COURT OF APPEALS OF VIRGINIA

Present: Judges Benton, Haley and Retired Judge Rosenblatt*
Argued at Alexandria, Virginia

COMMONWEALTH OF VIRGINIA,
VIRGINIA BIRTH-RELATED NEUROLOGICAL
INJURY COMPENSATION PROGRAM AND
VIRGINIA BIRTH-RELATED NEUROLOGICAL
PROGRAM BOARD

v. Record No. 2351-04-4

MICHELE BAKKE, JONATHAN BAKKE,
SUSAN L. RATTNER, M.D., WOMEN PHYSICIANS
OF NORTHERN VIRGINIA, P.C. AND
RESTON HOSPITAL CENTER, LLC d/b/a RESTON
HOSPITAL CENTER AND/OR COLUMBIA RESTON
HOSPITAL CENTER

OPINION BY
JUDGE JAMES W. BENTON, JR.
SEPTEMBER 27, 2005

FROM THE VIRGINIA WORKERS' COMPENSATION COMMISSION

Carla R. Collins, Assistant Attorney General (Jerry W. Kilgore, Attorney General; Francis S. Ferguson, Deputy Attorney General, on briefs), for appellant.

Lesley S. Zork (Bruce J. Klores; Bruce J. Klores & Associates, P.C., on brief), for appellees Michele Bakke and Jonathan Bakke.

Joyce A.N. Massey (Susan L. Mitchell; McCarthy, Massey & Mitchell, P.C., on brief), for appellees Susan L. Rattner, M.D. and Women Physicians of Northern Virginia, P.C.

No brief or argument for appellee Reston Hospital Center, LLC d/b/a Reston Hospital Center and/or Columbia Reston Hospital Center.

The Workers' Compensation Commission awarded benefits and expenses under the Virginia Birth-Related Neurological Compensation Act, Code §§ 38.2-5009 through 38.2-5021,

* Retired Judge Alan E. Rosenblatt took part in the consideration of this case by designation pursuant to Code § 17.1-400.

to Michele Bakke and Jonathan Bakke, parents and next friends of Jenna Marie Bakke. The Commonwealth of Virginia, Virginia Birth-Related Neurological Injury Compensation Program, and the Virginia Birth-Related Neurological Injury Compensation Program Board (collectively designated "the Program") contend the commission erred (1) in applying the Act's rebuttable presumption that the infant's injury is a birth-related neurological injury, (2) in finding that some of the physicians were the most qualified to evaluate the timing of the infant's injury, (3) in concluding that evidence was insufficient to rebut the presumption, and (4) in finding that the Program failed to prove a specific non-birth-related cause of the injury. We affirm the commission's award.

I.

During her pregnancy, Michele Bakke received a diagnosis of HELLP syndrome (hemolysis, elevated liver enzyme levels and low platelet count) and preeclampsia. Because of the life-threatening dangers to Bakke and her child associated with these conditions and because of Bakke's low platelet count, physicians delivered her child by cesarian section without labor. At her birth on September 2, 1999, the infant's gestational age was estimated to be twenty-nine weeks. She weighed .885 kilograms and was 33 centimeters long. The medical records indicate the infant had "NO RESPIRATION" at delivery and was intubated immediately. A handwritten note included within the delivery records shows that she "did make some resp effort." At that time, the infant's Apgar score was five. Five minutes after birth, her Apgar score was seven. When the infant was admitted to the neonatal intensive care unit, a note indicated her condition as "responsive in severe respiratory distress." The infant's chest x-ray report indicated "WHITE OUT LUNGS," and the infant was put on a ventilator, where she remained for a month. The discharge summary noted diagnoses for twelve diseases or conditions.

The medical records from the period of the infant's birth to her discharge from the hospital on December 7, 1999 are extensive. Likewise, the commission's record contains extensive testimony, reports, and other documents from physicians regarding the infant's condition at birth and later. In two succinct sentences, the commission addressed the nub of the issue in this case:

> The medical professionals who have evaluated [the infant's] medical history disagree regarding when and how [she] actually sustained the injury causing her cerebral palsy. While Dr. [James T.] Christmas and the members of the [medical panel] who reviewed [the infant's] case have opined that [she] did not sustain an injury during the course of her labor, delivery, resuscitation or immediately after her birth, Dr. [J. Peter] VanDorsten, Dr. [Daniel] Lefton, Dr. [M. Elizabeth] Latimer and Dr. [Marcus C.] Hermansen have all opined that [she] was injured around the time of her birth.

In a lengthy opinion, the commission reviewed in detail the medical evidence and found that the more persuasive opinions were rendered by those physicians who opined that the damage to the infant's brain was caused at birth. The Program contends that the commission's reasoning is flawed and that the award should be reversed.

II.

The Virginia Birth-Related Neurological Injury Compensation Act provides compensation to families whose infants suffer "birth-related neurological injuries" caused by a participating physician or a participating hospital. Code §§ 38.2-5000 to 38.2-5021. A "birth-related neurological injury" is defined as follows:

> [I]njury to the brain or spinal cord of an infant caused by the deprivation of oxygen or mechanical injury occurring in the course of labor, delivery or resuscitation in the immediate post-delivery period in a hospital which renders the infant permanently motorically disabled and (i) developmentally disabled or (ii) for infants sufficiently developed to be cognitively evaluated, cognitively disabled.

Code § 38.2-5001. Thus, to satisfy this statutory definition the following four factors necessarily must be established:

> (1) The infant sustained "an injury to the brain or spinal cord" that was "caused by deprivation of oxygen or mechanical injury."
>
> (2) The injury occurred "in the course of labor, delivery or resuscitation necessitated by a deprivation of oxygen or mechanical injury that occurred in the course of labor or delivery, in a hospital."
>
> (3) The injury rendered the infant "permanently motorically disabled and (i) developmentally disabled or (ii) for infants sufficiently developed to be cognitively evaluated, cognitively disabled."
>
> (4) Such disability caused "the infant to be permanently in need of assistance in all activities of daily living."

Central Virginia Obstetrics & Gynecology Assoc., P.C. v. Whitfield, 42 Va. App. 264, 273, 590 S.E.2d 631, 635-36 (2004) (quoting Code § 38.2-5001) (footnote omitted).

III.

Initially, we address the Program's contention that the commission "err[ed] in applying the presumption set forth in . . . Code § 38.2-5008." We conclude that this claim lacks merit.

"The legislature, recognizing the difficulty in proving when, but not whether, such an injury was sustained, enacted a presumption to assist potential claimants in obtaining benefits." Wolfe v. Virginia Birth-Related Neuro. Injury Comp. Pgm., 40 Va. App. 565, 578, 580 S.E.2d 467, 473 (2003). This presumption is described by the statute as follows:

> A rebuttable presumption shall arise that the injury alleged is a birth-related neurological injury where it has been demonstrated, to the satisfaction of the Virginia Workers' Compensation Commission, that the infant has sustained a brain or spinal cord injury caused by oxygen deprivation or mechanical injury, and that the infant was thereby rendered permanently motorically disabled and (i) developmentally disabled or (ii) for infants sufficiently developed to be cognitively evaluated, cognitively disabled.

Code § 38.2-5008(A)(1). "Once the presumption applies, the burden of proof shifts to the party opposing the presumption to disprove elements two and four[, as listed in Part II above], and thereby establish 'that the injuries alleged are not birth-related neurological injuries within the meaning of the chapter.'" Whitfield, 42 Va. App. at 273, 590 S.E.2d at 636 (quoting Wolfe, 40 Va. App. at 578, 580 S.E.2d at 474 and Code § 38.2-5008(A)(1)).

