WHY TECHNOLOGY PROVIDES COMPELLING REASONS TO APPLY A *DAUBERT* ANALYSIS TO THE LEGAL STANDARD OF CARE IN MEDICAL MALPRACTICE CASES

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ABSTRACT

Traditionally, courts have applied a "customary practice" standard in determining the legal standard of care in medical malpractice cases. Recently, a few courts have abandoned this dated standard and instead applied a Daubert *analysis to the standard of care, which focuses on medical evidence that is scientifically based . In light of these recent holdings, this iBrief argues that with the increasing amounts of technologies improving evidence-based medicine, the customary practice standard is no longer a useful or appropriate test for determining the standard of care in medical malpractice cases. By applying a* Daubert *analysis to an expert's testimony on the standard of care, the testimony becomes a scientifically based testimony rather than an expert's notion of what is common practice in the medical profession.*

INTRODUCTION

¶1 Recent split circuit court decisions signal a tension regarding expert testimony in the area of medical malpractice. The issue is whether the legal standard of care should be determined by expert opinion informed by personal experience or informed by scientific evidence.[2] Exclusive reliance on physician experience was justified when there was no other information available, but new technology has significantly improved research, allowing medicine to become increasingly evidence-driven.[3] The introduction of such nascent technology raises the question: Should physicians be allowed to testify

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[2] *See* Michelle M. Mello, *Using Statistical Evidence to Prove the Malpractice Standard of Care: Bridging Legal, Clinical, and Statistical Thinking*, 37 WAKE FOREST L. REV. 821, 823 (2002) (describing why health services research, such as clinical practice guidelines, chart review studies, and physician surveys, are subject to challenges when used to establish the malpractice standard of care).

[3] *See id.* at 824.

about medical malpractice without taking modern medical technology into account?

¶2 In many professions technology provides powerful information helping to advance the field. Therefore, as technology facilitates the growth of accessible medical information, it only seems natural that physicians would utilize such information when determining how to treat a patient. Yet, this is not the case. Today, most states permit physicians to be protected by a customary standard designed by physicians. In order to help initiate change, courts should hold physicians accountable for knowing and incorporating modern medical information into the physician's method for treating a patient. Therefore, this iBrief argues that in light of increasing amounts of technology providing better information on medicine, customary practice is no longer an appropriate test in evaluating a physician's expert testimony and instead should be replaced with a *Daubert* analysis.

¶3 The first part of this iBrief is an introduction to the elements necessary for establishing medical malpractice. Part II of this iBrief explores the weaknesses of a customary practice standard. Part III describes how a *Daubert* analysis would be applied to determining the medical standard of care. Part IV of this iBrief specifically discusses the differences between a customary practice standard and a standard that applies a *Daubert* analysis. Part V of this iBrief shows how a *Daubert* analysis is compatible with the emerging reasonable physician standard. Finally, Part VI of this iBrief discusses why applying a *Daubert* analysis to the standard of care does not create a standard of care that is too demanding for physicians.

I. ESTABLISHING A CLAIM FOR MEDICAL MALPRACTICE AND THE REQUIREMENTS FOR EXPERT TESTIMONY

¶4 To establish a claim for medical malpractice, a plaintiff must show the following elements: (1) the applicable standard of care, (2) breach of that standard of care by the defendant, (3) injury, and (4) proximate causation between the alleged breach and the injury.[4] In ordinary negligence cases, the standard of care is the degree of care that a reasonable person of ordinary prudence would have exercised when in the defendant's situation or a similar circumstance.[5] However, for medical malpractice, the standard of care is determined by looking at the "degree of skill, care and learning which is possessed and exercised by members of the medical profession in good standing."[6] The

[4] CLARK C. HAVIGHURST ET AL., HEALTH CARE LAW AND POLICY 992 (2d ed. 1998).

[5] *See* RESTATEMENT (SECOND) OF TORTS § 283 (1965).

