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NO. 95173-0

SUPREME COURT OF THE STATE OF WASHINGTON

L.M., a minor, by and through his Guardian ad litem, WILLIAMS L. E. DUSSAULT,

Appellant,

v.

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

Respondents.

RESPONDENT HAMILTON'S SUPPLEMENTAL BRIEF

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I. INTRODUCTION

L.M. petitioned for review of the Court of Appeals' decision in *L.M. v. Hamilton*, 200 Wn. App. 535, 402 P.3d 870 (2017), insofar as it affirmed the trial court's admission of expert medical testimony as to natural forces of labor (NFOL) causation of L.M.'s brachial plexus injury (BPI) and Dr. Allan Tencer's biomechanical expert testimony as to the forces involved in labor and delivery. This Court granted L.M.'s petition. In this supplemental brief, Respondent Hamilton further explains why the Court of Appeals' affirmance of those trial court rulings was correct.

II. SUPPLEMENTAL STATEMENT OF THE CASE

The main disputes at trial were: (1) whether Midwife Hamilton properly managed L.M.'s delivery or used excessive traction on L.M.'s head and neck; and (2) whether L.M.'s BPI (involving a rupture, partial avulsion or avulsion of all five brachial plexus nerve roots) was caused by NFOL or by use of improper traction. Both sides presented expert medical testimony supporting their contentions on those issues, based upon their medical experts' review of L.M.'s birth video and medical records,[1] interpretation of the literature,[2] and knowledge and experience.

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[1] *See* 10/20 RP (Kelly) 18:11-21; 10/21 RP (Mandel) 11:14-23; 10/22 RP (Glass) 14:22-25, 18:9-11; 10/26 RP (Browder) 30:21-31:4; 10/28 RP (DeMott) 37:8-17; CP 4966, 4971-73, 4986-87 (Collins Dep.).

[2] *See* 10/20 RP (Kelly) 75:1-11, 82:19-83:6; 10/21 RP (Mandel) 67:5-6, 19-21, 68:5-8, 69:2-5, 90:20-91:5, 91:6-92:9, 112:13-113:17, 113:25-114:3; 114:4-115:11, 117:7-21, 118:7-22; 10/22 RP (Glass) 86:7-89:18; 10/26 RP (Browder) 30:25-31:2; 10/28 RP

L.M.'s experts claimed the birth video showed a shoulder dystocia with Midwife Hamilton using excessive traction to relieve it.[3] But, the defense experts disagreed, finding the birth video showed proper handling of the baby, no shoulder dystocia, and no excessive traction.[4] And, L.M.'s experts claimed the medical literature did not support a conclusion that NFOL could cause a rupture or avulsion of the brachial plexus nerve roots like L.M. had and that such an injury must have occurred as a result of excessive lateral traction.[5] But, the defense experts disagreed, citing ample medical literature establishing that permanent BPIs (which include rupture and avulsion injuries) can and do occur from NFOL without intervention by the birth attendant, and opining, more probably than not, that is what occurred in L.M.'s case as the birth video shows proper handling of the baby and no excessive traction.[6]

(DeMott) 8:9-10, 8:19-9:10, 10:13-19:1, 20:12-21:9, 27:18-28:10, 28:23-29:25, 68:15-23, 95:2-14; CP 4969-73, 4982 (Collins Dep.).

[3] *See* 10/20 RP (Kelly) 38:12-39:14, 40:24-41:6, 44:17-19, 57:19-23; 10/21 RP (Mandel) 11:3-13, 21:5-22:19, 25:18-20, 45:2-11, 46:13-47:3, 47:21-24, 48:16-49:2, 70:3-5.

[4] *See* 10/28 RP (DeMott) 45:18-21, 47:15-22, 52:10-53:13, 72:4-73:4, 74:21-23, 84:14-20, 89:6, 91:5-11, 100:9-20; 10/26 RP (Browder) 31:3-33:16, 35:4-6, 48:3-8, 50:24-51:1, 70:2-5, 79:17-80:11, 83:2-7, 83:12-84:2. Dr. Collins, not an obstetrician or midwife, was the only defense expert who thought there was a shoulder dystocia during L.M.'s delivery. *See* CP 4972 (Collins Dep.).

