STATE OF MINNESOTA
IN COURT OF APPEALS
A17-0966

Cindy Ly,
Appellant,

vs.

North Memorial Medical Center,
Respondent.

Filed April 2, 2018
Affirmed
Hooten, Judge

Hennepin County District Court
File No. 27-CV-15-3449

Ryan W. Marth, Chris A. Messerly, Robins Kaplan LLP, Minneapolis, Minnesota; and

Michael A. Zimmer, M.A. Zimmer Law, Minneapolis, Minnesota (for appellant)

Richard J. Thomas, Chad J. Hintz, Burke & Thomas, PLLP, Arden Hills, Minnesota (for respondent)

Considered and decided by Johnson, Presiding Judge; Hooten, Judge; and Kirk, Judge.

U N P U B L I S H E D O P I N I O N

HOOTEN, Judge

In an appeal from judgment in favor of respondent in a medical negligence action, appellant challenges the district court's exclusion of her experts' opinions for lacking foundational reliability. Appellant argues that the district court erred by engaging in fact

finding through weighing and balancing the experts' opinions and by relying on *McDonough v. Allina Health Sys.*, a case which she claims applied an incorrect causation standard and should be overruled. 685 N.W.2d 688 (Minn. App. 2004). And appellant contends that, even if we do not overrule *McDonough*, the district court erred by applying it to a failure-to-diagnose case. We affirm.

FACTS

On July 20, 2012, appellant Cindy Ly arrived at the emergency department in respondent North Memorial Medical Center (North Memorial) with a rash on her hands and bumps on her feet. She also complained of a sensation in her throat and sores around her mouth. After a rapid strep test returned positive, an emergency room doctor diagnosed Ly with strep pharyngitis and gave her a deep intramuscular injection of penicillin. The doctor discharged her and instructed her to come back if problems persisted.

Ly returned to North Memorial two days later on July 22, complaining that her rash had spread to other areas of her body and that she had lesions in her mouth. She also described having difficulty breathing, stating that she felt she had to gasp for air. Dr. Kelly Milkus examined Ly, diagnosed her with hand, foot, and mouth disease, prescribed medications, and directed her to return if her symptoms worsened.

On July 26, Ly was taken by ambulance to North Memorial's emergency department. She had a severe rash that covered most of her body and golf ball-sized blisters on her wrists and the soles of her feet. She also had crusted mouth sores, including on the bottom of her tongue, and mucous membrane involvement in her nose and mouth and on her lips. Dr. Amy Kolar diagnosed Ly with toxic epidermal necrolysis (TEN), a rare but

potentially life-threatening skin disease most commonly associated with an adverse reaction to a drug present in the individual's system. Dr. Kolar arranged to have Ly transferred to the burn unit at Hennepin County Medical Center (HCMC).

Upon arriving to the burn unit, Ly's TEN continued to progress from covering 40 percent of her body to 95 percent. She remained at the burn unit for the next 41 days and spent another several weeks recovering at a rehabilitation center. While hospitalized at HCMC, she suffered additional conditions, such as sepsis, and needed to undergo numerous procedures including blood transfusions, installation of feeding and rectal tubes, and wound irrigation and debridement.

In March 2015, Ly sued North Memorial for medical negligence, claiming that Dr. Milkus negligently failed to assess and treat her on July 22, 2012 for her adverse reaction to the penicillin administered two days earlier. She alleged that Dr. Milkus failed to satisfy the standard of care and caused her TEN prognosis to become severe and life-threatening. Ly submitted disclosures with affidavits expressing the opinions of her two experts: Dr. Terrance Baker, an emergency room physician, and Dr. Ernest Charlesworth, a dermatologist. Dr. Baker opined that Dr. Milkus's treatment fell below the standard of care by discharging Ly on July 22, and that if Dr. Milkus had provided the appropriate care, Ly's condition "would not have progressed from non-serious to TEN" between July 22 and July 26. Dr. Charlesworth opined that if Dr. Milkus had provided proper care, such as referring Ly to a dermatologist, Ly would have experienced a less severe course of events instead of TEN with severe morbidity.