[6] Gates v. Jensen, 595 P.2d 919, 925 (Wash. 1979) (Dolliver, J., dissenting).

conventional justification for the medical-custom standard is that lay decision makers are more capable of determining what physicians actually do than what physicians should do.[7] Moreover, it would be difficult for a layman to determine what a doctor should have done without having any knowledge of the profession. Therefore, in medical malpractice cases, expert witnesses testify as to what the appropriate standard of care should be.

¶5 An example of a medical malpractice case where experts testified to the standard of care without using a *Daubert* analysis is *Kramer v. Milner*.[8] There, an action was brought against the defendant for negligently failing to recommend or order a screening mammogram for the decedent who died from breast cancer.[9] According to the defendant's expert, the defendant was not negligent even though the decedent was over fifty and the decedent's sister had passed away from breast cancer.[10] He stated that, because of the decedent's age (seventy), family history diminished in importance. Moreover, the decedent did not complain about her breast during the three years she was treated by the defendant.[11] Meanwhile, the plaintiff's expert testified that the standard of care required that an annual mammogram to be ordered for any woman over fifty if her mother or sister had breast cancer.[12] The plaintiff's expert based this testimony on medical guidelines followed by over eighty percent of physicians and suggested that, by not following the guidelines, the defendant violated the standard of care.[13] In response, the defendant's expert testified that the guidelines were merely recommendations or suggestions.[14] Ultimately, a jury decides which expert is accurately determining the standard of care.[15] Therefore, final decisions are often made without considering a *Daubert* analysis even though the *Daubert* test was created to shed light on Federal Rule of Evidence 702 , which governs expert testimony in federal courts.[16]

¶6 Federal Rule of Evidence 702 was interpreted by the U.S. Supreme Court in *Daubert v. Merrell Dow Pharmaceuticals.*[17] *Daubert*

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[7] Catherine T. Struve, *Doctors the Adversary System, and Procedural Reform in Medical Liability Litigation*, 72 FORDHAM L. REV. 943, 978 (2004).
[8] Kramer v. Milner, 639 N.E.2d 157, 158–59 (Ill. App. Ct. 1994).
[9] *Id.* at 158.
[10] *Id.* at 159.
[11] *Id*.
[12] *Id.* at 158.
[13] *Id.* at 158–59.
[14] *Id*. at 159.
[15] *See* RESTATEMENT, *supra* note 5, § 328C(b).
[16] FED. R. EVID. 702.
[17] Daubert v. Merrell Dow Pharm., 509 U.S. 579 (1993).

expressly covers expert testimony in federal courts, but it does not necessarily apply to expert testimony in state courts. Because *Daubert* only applies in federal courts, state courts are not obligated to apply *Daubert* to an expert's testimony on the standard of care. However, states can adopt *Daubert*'s standard for admissibility of expert testimony.[18]

¶7 In *Daubert*, the Supreme Court created a test for the admissibility of expert opinion.[19] *Daubert* held that trial judges should determine "whether the reasoning or methodology underlying the testimony is scientifically valid and . . . whether that reasoning or methodology properly can be applied to the facts in issue."[20] *Daubert*'s two-step inquiry requires trial judges to assess the relevance and reliability of the expert's testimony.[21] According to the Sixth Circuit, the relevance requirement makes certain that there is a proper "fit" between the expert's testimony and the matter to be resolved at trial.[22] The reliability prong focuses on the methodology and the principles underlying the testimony.[23] *Daubert* suggested four factors in assessing reliability: (1) the ability to test the opinion; (2) peer review and publication; (3) potential rate of error; and (4) general acceptance in the relevant scientific community.[24] Such a test permits judges to exclude expert testimonies based on junk science.

II. THE WEAKNESSES OF USING THE CUSTOMARY-CARE STANDARD WHEN DETERMINING THE STANDARD OF CARE

¶8 There are significant downfalls in determining the standard of care by solely looking at customary practice. First, there may be no customs in a world where there are various medical options for the same problem. Second, custom itself may be negligent. Third, experts (sometimes referred to as the "hired guns") may be biased and provide unreliable testimony. Fourth, customary practice permits an inefficient medical system to remain at odds with emerging evidence-based medicine.

