Electronic Medical Records: A Prescription for Increased Medical Malpractice Liability?

ABSTRACT

The cost and quality of healthcare is and will most likely continue to be one of the most important issues that the United States faces in the coming decade. Although no powerful antidote exists to cure this industry of all of its ailments, one potential suggestion to treat some of the symptoms is the introduction of electronic medical records (EMRs).

Members of the medical community, patients, and even politicians all agree that EMRs offer promising opportunities to improve the overall quality of healthcare. However, lost in the discussion of these opportunities, is a consideration of the potential side effects of EMRs.

One such side effect is that physicians and other healthcare providers may face additional liability exposure due to the introduction of EMRs. A medical malpractice claim closely tracks that of a typical negligence claim, holding the healthcare provider to a duty of care. This duty of care asks whether the provider offered medical care in the way a reasonable professional would.

The unchecked introduction of EMRs has the potential to raise the standard of care for healthcare providers in many ways. Additional liability for providers could come from a failure to perform all of the extra steps required by the consultation of EMRs, a failure to spot something in a medical history that may be incomprehensibly complex, or a simple failure to utilize this technology at all. A 2003 Oklahoma Supreme Court decision offers an early example of how these cases may play out.

To encourage the introduction of EMRs, both the federal and state governments should take steps to protect healthcare providers from these side effects. These steps may include the funding of a federal mandate for the nationwide adoption of EMRs or the introduction of statutory protections on a state-by-state basis to ensure that healthcare providers do not face unreasonable liability exposure.
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In the spring of 2010, the debate over the government’s role in the reform and regulation of healthcare reached a fever pitch.\(^1\) All sides predicted calamity and catastrophe if the government did not adopt their particular recommendations.\(^2\) In the midst of this debate, however, pundits and players from across the political spectrum seemed to agree on one thing—electronic medical records (EMRs) offer promising solutions to healthcare problems plaguing medical professionals, patients, and taxpayers alike.\(^3\) Research shows that medical errors currently result in as many as 98,000 patient deaths each year in the United States and cost providers and taxpayers as much as $29 billion per year in wasted spending.\(^4\) In 2000, the World Health Organization ranked the U.S. healthcare system 37\(^{th}\) out of 191 countries, specifically identifying the poor use of information technology as a reason for the low ranking.\(^5\) In addition, medical costs

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5. Id.
for both patients and providers continue to rise,\(^6\) medical malpractice claims continue to grow,\(^7\) and federal budget deficits continue to balloon.\(^8\) These developments have caused politicians, policymakers, physicians, patients, and taxpayers to consider adopting EMRs as a possible solution.\(^9\)

Both Republicans and Democrats have supported the shift to EMRs.\(^10\) Former Republican President George W. Bush championed them in his 2006 State of the Union Address, claiming that they could “help control costs and reduce dangerous medical errors.”\(^11\) Current Democratic President Barack Obama has also strongly advocated for the new technology, claiming that it would “cut waste, eliminate red tape, and reduce the need to repeat expensive medical tests.”\(^12\) Obama has stated that eliminating paper records will not only “save billions of dollars and [create] thousands of jobs—[they] will save lives by reducing the deadly but preventable medical errors that pervade our health care system.”\(^13\) As part of the Federal Stimulus Package enacted in 2009, President Obama allocated nearly $19 billion to accelerate the jump to computerized medical records in doctors’ offices.\(^14\)

Medical experts also agree that EMRs could play a vital role in lowering costs, reducing errors, and creating new research opportunities.\(^15\) Additionally, members of the medical community anticipate fewer paid medical malpractice claims as EMRs reduce the

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8. Pascal Fletcher, For Americans, Deficit Pain Is Felt Close to Home, REUTERS (Nov. 4, 2009, 6:15 PM), http://www.reuters.com/article/2009/11/04/us-usa-deficit-idUSTRE5A33K120091104 ("[O]rdinary Americans are counting the cost to their own lives of the recession, which has seen the U.S. budget deficit swell to a record $1.4 trillion in the 2009 fiscal year—the biggest shortfall since World War Two.").


10. Id.


13. Id.


frequency of medical errors. A recent study based at the Department of Ambulatory Care and Prevention of Harvard Medical School provided the first evidence that this hope will become a reality. The study was the first to empirically show a trend toward fewer paid malpractice claims for physicians who actively use EMR technology. Because of the potential reduction in malpractice liability and the ability to provide better care, most medical experts support policymakers’ efforts to encourage widespread adoption and integration of EMRs.

Finally, although many patients worry about the impact of new record-keeping systems on their privacy, in general the promise of these new systems presents real opportunities for streamlining and improving healthcare delivery. For example, the following fictional account offers a glimpse of future medical care:

A child wakes in the early morning, crying and wheezing, running a temperature of 101 degrees. The parents hold and rock her gently, wondering if they should venture out into the snowstorm to go to the emergency room at a hospital located thirty-five miles away. The mother logs onto her computer and goes to her daughter’s pediatrician’s website. At the website, she logs in with a special password that verifies her daughter as a patient and receives a prompt on her screen, “please list your child’s symptoms.” The mother carefully lists the symptoms and in a minute the physician herself appears on the screen. The physician is in her home and has a video camera mounted on her computer, which allows her to be viewed by her patients. The physician also has the baby’s entire medical record to date in front of her on the computer. The physician instructs the father to hold the child near their video camera, and the baby’s image and sounds are transmitted to the physician. The mother inserts a thermometer into the baby’s mouth and the reading is transmitted automatically to the physician’s computer and directly into the baby’s electronic medical record. After a minute, the physician tells the parents that the baby is fine and most likely needs sleep and fluid . . . and to make an appointment to see her.