In March 2016, North Memorial moved to exclude Dr. Baker's and Dr. Charlesworth's opinions under the *Frye-Mack* standard and requested that the district court grant summary judgment in its favor. *See Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923); *State v. Mack*, 292 N.W.2d 764 (Minn. 1980). North Memorial disclosed two of its own experts who intended to testify that Ly did not present symptoms of TEN in her second visit to North Memorial on July 22, 2012, and that even if Dr. Milkus had diagnosed her with TEN on July 22, no medical treatment has been proven to prevent or reduce the disease's progression.

The district court denied North Memorial's *Frye-Mack* motion, reasoning that the standard does not apply if the experts are not offering "novel" scientific evidence and that North Memorial failed to identify the new scientific methods or techniques in either of Dr. Baker's or Dr. Charlesworth's opinions. The district court also denied North Memorial's motion for summary judgment, concluding that material factual issues existed due to the differing expert opinions regarding Ly's diagnosis and treatment.

As the case proceeded to trial, North Memorial filed motions in limine to exclude Dr. Baker and Dr. Charlesworth from testifying about their opinions on the basis that their opinions failed to meet the foundational reliability requirement under Minn. R. Evid. 702. The district court granted North Memorial's motions in limine in March 2017, concluding that the opinions lacked foundational reliability required to testify that the progression of Ly's TEN would have been eliminated or reduced by earlier hospitalization or administration of intravenous immunoglobulins (IVIG). The district court determined that the medical literature relied upon by Ly's experts did not establish that additional treatment

would have eliminated the progression of TEN but was rather "at best, equivocal." The district court also concluded that Ly failed to present a plausible cause for her injuries that could explain why North Memorial's proffered cause—the inability to remove the penicillin from her system—was not the sole cause.

After the district court ordered Dr. Baker's and Dr. Charlesworth's testimony to be excluded from trial, the parties stipulated that Ly could not prove the causation element to establish her prima facie case of medical negligence against North Memorial. As a result of the parties' agreement, the district court entered judgment in favor of North Memorial. This appeal followed.

D E C I S I O N

Ly contends that the district court erred by excluding the testimony of her experts regarding the causation element in her prima facie case of medical negligence. She argues that the district court (1) encroached on the role of the trier-of-fact by engaging in fact-finding functions; (2) inappropriately relied on this court's decision in *McDonough*, which articulated the wrong causation standard; and, alternatively, (3) incorrectly interpreted *McDonough* by applying its reasoning to a failure-to-diagnose case.

Appellate courts "review a district court's evidentiary rulings, including rulings on foundational reliability, for an abuse of discretion." *Doe v. Archdiocese of St. Paul*, 817 N.W.2d 150, 164 (Minn. 2012). And if the district court considered the relevant factors regarding foundational reliability, we will not reverse the district court's evidentiary decision absent an abuse of its discretion. *Id.* at 168.

All testimony must meet the basic requirements of the rules of evidence in order to be admissible. *Id.* at 164. An expert's testimony must also satisfy the requirements of Minn. R. Evid. 702. *Id.* Rule 702 provides:

> If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise. The opinion must have foundational reliability. In addition, if the opinion or evidence involves novel scientific theory, the proponent must establish that the underlying scientific evidence is generally accepted in the relevant scientific community.

Minn. R. Evid. 702. In other words, for expert testimony to be admissible under rule 702, the proponent of the testimony must show that: (1) the witness qualifies as an expert; (2) the expert's opinion has foundational reliability; and (3) the testimony is helpful to the trier-of-fact. *Doe*, 817 N.W.2d at 164.

The parties only dispute the second requirement: whether the opinions of Dr. Baker and Dr. Charlesworth have foundational reliability. The Minnesota Supreme Court has instructed the district courts in addressing the foundational reliability of expert testimony to (1) "analyze the proffered testimony in light of the purpose for which it is being offered"; (2) "consider the underlying reliability, consistency, and accuracy of the subject about which the expert is testifying"; and (3) require the proponent of the evidence to "show that it is reliable in that particular case." *Id.* at 167–68.

