

IN THE COURT OF APPEALS OF THE STATE OF WASHINGTON

L.M., a minor, by and through his
Guardian ad Litem, WILLIAM L.E.
DUSSAULT,

Appellant,

v.

LAURA HAMILTON, individually and her
marital community; LAURA HAMILTON
LICENSED MIDWIFE, a Washington
business,

Respondents.

No. 76019-0-1

DIVISION ONE

UNPUBLISHED

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Cox, J. — Frye v. United States¹ is implicated only where “either the theory and technique or method of arriving at the data relied upon is so novel that it is not generally accepted by the relevant scientific community.”² In this professional negligence action, the record shows that neither the theory and techniques nor methods at issue are novel. Thus, Frye is not implicated in whether to admit the natural [maternal] forces of labor (NFOL) evidence of

¹ 54 App. D.C. 46, 293 F. 1013 (D.C. Cir. 1923).

² Lakey v. Puget Sound Energy, Inc., 176 Wn.2d 909, 919, 296 P.3d 860 (2013) (quoting Anderson v. Akzo Nobel Coatings, Inc., 172 Wn.2d 593, 611, 260 P.3d 857 (2011)).

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causation. And this evidence satisfies the requirements of ER 702, as being helpful to the jury. The trial court properly admitted NFOL evidence.

Likewise, the trial court did not abuse its discretion under ER 702 by admitting a biomechanical engineer's testimony, subject to certain limitations, concerning the biomechanics of labor. And it did not abuse its discretion in excluding a medical expert who treated the child but who was not qualified to testify on causation of his injuries. Finally, the trial court properly exercised its discretion in granting the renewed motion to change venue to Lewis County.

We affirm.

Midwife Laura Hamilton delivered L.M. in Lewis County. Shortly after his birth, he was diagnosed with avulsion and rupture damage to five nerve roots in his brachial plexus. As a result, he has limited functional use of his arm and suffers continuing pain.

L.M., through his guardian ad litem, brought this action in King County against Hamilton, her business entity, and Joint Underwriters Association of Washington State (JUA). The latter entity is the statutorily created program that provides medical malpractice insurance to midwives. He later added Midwifery Support Services (MSS), JUA's administrative service company, as an additional defendant.

The trial court granted summary judgment, dismissing the claims against JUA and MSS. Thereafter, the court granted Hamilton's renewed motion to change venue to Lewis County, the county of residence of the principals in this litigation and the location of L.M.'s delivery.

L.M. claimed that Hamilton was professionally negligent in performing his delivery. L.M. moved in limine to exclude testimony from Hamilton's experts that NFOL caused his injury. The trial court granted that motion.

Hamilton moved for reconsideration, submitting additional expert declarations. The trial court granted this motion, permitting evidence at trial of NFOL as a cause of the injuries.

The trial court also ruled in limine, over L.M.'s opposition, that the testimony of biomechanical engineer Dr. Alan Tencer, subject to certain limitations, could be admitted. Dr. Tencer does not hold a medical degree. His testimony addressed the different levels of external and internal forces on the mother that affect delivery.

At trial, the jury returned a verdict in Hamilton's favor. The trial court entered judgment on that verdict.

L.M. appeals.

FRYE AND NATURAL FORCES OF LABOR

L.M. argues that the trial court improperly admitted expert testimony regarding the NFOL theory of causation. We disagree.

Scientific expert testimony is admissible only if it satisfies both the Frye test and ER 702.³ Frye excludes such testimony where "either the theory and technique or method of arriving at the data relied upon is so novel that it is not generally accepted by the relevant scientific community."⁴ But unanimity is not

³ Id. at 918.

⁴ Id. at 919 (quoting Anderson, 172 Wn.2d at 611).

required.⁵ If the theory or method has general scientific consensus, its application to reach novel conclusions as to causation does not implicate Frye.⁶

For example, expert medical testimony can be admissible even if it reflects “pure opinions and [is] based on experience and training rather than scientific data.”⁷ To require that each and every such conclusion independently satisfy Frye would allow “virtually all opinions based upon scientific data [to be] argued to be within some part of the scientific twilight zone.”⁸

Put simply, “Frye does not require that the specific conclusions drawn from the scientific data upon which [an expert] relied be generally accepted in the scientific community. Frye does not require every deduction drawn from generally accepted theories to be generally accepted.”⁹

ER 702 excludes expert testimony that fails to adhere to that methodology or assist the jury.¹⁰

We review de novo a trial court’s exclusion of evidence under Frye.¹¹ We review for abuse of discretion a trial court’s admission of expert testimony.¹² “A

⁵ Anderson, 172 Wn.2d at 603.

