

STATE OF MICHIGAN
COURT OF APPEALS

ELIJAH BENNETT, a Minor, by his Conservator,
EBONIE BENNETT,

UNPUBLISHED
December 2, 2010

Plaintiff-Appellant,

v

SINAI HOSPITAL OF GREATER DETROIT,
d/b/a SINAI-GRACE HOSPITAL, DAVID
STONE, M.D., and LISA CARDWELL, M.D.,

No. 291036
Wayne Circuit Court
LC No. 06-635426-NH

Defendants-Appellees.

Before: MURRAY, P.J., and DONOFRIO and GLEICHER, JJ.

PER CURIAM.

In this medical malpractice case, we revisit the recurring issue whether Dr. Ronald Gabriel's expert testimony concerning causation satisfies the requirements of MRE 702 and MCL 600.2955(1). The circuit court granted summary disposition to defendant Sinai Hospital of Greater Detroit (Sinai Hospital), finding that plaintiff Ebonie Bennett had failed to produce scientific support for Gabriel's opinion. Because the circuit court's written opinion inaccurately describes the factual foundation for plaintiff's claim and neglects to acknowledge relevant scientific evidence presented in this case, we reverse and remand for further proceedings.

I. UNDERLYING FACTS AND PROCEEDINGS

Elijah Bennett is the son and ward of plaintiff Ebonie Bennett. On August 6, 2001, during the thirty-seventh week of plaintiff's pregnancy, Dr. David Stone diagnosed plaintiff with preeclampsia. Stone admitted plaintiff to Sinai Hospital, and began inducing labor by placing a drug called Cervidil near plaintiff's cervix. Several hours later, Stone or another attending physician ordered that plaintiff receive Pitocin. Plaintiff delivered Elijah Bennett on August 7, 2001, at 3:45 p.m. At delivery, Elijah's head showed molding and a caput.¹

¹ As defined by F. Gary Cunningham et al, in *Williams Obstetrics* (McGraw Hill, 21st ed), p 306, "[m]olding describes the change in fetal head shape from external compressive forces." The text (continued...)

At 9:50 p.m. on August 7, 2001, Elijah developed respiratory distress and required intubation. He also exhibited seizure activity. After a lumbar puncture (spinal tap) detected the presence of red blood cells and an elevated protein level in Elijah's spinal fluid, the child was transferred to Children's Hospital of Michigan. A subsequent MRI revealed ischemia in the periventricular and subcortical white matter of Elijah's brain.

In December 2006, plaintiff sued Stone, Sinai Hospital and Dr. Lisa Cardwell in the Wayne Circuit Court.² Plaintiff's complaint averred that Elijah suffers from respiratory and neurologic deficits, including cerebral palsy, as a result of defendants' failure to recognize his fetal distress and perform a cesarean section. According to the deposition testimony of two obstetricians offered as plaintiff's experts, the Pitocin administered to induce plaintiff's labor hyperstimulated her uterus, causing frequent and strong contractions that decreased the oxygen available to Elijah. The obstetrical experts testified that the fetal heart rate tracing reflected a nonreassuring pattern that should have resulted in cesarean section no later than 11:45 a.m. on August 7, 2001, approximately four hours before Elijah's actual delivery.

In February 2008, defendants deposed plaintiff's proposed causation expert, Dr. Gabriel. Gabriel opined that Elijah's "minimal degree of prematurity," combined with plaintiff's preeclampsia, uterine hyperstimulation, and "excessive pressure on the malleable fetal skull," as manifested by Elijah's caput and molding, caused a sinus venous thrombosis. A sinus venous thrombosis occurs when a blood clot develops in the venous channels that drain blood from the brain, and can lead to an infarction of brain tissue (stroke).

In April 2008, defendants moved for summary disposition under MCR 2.116(C)(10), or alternatively to strike Dr. Gabriel's testimony, on the ground that Gabriel's opinions lacked a reliable scientific basis. In response, plaintiff filed with the court seven articles from the medical literature, which she claimed supported Gabriel's opinions. At a hearing in August 2008, the circuit court expressed an inclination to strike Gabriel's testimony. Plaintiff requested an evidentiary hearing. The circuit court agreed to consider Gabriel's testimony "in the context of *Daubert*,"³ and directed the parties to redepose Gabriel.