¶9 First, not even physicians agree on customary care in particular cases, suggesting that a singular custom oftentimes does not exist. The standard of care for medical malpractice cases must be proven by expert

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[18] Miller v. Eldridge, 146 S.W.3d 909, 913 (Ky. 2004).
[19] *Daubert,* 509 U.S. at 579.
[20] *Id.* at 592–93; *see also* Kumho Tire Co. v. Carmichael, 526 U.S. 137, 151–52 (1999) (broadening gate-keeping obligations to all experts).
[21] *Daubert*, 509 U.S. at 591–93.
[22] *See* United States v. Bonds, 12 F.3d 540, 555 (6th Cir. 1993).
[23] *Id.* at 556.
[24] *Daubert*, 509 U.S. at 593–94.

testimony outlining the prevailing medical custom.[25] These physician expert witnesses are asked to explain what is ordinarily done in circumstances similar to the issue of concern, but it is unclear how these physicians know what is ordinarily done.[26] In fact, they may simply be explaining what they would have done and assume that it is what other physicians would have done as well.[27]

¶10 When the testimony involves areas with no agreement on the standards of practice, a jury is likely to hear mutually exclusive testimonies. This is not to suggest that there should be only one standard of practice,[28] but rather that *one* custom does not exist. This should not be surprising considering science often leads to dissimilar scientific conclusions and physicians will respond to these various conclusions differently. Moreover, the growth of technology has increased a physician's possible alternatives for treating a patient.[29] Having a variety of caretaking approaches for the same medical condition makes it even more difficult to identify a medical custom because it is unlikely that just one custom even exists.[30]

¶11 The controversy of whether a customary practice exists was illustrated by the *Kramer* case where the plaintiff's expert felt that the American Cancer Society's recommendation (annual mammograms for women over fifty if there is a family history of cancer) was the standard of care because it was customary to follow their suggestions.[31] Meanwhile, the defendant's expert felt that, because there were *several* guidelines with different recommendations, there was no uniform guideline for practitioners.[32]

¶12 Second, the custom itself may be a negligent standard of care.[33] Normally, customary practice is not conclusive evidence of what the standard of care is, but in medical malpractice cases, custom *is* typically

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[25] John W. Ely et al., *Determining the Standard of Care in Medical Malpractice: the Physician's Perspectives*, 37 WAKE FOREST L. REV. 861, 864–65 (2002).
[26] *Id.* at 865.
[27] *Id.*
[28] HAVIGHURST *supra* note 4, at 1030 (arguing that reconciling scientific disputes is not in the public interest and is possibly an anti-trust violation).
[29] HAVIGHURST, *supra* note 4, at 1013 (citing Henderson & Siciliano, *Universal Health and the Continued Reliance on Custom in Determining Malpractice*, 79 CORNELL L. REV. 1382, 1389–91(1994)).
[30] HENDERSON & SICILIANO, *supra* note 29, at 1390–91.
[31] Kramer v. Milner, 639 N.E.2d 157, 158 (Ill. App. Ct. 1994).
[32] *Id.* at 159.
[33] Paula Sweeney, *Medical Malpractice Expert Testimony in Texas*, 41 S. TEX. L. REV. 517, 525 (2000).

the exclusive measure of due care.[34] This can be particularly problematic when the customary practice standard appears to be too low.

¶13 An illustration of when customary medical standards are indeed too low was seen in *Helling v. Carey*.[35] In *Helling*, the plaintiff could have retained her eyesight had the defendant physician detected her condition by administering a simple glaucoma test and taken preventative measures.[36] Nevertheless, the defendant, an ophthalmologist, complied with the standard of his profession, which did not require a routine pressure test for persons under forty years of age.[37] Therefore, the defendant acted within the standard of his profession[38] and normally would not have been found negligent. However, the *Helling* court stated that "it is the duty of the courts to say what is required to protect patients under 40 from the damaging results of glaucoma,"[39] thereby shifting from implementing the traditional customary practice standard to the reasonable prudence standard. Under the reasonable prudence standard the defendant was negligent as a matter of law.[40] *Helling* highlights how a court had to deviate from the customary practice standard in order to prevent the low customary standard from shielding a negligent physician.