On its review, the commission ruled that the deputy commissioner "concluded that the medical evidence predominated in establishing that the presumption provided in Code § 38.2-5008 applies to [the infant's] case and the program has not requested review of that finding." Credible evidence in the record supports this ruling.

The deputy commissioner found,

> after considering the three volumes of medical records plus all of the expert medical opinions . . . , that the infant is entitled to the rebuttable presumption that her injury as alleged is a birth-related neurological injury caused by oxygen deprivation . . . [,] that the infant is both developmentally and cognitively disabled . . . [, and that the] physicians and hospital also participated in the Program.

The deputy commissioner expressly relied upon the opinions of Drs. VanDorsten, Latimer, Lefton, and Hermansen to support these findings.

On the commission's review, the Program asserted in its written statement that the deputy commissioner's "ruling is consistent with and founded upon a correct application of the law and . . . credible evidence." The Program's written statement concluded "that the rulings of [the deputy commissioner] . . . should be sustained and affirmed in full." This unambiguous, express language in the Program's written statement supports the commission's finding that the issue of the infant's entitlement to the rebuttable presumption was not raised by the Program at the commission's review.

Rule 5A:18 bars our review of issues that were not put "before the commission on review in [the party's] written statement or its reply to the [other party's] written statement . . . [and that

were] not considered by the full commission." Berner v. Mills, 38 Va. App. 11, 18, 560 S.E.2d 925, 928 (2002). See also Williams v. Gloucester Sheriff's Dep't, 266 Va. 409, 411, 587 S.E.2d 546, 548 (2003) (noting that parties may raise issues before the commission by motions to reconsider); Overhead Door Co. of Norfolk v. Lewis, 29 Va. App. 52, 62, 509 S.E.2d 535, 539-40 (1999) (same); Steadman v. Liberty Fabrics, Inc., 41 Va. App. 796, 806 n.3, 589 S.E.2d 465, 467 n.3 (2003) (noting failure of the party to appeal an issue decided adversely by the deputy commissioner and declining to consider that issue on appeal because it was not addressed by the commission on review). We hold that credible evidence in the record supports the commission's finding that the Program did not present for review the deputy commissioner's ruling that the evidence was sufficient to entitle the infant to the Code § 38.2-5008 presumption. Accordingly, this issue is not properly preserved for appeal.

IV.

The Program also contends the commission erred in concluding the evidence was "insufficient to defeat the presumption set forth in . . . Code § 38.2-5008(A)(1)." The Program argues that (1) the physicians the commission relied upon were not the most qualified to evaluate the timing of the injury, (2) the opinions expressed by the medical panel and Dr. Christmas were sufficient to prove the injury did not occur during delivery or resuscitation in the immediate post-delivery period, and (3) the evidence was sufficient to prove a specific non-birth-related cause of the infant's injury. We disagree.

The Act provides that "[t]he determination of the Commission pursuant to [Code] § 38.2-5008[(A)(1) through (A)(3)] . . . , or a determination or award of the Commission upon . . . review [of the evidence], as provided in [Code] § 38.2-5010, shall be conclusive and binding as to all questions of fact." Code § 38.2-5011. On appeal from the commission's review of the evidence and from its decision under the Act, we apply our usual standard of review and

consider the evidence "in the light most favorable to the prevailing party before the commission." Whitfield, 42 Va. App. at 269, 590 S.E.2d at 634.

A.

The Program contends the commission's decision is flawed because the commission "erred in concluding that certain medical experts are the most qualified to evaluate the timing of the injury . . . based solely on their stated occupations or specialities." Essentially, the Program contends we should overturn the commission's finding that the injury occurred at the time of the birth because the Program's expert was more qualified to make that determination.

Resolving the conflicting testimony of the physicians, the commission made the following findings:

> Of the physicians who have offered expert opinions in this case, we conclude that Drs. Hermansen and Latimer are the most qualified to evaluate the timing of the injury causing [the infant's] cerebral palsy. Dr. Hermansen is a pediatrician who specializes in neonatology and Dr. Latimer is a neurologist specializing in treating children. In contrast, Drs. Christmas, VanDorsten and the members of the [medical panel] are obstetricians, gynecologists and specialists in maternal-fetal medicine who, although involved in high-risk pregnancies involving mothers and fetuses, do not regularly treat infants after their birth.

On appeal, we are guided by the statutory mandate of Code § 38.2-5011 and well-settled principles. The Supreme Court has held that "[t]he Commission's factual findings are 'conclusive and binding' and a question raised by 'conflicting expert medical opinions' is 'one of fact.'" Eccon Const. Co. v. Lucas, 221 Va. 786, 790, 273 S.E.2d 797, 799 (1981) (citations omitted). In other words, the commission is to decide the "probative weight" to be given to conflicting medical evidence. C.D.S. Const. Services v. Petrock, 218 Va. 1064, 1071, 243 S.E.2d 236, 241 (1978).

We have applied these same principles in appeals concerning the commission's consideration of conflicting medical opinions when resolving issues arising under the Act.

> "Questions raised by conflicting medical opinions must be decided by the commission." This appellate deference is not a mere legal custom, subject to a flexible application, but a statutory command making clear that the commission's decision "shall be conclusive and binding as to all questions of fact." Medical evidence, therefore, remains "subject to the commission's consideration and weighing." And the appearance of "contrary evidence in the record is of no consequence if there is credible evidence to support the commission's finding."

Whitfield, 42 Va. App. at 279, 590 S.E.2d at 639 (citations omitted). See also Kidder v. Va. Birth-Related Neuro. Injury Comp. Pgm., 37 Va. App. 764, 778, 560 S.E.2d 907, 913 (2002); Va. Birth-Related Neuro. Injury Comp. Pgm. v. Young, 34 Va. App. 306, 318, 541 S.E.2d 298, 304 (2001).

The commission reviewed the evidence, the qualifications of the physicians, and the areas of conflict among the physicians. The commission did not conclude that the Program's experts were incredible but, rather, found the opinions of the other physicians to be more persuasive. We cannot say that the commission erred by giving more weight to the opinions of those physicians who specialize in neonatology and pediatric neurology. As we and the Supreme Court have often explained, "[t]he deference that we give to the commission's fact finding on medical questions is based upon the 'unwisdom of an attempt by . . . [courts] uninitiated into the mysteries [of the medical science debate] to choose between conflicting expert medical opinions.'" Stancill v. Ford Motor Co., 15 Va. App. 54, 58, 421 S.E.2d 872, 874 (1992) (quoting Johnson v. Capitol Hotel, Inc., 189 Va. 585, 590, 54 S.E.2d 106, 109 (1949)). See also Amelia Sand Co. v. Ellyson, 43 Va. App. 406, 409, 598 S.E.2d 750, 751 (2004). We, therefore, decline the Program's invitation to consider the institutions from which the physicians graduated and received their training as a basis for concluding the commission should have given the testimony of other physicians greater weight. We hold that the commission thoroughly examined the evidence and made a factual determination that is supported by credible evidence.

B.

The Program contends the commission "erred in concluding that the opinions . . . by the [medical panel] and Dr. Christmas regarding the timing of the injury . . . were insufficient to defeat the presumption." We disagree.

"[T]o defeat the Code § 38.2-5008(A)(1) presumption, the Program must prove, to a reasonable degree of medical certainty both (1) that the [infant's] . . . injury did not occur 'in the course of labor, delivery or resuscitation in the immediate post-delivery period in a hospital' and (2) that there was a specific, non-birth-related cause of the injury." Coffey v. Va. Birth-Related Neur. Injury Comp. Pgm., 37 Va. App. 390, 402, 558 S.E.2d 563, 569 (2002).