While this account describes a scene unlikely to occur in the immediate future, it does provide a gripping example of the opportunities EMR systems could one day make available. The potential for these improvements in the delivery of medical diagnosis and treatment explains why many patients favor EMRs.

16. Id.
17. Id.
18. Id.
19. Id.
Amidst the discussion about the promising benefits offered by EMRs, few people have addressed head-on the potential legal complications that the introduction of EMRs could create. Some legal scholars have concluded that EMRs could pose privacy concerns, increase discovery costs during litigation, and create extensive regulatory headaches. While these problems are certainly significant, this Note will analyze how the adoption of EMRs could affect the standard of care in medical malpractice cases. Perversely, the implementation of EMRs could actually increase the number of medical malpractice suits by raising the standard of care for doctors and the healthcare facilities or hospitals where they practice. This Note will analyze these problems and propose solutions that policymakers and healthcare providers can implement to reduce liability and encourage wider adoption of these records.

Part I of this Note defines “electronic medical record” and outlines the basic elements of a medical malpractice claim. Part II examines an early court decision addressing this issue and provides pertinent hypothetical scenarios applying the elements established in Part I. Part III proposes solutions to preemptively address several issues that may be created by the introduction of EMRs.

I. ELECTRONIC MEDICAL RECORDS AND THE MALPRACTICE DOCTRINE

A. Electronic Medical Records: Definition and History

When a healthcare provider employs a traditional medical record system, the provider stores test results and notes from each patient consultation in a large manila folder known as a patient chart. These charts are created and then stored in each distinct healthcare location a patient visits such as an emergency room, a physician’s office, or a hospital floor. Inevitably, these records get misfiled, lost, or destroyed over time, resulting in preventable medical errors. The lack of adequate communication between healthcare providers also causes these types of errors, with each party in

24. Id.
25. Id.
26. See Id. at 84.
27. Gulick, supra note 21, at 359.
28. Id.
29. Id.
possession of patient information that could prove vital to a proper diagnosis. To help solve this problem, some providers have begun to shift toward EMR systems. Although some providers have done so on their own initiative, the federal government has taken steps to create a fully interoperable system, which will allow medical care providers all around the country to update and access patient information electronically.

Despite what seems to be a self-defining name, the term “electronic medical record” is presently a fluid concept, lacking a uniform or standard definition. However, at a minimum, an EMR system should have the following core functionalities:

- **Health Information and Data**: It should store and display test results, pertinent medical histories (including allergies, lists of other medications the patient is taking, medical and nursing diagnoses, patient demographics, and providers’ notes).
- **Results Management**: It should organize and provide medical test results electronically to enhance provider access to information and promote efficiency with an emphasis on easier detection of abnormalities.
- **Order Entry and Management**: It should allow for computerized medication orders and other care instructions to reduce lost orders, duplicate orders, mistakes caused by illegible handwriting, and delays in filling orders.
- **Decision Support**: It should allow for computer reminders and prompts that can improve preventive care, diagnosis, treatment, and disease management.
- **Electronic communication and connectivity**: It should enable online communication among the medical staff, patients, and other providers (such as laboratories or pharmacies), through e-mail, web messaging, telemmedicine, and home telemonitoring. Communication should be possible across providers in different geographic locations and medical organizations.

For the purposes of this Note, an “EMR system” is an electronic means of storing a patient’s health information or data, allows for computerized pharmaceutical order entry and management, and provides a level of communication and connectivity with other

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30. Id.
32. Hoffman & Podgurski, supra note 4, at 110.
34. Hoffman & Podgurski, supra note 4, at 108.
35. Id.
36. Id.
37. Id.
38. Id.
departments or providers that may have pertinent patient information.

Many providers—in both urban and rural settings—have begun to adopt these technologies with some success. For example, a large hospital in Pennsylvania began using electronically stored data in two of its affiliated practices to better manage the care of diabetic patients. The system allows physicians to scan the system and see which patients have not had a recent cholesterol test and then reminds those individuals to get tested. Implementing this small feature of what is a much larger EMR system, ninety-five to ninety-six percent of the diabetic patients in the two practices are up-to-date on blood tests, and ninety-one to ninety-five percent are up-to-date on cholesterol tests—both about thirty percentage points higher than similar rates in the community. Rural practices have also adopted EMR systems with success. For example, Dr. Brull, who runs a solo practice in Plainville, Kansas says, “I'll never go back to the old system. I can always look at the records by Internet, whether I am seeing patients at the nursing home or a clinic or the hospital, or even when I'm as far away as Florida.” While these two case studies provide only a small sample of how doctors are taking advantage of EMR systems, they demonstrate the benefits that medical experts believe can be obtained through the use of EMRs.