In October 2008, Dr. Gabriel submitted to a second deposition. He again testified that plaintiff's "abnormal labor" produced Elijah's sinus venous thrombosis, which in turn resulted in his cerebral palsy. Gabriel summarized as follows:

(...continued)

further explains that "[i]n prolonged labors before complete cervical dilatation, the portion of the fetal scalp immediately over the cervical os becomes edematous, forming a swelling known as the *caput succedaneum*." *Id.* (emphasis in original).

² The circuit court granted Cardwell's motion for summary disposition, and plaintiff has not appealed this ruling.

³ *Daubert v Merrell Dow Pharmaceuticals, Inc.*, 509 US 579; 113 S Ct 2786; 125 L Ed 2d 469 (1993).

What we have is a set of clinical facts. And those clinical facts have been widely acknowledged throughout the medical literature for decades as having the potential to produce a sinus venous thrombosis.

In this case, the medical facts are the preeclampsia; abnormal labor; Pitocin hyperstimulation; and as a consequence in the newborn period, bleeding in the brain, seizure activity, respiratory failure, et cetera, together with the MRI data which showed unequivocal ischemia.

* * *

Mechanical trauma is one thing in terms of what may occur to the fetal brain, as happened in the *Sands*^[4] case. In the Bennett case with Elijah, this is an entirely different phenomenon. This is a phenomenon in which there is a background of preeclampsia, a risk factor for sinus venous thrombosis followed by Pitocin, hyperstimulation.

And as I quoted from Dr. Eichler of Harvard, the sinuses are easily compressible by the forces of labor and can produce abnormal changes in blood flow.

That's the long and the short of it.

As medical support buttressing Dr. Gabriel's opinions in this case, he cited the seven medical articles previously filed with the court and offered three additional articles. During the deposition, Gabriel specifically referenced an article authored by "Dr. Eichler from Harvard," and in particular a statement that Gabriel quoted as follows: "the effects of skull molding have long been known to compress the superior sagittal sinus and slow cerebral circulation."⁵ Gabriel further explained that "[t]he venous sinus system" transports blood from the brain back to the heart, and he applied the Eichler article to the facts of the instant case as follows:

The sinuses are the large—basically large veins that collect the blood from the brain in preparation to its return to the heart. Those sinuses lie directly under the open skull plates of the fetus's brain. Of the fetus's head.

Those skull plates are easily compressible. And the sinuses, therefore, can be compressed. And that is what Dr. Eichler is talking about when he talks about compressible sinuses. When you add on top of that preeclampsia, together with

⁴ *Estate of Sands v Providence Hosp Med Ctr*, unpublished opinion per curiam of the Court of Appeals (Docket No. 268401), issued 12/28/06.

⁵ Eichler, *Magnetic Resonance Imaging Evaluation of Possible Neonatal Sinovenous Thrombosis*, 37 *Pediatric Neurology* 317 (2007). Eichler's article states, "The effects of skull molding have long been known to compress the superior sagittal sinus and slow cerebral circulation in the absence of clinical signs or repercussions." *Id.*

hyperstimulation of Pitocin, together with the abnormal labor, then you have a setup in which you can produce impairment of the outflow of blood through the sinuses.

There is a venous ischemic or hemorrhagic infarction that occurs as a consequence.^[6] And that is the basis for the subsequent long-term problems Elijah has.

If you recall, the MRI, even by the interpreter locally, called it ischemia, with which I agree. And in view of the significant bleeding in the spinal fluid in the newborn period and his critical condition requiring intubation and resuscitation, it is highly probable that the explanation in Elijah's case is a sinus venous thrombosis in view of all those risk factors.

The parties submitted Dr. Gabriel's second deposition to the circuit court, along with supplemental briefs. Defendants did not offer any expert testimony contradicting Gabriel or file with the court any medical literature. On February 25, 2009, the circuit court issued a written opinion and order "dismissing the case on account of . . . plaintiff's failure to show scientific reliability." The circuit court offered the following reasoning:

The plaintiff's theory of the case does not comport with the science of neurology. At oral argument, we denied defendant's [sic] request for summary disposition on the issue, but we granted the defendant's [sic] alternative request for a *Daubert* hearing. The plaintiff was to file a supplemental brief addressing the difference between the instant case and *Estate of Sands v Providence Hospital & Medical Center*, [unpublished opinion per curiam of the Court of Appeals (Docket No. 268401), issued 12/28/06.] *Sands* matters—the defendants attached it to their brief—because there the Court of Appeals, holding that MRE 702 as amended substituted *Daubert* for *Frye*, ... affirmed the trial court's grant of summary disposition to the defendant concluding the plaintiff's "causation theory"—very much like the instant plaintiff's—was not "scientifically reliable." In fact, as we discuss below, we have the same expert.