> "The determination whether the employer has [rebutted the presumption and carried its burden of proof] is made by the Commission after exercising its role as finder of fact. In this role, the Commission resolves all conflicts in the evidence and determines the weight to be accorded the various evidentiary submissions. 'The award of the Commission . . . shall be conclusive and binding as to all questions of fact.'"

Young, 34 Va. App. at 317, 541 S.E.2d at 304 (citation omitted).

The commission made extensive findings supporting its conclusion that the Program failed to rebut the presumption contained in Code § 38.2-5008(A)(1). We relate in detail a portion of those findings:

> Of the physicians who have offered expert opinions in this case, we conclude that Drs. Hermansen and Latimer are the most qualified to evaluate the timing of the injury causing [the infant's] cerebral palsy . . . .
>
> Both Dr. Hermansen and Dr. Latimer have opined that the damage to [the infant's] brain was caused near the time of her birth, and we find their opinions to be persuasive. We also disagree with the [deputy commissioner's] conclusion that there is no objective evidence supporting the opinions of Drs. Hermansen and Latimer.

> [The infant's] medical records immediately after her birth show that she displayed no respirations prompting those who were treating her to intubate immediately. A chest x-ray was taken showing "whiteout lungs" and [the infant] was diagnosed with respiratory distress syndrome and hylan membrane disease, causing her to be placed on mechanical ventilation for a significant period of time while she was in NICU. It is also undisputed that hylan membrane disease interferes with the delivery of oxygen to the body.
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> Although [the infant's] initial blood gas levels were read as normal, these levels were taken *after* [she] had been given oxygen. The medical records also reflect that [the infant] was treated for metabolic acidosis within the first day of her life, despite her base excess level of -9.5 falling within the "normal" range for a full term infant, thereby supporting Dr. Hermansen's conclusion that [the infant] had at least some level of metabolic acidosis.
>
> In addition, [the infant's] medical records show that she suffered from hypotension at birth and for several days thereafter. Dr. Latimer explained that such hypotension is "commonly known" to cause PVL and PVL is known to cause cerebral palsy. Dr. Christmas agreed while testifying that hypotension can injure the brain and cause PVL in pre-term infants.
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> Furthermore, as noted by Dr. Hermansen, [the infant's] head ultrasound performed on September 4, 1999, and reviewed by Dr. Lefton, a neuroradiologist, showed evidence of a cerebral edema soon after [the infant's] birth, thereby supporting the conclusion that [the infant] had sustained a recent brain injury. The lack of PVL on [the infant's] first ultrasound constitutes additional evidence that her brain injury did not occur long before her birth.
>
> Upon our Review of the medical records in their entirety and our Review of the various opinions expressed by experts in this case, we conclude that the evidence with respect to the timing of the oxygen deprivation causing the injury to [the infant's] brain is, at most, equipoise. Therefore, while we do not ignore the opinions expressed by the [medical panel] and Dr. Christmas, we conclude that their opinions are insufficient, in light of the contrary opinions expressed by Drs. Hermansen and Latimer, as buttressed by Drs. Lefton and VanDorsten, to defeat the presumption of Code § 38.2-5008(A)(1).

The Program challenges these findings and contends there was "no evidence of metabolic acidosis or [edema] in the medical records and no specific reference to an hypoxic event during

the statutory period." We disagree. Simply put, the Program asks us to reweigh the evidence, contrary to our standard of review, and find in its favor. As we have consistently held in reviewing decisions under the Act, "the appearance of 'contrary evidence in the record is of no consequence if there is credible evidence to support the commission's finding.'" Whitfield, 42 Va. App. at 279, 590 S.E.2d at 639 (quoting Young, 34 Va. App. at 318, 541 S.E.2d at 304, and Kidder, 37 Va. App. at 778, 560 S.E.2d at 913). A review of the record demonstrates substantial credible evidence supporting the commission's findings.

Significantly, the commission gave thorough and reasoned consideration to the contrary opinions of the Program's medical expert, Dr. Christmas, when it made its decision. To take one example, Dr. Christmas recognized the possibility of edema, testifying that "there is allegedly edema noted on the first scan and two weeks later there's not any edema so . . . it must have been very mild edema noted on the first exam if, in fact, there was any edema." Reviewing his testimony, the commission found that Dr. Christmas merely "speculated that the cerebral edema shown on the first ultrasound must have been fairly small" and noted that "Dr. Christmas did not actually review the ultrasounds." The commission further noted that Dr. Christmas "also deferred to a radiologist regarding what [the ultrasounds] actually showed."

The commission gave greater weight to the opinion of Dr. Daniel Lefton, a board certified radiologist who also has a qualification in neuroradiology. Unlike Dr. Christmas, Dr. Lefton actually examined the ultrasounds. He reported "[t]o a reasonable degree of medical certainty [the infant's] brain injury (PVL) resulted from a hypoxic-ischemic encephalopathy during the immediate delivery and resuscitation period." In support of his conclusion, he noted the following:

> Both of the MRI studies show clear evidence of periventricular leukomalacia (PVL): an hypoxic ischemic injury to the white matter of the brain surrounding the ventricles. This neuroradiologic finding is typically found in premature infants

> requiring resuscitation and mechanical ventilation at the time of delivery . . . .
>
> The September 4, 1999, head ultrasound performed on day two of life is strongly consistent with the opinions expressed above, and further confirms that [the infant's] injury occurred at or about the time of delivery. The films from this study show increased echogenicity, or "cerebral edema." The finding of cerebral edema on ultrasound is an early radiologic manifestation of an hypoxic ischemic injury that is later manifested as PVL. PVL is not usually seen radiographically until about two weeks after the hypoxic/ischemic event.
>
> In conclusion, these three studies demonstrate that [the infant] suffered a brain injury to the periventricular white matter from lack of oxygen or blood supply at or around the time of birth.

In contrast to Dr. Christmas's conclusion that the edema must have been mild, Dr. M. Elizabeth Latimer, a board certified child neurologist who examined the infant and reviewed the medical records, reported the following:

> [The infant] did have an ultrasound done on day 2 of life which showed no hemorrhage but did show cerebral edema. This was not reported at the time of exam, most likely because the primary focus of the initial exam was to rule out intraventricular hemorrhage. On the subsequent exams in the NICU, [the infant] had resolution of the cerebral edema which clearly times the cerebral insult to the immediate perinatal period. Additionally, there is no evidence of periventricular leukomalacia on the initial exam. The absence of the appearance of periventricular leukomalacia makes it highly unlikely that the injury occurred significantly prior to delivery . . . .
>
> With regard to imaging studies, she had an MRI done . . . at age one which although read as normal, clearly was not. This MRI definitely demonstrates Periventricular Leukomalacia. This finding is highly significant because it is seen primarily in premature infants who also have either hypoxemia or hypotension during the immediate perinatal period. This area of the brain in premature infants is extremely vulnerable to low flow states, such as low blood pressures, which [the infant] sustained during the immediate resuscitation period following delivery. The reason for this is because premature babies delivered prior to 32 weeks gestation lack autoregulation . . . . In the premature infant, there is no autoregulation so when the blood pressure drops, the blood flow to the brain drops accordingly. The vulnerable portion of the brain, the periventricular region is the most vulnerable and in this case the most damaged.

* * * * * * *

> In summary, [the infant] has a Permanent Neurologic Injury caused by a lack of oxygen to the brain, which is severe and is temporally related to the immediate period following her premature birth. She had profound hypotension at birth which was documented and treated in the records. It is commonly known that such hypotension at this stage of prematurity causes Periventricular Leukomalacia. She is permanently disabled with no hope of meaningful recovery. She is likely to never walk independently. She is most likely, at best, to have an IQ of 25-50, and will never be employable. She will require assistance with all activities of daily living for her entire life and is expected to have a normal life span.

