maintain records a certain way. This provides for a more uniform approach in how these records are organized. The hospital will also have a medical records department to maintain and organize the patients’ charts.

62. *Id.*

63. *Id.*

64. For a definition of the Minimum Data Set see *Medicare Fee-For-Service Skilled Nursing Facility Utilization & Payment Public Use File: A Methodological Overview*, CMS CTRS. FOR MEDICARE & MEDICAID SERVS., https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Medicare-Provider-Charge-Data/Downloads/SNF_Methodology.pdf (last visited on May 24, 2017).

65. *Nursing Home Medical Records*, *supra* note 57.

Interestingly, it is usually only after the patient has been discharged that the chart will come under the control of the medical records department.⁶⁶

Hospital records contain documentation of all assessments, treatment, diagnostic testing and medication given from the point of entry to the hospital until discharge.⁶⁷ Occasionally hospitals have documentation in the record of post-discharge outreach, such as follow-up phone calls. The traditional hospital records will also have the following subparts in order to document the patient's stay:

- Emergency room record
- Patient registration
- History and physical
- Progress notes
- Consultations
- Laboratory and diagnostic test results
- Nurses' notes
- Medication sheets
- Physician orders
- Operative notes
- Discharge summary
- Incident reports
- Consent and other miscellaneous documents⁶⁸

All of these documents, regardless of whether they are in a paper or electronic format, must contain the patient's full name and individual patient number.⁶⁹

1. The Emergency Room Record

The emergency room record will contain the information assessed in triage, the nursing physical assessment including vital signs, the physician's impressions, physician orders, and the patient disposition (admission, observation, or discharge). There will also be a record of the medications administered and any diagnostic testing. If the patient was brought in by ambulance, the record should also contain the documentation from the EMT.

The emergency room is a chaotic place and the staff has one goal: to treat the patient. Entries placed in the chart are usually unbiased and contemporaneous. The staff will observe and record the injuries sustained by the person, whether there are any visible signs of trauma and the history of the accident. By the same token, negative findings will be recorded as well as observations about the patient's demeanor. For example, a trauma victim who claims to be in significant pain should not be walking the halls in a leisurely manner, talking on the phone or smoking.⁷⁰

66. Hodge, *supra* note 23, at 22.

67. *Hospital Chart*, THE FREE DICTIONARY BY FARLEX, <http://medical-dictionary.thefreedictionary.com/hospital+chart> (last visited May 25, 2017).

68. Hodge, *supra* note 23, at 22.

69. *Legal Medical Record Standards*, POL'Y NO. 9420, 3 (2008), <http://policy.ucop.edu/doc/1100168/LegalMedicalRecord>.

70. Hodge, *supra* note 23, at 23.

2. Patient Admission

The admission section includes a face sheet with demographic materials, insurance information, next of kin, and the chief complaint or reason the patient is seeking treatment.⁷¹ There will be forms for release of information to the insurance company for billing, consent for treatment, and a HIPAA notification.⁷² There may also be a place to record whether the patient has an advanced directive or living will and occasionally a copy of these documents will be placed in the file.⁷³

Once the admission process is complete, the patient will be brought to the appropriate hospital room depending upon what type of care is to be administered.⁷⁴ For example, a person being admitted for gallbladder surgery will be admitted to the general surgical floor and an expectant mother will be taken to the maternity wing.

3. Physician Documentation

Physician documentation includes the history and physical (H&P), progress notes, physician orders, consultation requests and reports, discharge instructions, and discharge summaries.⁷⁵ Other documents include the consent forms, such as operative consent, blood product administration consent, and HIV testing consent.

Most hospitals have a separate form for “do not resuscitate” orders (DNR).⁷⁶ This document is generated by a physician in most cases.⁷⁷ If the patient experiences an emergency situation or cardiovascular arrest during hospitalization, there should also be documentation from the rapid response team or the code team (code record).⁷⁸ These records are frequently batched together with the progress notes. If the patient expires while in the hospital, there should also be a “death note” in the progress note section and a copy of the death certificate.⁷⁹

4. Operative Report

The operative report is created by the surgeon or another doctor who assisted in the surgical procedure.⁸⁰ Its purpose is to detail the specifics of the operation and to

71. *Admission to the Hospital*, ENCYCLOPEDIA OF SURGERY, <http://www.surgeryencyclopedia.com/A-Ce/Admission-to-the-Hospital.html> (last visited June 2, 2017).

72. *Id.*

73. *Id.*

74. *Id.*

75. Ruthann Russo, *Documentation and Data Improvement Fundamentals*, AHIMA HIM BODY OF KNOWLEDGE, <http://bok.ahima.org/doc?oid=60174#.WTPQ-caZPVU> (last visited June 4, 2017).