I.

Ly first argues that the district court erred by intruding upon the trier-of-fact's role in evaluating the issue of causation and by improperly weighing the experts' proffered testimony. She asserts that because this case involves competing expert testimony, it is the function of the jury, not the district court, to resolve a "battle of the experts." However, questions regarding the admissibility of evidence, including whether there is foundation for the evidence, are generally considered preliminary questions for the district court. *See* Minn. R. Evid. 104(a); *see also Johnson v. Washington Cty.*, 518 N.W.2d 594, 601 (Minn. 1994) (stating that evidentiary rulings concerning foundation are within district court's sound discretion).

Ly relies on *Pfeiffer v. Allina Health Sys.*, in which this court held that the district court abused its discretion by determining that the appellant's expert affidavits lacked foundational reliability. 851 N.W.2d 626, 638–39 (Minn. App. 2014), *review denied* (Minn. Oct. 14, 2014). In *Pfeiffer*, this court concluded that the district court had failed to conduct a rule 702 analysis and that the district court "intruded upon a function customarily reserved for the fact-finder at trial." *Id.* This court reasoned that "[t]he reliability of appellant's expert opinion testimony with regard to causation goes to the 'relative weight' of that testimony rather than to its admissibility." *Id.* at 639 (citing *State v. Myers*, 359 N.W.2d 604, 611 (Minn. 1984)).

But this case differs from *Pfeiffer* because Ly's experts do not have adequate foundation for their opinions. The district court concluded that the opinions of Ly's experts lacked foundational reliability to testify that earlier hospitalization or administration of any

drug treatment, such as IVIG, would have eliminated or reduced Ly's progression of TEN. Unlike the district court in *Pfeiffer*, which never applied a rule 702 analysis, the district court in this case reasoned that "[t]he medical literature does not establish that the treatments suggested by [Ly's] medical experts would have stopped the progression of or eliminated entirely [Ly's] injuries." The district court further determined that "the medical literature is, at best, equivocal" regarding the effectiveness of the treatments proposed by Ly's experts.

Ly repeatedly suggested at oral argument that both Dr. Charlesworth's and Dr. Baker's experience provides the necessary foundation for their assertions.[1] But neither experts' curriculum vitae denotes any particular training or background with treating TEN patients. Indeed, the record is unclear regarding the number of TEN patients, if any, that Dr. Charlesworth and Dr. Baker have personally treated. The medical literature in the record reflects an array of differing opinions regarding the use and effectiveness of specific therapies leading us to the only possible conclusion that these therapies remain highly controversial.[2] Some of the medical articles in the record emphasized the importance of

[1] Ly refers to an unpublished opinion to support her claim that experience alone is enough to establish foundational reliability for an expert's opinion. *See Howard v. Svoboda*, No. A16-1232, 2017 WL 2535687 (Minn. App. June 12, 2017). We note, however, that unpublished opinions from this court lack precedential value and are not to be relied upon. Minn. Stat. § 480A.08, subd. 3 (2016).

[2] *See* Marnie R. Ririe et al., *Intravenous Immune Globulin Therapy for Stevens-Johnson Syndrome/Toxic Epidermal Necrolysis Complicated by Hemolysis Leading to Pigment Nephropathy and Hemodialysis*, 69 J. Am. Acad. Dermatology 221, 221–22 (2013) ("Although the use of IVIG in the treatment of patients with toxic epidermal necrolysis (TEN) remains controversial, some experts consider IVIG to be the best treatment currently available for this diagnosis."); *see also* Mario Lissia et al., *Toxic Epidermal Necrolysis (Lyell's Disease)*, 36 Burns 152, 152 (2010) ("Different authors report good results in terms

early hospitalization and transfer to burn units by indicating that this supportive care may decrease mortality rates through prevention of secondary infections.[3] But these articles do not support the claim that secondary care can prevent or reduce the progression of TEN.

