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STATE OF WISCONSIN COURT OF APPEALS
DISTRICT III

UNITY BAYER,
by her guardian ad litem,
Vincent R. Petrucelli,
LEAH BAYER and
ANDREW BAYER,

Plaintiffs-Respondents,

and

JOHN ALDEN LIFE INSURANCE COMPANY,

Involuntary Plaintiff,

vs.

Appeal No. 2015-AP-1470
Case No. 13-CV-271
Code No. 30104

BRIAN D. DOBBINS, M.D.,
MMIC INSURANCE, INC.,
PREVEA CLINIC, LLC, and
DEF INSURANCE COMPANY,

Defendants-Appellants,

and

INJURED PATIENTS AND FAMILIES
COMPENSATION FUND,

Defendant-Co-Appellant.

APPEAL FROM THE CIRCUIT COURT FOR MARINETTE COUNTY
HONORABLE DAVID G. MIRON PRESIDING
MARINETTE COUNTY CIRCUIT COURT CASE NO. 13-CV-271

BRIEF OF DEFENDANT-CO-APPELLANT

NASH, SPINDLER, GRIMSTAD & MCCRACKEN LLP
Terri L. Weber
State Bar No. 1027628
Katelyn P. Sandfort
State Bar No. 1079785
Attorneys for Defendant-Co-Appellant, Injured Patients and Families Compensation Fund
1425 Memorial Drive
Manitowoc, WI 54220
Telephone: (920) 684-3321
Facsimile: (920) 684-0544

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INTRODUCTION

This lawsuit arises out of injuries sustained by Plaintiff Unity Bayer during labor and delivery. Unity Bayer experienced a medical complication called a shoulder dystocia when her shoulder became stuck on her mother's pelvis as she passed through the birth canal. As a result of the shoulder dystocia, Unity Bayer suffered a permanent brachial plexus injury, which damaged the nerves that run from her neck to her left upper extremity.

Plaintiffs Leah Bayer (mother), Andrew Bayer (father), and Unity Bayer (child) filed suit against obstetrician Dr. Brian Dobbins alleging he negligently applied excess traction during the shoulder dystocia which caused the brachial plexus injury. Defendants' experts opined during their depositions that there are multiple causes of brachial plexus injuries, including maternal labor forces. Defense experts unanimously agree that the injury in this case was the result of maternal labor forces (contractions and pushing).

The Court granted Plaintiff's Motion In Limine to bar the defendants' experts from testifying about maternal forces in this case.

The trial court's decision misinterpreted Wisconsin's new statute on expert testimony (the Daubert standard) and its misunderstanding of the biomechanics of brachial plexus injuries has all but assured a verdict for the plaintiffs when this matter proceeds to trial. In short, the trial court ruled that not only are defense experts barred from discussing their experience with shoulder dystocias that result in temporary brachial plexus injuries, but the defense is barred from offering any

other cause (namely maternal labor forces) for the brachial plexus injuries. This leaves only the plaintiffs' theory that excessive traction caused Unity Bayer's injury. The trial court admitted that this may result in a directed verdict.

STATEMENT OF ISSUES PRESENTED

1. Did the Court inappropriately surpass its role as a gate keeper under Daubert when it evaluated the competing scientific analyses and concluded that Unity Bayer's injury could have only occurred as a result of excessive traction? Answered by the trial court: unanswered. Correct answer: yes.

2. Is it appropriate for the defendants in a brachial plexus injury case to be allowed to present opinions based on peer reviewed literature and studies that indicate serious injuries can result from maternal labor forces? Answered by the trial court: no. Correct answer: yes.

STATEMENT OF THE FACTS

1. Background Facts

This medical malpractice lawsuit arises from injuries sustained by Unity Bayer during her delivery on December 28, 2006. (R.46 Exh. 4, A-App 1). Unity Bayer is Leah Bayer's second child. (Id.) Leah Bayer's first child was delivered via cesarean section. (Id.) For the second delivery, Leah Bayer chose to proceed with a vaginal birth after cesarean (VBAC). (Id.)

Initially, Leah Bayer's labor progressed as expected. However, she tired and her delivery slowed. (Id.) Dr. Dobbins offered her a cesarean which she declined. (Id.) Dr. Dobbins also offered to use a vacuum to assist in delivering Unity and

explained that there was an increased risk of shoulder dystocia (when the fetal shoulder becomes lodged on the mother's pelvis) with the use of vacuum. (R.46, Exh 3, p. 119:12-19, A-App3). Leah Bayer agreed to the vacuum. (R.46 Exh 4, A-App 1).

Dr. Dobbins used the vacuum to assist in delivering Unity Bayer. He diagnosed a shoulder dystocia after the child's body did not deliver after gentle downward traction. (R.46, Exh 3, p. 123:23-124:1, A-App 4). Unity Bayer's right shoulder was stuck. This is considered an obstetrical emergency since the child can suffer brain damage from lack of oxygenation if not delivered promptly. As a result, Dr. Dobbins performed two obstetrical maneuvers which are designed to facilitate delivery without using excess traction. (R.46 Exh 4, A-App 1). The maneuvers were successful and Unity Bayer was delivered. (R.46, Exh 3, p. 123:23-124:1, A-App 4).

Unity Bayer was later diagnosed with a permanent brachial plexus injury. A brachial plexus injury damages the nerves from the neck and spine to the arm and hand. The Bayers allege that Dr. Dobbins caused the brachial plexus injury by exerting excessive traction when the shoulder dystocia occurred. Dr. Dobbins explained that the injury was not the result of medical negligence as he only used gentle downward traction. (R.46, Exh 3, p 121:5-7, A-App 3). Instead, the injury was the result of maternal forces of labor, primarily Leah Bayer's contractions coupled with her pushing during labor and delivery. Within the past twenty years,

a wealth of literature has arisen which supports that brachial plexus injuries can occur as a result of maternal forces of labor.[1]

2. The Defense Expert Opinions

A. Dr. Dobbins

Dr. Dobbins believes that he complied with the standard of care at all times and the brachial plexus injury suffered by Unity Bayer was unrelated to excessive traction. (R. 73, Exh. 46, p. 3, A-App 10). He is familiar with the medical literature that discussed the various causes of brachial plexus injuries. (Id.).