[5] *See* 10/21 RP (Mandel) 69:2-5, 112:13-113:17, 118:19-22; 10/22 RP (Glass) 86:22-24, 89:10-13, 108:14-18, 115:8-10; *see also* 10/20 RP (Kelly) 82:19-83:6.

[6] *See* 10/28 RP (DeMott) 11:11-21:9, 27:18-28:2, 28:23-29:15, 68:15-69:5, 84:4-11, 94:12-95:1; CP 4981-82, 4985-86. Even L.M.'s experts admitted that NFOL can cause fractured clavicles and tailbones, as well as some BPIs, 10/21 RP (Mandel) 88:2-25, 89:1-12; 10/22 RP (Glass) 87:8-13, 89:4-5, 104:23-25, 119:4-7; acknowledged case reports of permanent BPIs occurring without shoulder dystocia, with C-sections, and in cases where the birth attendant was not touching the patient, 10/21 RP (Mandel) 87:17-

After hearing the competing expert testimony as to what L.M.'s birth video showed regarding the delivery and what the literature revealed about causation of neonatal BPIs, the jury found that Midwife Hamilton properly managed the delivery and did not use excessive traction on L.M.'s head and neck, as it returned a verdict answering "No" to the question: "Was Laura Hamilton negligent?" CP 3822-23.

III. SUPPLEMENTAL ARGUMENT

A. The Court of Appeals Properly Affirmed the Admission of Expert Medical Testimony Concerning NFOL Causation.

While decisions as to admissibility of expert testimony under ER 702 are reviewed for abuse of discretion, decisions to admit or exclude novel scientific evidence under *Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923), based on general acceptance in the relevant scientific community are reviewed de novo. *E.g.*, *Lakey v. Puget Sound Energy, Inc.*, 176 Wn.2d 909, 919, 296 P.3d 860 (2013); *Anderson v. Akzo Nobel Coatings, Inc.*, 172 Wn.2d 593, 600, 260 P.3d 857 (2011). As the Court of Appeals correctly noted, however: "*Frye* … 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

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19, 119:3-21; 10/22 RP (Glass) 13:18-19, 115:11-25; and admitted the absence of literature stating that only traction, as opposed to NFOL, can cause avulsion or rupture BPIs. 10/21 RP (Mandel) 90:20-91:5; 10/22 RP (Glass) 120:10-15. Dr. Mandel also acknowledged that literature references to permanent BPIs caused by NFOL include avulsions, ruptures, and bad stretch injuries. 10/21 RP (Mandel) 117:7-21, 118:7-11.

community." *L.M.*, 200 Wn. App. at 539 (quoting *Lakey*, 176 Wn.2d at 919; *Anderson*, 172 Wn.2d at 611). "If the theory or method has general scientific consensus, its application to reach novel conclusions as to causation does not implicate *Frye*." *Id.* at 541 (citing *Lakey*, 176 Wn.2d at 920). "*Frye* does not require every deduction drawn from generally accepted theories to be generally accepted." *Anderson*, 172 Wn.2d at 611.

Here, as explained in the Brief of Respondents Hamilton at pages 28-36, and the Court of Appeals' opinion, *L.M.*, 200 Wn. App. at 540-51, *Frye* was not implicated with respect to NFOL causation evidence in this case. Indeed, there was nothing novel about the scientific methodology the defense medical experts employed to arrive at their causation opinions, nor was there anything novel even about the conclusions they drew. They reviewed L.M.'s medical records and birth video and found no evidence that Midwife Hamilton employed excessive traction on L.M.'s head and neck and concluded that, in the absence of such evidence, based on their interpretation of the peer-reviewed medical literature (which undisputedly shows that NFOL may cause permanent BPIs), NFOL was the cause of L.M.'s permanent BPI. That L.M.'s medical experts, using the same methodology (review of the same evidence and interpretation of the same literature), drew different conclusions does not render the methodology underlying the defense expert medical testimony lacking in general

acceptance. As the Court of Appeals correctly found after reviewing the expert testimony, the medical literature, and cases from other jurisdictions: "*Frye* was not implicated. Extensive peer reviewed literature supports the theory that NFOL may cause BPIs." *L.M.*, 200 Wn. App. at 549.

