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IN THE COURT OF APPEALS OF THE STATE OF ALASKA

CLAYTON PHILLIP ALLISON,

Appellant,

v.

STATE OF ALASKA,

Appellee.

Court of Appeals No. A-12382
Trial Court No. 3PA-09-02996 CR

OPINION

No. 2651 — July 26, 2019

Appeal from the Superior Court, Third Judicial District, Palmer,
Vanessa H. White, Judge.

Appearances: Josie Garton (opening and reply briefs) and Emily Jura (oral argument), Assistant Public Defenders, and Quinlan Steiner, Public Defender, Anchorage, for the Appellant. Patricia L. Haines, Assistant Attorney General, Office of Criminal Appeals, Anchorage, and Jahna Lindemuth and Kevin Clarkson, Attorneys General, Juneau, for the Appellee.

Before: Allard, Chief Judge, and Harbison, Judge, and Suddock,
Senior Superior Court Judge.*

Judge ALLARD.

* Sitting by assignment made pursuant to Article IV, Section 11 of the Alaska Constitution and Administrative Rule 23(a).

Clayton Phillip Allison was convicted of second-degree murder after his fifteen-month-old daughter, J.A., suffered a fatal injury while she was in his care. Over the course of Allison's month-long trial, the jury heard testimony from thirty witnesses — including sixteen medical professionals. In addition to J.A.'s numerous care providers, who testified to the medical complications she experienced during her lifetime, both Allison and the State presented multiple expert medical professionals who analyzed the circumstances surrounding J.A.'s death. Although the State's experts concluded that J.A.'s death was the result of physical abuse, Allison's experts presented the opposite opinion — that there were plausible, and far more likely, alternative explanations for J.A.'s death.

One of these possible explanations was that J.A. suffered from Ehlers-Danlos Syndrome — a neurogenetic disorder that is associated with collagen abnormalities and excessive bleeding. But the trial court precluded Allison's experts from discussing, or even mentioning, the possibility that J.A. suffered from Ehlers-Danlos Syndrome. On appeal, Allison argues that this was error.

For the reasons explained here, we agree with Allison that it was error for the trial court to exclude this evidence and error for the trial court to restrict Allison's questioning of the experts on this matter. We also conclude that the error affected Allison's ability to present his defense and was not harmless. Accordingly, we reverse Allison's conviction and remand this case to the superior court so that the State can determine whether to retry Allison.

Factual background and prior proceedings

J.A. was born on June 22, 2007 to Christiane and Clayton Allison. J.A. appeared to be a relatively healthy child for the first few months of her life, but her

development suddenly changed when she was four to six months old. She began experiencing decreased muscular strength and tone, weight loss, limited mobility, and an enlarged head and brain. Her primary care physician referred her to a physical therapist, dietician, neurologist, and radiologist. J.A. was under treatment by most of these medical professionals at the time of her death.

On September 24, 2008, when J.A. was fifteen months old, she suffered a fatal injury while she was home with her father. According to Allison, J.A. fell down a flight of stairs while he was in the bathroom. Allison called 911, and J.A. was taken in a helicopter to the emergency room at Providence Hospital. Doctors discovered that J.A. had suffered a severe traumatic brain injury, resulting in a subdural hematoma (bleeding between the skull and the surface of the brain) and overall brain swelling. J.A. died while undergoing surgery to remove the blood and reduce the pressure on her brain. Dr. Robert Whitmore, a forensic pathologist, conducted an autopsy the following day, and categorized J.A.'s death as a homicide, with the cause of death being blunt force head and neck trauma.

Allison was charged with manslaughter, criminally negligent homicide, and second-degree murder.¹ It was established during the trial that J.A., in fact, had two subdural hematomas: an older chronic one and a newer acute one. Various witnesses testified to prior falls where J.A. failed to extend her arms when she fell down, forcefully hitting her head on the ground or on a piece of furniture as a result. The defense argued that the older hematoma was likely caused by one of these prior falls, and that the older hematoma made J.A. especially vulnerable to the newer one. The State argued that, despite this preexisting injury, J.A. could not have sustained a fatal injury from a fall

¹ AS 11.41.120(a)(1), AS 11.41.130(a), and AS 11.41.110(a)(2), respectively.

down the stairs and therefore the only possible explanation for her death was physical abuse.

