Medicina Clínica 162 (2024) e9–e14

MEDICINA CLINICA

www.elsevier.es/medicinaclinica

Review

Medicolegal aspects of documentation and the electronic health record

Rade B. Vukmir

Drexel University, United States

ARTICLE INFO

Article history:
Received 19 December 2023
Accepted 25 January 2024
Available online 5 March 2024

Keywords:
Documentation
Electronic health record
Medicolegal
Risk management
Medical malpractice

ABSTRACT

Introduction: The busiest times in the hospital are often met by the greatest challenges in complete and comprehensive documentation of the patient care event. The near complete transition to the Electronic Health Record (EHR) was to be the solution to a host of provider documentation concerns. It is clear the EHR provides reliability, reproducibility, integration, evidence based decision-making, multidisciplinary contribution across the entire healthcare spectrum.
Methods: The use of a consensus of expert opinion supplemented by focused literature review allows a balanced evidence based presentation of data.
Results: Documentation is not a perfect tool however, as issues with efficiency, reliability, use of shortcut maneuvers and potential for increased medico-legal risk have been raised. The solution is attention to documentation detail, and creation of systems that facilitate excellence. The focus on electronic documentation systems should include continual evaluation, ongoing improvement, involvement of a multidisciplinary patient care team and vendor receptiveness to in EHR development and operations.
Conclusion: The most effective use of the EHR as a risk management tool requires documentation knowledge, targeted analysis, product improvement and co-development of clinical-commercial resource.

Aspectos medicolegales de la documentación y la historia clínica electrónica

Palabras clave:
Documentación
Historia Clínica Electrónica
Medicolegal
Gestión de Riesgos
Negligencia Médica

RESUMEN

Introducción: Los momentos de mayor actividad en el hospital a menudo se enfrentan con los mayores desafíos en cuanto a la documentación completa y exhaustiva del evento de atención al paciente. La transición casi completa a la historia clínica electrónica (HCE) iba a ser la solución a una serie de preocupaciones sobre la documentación de los proveedores. Está claro que la HCE proporciona confiabilidad, reproducibilidad, integración, toma de decisiones basada en la evidencia y contribución multidisciplinaria en todo el espectro de la atención médica.
Métodos: El uso de un consenso de opinión de expertos complementado con una revisión de la literatura enfocada permite una presentación equilibrada de los datos basada en la evidencia.
Resultados: La documentación no es una herramienta perfecta, ya que se han planteado problemas de eficiencia, confiabilidad, uso de maniobras abreviadas y la posibilidad de un mayor riesgo medicolegal. La solución es la atención al detalle de la documentación y la creación de sistemas que faciliten la excelencia. El enfoque en los sistemas de documentación electrónica debe incluir evaluación continua, mejora continua, participación de un equipo multidisciplinario de atención al paciente y receptividad de los proveedores en el desarrollo y las operaciones de la HCE.
Conclusión: El uso más eficaz de la HCE como herramienta de gestión de riesgos requiere conocimiento de la documentación, análisis específicos, mejora del producto y desarrollo conjunto de recursos clínico-comerciales.

E-mail address: rbvmd@comcast.net

https://doi.org/10.1016/j.medcli.2024.01.006

Introduction

It has been suggested that the advent of the electronic health record (EHR) provided significant improvement in provider efficiency, patient care quality and medical-legal risk profile. As we have developed this invaluable tool in emergency medicine, it is clear that continual monitoring, intervention and improvement is required to truly achieve these meritable goals.

There was a predictable increase in EHR related medical malpractice over time as implementation has become near universal. This assessment is based on the characteristic processing profile of adult medical malpractice claims of between two to seven years from filing to resolution.[1]

The incidence of EHR specifically related claims has undergone a four-fold increase from 0.35% (7 claims) to 1.39% (22.5 claims) annually from a cohort of 216 closed claim cases reported from 2010 to 2018 by The Doctors Company.[2] Specialty analysis finds that the highest incidence of EHR and medical malpractice claims occurs in internal medicine and family medicine (8%), radiology and cardiology (6%) and least common in general surgery, anesthesiology and emergency medicine (3%).

Further analysis of this data finds both systemic and individual etiology with potential responsibility for error (Table 1). This finding clearly dictates the contribution of both system and individual contributors to the quality improvement and update process for the EHR.