"*Frye* does not require every deduction drawn from generally accepted theories to be generally accepted." *Anderson*, 172 Wn.2d at 611. Indeed, if '"general acceptance' of each discrete and ever more specific part of an expert opinion" were required, then "virtually all opinions based upon scientific data could be argued to be within some part of the scientific twilight zone." *Id.* L.M. nonetheless continues to insist, *Pet. at 7, Supp. Br. of Pet'r at 3-4, 14*, that general acceptance is lacking because nothing in the medical literature specifically states that a rupture or avulsion of the brachial plexus has been caused by NFOL. But that insistence ignores the fact that there is also nothing in the medical literature that specifically states that natural forces of labor, which the literature reveals can cause permanent BPI, cannot cause the subcategories of permanent BPI that are due to ruptures or avulsions.

As explained at pages 31-36 of the Brief of Respondents Hamilton, and in the Court of Appeals' opinion, *L.M.*, 200 Wn. App. at 540-51, there was more than ample expert testimony and evidence establishing that NFOL can cause permanent BPIs (which include avulsions and ruptures),

see CP 1839 (¶12), 1842-43 (¶22), 2663 (¶3), 2670 (¶9), 2667-71 (¶¶3-11), 4981-82; 10/28 RP (DeMott) 27:18-28, 94:12-95:1. Indeed, L.M.'s own obstetrical expert, Dr. Mandel, conceded that the references to permanent (or persistent) BPIs in the 2014 American College of Obstetrics and Gynecology (ACOG) Report on "Neonatal Brachial Plexus Palsy," CP 1867-1987, include avulsions, ruptures, and severe stretch injuries. 10/21 RP (Mandel) 117:7-21, 118:7-11; *see also* CP 1839 (¶12), 2670 (¶9). And, as the Court of Appeals properly noted, *L.M.*, 200 Wn. App. at 550-51, to the extent that an analytical gap exists because reliable prospective testing concerning the amount of force needed to rupture or avulse a neonate's brachial plexus cannot ethically be done because of the risk to mothers and infants, such that the scientific community is divided on whether NFOL can and does cause certain avulsions and ruptures, "this gap goes to the weight, not the admissibility, of this evidence."

L.M. also argues, *Supp. Br. at Pet'r at 13-14*, that because one study found a three-to-four-fold increased risk of neonatal BPI with shoulder dystocia attended by a midwife, nurse, corpsman, or osteopath, that must mean those practitioners applied too much traction, and thus, because Hamilton was a midwife, the trial court should not have allowed expert testimony that NFOL, rather than midwife traction caused L.M.'s BPI. That argument, however, is a complete non sequitur and also ignores

that whether there was shoulder dystocia in this case was hotly disputed.

L.M., *Supp. Br. of Pet'r at 15-16*, asks this Court to consider two medical articles that were not before the trial court in determining whether NFOL causation evidence meets the *Frye* standard. Both of those articles, however, support Respondent Hamilton's position concerning general acceptance. Indeed, although this case has nothing to do with prevention of shoulder dystocia (and it was disputed whether L.M. even experienced a shoulder dystocia during delivery), the author in Iffy, *Prevention of shoulder dystocia related birth injuries: myths and fact*s, WORLD JOURNAL OF OBSTETRICS AND GYNECOLOGY, Nov. 10, 2014; 3(4): 148-161, makes clear on the sixth page of that article that "among American obstetricians the idea that most [BPIs] develop "in utero" spontaneously has gained wide acceptance." And, the authors in Megan G. Hill & Wayne R. Cohen, *Shoulder Dystocia: Prediction and Management*, WOMENS HEALTH (Lond.), 2016 Mar; 12(2): 251-61, makes clear on page one of the article that "[t]here is enough evidence that BPI can occur in the absence of shoulder dystocia to conclude that not every injury is the consequence of excessive force applied by the obstetrician or midwife" and "it seems equally clear that BPI can occur in association with shoulder dystocia even when the complication has been managed optimally."