B. Dr. Rouse

Defense expert Dr. Rouse explained that he relied on ACOG's monograph on neonatal brachial plexus injuries, the ACOG practice bulletins, and the ACOG documents on shoulder dystocia as support for his opinions that the maternal forces of labor caused Unity Bayer's injuries. (R.73, Exh 44 p. 14:12-15:22, 109:17-21, A-App 29).

C. Dr. DeMott

Dr. DeMott explained that not only did maternal forces cause the brachial plexus injury, but it also caused the large bruise on Unity Bayer's ulnar bone because "you don't deliver the baby by the ulnar bone". (R.73, Exh 43, p. 22:23-23:18, A-App 66). Dr. DeMott has published on brachial plexus injuries caused by maternal forces of labor, and his theory has been tested in studies by at least two

1 The Fund incorporates and adopts Dobbins' argument and summary on the medical literature and studies on maternal forces of labor.

scientists. (R.73, Exh 43, 30:7-14; 38:15-18, A-App 68, 70). He also cited to multiple articles which support permanent brachial injuries occurring without excessive traction. (R.73, Exh 43, 43:4-17, A-App 71).

D. Dr. Grimm

Unlike Dr. Dobbins and the retained OB/GYN experts, Dr. Grimm is not a medical doctor, but she is a biomedical engineer. Dr. Grimm's opinion is that the injury resulted from maternal labor forces. While there could have been some vacuum and gentle manual traction by Dobbins, those forces are less than the maternal labor forces. (R.73, Exh 45, 35:14-36:7, A-App 88). The basis for her opinions are her own studies as well as studies of others, her training and experience, and the medical literature. (R.73, Exh 45, 36:18-37:11, A-App 88).

Dr. Grimm's studies are focused on the science behind various natural forces which occur during the delivery process and which affect the brachial plexus. (R.73, Exh 45, 71:15-19, A-App 97). There is no data available for exerting the forces directly on human neonatal brachial plexus as to do such a study would be unethical (it would require intentionally causing injury to a child during delivery). For these ethical reasons, Dr. Grimm's research has been done through the use of animal studies. Modeling studies in 2003 demonstrated that maternal forces stretch the brachial plexus and these forces are sufficient to cause injuries in some infants. (R.73, Exh 45, 70:19-24, A-App 97). Additional studies confirmed that finding in 2010. (R.73, 81:25-82:4, A-App 99-100).

E. Dr. Scher

Dr. Scher is a pediatric neurologist. Like the other experts, Dr. Scher believes that Unity Bayer's injury is most likely the result of maternal forces of labor. (R.57, Exh 1, 18:8-13, A-App 121). Indeed, he testified "I believe, more probably than not, there are much more substantial factors other than the maneuvers over a two-minute period of time that caused or contributed to this child's injury." (R.57, Exh 1, 19:16-20, A-App 121).

3. The Court's Exclusion of the Maternal Forces of Labor Theory

A. The Bayers' Motion In Limine

Numerous motions in limine were filed by all parties. The plaintiffs moved in limine to bar any evidence relating to maternal forces of causation under the Daubert standard and Wis. Stat. § 907.02(1). (R.53, A-App 144). The Bayers asked the Court to conclude that the maternal forces of labor theory was essentially junk science. They claim that the maternal forces of labor theory was disproven by their expert witness, Robert Allen, Ph.D. (R.53, p 8-9, A-App 151-152). The Bayers argue that Dr. Grimm's studies are unreliable because they use animals rather than newborns. (R.53, p 32, A-App 175). Of course, that argument ignores the fact that to do this type of research on humans would be illegal and unethical.

The Bayers also argue that there is no evidence of pushing or maternal contractions which could have caused Unity Bayer's injury. (R.53, p 31, A-App 174). Again, the Bayers' argument is faulty since it ignores the reality of this actual labor (and all labors in general). There cannot be direct evidence since as there was

no pressure device in Leah Bayer's body (or any women's body during labor) which would conclusively prove or disprove labor pressures. The trial court was expected to disregard that women in the second stage of labor have contractions and often have unavoidable pushing.

Finally, the Bayers are critical of the peer reviewed articles on maternal forces of labor causing brachial plexus injuries on the basis that the articles are "overly concerned with litigation" and written by "experts" (R.53, p 28, A-App 171). Again, the Bayers wanted the trial court to ignore that these articles have not only been published in peer reviewed journals but also now are found within the major obstetrical textbooks.

B. Dobbins Response To The Bayers' Motion in Limine

Dobbins, in response to the Bayers' Motion In Limine, cited to numerous peer reviewed medical publications which demonstrated that maternal forces of labor was a recognized cause of brachial plexus injury. This is true for both permanent and temporary brachial plexus injuries. (R.77, p. 12-22, A-App 192-202). Dobbins also provided the Court with a list of peer reviewed articles authored by Dr. Grimm as well as an in depth description of her studies as reported by ACOG. (R.77, p. 42-45, A-App 222-225). The Fund joined in Dobbins motions in limine.