An additional group of 248 claims from 2012 to 2013 were analyzed identifying <1% of claims involved the health IT system with the majority-59% (146) of claims occurring in the ambulatory care setting.[3] Focus on the etiology of claims finds that most common cause was medication error (31%), treatment complications (31%) and diagnostic errors (28%), where the vast majority-80% of cases were significant-involving moderate to severe harm.

The Emergency Care Research Institute (ECRI) Institute published the Top Ten Patient Safety concerns in 2019, which included inaccurate and missing EHR information that may lead to serious harm or patient death.[4] Early in the implementation process it was assumed the data integrity of the EHR was protected from error, but cautions are still required for electronic records data validation, as they were with manual entry approaches.

However, it is important to recognize that although the incidence of EHR related medical malpractice cases is increasing, it constitutes only a small portion of overall claims. As well, the actual number of EHR claims with a primary documentation failure is even lower, and that the cases encountered predominantly involve an EHR contributing effect.

Table 1
EHR association with medical malpractice claims.

System
1. Design information fragmentation
2. Lack of provider access during system failure
3. Failure of electronic data routing
4. Insufficient area for documentation
5. Failure of alarms, alerts or decision support tools
6. Lack of integration of hospital EHR systems
7. EHR training/education deficit
Individual
6. Hybrid records/EHR conversion issues
7. Pre-populating template/copy and paste record error
8. Incorrect user EHR documentation
9. User data incorporation error
10. System protection circumvention
11. User alert fatigue

Reference: [2].

Medicolegal high risk areas

Documentation

The vast majority of medical malpractice cases do involve a documentation component, at least in part according to Robert Sherwin, MD (personal communication, December 26, 2021). There are commonly recognized themes that include:

1) Not documenting discussions with specialists in a timely manner with the appropriate level of detail.
2) Not documenting what was discussed by physicians at sign-out.
3) Templated physical exam notes that do not properly document either a neurologic or vascular perfusion exam in detail appropriate for stroke or ischemic extremity cases.

Proper template

A crucial issue with EHR documentation is attention to template detail as noted by Geetika Gupta, MD (personal communication, December 27, 2022). She stressed that a crucial potential error is to utilize an adult template in a pediatric patient. Likewise, attesting to completion of portions of the physical exam in the template, that were not actually performed can be problematic from the risk perspective.

Documentation by exception

The concept of "documentation by exception", has been incorporated into the template based charting systems in some respect, and found associated with medical malpractice concerns as cited by Dan Mayer, MD (personal communication, December 28, 2021).

The Charting By Exception (CBE) documentation strategy has it's basis in nursing documentation methodology.[5] This strategy only requires specific documentation when the patient's specific condition is abnormal, or a variant from the patient baseline. This documentation strategy was then adopted in the physician documented medical record with the advent of the template based approach, which then transitioned to EHR.

This documentation strategy is potentially prone to error as pertinent positive findings may be overshadowed by background templated negative findings.

Consultants and discharge instructions

A crucial aspect of proper emergency medicine documentation relates to the detail required in two high risk areas-consultant encounters and discharge instructions, according to Mark Olivier, MD (personal communication, January 3, 2022). He emphasizes these high risk areas:

1) Incomplete documentation of the specifics of the discussion with a consultant or admitting physician. Later during litigation, the consultant claims the ED physician "never told them" a vital piece of information.
2) Incomplete documentation of discharge instructions (nonspecific abdominal pain, closed head injury, etc.).

The majority of the ED consultation responsibility malpractice cases turn on the presence of an established "physician patient relationship" and a defined "affirmative act".[6] This transition of care requires the consultant definitely accept responsibility for subsequent patient care treatment event. This may occur by accepting

Table 2
Categories of metadata.

Category	
1. Application	Classic ESI Imbedded in record Transfers with copy
2. Document	Imbedded in file Viewed in properties Creator, revision dates
3. File system	Tracking demographics External to record
4. Embedded	Track changes or comments Extraction variable

Reference: [8].

responsibility for inpatient consult, outpatient follow-up or hospital admission. The ED physician should clearly document the care transition, as well as the specifics of the patient condition discussed with the consultant.