Finally, to the extent that L.M. argues, *Pet. at 1, 13*; *Supp. Br. of*

Pet'r at 14-15 that this Court should remand for a *Frye* hearing, L.M. ignores that he never asked the trial court to conduct any *Frye* hearing other than what it conducted based on the briefs, literature, other jurisdiction cases, and arguments submitted by the parties. *See Answer to Pet. at 11*. '"[A] party who fails to seek a *Frye* hearing below does not preserve this evidentiary challenge for review." *Johnston-Forbes v. Matsunaga*, 181 Wn.2d 346, 356, 333 P.3d 388 (2014) (quoting with approval from *Johnston-Forbes v. Matsunaga*, 177 Wn. App. 402, 407-08, 311 P.3d 1260 (2013)); *see also In re Det. of Post*, 145 Wn. App. 728, 755, 187 P.3d 803 (2008*), aff'd*, 170 Wn.2d 302 (2010).

B. <u>The Court of Appeals Properly Found No Abuse of Discretion in Admitting Dr. Tencer's Testimony Concerning the Biomechanical Forces Involved in Labor and Delivery</u>.

Evidentiary rulings, including those on admissibility of expert testimony, are reviewed for abuse of discretion. *Gilmore v. Jefferson County Pub. Transp. Benefit Area*, 190 Wn.2d 483, 494, 415 P.3d 212 (2018). "A court abuses its discretion when an 'order is manifestly unreasonable or based on untenable grounds.'" *Id.* (citations omitted). "[A] reviewing court may not find abuse of discretion simply because it would have decided the case differently – it must be convinced that 'no reasonable person would take the view adopted by the trial court.'" *Id.* (citations omitted). In the context of expert testimony, "[i]f the basis for admission

of the evidence is 'fairly debatable,'" the appellate court will not disturb the trial court's ruling. *Id.* (citations omitted). "[T]he appellate court may not substitute its judgment for that of the trial court" and '"may not find abuse of discretion simply because it would have decided the case differently." *Id.* at 497 n.2 (citation omitted).

Here, it cannot be said that "no reasonable person would take the view adopted by the trial court" in admitting Dr. Tencer's expert testimony as to the biomechanical forces at play in labor and delivery. As this Court has explained specifically with regard to biomechanical expert testimony by Dr. Tencer, "trial courts have wide discretion in determining the admissibility of biomechanical testimony," and "a trial court does not abuse that discretion if it follows '"the analytical framework required under the ERs."' *Gilmore*, 190 Wn.2d at 495 (quoting *Johnston-Forbes*, 181 Wn.2d at 354). Under ER 702, a qualified expert may testify if the expert's "scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue." In determining admissibility of expert testimony, our courts generally look to three elements – whether:

> (1) the expert is qualified; (2) the expert relies on generally accepted theories in the scientific community, and (3) the testimony would be helpful to the trier of fact.

Gilmore, 190 Wn.2d at 495 (citing *Johnston-Forbes*, 181 Wn.2d at 352).