We recognize that the rarity of this horrific disease has made it difficult for the medical community to establish a consistent course of treatment that can both alleviate and eliminate the symptoms of TEN.[4] The district court, in exercising its authority as the gatekeeper for admitting evidence, must consider the reliability, consistency, and accuracy of the subject matter and ultimately determine whether the proffered evidence is reliable. *Doe*, 817 N.W.2d at 168–69. We conclude that the district court did not abuse its discretion by determining that Ly's experts lacked foundational reliability for their opinions, and that the district court did not engage in improper fact-finding.

II.

Ly next contends that the district court erred by basing its decision on this court's reasoning in *McDonough*. She specifically argues that we should overrule *McDonough* because it "fundamentally misapprehends" the causation standard in medical negligence

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of decreasing mortality and morbidity or improving clinical conditions of the use of human intravenous immunoglobulins (IVIGs). Regardless, the true utility of this treatment remains controversial.").

[3] *See, e.g.*, Lissia et al., *supra*, at 157 ("Despite a lack of specific research with control groups, data from retrospective studies suggest that an early admission to burn unit reduces the risk of infections and infections related mortality, and, also, the hospitali[z]ation length.").

[4] *See* Gerard J. Abood et al., *Treatment Strategies in Toxic Epidermal Necrolysis Syndrome: Where Are We At?*, 29 J. Burn Care & Res. 269, 272 (2008) ("Given the low incidence of TENS, randomized controlled trials comparing potential therapeutics are rare."). We note that this article, as with the rest of the medical literature cited in our opinion, was part of the record before the district court.

actions. The doctrine of stare decisis directs Minnesota courts to adhere to prior decisions in order to promote and maintain stability in the law. *Oanes v. Allstate Ins. Co.*, 617 N.W.2d 401, 406 (Minn. 2000). For instance, we are bound by precedent to follow this court's prior published opinions. *Jackson ex. rel. Sorenson v. Options Residential, Inc.*, 896 N.W.2d 549, 553 (Minn. App. 2017). And while "stare decisis is not an inflexible rule of law," this court will not overrule its own decisions unless presented with a compelling reason to do so. *See Oanes*, 617 N.W.2d at 406 (quotation omitted).

In *McDonough*, the plaintiff-patient sued the defendants, alleging that she suffered a stroke that was caused by the hospital's negligent administration of an IVIG infusion. 685 N.W.2d at 692. One of plaintiff's experts opined that the plaintiff's stroke was caused by the IVIG being administered at an unreasonable rate. *Id.* The defendants moved to exclude the expert testimony and offered contrary expert opinion that a number of other risk-related factors could have caused the plaintiff's stroke. *Id.* at 693–94. This court affirmed the district court's exclusion of the plaintiff's experts' opinions, holding that if the defendants "point[] to a plausible alternative cause and the [plaintiff's expert] offers no explanation for why he or she has concluded that was not the sole cause, that [expert's] methodology is unreliable." *Id.* at 695 (quoting *Heller v. Shaw Indus., Inc.*, 167 F.3d 146, 156 (3d Cir. 1999) and citing *Turner v. Iowa Fire Equip. Co.*, 229 F.3d 1202, 1209 (8th Cir. 2000)).

Here, North Memorial asserted that the primary treatment for a patient developing TEN is to remove the offending agent. Much of the pertinent medical literature in the record, and the experts for both parties—as noted by the district court—agree with this

assertion.[5] Nonetheless, Ly's experts maintained that Ly's injuries could have been avoided, or at least reduced, by prompt treatment through earlier hospitalization and administration of IVIG. But North Memorial's experts opined that because the penicillin was injected into Ly's system, and had a half-life of two to three weeks, this offending agent could not have been removed and that no medical treatment could have reduced the progression of or eliminated Ly's TEN. The district court construed this explanation as a "plausible alternative cause" for Ly's injuries. The district court also referenced the testimony from the director of HCMC's burn unit, who stated that he was unaware of any injuries or damage Ly suffered due to any delay in transferring her to the burn unit. Thus, the district court determined that, according to *McDonough*, Ly's experts needed to show that the inability to remove the penicillin from her system was not the cause of her injuries. Because the district court determined that Ly's experts, and the medical literature that they relied upon, failed to show that North Memorial's treatment or failure to diagnose was the cause of her TEN and her subsequent injuries, it excluded their testimony for lacking foundational reliability under rule 702.