C. The Trial Court's Decision

The Bayers wanted the trial court to conclude there can be only one mechanism that causes a permanent brachial plexus injury rather than multiple causes as explained in the literature. Unfortunately, the Court agreed with this line

of reasoning and concluded that the excess traction theory was more persuasive than the maternal forces theory. It held that maternal forces of labor do not cause permanent brachial plexus injuries. In doing so, the Court stepped beyond its role as a gate keeper and into the role of the jury. Pertinent sections of the trial court's decision are below:

> Court: Well I am going to allow them – they can bring in their theory of maternal forces of labor, I think it's out there enough, but if they don't have the expert testimony behind it regarding permanent brachial plexus injuries, then we're not going to listen to it. And it may very well be that this ruling guts the maternal forces of labor argument, and if that's what it does, well, then so be it.
>
> Leib: Well, Judge, you have all the sufficients; our experts are going to testify that the permanent brachial plexus injury in this child was caused by maternal forces.
>
> Court: But they can't identify what source.
>
> Leib: Well, they can say generally what the forces are.
>
> Court: I don't want generally. I want specifics. That's what I am telling you here. I want specifics about what they're claiming happened here. I'm not going to let them go into 15 different ways that this thing could possibly happen in the general population. It needs to be specific as to what happened to this child.
>
> Leib: Well – and I think we already covered this, but even the case law allows for possibilities, but they're not – they don't even need that case law, the law would allow for that to be admitted, Judge. Possibilities. Because of the defense end of it.
>
> Court: But I'm not going to have you talking about possibilities of things when in fact those possibilities did not occur in this case.

(R.100, 66:10-67:19, A-App 301-302).

> Court: Hey, this is what they want us to do now with these Daubert cases. I'm supposed to look at this stuff and determine whether – and a lot of my argument here, or my decision here is based on whether this stuff is even relevant.
>
> But this cuts both ways. There have been times that I've gutted the plaintiffs case on causation because they're relying on articles that I don't think have anything to do and can't be used to draw the opinions that people are trying to draw from them. So if I'm doing it against the defense at this time, well, apparently that's what the legislature wants me to do.

(R.100, 70:13-25, A-App 305).

Initially, the trial court prohibited Dobbins and the Fund from using the Lerner article (which discusses a permanent brachial plexus injury that occurred in a case of no traction), any articles that discuss temporary brachial plexus injuries, and all articles that do not distinguish between temporary and permanent brachial plexus injuries. (R.100, 73:22-74:10, 64:10–23, A-App 308-309, 299). However, the Court took it one step further in stating that even without mentioning the articles, the experts could not even consider them.

> Leib: And I – Judge, clearly I respect the Court and the Court's ruling, but I just want to make sure that I know where we are, because we got time now, this trial is a long way in the distance, and I feel that, if I understand that Court's ruling correct, these experts don't get to testify, and all of these things that they would base their opinions on are not going to be – they not only don't get to say it, but they don't get to use it, even within their own minds, to arrive at their opinions.
>
> Court: Right.

(R.100, 79:19-80:5, A-App 314-315).

Ultimately, the Court granted the Bayers' motion in limine No. 12 to preclude defense experts from testifying that the maternal forces of labor caused Unity Bayer's permanent brachial plexus injury. (R.100, 82:10-15, A-App 317). The result of this decision is extremely prejudicial as it left Dobbins and the Fund without a standard of care or causation defense.

What is most concerning is that the court did not use the Daubert standard or explain the Daubert factors which led to its decision to bar the maternal forces of labor theory. It failed to comment on the numerous articles besides the Lerner article which it thought was "disingenuous". It also failed to consider the studies

performed by Dr. Grimm whose results are found in numerous peer reviewed publications.

The circuit court's position was reiterated later when it stated, "I think, really, as I was reading through this, too, I think this is right for that res ipsa loquitur instruction that I doubt that I've ever given before, but this sounds like a case tailor-made for it." (R.100, 98:16-21, A-App 332) Indeed, the Court, without prompting from the parties, brought up a res ipsa instruction on three occasions. (R.100, 98:16-21, 119:13-16, 145:6-10, A-App 332, 353, 345). The Court explained his reasoning for his decision at the end of the hearing.

> Court: Everything that I'm reading here is – and it looks to me like even the articles that your people have relied upon indicate that, yes, for over 100 years, everyone agreed you get a permanent brachial plexus injury under circumstances where you have a shoulder dystocia and too much traction applied by the doctor. **And then, within the last 20 years, the defense bar has been coming up with this other theory that it could be the maternal forces of labor that's doing this.**
>
> But even – even your experts agree that this is caused by excessive traction. And just because your doctor, Dr. Dobbins, might say, oh, I only used slight traction doesn't make it so. **It may very well be, like I said, he is covering for himself, he's trying to mitigate what he did**. And if the experts testify that, no, you only see this when there is this amount of traction, I'm going to let them testify to that. Because this is the classic situation where a witness can say something, but the scientific evidence, **the actual physical facts, don't back up what a person is saying happened.** It's the classic situation. Happens all the time.
>
> Leib: Well, and obviously, I respect the Court's ruling. **The jury in this case will have no alternative, because they won't be able to hear the counter-arguments on causation by the experts.** It will – all they will be left with under the Court's ruling, is that this was the product of Dr. – **its tantamount to a directed verdict, judge, on the causation issue**.
>
> Court: **I know**. Plaintiffs attorneys don't get – they're not happy with me, either, when I make similar rulings' I wouldn't expect defense attorneys to be.

(R.100, 147:9-148:20, A-App 381-382).

The trial court signed the motion in limine order on July 10, 2015. (R.92, A-App 387). The Fund moved for an interlocutory review of the Order which was granted by the Court of Appeals on October 5, 2015. (R.95, A-App 395).

STANDARD OF REVIEW

This case will request the Appellate Court's review of the interpretation of Wis. Stat § 907.02(1). This is a de novo review. State v. Steffes, 2013 WI 53, ¶ 15, 347 Wis. 2d 683, 692, 832 N.W.2d 101, 106.