All three elements for determining admissibility of Dr. Tencer's biomechanical expert testimony were satisfied. First, the trial court concluded that Dr. Tencer was qualified to give expert testimony on the biomechanical forces at play in labor and delivery, s*ee* 10/12 RP (Motion Hearing) at 37, and the Court of Appeals properly found no abuse of the trial court's discretion in so concluding, *L.M.*, 200 Wn. App. at 557. Indeed, Dr. Tencer was qualified to testify as an expert on the biomechanical forces involved in labor and delivery by virtue of his knowledge, training, and experience as a biomechanical engineer and his review of the available biomechanical studies and literature concerning those forces. He holds a Ph.D. in Mechanical Engineering, and worked for 7 years as a University of Texas Assistant Professor of Surgery, and then for more than 27 years as a University of Washington Full Professor of Orthopedics and Sports medicine and Adjunct Professor of Mechanical Engineering. CP 2372-73 (¶2); 10/27 RP (Tencer) 5:16-8:9. He personally has done biomechanical research studying the strength of the spinal cord and nerve roots, the elastic strength of nerves and the dura surrounding and protecting the nerve roots and spinal cord, as well as the forces involved in fracture of bones. CP 2372-73 (¶2); 10/27 RP (Tencer) 5:16-7:14. Not only has he published numerous peer-reviewed articles relating to his own research, *see* CP 2380-2402, 10/27 RP (Tencer) 8:10-23, but also he

reviewed the published research of other biomechanical engineers who have specifically studied the forces at play in labor and delivery, *see* CP 2373-76, 2404-2503; 10/27 RP (Tencer) 9:17-20, 10:22-11:19. That was more than enough to qualify him as an expert to testify concerning the endogenous and exogenous forces at play during labor and delivery, and whether the endogenous forces, which can cause fractures of the infant's clavicle and of the mother's tailbone, can be sufficient to cause rupture or avulsion of the brachial plexus.

Notwithstanding L.M.'s protestations to the contrary, *see e.g., Pet. at 16, Supp. Br. of Pet'r at 5-6,* for Dr. Tencer to be qualified to give the testimony he gave concerning the biomechanical forces at play in labor and delivery, he did not need a medical degree or specialized experience with childbirth, nor did he need to have personally conducted the biomechanical research that has been published concerning those forces. As the Court of Appeals properly noted, our courts have long allowed "otherwise qualified nonphysicians to testify as to 'causation, reasonable prudence, or underlying facts tending to prove [those] ultimate facts' in medical malpractice actions," recognizing that '"the line between chemistry, biology, … medicine," and other related fields "'is too indefinite to admit of a practicable separation of topics and witnesses.'" *L.M.*, 200 Wn. App. at 557 (quoting *Harris v. Robert C. Groth, MD, Inc.*, 99 Wn.2d 438, 450,

663 P.2d 113 (1983) and 2 JOHN HENRY WIGMORE, EVIDENCE IN TRIAL AT COMMON LAW §569, at 790 (Chadbourn rev. 1979)).

Dr. Tencer was not asked to give and did not give a medical opinion as to standard of care or causation of L.M.'s BPI, nor was he asked to testify about the actual forces involved in L.M.'s labor and delivery or whether L.M.'s BPI resulted from exogenous or endogenous forces or some combination thereof, something he admitted he could not do from a biomechanical perspective.[7] *See* CP 2376 (¶5(i)); 10/27 RP (Tencer) 16:5-14. He was asked to describe the endogenous and exogenous forces generally at play in labor and delivery and the relative strength of bones versus nerves. As he was not asked to, and did not, give medical expert testimony, he did not need a medical degree to testify as he did. *See, e.g.*, *Ma'Ele v. Arrington*, 111 Wn. App. 557, 564, 45 P.3d 557 (2002).

Nor did he need to have personally conducted the research upon which he relied as to the biomechanical forces at play in labor and delivery. As the Court of Appeals properly noted: "An expert can be qualified '"by virtue of knowledge, skill, experience, training, ***or*** education." *L.M.*, 200 Wn. App. at 556 (quoting *Harris, Inc.*, 99 Wn.2d at 449),

[7] Contrary to L.M.'s assertions, *Pet. at 18*; *Supp. Br. of Pet'r at 8*, Tencer did not attempt to suggest how much force Midwife Hamilton applied in L.M.'s case, nor was his testimony in any way "crafted to cause the jury to speculate or assume that Hamilton applied a safe amount of force." Indeed, as L.M. concedes, *Supp. Br. of Pet'r at 8*, "[t]here was nothing in Tencer's testimony to suggest that Hamilton did not use excess force or that less than 150 N is safe."