76. Laura J. Martin, *Do-not-resuscitate Order*, MEDLINE PLUS TRUSTED HEALTH INFO. FOR YOU (Feb. 6, 2016), <https://medlineplus.gov/ency/patientinstructions/000473.htm>.

77. *Id.*

78. For a flowchart of the rapid response team procedures see *Health Care Protocol: Rapid Response Team*, ICSI INST. FOR CLINICAL SYS. IMPROVEMENT (Jul. 2011), https://www.icsi.org/_asset/8snj28/RRT.pdf.

79. For information on how physicians document the death of a patient while in the hospital, see *The Palliative Response Guidelines for Pronouncement*, BIRMINGHAM/ATLANTA GERIATRIC RES., EDU. & CLINICAL CTR., https://www.uab.edu/medicine/palliativecare/images/Tab_6_F_Guidelines_for_Death_Pronouncement.pdf (last visited June 4, 2017).

80. *Operative Report*, THE FREE DICTIONARY BY FARLEX, <http://medical-dictionary.thefreedictionary.com/operative+report> (last visited May 26, 2017).

name those in the operating room.⁸¹ The record will contain the pre and post-operative assessment, documents from the pre-operative holding area, estimated blood loss, complications, the Universal Protocol (time out) form, the anesthesia record, the operative report, and the scrub nurse documentation of the instrument and sponge count prior to closing the incision.⁸² If a medical device or hardware is implanted, there should also be a form showing the serial number of the device and any expiration date that may apply.⁸³ There will be a separate post anesthesia care unit (PACU, recovery room) record as well as a pathologist's report.

Invasive interventional cases, such as cardiac catheterization, electrophysiology, interventional radiology and the like will have many of the same documents as contained in the operating room record.

5. Nurse's Notes

The notes written by the nurses tend to be the most voluminous section of the chart since they are responsible for the daily care of the patient. This section of the chart will include the nursing history and admission assessment, a patient belongings form, shift assessments, nursing notes, nursing care plans, vital signs, intake and output, activities of daily living (ADLs), and patient and family education.⁸⁴

If the patient is on continuous cardiac monitoring, there should be a record of the cardiac rhythm strips analyzed each shift. Some hospitals have monitor rooms with technicians who keep their own records of the cardiac events.

6. Diagnostic Tests

This section of the chart will list the results of diagnostic tests. This includes the findings from hematology (blood work), radiology, electrocardiograms, echocardiograms, electroencephalograms, and pulmonary function tests among others.⁸⁵

7. Medication Administration Record

The Medication Administration Record (MAR or eMAR if electronic) is the log detailing the drugs given to the patient while in the hospital. The physician is required to "sign off" on the chart when the medication is ordered or issued.⁸⁶ The MAR is usually divided into four sections: routine scheduled medications, emergent

81. *Id.*

82. *Id.*

83. See Byron L. Burlingame & Denise Maxwell-Downing, *Unique Device Identifier*, 102 AORN J., 536, 540–41 (2015), https://www.aorn.org/websitedata/cearticle/pdf_file/CIA15546-0001.pdf.

84. For more information on nursing documentation, see Wanda Lockwood, *Documentation: Accurate & Legal*, RN.ORG (May 2017), <http://www.rn.org/courses/coursematerial-66.pdf>.

85. See *Medical Charts*, ENCYCLOPEDIA OF SURGERY, <http://www.surgeryencyclopedia.com/La-Pa/Medical-Charts.html> (last visited June 4, 2017).

86. *Medication Administration Record*, WIKIPEDIA, https://en.wikipedia.org/wiki/Medication_Administration_Record (last visited June 4, 2017).

(STAT) or one time medications, medications given as needed (PRN) (such as pain medications), and intravenous (IV) medications/fluids.⁸⁷

8. Discharge Summary

The discharge summary functions as the “primary document[] communicating a patient’s care plan to the post-hospital care team.”⁸⁸ It is one of the most common parts of the charts requested by counsel but it is the most incorrect. The record is often dictated by a junior physician after the patient has been discharged from the facility and is not very detailed.⁸⁹

9. Miscellaneous Records

Ancillary departments also have their own documentation.⁹⁰ In the days of paper charting they wrote their comments in the physician progress notes. Now that many hospitals have electronic documentation, these department records will be printed out separately. Examples of these departments include hemodialysis, respiratory therapy (which also may contain flow sheets), physical therapy, occupational therapy, speech therapy, social work, and case management.⁹¹ Some hospitals also have dedicated wound care nurses and diabetic specialists who generally document their observations in the nurses’ notes.