Augmenting the individualized patient information that can be documented in crucial areas of the EHR will help to mitigate the medical malpractice risk. Providers that have utilized this strategy of documenting one memorable thing about every patient encounter can often recall care details years later.

Metadata

A particularly complex aspect of the EHR and related medical malpractice concerns is the use of health information metadata, as emphasized by William Sullivan, DO, JD (personal communication, January 5, 2022). This metadata, mandated by the federal government, has been associated with legal issues for some medical providers – specifically in the areas of Health Insurance Portability and Accountability Act (HIPAA) compliance and medical record documentation integrity.

The simplest description of metadata is "data about data" consisting of both terms and attributes.[7] While the more precise version describes "descriptive data that characterize other data to create a clearer understanding of their meaning and to achieve a greater reliability and quality of information."[8]

Categories of metadata as applicable to Electronically Stored Information (ESI) include application, document, file system and embedded metadata[8] (Table 2). The provider should recognize that there are numerous copies and checks in any EHR system. Any documentation update or modification performed by the provider after the healthcare encounter will be carefully scrutinized for potential breaches of integrity.

Scribes

Another area of potential medicolegal risk in emergency medicine practice is the increasing use of scribes to assist with documentation in the ED, as suggested by Pooneh Glascock, MD (personal communication, January 7, 2022). The concerns may manifest as the physician being held accountable for erroneous documentation performed by the scribe, or the use of the scribe as a potential witness challenging the physician's documentation.

Although, there can be a clear efficiency benefit to scribe use, there have been suggested multiple potential legal concerns, such as documentation errors, medical term confusion, medication documentation errors and documentation inconsistency.[9]

Documentation shortcuts

Another area of EHR documentation concern includes use of "cut and paste" terminology, template accuracy, smart phrases, dot phrases and data importation. These programs were widely endorsed as documentation efficiency tools, where pre-written text is inserted in the patient care document through an established shortcut mechanism.

However, it soon became apparent that the use of repetitive standardized documentation language raises the concerns about validity of that care record. It is crucial that these shortcuts be individualized to the specific patient to ensure documentation integrity.

Analysis of EHR related medical professional liability (MPL) claims from 2012 by the Medical Professional Liability Association (MPLA) found that over half (53%) of the respondents had encountered EHR related malpractice claims.[10] Further inspection of etiology found almost three quarters-71% of cases were related to "cut and paste" concerns, followed by failure to review available data and finally breach of systems in 24%.

Safety recommendations for "cut and paste" documentation strategies, such as delineating any repetitive documentation as such, eliminates any perceived benefit of the this approach.

Document disclosure

A more generalized documentation recommendation has been offered by Hugh Hill, MD, JD (personal communication, January 7, 2022). One should review their documentation with the expectation that "things will be taken out of context, blown up on a big white board in front of the jury and headlined in your local paper." A good risk management exercise is on a periodic basis review a deidentified patient care record with your group, specifically for documentation issues.

Legal documents

A commonly encountered duty of the emergency physician is the completion of legally required documents in the patient care event, according to Veronica Tucci, MD, JD (personal communication, January 7, 2022). The emergency physician is often required to complete against medical advice (AMA), involuntary commitment, motor vehicle driver safety, pediatric abuse referral, school physical and other forms that become part of the legal record as well.

In addition, there are mandatory reporting obligations for the defined patient presentations, with allegations of negligence if there is a failure of the required reporting.

Providers are often concerned over potential liability in an involuntary commitment procedure, alleging the form was signed based on incorrect collateral information gathered.[11] There is both statutory immunity and judicial precedent for a provider who makes a "reasonable, well intentioned" commitment decision. However, there is a bad faith provision establishing liability, if a form is signed, knowingly containing false information.

The provider who with good intent, documents the extrinsic evidence at hand in a logical, cohesive strategy almost universally prevails in challenges to legal document completion.

Template documentation

The benefits of template use in standardized electronic documentation are clear. However, as pointed out by Geoff Mitchell, MD, JD (personal communication, January 7, 2022) choice of the wrong documentation template can potentially focus the subsequent evaluation in the wrong direction.

As an example, choosing a gastrointestinal problem documentation template with it's subsequent history and physical focus, could cause one to potentially miss a neurological event. Likewise, the benefits of a narrative history, "the story" can be lost in a template document system increasing medicolegal risk.