Dr. Marcus Hermansen, a board certified pediatrician and neonatologist also reviewed the medical records and Dr. Lefton's report. He opined as follows:

> PVL is a form of ischemic (inadequate blood flow) brain injury seen most commonly in premature infants. [The infant's] PVL occurred around the time of her birth. This timing is based upon her critical condition at birth and in the immediate post-birth period and the cerebral edema on the head ultrasound study at two days of age. Immediately after her birth she had no respiratory effort followed by severe respiratory distress. She also had a metabolic acidemia and severe hypotension. All of these clinical observations demonstrate evidence of brain ischemia.
>
> Cerebral edema is seen on neuro-imaging studies for a few days following significant brain injury. The typical changes of PVL are seen weeks or months later. The presence of cerebral edema on September 4, 1999 is strong evidence of recent brain injury. In addition, the lack of PVL on the initial ultrasound is strong evidence that the brain injury did not occur long before the birth.

The record likewise contains evidence to support the commission's finding, which is contested by the Program, that at birth the infant "displayed no respiration prompting those who were treating her to intubate immediately." Dr. James VanDorsten, who is board certified in maternal fetal medicine and is chairman of the department of obstetrics and gynecology at a medical university, testified that the infant had hypotension in the immediate post-delivery period, that the infant "was not breathing at all" at birth, and that this "required an intervention,

an intubation." He opined that "[i]ntubation at less than a minute by experienced neonatologists . . . would be unusual." That is, the physicians would not have intubated so quickly had the infant not been in serious respiratory distress. He also testified that the infant "had acidosis in the first day of life that required treatment with bicarbonate," which was another indication that the infant did not receive adequate oxygen, resulting in her injury.

This is the evidence the commission found to be persuasive. These reports refute the Program's suggestion that the commission's findings lacked credible evidentiary support. As the Supreme Court has consistently held, a "finding of the Commission upon conflicting medical testimony that a condition . . . was due to [one cause] rather than to [another cause] is . . . a finding of fact" and is conclusive and binding on appeal. Johnson, 189 Va. at 588, 54 S.E.2d at 107-08 (citing Estep v. Blackwood Fuel Co., 185 Va. 695, 699, 40 S.E.2d 181, 183 (1946), and Mulkey v. Firth Bros. Iron Works, 188 Va. 451, 455, 50 S.E.2d 404, 406 (1948)).

The Program argues that the commission "erred as a matter of law in finding the evidence to be in equipoise" when its expert and the medical panel gave opinions "to a reasonable degree of medical certainty." This argument about "reasonable medical certainty" was not posed as a question presented for review but, rather, is raised merely in the context of suggesting that the commission gave the opinions of various physicians undue weight. Significantly, the Program does not contend that the medical evidence the commission considered was not credible. As we explained in Georgia-Pacific Corp. v. Robinson, 32 Va. App. 1, 526 S.E.2d 267 (2000), the commission determines which medical evidence is credible.

> Applying equally well-settled principles, the Supreme Court has held that the "question [of causation] raised by 'conflicting expert medical opinions' is one of fact." Eccon Constr. Co. v. Lucas, 221 Va. 786, 790, 273 S.E.2d 797, 799 (1981). Thus, the commission's "finding upon conflicting medical evidence that a certain condition does or does not exist is . . . a conclusive finding of fact." McPeek v. P.W. & W. Coal Co., 210 Va. 185, 188, 169 S.E.2d 443, 445 (1969). "The deference that we give to the

> commission's fact finding on medical questions is based upon the 'unwisdom of an attempt by . . . [courts] uninitiated into the mysteries [of the medical science debate] to choose between conflicting expert medical opinions.'" Stancill v. Ford Motor Co., 15 Va. App. 54, 58, 421 S.E.2d 872, 874 (1992) (citation omitted).

Robinson, 32 Va. App. at 5, 526 S.E.2d at 268-69.

Furthermore, the suggestion that the other evidence was "not equal" to the Program's evidence lacks merit. When asked whether he rendered his opinions "to a reasonable degree of medical certainty," Dr. VanDorsten expressly testified, "I do." The record also indicates Dr. Lefton asserted that he "h[e]ld the opinions [he has] stated . . . to a reasonable degree of medical probability." Dr. Hermansen likewise stated that his "opinions are expressed to a reasonable degree of medical probability." Although Dr. Latimer did not couch her opinion in those express terms, her report contains no expressions of uncertainty or speculation. Her report, which we have quoted in detail earlier in this opinion, is prefaced with the following paragraph:

> I am a Board Certified Child Neurologist. It is within the scope of my training and practice to evaluate and treat neonates in the intensive care nursery who have sustained neurologic injury. It is also within my scope of practice to determine timing and causation of injury and routine to read radiologic studies on these patients. I have reviewed prenatal and delivery records of Michele Bakke, neonatal intensive care unit . . . records on [the infant], films of ultrasound studies performed on [the infant] . . . , MRI studies . . . , and subsequent records of her treating physicians and healthcare providers. In addition, I examined [the infant] in my office on July 16, 2003. In this light these are my findings.

Dr. Latimer's report was competent medical evidence that the commission weighed with other medical evidence and accepted as persuasive. When a physician's opinion is certain and accepted by the commission, this Court "will not substitute form over substance by requiring a physician to use the magic words 'to a reasonable degree of medical certainty.'" Island Creek Coal Co. v. Breeding, 6 Va. App. 1, 11-12, 365 S.E.2d 782, 788 (1988). Indeed, in Lindenfield v. City of Richmond Sheriff's Office, 25 Va. App. 775, 492 S.E.2d 506 (1997), we affirmed the

commission's decision to deny benefits to a claimant who suffered from tuberculosis, which he alleged he contracted while working at the jail. The record contained the opinions of three physicians regarding the causation of the disease, only one of which was an opinion "to a reasonable degree of medical certainty that [the] claimant contracted tuberculosis while working in the jail." Id. at 781, 492 S.E.2d at 509. Noting that the commission found more persuasive the opinion of the two physicians who did not use these words, we held that "the commission, as the trier of fact," was permitted "to assign . . . little weight" to the opinion of the other physician in resolving the claim under Code § 65.2-401. Id. at 786, 492 S.E.2d at 512. Since our decision in Lindenfield, the legislature has amended Code § 65.2-401 to delete the requirement to prove the evidence "to a reasonable degree of medical certainty."

Simply put, the Program presents a view of the evidence consistent solely with the testimony and reports of those physicians the commission found to be less persuasive. The fallacy in the Program's analysis is demonstrated by its argument that "[b]ecause the Full Commission made no assertion that [the deputy commissioner's] determinations of fact were plainly wrong, the Full Commission's reversal of those factual findings was arbitrary and capricious and erroneous as a matter of law." It is well settled that the commission is the finder of fact. When the commission "articulate[s] a basis for its conclusion . . . that . . . is supported by credible evidence in the record," we are bound by its finding, not a contrary one made by the deputy commissioner. Goodyear Tire & Rubber Co. v. Pierce, 9 Va. App. 120, 127, 384 S.E.2d 333, 337 (1989). See also Grayson County School Bd. v. Cornett, 39 Va. App. 279, 286 n.2, 572 S.E.2d 505, 508 n.2 (2002); Lanning v. Va. Dept. of Trans, 37 Va. App. 701, 709, 561 S.E.2d 33, 37 (2002); Bullion Hollow Enterprises, Inc. v. Lane, 14 Va. App. 725, 728-29, 418 S.E.2d 904, 907 (1992); Williams v. Auto Brokers, 6 Va. App. 570, 573-74, 370 S.E.2d 321, 323-24 (1988). Even in cases, unlike this one, where the deputy commissioner makes credibility findings based

on a witness' demeanor, that finding is not unreviewable by the commission. Lane, 14 Va. App. at 729, 418 S.E.2d at 907. By statute, a request for review empowers the commission to consider the case *de novo*. Code § 65.2-705.