IV. SPECIAL CONSIDERATIONS REGARDING ELECTRONIC MEDICAL RECORDS

Hospitals have made great progress in the conversion to electronic medical records. Frequently, they begin the switch with a few inpatient units to work out any complications before instituting the system hospital wide.⁹² Counsel will frequently see the inpatient areas “go live” several months before the emergency department, the procedural areas, the operating rooms, or outpatient services. Unfortunately, this fractured system of communication can lead to errors in patient treatment.⁹³

Sometimes within the same facility, different departments are documenting the patient’s progress on different software platforms. Common examples include the pharmacy, radiology (archived x-ray images), laboratory, cardiac catheterization lab, operating room, and ICU monitoring systems including remote telemetry monitoring

87. See *General Medication Administration and Specific Guidelines for High Risk Medications*, CHILDREN’S HOSP. & REGIONAL MED. CTR., www.seattlechildrens.org/pdf/general_medication_administration_guidelines.pdf (last visited June 4, 2017).

88. Amy Kind & Maureen Smith, *Documentation of Mandated Discharge Summary Components in Transitions from Acute to Subacute Care*, AGENCY FOR HEALTHCARE RES. & QUALITY 1, (last visited June 4, 2017).

89. Hodge, *supra* note 23, at 25.

90. Russo, *supra* note 75.

91. For more information on ancillary departments, see *What are Hospital Ancillary Services?*, REFERENCE.COM, <https://www.reference.com/business-finance/hospital-ancillary-services-9d29f56fe8e18d53#> (last visited June 4, 2017).

92. Michael Hodgkins, *Electronic Health Record (EHR) Implementation*, AMA STEPSFORWARD, <https://www.stepsforward.org/modules/ehr-implementation> (last visited June 4, 2017).

93. *Id.*

and remote monitoring (telemedicine). Also, the medication dispensing system can generate reports that can be very beneficial to the assessment of a case. An example is a system called Pyxis which automatically dispenses medication.⁹⁴

Smaller hospitals may not have their own hemodialysis departments. Therefore, they generally provide space for a dialysis agency to provide inpatient treatments. These records become part of the patient's chart, but often they are in a paper format. Some hospitals do not permit access to their computer system by outside services.

V. DECISION SUPPORT SOFTWARE AND ALERTS

Many systems have decision support software and alerts. These safety features provide "pop-up" screens or alerts to assist physicians in such things as medication dosing, dangerous drug incompatibility, and meeting core measures.⁹⁵ Nurses also may receive alerts regarding critical laboratory results, overdue assessments and the like.⁹⁶ Both physicians and nurses can choose to accept these prompts or bypass them.⁹⁷

It is an important part of discovery to ascertain what decision support and pop-up alerts are in use with the electronic record system. The information technology department should be able to provide a printout of when the prompts were generated and whether they were acknowledged or dismissed by caregivers.

VI. COMPUTER DOWNTIME

Hospitals which have converted to a digital records system still have occasion to use paper documentation. One specific example is when "downtime" occurs.⁹⁸ This can either be scheduled in order to perform maintenance or upgrades, or it can be catastrophic – an unexpected event with no determined end time.⁹⁹ During this period, the staff must follow specific procedures which are variable depending upon the amount of time the computer system is unavailable.¹⁰⁰ For short periods of two hours or less, the staff will jot down vital information and then back-chart it when the system comes online again.¹⁰¹ For longer periods, the healthcare provider will

94. See *Pyxis MedStation System*, BD, <http://www.carefusion.com/our-products/medication-and-supply-management/medication-and-supply-management-technologies/pyxis-medication-technologies/pyxis-medstation-system> (last visited June 4, 2017).

95. See Margaret Rouse, *Clinical Design Support System (CDSS)*, TECHTARGET, <http://searchhealthit.techtarget.com/definition/clinical-decision-support-system-CDSS> (last visited June 4, 2017).

96. *Id.*

97. Bypassing these prompts can lead to medical errors, see *Alert Fatigue and Patient Risk: An Effective Drug Decision Support System Could Eliminate Both*, MANAGED HEALTHCARE EXECUTIVE, https://www.elsevier.com/_data/assets/pdf_file/0019/272152/MHE1116-Elsevier-Alert-Fatigue-WP.pdf (last visited June 4, 2017).

98. Lindsey Getz, *Dealing with Downtime – How to Survive if Your EHR System Fails*, FOR THE REC., 21, Nov. 9, 2009, <http://www.fortherecordmag.com/archives/110909p16.shtml> (last visited June 19, 2017).