and 5A KARL B. TEGLAND, WASHINGTON PRACTICE: EVIDENCE LAW AND PRACTICE § 289 (2d ed. 1982)). "[A]n expert's 'practical experience' or '[t]raining in a related field or academic background alone may also be sufficient"' *Id.* (quoting *Harris*, 99 Wn.2d at 449 and 5A TEGLAND, § 289). It is not essential that an expert acquire his knowledge through personal experience, as an expert may testify based on training, experience, professional observations, and acquired knowledge. *E.g.*, *Reese v. Stroh*, 128 Wn.2d 300, 307-08, 907 P.2d 282 (1995); *State v. Rodriguez*, 163 Wn. App. 215, 232, 259 P.3d 1145 (2011). Indeed, L.M. has cited no authority suggesting that an expert cannot base his opinions on published works done by others in his field or must have personally conducted studies like those on which he relies.

Second, the methodologies Dr. Tencer relied upon were generally accepted in the scientific community. In addition to his own research and publications regarding spinal cord and nerve root injuries,[8] he relied upon the findings of published biomechanical studies concerning the cause of neonatal BPIs done by other biomechanical engineers such as Michelle Grimm, Ph.D. – biomechanical studies relied upon and cited in peer-

[8] L.M. complains, *Supp. Br. of Pet'r at 10*, that while Tencer referenced his own research, he did not identify or discuss it at length, and the trial court did not require him to produce his research. But, L.M., who had Dr. Tencer's curriculum vitae listing his all of his publications, never asked to depose him and never moved to compel production of the specific research he had done that formed the basis of his opinions.

reviewed medical literature like the 2014 ACOG Report, CP 1867-1987, a report that has been endorsed by numerous professional societies, CP 2668 (¶4).[9] *See* CP 2373-74 (¶4), 2375 (¶5.e). L.M.'s assertions that "no credible science exists to support Tencer's attempt to quantify the forces present during labor," *Pet. at 15, see also Supp. Br of Pet'r. at 12,* or that "Tencer testified to measurements of forces that are not known to science," *Supp. Br. of Pet'r at 6, 7,* are belied by the biomechanical studies cited in the 2014 ACOG Report, and cases from other jurisdictions that have found biomechanical engineering expert testimony based on such studies admissible under the "general acceptance" test of *Frye, see Ruffin v. Boler*, 384 Ill. App. 3d 7, 890 N.E.2d 1174, 1187-89 (2008), and the scientific reliability test of *Daubert, see Dorman v. Anne Arundel Med. Ctr.*, 2018 U.S. Dist. LEXIS 75560 (D. Md. May 4, 2018); *Bayer v. Dobbins*, 2016 WI App. 65, 371 Wis. 2d 428, 885 N.W.2d 173, 180-83 (2016) (reversing trial court's exclusion of Michelle Grimm, Ph.D.'s testimony that maternal forces of labor alone can cause permanent BPI, which was based in part on her computer modeling research).

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[9] Among the professional societies endorsing the 2014 ACOG Report are The American College of Nurse-Midwives, The Child Neurology Society, The Amerian Gynecological and Obstetrical Society, The American Academy of Pediatrics, The American Academy of Physical Medicine and Rehabilitation, The American Society for Reproductive Medicine, the Society for Maternal-Fetal Medicine, The Japan Society of Obstetrics and Gynecology, The Royal Australian and New Zealand College of Obstetricians and Gynecologists, and The Society of Obstetricians and Gynaecologists of Canada. CP 1878, 2668.