A. The *Daubert* Standard

In urging us to overrule the *McDonough* case, Ly claims that *McDonough* incorrectly relied on the *Daubert* standard—the federal standard used in interpreting the

[5] *See, e.g.*, Frederick A. Pereira et al., *Toxic Epidermal Necrolysis*, 56 J. Am. Acad. Dermatology 181, 192 (2007) ("The first and most important element of treatment consists of discontinuation of the offending drug. The faster the causative drug is eliminated, the better the prognosis. Unfortunately, this appears to be less true if the drug has a long half-life.").

application of Fed. R. Evid. 702 for admitting expert scientific testimony but rejected by the Minnesota Supreme Court—by noting its citation to *Heller* and *Turner*, two federal appellate court cases that applied the *Daubert* standard. *See Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 113 S. Ct. 2786 (1993). *McDonough* cites *Heller* and *Turner* for the proposition that if a defendant proposes an alternative cause for a plaintiff's injuries and the plaintiff's expert fails to explain why the defendant's alternative cannot be the sole cause, then the expert's opinion is unreliable.[6] *See McDonough*, 685 N.W.2d at 695. But for reasons set forth below, *McDonough*'s analysis of foundational reliability, and its reference to these two circuit court cases, does not implicate the Minnesota Supreme Court's rationale for rejecting the *Daubert* standard.

The Minnesota Supreme Court has chosen not to adopt the *Daubert* standard but instead continues to adhere to the *Frye-Mack* standard. *Goeb v. Tharaldson*, 615 N.W.2d 800, 814 (Minn. 2000). The *Frye-Mack* standard imposes two requirements in addition to the rule 702 requirements for "novel" scientific evidence. *Doe*, 817 N.W.2d at 165. One of these requirements is that the evidence "must be shown to be generally accepted within the relevant scientific community." *State v. Roman Nose*, 649 N.W.2d 815, 818 (Minn. 2002). The supreme court has suggested that the *Daubert* standard may be less rigorous

[6] In *Heller*, the Third Circuit stated that the failure to rule out all alternative possible causes constituted a more stringent standard than required under Fed. R. Evid. 702 for a medical expert's differential-diagnosis opinion. 167 F.3d at 156. But, the *Heller* court concluded that if a plausible alternative case is presented, the expert must at least explain why this alternative cause is not the sole cause. *Id.* In *Turner*, the Eighth Circuit concluded that the district court did not abuse its discretion by excluding an expert's opinion because although the medical literature could "rule in" the alleged cause of the disease, the expert's opinion could not "rule out" other possible causes. 229 F.3d at 1209.

than the *Frye-Mack* standard because the *Daubert* standard does not contain this "general acceptance" requirement. *See Goeb*, 615 N.W.2d at 813–14; *see also State v. Traylor*, 656 N.W.2d 885, 891–93 (Minn. 2003).

In this case, the district court denied North Memorial's *Frye-Mack* motion because it failed to identify any "new science" involved in either Dr. Baker's or Dr. Charlesworth's opinions. The issue on appeal does not concern whether the district court improperly applied the *Daubert* standard, instead of the *Frye-Mack* standard, in evaluating whether the experts' proposed evidence was novel. Rather, the issue is whether Ly's experts had foundational reliability to support their opinions. Because this case centers on whether the district court erred in its foundational reliability analysis under rule 702, not in its earlier *Frye-Mack* analysis, Ly's argument does not present a compelling reason to overrule this court's prior decision in *McDonough.*