Plaintiff's Theory

Plaintiff says her baby's brain was damaged when forceps were applied to the brain; the impact of the forceps damaged the baby's brain tissue. Defendant says plaintiff's theory lacks scientific support. *If we look at scientific criteria like error rates, we would not be able to accept a jury verdict that Elijah developed cerebral palsy because when he was delivered forceps pushed on his brain.* In legal terms, we have a *Daubert/Frye* problem.

⁶ An infarct is "an area of coagulation necrosis in a tissue due to local ischemia resulting from obstruction of circulation to the area, most commonly by a thrombus or embolus." Dorland's Illustrated Medical Dictionary, 778 (25th ed, 1974).

Sands

In *Sands*, the Court of Appeals held that the trial court had not abused its discretion in concluding that the theory a baby's brain might be injured if his brain had been pushed inward when he was delivered or shortly after [sic]. The plaintiff had pointed out that its expert had arrived at the theory after looking at the documentary evidence concerning the child's birth—medical records, depositions, and the like. But this missed the point.

The question is not the qualifications of the expert, but the qualification of the theory, so to speak.

Some specifics:

What do colleagues of the expert think of his methodology—has it been “peer reviewed”? Has it been tested; if so, how? What has been published? Is it “generally accepted”: Were we to take a poll of the medical community, what percentage of doctors would approve of the theory? We don't pretend this is an exclusive list.

In dictum, the *Sands* Court said had the trial court conducted a *Daubert* hearing, the expert's evidence “likely” would have been found inadmissible. The Court of Appeals cited *Craig v Oakwood Hosp*, [471 Mich 67; 684 NW2d 296 (2004).] Actually, the Court of Appeals had cited *Craig* several times earlier. The theory of the case matched the theory in *Craig*; as the Supreme Court rejected the theory, so should the *Sands* Court.

In fact, the Supreme Court had faced the very expert the *Sands* Court faced.

The Facts Here

Actually, our plaintiff also uses the same expert as the plaintiff in *Craig* used.

She explains she has tried to “create a dialogue directly between Dr. Ronald Gabriel and you Judge Murphy” wherein Dr. Gabriel can answer questions Judge Murphy may have.

This might mean something if Dr. Gabriel explained how his theory qualified under *Daubert*.

In fact, Dr. Gabriel does the opposite. He makes the case for not accepting his own theory. If we believe him, we just don't have the scientific support, at least at this time. To be sure, some scientists suspect that “mechanical trauma” to a newborn's brain is the culprit. Some scientists believe trauma may arise from careless application of forceps. But under the *Daubert* regime, suspicion is not enough.

Dr. Gabriel says “scientific evidence” is “powerful”; every “legitimate” child neurologist recognizes it; it is taught in every medical school. But where is this scientific evidence? *Dr. Gabriel certainly doesn’t produce data.*

We might be willing to accept his conclusion without data—because the methodology is defined so broadly, that everyone, neurologist or not, doctor or not, may sanction it: “The methodology is one which relies upon probability.” “Probability based upon the facts of the case and the purported mechanism.” Of course, as the theory expands, its power declines. Most anything can be defined in terms of probability. It would help to know the specific probabilities. If the underlying theory is wrong, the probabilities derived by plugging in data will be wrong as well.

Dr. Gabriel accuses the medical community of misleading the legal community by “obscure(ing)” [sic] the “scientific analysis.” Maybe so, but what is the correct scientific analysis? This begs the question.

Dr. Gabriel says this case can be distinguished from *Daubert* because here we have “clinical facts” that “have been widely acknowledged throughout the medical literature for decades as having the potential to produce a sinus venous thrombosis.” *Okay, but where is the literature? Dr. Gabriel does give us an—one—article: Florian Eichler MD et al., Magnetic Resonance Imaging Evaluation of Possible Neonatal Sinovenous Thrombosis. (The source of the article is unclear, but we are willing to believe it is from a legitimate scientific journal.) One article is pretty paltry.*

The authors do say they did a “retrospective search of the institutional database.” But they were looking for neonates whose tomographs “raised the suspicion for thrombus.” A thrombus is a blood clot. But do we even know cerebral palsy may be caused by a blood clot?

In light of *Sands*, Plaintiff has not shown that his [sic] theory of how Elijah was injured is scientifically reliable. Accordingly, we dismiss the case. [Emphasis added, footnotes omitted.]