¶14 Third, many physicians who participate in providing expert testimony are "driven solely by financial reward and not the pursuit of sound medical principles."[41] Such financial motives are likely to influence an expert's testimony and create incentives for deliberate or subconscious biases and distortions of facts.[42]

¶15 Fourth, clinical research evidence (evidence-based medicine) proves that customary standards are inefficient. A report from the 1980s showed that only fifteen percent of medical practices were based on clinical trials.[43] Meanwhile, clinical trials have proven that some of the common practices used by physicians are ineffective.[44] Without solid

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[34] HAVIGHURST , *supra* note 4, at 1001.
[35] Helling v. Carey, 519 P.2d 981 (Wash. 1974).
[36] *Id.* at 981–82.
[37] *Id.* at 982.
[38] *Id.*
[39] *Id.* at 983.
[40] *Id.* at 984.
[41] David B. Brown & O. William Brown, *The Expert Medical Witness in the State of Michigan: A Cause For Concern*, 9 MICH. ST. J. MED. & LAW 279, 286 (2005).
[42] Mello, *supra* note 2, at 824.
[43] David Eddy, *Evidence-Based Medicine: A Unified Approach*, 21 HEALTH AFFAIRS 1, 10 (2005).
[44] *Id.*

evidence for many customary practices,[45] doctors continue to perform inefficient treatment.

¶16 Applying a *Daubert* analysis resolves many of the weaknesses with the traditional customs standard. It ensures that expert opinion is grounded in scientifically sound principles and methodologies. Published research suggests the finding is methodologically sound because the work has "weathered peer review."[46] Judges and juries will only hear evidence that the medical community considers real science. This means that a so-called expert cannot testify as to what he suspects the community is doing based on the expert's experience, notions, and feelings. Instead, applying *Daubert* means the expert is well informed on research evidence regarding the issue in question. Being informed on these matters makes sense in a world where increasing developments in technology provide increasing amounts of information and research, helping to determine whether medical treatments are safe and efficient. Therefore, evidence-based medicine creates compelling reasons for experts to testify to the science of a medical treatment rather than to what the experts suspects the customary treatment is. Testimonies on the science means physicians cannot be found non-negligent just because they hid behind customary standards when research shows that the treatment in question is harmful or ineffective.

III. APPLYING *DAUBERT* TO THE STANDARD OF CARE

¶17 There appear to be two specific ways of applying *Daubert* to the standard of care in medical malpractice cases. It can either exclude expert opinion grounded on incorrect factual assumptions, or it can be used to ensure that the expert's opinion regarding the standard of care is based on valid science.

¶18 First, *Daubert* can be used to withhold expert opinion that is based on incorrect factual assumptions as seen in *Berk v. St. Vincent's Hospital and Medical Center.*[47] In *Berk*, the plaintiff alleged that the defendant was negligent for not advising him to seek immediate medical attention after the plaintiff called the defendant physician and informed the physician of orange fluid that was draining out of the plaintiff's knee after surgery.[48] The plaintiff's expert's opinion was premised on the belief that the plaintiff complained to the defendant of redness, swelling, and drainage, however the plaintiff stated that he only complained to

[45] *Id.*
[46] Mello, *supra* note 2, at 857.
[47] Berk v. St. Vincent's Hosp. & Med. Ctr., 380 F. Supp. 2d 334, 353 (D.N.Y. 2005).
[48] *Id.* at 339.

defendant of orange drainage.[49] Because the plaintiff's expert's testimony was formulated around inaccurate facts, it failed to meet the reliability prong of *Daubert* and was excludable.[50]