Table 3
Medical malpractice correlates (CRICO 2020).

Failure	Indemnity (%)
Policy or protocol	63
Documentation	56
Patient assessment	47

Reference: [12].

The 2020 Controlled Risk Insurance Company (CRICO) Risk Management Foundation Strategies National CBS Report analyzed 37,000 medical professional liability claims to identify three areas associated with increased liability.[12] High risk areas include first, failure to have or follow a policy or protocol associated with a 63% indemnity rate. Second, absent or insufficient documentation is associated with a 56% incidence, with 5% of claims over $1M in indemnity. Lastly, patient assessment issues were associated with a 47% rate of case closure with indemnity (Table 3).

The goal of proper EHR documentation is to become familiar with the care template choices, algorithms and protocols so the benefits of prompts and decision-making can be realized.

Efficiency

Further he emphasized that, it is crucial to note that any documentation discussion must include consideration of the work effort required by the provider to properly document and substantiate the medical record.

A recent analysis of EHR use, clinical productivity and physician turnover found that in an office practice environment, physicians spent the majority (69%) – 5.5 (95% CI, 5.3–5.8 h) of the workday involved with the EHR for every 8 h of scheduled patient care time.[13] There was a subsequent complex correlation between physician turnover and inbox time, physician demand and order teamwork. Interestingly, there was a provider turnover cohort with minimal screen-time as well.

As well, a study of simulated ICU patients found that all physicians experienced fatigue at least once during the workday, while 80% experienced fatigue within the first 22 min of EHR usage.[14] The onset of fatigue was associated with the subsequent less efficient EHR use taking more time, more clicks and more screen transitions to accomplish the same tasks.

There are clear benefits to the EHR, however it is incumbent on the medical community to acknowledge the potential for adverse effects as well, and strive for continual operational improvement.

Documentation reconciliation

A critical point of concern can be a discrepancy between the nursing and physician documentation concerning the patient care encounter requiring reconciliation, as offered by John Moorhead, MD (personal communication, January 7, 2022).

As well, an unacknowledged component of the EMS report can also be viewed as a potential critical error from a medico-legal perspective.

"It is crucially important in any medical record to have internal consistency in all data and information. If something is found to be conflicting in the record, it should be reconciled by re-interviewing the patient or providers. If the inconsistency in documentation cannot be resolved, then this should be stated and stated to acknowledge attention to detail and interest in producing the most accurate medical record possible."[15]

Table 4
Clinical use of patient care timelines.

Benefit	Significance (95% CI)
Facilitate clinical audits	77.6–91.6
Improve time efficiency	77.7–91.6
Reduced clinical error	71.0–86.7
Improved patient safety	70.0–85.9

Reference: Gill et al. (2010).[16]

Timing and review

There are basic tenets of documentation offered by Michael Bressler, MD (personal communication, January 7, 2022) that include being attentive to documenting timing and sequence in the narrative of significant care events, while still recognizing it is typically tracked separately in the EHR.

Another crucial issue is to ensure proper review historical review, including EMS records, nursing notes, significant past history and consultant notes.

The use of timelines is pervasive with 75% of providers using and documenting a chronological timeline on a daily basis in their patient care efforts.[16] The potential benefits of timeline use were facilitation of clinical audits, increased time efficiency, reduced clinical error and improved patient safety. Timelines were helpful in supporting the clinician's cognitive process, by improving both the amount and quality of data presented. Physicians should be involved in the EHR design and improvement process to facilitate that end (Table 4).

It is crucial to recognize that most commercially available EHR's have a separate embedded timeline and the provider's narrative sequencing and chronology should coincide.

Documentation strategy

"Each and every medical malpractice case involves documentation to some extent", based on Robert Broida, MD's (personal communication, January 10, 2022) long term risk management experience. There has been a transition from the dictated narrative record, typically more easily understood, but without the guidance prompts. Currently, most emergency medicine EHR documentation systems utilize a disease based template system with risk management based prompts, cued pertinent positives and negatives, generating a more comprehensive, but less easily understood medical record.

Individualized record

As emphasized by most of our providers, the individualized patient care record is crucial to safe medical practice and to minimize medical malpractice risk. Recommendations include documenting a particular defining characteristic for each patient presentation, noting the contributions of family-both positive and negative and clearly recording consultant input.