II. ANALYSIS

Plaintiff now challenges the circuit court’s summary disposition ruling, which we review de novo. *Walsh v Taylor*, 263 Mich App 618, 621; 689 NW2d 506 (2004). “In reviewing a motion under . . . (C)(10), this Court considers the pleadings, admissions, affidavits, and other relevant documentary evidence of record in the light most favorable to the nonmoving party to determine whether any genuine issue of material fact exists to warrant a trial.” *Id.* We review a circuit court’s decision to exclude or admit expert witness testimony for an abuse of discretion. *People v Wilson*, 194 Mich App 599, 602; 487 NW2d 822 (1992). An abuse of discretion occurs when a circuit court chooses a result that falls outside the range of reasonable and principled outcomes. *Maldonado v Ford Motor Co*, 476 Mich 372, 388; 719 NW2d 809 (2006).

MRE 702 “requires trial judges to act as gatekeepers who must exclude unreliable expert testimony. See *Daubert v Merrell Dow Pharmaceuticals, Inc.*, 509 US 579; 113 S Ct 2786; 125 L Ed 2d 469 (1993), and *Kumho Tire Co, Ltd v Carmichael*, 526 US 137; 119 S Ct 1167; 143 L Ed 2d 238 (1999).” Staff Comment to 2004 Amendment of MRE 702. In *Gilbert v DaimlerChrysler Corp.*, 470 Mich 749, 782; 685 NW2d 391 (2004), our Supreme Court elaborated that the trial court’s gatekeeper role

applies to *all stages* of expert analysis. MRE 702 mandates a searching inquiry, not just of the data underlying expert testimony, but also of the manner in which the expert interprets and extrapolates from those data. Thus, it is insufficient for the proponent of expert opinion merely to show that the opinion rests on data viewed as legitimate in the context of a particular area of expertise (such as medicine). The proponent must also show that any opinion based on those data expresses conclusions reached through reliable principles and methodology. [Emphasis in original.]

Consistent with this “gatekeeper” role, the circuit court must also consider the factors listed in MCL 600.2955(1). *Clerc v Chippewa Co War Mem Hosp*, 477 Mich 1067, 1068; 729 NW2d 221 (2007). The Legislature dictated as follows in MCL 600.2955:

(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.

(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. As used in this subdivision, “relevant expert community” means individuals who are knowledgeable in the field of study and are gainfully employed applying that knowledge on the free market.

(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.

(2) A novel methodology or form of scientific evidence may be admitted into evidence only if its proponent establishes that it has achieved general scientific acceptance among impartial and disinterested experts in the field.

(3) In an action alleging medical malpractice, the provisions of this section are in addition to, and do not otherwise affect, the criteria for expert testimony provided in section 2169.

Each of these statutory factors need not favor the proposed expert's opinion. *Chapin v A & L Parts, Inc*, 274 Mich App 122, 137; 732 NW2d 578 (2007) (opinion by Davis, J.). It suffices that "the opinion is rationally derived from a sound foundation." *Id.* at 139.

Although the circuit court appears to have considered several of the factors set forth in MCL 600.2955(1), the court's written opinion reveals a fundamental misapprehension of the facts of this case. The circuit court summarized plaintiff's medical malpractice theory as arising from the use of forceps during Elijah's delivery: "Plaintiff says her baby's brain was damaged when forceps were applied to the brain; the impact of the forceps damaged the baby's brain tissue. ... If we look at scientific criteria like error rates, we would not be able to accept a jury verdict that Elijah developed cerebral palsy because when he was delivered forceps pushed on his brain." The parties agree that forceps played no part in Elijah's delivery, and that plaintiff has never advanced a causation theory related to forceps. The circuit court's profound misapprehension with respect to the basic factual underpinnings of plaintiff's case significantly undermines our confidence that the court correctly applied the factors in MRE 702 and MCL 600.2955(1) to the evidence presented in this case.