The State presented testimony from Dr. Cathy Baldwin-Johnson, an expert in the medical evaluation of suspected abuse. Dr. Baldwin-Johnson concluded that J.A. suffered from abusive head trauma² — a conclusion she reached in part because she was able to rule out the existence of other medical conditions that could have contributed to J.A.’s injuries. The State also presented testimony from two other medical professionals who observed J.A. just prior to and just after her death: Dr. Elizabeth Galloway, the pediatric intensive care unit physician at Providence Hospital who examined J.A. upon her arrival, and Dr. Robert Whitmore, the forensic pathologist who conducted her autopsy. Dr. Galloway did not diagnose J.A. with having suffered from abusive head trauma. She stated only her opinion that J.A.’s injuries were consistent with shaking and not with a fall down the stairs. Dr. Whitmore concluded that, based only on the injuries he observed during the autopsy, the most likely explanation for J.A.’s death was shaking or a combination of shaking and non-accidental blunt force head trauma.

The State’s case against Allison rested on the testimony of these three experts. There were no eyewitnesses to the alleged abuse, nor any eyewitnesses to any prior abuse. The jury heard no admissions or confessions by Allison. Notably, none of the doctors who treated J.A. prior to the incident that led to her death testified that they believed that J.A. had suffered abuse while in Allison’s care. Nor did any of the family members or friends who testified at trial.

In his defense, Allison called three expert physicians who had independently reviewed J.A.’s medical records: Dr. Janice Ophoven, a specialist in

² “Abusive head trauma” is the current clinical term for what was previously diagnosed as “shaken baby syndrome.”

pediatric forensic pathology, Dr. Khaled Tawansy, a pediatric retinal ophthalmologist, and Dr. Joseph Scheller, a child neurologist. These doctors testified that J.A.’s chronic subdural hematoma, coupled with her preexisting health issues, was a “time bomb for subsequent decompensation and potentially sudden death,” and that her injuries were consistent with a fall down the stairs and not indicative of abuse. Allison also presented Dr. Kenneth Monson, a mechanical engineering professor, who testified that, based on his analysis of the mechanics and injury thresholds in children, J.A. could have died from falling down the stairs, but not from shaking.

The jury convicted Allison of second-degree murder.³ At sentencing, Allison was sentenced to 40 years’ imprisonment with 10 suspended (30 years to serve) and 15 years of felony probation.

The trial court’s rulings excluding evidence related to Ehlers-Danlos Syndrome

On appeal, Allison argues that the trial court erred by barring him from raising the possibility that J.A. suffered from Ehlers-Danlos Syndrome.

Ehlers-Danlos Syndrome is a group of inherited disorders that affect a person’s connective tissues—primarily their skin, joints, and blood vessel walls. People who have Ehlers-Danlos Syndrome usually have overly flexible joints and stretchy, fragile skin. They can also be more susceptible to bruising and excessive bleeding.⁴ A

³ Because of the way this case was charged, the jury actually convicted Allison of second-degree murder, manslaughter, and criminally negligent homicide. These charges then merged into a single conviction for second-degree murder.

⁴ Although the State argued that excessive bleeding was only related to the vascular type of the syndrome, Dr. Ophoven testified that excessive bleeding is a concern with *any* (continued...)

more severe form of the disorder, called vascular Ehlers-Danlos Syndrome can cause the walls of a person's blood vessels, intestines or uterus to rupture. According to Dr. Tawansy, one of Allison's experts, there have been cases where complications related to Ehlers-Danlos Syndrome have been misdiagnosed as child abuse.

At the time of her death, J.A. was under the care of pediatric neurologist Dr. Roderic Smith. Dr. Smith's office was assisting the family in trying to secure additional medical insurance to pay for genetic testing because the causes of J.A.'s multiple health problems were unknown. One avenue of genetic testing that Dr. Smith was interested in pursuing was whether there was something wrong with the connective tissue within J.A.'s family. Dr. Smith was aware that J.A.'s mother and her relatives had an undiagnosed amplified pain syndrome that might be Ehlers-Danlos Syndrome.

