

STATE OF MICHIGAN
COURT OF APPEALS

TEIJA MCCALL, a Minor, by her conservator,
RAQUEL ROBELIN,

UNPUBLISHED
September 10, 2009

Plaintiff-Appellee,

v

No. 279780
Kent Circuit Court
LC No. 04-010444-NH

SPECTRUM HEALTH HOSPITALS, d/b/a
SPECTRUM HEALTH-EAST CAMPUS, JOHN
HARTMANN, M.D., and ADVANTAGE
HEALTH PHYSICIANS, P.C., jointly and
severally,

Defendants-Appellants.

Before: Cavanagh, P.J., and Markey and Davis, JJ.

PER CURIAM.

In this medical malpractice suit, defendants appeal as on leave granted¹ an order denying their motion to strike causation opinion testimony from one of plaintiffs' experts. We affirm.

Plaintiff Raquel Robelin is the mother and conservator of plaintiff Teija McCall. On May 2, 2001, Robelin arrived at Spectrum Health-East Campus hospital in labor. She was immediately admitted and, at approximately 11:09 a.m., she was placed on an external fetal heart rate monitor. Fetal heart rate monitors generate "fetal heart rate monitoring strips," which preserve a documented record of the fetus's heart rate pattern. The fetal heart rate monitor to which Robelin was connected immediately began showing the presence of "late decelerations" in McCall's heart rate. "Variable decelerations" in McCall's heart rate were also present.

¹ This Court initially denied defendants' application for leave to appeal; in lieu of subsequently granting leave to appeal, our Supreme Court remanded the case to this Court to evaluate whether the trial court abused its discretion in denying the motion and particularly "to consider whether [the] proposed testimony meets the criteria of MCL 600.2955 and MRE 702." *Robelin v Spectrum Health Hosp*, 482 Mich 985; 755 NW2d 631 (2008).

Dr. Ronald G. Zack, a board certified specialist in obstetrics and gynecology retained by plaintiff as an expert on the applicable standard of care,² explained that there are three types of fetal heart rate decelerations: “early decelerations, late decelerations, and variable decelerations.” Early decelerations are usually benign. Variable decelerations are caused by compression of the umbilical cord, and they are sometimes benign and sometimes not. Late decelerations begin after contractions begin, and they are – if they persist – always a negative sign, usually indicating fetal hypoxia³ and typically caused by “anything that interferes with the oxygenation to the fetus.” Hypoxia means a reduced amount of oxygen being supplied to the body, as opposed to anoxia, which means no or almost no oxygen being supplied. Zack testified that the fetal monitoring strips showed “non-reassuring heart tones” almost immediately, and by 11:30 a.m. late decelerations were still occurring. Dr. Zack testified that portions of the fetal monitoring strips “would be consistent with hypoxia,” but he refused to opine whether McCall actually suffered any hypoxic injury as a result. However, he did opine that the decelerations were so “ominous” that they should have prompted immediate delivery by cesarean section.

Instead, Robelin’s labor continued. Her “membranes were artificially ruptured” at approximately 3:30 or 3:40 p.m., at which time meconium staining was found. Meconium is a fetus’s in utero bowel movement, which can be caused by hypoxia. Robelin gave birth to McCall vaginally at 4:56 p.m. Upon delivery, McCall required resuscitation, including oxygen and positive pressure ventilation. Her one-minute Apgar score was two, although her five-minute Apgar score was nine.⁴ Her cord blood gas pH was recorded as being 7.26, which is at the low end of normal. McCall was subsequently taken to a normal nursery, but two hours after birth, she developed seizures and was found to have low blood sugar. She was diagnosed as having suffered an “infarction or stroke” caused by an obstruction to her left internal carotid artery. As a consequence, she is now partially paralyzed, suffers from severe developmental problems, and has significant cerebral palsy.