**B. Elements of a Medical Malpractice Claim**

Despite advances in medical technology and the development of new treatments and drugs, the number of medical malpractice claims has remained relatively stagnant for the last twenty years. According to the National Association of Insurance Commissioners, between 1995 and 2000, claims have only varied by 1-2% on average from year to year—for example, there were 90,212 claims in 1995 and 86,480 in 2000. While the elements of medical malpractice claims vary by state, they are generally rooted in negligence law, either

40. *Id.*
41. *Id.*
43. *Id.*
45. *Id.*
46. *Id.*
codified into statute or developed through state common law.\textsuperscript{47} A successful malpractice claim commonly requires the showing of four essential elements: (1) a professional duty to use the same level of skill and diligence that other members of the medical profession commonly exercise; (2) a breach of that duty; (3) a proximate causal connection between the negligent conduct and the resulting injury; and (4) an actual loss or damage resulting from the professional’s negligence.\textsuperscript{48}

In addition to the basic elements of a medical malpractice claim, many states have adopted additional statutory requirements designed to reduce the number of claims filed.\textsuperscript{49} For example, to bring a medical malpractice claim in Tennessee, a plaintiff must submit a certificate of good faith with the filing of the suit stating that the claim has been reviewed by an expert and found to have merit.\textsuperscript{50} The effect of such requirements, however, remains to be seen.\textsuperscript{51}

The first element of a medical malpractice claim, commonly known as the standard of care, turns on whether the physician or healthcare provider fulfilled its professional duty to use such skill, prudence, and diligence as other members of the profession commonly possess and exercise.\textsuperscript{52} This analysis, typically the most important in a malpractice claim, turns on “whether a defendant physician provided medical care that a reasonable physician should have provided, whether a defendant nurse acted as a reasonable nurse would have acted in furnishing treatment, [or] whether a defendant medical clinic or hospital provided healthcare services that a reasonable clinic or hospital would have supplied.”\textsuperscript{53}

Because the question is what a reasonable professional would do, the plaintiff often must rely on expert testimony to establish the provider’s standard of care. In some states, “[w]here the acts or omissions complained of are within the general knowledge and

\textsuperscript{47} 61 AM. JUR. 2D Physicians, Surgeons, and Other Healers § 287 (2009).

\textsuperscript{48} Id.; See also Tortorella v. Castro, 43 Cal. Rptr. 3d 853, 855 n.2 (Ct. App. 2006).


\textsuperscript{50} Id.


experience of lay persons, expert testimony is not necessary to establish a standard of care.” 54 In practice, however, medical malpractice plaintiffs almost always employ expert witnesses, and many states require expert testimony to establish the standard of care. 55

A claim that a physician or healthcare provider failed to adhere to the standard of care can result either from an affirmative act on the part of the provider, or from an omission. 56 For example, if a surgeon inadvertently makes an incision in the wrong place when a reasonable surgeon is expected to know where to make the incision, then that affirmative act violates the standard of care; while if the surgeon provides an improper diagnosis or treatment because he fails to consult the patient’s medical records, this omission violates the standard of care.

Again, individual states have developed different tests for determining the standard of care. In Tennessee, the standard of care is specified in TCA § 29-26-115(a)(1). This statute requires the plaintiff to prove that the defendant failed to meet “[t]he recognized standard of acceptable professional practice in the profession and the specialty thereof, if any, that the defendant practices in the community in which the defendant practices or in a similar community at the time the alleged injury or wrongful action occurred.” 57 This statute limits the standard of care analysis in Tennessee medical malpractice claims to the standard of care in the community in which the defendant practices, or a similar community. 58 What constitutes a “similar community” is often a point of contention in pre-trial motion practice, as each side cites community statistics to either bolster their argument or undermine their opponents. 59

To ensure that this “community” standard is enforced, Tennessee employs a ‘locality rule’ limiting expert testimony. This rule requires that:

56. Id.
58. See id.
59. See Robinson v. LeCorps, 83 S.W.3d 718, 721—23 (Tenn. 2002) (“The plain and ordinary language in § 115(a)(1) embraces the so-called ‘locality rule,’ which requires that the standard of professional care must be based upon the community in which the defendant practices or in a similar community.”) (internal quotation omitted).
[no person in a health care profession requiring licensure under the laws of this state shall be competent to testify in any court of law to establish the facts required to be established by subsection (a), unless the person was licensed to practice in the state or a contiguous bordering state a profession or specialty which would make the person’s expert testimony relevant to the issues in the case and had practiced this profession or specialty in one (1) of these states during the year preceding the date that the alleged injury... occurred.60]

This requirement plays an important role in the expert qualification process in Tennessee and demands consideration when trying a medical malpractice case.61 Thus, the fact that the standard of care is articulated differently state-to-state affects the impact that EMRs could have on the standard.