After J.A.'s death, J.A.'s mother traveled to the Mayo Clinic, where she was subsequently diagnosed as having "Ehlers-Danlos type 3 appearance with hypermobile joints." (This is a nonvascular version of the disorder.) According to Dr. Smith, there is a fifty percent chance of a person with Ehlers-Danlos Syndrome passing on that condition to their children. According to Dr. Ophoven, a family history of *any* type of Ehlers-Danos Syndrome is a factor that should be considered in any case involving significant bleeding, such as J.A.'s.

The expert reports given to the State during pretrial discovery referred to the mother's diagnosis of Ehlers-Danlos Syndrome and to the significance of this

⁴ (...continued)
type of Ehlers-Danlos Syndrome. On appeal, Allison cites to medical literature in support of this testimony. See Anne De Paepe & Fransiska Malfait, *Bleeding and Bruising in Patients with Ehlers-Danlos Syndrome and Other Collagen Vascular Disorders*, 127 *Brit. J. of Haematology* 491, 491 (2004) ("Prominent bruising and bleeding is seen in all subtypes of EDS.").

diagnosis to any differential diagnosis of J.A.'s death. Dr. Tawansy's report characterized the maternal diagnosis as "significant," concluding that the family history of Ehlers-Danlos Syndrome "merit[ed] further investigation" and noting the possibility that J.A. "may have suffered from a variant of this condition herself," which could have played a role in her death.

Shortly before trial, the State filed a motion for a protective order, seeking to exclude any mention of Ehlers-Danlos Syndrome at trial. The State argued that the mother's diagnosis was inherently suspect because the mother had obtained the diagnosis after J.A.'s death. The State also viewed the diagnosis as too speculative.

The court held an evidentiary hearing and heard testimony from Dr. Ophoven regarding why the mother's diagnosis was relevant to any differential diagnosis of the cause of J.A.'s death. Dr. Ophoven testified that "when you're considering whether or not there is a special vulnerability in a particular case, a positive history of Ehlers-Danlos in the family has to be a consideration." Dr. Ophoven further testified that, given the inheritance patterns of the disorder, one could not "exclude the possibility that . . . an underlying collagen disorder could have made the child bleed more easily." Dr. Ophoven made clear that she was not diagnosing J.A. as having this condition (indeed, she questioned whether such a diagnosis could be made given J.A.'s young age). But her expert opinion as a forensic pathologist was that this maternal history was significant to any differential diagnosis of the causes of J.A.'s death and it was "something that can't be excluded from the . . . facts of the case."

The court expressed concern about the speculative nature of the evidence:

[T]he inquiry has to be, number one, . . . is there someone qualified to make the diagnosis, and despite her other qualifications, I do not find that Dr. Ophoven's qualified to make that diagnosis in this case. Number two, can that expert

offer an opinion to a reasonable degree of medical certainty that the diagnosis existed in [J.A.]? And Dr. Ophoven just testified this morning that she could not make that diagnosis to any degree of medical certainty. She merely posed it as a possibility that [J.A.] had the condition and pointed out that at her young age, it would likely not be diagnosed anyway.

Based on this analysis, the court concluded that it would not allow Dr. Ophoven to offer any opinion on the mother's medical history of Ehlers-Danlos Syndrome or its possible relevance to J.A.'s fatal injuries. Because Allison's second expert, Dr. Tawansy, had similar qualifications to Dr. Ophoven regarding his knowledge of Ehlers-Danlos Syndrome, the court also excluded his testimony about the diagnosis. Accordingly, the superior court granted the State's motion to preclude all evidence related to Ehlers-Danlos Syndrome.

Allison filed a motion for reconsideration. After hearing arguments from both parties, the court rejected the motion — again ruling to preclude all evidence of Ehlers-Danlos Syndrome from the trial. The court again stated that the diagnosis the mother received was too speculative to form a legitimate factual basis for another expert to rely on in forming an opinion.