Another critical area of focus is the reconciliation of conflicting documentation portions within the same record, that might be documented independently by nursing, NP/PA or the physician.

Clearly, it is the provider's responsibility to amicably generate the singular correct narrative regarding the healthcare visit.

As a suggestion to transform the template record into a more individualized patient care document, Stanley Materka, DO (personal communication, January 11, 2022) recommends utilizing an EHR HIPAA compliant, compatible speech recognition system to supplement narrative supplements to key portions of the record, such as the HPI, medical decision-making and consultant

Table 5
EHR documentation recommendations.

Proper care standards
Adequate training, certification and continuing education
Proper documentation, reconciliation and evidence based guidelines
Individualized versus machine generated documentation

recommendations. As well, more complex areas including "documentation conflicts, critical positive and negatives, conflicts and hostile patient encounters and interactions should have a narrative addition".

A discussed by others, "the clinician's failure to review, recognize and reconcile EMS, registration, triage and nursing reports" with the physician record can be quite problematic from a risk management perspective. Making this reconciliation even more difficult, these records are often not easily viewable within the EHR document, or are performed at different times. To accomplish this meritable goal, the EHR vendor or Information Technology department should be enlisted to facilitate record design to allow prosper record reconciliation.

However, it is crucial to recognize there is some variability in dictation accuracy based on both software, provider experience and proficiency. Dictation supported by speech recognition (SR) technology had an overall error rate of 7.4% or 7.4 errors per 100 words for a multi-specialty physician group.[17] Overall the vast majority (96.4%) of SR notes had at least one error, compared to 58.1% in medically transcribed (MT) notes. The discharge summary was associated with a higher error rate – 8.9 vs. 6.4% (95% CI, 1.0–3.6%; $p < 0.001$).

Therefore, speech recognition is a useful adjunct in EHR documentation, but document must be reviewed by the provider to ensure accuracy.

Limitations

As with any comprehensive subject review, there are limitations based on secondary data interpretation. However, the use of primary source data combined with targeted literature review attempts to ensure validity of conclusions.

An additional consideration is to acknowledge the differences in medico-legal standards based on practice geographic location, legal standards based on the venue of analysis. However, there are standardized basic patient care tenets, that ensure safety and risk management standards across all practice locations.

Recommendations

Proper care standards are maintained by ensuring adequate training, certification and continuing education. Specific areas of focus includes ensuring proper documentation, reconciliation of all multidisciplinary record entries and use of evidence based care guidelines (Table 5).

Areas of documentation concern include omission of crucial aspects of the patient's presentation, past medical history, pertinent allergies or medications, misinterpretation of laboratory results or other diagnostic testing, prescription errors-dosing or implementation, improper followup or referral and finally proper patient disposition-admission or discharge (Table 6).

The cornerstone of EHR documentation is to ensure the patient's communication is individualized and properly memorialized in the medical record, accurately reflecting the provider input rather than incorporating standardized machine language.

Certainly as all aspects of medicine are affected by the transition to Artificial Intelligence (AI) supported processes, it is crucial to maintain documentation integrity in the patient EHR.

Table 6
EHR documentation focus areas.

History of present illness
Past medical history
Pertinent allergy or medication
Laboratory, radiographic or diagnostic results
Prescription medication
Follow-up or referral
Patient disposition
Admission or discharge

Conclusion

The advent of the electronic health record has vastly improved the accuracy, reliability and integrity of the patient medical record. However, there are clear costs related to provider efficiency, job satisfaction and retention during they implementation transition period. However, it is clear that the EHR systems will continue to improve over time.

We all agree that careful documentation of an individualized patient record, adding narrative comment as appropriate, appropriate use of documentation shortcuts and reconciling historical discrepancies documented by different parts of the healthcare team are essential to optimum patient care, quality improvement and risk management strategies.

Ethical considerations

Informed consent not required.

Funding

None.

Conflict of interest

American College of Emergency Physicians, Past Medicolegal Committee Chair. However, this work is submitted by the author independently and is not representative of any view, perspective or policy of ACEP.