A circuit court's decision to admit or exclude expert testimony is reviewed under an erroneous exercise of discretion standard. State v. Giese, 2014 WI App 92, ¶ 16, 356 Wis. 2d 796, 804, 854 N.W.2d 687, 691.

ARGUMENT

The trial court usurped the jury's role as fact finder when it held that the defendants were prohibited from offering evidence of the maternal forces of labor theory. This is a misunderstanding by the trial court on what its obligations were with respect to expert testimony

The maternal forces of labor theory not only deals with causation but is also intertwined with the defendants' standard of care defense. Under the trial court's decision, the jury will be misled into believing that the only way to cause these types of injuries is through excessive traction. The jury will undoubtedly conclude that Dobbins was negligent since there would be no other explanation for Unity Bayer's injury. This has removed from the jury's purview the ability to weigh different competing scientific methods and analyses.

1. Expert Testimony In Wisconsin

The legislature recently amended Wis. Stat. § 907.02(1) to adopt the Daubert standards set forth in Federal law. That statute provides as follows, in pertinent part:

> 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, if the testimony is based upon sufficient facts or data, the testimony is the product of reliable principles and methods, and the witness has applied the principles and methods reliably to the facts of the case.

Trial courts must serve as gatekeepers to determine whether the process and methodology used by the expert is valid; the cornerstone of the Daubert inquiry is the evidentiary relevance and reliability of the proposed testimony. The proponent of the expert bears the burden of demonstrating that the expert's testimony satisfies the Daubert standard. Lewis v. CITGO Petroleum Corp., 561 F.3d 698, 705 (7th Cir. 2009).

To determine if testimony is admissible, the Court "must determine whether the witness is qualified; whether the expert's methodology is scientifically reliable; and whether the testimony will assist the trier of fact to understand the evidence or to determine a fact in issue. Myers v. Ill. Cent. R.R. Co., 629 F.3d 639, 644 (7th Cir. 2010). There is no claim that the defense experts are unqualified or that there is no need for specialized knowledge to assist the jury. Instead, this case focuses on the second criterion, whether the defendants' scientific theory of maternal labor forces causing a permanent brachial plexus injury is scientifically reliable. The defendants have provided ample evidence that the maternal forces of labor theory satisfies the Daubert standard.

At the time the circuit court made its decision, there was only one case in Wisconsin, State v. Giese, which provided any substantive guidance for Wisconsin courts on the Daubert standard. 2014 WI App 92, 356 Wis.2d 796, 854 N.W.2d 687. However, Giese did not discuss the courts' role when considering competing scientific theories. In Giese, the Court was asked to determine whether retrograde extrapolation was admissible.[2]

Based on the trial court's decision, there is now a split in Wisconsin lower courts on whether both competing theories on causes of brachial plexus injuries can be elicited at trial.[3] This is an area of law that needs clarification to provide guidance to the circuit courts. The Giese Court explained:

> The court's gate-keeper function under the *Daubert* standard is to ensure that the expert's opinion is based on a reliable foundation and is relevant to the material issues. Daubert v. Merrell Dow Pharm., Inc., 509 U.S. 579, 589 n. 7, 597, 113 S.Ct. 2786, 125 L.Ed.2d 469 (1993). The court is to focus on the principles and methodology the expert relies upon, not on the conclusion generated. Id. at 595, 113 S.Ct. 2786. The question is whether the scientific principles and methods that the expert relies upon have a reliable foundation "in the knowledge and experience of [the expert's] discipline." Id. at 592, 113 S.Ct. 2786. Relevant factors include whether the scientific approach can be objectively tested, whether it has been **subject to peer review and publication**, and whether it is **generally accepted in the scientific community**. Id. at 593–94, 113 S.Ct. 2786.

State v. Giese, 2014 WI App 92, ¶ 18. (emphasis supplied).

The Giese court, citing to decisions from three other jurisdictions, noted that no other court excluded calculating a blood alcohol concentration using retrograde extrapolation under Daubert. Id. at ¶ 22. This is especially persuasive in this case

2 Retrograde extrapolation occurs when the toxicologist makes certain assumptions and calculates a range of possible blood alcohol concentrations prior to a blood draw. Giese, at ¶ 8.

3 Circuit courts in Grant County, Milwaukee County, and Sheboygan County have all concluded that maternal forces of labor is a reliable scientific theory and can be presented to the jury.

since numerous other jurisdictions have allowed the inclusion of the maternal forces of labor theory, which will be discussed in the next section of this memorandum.

Finally, the Giese court reminded the circuit courts that they are not to decide which scientific theory is more persuasive like the trial court did in this case.

> The mere fact that some experts may disagree about the reliability of retrograde extrapolation does not mean that testimony about retrograde extrapolation violates the Daubert standard. If experts are in disagreement, it is not for the court to decide "which of several competing scientific theories has the best provenance." Ruiz–Troche v. Pepsi Cola of P.R. Bottling Co., 161 F.3d 77, 85 (1st Cir.1998). The accuracy of the facts upon which the expert relies and the ultimate determinations of credibility and accuracy are for the jury, not the court. See Lapsley v. Xtek, Inc., 689 F.3d 802, 805 (7th Cir.2012). As the Supreme Court pointed out in Daubert,
>
> > there are important differences between the quest for truth in the courtroom and the quest for truth in the laboratory. Scientific conclusions are subject to perpetual revision. Law, on the other hand, must resolve disputes finally and quickly.
> >
> > Daubert, 509 U.S. at 596–97, 113 S.Ct. 2786.

State v. Giese, 2014 WI App 92, ¶ 23.