⁶ Lahey, 176 Wn.2d at 920.

⁷ Anderson, 172 Wn.2d at 610.

⁸ Id. at 611.

⁹ Id.

¹⁰ Lahey, 176 Wn.2d at 919.

¹¹ Id.

¹² Id.

trial court abuses its discretion by issuing manifestly unreasonable rulings or rulings based on untenable grounds.”¹³

Here, the parties dispute whether Frye requires that the scientific community generally accept that NFOL can cause the specific sort of brachial plexus injury (BPI) L.M. suffered. They also dispute whether such evidence is otherwise admissible.

The brachial plexus is a network of nerves that connects the spinal cord to the muscles and skin of the shoulder and arm. Damage to the brachial plexus can cause BPIs, either transient or permanent, which can lead to neonatal brachial plexus palsy (NBPP), characterized by movement loss or weakness of the arm. BPIs can take a number of forms, from temporary stretching to rupture (tearing in the nerve) or avulsion (tearing of the nerve from its spinal cord root).

Expert testimony on the level of acceptance the medical community has afforded NFOL was given in numerous declarations from obstetric providers, both M.D.s and midwives. These experts reviewed the labor and delivery records as well as video of L.M.’s birth, relevant depositions and declarations of other experts, and other scholarly literature.

For example, midwife Beth Coyote explained that it was commonly “know[n] that babies can have permanent brachial plexus injuries caused by the natural forces of labor.”¹⁴ Dr. Elizabeth Sanford testified that “[i]t is agreed that permanent brachial plexus injuries can be caused by the natural forces of

¹³ Id.

¹⁴ Clerk’s Papers at 2653.

labor.”¹⁵ Such BPIs include ruptures and avulsions of the type L.M. suffered. Dr. Thomas Collins testified that “[t]here is a general consensus in the medical community that permanent brachial plexus injury can occur due to the natural forces of labor and delivery.”¹⁶

Dr. David DeMott also testified that no evidence supports the contention that more force is required to cause an avulsion or rupture BPI than an intact stretch or that “a permanent brachial plexus injury cannot be caused by the same mechanisms as a temporary injury.”¹⁷ The only difference, he testified, was of degree. By contrast, he noted that the relevant literature “**does** describe permanent injury to the brachial plexus as a result of maternal forces of labor.”¹⁸

L.M. also provided testimony from similarly qualified experts who disagreed about the relevant scientific consensus.

Dr. Howard Mandel testified that while NFOL alone could cause stress BPIs, it could not cause a brachial plexus avulsion or rupture “without excessive manual traction by the delivering provider.”¹⁹

¹⁵ Id. at 2663.

¹⁶ Id. at 2674.

¹⁷ Id. at 2924.

¹⁸ Id. at 1839.

¹⁹ Id. at 1641.

But, upon deposition, Dr. Mandel conceded that he could not cite a single study supporting his opinion. He further admitted he had not “done any research on nerve avulsion or specific reading on it in over ten years.”²⁰

Nurse Pamela Kelly had “never heard of nor read any medical literature that says *avulsion* and *ruptures* of the brachial plexus nerve roots of an otherwise normal newborn can occur by way of the natural forces of nature.”²¹ Rather, she posited such damage could “occur only from the application of excessive manual traction by the delivering provider.”²²

Dr. Stephen Glass examined L.M. at 5 years old. He testified that:

[t]he current medical literature suggests that the occurrence of transient stretch-type brachial plexus injuries in newborns can occur spontaneously *in utero* without manual traction (pulling) to the head, ***but avulsion injuries are caused only by application of excessive manual traction of the delivering provider while trying to alleviate the shoulder dystocia.***^[23]

He also explained that “no meaningful scientific studies . . . have measured the forces necessary to cause a brachial plexus injury compared with the forces exerted by a laboring mother.”²⁴

Courts may also consider peer reviewed scientific literature.²⁵ Hamilton’s experts, in particular Dr. DeMott, reviewed and presented this literature at length.