We hold, therefore, that credible evidence in the record supports the commission's conclusion that the Program failed to rebut the presumption.

C.

Although unnecessary in light of our holding, we address for completeness the Program's contention that the evidence "established by a preponderance that uteroplacental insufficiency was the specific non-birth related cause of this infant's cerebral palsy." It argues that Dr. Christmas's testimony and the other medical evidence support this conclusion.

The commission specifically addressed this aspect of Dr. Christmas's testimony. It found that "[a]lthough Dr. Christmas opined that [the infant] suffered a hypoxemic event resulting from uteroplacental insufficient and resulting in PVL, he acknowledged that there was no evidence based on fetal monitor tracings showing that [she] suffered a neurologic injury before her birth." The commission also noted that Dr. Christmas "agreed that there was no evidence of any acute trauma or infection in the uterus during . . . Bakke's pregnancy and could not identify precisely when [the infant's] injury occurred before her delivery."

A review of Dr. Christmas's testimony and the reports supports these findings. In addition, the commission considered and weighed Dr. VanDorsten's assessment of this specific testimony of Dr. Christmas and his conclusion that Dr. Christmas's testimony was "way off base." As we have repeated throughout, "[i]t was peculiarly within the province of the Commission to decide what evidence, if credible, was entitled to greater weight." McPeek, 210 Va. at 188, 169 S.E.2d at 445, and, if a portion of the medical evidence "is in conflict with other

medical evidence, the Commission is free to adopt that view 'which is most consistent with reason and justice,'" Robinson, 32 Va. App. at 5, 526 S.E.2d at 269 (citations omitted).

V.

For these reasons, we affirm the commission's award.

Affirmed.

Haley, J., concurring, in part and dissenting, in part.

I.

CONCURRENCE

I concur in the majority's view "that credible evidence . . . supports the commission's finding that the Program did not present for review the deputy commissioner's ruling that the evidence was sufficient to entitle the infant to the Code § 38.2-5008 presumption."

I respectfully dissent, however, to the majority's view that the Program failed to rebut the Code § 38.2-5008 presumption.

II.

THE STATUTE AND THE PRESUMPTION

Succinctly stated, and as here applicable, under the Virginia Birth-Related Neurological Compensation Act (the "Act"), if an infant suffers "'an injury to the brain' . . . that was 'caused by deprivation of oxygen'" proximately causing permanent damage requiring assistance in daily living, a rebuttable presumption arises that "[t]he injury occurred 'in the course of labor, delivery or resuscitation . . . .'" Central Va. Obstetrics & Gynecology Assocs. v. Whitfield, 42 Va. App. 264, 272, 590 S.E.2d 631, 635 (2004) (quoting Code § 38.2-5001); see also Code § 38.2-5008; Wolfe v. Va. Birth-Related Neuro. Injury Comp. Program, 40 Va. App. 565, 577-78, 580 S.E.2d 467, 473 (2003).

"[T]o defeat the Code § 38.2-5008(A)(1) presumption, the Program must prove, to a reasonable degree of medical certainty . . . both (1) that the [infant's] . . . injury did not occur 'in the course of labor, delivery or resuscitation in the immediate post-delivery period in a hospital' and (2) that there was a specific, non-birth-related cause of the injury." Coffey v. Va. Birth-Related Neuro. Injury Comp. Program, 37 Va. App. 390, 402, 558 S.E.2d 563, 569 (2002) (citation omitted).

III.

THE STANDARD OF REVIEW

While it is true that pursuant to Code § 38.2-5011, the determination of the full commission is conclusive as to questions of fact, "the reviewing court must assess whether there is *credible evidence* to support the Commission's award." Bass v. City of Richmond Police Department, 258 Va. 103, 115, 515 S.E.2d 557, 563 (1999) (emphasis added).

Credible evidence has been defined by Black's Law Dictionary 366-67 (6th ed. 1990) as follows:

> Evidence to be worthy of credit must not only proceed from a credible source but must, in addition, be "credible" in itself, by which is meant that it shall be so natural, reasonable and probable in view of the transaction which it describes or to which it relates as to make it easy to believe it, and credible testimony is that which meets the test of plausibility.

In Hercules, Inc. v. Gunther, 13 Va. App. 357, 361, 412 S.E.2d 185, 187 (1991), this Court stated:

> On appeal, factual findings of the commission will not be disturbed if based on credible evidence. Morris v. Badger Powhatan/Figgie Int'l, Inc., 3 Va. App. 276, 279, 348 S.E.2d 876, 877 (1986). The commission may not arbitrarily disregard uncontradicted evidence of unimpeached witnesses, which is not inherently incredible and not inconsistent with other facts in the record. Id. Whether credible evidence exists to support a factual finding is a question of law which is properly reviewable on appeal. See Ablola v. Holland Road Auto Ctr., Ltd., 11 Va. App. 181, 183, 397 S.E.2d 541, 542 (1990). Causation is a factual determination to be made by the commission, but the standards required to prove causation and whether the evidence is sufficient to meet those standards are legal issues which we must determine. Morris v. Morris, 238 Va. 578, 385 S.E.2d 858 (1989).

The Virginia Supreme Court has also noted this distinction. In Goodyear Tire and Rubber Co. v. Watson, 219 Va. 830, 252 S.E.2d 310 (1979), the Court held:

> Upon appeal, the Commission's findings of fact, based on credible evidence, are conclusive and binding upon us. Code

> § 65.1-98. If, however, there is no credible evidence to support the Commission's findings of fact, its findings are not binding on us and the question of the sufficiency of the evidence becomes one of law. A & P v. Robertson, 218 Va. 1051, 1053, 243 S.E.2d 234, 235 (1978); Conner v. Bragg, 203 Va. 204, 207, 123 S.E.2d 393, 395 (1962).

Id. at 833, 252 S.E.2d at 312.

Also pertinent to issues here raised is the standard by which physical evidence is to be contrasted to oral testimony.

"[W]hen physical facts are relied upon to overcome oral testimony they must be established by evidence so clearly preponderating that the existence of such facts is unmistakable." Weddle v. Draper, 204 Va. 319, 323, 130 S.E.2d 462, 466 (1963). Oral evidence is overcome only when "'the physical facts are such as to demonstrate that the oral evidence . . . is incredible.'" Parker v. Davis, 221 Va. 299, 304-05, 269 S.E.2d 377, 381 (1980) (quoting Noland v. Fowler, 179 Va. 19, 23, 18 S.E.2d 251, 253 (1942)).

The commission's decision must be likewise based upon competent evidence. To be credible, a medical opinion must be stated to a "reasonable degree of medical certainty or probability." In a case involving the Code § 38.2-5008 presumption here under discussion, this Court reversed the commission's finding that the Program had overcome the presumption. It did so because the commission had relied upon opinions offered by the Program which were not stated to a reasonable degree of medical certainty:

> No physician concluded, to a reasonable degree of medical certainty, that [infant's] injuries did not occur at birth. . . . None of these opinions was stated to a reasonable degree of medical certainty. . . . The evidence failed, *as a matter of law*, to support the commission's holding that the Program had rebutted the Code § 38.2-5008(A)(1) presumption.