To the extent that L.M. takes issue with certain conclusions Dr. Tencer drew from the published biomechanical studies that have been done to measure the endogenous and exogenous force involved in labor and delivery, that may have provided fodder for cross-examination, but it does not render his testimony unreliable. For example, although L.M. complains, *Pet. at 17-18*; *Supp. Br. of Pet'r at 8*, about Dr. Tencer's declaration testimony, CP 2375 (¶5(e)), that, according to the studies, "[e]xogenous forces ranged from 100 N in actual births and up to 250 N during simulations although most clinicians applied less than 150N during delivery," that testimony was drawn directly from the published literature, *see* CP 2431.[10] The same is true of L.M.s complaints, *Supp. Br. of Pet'r at 9*, as to Dr. Tencer's testimony about the measured endogenous forces being greater than the measured exogenous forces. *Compare* CP 2375 (¶5(f)) and 10/27 (Tencer) RP 18:10-13 *with* CP 1840-41 (¶¶16.c and 17), 2375 (¶5(e) and 2434.[11]

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[10] That testimony hardly "covers up" findings of forces as high as 254 N, or that 28% (which is less than a majority) of clinicians used force in excess of 150 N, as L.M. argues, *Supp. Br. of Pet'r at 8*. If L.M. wished to quibble over 250 N versus 254 N, or to point out that 28 % of clinicians were found to use force in excess of 150 N, he was free to do so on cross-examination.

[11] L.M. also takes issue, *Supp. Br. of Pet'r at 6, 10*, with Dr. Tencer's testimony concerning compressive forces, claiming that such forces are somehow irrelevant with respect to the possible causes of BPI. His arguments in that regard, however, reflect a fundamental misunderstanding of Tencer's testimony about the endogenous compressive forces and how they may result in injury to a fetus's brachial plexus, testimony which was consistent with what is stated in the published literature. *Compare* CP 2374-76 (¶5) *with* CP 2424-38.

Third, the trial court concluded that Dr. Tencer's testimony would be helpful to the jury to understand the biomechanical forces at play, 10/12 RP (Motion Hearing) 37, and the Court of Appeals properly found the trial court did not abuse its discretion in so concluding, *L.M.*, 200 Wn. App. at 558. Indeed, most laypersons do not have an understanding of the endogenous and exogenous forces at play in labor and delivery, the potential magnitude of such forces, or the relative strength of bones and nerves. Dr. Tencer's testimony as to such matters would be of educational value to the jury in understanding and evaluating the causation evidence, especially where, as here, L.M.'s experts contended that it was impossible for natural forces of labor to cause L.M.'s BPI. "Expert testimony is usually admitted under ER 702 if helpful to the jury's understanding of a matter outside the competence of an ordinary layperson." *Reese*, 128 Wn. 2d at 308.

Citing the final question asked, without objection, of Dr. Tencer on direct exam as to whether in his opinion "the forces of labor, the natural forces, [can]cause the rupture and avulsion of a brachial plexus," 10/27 RP (Tencer) 22:6-9, L.M. asserts, *Supp. Br. at Pet'r at 11*, that "Dr. Tencer testified about causation, in spite of Hamilton's assurance to the trial court." But what both Dr. Tencer in his declaration, CP 2376 (¶5(i) and defense counsel, CP 2360, 10/12 RP (Motion Hearing) 14:6-14, had assured the trial court was that Dr. Tencer would not offer medical

opinions or opine as to what caused L.M.'s BPI. And, even if the question asked were somehow an impermissible one, which it was not, the trial court made clear that if Dr. Tencer's testimony impermissibly crossed the line into causation, the court expected "an immediate objection which will be sustained." 10/12 RP (Motion Hearing) 37:23-38:2. L.M.'s counsel made no such objection to the question asked, and L.M. has not shown how the mere asking of the question was so prejudicial that it could not have been cured by an immediate objection.

Rather ironically, L.M. also complains, *e.g.*, *Pet. at 16*, *see also Supp. Br. of Pet'r at 7*, that Tencer's testimony lacked foundation or was unhelpful because he "did not apply what little science that exists to the facts of the case," as neither the specific forces Midwife Hamilton used nor the internal forces of the mother during L.M.'s delivery were not measured or known. But, Dr. Tencer was not called to testify about the specific cause of L.M.'s BPI or the specific degree of endogenous or exogenous forces that were at play during his labor and delivery. He was called to provide the jury with an understanding of the endogenous and exogenous biomechanical forces generally at play during labor and delivery and how it is, from a biomechanical perspective, that such forces can cause BPI. That he was called to testify about the nature of the forces involved and the likelihood that they could cause injury did not render his