²⁰ Id. at 1511, 1690.

²¹ Id. at 1656.

²² Id.

²³ Id. at 1672.

²⁴ Id.

²⁵ Eakins v. Huber, 154 Wn. App. 592, 599, 225 P.3d 1041 (2010).

Dr. DeMott traces the evolution of thinking on the issue in Williams Obstetrics, a preeminent authority in the field. The 21st volume of that treatise had posited that BPIs “usually result[] from downward traction on the brachial plexus during delivery of the anterior shoulder.”²⁶ By the 24th edition, published in 2014, the textbook had begun to explain that even severe plexopathy could occur without risk factors associated with traction or other iatrogenic applied forces.

Another textbook entitled Precis, published by the American College of Obstetricians and Gynecologists (the “ACOG”), the licensing board in that discipline, is also helpful and relied upon by the defense experts. The 4th edition of Precis explains that where past textbooks had stressed the excessive traction theory, more recent thought “supported the concept that most brachial plexus palsies are not caused by the [midwife].”²⁷

The ACOG also issued an important report in 2014 entitled Neonatal Brachial Plexus Palsy. This report discusses anterior shoulder NBPP to explain that an infant with low injury tolerance might suffer transient or persistent NBPP due to NFOL absent obstetric maneuvers. It includes many statements “indicat[ing] that it is not simply clinician-applied traction that is responsible for [brachial plexus] injuries.”²⁸ This report is relevant not only for its substance but

²⁶ Clerk’s Papers at 1990.

²⁷ Id. at 1841.

²⁸ Id. at 1913.

for its widespread acceptance. It has been endorsed by many Gynecological-Obstetrical organizations in the United States and worldwide.

Dr. DeMott also discusses other peer reviewed articles on the subject. For example, a 2012 article, Severe Brachial Plexus Palsy in Women Without Shoulder Dystocia, published in Obstetrics & Gynecology, states that the results of several permanent NBPP cases “corroborate that factors other than traction applied at delivery . . . had to have been responsible.”²⁹

Courts may also look to the example of other jurisdictions that have considered the question.³⁰ Such precedents offer further perspective, not so much on other legal analyses, but on discussion in the scientific community.³¹ Hamilton presented several such cases in her motion for reconsideration.

Many of these cases hold that the NFOL theory is generally accepted based on the same medical authorities cited here. In Luster v. Brinkman, the Colorado Court of Appeals relied on the growing “body of literature finding that intrauterine forces can cause brachial plexus injuries.”³² That literature includes a favorable reference to the Precis textbook. Similarly, the Illinois Court of Appeals, in Ruffin ex rel. Sanders v. Boler,³³ reached the same result based on

²⁹ Id. at 1846.

³⁰ Eakins, 154 Wn. App. at 599.

³¹ Id. at 600.

³² 205 P.3d 410, 415 (Colo. App. 2008).

³³ 384 Ill. App.3d 7, 890 N.E.2d 1174 (Ill. App. Ct. 2008); see also Stapleton ex rel. Clark v. Moore, 403 Ill. App.3d 147, 153-54, 932 N.E.2d 487 (Ill. App. Ct. 2010).

Precis, Williams Obstetrics, and articles published in the American Journal of Obstetrics and Gynecology. The Louisiana Supreme Court held likewise in Salvant v. State.³⁴

Some cases have discussed a common critique of the data underlying the NFOL theory of causation. Aside from artificial modeling and similar studies, much of the research is retrospective. “[R]etrospective study analyzes existing medical records” while prospective study allows for the most systemic determination of testing parameters.³⁵ Retrospective studies are often considered less reliable “because of the potential for inclusion of inaccurate, incomplete[,] or inconsistent information in the records being reviewed.”³⁶

The Texas Court of Appeals explained why this reliability concern does not, by itself, justify exclusion of NFOL causation evidence in Taber v. Roush.³⁷ It began by rejecting the argument that the NFOL theory was inadmissible simply because it was not prospectively testable.³⁸ It explained that “ethical considerations . . . preclude a prospective study subjecting mothers and babies to potential injury while measuring excessive traction.”³⁹ Faced with such issues, it held that such a hypothesis if “supported by reliable data and methodology”

³⁴ 935 So.2d 646 (La. 2006).