Since the trial court reached its decision, the Court of Appeals has released another published decision on Daubert. Seifert ex rel. Scoptur v. Balink, 2015 WI App 59, 364 Wis. 2d 692, 869 N.W.2d 493.[4] Interesting, Seifert is another brachial plexus injury case (which indicates how frequently these cases are litigated) though its emphasis is not on maternal forces of labor. The Court noted,

> In cases involving expert testimony provided by physicians, several courts have focused on the knowledge and experience of the testifying expert as an indicator of reliability under *Daubert.* In doing so, these courts often draw a distinction between medical expert testimony and other scientific or specialized expert testimony due to the level of uncertainty presented when medical knowledge is applied to individualized patient treatment. For example, the Ninth Circuit explained, "[t]he human body is complex, etiology is often uncertain, and ethical concerns often prevent double-blind studies calculated to establish statistical proof." In addition, the Ninth Circuit observed that medicine is a complicated

4 On November 4, 2015, the Supreme Court accepted review of Seifert.

> science that requires physicians to make judgments and decisions based on known factors and uncertainties.

Seifert ex rel. Scoptur v. Balink, 2015 WI App 59, ¶ 19, 364 Wis. 2d 692, 705, 869 N.W.2d 493, 499-500 (internal citations omitted). In this particular case, Seifert is especially instructive as it explains that there does not need to be a dearth of medical literature dating back for years for an opinion to be reliable.

> As we have explained, reliance on peer reviewed publications is just one factor that courts *may* consider under *Daubert*. The Supreme Court in *Daubert* and in *Kumho* emphasized that the factors listed in *Daubert* are guidelines to assist the court to determine the reliability of an expert's opinion, and that the court is afforded flexibility in deciding which factors are appropriate for the particular circumstances of each case. Here, the court's analysis was not strictly tied to consideration of whether Dr. Wener's opinions were reliable based on medical literature

Seifert ex rel. Scoptur v. Balink, 2015 WI App 59, ¶ 31, 364 Wis. 2d 692, 709-10, 869 N.W.2d 493, 501.

All parties concede in this case that there are numerous peer reviewed articles and textbooks which discuss on the maternal forces of labor theory. Daubert does not permit the trial court weigh which theory has been reviewed in greater detail in the literature and throw out the other theory. Any perceived issues with respect to the literature should be explored through cross examination, not by a blanket prohibition on the topic.

> Whether or not Dr. Wener's testimony on these issues could be weakened or discredited on cross-examination, through other expert testimony, or by argument (such as that noted in footnote 8 *supra*) speaks not to the reliability of Dr. Wener's opinions, but to their weight. "Shaky but admissible evidence is to be attacked by cross examination, contrary evidence, and attention to the burden of proof, not exclusion." *Primiano*, 598 F.3d at 564; *see also Kumho Tire*, 526 U.S. at 153, 119 S.Ct. 1167 (when conflicting expert testimony is presented, as in this case, the jury must be given the opportunity to weigh such testimony); *Giese*, 356 Wis.2d 796, ¶ 23, 854 N.W.2d 687 ("the mere fact that experts may disagree about the reliability

> of [a certain methodology] does not mean that testimony about [that methodology] violates the *Daubert* standard

Seifert ex rel. Scoptur v. Balink, 2015 WI App 59, ¶ 33, 364 Wis. 2d 692, 710-11, 869 N.W.2d 493, 502.

The Marinette circuit court has done exactly what it was cautioned against by the Court of Appeals in Giese and Seifert. It decided on the accuracy of the theory rather than letting the jury do so. This is error and must be reversed.

2. The Trial Court Usurped The Jury's Role When It Decided That Maternal Forces Of Labor Do Not Cause Brachial Plexus Injuries.

The Court committed an error when it concluded that the maternal forces theory was created by the "defense bar", and barred the defendants from offering evidence of the maternal forces of labor theory. The Bayers' case will be fraught with medical literature and studies while Dobbins and the Fund's hands will be tied and will have no meaningful defense.

Wisconsin only recently adopted the Daubert standard. Other states have utilized the Daubert standard for many years and, as a result, have a plethora of cases which explain and guide the circuit courts on how to handle motions on experts or scientific theories. A number of courts have dealt with this precise issue and unanimously have concluded that the defense should be allowed to defend their case using the maternal forces theory under Daubert.[5] Other courts, while not expressly commenting on Daubert, have noted that there is a wealth of knowledge

5 It is anticipated that the Bayers will respond with cases from New York where the maternal forces theory was barred. New York is not a Daubert jurisdiction. Those cases were analyzed under the different Frye standard which does not apply here.

and literature on maternal forces, including the studies by Dr. Grimm, which lends credence to the theory.

A. Louisiana

The Supreme Court of Louisiana concluded that evidence supported finding that a permanent brachial plexus injury could have occurred for unknown reasons and a res ipsa loquitor instruction was inappropriate as far back as 2006. Salvant v. State of Louisiana, 935 So.2d 646, 2005-2126 (La. 7/6/06)(A-App 397). Like in this case, the plaintiffs alleged defendants used excess force when "pulling" on the baby's head resulting in a permanent brachial plexus injury. A three day bench trial resulting in a decision for the defense. Id. at 650. The appellate court reversed finding that the brachial plexus injury was more likely than not caused by improper management of shoulder dystocia and concluded the district court erred by not applying the res ipsa loquitur doctrine. Id. In support for appellate court's decision, it noted "our review of the record indicates that the medical review panel's finding that the injury was caused by extensive unknown intrauterine force is not supported by the record or the medical reports. Id. at 656.