Coffey, 37 Va. App. at 405-06, 558 S.E.2d at 570-71 (emphasis added). Furthermore, an expert opinion is merely speculative if not stated to a reasonable degree of medical probability. Pettus v. Gottfried, 269 Va. 69, 78, 606 S.E.2d 819, 825 (2005).

Finally, though not binding upon the commission, "we have said in a number of cases that great weight should be given to the testimony of the attending physician." Williams v. Fuqua, 199 Va. 709, 714, 101 S.E.2d 562, 566 (1958).

Simply stated, the commission's decision must be based upon evidence that is both credible and competent, and this Court may properly review *de novo* the credibility and competence of that evidence.

IV.

UNCONTRADICTED FACTS

The record in this case establishes certain relevant *uncontradicted* facts. These facts include the following: (1) The infant was born by cesarian section, and accordingly there was no "labor," as applicable under the statute; (2) a sonogram done at 17 weeks showed the infant to be of normal fetal development and size; (3) after a gestation period of 29 weeks, at birth the infant weighed 1 pound, 14 ounces, which is the 10th percentile of expected weight for the gestational period; (4) "The infant was noted to cry at the surgical field upon delivery;"[1] (5) at "one minute of age baby did make some resp[iratory] effort;"[2] (6) the infant was intubated within one minute of birth; (7) the pathology of the placenta, performed the day following the infant's birth, showed "infarction . . . increased syncytial knotting . . . consistent with chronic

[1] Operative Report of Dr. Namata Choudhary, who performed the cesarian section. Columbia Reston Hospital.

[2] Newborn Resuscitation Record, 09/02/99, Columbia Reston Hospital.

uteroplacental insufficiency;"[3] (8) the infant had Apgar scores of 5 at one minute and 7 at fifteen minutes;[4] and (9) blood gas analysis within fifteen minutes of birth showed no evidence of hypoxemia[5] or metabolic acidosis,[6] and the same analysis two hours following birth had the same result.

V.

THE TIMING OF THE DEPRIVATION OF OXYGEN

As has been noted, the commission found, and this Court has affirmed, that the infant suffered a deprivation of oxygen which resulted in permanent injury. For the Program to rebut the presumption thus arising, it need not establish precisely when that deprivation occurred; rather, it must only establish that it *did not occur*, in this case, during birth or resuscitation. The timing of this deprivation is accordingly of signal importance.

As quoted above by the majority, with respect to timing, the commission rejected the opinion of the Program's experts and accepted that of the claimants: "[O]f the physicians who have offered expert opinions in this case, we conclude that Drs. Hermansen and Latimer are the most qualified to evaluate the *timing* of the injury causing the infant's cerebral palsy . . . ." (Emphasis added). None of claimants' experts were attending physicians. Their opinions, and those of another claimants' expert, will be reviewed.

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[3] Pathology Report, 09/03/99, Columbia Reston Hospital.

[4] "The Apgar rating scale ranges from 1 to 10. It provides a numerical expression that assesses heart rate, *respiratory effort*, muscle tone, reflex, irritability, and color." Whitfield, 42 Va. App. at 270 n.1, 590 S.E.2d at 634 n.1 (citations omitted) (emphasis supplied).

[5] Hypoxemia is "deficient oxygenation of the blood." Dorland's Medical Dictionary 812 (28th ed. 1994).

[6] Metabolic acidosis is also called nonrespiratory acidosis. Dorland's, supra, at 16.

Dr. Marcus Hermansen's evidence consisted of a two-page letter dated July 13, 2003. He had reviewed Dr. Daniel Lefton's letter. He states, in contradiction to the medical records, the infant "immediately after . . . birth had no respiratory effort . . . ." He likewise states, again in contradiction to the medical record: "[The infant] . . . had a metabolic acidemia . . . ."[7] He concurs in Dr. Lefton's diagnosis of periventricular leukomalicia (PVL).[8]

Dr. M. Elizabeth Latimer's evidence consisted of a three-page undated letter. She writes that the infant "had no respirations at birth . . . ." She states: "there is no evidence of periventricular leukomalacia [PVL] on the initial [following birth] exam. The absence of the appearance of . . . [PVL] . . . makes it *highly unlikely* that the injury occurred significantly prior to delivery." (Emphasis added). She makes no mention of the fact that blood gas analysis showed no metabolic acidosis following birth. At no point does she ever state that it is her opinion, to a reasonable degree of medical certainty, that PVL was the cause of the infant's ultimate disability.

Dr. Daniel Lefton's evidence consisted of a two-page letter dated July 7, 2003 to counsel for claimant. He recites he reviewed only the head ultrasound and MRI studies. He states: "*You* have advised me that . . . according to the delivery records, at the time of birth [infant] had no respirations." (Emphasis added). Thus, he relies upon counsel's representation, not the medical records, that the infant was not breathing at birth. He neither reviewed, nor was apparently made aware of, the medical records of the blood gas analysis which showed no hypoxemia or

[7] When Dr. Christmas was asked about Dr. Hermansen's reference to metabolic acidemia, he responded "I couldn't find that in the chart." Appellees have never presented any evidence that metabolic acidemia occurred sufficient to cause neurologic injury. Even assuming there was some evidence of mild metabolic acidosis, the uncontradicted testimony of Dr. Christmas was that it was "not evidence of metabolic acidosis to a degree that has been associated with long-term neurologic injury."

[8] PVL is a hypoxic-ischemic injury to the white matter of the brain surrounding the ventricles.

respiratory acidosis. Nevertheless, he finds, to a reasonable degree of medical certainty, that the infant suffered from PVL, resulting from a hypoxic-ischemic encephalopathy,[9] during birth or resuscitation, justifying compensation under the Program.

The expert evidence with respect to the timing of the deprivation of oxygen, that is, the opinions of Drs. Hermansen and Latimer, on which the commission specifically relied is, it is respectfully submitted, neither credible nor competent, for the following reasons.

Dr. Hermansen bases his opinion on the facts that the infant "had no respiratory effort . . ." and "had metabolic acidemia . . . ." It is uncontradicted that the attending physician, Dr. Choudhary, heard the infant "cry . . . upon delivery . . . ." The immediacy of that medical evidence, by the attending physician, augments its weight. And it is physical evidence. This Court can take judicial notice that sound may not be produced without an airstream.[10] The uncontradicted medical records show the infant cried, did make respiratory efforts, and did *not* have metabolic acidosis. Dr. Hermansen concurs in Dr. Lefton's diagnosis of PVL, but, as noted above, Dr. Lefton did not review the medical records, makes no reference to the lack of metabolic acidosis, and bases his opinion of the representation of claimant's *counsel* that the infant "at the time of birth had no respirations."

With respect to the report of Dr. Latimer, her opinion is likewise based upon the purported fact that the infant "had no respirations at birth . . . ." She states that the lack of

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[9] Hypoxic-ischemic encephalopathy is a degenerative disease of the brain caused by a lack of oxygen during the fetal stage of development *or* during labor, birth or resuscitation. See Dorland's, supra, at 550.

[10] "Thus, our courts will take judicial notice of the operation of the laws of physics and other natural phenomena, and the effects of such physical laws upon human beings; . . . of human . . . capabilities . . . ." Charles E. Friend, The Law of Evidence in Virginia § 19-15 (6th ed. 2003); Pearcey v. St. Paul Fire Ins. Co., 163 Va. 928, 936, 177 S.E. 843, 846 (1935); "sounds are made with air exhaled from the lungs. . . . This airstream is shaped into different sounds." "Speech," Encyclopedia Britannica (2005). In short, judicial notice can be taken that there cannot be a "cry" without air being exhaled from the lungs.

evidence of PVL on the initial exam "makes it *highly unlikely* that the injury occurred *significantly* prior to birth . . . ." (Emphasis added). She makes no mention of the absence of metabolic acidosis. She never states her opinion to a reasonable degree of medical certainty.[11] "Highly unlikely" is not medical certainty, and the timing question is based upon a deprivation of oxygen during (or subsequent to) birth, not one that may have occurred in a period of time, significant or not, prior to birth.