³⁵ Taber v. Roush, 316 S.W.3d 139, 152 (Tex. App. 2010).

³⁶ Id.

³⁷ 316 S.W.3d 139 (Tex. App. 2010).

³⁸ Id. at 159.

³⁹ Id. at 152.

may still be found generally accepted in the scientific community.⁴⁰ Peer reviewed literature from ACOG provided sufficient support for such data and methodology.⁴¹

While the cases cited in other jurisdictions generally support admission of experts testifying about the NFOL theory of causation, they are not unanimous. Two recent New York cases reach different conclusions.

In the first, Muhammad v. Fitzpatrick,⁴² the Appellate Division of the New York Supreme Court affirmed a trial court's exclusion of such evidence under Frye. It did not provide extensive reasoning because the "defendants failed to rebut plaintiff's showing that their theory was not generally accepted within the relevant medical community."⁴³ This is not very helpful.

In the second case, Nobre v. Shanahan,⁴⁴ the defendants made a stronger showing and the court considered it at greater length. Specifically, they cited articles in the Journal of Obstetrics and Gynecology, Williams, and ACOG publications.⁴⁵ The court concluded that the methodologies underlying the cited research, "such as animal studies, medical literature[,] and computer modeling"

⁴⁰ Id. at 159.

⁴¹ Id.

⁴² 91 A.D.3d 1353, 937 N.Y.S.2d 519 (N.Y. App. Div. 2012).

⁴³ Id. at 1354.

⁴⁴ 42 Misc. 3d 909, 976 N.Y.S.2d 841 (N.Y. App. Div. 2013).

⁴⁵ Id. at 918.

had general acceptance.”⁴⁶ In light of this data, the court could not “conceive how a theory that has been studied, tested,^[,] and debated for more than 20 years can be deemed to be novel.”⁴⁷

In that case, the plaintiffs conceded that NFOL could cause temporary BPIs but not permanent ones.⁴⁸ The court described the specific question in the case, whether NFOL could cause permanent BPIs, as “simply a further refinement on a much-debated theory.”⁴⁹ Viewed in that light, the court determined that “the factual disagreement . . . ‘should not [be] resolved as a matter of law by the [court] in the course of [a] Frye inquiry.”⁵⁰ The court distinguished Muhammad based on the weaker showing on general acceptance in that case.⁵¹

Nobre ultimately declined to hold admissible expert testimony regarding NFOL as a cause of permanent BPIs.⁵² Although it concluded the theory and underlying methodology to be generally accepted in the scientific community, other reliability concerns also arose.⁵³ The court specifically discussed the

⁴⁶ Id. at 922.

⁴⁷ Id.

⁴⁸ Id.

⁴⁹ Id.

⁵⁰ Id. at 924 (quoting Lugo v. New York City Health & Hosps. Corp., 89 A.D.3d 42, 62, 929 N.Y.S.2d 264 (N.Y. App. Div. 2011)).

⁵¹ Id.

⁵² Id. at 929-30.

⁵³ Id. at 927-29.

impossibility of controlled prospective testing on causation, “given the moral and ethical constraints imposed by our society against using live infants as guinea pigs.”⁵⁴ Although the court respected these concerns, it disagreed with the cases that concluded that ethics concerns excuse the “analytical gap” between theoretical retrospective research and a permanent BPI.⁵⁵ Without scientific evidence explaining specific causation, even a differential diagnosis was unreliable.⁵⁶

But the Taber court was able to reconcile the same analytical gap. It specifically discussed the “analytical gap” that lay “between non-specific brachial plexus injuries discussed in the literature and the particular avulsion injury [the plaintiff] suffered.”⁵⁷ The parties in that case provided alternative mechanisms to bridge that gap: NFOL or excessive traction.⁵⁸ The court explained that the trial court’s role was not to judge which “has more medical merit” but to rather act as gatekeeper and admit the relevant evidence if reliable.⁵⁹ On this basis, it admitted the NFOL evidence.

Here, the trial court, on reconsideration, reviewed these extensive declarations, scientific authorities, and cases from other jurisdictions. It correctly

⁵⁴ Id. at 927.