The Supreme Court concluded:

> However, **this finding by the court of appeal is wrong**. There was ample evidence in the record that a brachial plexus injury can occur for unknown reasons. For example, an ACOG Practice Bulletin, prepared by the American College of Obstetricians and Gynecologists for the Clinical Management Guidelines for Obstetrician-Gynecologists for Shoulder Dystocia from November 2002 (the "ACOG Bulletin") and admitted into evidence, described the incidence of brachial plexus injuries as follows:
>
> Brachial plexus injuries and fractures of the clavicle and humerus as associated with shoulder dystocia. The reported incidence of brachial plexus injuries following a delivery complicated by shoulder dystocia varies widely from 4% to

> 40%. [ ] Fortunately, most cases resolve without permanent disability; that is, fewer than 10% of all cases of shoulder dystocia result in persistent brachial plexus injury. *Data suggest that a significant proportion (34-47%) of brachial plexus injuries are not associated with shoulder dystocia; in fact, 4% occur after cesarean delivery.* (Emphasis added).
>
> Further, Dr. Robert Gherman's article concluded that 50% of all brachial plexus injuries may be attributable to unavoidable intrapartum or antepartum events and not to the actual management of the shoulder dystocia. Dr. Culotta explained that the article indicated that many of the brachial plexus injuries are occurring intrauterine during the development of the baby or during the alignment of the baby just prior to the initiation of labor. As to the possible mechanisms that could lead the author of the studies to conclude that a brachial plexus injury could occur in the absence of shoulder dystocia, Dr. Culotta explained:
>
> Well, they propose one that may be related to a mycoplasm infection. **They tell you it may be just related to normal forces of labor**. It may be issues relative to the way the child develops in abnormal intrauterine pressure at the time of delivery or during the labor of the pregnancy. Position that the baby may be in and with some contractions may have caused it.

Id. at 656-57 (emphasis supplied).

The Salvant court also concluded that the res ipsa loquitor doctrine was inappropriate.

> In spite of the evidence that a brachial plexus can occur in the absence of shoulder dystocia, the court of appeal supports the application of the doctrine of *res ipsa loquitur* because of "undisputed evidence that the stretching of the brachial plexus nerve does not occur without excessive force." **This finding ignores the medical evidence presented by defendants that brachial plexus injuries sometimes occur for reasons that are unknown** and that occur even in the absence of shoulder dystocia. The court of appeal then attempts to support the application of this doctrine with its finding that "[t]he medical testimony conflicts, however, as to whether the injury occurred in the absence of negligence," and then finds that "the plaintiffs' testimony is more convincing than that of the defense witnesses."

Id. At 659 (emphasis supplied)(internal citations omitted).

B. Colorado

The Colorado Supreme Court concluded in 2011 that intrauterine contraction theory (maternal forces of labor) as a cause of an infant's brachial plexus injury constituted reasonably reliable scientific evidence. Estate of Ford v. Eicher, 250

P.3d 262 (2011)(A-App 408). The plaintiffs claimed that the child's brachial plexus injury was a result of excessive traction during delivery. Id. at 264. Defendants endorsed the opinion that the child's injury was caused by maternal intrauterine forces. Id. The Estate filed a pretrial motion to bar defense experts from testifying about the intrauterine contraction theory. Id. at 265.

The trial court concluded that the intrauterine forces theory was unreliable based, in part, on the inability to test the theory. Id. Like the circuit court in this case, it found that the established medical thinking was that excessive traction was the presumptive cause of brachial plexus injury in newborns suffering shoulder dystocia until the late 1990s or early 2000s. Id. at 268. The literature had been criticized for being retrospective in nature. Id.

The Court of Appeals determined that the excluded testimony was admissible and remanded for a new trial. Plaintiff appealed to the Colorado Supreme Court.

With respect to the inability to test the intrauterine forces theory, the Colorado Supreme Court held:

> We are not persuaded by the trial court's analysis. First, excluding testimony because the theory cannot be tested and error rates cannot be assessed focuses the reliability analysis too narrowly. **The nature of the intrauterine forces theory makes it impossible and unethical to test**. It follows that error rates cannot be assessed. While the testability and error rates of a scientific theory are factors a trial court *may* consider in assessing reliability, the trial court may give these factors less weight or disregard them altogether if the case so requires. The CRE 702 inquiry is designed to be flexible to accommodate precisely this type of situation. A theory's inability to satisfy some of the suggested reliability factors will not automatically render the theory unreliable.
>
> Here, **ethics prevent testing the intrauterine contraction theory. Such testing would subject mothers and their infants to potential injury. Instead, the theory is supported by research, clinical study, and a body of peer-reviewed literature spanning almost twenty years**. **It is accepted in the scientific**

> **community as illustrated by the fact that it has been adopted in authoritative texts and in the medical practice guidelines.**
>
> Moreover, testability and error rate concerns should not exclude the intrauterine contraction theory as a possible cause of the injuries when one considers the totality of the circumstances in this particular case. Here, the record shows that each party intended to present experts on causation who would offer untestable theories. The Estate's expert testified that excessive traction caused the injuries. That theory, like the intrauterine contraction theory, is not ethically subject to testing or error rate assessment. Concerns raised by the trial court regarding the inability to test the intrauterine contraction theory or assess error rates are the same issues inherent in the excessive traction theory. These concerns are adequately addressed by vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof.

Estate of Ford v. Eicher, 250 P.3d 262, 268-69 (Colo. 2011) (emphasis supplied).

The Court also commented generally on the various other jurisdictions which have admitted maternal labor forces expert testimony.

> **Finally, a variety of jurisdictions around the country have admitted expert testimony about the intrauterine forces theory.**[7] We find these opinions instructive and persuasive in analyzing whether the intrauterine forces theory is sufficiently reliable. Furthermore, in this state, a division of the court of appeals held that expert testimony concerning intrauterine forces as a cause of brachial plexus injury was sufficiently reliable and admissible in Luster v. Brinkman, 205 P.3d 410, 415 (Colo.App.2008). The parties have cited no case, and we are aware of none, holding that such expert testimony is unreliable or inadmissible. For the foregoing reasons, we determine that the intrauterine contraction theory is reasonably reliable under CRE 702.