99. *Id.*

100. *Id.*

101. See Robert N. Mitchell, *Documentation During EMR Downtimes*, FOR THE REC., 27, Aug. 2015, <http://www.fortherecordmag.com/archives/0815p10.shtml> (last visited June 19, 2017).

revert to previous paper charting methods.¹⁰² Depending upon the individual hospital's policies, the staff may not have to manually enter this information into the computer as the paper record will become part of the chart.¹⁰³

Unfortunately, computer downtime is an occurrence fraught with the possibility of errors.¹⁰⁴ The timing of events when back-charting is sometimes dependent upon the staff member's memory and is rarely accurate.¹⁰⁵ Also, hospital personnel must remember to change the time in the computer to properly reflect the time of the event. Otherwise, the incident or recording will appear to have happened at a point later than it actually occurred.

A staff member working the subsequent shift may not know that there was a downtime and may not know to refer to the paper record to determine the proper timing of medication or results of point of care testing (for example blood sugar testing).

VII. USERS COMMENTS

Not everyone who has used electronic medical records is sold on their usefulness. In fact, physician unhappiness with electronic medical records is growing.¹⁰⁶ A Physician Satisfaction Study determined that the preponderance of doctors found them to be "cumbersome," and "time-consuming."¹⁰⁷ They also determined that having to enter their notes on a keyboard distracted from the ability to interact with patients and that converting to a digital system exposed their practices to significant financial risks.¹⁰⁸

A survey by the authors found little support for EMRs among physicians. For example, Ian Crabb, M.D., an orthopedic surgeon in Nebraska, believes that the "electronically generated clinical notes make it almost impossible to trace the thought process of the physician. In conducting medical-legal reviews, the computer generated notes are virtually unreadable."¹⁰⁹ He further noted that, "What one chooses to say, and what one leaves out are important parts of a note and in a dense computer generated entry, all of the information is presented as if it has equal weight which it does not."¹¹⁰ Nathan Schwartz, M.D., an anesthesiology/pain management physician in Philadelphia, opined that, "electronic medical records represent a paradigm shift both in the collection of big data and enhancing outcomes while it

102. *Id.*

103. For an example of a hospital's downtime policy, see *ICIS Downtime Policy*, NYU LANGONE MED. CTR. (Sept. 12, 2008), http://icis.med.nyu.edu/files/icis/icis/u4/ICIS_Downtime_Policy.pdf.

104. See Ying Want et al., *Measuring the Effects of Computer Downtime on Hospital Pathology Processes*, 59 J. OF BIOMEDICAL INFORMATICS 308, 309 (2016).

105. See Mitchell, *supra* note 98.

106. Edmund Billings, *EHR Design and Dissatisfaction: It's A Matter of Time*, HEALTHCARE IT NEWS (Sept. 22, 2014, 2:22 PM), <http://www.healthcareitnews.com/blog/ehr-design-dissatisfaction-its-matter-time>.

107. Dike Drummond, *9 Reasons Physicians Hate EMR – The 2013 RAND Study*, THE HAPPY MD, <https://www.thehappymd.com/Blog/Bid/351428/9-Reasons-Physicians-Hate-EMR-The-2013-RAND-Study> (last visited June 4, 2017).

108. *Id.*

109. E-mail from Ian Crabb, M.D., Orthopedic Surgeon, Columbus, NE, to Samuel Hodge and Joanne Callahan (Nov. 19, 2016) (on file with authors).

110. *Id.*

represents the last breath of old, traditional bedside medicine.”¹¹¹ He went on to say, that while he loves the capture of analytical modeling, “As an older physician, I terribly miss the benefit of looking at the patient’s eyes instead of the computer.”¹¹² Leonard Bruno, M.D., a neurosurgeon in Philadelphia, replied, “They are impossible to interpret quickly and efficiently for diagnosis, treatment, and outcome.” He then went on to say, “They are painfully redundant, lessening accuracy. There is also valuable time and interaction lost with the patient in order to complete the required records on a keyboard.”¹¹³ Jeffrey Bomze, M.D., a pediatrician in a suburb of Philadelphia, admits that “electronic medical records offer the advantage of a typed document that is easy to read,” but he has to “spend about three extra hours a day acting as a data entry clerk completing the patient’s chart.”¹¹⁴ He also believes the system creates problems with the doctor/patient relationship and cited to a study in support of his opinion that found statistically that “the doctor only spends about 37% of the time with the patient and 50% of the time typing the chart notes.”¹¹⁵ On the other hand, Howard Roth, M.D., a radiologist in New Jersey, wondered how the implementation of EMRs will be affected if Obamacare is repealed.¹¹⁶ He did state that “the electronic medical record is extremely helpful for getting clinical information that is rarely provided and helpful for image interpretation.”¹¹⁷