⁵⁵ Id. at 928.

⁵⁶ Id. at 929.

⁵⁷ Taber, 316 S.W.3d at 153.

⁵⁸ Id.

⁵⁹ Id.

explained that it was the methodologies and theories underlying the experts' testimony that must have general acceptance in the scientific community, not their "ultimate opinion as to what caused the damage."⁶⁰ It recognized that many of these sources did not discuss avulsions directly. But they considered permanent BPIs and, as such, provided "enough there for [the NFOL theory] to go through to the jury."⁶¹

The trial court also examined the disagreement between Taber and the New York cases, namely whether the ethical dilemmas posed by prospective testing excuse the absence of such research. The trial court agreed with Taber. It granted Hamilton's reconsideration motion and admitted the evidence for trial, allowing L.M.'s counsel to challenge it on cross-examination.

In ruling as it did on reconsideration, the trial court properly fulfilled its gatekeeper function and properly determined that Frye was not implicated. Extensive peer-reviewed literature supports the theory that NFOL may cause BPIs. Numerous experts and other courts agree.

L.M. argues the trial court erred by concluding that the scientific community generally accepts the NFOL theory of causation despite express statements of uncertainty in Hamilton's cited literature. For example, the 2014 ACOG report states that the "estimate of the force needed to cause a nerve rupture cannot be directly established" at the current state of research.⁶²

⁶⁰ Report of Proceedings (October 12, 2015) at 26.

⁶¹ Id. at 28.

⁶² Clerk's Papers at 1917.

Hamilton also cites an article by Dr. Daniel T. Alfonso that discusses “a lack of precision in the literature.”⁶³ This argument is unpersuasive.

As our supreme court recently stated, “science never stops evolving and the process is unending.”⁶⁴ Thus, while “[l]aw must resolve disputes finally and quickly, . . . science may consider a multitude of hypotheses indefinitely.”⁶⁵ It is to be expected that a scientific theory, even if generally accepted and helpful to the jury, will still have doubters in the scientific community. And experts expressing it may properly note these concerns. If a trial court required an “exacting level of scientific certainty to support opinions . . . [it] would, in effect, change the standard for opinion testimony in civil cases.”⁶⁶

Here, the doubts are similar. The NFOL theory, like any other in science, is imperfect. In recent decades, the consensus on the roles of NFOL versus traction has shifted. Unsurprisingly, many experts, including those in this case, disagree. And the specific nature of this issue raises special concerns. Reliable prospective testing is impossible at this time, given the risk of injury it would pose to mothers and infants. As such, the scientific community can ascertain that NFOL can and does cause BPIs. It is more divided on whether it can and does

⁶³ Id. at 2037.

⁶⁴ Anderson, 172 Wn.2d at 607.

⁶⁵ Id. (quoting Lee Loevinger, Science as Evidence, 35 JURIMETRICS J. 153, 177 (1995)).

⁶⁶ Id. at 608.

cause certain avulsions and ruptures. An analytical gap thus exists, apparent to scientists and courts alike.

But this gap goes to the weight, not admissibility, of this evidence. The trial court properly determined that Frye did not require exclusion of the NFOL evidence of causation.

Helpful to the Trier of Fact

L.M. also argues that the challenged testimony would not be helpful to the trier of fact. Specifically, he contends that nothing in the research or record link NFOL to an injury of the sort he suffered, a permanent five-point avulsion or rupture. We disagree.

Washington courts have provided extensive guidance on what renders expert testimony helpful. An expert's testimony is helpful if it assists the jury in "understanding matters outside the competence of ordinary lay persons."⁶⁷ And the court gauges the extent of that helpfulness on what the parties bear the burden of proving or disproving in a particular claim.⁶⁸ Further, the expert must also "ground his or her opinions on facts in the record."⁶⁹

Colley v. Peacehealth⁷⁰ is instructive. That case arose out of a medical negligence claim after Lewis Colley suffered alleged brain damage that he

⁶⁷ Id. at 600.

⁶⁸ See Colley v. Peacehealth, 177 Wn. App. 717, 728-29, 312 P.3d 989 (2013).