After the court's rulings, the admissibility of evidence related to Ehlers-Danlos Syndrome was discussed one more time during Allison's trial. When Dr. Smith, J.A.'s treating neurologist, was testifying for the State, he mentioned that there were many unresolved questions in J.A.'s case, including whether there was something wrong with the connective tissue within J.A.'s family. Outside the presence of the jury, he testified that J.A. was clearly a more vulnerable child, and that prior to her death he was in the process of helping the family apply for additional medical insurance so that they could seek genetic testing.

Allison’s defense counsel again asked the court to reconsider its ruling to preclude all testimony related to Ehlers-Danlos Syndrome so that she could ask Dr. Smith questions about his concern that J.A. may have suffered from an underlying neurogenetic disorder. The court denied this request, stating that, “given the speculative nature of Ms. Allison’s diagnosis, and given the fact that no one had diagnosed [J.A.] . . . with this condition, and given the fact that no one has offered an expert in this syndrome, my prior ruling remains in effect.”

Why we conclude that the court erred when it precluded any mention of Ehlers-Danlos Syndrome at Allison’s trial

On appeal, Allison argues that the superior court erred when it refused to allow his experts to mention Ehlers-Danlos Syndrome or his lawyers to question the State’s experts about the mother’s diagnosis. He contends that evidence of the maternal diagnosis of Ehlers-Danlos Syndrome was relevant and admissible through the testimony of Doctors Ophoven, Tawansy, and Smith because it was the type of information that experts in the field reasonably rely on in making their differential diagnoses. Allison further claims that the court’s error in excluding this evidence was not harmless because the State’s case against him was based entirely on circumstantial evidence and the proposed testimony about Ehlers-Danlos Syndrome tended to rebut the State’s theory that abuse was the only possible cause of J.A.’s fatal injuries.

For the reasons explained here, we agree with Allison that evidence of the mother’s diagnosis should have been admitted and that Allison should have been permitted to question his experts and the State’s experts about the possible significance of that diagnosis. We also agree with Allison that the trial court’s reasons for excluding this evidence were erroneous and predicated on an incorrect understanding of the

relevant law. Lastly, we agree with Allison that the court's error was not harmless and that reversal of Allison's conviction is required.

As Allison correctly points out, the State's case against him rested on the reliability of three witnesses — the State's expert who testified that the only possible cause of J.A.'s death was physical abuse, and the two medical professionals who identified J.A.'s injuries as most consistent with abuse. There were no eyewitnesses to any physical abuse by Allison. Nor was there any evidence that Allison had previously abused J.A. or been suspected of abusing J.A. To the contrary, the evidence presented at trial was almost exclusively that Allison was a loving father who was very involved in his special needs child's care.

The State's expert came to her conclusion that physical abuse was the only possible cause of J.A.'s death through the process of differential diagnosis. As one expert in the field has explained this process:

In the differential diagnosis methodology, the physician gathers historical information on a patient's symptoms and signs and generates hypotheses (a.k.a., the differential diagnosis). Through the attainment of additional clinical information (via various diagnostic tests), the physician goes through an inferential and deductive process of hypothesis refinement until a consistent 'working diagnosis' is achieved. Hypothesis refinement utilizes a variety of reasoning strategies — probabilistic, causal, and deterministic — to discriminate among the existing diagnoses of the differential diagnosis. . . . In the simplest sense, the methodology relies on process-of-elimination reasoning. As one eminent evidentiary scholar stated, '[i]n differential diagnosis, if there

are four possible diagnoses and you eliminate three, logic points to the last illness as the correct diagnosis.’⁵

In other words, the process of differential diagnosis is a process of elimination. A diagnosis of shaken baby syndrome or abusive head trauma can only be made if all other possible causes are ruled out.⁶

Here, the State’s primary expert, Dr. Baldwin-Johnson, was confident that the only reasonable explanation of J.A.’s death was abusive head trauma caused by Allison shaking or beating her. The defense experts thought otherwise and were critical of Baldwin-Johnson’s conclusions and methodology. The defense experts were also critical of Dr. Whitmore’s autopsy procedures and conclusions. The jury’s task was to