The second and third elements of a typical medical malpractice claim—breach of duty and causation—that the provider breached his or her duty to the patient and that the breach of this duty caused the injury—often run together in a typical claim.62 Because these issues are normally complex, they often require expert testimony subject to the same state restrictions mentioned above.63 Here, the expert attempts to establish whether the provider actually breached the standard of care in the defendant’s community or a similar community, and then argues that the provider’s breach of this standard caused the injury in question.64 In an affirmative breach case, such as a surgeon making an improper incision, the expert would opine that the provider failed to adhere to the standard of care, and that the failure caused the injury in question. Similarly, to prove an omission, such as the failure to properly review past medical records, the expert would testify that the provider’s failure to review these records violated the accepted standard of care and caused the improper diagnosis.

The final element of a medical malpractice claim is actual injury.65 This is often the easiest element to satisfy, and crucial in calculating damages.66 For example, while the presence of an injury may allow the case to proceed, the damages will be nominal unless the plaintiff can show how the injury has impaired his life—for instance, by

60. § 29-26-115(b).
61. See Robinson, 83 S.W.3d at 723.
62. 61 AM. JUR. 2D Physicians, Surgeons, and Other Healers § 287 (2010).
64. Id.
65. See 61 AM. JUR. 2D Physicians, Surgeons, and Other Healers § 287 (2010).
66. See Gunter v. Lab. Corp. of Am., 121 S.W.3d 636, 642 (Tenn. 2003) (discussing the injury element of a medical malpractice claim).
II. IMPACT ON THE STANDARD OF CARE

EMRs offer the potential for promising benefits; but, without appropriate preemptive action, their adoption could cause legal problems in the area of malpractice law for both physicians and healthcare facilities. While the hypothesized problems resulting from their adoption far exceed the scope of this Note, the introduction of such records could lead to an increase in medical malpractice claims. A heightening in the standard of care applicable to all practicing physicians—whether or not they work in facilities with EMR infrastructure—may spur additional medical malpractice claims. Likewise, healthcare facilities may face increased liability if they improperly use the new record-keeping systems.

The potential problems posed by the adoption of EMRs will primarily impact physicians and the standard of care to which they are held. As outlined above, one of the most important elements of any malpractice claim is proving that the physician who allegedly caused the injury failed to adhere to the standard of care. This standard is typically determined by considering whether the physician acted in the manner that a reasonable physician with the requisite training would have acted. In addition, in states like Tennessee, the medical malpractice statute specifically requires that the standard incorporate a “community” requirement that holds a physician to the standard of care in “the community in which the defendant practices or in a similar community.”

A. Standard of Care for Physicians and Facilities Utilizing These Systems

There are two primary ways that a heightened standard of care could develop for physicians and healthcare facilities that adopt EMRS. First, the adoption of EMRs may lead to an increase in medical malpractice claims by raising the standard of care for

68. Jones et al., supra note 23, at 83.
69. Id.
70. Elements of a Medical Malpractice Case, supra note 52.
71. Id.
72. TENN. CODE ANN. §29-26-115(b) (2010).
physicians practicing in facilities where these systems have been adopted.\textsuperscript{73} An early case study of how this issue might play out is the Oklahoma Supreme Court’s decision in \textit{Johnson v. Hillcrest Health Center, Inc.}\textsuperscript{74} In \textit{Johnson}, Henry Johnson sought treatment for chest pains at the Hillcrest Health Center emergency room and was admitted to the hospital under the care of Dr. Jozef Dzurilla.\textsuperscript{75} Dr. Dzurilla examined Mr. Johnson, determined that he was not suffering from a heart condition, and discharged him from the hospital.\textsuperscript{76} Mr. Johnson, however, returned the next day, again complaining of chest pains, and he was re-admitted to the hospital under Dr. Dzurilla’s care.\textsuperscript{77} Three days later, Dr. Dzurilla discharged Mr. Johnson with a clean bill of health.\textsuperscript{78} Two days after the second discharge, Mr. Johnson went to a different hospital and subsequently died of a heart attack.\textsuperscript{79} Mrs. Johnson filed suit against both the doctor and Hillcrest.\textsuperscript{80}

Specifically, Mrs. Johnson alleged that both the doctor and the hospital improperly stored Mr. Johnson’s laboratory test results in his EMRs.\textsuperscript{81} Raw data from the lab tests taken on the night of Mr. Johnson’s first admission suggested that he suffered an “early acute myocardial injury.”\textsuperscript{82} Although hospital personnel ordinarily place these results in the patient’s chart after entering the data into the computer system, Mr. Johnson’s test results were apparently placed in the wrong chart.\textsuperscript{83} Despite the improper placement, the raw data from the lab tests remained available on computer terminals located throughout the hospital, including one on Mr. Johnson’s floor.\textsuperscript{84} When Dr. Dzurilla checked the paper chart, he was unable to see the misfiled laboratory test results.\textsuperscript{85} He also failed to check the electronic records, which led to the allegedly improper discharge based on the