⁶⁹ Volk v. DeMeerleer, 187 Wn.2d 241, 273, 386 P.3d 254 (2016).

⁷⁰ 177 Wn. App. 717, 312 P.3d 989 (2013).

attributed to the Peacehealth Hospital's negligent care during an episode of respiratory failure he suffered.⁷¹ Colley moved in limine to exclude evidence from three experts he identified as defense witnesses on causation but whom he argued had no opinions on causation.⁷²

The first expert, Dr. Ralph Pascualy, identified "several factors besides oxygen deprivation that could have caused" the alleged brain damage.⁷³ Colley argued this testimony should have been excluded unless Dr. Pascualy could say definitively that oxygen deprivation was not the cause of the brain damage or identify some other specified and certain cause.⁷⁴

This court disagreed. It was Colley's burden to prove causation.⁷⁵ The Hospital did not have to either prove or disprove causation.⁷⁶ Rather, it could put forth Dr. Pascualy's evidence to attack the "premise" of Colley's case, by explaining that "there could be other explanations for memory loss and it was not possible to infer with certainty that Colley experienced serious oxygen deprivation while at the hospital."⁷⁷

⁷¹ Id. at 719-22.

⁷² Id. at 727.

⁷³ Id. at 728.

⁷⁴ Id.

⁷⁵ Id. at 728-29.

⁷⁶ Id.

⁷⁷ Id. at 729.

Similarly here, L.M. bore the burden to prove that Hamilton's alleged conduct caused his injury.⁷⁸ Hamilton bore no such burden. She was entitled to make her defense by attacking the premises of L.M.'s claim. The trial court noted the important fairness of admitting the expert testimony to allow that defense.

And Hamilton's experts based their opinions on application of generally accepted theories to the particular facts of this case. As we stated, these experts reviewed documentary and video records of L.M.'s birth, as well as deposition and declaration transcripts from other experts. Each attested in light of their expertise that Hamilton met the appropriate standard of care for a licensed midwife.

Importantly, they noted specific features of L.M.'s birth that justified their conclusions regarding NFOL and traction. Midwife Coyote referenced the "rapid labor and particularly rapid second stage. The usual second stage in a first time mother lasts about two hours. In this case it lasted just a few minutes."⁷⁹ Based on her observation, she characterized L.M.'s presentation at birth as "unusual." She testified that he came out first "occiput anterior meaning the back of the head was up, and then he restituted to left occiput anterior. Then he rotated 180 degrees on his own to right occiput anterior meaning he was facing the mother's

⁷⁸ Miles v. Child Protective Services Dep't, 102 Wn. App. 142, 159-60, 6 P.3d 112 (2000).

⁷⁹ Clerk's Papers at 2652; see also Report of Proceedings (October 26, 2015) Testimony of Dolly Browder at 26.

left thigh.”⁸⁰ Based on these observations, she opined that nothing suggested Hamilton applied excessive force and she alternatively suggested that NFOL might have caused L.M.’s injury. Similarly, Midwife Dolly Browder concluded that Hamilton “provided appropriate management of a fast first birth” and did not apply excessive traction.

Dr. Sanford also stated that the video of the birth showed no evidence of excessive traction but rather that Hamilton met the appropriate standard of care. She provided several reasons that supported her conclusion that NFOL caused L.M.’s injury. First, she cited the rapid second stage of labor. Second, she noted that L.M.’s mother “pushed unusually hard as evidenced by broken vessels in her eyes.”⁸¹ Third, the video indicated L.M. rotated on his own.⁸² Based on these observations, she opined that it was “most likely that [his injuries] occurred during the descent and rotation of the second stage of labor just before delivery.”⁸³ NFOL and the mother’s pushing “caused [the] baby’s brachial plexus to be stretched and pressed against the mother’s pubic bone causing rupture and avulsion of the brachial plexus.”⁸⁴

This testimony is helpful to the jury for several reasons. First, the complexity of the subject, let alone the surrounding debate, place this information

⁸⁰ Clerk’s Papers at 2653.

⁸¹ Id. at 2664.

⁸² Id.

⁸³ Id.