Dr. Ronald Gabriel, a board-certified pediatric neurologist retained by plaintiff as an expert on causation,⁵ testified that he reviewed McCall’s medical records, including “labor and

² Dr. Zack’s testimony is not challenged in this appeal.

³ Defendants’ expert, Dr. Michael Johnson, agreed that late decelerations indicated dangerously low oxygen levels for the fetus, potentially causing considerable brain damage. However, the gravamen of his testimony was that late decelerations were only a possible predictor of asphyxial brain damage, whereas a stroke is unpredictable and would be “just totally different.”

⁴ Apgar scores are evaluations of an infant’s condition, derived by assigning a number from 0 to 2 for each of five different measures of an infant’s well-being, the best condition being a total combined score of 10. Apgar scoring “provides a convenient shorthand for reporting the status of the newborn infant and the response to resuscitation,” but is otherwise a limited diagnostic tool with poor correlation to an infant’s future outcome and is not even necessarily reported in a standard manner. *The Apgar Score*, Policy Statement, American Academy of Pediatrics, Committee on Fetus and Newborn, American College of Obstetricians and Gynecologists and Committee on Obstetric Practice, 117 Pediatrics 1444 (Apr 2006), available online at <http://www.pediatrics.org/cgi/content/full/117/4/1444>.

⁵ Dr. Gabriel’s opinion is challenged in this appeal, but we note that his professional
(continued...)

delivery records from Spectrum, fetal monitoring strips, prenatal records, all of the neonatal records, records of ... [various doctors involved in McCall's medical treatment]" as well as CT, MRI, and MRA imaging studies. He observed that McCall had been developmentally normal upon Robelin entering labor, but during labor the fetal heart monitor showed evidence that blood flow to McCall's brain was impaired, and she was born with "virtually no neurological function." He stated that several potentially probative tests had not been performed, such as an echocardiogram or placental pathology test, and so it was not possible to be completely certain what happened to McCall. However, after examining what evidence there was, including the fact that various things were shown not to be the case, he concluded that in the "absence of an alternative explanation," the "most likely explanation is thrombus⁶ formation due to decreased velocity of internal carotid blood flow due to the abnormal changes in fetal heart rate." He emphasized that none of the events or evidence present during labor and delivery had any serious *predictive* value; rather, they constituted some evidence that was of retrospective use in systematically excluding "other potential causes."

He further specified that the infarction must have been underway as of seventeen minutes prior to delivery, but that he had no way to know how far in advance it had begun. However, he opined that it must have taken place fairly close to the time of actual delivery, because umbilical cord tests have a time lag, and no serious problems were reflected in the cord test that was performed. He concluded that if McCall had been delivered prior to 3:15 p.m., "it is unlikely that she would be neurologically abnormal."

Defendants moved to strike Dr. Gabriel's proposed expert testimony on the grounds that it was unsupported by sufficient facts and data and was not the product of reliable principles and methods, pursuant to MRE 702; his theory was not subjected to peer review, lacked any generally accepted criteria or methodology, and appeared only in the context of malpractice litigation, pursuant to MCL 600.2955; and his opinion "exceeds the bounds of what is known regarding the causes of birth trauma and makes assumptions which are not to be found in the existing medical literature, the medical records ... and are not supported by other experts in the same field." The trial court held a hearing on defendants' motion, but declined to rule on it and instead scheduled a *Daubert*⁷ hearing. At the conclusion of that hearing, the trial court concluded that Dr. Gabriel's testimony satisfied the minimum requirements for admissibility. Defendants appealed.

We review a trial court's admission of expert testimony and determination that an expert is qualified for an abuse of discretion, although admission of legally inadmissible evidence is necessarily an abuse of discretion. *Woodard v Custer*, 476 Mich 545, 557; 719 NW2d 842 (2006); *Craig v Oakwood Hosp*, 471 Mich 67, 76; 684 NW2d 296 (2004). The trial court's exercise of its "gatekeeper" role under MRE 702, the purpose of which is to ensure the admission of only reliable scientific evidence, is only a threshold inquiry into the "principles and

(...continued)

qualifications as an expert are not.