B. The Causation Standard in Medical Negligence Cases

Ly next requests that we overrule *McDonough* on the basis that it misconstrues the causation standard for medical negligence cases by imposing an unjustified burden on her experts to disprove North Memorial's proffered alternative cause. Minnesota caselaw has previously established that a plaintiff does not need to exclude every other possible hypothesis as to the cause of her injuries in order to prove causation, but she may not base the cause of her injuries on speculation or conjecture. *Schulz v. Feigal*, 273 Minn. 470, 476, 142 N.W.2d 84, 89 (1966); *see also Bauer v. Friedland*, 394 N.W.2d 549, 554 (Minn. App. 1986) (explaining that medical malpractice plaintiff "is not required to prove her theory of negligence by testimony so clear as to exclude every other possible theory"). The

plaintiff must still prove "that it is more probable than not that his or her injury was a result of the defendant health care provider's negligence." *Leubner v. Sterner*, 493 N.W.2d 119, 121 (Minn. 1992).

This court's reasoning in *McDonough* that the failure to offer any explanation for a plausible alternative cause of an individual's injuries is not inherently inconsistent with Minnesota law on causation because it further illustrates that negligence claims must not depend on speculative causes. *See Saaf v. Duluth Police Pension Relief Ass'n*, 240 Minn. 60, 65, 59 N.W.2d 883, 886 (1953) (explaining that "medical testimony which does nothing more than show a mere possibility, suspicion, or conjecture that such causal relation exists, *without any foundation for the exclusion of other admittedly possible causes*, provides no proper foundation for a finding of a causal connection" (emphasis added)).

Without foundation to support their opinions that the severity of Ly's TEN could have been reduced or eliminated entirely through earlier hospitalization or other therapies and treatment, the experts' opinions that North Memorial caused Ly's injuries are nothing more than speculation and conjecture. We conclude that Ly's argument that *McDonough* imports a faulty understanding of the causation standard is unpersuasive and does not provide us with a compelling reason to overrule this binding precedent.

III.

Alternatively, Ly argues that even if we do not overrule *McDonough*, the district court erred by applying its reasoning to a failure-to-diagnose case. She asserts that this case is not a differential diagnosis case, in which the parties disagree as to what treatment caused her injuries, but is rather a failure-to-diagnose case where the absence of or delay

in treatment allegedly made her injuries more severe. *See Leubner*, 493 N.W.2d at 122 (stating that in failure-to-diagnose cases, "there is no claim the disease itself . . . was caused by the physician, but rather that the physician's delay resulted in harm that could have been prevented").

"In performing a differential diagnosis, a physician begins by ruling in all scientifically plausible causes of the [patient's] injury. The physician then rules out the least plausible causes of injury until the most likely cause remains." *McDonough*, 685 N.W.2d at 695 n.3 (alteration in original) (quotation omitted). As previously discussed, the parties in *McDonough* disputed whether the high rate of IVIG infusion caused the appellant's stroke or whether it was another cause, such as the appellant's obesity or high blood pressure. *Id.* at 694. This court concluded that because the experts could not rule out the other plausible causes, or at least explain why they were excludable, their opinions were not sufficiently reliable for purposes of proving causation. *Id.* at 695.

We agree with Ly to the extent that this case does not constitute a differential diagnosis case. But we disagree with her claim that *McDonough* cannot apply to a failure-to-diagnose case. Whether a patient is misdiagnosed or experiences delayed treatment may be contributing factors that relate to the cause of her injuries, and under Minnesota caselaw, including *McDonough*, the patient must still prove that this misdiagnosis or delay in treatment more probably than not caused her harm. *See generally Dickhoff ex rel. Dickhoff v. Green*, 836 N.W.2d 321, 333–38 (Minn. 2013). The district court in this case noted that all of the parties' experts agreed that the primary treatment for a patient who is developing TEN is to remove the offending agent. Because Ly is unable to explain how the penicillin

could be removed from her system, and because Ly has not provided any foundationally reliable evidence that any therapy can reduce or stop TEN from progressing while the offending agent remains in a person's system, we conclude that the district court did not err by excluding the testimony of Ly's experts for lack of foundational reliability.

Affirmed.