Because Dr. Latimer does not state her opinion "to a reasonable degree of medical certainty," her opinion is not competent, and fails "as a matter of law" to support the commission's conclusion as to the timing of the deprivation of oxygen. See Coffey, 37 Va. App. at 402, 558 S.E.2d at 569. The Virginia Supreme Court has previously stated that expert opinions which are "not stated to a reasonable degree of medical probability" are "speculative in nature and inadmissible." Pettus, 269 Va. at 78, 606 S.E.2d at 825. Evidence of such a

[11] The majority cites Island Creek Coal Co. v. Breeding, 6 Va. App. 1, 365 S.E.2d 782 (1988), for the proposition that we will not substitute form over substance by requiring a physician to use the magic words "to a reasonable medical certainty." Id. at 11-12, 365 S.E.2d at 788. In Island Creek Coal Co., however, the record contained no evidence to contradict the physician's opinion. Id. Here, significant credible evidence directly contradicts Dr. Latimer's opinions. Therefore, the fact that her testimony is not "to a reasonable degree of medical certainty" becomes substantive, rather than a mere matter of form.

Additionally, the majority cites Lindenfield v. City of Richmond Sheriff's Office, 25 Va. App. 775, 492 S.E.2d 506 (1997), and an amendment to Code § 65.2-401 to show that whether expert medical opinions are "to a reasonable medical certainty" has little to no bearing on the weight the commission should give such testimony. In fact, since both Lindenfield and the Code amendment, this Court has continued to rely on the distinction between those opinions stated "to a reasonable degree of medical certainty" and those not. See, e.g., Coffey, 37 Va. App. at 406, 558 S.E.2d at 571 (holding that the evidence failed to establish a specific, non-birth-related cause of injury when the doctor's opinion did not identify one to a reasonable degree of medical certainty").

Furthermore, the removal of "to a reasonable medical certainty" from Code § 65.2-401 occurred before the decision in Lindenfield, 1997 Va. Acts, c. 15, and relates strictly to the burden of proof in "ordinary disease of life coverage" under the Workers' Compensation regime. Indeed, the change does not even affect the majority of Workers' Compensation Commission cases, let alone the role of medical certainty in opinion testimony generally, or in birth-related neurological defect cases specifically.

speculative nature, when contradicted by other factual evidence or expert opinions which are stated to a reasonable degree of medical probability, is not, it is submitted, credible.

Though not specifically relied upon by the commission in its determination of the timing of the deprivation of oxygen, Dr. James Peter VanDorsten, likewise not an attending physician, testified before the deputy commissioner on behalf of the claimant. Excerpts from his testimony include the following:

> I construed the record to present a baby that was apniac, that was not breathing at all.
>
> Q. A large part of your opinions are based upon the belief that this child had no signs of any respiratory effort. Correct? That is your belief?
>
> A. That is what the record reflects.
>
> Q. During the prenatal period was there any evidence of any significant growth restriction prior to delivery?
>
> A. There was not.
>
> Q. . . . You've seen the blood gas results, and you know this baby had oxygen through intubation within a minute of birth. So it's not your opinion that this baby was not well oxygenated, is it?
>
> A. Oh, it's my opinion the baby *probably* was not well oxygenated in the early going. I mean it wasn't breathing at all . . . .

(Emphasis added).[12]

[12] Dr. VanDorsten does speculate at one point as to what a blood gas taken earlier would have shown:

> Q. Do you have an opinion as to what a blood gas taken prior to fifteen minutes of life would have shown?
>
> A. I think it likely would have been reflective of hypoxemia and probably respiratory and even perhaps metabolic acidosis.

The deputy commissioner's opinion also notes the speculative nature of this testimony. Such speculation has no bearing on a case when actual evidence, taken only minutes later, contradicts it. This Court has previously declined to presume the results of a test for metabolic

Finally, in his testimony, Dr. VanDorsten re-affirms an opinion stated in his April 10, 2003 letter: "[I]t is my opinion, to a reasonable degree of medical certainty, that prematurity is the cause of [the infant's] cerebral palsy . . . . This child's cerebral palsy is the direct result of her unavoidable prematurity, i.e., delivery at 29 weeks gestation." In this letter Dr. VanDorsten makes no reference whatsoever to a deprivation of oxygen.

Dr. VanDorsten's testimony is not credible because it is based upon a fact *not* supported by the medical records, including that of the attending physician, that is, the infant made no respiratory effort and was not breathing at all. With respect to the signal issue of the timing of the oxygen deprivation, Dr. VanDorsten, as quoted above, says the infant was probably not well oxygenated. For this doctor to conclude that an infant with normal size and development at 17 weeks, and born at 29 weeks weighing less than 10% of normal weight, showed no signs of prenatal growth restriction, is incredible.

With the above summary of the claimant's evidence as to timing, we turn to that relied upon by the Program. As noted above in Part II of this dissent, to rebut the Code § 38.2-5008 presumption, the Program must first establish that the infant's deprivation of oxygen did not occur, as here relevant, during birth or immediate attempts to resuscitate.

Pursuant to Code § 38.2-5008, the infant's claim was "reviewed by a panel of three qualified and impartial physicians." With respect to the timing of the deprivation of oxygen, in a letter dated June 9, 2003, the independent panel concluded: "No evidence of such deprivation of oxygen during the required perinatal period is contained in these records."[13]

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acidosis that was not performed, absent negligent or intentional failure by the medical professionals present to perform such a test. Wolfe, 40 Va. App. at 585, 580 S.E.2d at 477.

[13] It is noted that "the commission is not bound by the opinion of an independent expert it selects . . . ." Island Creek Coal Co. v. Honaker, 9 Va. App. 336, 339, 388 S.E.2d 271, 272-73 (1990).

Testifying on behalf of the Program was Dr. James Christmas.[14] His testimony, succinctly stated, establishes that deprivation of oxygen necessarily causes measurable metabolic acidosis, and, of critical import, evidence of that acidosis will not be dissipated for *hours* following the deprivation. As Dr. Christmas explained:

> Well, when we breathe, when our cells breathe, when we at the cellular level do the things that we need to do to survive, cells burn glucose, and they burn glucose really efficiently. They burn it to carbon dioxide, which we then exhale and breathe off. When we are forced because of a lack of oxygen, we ourselves still need to make energy, and if they don't have oxygen available to them, they burn acids to make energy, and those---the production of energy from acids is incredibly inefficient and it results in the byproduct or the end product of that process is very large fixed acids that are 8, 6, and 12 carbon acid molecules, and those molecules don't cross the pulmonary capillaries, and so they build up in the blood stream, and ultimately they have to be metabolized by the liver and the kidneys before they can be cleared. So whether you're a newborn or an infant or a fetus or an adult, if you develop a large metabolic acidosis from decreased---from insufficient oxygen, then that metabolic acidosis will take several to many hours to completely clear because those acids have to be metabolized back down created ultimately to carbon dioxide and then cleared.

In accordance with the finding of the medical panel, Dr. Christmas testified that the infant "had blood gas that demonstrated normal oxygenation . . . and no evidence of a recent metabolic acidosis, and when I say recent, I would say within several hours." Likewise, he concluded: "In looking at the medical record there's no evidence of any sustained oxygen deprivation . . . . There is zero evidence of oxygen deprivation."