⁶ A thrombus is a clot that obstructs a blood vessel.

⁷ *Daubert v Merrell Dow Pharmaceuticals, Inc*, 509 US 579; 113 S Ct 2786; 125 L Ed 2d 469 (1993).

methodology” behind the expert’s conclusion, not the truth thereof. *Daubert v Merrell Dow Pharmaceuticals, Inc.*, 509 US 579, 594-595; 113 S Ct 2786; 125 L Ed 2d 469 (1993); *Gilbert v DaimlerChrysler Corp.*, 470 Mich 749, 779-783; 685 NW2d 391 (2004). We are not to determine whether Dr. Gabriel’s opinion is actually correct, nor does it matter whether plaintiff is likely to ultimately prevail at trial.⁸ This is merely a threshold inquiry into whether Dr. Gabriel’s expert opinion testimony meets certain minimal standards for scientific reliability.

MRE 702 provides:

If the court determines that 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 (1) the testimony is based on sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.

Defendants do not seriously challenge whether Dr. Gabriel is qualified as an expert⁹ or whether his testimony would assist the trier of fact. There is also no dispute in this case that Dr. Gabriel’s application of his principles and methods was based on undisputed medical records. The remainder of MRE 702’s requirements are necessarily included in the requirements of MCL 600.2955.

MCL 600.2955 provides in relevant part:

(1) In an action for the death of a person or for injury to a person or property, a scientific opinion rendered by an otherwise qualified expert is not admissible unless the court determines that the opinion is reliable and will assist the trier of fact. In making that determination, the court shall examine the opinion and the basis for the opinion, which basis includes the facts, technique, methodology, and reasoning relied on by the expert, and shall consider all of the following factors:

(a) Whether the opinion and its basis have been subjected to scientific testing and replication.

⁸ In fact, the trial court expressed skepticism that plaintiff could do so and properly explained that this was nevertheless not pertinent to the admissibility of Dr. Gabriel’s testimony.

⁹ Defendants do impliedly challenge Dr. Gabriel’s qualifications in that they devote considerable effort to discussing other cases in which Dr. Gabriel’s expert testimony was proffered. These cases are irrelevant because none of them held that Dr. Gabriel was ineligible as a matter of law to render expert testimony, and otherwise our concern is whether the testimony he presented in this case is scientifically reliable. No challenge to his actual qualifications was made below.

(b) Whether the opinion and its basis have been subjected to peer review publication.

(c) The existence and maintenance of generally accepted standards governing the application and interpretation of a methodology or technique and whether the opinion and its basis are consistent with those standards.

(d) The known or potential error rate of the opinion and its basis.

(e) The degree to which the opinion and its basis are generally accepted within the relevant expert community...

(f) Whether the basis for the opinion is reliable and whether experts in that field would rely on the same basis to reach the type of opinion being proffered.

(g) Whether the opinion or methodology is relied upon by experts outside of the context of litigation.

A trial court need not find that all of these statutory factors favor admissibility before the testimony may be admitted; instead, the relevant inquiry under the statute is whether a scientific opinion is “rationally derived from a sound foundation.” *Chapin v A & L Parts, Inc.*, 274 Mich App 122, 137, 139; 732 NW2d 578 (2007).

The trial court placed on the record its conclusions regarding all of the above criteria. We find no fault with any of the trial court’s analysis. We further note that, other than defendants’ concern with irrelevant other cases in which Dr. Gabriel testified, the only challenge defendants raise to Dr. Gabriel’s testimony in *this* case concerns the ostensible lack of acceptance for Dr. Gabriel’s causation theory in the scientific community. Aside from the fact that novelty or a lack of general acceptance is not necessarily fatal to admission of scientific evidence, defendants’ argument entirely misconstrues Dr. Gabriel’s actual testimony. Defendants argue that it is impossible to prospectively predict a stroke. However, Dr. Gabriel himself said the same thing: “you cannot use fetal monitoring in a prospective or predictive manner because there is none.”