The lawyers surveyed for this article were equally unimpressed by this new technology. Clifford Rieders, Esquire, the past President of the Pennsylvania Association for Justice, founding member of Pennsylvania’s Patient Safety Authority, and Chair of the Pennsylvania Bar Association’s Health Care Law Committee, stated that “both plaintiff and defense attorneys can agree on one thing, electronic medical records are a disaster.”¹¹⁸ They repeat the same information over and over, the drops down menus are not complete and physicians are frustrated by this technology.”¹¹⁹ Jackie Trimm, Esquire, a medical malpractice defense and healthcare attorney noted that she has “mixed feelings about them.”¹²⁰ Trimm explained:

From a litigation perspective, a major downside is that we seem to lose the visible thought process that comes with handwritten or dictated notes. I also think electronic box-checking lends itself to errors that can be hard to explain in a lawsuit. There are advantages, though. The time stamp and audit trail functions can be useful,

111. E-mail from Nathan Schwartz, M.D., Anesthesiology/ Pain Management Physician, Philadelphia, PA, to Samuel Hodge and Joanne Callahan (Nov. 19, 2016) (on file with authors).

112. *Id.*

113. E-mail from Dr. Leonard Bruno, M.D., Neurosurgeon, Philadelphia, PA (Nov. 20, 2016) (on file with authors).

114. Telephone Interview with Dr. Jeffrey Bomze, M.D., Pediatrician (Nov. 20, 2016).

115. *Id.*; Christine Sinsky, MD, et. al, *Allocation of Physician Time in Ambulatory Practice: Study in 4 Specialties*, ANNALS OF INTERNAL MED. (Dec. 6, 2016) (originally published Sept. 6, 2016) <http://annals.org/aim/article/2546704/allocation-physician-time-ambulatory-practice-time-motion-study-4-specialties>.

116. E-mail from Dr. Howard Roth, M.D., Radiologist, Camden, NJ (Nov. 19, 2016) (on file with authors).

117. *Id.*

118. Telephone Interview with Clifford Rieders, Esquire (Nov. 19, 2016).

119. *Id.*

120. E-mail from Jackie Trimm, Esquire, (Nov. 19, 2016) (on file with authors).

(if not always helpful), and the prompts used by some systems serve as good reminders for documenting things that might otherwise go unrecorded.”¹²¹

VIII. LEGAL ISSUES INVOLVING ELECTRONIC MEDICAL RECORDS

A. Admissibility of Electronic Medical Records

Federal Rule of Evidence (F.R.E.) 803(6) deals with the admissibility of electronic medical records and makes them an exception to the hearsay rule if the record is created in the regular course of business and the healthcare provider makes the entry as part of its regular practice.¹²² The record must also be authenticated by the records custodian or another qualified witness before it can be admitted into evidence.¹²³ F.R.E. 803(4) further allows statements made for the diagnosis or treatment into evidence if the declaration is reasonably related to the patient’s treatment and depicts the medical history, symptoms, or their cause.¹²⁴

The admissibility of EMR in state courts requires a review of each jurisdiction’s rules of evidence but some states have passed legislation on the issue. For example, Indiana has enacted the Hospital Medical Record Electronic Data or Electronic Image Processing Statute.¹²⁵ This law provides that entries made in hospital medical records may be authenticated by showing that:

- (1) the electronic data processing equipment is standard equipment in the hospital;
- (2) the entries were made in the regular course of business at or reasonably near to the happening of the event or order, opinion, or other information recorded;
- (3) the security of the entries from unauthorized access can be demonstrated through the use of audit trails; and
- (4) records of all original entries and subsequent access to the information are maintained.¹²⁶

Based upon this Rule, the recording of an electronic hospital record is considered an original written record and printouts will be treated as an original record for evidentiary purposes. Nevertheless, there are two things which may influence the admissibility of the chart: whether the note is medically relevant to the treatment and whether the entry is one of fact or opinion.¹²⁷ Likewise, North Dakota provides that an electronic medical record, whether in written or printed form, shall be considered an original record for the purpose of its admissibility into evidence.¹²⁸ Several states, however, do not specifically address the issue but have passed laws

121. *Id.*

122. Fed. R. Evid. 803(6).

123. Jeffrey Masor, *supra* note 49, at 5.

124. Fed. R. Evid. 803(4).

125. IND. CODE § 34-43-1-2 (2017).

126. *Id.*

127. TERRANCE SMITH & ADRIAN SMITH, *Hospital Records*, 6 Ind. Prac. Trial Handbook for Indiana Lawyers § 28:6, August 2016 Update.