Acknowledgements

Contributors: ACEP Medicolegal Committee Members: Robert Sherwin MD, Geetika Gupta MD, Dan Mayer MD, Mark Olivier MD, William Sullivan DO, JD, Pooneh Glascock MD, Veronica Tucci MD, JD, Geoff Mitchell MD, JD, John Moorhead MD, Michael Bressler MD, Robert Broida MD, Stanley Materka DO, Hugh Hill MD, JD.

References

1. Vukmir R. Medical malpractice: managing the risk. Med Law. 2004;23:495–513. PMID: 15532944.
2. Malpractice claims involving electronic health records on the rise. https://www.thedoctors.com/articles/electronic-health-records-continue-to-lead-to-medical-malpractice-suits/; 2021 [accessed 28.12.21].
3. Graber ML, Siegal D, Riah H, Johnston D, Kenyon K. Electronic health record-related events in medical malpractice claims. J Patient Saf. 2019;15:77–85, http://dx.doi.org/10.1097/PTS.0000000000000240. PMID: 26558652.
4. ECRI. Diagnostic errors and test results top ECRI institute's patient safety list. https://www.ecri.org/press/diagnostic-errors-test-results-top-patient-safety-list [accessed 11.11.22].
5. Smith LS. How to chart by exception. Nursing. 2002;32:30. https://journals.LW.com/nursing/Citation/2002/09000/How_to_chart_by_exception.18.asps [accessed 20.11.22].
6. Aldalati A, Bellamkonda VR, Moore GP, Finch AS. Three cases of emergency department medical malpractice involving "consultations": how is liability legally determined? Ann Emerg Med. 2021;5:283–8, http://dx.doi.org/10.5811/cpcem.202.7.52680. PMID: 34437032; PMCID: PMC8373181.

7. American Health Information Management Association (AHIMA). Pocket glossary of health information management and technology. 5th ed. Chicago, IL: AHIMA Press; 2012. 221. ebook ISBN#9781584265948.
8. Categories of metadata. The Sedona conference. "The Sedona Conference glossary: E-discovery & digital information management (3rd ed.)"; 2010. https://thesedonaconference.org/publications [accessed 16.11.22].
9. Legal implications for ED if scribes used for documentation. http://www.reliasmedia.com/articles/142962-Legal-implications-for-Ed-if-scribes-used-for-documentation [accessed 26.10.22].
10. PIAA (2015, January), Part 1 of 2: Electronic health records and a summary analysis on the 2012, PIAA EHR Survey Research Notes, 1, 3 [accessed 20.11.22].
11. Marett CP, Mossman D. What is your liability for involuntary commitment based on faulty information. Curr Psychiatr. 2017;16:21–33. https://can.mdedge.com/files/s3fs-public/cp_01603021.pdf [accessed 12.11.22].
12. The power to predict: 2020 CRICO strategies National CBS report. https://rmf.harvard.edu/Malpractice-Data/Annual-Benchmark-Reports/The-Power-to-Predict [accessed 31.10.22].
13. Melnick ER, Fong A, Nath B. Analysis of electronic health record use and clinical productivity and their association with physician turnover. JAMA Netw Open. 2021;4:e2128790. https://JAMA network.com/journals/jamanetworkopen/full article/2766836
14. Khairat S, Coleman C, Ottmar P. Association of electronic health record use with physician fatigue and efficiency. JAMA Netw Open 2020;3:e207385. https://JAMA network.com/journals/jamanetworkopen/fullarticle/2784810.
15. Vukmir RB. Chapter 31: documentation. In: Legal issues in emergency medicine. Cambridge Press, Cambridge, UK; 2018. p. 82–3. ISBN 10: 1107499379. ISBN 9781107499379.
16. Gill J, Chearman T, Carey M, Nijjer S, Cross F. Presenting patient data in the electronic care record: the role of timelines. JRSM Short Rep. 2010;1:29. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2984360/pdf/SHORTS-10-012.pdf
17. Zhou L, Blackley MA, Kowalski L, Doun R, Acker WW, Landman AB, et al. Analysis of errors in dictated clinical documents assisted by speech recognition software and professional transcriptionists. JAMA Netw Open. 2018;1:e180530. https://JAMA network.com/journals/jamanetworkopen/articlepdf/2687052/zhou_2018_oi_180050.pdf