\textsuperscript{73} Id.
\textsuperscript{74} \textit{Johnson v. Hillcrest Health Ctr., Inc.}, 70 P.3d 811 (Okla. 2003).
\textsuperscript{75} Id. at 813.
\textsuperscript{76} Id. at 814.
\textsuperscript{77} Id.
\textsuperscript{78} Id.
\textsuperscript{79} Id.
\textsuperscript{80} Id.
\textsuperscript{81} Id.
\textsuperscript{83} \textit{Johnson}, 70 P.3d at 814.
\textsuperscript{84} Id.
\textsuperscript{85} Id.
conclusion that Mr. Johnson was not suffering a heart attack. 86 Dr. Dzurilla—but not Hillcrest—eventually settled the case. 87

Dr. Dzurilla may have settled the case prior to trial due, in part, to a fear of liability for failing to consult the electronic records prior to discharging Mr. Johnson. 88 If so, Johnson provides a perfect example of how a facility’s adoption of EMRs can lead to a higher standard of care and increase a physician’s liability. Perhaps Dr. Dzurilla’s fear of potential liability was well held, as the court’s subsequent denial of the hospital’s summary judgment motion suggests that the court likely would have held the physician liable for failing to consult the EMRs with the pertinent test data stored on the computers. 89

In this scenario, the adoption of EMRs directly led to an effectively heightened standard of care. 90 Before electronic records, the standard of care required only that a doctor consult the paper charts. 91 Because the data in this case was stored electronically, however, the doctor had to take an extra step to satisfy the standard of care. Thus, the adoption of electronic records effectively raised the standard of care expected of him. 92

Although the physician himself settled with the Johnson family prior to trial, the case still provides a pertinent example of how the adoption of electronic records could raise the standard of care applied to an individual healthcare facility. The Johnson court denied the hospital’s motion for summary judgment regarding its possible violations of the standard of care. 93 In reaching its decision, the court concluded that the applicable standard of care required the hospital to include completed lab tests and lab reports in the patient’s paper chart—regardless of whether the lab tests were made available on the computer. 94 In a footnote, the court acknowledged the growing use of computer technology in the medical field, though it declined to weigh in on whether the standard had changed to require providers to only file test results in an EMR, stating that “[w]e recognize that medical literature reflects and supports the advent of electronic medical

86. Id.
87. Id.
88. See id.
89. See id. at 819—20.
90. Id. at 814 (“Dr. Dzurilla insists that the lab tests and the lab report were not in Johnson’s chart during either of his stays at Hillcrest and that, had he seen the information, he would have confirmed the tests.”).
91. See id. at 814—15.
92. See id. at 814.
93. Id. at 818.
94. Id.
records and even advocates the movement towards the elimination of handwritten clinical data . . . .”

This language tracks the court’s holding that the hospital’s employees had a duty to correctly file the test results; however, the footnote also foreshadows potential difficulties in determining the standard of care as hospitals begin to adopt EMRs. Because of the complexities of these systems, the court recognizes that a new “standard of care” may be necessary when a hospital employee incurs liability for incorrectly filing electronic patient data. At a minimum, this will probably mean additional, more expensive training for hospital employees who interact with these new systems, as well as the implementation of additional safeguards to ensure that mistakes do not occur.

The second way that EMRs can lead to an increase in medical malpractice claims is by raising the standard of care for doctors who fail to fully utilize these new systems when they are readily available. While no court has yet ruled on the issue, the day will surely come when a patient sues his doctor for failing to utilize an EMR system in a way that would have allowed him to discover something in the records necessary for the proper diagnosis. This scenario could arise, for example, where an EMR system allows a physician to access a patient’s entire medical history from numerous different facilities. Buried in this long and complex medical history may lie a fact that should indicate to the physician that his current proposed treatment plan could result in complications.

If the fact that could impact the proper diagnosis is something small and contained in a record from many years ago, it could be very difficult for the physician to recognize its importance. Because the physician failed to spot the information in the record, he could potentially be held liable for pursuing a particular treatment that he should have known would cause complications. Without the medical records, he would not have had access to this information, and

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95. Id. at n.20.
96. Id.
97. Id. (“We refrain from commenting on whether the standard of care would be different today, given the increased implementation of computer technology in the medical profession.”).
98. Jones et al., supra note 23, at 83.
99. Id.
100. Hoffman & Podgurski, supra note 4, at 108.
101. See Jones et al., supra note 23, at 83.
102. Id.
103. Id.
thus would not have faced liability for missing it.\textsuperscript{104} Thus, the physician is once again held to a higher standard of care due to the adoption of electronic records.

This scenario also has the potential to spiral out of control and spawn numerous third-party claims. For example, imagine a scenario in which a physician from the patient’s past fails to include something in the EMR that a subsequent physician could have used to make a better diagnosis. If that subsequent physician is sued, and discovers this error, he could potentially file a third-party claim against the original physician, creating numerous cross-claims and legal implications for physicians who use EMRs but fail to take full advantage of them.\textsuperscript{105}

While it is certainly difficult to argue, from a patient standpoint, that access to extensive medical histories is a negative result, it may adversely impact the physician by raising the bar to a level that could create additional exposure to malpractice liability.\textsuperscript{106} Thus, while access to lengthy records could improve healthcare, it could also create a higher standard of care, increasing malpractice exposure for physicians.\textsuperscript{107}

In summary, two separate scenarios raise a concern that the adoption of EMRs could lead to a higher standard of care for physicians and healthcare facilities: (1) mistakes in using these new systems as seen in \textit{Johnson},\textsuperscript{108} and (2) a failure to properly utilize all of the available information contained in these systems.\textsuperscript{109} Both of these scenarios lead to a heightened standard of care, as the caregiver is now expected to perform tasks and recognize patterns he was not expected to do prior to the implementation of these new systems.