Dr. Gabriel *actually* testified that he used “the totality of the database” to *retrospectively* analyze the available medical information and thus determine the most probable time of and reason for that stroke’s occurrence, using process of elimination. The “totality of the database” was not merely the fetal monitoring strips, but also included McCall’s known condition prior to delivery, her “essentially dead” status upon delivery, the actual fact that she suffered an acute stroke, the evidence that she had suffered multi-organ hypoxic injury, and the extensive subsequent investigation and imaging study that revealed an occlusion in McCall’s left internal carotid artery. Defendants’ challenge to Dr. Gabriel’s testimony is simply inapposite. Dr. Gabriel did not rely on any of the medical evidence for its prospective, predictive value, but rather as evidence upon which to retrospectively exclude impossible scenarios.

It was undisputed that hypoxia is known to cause harm to fetuses, albeit unpredictably because different fetuses will have different “reserves.” And our review of the literature provided by plaintiff supports Dr. Gabriel’s contention that hypoxia is associated with neonatal

strokes, albeit not sufficiently to *predict* them. In a nutshell, Dr. Gabriel concluded that a stroke must have occurred at approximately 4:39 p.m. because if it had occurred much earlier or later, there would have been evidence thereof, given the testing that was conducted for any other possible source of McCall's stroke. We also note that defendants appear to contend that Dr. Gabriel provided a much more limited timeframe than he actually did – rather than saying that the stroke must have occurred at a particular time, he opined that it was caused by events that began at approximately 3:15 p.m. and that it must have occurred by seventeen minutes prior to delivery. The unavailability of absolute, pinpoint certainty does not render a conclusion unreliable or unscientific.

The trial court correctly concluded that Dr. Gabriel simply used process of elimination, a sufficiently tested and time-honored way to arrive at an answer that it is even the quintessential Sherlock Holmes methodology. Stated in various ways in various books, once all impossibilities are filtered out, whatever remains, irrespective of its improbability, must be the truth.¹⁰ It would be impossible to conduct controlled experiments on fetuses to determine what kind of insults result in strokes, so this is certainly a sound methodology under the circumstances. The gravamen of defendants' challenge is not that Dr. Gabriel's methodology was unsound, but that it draws a conclusion that no other published scientific literature has drawn. Our review of the literature provided is that it does support Dr. Gabriel's contention that hypoxia is associated with neonatal stroke and that, for example, Apgar scores are of little probative value. Furthermore, and critically to our rejection of the remainder of defendants' argument, the *Daubert* inquiry seeks to ensure only that "the basic methodology and principles employed by an expert to reach a conclusion are sound and create a trustworthy foundation for the conclusion reached," not whether the expert testimony is or is not novel. *Nelson v American Sterilizer Co (On Remand)*, 223 Mich App 485, 492; 566 NW2d 671 (1997).

We conclude that the trial court fully appreciated the inquiry with which it was tasked, and it analyzed Dr. Gabriel's proffered expert testimony exhaustively and properly. Irrespective of whether Dr. Gabriel's conclusions are correct, and irrespective of whether plaintiff can carry her ultimate burden of proof at trial, Dr. Gabriel's testimony is based on sound principles and methodology, and his conclusion was derived from facts that came from undisputed medical records or from peer-reviewed literature. The trial court did not abuse its discretion in admitting Dr. Gabriel's proposed expert testimony.

Affirmed.

/s/ Mark J. Cavanagh
/s/ Jane E. Markey
/s/ Alton T. Davis

¹⁰ In *The Hound of the Baskervilles*, chapter 4, Sherlock Holmes observed that "we balance probabilities and choose the most likely. It is the scientific use of the imagination, but we have always some material basis on which to start our speculation."