128. N.D. CENT. CODE § 31-08-01.3 (2017).

requiring electronic medical records to be treated the same as a paper version. North Carolina permits the creation of an electronic version of a paper chart, but it must be kept in a legible and retrievable format and the law allows for their authorization by a written or digital signature in lieu of a signature in ink.¹²⁹ Furthermore, the legal rights and responsibilities concerning records created or maintained in an electronic format shall be the same as those medical records embodied in paper or other media.¹³⁰ Louisiana's law applies to digital technology in general and notes that an electronically digitized copy, when satisfactorily identified, shall be considered the same as an original, and shall be admissible in evidence.¹³¹

Alaska merely notes that a health care provider may use digital medical records that protect the chart from access by unauthorized persons and a paper copy need not be kept.¹³² Likewise, Utah indicates that its medical records may be maintained in a digital format.¹³³

B. Audit Trail

A digitally created document is easy to change and leaves no telltale sign that the record has been altered. Just look at the practice of law. Forms can be duplicated and reused in a different case and documents can be corrected multiple times with no evidence of the modification. Does this ability to alter the document jeopardize the integrity of the electronic medical record? Can a healthcare provider erase or change an entry to eliminate any evidence of a mistake?

This problem was considered by HIPAA, which requires that every healthcare provider who uses a computerized medical record have a system in place that creates a written record detailing all electronic entries as well as every access to the digital chart.¹³⁴ This ensures that the EMR cannot be altered without detection at a time subsequent to the entry.¹³⁵ One limitation, however, is that the log cannot show what was recorded in the chart before it was changed.¹³⁶ This record is known as an "audit trail" and it is a chronological listing that protects against the modification of an electronic record without leaving behind a sign of the alteration.¹³⁷ As noted in *Fundamentals of Law for Health Informatics and Information Management*, an audit

129. N.C. GEN. STAT. § 90-412 (2017).

130. N.C. GEN. STAT. § 90-412(C) (2017).

131. LA. STAT. § 44: 39 (2017).

132. ALASKA STAT. § 18.23.100 (2017).

133. UTAH CODE § 58-67-803 (2017).

134. Mark Bower, et. al., *Another Trip Down the Audit Trail*, Professional Negligence Newsletter, AM. ASS'N FOR JUSTICE, Fall 2011, <https://www.justice.org/sections/newsletters/articles/another-trip-down-audit-trail> (last visited November 14, 2016).

135. *Keeping Them Honest – The Audit Trail as an Accountability Tool*, TALASKA LAW FIRM, <http://www.talaskalawfirm.com/articles/keeping-them-honest-the-audit-trail-as-an-accountability-tool/> (last visited November 14, 2016); See 45 C.F.R. § 164.3165. HIPPA further mandates that the audit trail must be kept by the health care provider for at least six years. *Id.*

136. Christine Norton & Mike D'Amico, *The Electronic Medical Record, Audit Logs and Revision History*, D'AMICO AND PETTINICCHI, LLC., <https://www.damicopettinicchi.com/scholarly-articles/the-electronic-medical-record-audit-logs-and-revision-history.html> (last visited November 14, 2016).

137. *Id.*

trail¹³⁸ is a “record that shows who has accessed a computer system, when it was accessed, and what operations were performed.”¹³⁹ To provide an example of an audit trail, let us look at a pathologist who inspects a specimen and makes a diagnosis that is posted in the electronic medical record. The audit trail will show the date and time the results were posted as well as the name and time of any person who subsequently logged into the record to review report.¹⁴⁰ The audit trail cannot be deleted, so all transactions dealing with access to the chart will be permanently listed in the log.¹⁴¹ Therefore, counsel should consider requesting a copy of the audit trail if the authenticity of an entry is in question.

Not everyone, however, believes that the audit trail provides the necessary protection to guarantee the accuracy of the record. Critics assert that the correctness of an audit trail may be undermined by the ability of the healthcare provider to turn off the audit function, modify the software, or make alterations either deliberately or as the result of an error.¹⁴² It is, therefore, important to use the discovery process to determine whether the audit trail is a complete and accurate depiction of a patient’s medical chart.¹⁴³

Several cases discuss electronic medical records and audit trails. *Hall v. Flannery* involves a discovery dispute in a medical malpractice claim related to the software that the defendant used to create an electronic medical chart.¹⁴⁴ The plaintiff requested operating manuals and information dealing with the alleged alteration on the patient’s chart, claiming that the records were changed. The defense objected, asserting that the materials were peer review and work product.¹⁴⁵ The court disagreed with the defendant and held that the data was not generated by a peer review committee nor did it contain any discussion by such committee.¹⁴⁶ The audit trail does not contain interviews or minutes of any hospital meeting.¹⁴⁷ Instead, it is part of the plaintiff’s weekly chart that is generated in the ordinary course of business and not for a peer review team.¹⁴⁸ The court also found that the audit chart was not

138. An audit trail is defined by statute in N.H. REV. STAT. § 332-I:1 as “a chronological record identifying specific persons who have accessed an electronic medical record, the date and time the record was accessed, and, if such information is available, the area of the record that was accessed.”