\textbf{B. Standard of Care for Physicians and Facilities Not Using Traditional Systems}

The adoption of EMRs could also expose physicians practicing in healthcare facilities that have not yet adopted them to additional liability by raising the standard of care applied to all physicians. This is especially true in jurisdictions that tie the standard of care to particular communities.\textsuperscript{110} Again, in Tennessee, the standard of care

\begin{footnotesize}
\begin{itemize}
\item\textsuperscript{104} \textit{Id.}
\item\textsuperscript{105} \textit{Id.}
\item\textsuperscript{106} \textit{Id.}
\item\textsuperscript{107} \textit{Id.}
\item\textsuperscript{108} \textit{Johnson v. Hillcrest Health Ctr.}, 70 P.3d 811, 814 (Okla. 2003).
\item\textsuperscript{109} Jones et al., \textit{supra} note 23, at 83.
\item\textsuperscript{110} See, e.g., TENN. CODE ANN. § 29-26-155(a)(1) (2010).
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is “[t]he recognized standard of acceptable professional practice in the profession and the specialty thereof, if any, that the defendant practices in the community in which the defendant practices or in a similar community at the time the alleged injury or wrongful action occurred.”\textsuperscript{111} When the standard of care is tied to a particular community,\textsuperscript{112} a physician practicing in this type of jurisdiction would face a higher standard of care because others in his community have begun to use EMRs.

Returning to the hypothetical, imagine a scenario where a physician has access to an EMR system that allows him to view a patient’s entire medical history from various facilities.\textsuperscript{113} This history gives him access to a fact that indicates that his current proposed treatment plan could result in complications, and because of this factual discovery, the physician changes the treatment plan.\textsuperscript{114} Now imagine that a different physician is practicing in a facility without access to EMRs. Because this physician does not have access to these records, he fails to discover the pertinent fact, as it is not listed on his paper chart.

If complications develop in a jurisdiction that ties the standard of care to that used in the community, this physician may be held liable for failing to discover the fact that ultimately led to the complications, if physicians in that jurisdiction generally have access to EMRs.\textsuperscript{115} Because the standard of care in the community now requires using information contained in EMRs, the second physician is more likely face liability because of the increased standard of care in his community. In this scenario, the fact that many physicians in a community have adopted EMRs creates a heightened standard of care within that community.

The adoption of EMR systems in a particular community could lead to a higher standard of care, causing increased liability for physicians practicing in facilities without such systems.\textsuperscript{116} This could incentivize physicians to stop practicing at facilities without electronic records. This, in turn, might lead to a reduction in available medical services for certain areas within a particular community, as well as for certain socio-economic classes, who are often forced to seek out medical care at facilities slow to adopt the newest medical

\textsuperscript{111} Id.
\textsuperscript{112} Id.
\textsuperscript{113} Hoffman & Podgurski, supra note 4, at 108.
\textsuperscript{114} Jones et al., supra note 23, at 83.
\textsuperscript{115} Id.
\textsuperscript{116} See § 29-26-115(a).
While this scenario may seem implausible, according to researchers from the University of Wisconsin, other small changes in state medical malpractice laws have already led to a direct reduction in the healthcare available to the poor. Based on their analysis, an increase in the standard of care could also lead to a similar reduction.

III. “PREVENTIVE MEDICINE” FOR EMR SYSTEMS

This Note suggests two primary solutions to the heightened standard of care and increased liability expected to accompany the implementation of EMRs. First, the federal government can provide financial support for the adoption of universal EMR systems. This approach would primarily affect physicians practicing at facilities that do not currently use these systems (especially in jurisdictions where the standard of care is connected to a community standard), but it would also provide benefits to those doctors practicing at facilities that already use electronic records. Second, state legislatures can enact clear statutory limitations on the extent to which a physician can be held liable for errors resulting from his misuse of EMRs. This solution would impact all physicians and healthcare facilities using EMRs, and although little less concrete, it nonetheless provides the most practical and far-reaching opportunity to address the different underlying factors that create this problem.