¶19 Second, *Daubert* can be used to ensure that the expert's testimony is methodologically sound as seen in the lower court's decision in *Dickenson v. Cardiac & Thoracic Surgery of E. Tenn, P.C.*[51] In *Dickenson*, the plaintiff underwent heart bypass surgery followed by postoperative respiratory care.[52] After removal of her ventilation tube, the plaintiff suffered brain damage due to insufficient oxygen.[53] The plaintiff's estate alleged the plaintiff's injuries were caused by premature removal of the ventilation tube following surgery.[54] After applying a *Daubert* analysis, the district court rejected a cardiac surgeon's testimony on the standard of care for extubation of a ventilating tube, which is typically performed by a pulmonologist. The district court noted that: (1) the expert knew very little about ventilating medical equipment and the settings to be used; (2) the expert had never written an article on pulmonology; (3) the expert could not identify any articles about pulmonology that he had read; and (4) there was no peer review of his opinion regarding defendant's negligence.[55] Therefore, the court applied *Daubert* in order to consider whether the expert's testimony was grounded in reliable science before permitting him to speak on what the standard of care is.

¶20 While ensuring that the expert's opinion regarding the standard of care is based on valid science, a *Daubert* analysis also remains flexible enough to permit testimony that is not explicitly supported by texts. For instance, the court in *Sullivan v. U.S. Dep't of the Navy*[56] questioned whether the texts used to support an expert's testimony needed to state the precise type of harm explained by the expert. [57] In *Sullivan,* the plaintiff found a hole in her back after she had surgery that removed breast cancer and reconstructed her breast.[58] The reconstructive surgery lasted over thirteen hours.[59] The plaintiff's expert testified that,

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[49] *Id.* at 353.
[50] *Id.* at n. 25.
[51] Dickenson v. Cardiac & Thoracic Surgery of E. Tenn., P.C., 388 F.3d 976 *passim* (6th Cir. 2004).
[52] *Id.* at 977–78.
[53] *Id.*
[54] I*d.*
[55] *Id.* at 979–80.
[56] 365 F.3d 827 (9th Cir. 2004).
[57] *Id.* at 834.
[58] *Id.* at 829–30.
[59] *Id.*

normally, such reconstruction takes three to four hours to perform[60] and that "the excessive length of the surgery increased the risk of infection by at least six times."[61] The expert deduced that the defendant's performance was below the standard of care because the reconstructive surgery lasted drastically longer than usual.[62] The trial court felt that the expert did not present the steps she used to reach her conclusion and that literature describing the effect of operative length on the incidence of surgical wound infections was not the same as the effect of operative length on the incidence of surgical drain infections.[63] As a result, the trial court found that the plaintiff's scientific literature did not support the expert's opinion.[64]

¶21 The Ninth Circuit disagreed with the trial court in *Sullivan.*[65] The court stated that textbooks cannot be expected to say what the probable increase in the risk of infection is in specific cases; experts' experience suggests those estimates.[66] For the district court to require texts to state the precise type of harm explained by the testimony of a medical expert is an abuse of discretion.[67] Therefore, applying *Daubert* does not mean experts must find data that specifically corroborates their testimony. Instead, there remains room for experts to supplant their testimony with their own experience.

IV. DIVIDED COURTS: THE DIFFERENCE BETWEEN A *DAUBERT* COURT AND A CUSTOMARY STANDARD COURT

¶22 Despite the emergence of new technologies permitting scientific methods to help determine the standard of care in medical malpractice cases, only two circuits and one state court have addressed the issue. In *Sullivan*, the Ninth Circuit embraced a *Daubert* analysis when determining the standard of care.[68] Meanwhile, the Sixth Circuit rejected such use of *Daubert* in *Dickenson*.[69] The trial court in Massachusetts adopted a *Daubert* analysis, but the Appeals Court and the Supreme Court of Massachusetts then rejected applying *Daubert* to the standard of care. The cases convey why new technologies could change how we

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[60] *Id.* at 830.
[61] *Id.* at 831.
[62] *Id*.
[63] *Id.*
[64] *Id.* at 832.
[65] *Id.* at 829.
[66] *Id.* at 834.
[67] *Id.*
[68] *See supra* text accompanying notes 56–66.
[69] Dickenson v. Cardiac & Thoracic Surgery of E. Tenn., P.C., 388 F.3d 976, 982 (6th Cir. 2004); *see supra* text accompanying notes 52–55 (discussing district court's reasons for excluding expert's testimony).

traditionally determine the standard of care. Moreover, these cases highlight the differences between a court applying *Daubert* and those maintaining the traditional standard of care.