Also introduced into evidence before the deputy commissioner was a Report of The American College of Obstetricians and Gynecologists and the American Academy of Pediatrics

[14] Dr. Christmas's opinion was likewise stated in a July 1, 2003 letter introduced into evidence: "Initial blood gas evaluation within 15 minutes of delivery demonstrated no evidence of hypoxemia or metabolic acidosis."

entitled Neonatal Encephalopathy and Cerebral Palsy ("the Report"). With respect to neonatal encephalopathy, the Report states: "The criteria to define an acute intrapartum[15] event sufficient to cause cerebral palsy . . . [includes the following] . . . Essential criteria (must meet all four). 1. Evidence of a metabolic acidosis in fetal umbilical cord blood obtained at delivery . . . ."[16] (Footnotes added).

Finally, a finding of metabolic acidosis has been a pinion fact upon which this Court has relied in determining the timing of deprivation of oxygen. "At two minutes of life [infant's] arterial chord blood gases were critically low. They remained low for almost two hours after his birth." Coffey, 37 Va. App. at 394, 558 S.E.2d at 565. "[Infant's] arterial blood gases were not satisfactory." Va. Birth-Related Neurological Injury Comp. Program v. Young, 34 Va. App. 306, 313, 541 S.E.2d 298, 302 (2001); see also Whitfield, 42 Va. App. 264, 590 S.E.2d 631; Wolfe, 40 Va. App. at 575, 580 S.E.2d at 472.[17]

From the foregoing, it is respectfully submitted that the Program has met its burden of proof to rebut the presumption that the deprivation of oxygen occurred during the birth or immediate attempts to resuscitate.

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[15] Intrapartum means: "Occurring during childbirth, or during delivery." Dorland's, supra, at 854.

[16] This Court has relied upon the standards of the American College of Obstetricians and Gynecologists in a prior opinion. See Wolfe, 40 Va. App. at 585, 580 S.E.2d at 477.

[17] It should also be noted that this Court has consistently relied upon Apgar scores for timing determinations in birth-related cases. As set forth in footnote 4 of this dissent, an Apgar score includes an evaluation of respiratory effort. "His Apgar scores were 0 at one minute, 1 at five minutes, and 5 at ten minutes." Young, 34 Va. App. at 313, 541 S.E.2d at 302; "At one minute of life [infant's] APGAR score was two out of a possible ten." Coffey, 37 Va. App. at 394, 558 S.E.2d at 565; "received an APGAR score of 9 at both one and five minutes after birth." Kidder v. Va. Neuro. Birth-Related Injury Comp. Program, 37 Va. App. 764, 767, 560 S.E.2d 907, 908 (2002) (affirming the commission's denial of benefits); "His Apgar scores were 1 at one minute, 0 at 5 minutes, and 0 at 10 minutes." Whitfield, 42 Va. App. at 269-70, 590 S.E.2d at 634. It is uncontradicted that the infant involved here had Apgar scores of 5 at one minute and 7 at fifteen minutes.

VI.

A SPECIFIC, NON-BIRTH-RELATED CAUSE

As noted above in Part II of this dissent, the Program bears a second evidentiary burden to rebut the Code § 38.2-5008 presumption, that of establishing a specific, non-birth-related cause of the infant's injury.

The evidenced adduced by the Program supports the deputy commissioner's conclusion that the infant did suffer a deprivation of oxygen causing the infant's injury, probably from PVL, thus giving rise to the presumption. It was the Program's position, and one with which the deputy commissioner agreed, that the *cause* of that deprivation was uteroplacental insufficiency. As Dr. Christmas explained:

> Q. So then have you formed an opinion based upon a reasonable degree of medical certainty that the actual cause of [infant's] condition today would have been utero . . .
>
> A. Uteroplacental insuffiency. . . . I actually suspect that there was a specific ischemic event at some point or a hypoprofusion or a hypoxemic event. . . . That would be very common in a growth retarded fetus because a growth retarded fetus doesn't have any other reserves that a term fetus has. So if a baby's oxygen requirements---a baby's oxygen requirements are here and a normal baby has oxygen levels, a normal fetus has oxygen levels up here, that's no big deal. Little things happen in utero all the time and it never gets down to a threshold level where it's going to cause any damage. Well, the growth-retarded fetus by very definition is operating right at its threshold. So the little things that happen to a baby in utero all of a sudden become really important events. The periods of time when a fetus rolls over and compresses its umbilical cord for three minutes. For the normal term baby, I mean the normal appropriately grown baby that's got a huge placental reserve, that's no big deal. To the fetus that's operating right on the edge, that's a huge deal. So if you were to say, well, you think ischemia could be part of the picture, well, yeah. I mean because that's all part of the whole sort of process of uteroplacental insufficiency. But there's every evidence that that ended at delivery. It didn't start at

> delivery. There's every evidence that it probably ended many hours before delivery as far as the acute event.

Dr. Christmas continued:

> I think that prematurity is the single leading risk factor for periventricular leukomalacia [(PVL)] in the general population as well as in any specific fetus. A preterm delivery complicated by a small for gestational age fetus is at a significantly higher risk of periventricular leukomalacia than is an appropriately grown preterm fetus.

As noted above, claimant's expert, Dr.VanDorsten, in his opinion letter of April 10, 2003, does not mention a deprivation of oxygen, but writes, in accordance with Dr. Christmas's view: "[I]t is my opinion, to a reasonable degree of medical certainty, that prematurity is the cause of [the infant's] cerebral palsy."

It is uncontradicted that the infant had normal development at 17 weeks gestation and at birth weighed in the 10th percentile of an infant born at 29 weeks. It is clear that an event or condition adverse to the fetus occurred in that time period. It is uncontradicted that the pathology of the placenta showed "infarction . . . increased syncytial knotting . . . consistent with chronic uteroplacental insufficiency." This Court has specifically noted the significance of evidence of uteroplacental insufficiency in birth-related cases. "The records also revealed no evidence of utero-placental insufficiency or cord compression." Wolfe, 40 Va. App. at 571, 580 S.E.2d at 470.

Assuming the infant did have PVL, the rational conclusion, based upon the credible and competent evidence, is that the condition was caused by uteroplacental insufficiency, not by a deprivation of oxygen during birth or immediate attempts to resuscitate. Accordingly, it is submitted, the Program has established a non-birth-related cause of the injury.

VII.

CONCLUSION

For the above reasons, I believe the Program has met the burden of meeting both prongs necessary to rebut the presumption arising from Code § 38.2-5008. I would reverse the commission and uphold the opinion of the deputy commissioner.

In Meador v. Va. Neuro. Birth-Related Injury and Comp. Program, 44 Va. App. 149, 604 S.E.2d 88 (2004), this Court affirmed the commission's decision that the Act did not apply to a birth at home. In so doing, we noted:

> The Act cannot be applied with any interpretative preset in favor of coverage, for to do so would undermine two important features of the Act. First, the statute's "finely engineered *quid pro quo* . . . ." Second, when statutes displace common law principles governing tort liability, the statutes should be "strictly construed" and not "be enlarged in their operation by construction beyond their express terms." Jan Paul Fruiterman, M.D. & Assocs., P.C. v. Waziri, 259 Va. 540, 544, 525 S.E.2d 552, 554 (2000) (quoting Schwartz v. Brownlee, 253 Va. 159, 166, 482 S.E.2d 827, 831 (1997)).

44 Va. App. at 152-53, 604 S.E.2d at 90 (citing Whitfield, 42 Va. App. at 271, 590 S.E.2d at 635).

One cannot but have empathy for this infant, and this infant's parents. However, it is respectfully submitted that the commission's decision in this case does not comport with the strictures of the Act, as set forth in the same by the legislature, and with the decisions of this Court.