Estate of Ford v. Eicher, 250 P.3d 262, 269 (Colo. 2011)(emphasis supplied).

C. Ohio

Another example of a determination of the reliability of the maternal labor forces theory occurred in Ohio in 2008. Prior to trial, plaintiff filed a motion in limine arguing that "for over 100 years, the medical literature recognized that brachial plexus injuries are caused by excessive traction applied by the physician (i.e. pulling too hard) when shoulder dystocia is encountered. Appellants argued

that scientific opinion did not support the existence of any other alternative cause." D'Amore v. Cardwell, 2008 WL 852791, ¶ 21(unpublished)(A-App 417). Plaintiff appealed after the Court allowed defendants to opine that the child's injury was the result of maternal forces of labor.

The Court of Appeals noted that there were numerous medical literature resources that have found other causes for brachial plexus injuries including ACOG and the 22nd edition of Williams Obstetrics. Id. at ¶¶ 64-65. It held, "the trial court's role is not to evaluate which competing scientific analysis or conclusion is correct" but instead to "determine whether expert opinion testimony is sufficiently relevant and reliable to be admitted into evidence for jury consideration." Id. at ¶ 66. The Court also agreed that a res ipsa loquitor instruction was inappropriate as the jury was presented with evidence supporting alternative verdicts depending on whether it determined the cause of the plaintiff's injuries to be by use of excess traction or by utero forces. Id. at ¶ 73.

D. Illinois

An Illinois appellate court was asked to review the admissibility of Dr. Grimm's studies and opinions in a permanent brachial plexus case.

> While the admissibility of **Dr. Grimm's** theory is a matter of first impression in an Illinois court of review, her **articles concerning the forces of labor and shoulder dystocia, published in a peer-reviewed journal, date back a number of years:** her first article was published in 2000, followed by the articles published in 2003. **The articles themselves were published in the American Journal of Obstetrics and Gynecology, one of the same "highly prestigious medical journals" noted in Mitchell. Dr. Grimm's research has gained such prominence as to be referenced in two medical textbooks, Precis and Williams**. The plaintiffs presented no direct evidence to challenge Dr. Grimm's methods, relying instead to cast doubt on her methodology and principles during cross-examination. Dr. Grimm's claim that her model had been generally accepted

> in both the engineering and obstetric communities is amply supported by evidence at the Frye hearing.

Ruffin ex rel. Sanders v. Boler, 384 Ill. App. 3d 7, 24, 890 N.E.2d 1174, 1188 (2008)(emphasis supplied)(A-App 426).

The court concluded that Dr. Grimm's methodology was generally accepted with the relevant scientific communities and accordingly her testimony was properly admitted. Id. at 25.

E. California

A California district court was asked to bar Dr. Grimm after she was retained by the United States Attorney's Office to evaluate the cause of a brachial plexus injury at a naval hospital. Silong v. U.S. 2007 WL 2535126 (unpublished)(A-App 438). Since this was a federal case, it followed Daubert for the use of expert testimony. The Court noted the following about Dr. Grimm's testing and background.

> Dr. Grimm is a biomedical engineer who researches injury-producing mechanisms on humans, including the mechanics of the birthing process and brachial plexus nerves. In her research "that specifically analyzes the forces and impacts that a fetus encounters during the birth process, in particular the forces involved on the brachial plexus nerve when shoulder dystocia occurs," Dr. Grimm uses a computer model, referred to by its acronym MADYMO. MADYMO is software that was developed "over twenty-five years ago to enable biomedical and biomechanical engineers to understand injury response and the mechanics of injury."
>
> The MADYMO model developed by Dr. Grimm starts with a model of a crash test dummy the size of a 9-month-old infant. The model size was reduced to match the size of a 90th percentile newborn, with all remaining segments of the body changed proportionally. The relationship between the body segment geometrics and individual masses was based on human anthropometry tables. The neck of the model infant, taken from a child goat, was developed based on knowledge of human cervical anatomy. The stiffness of the neck was determined based on biomedical engineering work conducted at the Medical College of Wisconsin, published in an esteemed medical journal, and adopted by other reputable researchers and institutions. Dr. Grimm uses a rabbit nerve to represent the brachial

> plexus. Dr. Grimm selected that nerve based on work conducted under the supervision of Dr. Savio Woo, one of the leading soft tissue biomechanists in the world. Dr. Grimm uses MADYMO, along with relevant literature, to demonstrate that forces exerted by uterine contractions can be sufficient to cause injury when the infant's shoulder becomes impacted against the mother's pubic bone during delivery.

Silong v. United States, 2007 WL 2535126, at *2.

The Court noted that the plaintiff made "unsupported and unsubstantiated asserts about Dr. Grimm and her scientific method, research and opinions." Id. at ¶ 3. The Court concluded that Dr. Grimm's expert opinions were reliable under Daubert.

> **The evidence provided by the Government shows that Dr. Grimm's expert opinion is reliable for purposes of Rule 702 and Daubert**. Based on her tests and techniques with MADYMO, **Dr. Grimm has published three peer-reviewed articles on the maternal labor force theory as it relates to shoulder dystocia and brachial plexus injury in the American Journal of Obstetrics and Gynecology. Further, Dr. Grimm's findings have been referenced in a textbook in the field of obstetrics, Williams on Obstetrics**. Dr. Grimm's findings, methodologies and opinions have also been cited in publications issued by the American College of Obstetrics and Gynecology. Moreover, Dr. Grimm teaches advanced university courses on the subject.
>
> **The evidence further shows that Dr. Grimm's work has gained acceptance in the medical and biomechanical communities**. She has received multiple awards for research excellence based on her research on fetal brachial plexus strain during shoulder dystocia. Dr. Grimm has been asked to present her findings on this issue at several international biomedical and biomechanical conferences. Additionally, Dr. Grimm's maternal labor force theory is supported by other existing literature.[4]Finally, Dr. Grimm presents evidence that her scientific techniques were based on accepted scientific methodologies and learned treatises.