¶23 Although the Ninth Circuit held that the trial court applied an excessively rigid *Daubert* analysis in *Sullivan*, the Ninth Circuit still embraced applying *Daubert* to the standard of care.[70] Moreover, the Ninth Circuit suggested that the expert's testimony should be admitted because the opinion met the relevance and reliability prong of *Daubert*.[71]

¶24 Unlike the Ninth Circuit, the Sixth Circuit rejected the use of *Daubert* to determine the standard of care. In *Dickenson*, the Sixth Circuit stated *Daubert*'s role of excluding junk science from courts is not served by excluding testimony from a practitioner with extensive relevant experience.[72] It is unclear whether the Sixth Circuit altogether rejects *Daubert* or just believes the district court inappropriately applied the test. However, there are reasons to suspect the court altogether rejects applying *Daubert* to the standard of care. Although the court mentions that the physician has extensive relevant experience, that is not the same as the relevance of his or her testimony (one of the *Daubert* prongs). For example, a cardiac surgeon may have relevant experience in extubation, but if he testifies about boat manufacturing in a medical malpractice claim, his testimony would not be relevant to the issue at hand and therefore excludable. Because the Sixth Circuit does not explicitly discuss and analyze the relevance or reliability of an expert's testimon*y*, it appears as though the court altogether rejects the district court's *Daubert* analysis.

¶25 *Palandjian v. Foster*[73] was also a case where a higher court overturned the application of a *Daubert* analysis to the standard of care.[74] In *Palandjian*, the plaintiff died from gastric cancer and his estate filed a claim for medical malpractice against defendant physician and radiologists.[75] The decedent's grandmother and paternal aunt had also died from gastric cancer.[76] In order for plaintiff's expert to testify that there is an increased risk of gastric cancer in patients with two or more second degree relatives who also had gastric cancer, the plaintiff's expert had to provide *Daubert*-type evidence to support the statement.[77] In the lower court, the plaintiffonly provided data to support the controversial

[70] *Sullivan,* 365 F.3d at 833.
[71] *Id.*
[72] *Dickenson*, 388 F.3d at 982.
[73] 842 N.E.2d 916 (Mass. 2006).
[74] *Id.* at 925.
[75] *Id.* at 918.
[76] *Id.*
[77] *Id.* at 919–20.

belief that patients with a family history of gastric cancer among first degree relatives face an increased risk of gastric cancer.[78] Failing to meet the *Daubert* standard, the supreme judicial court affirmed the trial court's decision to exclude the evidence. [79]

¶26 The Appeals Court of Massachusetts in *Palandjian* vacated the judgment against the physician after holding that the trial judge erred in excluding the expert's opinion.[80] According to the Appeals Court, the expert's opinion only applied to the standard of care by suggesting that physicians exercise increased caution when dealing with a family history of gastric cancer.[81] Therefore, it was not the type of scientific evidence that must be screened for reliability by a judge.[82] The Supreme Court of Massachusetts agreed and maintained that the standard of care is determined by the care customarily provided by other physicians and that it does not have to be scientifically tested or proven effective.[83]

¶27 Without a *Daubert* analysis, the higher courts in *Dickenson* and *Palandjian* accepted expert testimony because the opinions were based on the experts' knowledge of care provided by other qualified physicians. This means a court applying the traditional standard of care is less interested in the methodology underlying the expert's opinion and more interested in the experience and education of the expert. Without applying *Daubert* in *Dickenson*, a cardiac surgeon became an expert on pulmonology because of the physician's experience working with pulmonoligsts, even though the expert had little knowledge about ventilating medical equipment, could not identify articles about pulmonology which he had read, and had no peer review regarding his opinion on defendant's negligence. In other words, without the court applying *Daubert*, a cardiac surgeon suddenly became an expert on pulmonology. Additionally, without a *Daubert* analysis, *Palandjian* suggests an expert can testify that there is an increased risk of gastric cancer in patients with two or more second degree relatives who also had the disease even though the expert has no evidence to support his opinion. These are precisely the results a *Daubert* analysis would not permit. Instead, applying *Daubert* to the standard of care means the