Moreover, instead of independently applying the MCL 600.2955(1) criteria to the correct underlying factual scenario existing here, the circuit court seemingly relied on this Court's analysis of some of these factors in *Sands*, another case involving Dr. Gabriel. In *Sands*, the Court considered the scientific reliability of Gabriel's testimony that an infant's brain injury had resulted from "a combination of factors," including "hyperstimulation, abnormal uterine pressures, decelerations and use of a vacuum"; Gabriel believed that these factors had given rise to "mechanical trauma that resulted in 'significant subarachnoid or subdural bleeding.'" *Id.*, slip op at 1. The defendants challenged the scientific reliability of Gabriel's causation theory. The plaintiff asserted that because Gabriel had premised his testimony on medical evidence concerning the child, his own "publication in progress on the complications of labor and delivery," and "his own background, education and experiences as a pediatric neurologist," Gabriel's causation theory met the legal standards governing scientific reliability. *Id.* at 4. This Court rejected that Gabriel's own background, experiences and publication sufficed to demonstrate the reliability of his conclusions. *Id.* This Court emphasized that the "[p]laintiff has never identified what principles and methods Gabriel utilized to reach his conclusion that a

combination of factors during [the child's] delivery" resulted in mechanical trauma, brain bleeding, reduced arterial flow to the brain, and brain injury. *Id.* The Court in *Sands* summarized, "Consequently, plaintiff did not establish that Gabriel's causation theory has been tested, subjected to peer review and publication, or is generally accepted within the relevant scientific community. Moreover, the record is void of evidence of hyperstimulation or abnormal uterine pressures." *Id.*

To be sure, some similarities connect the causation theory proffered here with that described in *Sands*. But in the instant case, Dr. Gabriel opined that a combination of preeclampsia, "abnormal labor" and uterine hyperstimulation caused a sinus venous thrombus, which in turn resulted in the "unequivocal ischemia" apparent on Elijah's MRI and an infarction of brain tissue. In *Sands*, Gabriel propounded that a different combination of factors (hyperstimulation, abnormal uterine pressures, decelerations and use of a vacuum) caused subarachnoid or subdural bleeding. More importantly, and in contrast with the record in *Sands*, the instant record contains medical literature that appears to support at least some aspects of Gabriel's theory.⁷

A court "would necessarily abuse its discretion if it based its ruling on an erroneous view of the law or on a clearly erroneous assessment of the evidence." *Cooter & Gell v Hartmarx Corp.*, 496 US 384, 405; 110 S Ct 2447; 110 L Ed 2d 359 (1990). The circuit court clearly misunderstood the facts of this case and appears to have disregarded scientific evidence presented in opposition to defendants' motion. Accordingly, the court failed to conduct "a searching inquiry" of Dr. Gabriel's testimony consistent with the relevant data, and we conclude that the court thus abused its discretion when it struck his testimony. *Gilbert*, 470 Mich at 782.

Notwithstanding that at least one article submitted by plaintiff appears consistent with Dr. Gabriel's causation theory, the record remains incomplete. Although Gabriel concluded that the 10 articles plaintiff had filed with the circuit court supported his causation opinion, neither Gabriel nor plaintiff's counsel addressed many of the factors delineated in MCL 600.2955. Instead, during Gabriel's *Daubert* hearing deposition, plaintiff's counsel put forth only general, nonspecific questions. Representative examples of plaintiff's counsel's questions include: (1) "And in your search of the world's literature, do you find that the bulk of the world's literature does, in fact, support your position in this particular case?"; (2) "I'm looking at specifically the article by Fitzgerald, which is No. 6 in my brief. I know we had discussed before, but there are numerous others. ... [I]n your opinion, Doctor, does this, as well as the others, support your position?"; (3) "So the theory that you're postulating, am I correct, Dr. Gabriel, isn't really a theory? It has been, in fact, replicated and written about in numerous scientific peer review papers? Is that a fair statement?"; and (4) "If I were to ask any board-certified pediatric

⁷ To the extent that the circuit court found that Dr. Gabriel had submitted only one article in support of his theory ("One article is pretty paltry"), we find that the circuit court clearly erred. Plaintiff submitted nine other articles arguably relevant to Gabriel's sinus venous thrombosis theory. Alternatively, the circuit court may have meant that it found only one of the submitted articles relevant to plaintiff's causation theory. On remand, the circuit court should clarify which of the submitted articles it reviewed.

neurologist who's appropriately trained with experience, would there be any reason, short of either politics or the particular ilk that the person might be attempting to sway—any reason why they wouldn't agree with you?" In response to this manner of questioning, Gabriel shed little light on the manner in which the submitted articles supplied scientifically reliable, peer-reviewed support for plaintiff's causation theory. On remand, plaintiff must give the circuit court an explanation of the manner in which Gabriel's testimony and the proffered articles satisfy MCL 600.2955 and MRE 702. The circuit court may permit defendants to respond, and to offer countervailing literature.

Reversed and remanded for further proceedings consistent with this opinion. We do not retain jurisdiction.

/s/ Christopher M. Murray
/s/ Pat M. Donofrio
/s/ Elizabeth L. Gleicher