⁸⁴ Id.

beyond the lay jury's competence. Second, this testimony was deeply relevant to important issues in the litigation, namely allowing Hamilton to defend herself by attacking the premises of L.M.'s causation theory that excessive traction caused his injury. The trial court referenced this reason in its oral ruling. Third, these experts grounded the application of their theories and expertise in a deep consideration of the record and specific facts of the case. Because the lay jury is untrained in the complexities of obstetrics and midwifery, these experts provided helpful testimony in understanding what occurred.

For these reasons, the trial court did not abuse its discretion in granting reconsideration and admitting the challenged testimony.

L.M. contends that such testimony is unhelpful because it relies upon studies that do not differentiate between stretches, ruptures, or avulsion. This argument is unpersuasive.

The supreme court considered a similar issue in Anderson v. Akzo Nobel Coatings, Inc.⁸⁵ In that case, Julie Anderson had been exposed to certain paint toxins.⁸⁶ She gave birth to a child suffering from certain medical abnormalities.⁸⁷ At trial, the company that had exposed Anderson to the paint successfully moved to exclude expert testimony linking paint exposure causally to the birth defects.⁸⁸

⁸⁵ 172 Wn.2d 593, 260 P.3d 857 (2011).

⁸⁶ Id. at 597-98.

⁸⁷ Id. at 598.

⁸⁸ Id. at 599.

The supreme court reversed, concluding that the trial court improperly required there “be scientific consensus that a specific type of exposure causes a specific type of injury before expert testimony is admissible under Frye.”⁸⁹ Instead, it emphasized, as discussed above, that expert opinion testimony is admissible “if the science and methods are widely accepted in the relevant scientific community . . . without separately requiring widespread acceptance of the plaintiff’s theory of causation.”⁹⁰ Thus, it was enough that the scientific community generally accepted “that toxic solvents like the ones to which Anderson was exposed are fat soluble, pass easily through the placenta and dissolve into the amniotic fluid inside the uterus, and may damage the developing brain of a fetus within the uterus.”⁹¹ It was not necessary to show general acceptance that ***this*** toxin caused ***this specific*** form of birth defect.⁹²

Here, the relevant studies discuss at length the general acceptance that endogenous NFOL can cause BPIs, both transient and permanent. Under Anderson, this is sufficient. It was not necessary to show that a specific level of NFOL had been shown to cause the specific sort of avulsion or rupture that L.M. suffered. The jury, presented with helpful expert testimony, was required to determine whether a causative link existed. It appears that it concluded there was such a link.

⁸⁹ Id. at 605.

⁹⁰ Id. at 609.

⁹¹ Id. at 610.

⁹² (Emphasis added.)

Prejudice

L.M. argues that the trial court prejudiced him by admitting this testimony on reconsideration one week before trial. The record does not support this argument.

This court will not reverse upon a trial court's decision to admit expert testimony absent prejudice to the appellant.⁹³

Here, the trial court granted reconsideration shortly before trial. But the record shows that L.M. long knew of this theory of causation. Importantly, he had deposed the experts on this theory and had their declarations. We do not see any prejudice based merely on the proximity to trial of the court's ruling on reconsideration.

BIOMECHANICAL FORCES OF LABOR TESTIMONY

Expert Qualification

L.M. next argues that the trial court abused its discretion in admitting Dr. Tencer's biomechanical forces of labor testimony because he does not have a medical degree. We disagree.

ER 702 requires that an expert providing opinion testimony be qualified. An expert can be qualified "by virtue of knowledge, skill, experience, training, *or*

⁹³ Driggs v. Howlett, 193 Wn. App. 875, 903, 371 P.3d 61, review denied, 186 Wn.2d 1007 (2016).

education.”⁹⁴ Thus, an expert’s “practical experience” or “[t]raining in a related field or academic background alone may also be sufficient.”⁹⁵

We review for abuse of discretion a trial court’s decision whether to qualify an expert.⁹⁶

Washington courts have long applied this rule to permit otherwise qualified nonphysicians to testify as to “causation, reasonable prudence, or underlying facts tending to prove [those] ultimate facts” in medical malpractice actions.⁹⁷ This reflects a recognition that “the line between chemistry, biology, . . . medicine_[,]” and other related fields “is too indefinite to admit of a practicable separation of topics and witnesses.”⁹⁸

Dr. Tencer has extensive training and experience in medical settings with injuries to the spinal cord and nerve roots as well as the force levels necessary to cause them. L.M. does not dispute this.