[78] *Id*.
[79] *Id.* at 925.
[80] *Id.* at 918.
[81] *Id.* at 920.
[82] *Id.*
[83] *Id.* at 921.

expert's testimony must be underlined with valid scientific theory or research.[84]

V. *DAUBERT* AND THE REASONABLE PHYSICIAN STANDARD

¶28 Applying *Daubert* to an expert's testimony on the standard of care does not conflict with the increasing shift from a custom-based standard to a reasonable physician standard. Recently, over forty percent of states have moved from the customary standard to a reasonable physician standard of care.[85] The reasonable physician standard is applied by determining what the ordinary reasonable physician would do under the circumstances.[86] Custom is just one bit of evidence considered, but it is not dispositive.[87] Ultimately, the inquiry for the jury is whether the defendant failed to act as a reasonably prudent physician.[88] Therefore, unlike the traditional standard of care, this standard leaves room for considering whether the rendered medical care was scientifically valid.

¶29 The reasonable standard of care was applied in *Hood v. Phillips*.[89] In *Hood*, the defendant physician performed carotid surgery as treatment for the plaintiff with emphysema. The plaintiff's experts testified that such surgery was an unaccepted method of treatment, a treatment with no support from medical evidence, and a treatment already shown to be ineffective and abandoned by other physicians.[90] The court determined that the standard of care is what a reasonable and prudent member of the medical profession would have done in the same or similar circumstances.[91] This reasonable and prudent standard permits physicians the ability to experiment in medical science by utilizing experimental, out-moded, and rejected surgical procedures as a last resort if other physicians in a similar circumstance would do the same.[92] Therefore, the reasonable physician standard differs from the customary standard because it asks what a reasonable physician would do rather than simply asking what is customarily done. (Although, in some circumstance a reasonable physician may be a physician that follows

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[84] Dickenson v. Cardiac & Thoracic Surgery of E. Tenn., P.C., 388 F.3d 976, 978–80 (6th Cir. 2004) (stating that the district court rejected the expert's testimony because he did not consult medical articles when deriving an opinion).
[85] Philip G. Peters Jr., *The Quiet Demise of Deference to Custom: Malpractice Law at the Millennium*, 57 WASH. & LEE L. REV. 163, 184 (2000).
[86] Sweeney, s*upra* note 33, at 525–26.
[87] *Id.*
[88] Hood v. Phillips, 554 S.W.2d 160, 165 (Tex. 1977).
[89] *Id.*
[90] *Id.*
[91] *Id.*
[92] *Id.*

custom.) This means physicians who follow the pack are not necessarily immunized from negligence liability.

¶30 A *Daubert* analysis can be applied in states using a reasonable physician standard because such states require the plaintiff's expert to testify about what other reasonable doctors in a similar circumstance would have done.[93] Similar to the customary standard, the expert can either devise his opinion based on his own notions and feelings or his testimony can actually be grounded in scientific evidence. The *Daubert* analysis is for the purposes of ensuring the scientific basis of an expert's underlying testimony is valid. If based on legitimate science, the expert's testimony will pass the *Daubert* test. Once the expert's testimony passes the *Daubert* test, the expert can testify as to what a reasonable physician would have done.

VI. WHY APPLYING *DAUBERT* DOES NOT MAKE THE STANDARD OF CARE TOO DEMANDING

¶31 Although physicians may be concerned that applying *Daubert* will cause the standard of care to be unreasonably demanding, there are several factors to remember. First, under *Daubert*, a physician's experience is still taken into account. Second, customs are also factored into a *Daubert* analysis. Third, physicians are not held accountable for information that was unknown at the time of the alleged negligence.