testimony inadmissible or unhelpful. *See Ma'Ele*, 111 Wn. App. at 564 (affirming admission of Dr. Tencer's testimony where he "simply testified about the nature of the forces involved in low-speed collisions and the likelihood of injury from such forces"); *Johnston-Forbes*, 181 Wn.2d at 356 (affirming admission of Dr. Tencer's testimony where it "helped the jury understand what forces might have been involved in the collision and he compared those forces to activities of daily living" and it was left to the jury "to determine whether they believed [plaintiff] experienced the same force of impact, and, if so, whether that caused her injury").

Because Dr.Tencer was qualified, because he relied on generally accepted theories in the scientific community, and because his testimony would be helpful to the trier of fact, his testimony met all three elements governing admissibility, and the Court of Appeals correctly found that the trial court did not abuse its discretion in admitting his expert testimony.

L.M. nonetheless suggests, *Pet. at 14; Supp. Br. of Pet'r at 6*, that because Dr. Tencer has been precluded from testifying in certain cases such as such as *Stedman v. Cooper*, 172 Wn. App. 9, 292 P.3d 764 (2012), even though other courts have allowed his testimony, *see Ma'ele*, 111 Wn.App. at 562-65; *Johnston-Forbes*, 181 Wn.2d at 349, 357, his testimony should have been excluded in this case. But, as this Court has made clear: "Understanding that the admissibility of such testimony could

vary from case to case … it is not 'remarkable that trial judges have sometimes allowed biomechanical engineering testimony, and specifically Tencer's testimony, where sometimes trial judges have excluded it.'" *Gilmore*, 190 Wn.2d at 495-96 (quoting *Johnston-Forbes*, 181 Wn.2d at 353-54). '"The broad standard of abuse of discretion means that courts can reasonably reach different conclusions about whether, and to what extent, an expert's testimony will be helpful to the jury in a particular case.'" *Id.* at 496 (quoting *Johnston-Forbes*, 181 Wn.2d at 353-54, and *Stedman*, 172 Wn.2d at 18).

Finally, even if the trial court had abused its discretion in admitting Dr. Tencer's testimony, which it did not, L.M. has failed to show any prejudice. Dr. Tencer did not testify to the applicable standard of care. His testimony went only to the issue of causation and whether, given what is known about the biomechanical forces at play in labor and delivery, NFOL could cause a rupture or avulsion of a neonate's brachial plexus, an issue the jury did not reach. The jury in this case did not reach the issue of causation as it ultimately found that Midwife Hamilton was not negligent. Moreover, Dr. Tencer's testimony was not the only testimony that NFOL could cause a rupture or avulsion of an infant's brachial plexus, as obstetrician Dr. DeMott and neurologist Dr. Collins also testified to that effect. *See* 10/28 RP (DeMott) 28:3-10, 67:3-69:5; CP 4981-82. "[E]rror

without prejudice is not grounds for reversal" and "[e]rror will not be considered prejudicial unless it affects, or presumptively affects, the outcome of the trial." *Brown v. Spokane Fire Prot. Dist. No. 1*, 100 Wn.2d 188, 196, 688 P.2d 571 (1983). Evidence that is "merely cumulative in nature" is "harmless error." *Id.*

IV. CONCLUSION

The Court of Appeals properly found no error or abuse of discretion in the trial court's admission of expert medical testimony concerning NFOL causation of L.M.'s BPI or Dr. Tencer's biomechanical testimony as to the biomechanical forces involved in labor and delivery. This Court should affirm the Court of Appeals' decision.

RESPECTFULLY SUBMITTED this 8th day of October 2018.

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CERTIFICATE OF SERVICE

I hereby certify under penalty of perjury that under the laws of the State of Washington that on the 8th day of October, 2018, I caused a true and correct copy of the foregoing document, "Respondent Hamilton's Supplemental Brief," to be delivered in the manner indicated below to the following counsel of record:

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