117. Sun & Schmit, supra note 51, at 7 (“The theory is that variation in state law will cause health care providers to alter their decisions about where to practice (locating in jurisdictions more favorable toward providers). Furthermore, health care providers will be likely to undertake additional tests and procedures as defensive medicine against malpractice. Greater levels of unnecessary defensive medicine will unnecessarily raise health care costs and therefore [sic] health insurance availability.”).
118. Id.
119. Id.
120. See Gulick, supra note 21, at 404 (noting that for e-health to fully be implemented in the healthcare industry, certain barriers to the adoption of e-health need to be resolved, and then listing numerous potential solutions).
121. Hoffman & Podgurski, supra note 4, at 126 (proposing that “[t]he government should require all healthcare providers to adopt EHR systems and offer financial support to offset the provider’s costs”).
123. See Hill et al., supra note 53, at 237 (noting the need for legislative parameters for healthcare provider liability consistent with technological capabilities).
124. See id. (“In the end, a national health information network requires a national legal framework to be fully efficacious.”).
A. Financial Support for Universal Electronic Medical Record Adoption

The first proposed solution for addressing this potential problem is for the federal government to provide financial support for universal adoption of EMRs. Sharona Hoffman and Andy Podgurski recommended this solution in Finding a Cure: The Case for Regulation and Oversight of Electronic Health Record Systems, in which the authors provide a compelling argument that this solution would address many of the issues outlined above.\(^{125}\)

The authors point out that, as of early 2008, only 4% of physicians in ambulatory care settings had fully functional EMR systems and only 13% had basic systems.\(^{126}\) As for hospitals, only 2% had comprehensive EMR systems and only 19% had basic systems.\(^{127}\) One of the primary problems Hoffman and Podgurski believe is slowing the adoption of EMRs is a “misalignment of incentives.”\(^{128}\) For example, while physicians and hospitals bear the bulk of the cost for adopting these systems, patients and insurers stand to save the most money after their adoption.\(^{129}\) Coupled with the potential for an increase in malpractice liability—for both physicians and hospitals—as addressed above, this misalignment of incentives becomes even more pronounced.

To address this discrepancy, the authors recommend a legal mandate requiring the implementation of EMRs by all healthcare providers.\(^{130}\) They recommend that federal law create such a requirement, phasing in the adoption over a period of several years, with longer deadlines for smaller practices.\(^{131}\) Additionally, federal regulations would be issued to establish standards for EMRs and regulatory agencies would certify which systems complied with federal law.\(^{132}\) Congress missed an opportunity to introduce this type of law during the recent healthcare reform bill that it passed in early 2010.\(^{133}\) Presuming EMRs end up providing extensive savings, the savings that

\(^{125}\) See Hoffman & Podgurski, supra note 4, at 126.

\(^{126}\) Id.

\(^{127}\) Id.

\(^{128}\) Id. at 127.

\(^{129}\) Id.

\(^{130}\) Id.

\(^{131}\) Id.

\(^{132}\) Id.

\(^{133}\) See, e.g., Karen Tumulty, Does Brown’s Senate Win Mean the End of Health Reform?, TIME, Jan. 20, 2010, http://www.time.com/time/politics/article/0,8599,1954980,00.html (noting that even though the original proposal did not feature an electronic medical records provision, the election of Scott Brown has sent healthcare reform back to the “drawing board”).
EMRs provide in both Medicaid and Medicare over the next decade could offset the cost of such a mandate.\footnote{134}{See Hoffman & Podgurski, supra note 4, at 141 ("Savings are predicted to rise sharply once the systems have been fully implemented. Assuming a base year of 2004, one study anticipated net national savings of $21.3 billion at year five, $59.2 billion at year ten, and $77.4 billion at year fifteen.").}

This solution would benefit all facilities, regardless of whether they have EMRs. First, the federal mandate would lower the exposure to additional malpractice liability for physicians practicing in facilities without EMRs.\footnote{135}{See TENN. CODE ANN. § 29-26-115(a)(1) (2010) (tying the standard of care to a particular community).} Although, on a national scale, the current rate of adoption for these systems is low, as they become more widespread, facilities unable to adopt these systems may expose themselves and their physicians to additional liability.\footnote{136}{Jones et al., supra note 23, at 83 (noting that a physician without EMRs may be accused of malpractice for failing to access information that could have prevented an adverse medical condition).} A federal mandate would help solve this problem by requiring all facilities to adopt these records. A physician could not be held liable for failing to use EMRs because she practiced at a facility without access to them.\footnote{137}{But see id. at 83 ("Early adopters of [EMRs], however, may face their own liability risks, particularly if on a particular occasion their records are for some reason inaccessible.").} This would lead to a uniform standard of care for all communities and medical facilities.

Second, this solution could benefit those practicing at facilities with access to these systems. The federal regulations implemented via the federal mandate might help provide a baseline for what types of EMR systems comply with the current standard of care. This would lead to a more uniform standard and allow physicians to learn about the standard to which they must adhere. Federal regulations would also be able to adapt to problems that arise as technologies change and physicians once again begin to deal with the problems outlined above. Finally, an influx of federal funding could facilitate the expansion of training programs, thus increasing both healthcare employees' and physicians' knowledge of these systems.

One drawback to this proposal is that it involves a complicated legislative process and would require significant funding to implement.\footnote{138}{See Hoffman & Podgurski, supra note 4, at 140 (discussing the cost of EMR system adoption).} This type of solution might never be passed at the federal level, nor be effectively implemented because of its large scope.\footnote{139}{Id. ("The transition from paper files to [EMR] systems can be expensive, complicate, and burdensome.").} In addition, it does little to address the numerous ways that
EMR systems could be exploited by creative plaintiffs’ lawyers in malpractice suits that create standard of care concerns, even with widespread and eventually universal adoption of these systems. This problem could be addressed through statutory immunity for certain types of malpractice claims related to EMRs.