L.M. contends that Dr. Tencer impermissibly provided a medical causation opinion. Not so.

⁹⁴ Harris v. Robert C. Groth, M.D., Inc., P.S., 99 Wn.2d 438, 449, 663 P.2d 113 (1983) (quoting 5A KARL B. TEGLAND, WASH. PRACTICE: EVIDENCE § 289 (1982)).

⁹⁵ Id. (quoting 5A TEGLAND, supra, § 289).

⁹⁶ Johnston-Forbes v. Matsunaga, 181 Wn.2d 346, 352, 333 P.3d 388 (2014).

⁹⁷ Harris, 99 Wn.2d at 450.

⁹⁸ Id. (quoting 2 JOHN HENRY WIGMORE, EVIDENCE § 569, at 790 (rev. 1979)).

A non-medical expert like a biomechanical engineer may be qualified to give certain opinions but not others. An opinion “that the maximum possible force in this accident was not enough to injure a person” is not a medical opinion.⁹⁹ This is so because it includes no opinion about the injured person’s “symptoms or possible diagnosis from those symptoms.”¹⁰⁰

Here, the trial court limited Dr. Tencer’s testimony, precluding him from testifying to causation. There is no evidence that he violated this restriction in his trial testimony. Accordingly, we reject this argument.

Helpful to the Jury

L.M. also argues that the trial court abused its discretion in admitting Dr. Tencer’s testimony when it was not helpful to the jury. We disagree.

The trial court did not abuse its discretion in deciding Dr. Tencer’s testimony would be helpful to the jury in understanding the biomechanical forces at play.

PLASTIC SURGEON’S TESTIMONY

L.M. argues that the trial court abused its discretion in excluding Dr. Raymond Tse from testifying based on lack of qualification as an expert and the cumulative nature of his testimony. We disagree.

Here, Dr. Tse testified by deposition that, because he had only a “secondhand history of the birth,” he could not give an opinion on the cause of

⁹⁹ Ma’ele v. Arrington, 111 Wn. App. 557, 564, 45 P.3d 557 (2002).

¹⁰⁰ Id.

L.M.'s BPI.¹⁰¹ He also testified that the "most common cause of brachial plexus injury is traction in adults. In kids it's thought that it's kind of a traction injury as well to the nerves."¹⁰² But he had not reviewed the "literature from the [obstetrics] side to see what studies have been done in order to figure out how these brachial plexus injuries occur."¹⁰³

Based on such testimony alone, the trial court did not abuse its discretion in precluding Dr. Tse from testifying. He could not testify as an expert because he could not give a relevant expert opinion. Nor had he studied the relevant literature. Thus, this testimony would not have been helpful to the jury and does not satisfy ER 702. Accordingly, we need not reach the issue whether it was also cumulative.

CHANGE OF VENUE

Lastly, L.M. argues that the trial court abused its discretion in granting Hamilton's renewed motion to change venue to Lewis County. We disagree.

RCW 4.12.030(3) authorizes a trial court to change venue if, among other reasons, "the convenience of witnesses or the ends of justice would be forwarded by the change."

We review for abuse of discretion an order to change venue.¹⁰⁴

¹⁰¹ Clerk's Papers at 4926-27.

¹⁰² Id. at 4938.

¹⁰³ Id. at 4950.

¹⁰⁴ Unger v. Cauchon, 118 Wn. App. 165, 170, 73 P.3d 1005 (2003).

Here, the King County superior court concluded that Lewis County was a more proper venue because Hamilton and L.M. both resided in the latter county and all relevant events occurred there. The trial court did not abuse its discretion in considering the parties' home county a more convenient forum.

L.M. contends he could not receive a fair trial in Lewis County because of the small size of the community. He argues that it would be impossible to empanel 12 jurors who did not know Hamilton. This contention is speculative and lacks evidence in the record.

L.M. further argues that the trial court paid inadequate attention to the convenience of his counsel and out-of-state witnesses. We see nothing wrong in the trial court giving more weight to the location of the principals than convenience of counsel in this case.

We affirm the judgment on the jury verdict.

Cox, J.

WE CONCUR:

Trickey, ACJ

Appelwhite