139. MELANIE BRODNIK, ET AL., FUNDAMENTALS OF LAW FOR HEALTH INFORMATICS AND INFORMATION MANAGEMENT 215 (Am. Health Info. Mgmt. Ass’n 2009).; Sandra Nunn, *Managing Audit Trails*, AM. HEALTH INFO. MGMT. ASS’N, <http://library.ahima.org/doc?oid=93266#.WCoK4hEjpyU> (last visited November 14, 2016).

140. Robert Kreisman, *Making Sense of the Electronic Medical Records with the Audit Trail*, KREISMAN LAW OFFICES, <http://www.robertkreisman.com/medical-malpractice-lawyer/2013/10/making-sense-electronic-medical-records-audit-trail.html> (last visited November 14, 2016).

141. See generally *Gilbert v. Highland Hospital*, 31 N.Y.S.3d 397 (S.Ct. N.Y. 2016).

142. Patrick Thronson, *Gold Mine or Fool’s Gold? Assessing Audit Trail Integrity*, Professional Negligence Newsletter, AM. ASS’N FOR JUSTICE, (2015), <https://www.justice.org/sections/newsletters/articles/gold-mine-or-fools-gold-assessing-audit-trail-integrity> (last visited November 14, 2016).

143. *Id.*

144. See generally *Hall v. Flannery*, No. 313-cv-914-SMY-DGW, 2015 WL 2008345 (S.D. Ill. May 1, 2015).

145. *Id.* at *1–*2.

146. *Id.* at *3.

147. *Id.*

148. *Id.*

prepared in anticipation of litigation.¹⁴⁹ It is merely part of the electronic medical record and is automatically created by the software.¹⁵⁰

The court in *Osborne v. Billings Clinic* reached a similar conclusion.¹⁵¹ The defendant objected to the production of the audit trail claiming that it was data used exclusively for quality assessment and not discoverable “healthcare information.”¹⁵² While the audit trail may be “data,” the court ruled that it relates to the plaintiff’s hospital care and treatment, so the log is discoverable.¹⁵³

Picco v. Glenn demonstrates the all-encompassing nature of an audit trail.¹⁵⁴ The facts show that the parties in a malpractice action entered into a settlement agreement by which the hospital agreed to produce the audit trail for the plaintiff’s medical records.¹⁵⁵ The defendant then asserted that it had complied with the agreement by producing the audit view, the transcription changes, and the electronic medical records.¹⁵⁶ The court disagreed and noted that it is not up to the plaintiff to have to assemble the audit trail by looking through the records.¹⁵⁷ The defendant must produce the information from the medium in which it is stored, and they have a duty to translate that information “into a reasonably usable form.”¹⁵⁸

A similar result was reached in *Peck v. Riverside Hospital, Inc.*, where the defendant filed a motion to quash a subpoena for the production of the plaintiff’s medical records and audit trail on the basis of privilege.¹⁵⁹ The court ordered the hospital to provide an IT copy of the patient’s electronic medical records in a format that supports, corresponds to, and provides an exact and understandable document for each transaction in the audit trail.¹⁶⁰

Moan v. Massachusetts General Hospital follows the liberal trend of the courts in compelling the production of as much of the chart as possible.¹⁶¹ The plaintiff sought discovery of the medical records and information dealing with a failed cardiac catheterization that resulted in the amputation of the patient’s leg.¹⁶² The court ordered the defendant to produce the audit trail and other information that identified each individual who accessed the plaintiff’s records, when they were accessed, and all alterations made to the electronic record.¹⁶³

149. *Id.* at *4.

150. *Hall*, 2015 WL 2008345 at *4. A similar result was reached in *Gilbert*, 31 N.Y.S.3d 397, where the court noted that an audit trail will show those who accessed the chart. Therefore, it is a relevant discovery record which is material and necessary to the lawsuit.

151. *See generally Osborne v. Billings Clinic*, No. CV 14-126-BLG-SPW, 2015 WL 1412626 (D. Ct. Mont. Mar. 25, 2015).

152. *Id.* at *3.

153. *Id.*

154. *See generally Picco v. Glenn*, No. 12-cv-02858-RM-MJW, 2015 WL 2128486 (D. Ct. Colo. May 5, 2015).

155. *Id.* at *1.