B. Statutory Limitations on Physician and Facility Liability for EMRs

A second solution is to enact statutory restrictions on the extent to which a physician can be held liable for failing to consult an EMR, or for entering information into an EMR system that later turns out to be inaccurate. Although there are many ways to implement this solution, one way would be for a state legislature to codify the elements of a medical malpractice claim tying the standard of care to a particular community, similar to the current practice in Tennessee.140 Tennessee has also recently enacted a statute that restricts medical malpractice claims to instances where the plaintiff files a good faith certificate showing an expert has reviewed the case and found the claims to have potential merit.141 In a similar vein, the statute of limitations for medical malpractice claims could depend on when data is put into an EMR system so that a physician cannot be held liable throughout the life of the patient for an alleged error in the electronic medical history that occurred years earlier.142

This proposal has both advantages and disadvantages that accrue to different parties. One of the obvious upsides of this proposal is its ability to limit medical malpractice liability for both physicians and healthcare providers. Additionally, this benefit can extend to patients because providers who are less fearful of liability may more quickly adopt EMRs, which most experts agree will lead to better healthcare at a lower cost.143 On the other hand, this proposal could result in adverse consequences for patients. First, it will limit access to the courts, foreclosing some meritorious claims. Also, it could create a moral hazard for physicians, who will know that they are protected by statutory limitations from some potential errors.

Effective implementation of this solution will not arrive overnight, but rather will require achieving a balance between physician and patient interests. Any statutory scheme will need updating as circumstances change and as attorneys on both sides of

140. § 29-26-116 (outlining a typical statute of limitations statute).
141. Id. § 29-26-122; see also Day, supra note 49.
142. See, e.g., § 29-26-116 (a typical statute of limitations statute).
143. See Hoffman & Podgurski, supra note 4, at 112—19 (touting the health and savings benefits of EMR adoption).
the aisle find ways to exploit these restrictions. However, with some
careful thought, this solution could be the most reasonable from a
cost-benefit perspective and it would allow for the necessary flexibility
to cope with changing circumstances.

IV. CONCLUSION

While little doubt remains that EMR systems offer promising
solutions and potential benefits, their adoption must be combined with
proactive solutions to combat unintended consequences. Although
many scholars have predicted problems with these systems, including
patient privacy concerns, compliance with anti-kickback laws, and the
potential for product liability exposure, few have considered the
direct impact EMRs could have on the “standard of care” issues
involved in medical malpractice cases.

Despite the wide-ranging benefits offered by these systems,
their adoption will inevitably lead to a heightened standard of care.
This could increase exposure to liability both for physicians practicing
in facilities with these records and those in facilities without them.
First, a physician without access to these systems is potentially
exposed to additional liability under the heightened standard of care if
an adverse event could have been prevented with access to EMRs.
On the other hand, as seen in Johnson, the adoption of these
systems could lead to an increase in medical malpractice liability even
for physicians with access to these systems due to the extra step in
treatment. A breakdown in this extra step could result from the
storage or retrieval of information, and when this breakdown harms a
patient, the physician or facility will be exposed to additional
liability. This creates a scenario where a physician becomes liable
for performing a step not expected of him before the adoption of
EMRs.

Although several solutions could address this problem, the
most promising and easiest to implement are: (1) a federal mandate
requiring universal implementation of EMR systems by a specific
date; and (2) individual state restrictions limiting a physician’s
liability for EMR-related claims. The first solution, while expensive,
would lead to a uniform standard of care for EMR systems, primarily assisting those physicians practicing in facilities slow to adopt this technology. In addition, given the large outlay of money that would accompany this kind of mandate, this solution would require the almost-certain promise of federal regulations outlining which systems should be adopted and how. These regulations will also lead to a more uniform standard by not only ensuring that all facilities have EMR systems, but an EMR system determined by the federal government to offer the necessary level of benefits. The second solution is less concrete, but it offers more flexibility for dealing with the problems that arise in a constantly changing field. This solution suggests the extension of tools currently in use in many states to limit malpractice liability where EMRs are partly to blame.

While both of these solutions require legislative action, the time is ripe for a comprehensive discussion and analysis regarding the widespread adoption of electronic records. Preemptive solutions can only be developed and implemented by recognizing the potential problems that could arise. As the debate continues about how to fix healthcare in the United States, policymakers should look to EMRs as a potential source of savings and consider available options to speed up this process; however, lawmakers must simultaneously direct some attention to the effects this change might have in the area of medical malpractice litigation lest the introduction of these records create more problems than they fix.

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151. Id. at 80—81
152. See generally Hoffman & Podgurski, supra note 4.
153. Id.
154. See supra text accompanying note 123.
156. See Hoffman & Podgurski, supra note 4 (noting that “[b]oth the federal government and health care advocates are enthusiastically promoting the adoption” of EMR systems).
157. See supra text accompanying note 145.

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