Id.

F. Texas

Lastly, the court of appeals in Texas also concluded that maternal forces of labor was a proper area of evidence in Taber v. Roush, 316 S.W.3d 139 (Tex. App. 2010)(A-App 442). Like the cases above, plaintiff alleged the defendant physician

exerted excessive traction on the child's neck causing a permanent injury. The plaintiff filed a motion in limine to bar the maternal forces theory and asserted there was no scientific or medical evidence to support a permanent brachial plexus injury in utero from an otherwise healthy baby from maternal forces which was denied. Id. at 147. The jury concluded there was no negligence and the plaintiff appealed on the basis that the defense expert testimony was unreliable and inadmissible. Id.

Plaintiff was critical, like the Bayers, of the maternal forces of labor theory because it relies on retrospective studies rather than prospective studies.

> **The dearth of prospective testing in support of the natural forces of labor theory is explained by ethical considerations that preclude a prospective study subjecting mothers and babies to potential injury while measuring excessive traction.** *See Ford v. Eicher*, 220 P.3d 939, 945 (Colo.App.2008, cert. granted) ("[T]he trial court overlooked the evidence in the record establishing that there is *no ethical way* in which to test the in utero causation theory of brachial plexus injury or to measure how much traction is 'excessive' without subjecting mothers and their infants to potentially injurious conduct.") (original emphasis). This is the explanation demanded by *Whirlpool Corp.*, 298 S.W.3d at 642–43; it provides assurance that the absence of prospective testing of the natural forces explanation is attributable to unique considerations governing this specific medical issue rather than inherent deficiencies in the challenged expert opinions.

Taber v. Roush, 316 S.W.3d at152-53.

Also, the plaintiff claimed that there was a lack of support in the literature based on the "analytical gap" between the non-specific brachial plexus injuries discussed in the literature and the particular avulsion injury the plaintiff suffered. The Court held,

> The parties' arguments regarding this asserted analytical gap cannot be addressed on appeal by weighing the relative persuasive power of competing medical articles in a vacuum; by eschewing analysis of the testimony; or by asking in the abstract whether an excessive lateral traction explanation for brachial plexus injuries has more medical merit than a natural forces of labor explanation. **Courts are not equipped to make medical judgments of this nature, and they are not called upon to do so.**

Taber v. Roush, 316 S.W.3d at 153-54.

Finally, the court acknowledged that the experts testifying on behalf of the defense relied in significant part on 22 peer-reviewed articles and textbooks. This collection of literature warranted submission of testimony regarding a natural forces of labor explanation for deciding causation. Id. at 156.

CONCLUSION

The wealth of cases around the country establish with certainty that the maternal forces theory of brachial plexus injuries is appropriate and reliable. The trial court took its role further than appropriate and made a determination which medical theory it found to be more persuasive. Indeed, the Court indicated on the record that it thought this medical theory, despite being published in numerous articles and textbooks was something concocted by the "defense bar" to avoid responsibility for these lawsuits and suggested on more than one occasion that a res ipsa instruction would be appropriate in this case. (R.100, 147:16-19, 145:6-10, A-App 381, 379). The Court failed to appropriate utilize the Daubert standard and its decision to bar the defense from offering evidence of the maternal forces of labor theory should be reversed.

Dated this 10th day of December, 2015.

NASH, SPINDLER, GRIMSTAD & McCRACKEN LLP

s/ Terri L. Weber

By: _____

Terri L. Weber
State Bar No. 1027628
Katelyn P. Sandfort
State Bar No. 1079785
Attorneys for Defendant-Co-Appellant Injured Patients and Families Compensation Fund

Mailing Address:
1425 Memorial Drive
Manitowoc, WI 54220
920-684-3321 Phone
920-684-0544 Fax
Tweber@nashlaw.com
ksandfort@nashlaw.com

CERTIFICATION

I hereby certify that this brief and appendix conforms to the rules contained in Wis. Stat. §80m9.19(8)(b) and (c) for a brief produced with a proportional serif font. The length of this brief is 7,660 words and 26 pages.

I also certify that the text of the electronic copy of the brief is identical to the text of the paper copy of the brief.

Dated this 10th day of December, 2015.

NASH, SPINDLER, GRIMSTAD & McCRACKEN LLP

s/ Terri L. Weber

By: _____

Terri L. Weber
State Bar No. 1027628
Katelyn P. Sandfort
State Bar No. 1079785
Attorneys for Defendant-Co-Appellant Injured Patients and Families Compensation Fund

Mailing Address:
1425 Memorial Drive
Manitowoc, WI 54220
920-684-3321 Phone
920-684-0544 Fax
Tweber@nashlaw.com
Ksandfort@nashlaw.com

CERTIFICATION COMPLIANCE
WITH WIS. STAT. § 809.19(12)

I certify that I have submitted an electronic copy of this brief on December 10, 2015. I further certify that this electronic brief is identical in content and format to the printed form of the brief filed as of this date.

A copy of this certificate has been served with the paper copies of this brief filed with the Court and served on all opposing parties.

Dated this 10th day of December, 2015.

NASH, SPINDLER, GRIMSTAD & McCRACKEN LLP

s/ Terri L. Weber

By: _____

Terri L. Weber
State Bar No. 1027628
Katelyn P. Sandfort
State Bar No. 1079785
Attorneys for Defendant-Co-Appellant Injured Patients and Families Compensation Fund

Mailing Address:
1425 Memorial Drive
Manitowoc, WI 54220
920-684-3321 Phone
920-684-0544 Fax
Tweber@nashlaw.com
Ksandfort@nashlaw.com