156. *Id.* at *1–*2.

157. *Id.* at *9.

158. *Id.* at *8.

159. *Peck v. Riverside Hosp., Inc.*, No. CL1400873V-04, 2014 WL 12543927 (Cir. Ct. Va. Oct. 7, 2014).

160. *Id.* at *1.

161. *See generally Moan v. Mass. Gen. Hosp.*, No. 15-CV-1122-H, 2016 WL 1294944 (Super. Ct. Mass. Mar. 31, 2016).

162. *Id.* at *1.

163. *Id.*

There is one other piece of information that should not be overlooked in discovery: metadata. If an issue exists as to the accuracy of the materials in the record, metadata is the embedded “data about data” that records every keystroke on the computer.¹⁶⁴ This information cannot be deleted and will provide vital information about “who, what, when & where” for everything.¹⁶⁵ On a practical basis, metadata constitutes “the modern equivalent of an audit trail in connection with electronically available records.”¹⁶⁶

C. Cost of Electronic Medical Records

A number of jurisdictions regulate what healthcare providers can charge to copy their medical records. For instance, Pennsylvania has enacted the Medical Records Act (MRA) which provides that a doctor or hospital may not charge an amount that exceeds the actual and reasonable expense of reproducing the medical record.¹⁶⁷ The law then establishes what the costs are for the retrieval of the records and the cost per page for copying the document.¹⁶⁸

In *Liss and Marion, P.C. v. Recordex Acquisition Corp.*, the issue before the court was whether a copy service *could* charge a fee in excess of that allowed by the Medical Records Act for a copy of an electronic medical record.¹⁶⁹ The Supreme Court of Pennsylvania noted that the MRA places a cap on the price a medical provider or their “designated agents” may charge for copying medical records.¹⁷⁰

The defendant asserted that they were not limited to the per page rate because electronic records could be billed at any “reasonable” rate.¹⁷¹ They claimed that the Medical Records Act intended the phrase “for paper copies” to mean copies “from paper records only” and not another format.¹⁷² The court ruled that since the defendant made paper copies from the electronic records and not from microfilm, the standard rate “for paper copies,” applied.¹⁷³ It was, therefore, improper for the copy service to charge a higher rate.¹⁷⁴

164. *Risk RX*, UNIV. OF FLA., <http://www.marshalldennehey.com/media/pdf-articles/O%20226%20by%20M.%20Keris%20%283.11%29.pdf> (last visited November 212, 2016).

165. *Id.*

166. Letter from Cliff Rieders, Esquire, to Samuel D. Hodge, Jr. (Nov. 22, 2016) (on file with the author).

167. 42 PA. CONS. STAT. §§ 6151–6160 (2017).

168. *Id.*

169. *See generally Liss & Marion, P.C. v. Recordex Acquisition Corp.*, 983 A.2d 652 (Pa. 2012).

170. *Id.* at 658. That charge is “\$15 for the searching of and retrieval of the records, \$1 per page *for paper copies* for the first 20 pages, 75¢ per page for pages 21 through 60 and 25¢ per page for pages 61 and thereafter [(rate D)]; \$1.50 per page *for copies from microfilm* [(rate M)]; plus the actual cost of postage, shipping or delivery.”

171. *Id.* at 662.

172. *Id.*

173. *Id.* at 663.

174. *Id.* For another case involving the cost of copying electronic medical records, *see generally Trejo v. Goyal*, No. 003822012, 2013 WL 6150173 (S. Ct. N.Y. July 30, 2013).

IX. CONCLUSION

The advent of electronic medical records has provided many benefits to patients and clinicians alike, but it also has created new challenges for litigators. Many physicians and attorneys who have worked with this new digital system do not like it for a number of reasons. HIPAA has also created the need for more specific requests and patient consents in order to obtain all of the relevant medical records. This can sometimes be a daunting task for lawyers because of the over abundance of caution exercised by some healthcare providers before they will release a patient's records.

Demands for discovery must include the many details specific to the EMR, such as inquiries regarding computer downtime during the plaintiff's treatment, audit trails, decision support, alert data, and information from other applicable software applications that were in use. Counsel should also request all policies and procedures related to electronic documentation.

In addition, it is important to discover at what stage of design and implementation the facility was in at the time of the request. Are all units of the facility documenting on the same program or are some divisions such as the emergency room still recording their observations on paper? This uncertainty mandates that counsel specifically request not only the electronic records, but any paper documents that were generated.

The bottom line is that electronic medical records are here to stay, so counsel must become familiar with the nuances of the various digital systems, adjust their discovery requests to guarantee that the full chart is produced, and be prepared to spend more time trying to decipher the medical information presented.