¶32 First, a physician's experience will still be considered when determining an expert's qualifications. Federal Rule of Evidence 702 has been interpreted to mean: "(1) the expert must be qualified to testify, by knowledge, skill, experience, training, or education; (2) the testimony must concern scientific, technical or other specialized knowledge; and (3) the testimony must be such as to assist the trier of fact to understand the evidence or to determine a fact in issue."[94] Therefore, the rule for expert admissibility expresses that an expert may qualify on the basis of experience. For example, in *Regions Bank* v. *Hagaman*[95] expert testimony was accepted even though the expert's opinion was not specifically supported by articles because the expert's outstanding credentials were a factor favoring admissibility.[96] If the hesitancy in applying *Daubert* is that it will reject testimony from highly skilled physicians, then Federal Rule of Evidence 702 mitigates that fear. This is an important feature of the *Daubert* rule because both the Sixth Circuit and the *Paladjian* court were opposed to rejecting expert witnesses after

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[93] Sweeney, s*upra* note 33, at 522.
[94] Perez-Viera v. United States, 2004 U.S. Dist. LEXIS 15841, at *4 (D.P.R. Aug. 11, 2004) (citing United States v. Corey, 207 F.3d 84, 88 (1st Cir. 2000)).
[95] 84 S.W.3d 66 (Ark. Ct. App. 2002).
[96] *Id.* at 70.

considering their lengthy experiences (even though they had no scientific evidence to back up their statements).

¶33 Second, customary practice is also considered in a *Daubert* analysis. The *Palandjian* court stated it is difficult to imagine how *Daubert*, "with its emphasis on methodology, would apply to testimony concerning the standard of care. Because the standard of care is determined by the care that the average qualified physician would provide, it is 'generally accepted' almost by definition."[97] In other words, the court must think that by definition customary practice is "generally accepted" under a *Daubert* analysis. Although the reasoning is valid, the statement highlights the court's misunderstanding of the difference between the *Frye* test and the *Daubert* rule.

¶34 The *Frye* decision focused on general acceptance in the scientific community as the sole criterion for the admissibility of scientific evidence.[98] Under *Frye*, customary practice would be substantially similar if not the same as general acceptance. However, *Frye* was superseded by Federal Rule of Evidence 702, which was interpreted in *Daubert*. Under *Daubert*, several factors are weighed to determine the validity of the science such as: the ability to test the opinion; peer review and publication; and potential rate of error.[99] It is important to note that general acceptance is also one of the several factors that can be used.[100] As the *Dickenson* court points out, custom is by definition generally accepted and since general acceptance is part of the *Daubert* analysis, then by definition, custom is also part of a *Daubert* analysis.

¶35 Third, a *Daubert* analysis only holds physicians accountable for information that was known at the time of the alleged negligence. For instance, in *Palandjian*, expert testimony referred to an article published over ten years after the alleged negligence.[101] The court stated, "a physician cannot be held to a standard of care based on medical research and literature not in existence at the time of the alleged negligence."[102] Moreover, if the concern is that physicians will have to stay well informed about new research and medical information, one must remember that the customs standard is also not a stagnant standard. Further, it is not unreasonable to expect physicians, who are professionals, to stay well informed about new medical information.

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[97] Palandjian v. Foster, 842 N.E.2d 916, 924 n.12 (Mass. 2006).
[98] Frye v. United States, 293 F. 1013, 1014 (D.C. Cir. 1923).
[99] Daubert v. Merrell Dow Pharm., 509 U.S. 579, 594 (1993).
[100] *Id.*
[101] *Palandjian*, 842 N.E.2d at 926.
[102] *Id.*

CONCLUSION

¶36 Because new technologies are quickly improving our understanding of science and medicine, physicians should be held to a standard of care that utilizes this new wave of scientific evidence. Rather than relying on customary practice, medical malpractice cases should question whether the physician practiced in a way that is consistent with legitimate science. The Daubert rule reaches this question by ensuring an expert's opinion is grounded in valid science before the expert can testify as to what the standard of care is. The effect is that medical malpractice no longer rests on what physicians do, but instead assess whether a physician acted in accordance with valid science and good medicine.