⁵ Sandeep K. Narang et al., *A Daubert Analysis of Abusive Head Trauma/Shaken Baby Syndrome—Part II: An Examination of the Differential Diagnosis*, 13 Hous. J. Health L. & Pol’y 203, 303-04 (2013) (internal citations omitted); *see also Ponte v. State*, 2017 WL 3867807, at *7 (Alaska App. Aug. 30, 2017) (unpublished) (discussing differential diagnosis in the context of a *Daubert* challenge to abusive head trauma testimony).

⁶ *See Com. v. Epps*, 53 N.E.3d 1247, 1265 (Mass. 2016) (noting that “a medical diagnosis of [abusive head trauma] is made only after consideration of all clinical data,” and that pediatricians “have a responsibility to consider alternative hypotheses when presented with a patient with findings suggestive of [abusive head trauma]”) (quoting C.W. Christian, R. Block, and the Committee on Child Abuse and Neglect, *Abusive Head Trauma in Infants and Children*, 123 Pediatrics 1409, 1410 (2009)); *Sissoko v. State*, 182 A.3d 874, 905-06 (Md. App. 2018) (“The process of reaching a diagnosis of abusive head trauma thus is nuanced and fact-specific. Physicians presented with an infant suffering from suspected head trauma will rely on positive and negative clinical, historical, and test-generated pieces of evidence, each of which can support or detract from a diagnosis, including a diagnosis of abusive head trauma.”); *cf. Commonwealth v. Doe*, 68 N.E.3d 654, 656-57 (Mass. 2016) (sealing record request in case where petitioner had been charged with murder of his infant son based on abusive head trauma diagnosis, but prosecution was subsequently terminated following discovery of wife’s family history of collagen vascular disease, “a genetic condition that was relevant to determination of cause of infant’s death” and that resulted in medical examiner changing cause of death from “homicide” to “could not be determined”).

sort through all of the conflicting medical and expert testimony and to determine whether the State had proved beyond a reasonable doubt that J.A. had died from physical abuse by Allison.⁷ In order for the jury to properly complete this task, it needed to understand the respective bases for the conflicting expert opinions.

But the jury never heard any evidence about the possibility that J.A. suffered from Ehlers-Danlos Syndrome. The trial court ruled that such evidence was inadmissible unless (1) the defense produced an expert in the syndrome who could explain the mother's diagnosis; and (2) the defense produced an expert who could diagnose J.A. with the syndrome "to a reasonable degree of medical certainty." Both of these rulings were incorrect.

First, it was not necessary for Allison to present an expert on Ehlers-Danlos Syndrome. Alaska Evidence Rule 702 allows a witness qualified as an expert by "knowledge, skill, experience, training, or education" to testify as to their opinion on a scientific, technical, or other specialized issue. This rule does not, however, require the witness to have an expertise in precisely every area upon which the expert proposes to comment.⁸ Rather, they only need to demonstrate that the facts or data underlying their opinion are the type of information reasonably relied on by experts in their field.⁹

As explained in the Commentary to Alaska Evidence Rule 703:

[T]he rule is [premised on] the belief that when an expert is deemed skilled enough to assist the trier of fact, the expert

⁷ See *Commonwealth v. Millien*, 50 N.E. 3d 808, 821-22 (Mass. 2016) (describing the jury's task in a shaken baby case as requiring the jury to evaluate "whether the Commonwealth had eliminated the possibility that [the child's] injuries were caused by the accidental fall described by the defendant beyond a reasonable doubt").

⁸ *Marron v. Stromstad*, 123 P.3d 992, 1003 (Alaska 2005).

⁹ Alaska Evid. R. 703; Alaska Evid. R. 705(a)-(b).

should be allowed to utilize the tools that he [or she] normally uses to practice his [or her] skills outside of the court. Thus, a physician [may base a] diagnosis on general information obtained from medical journals and treatises and on . . . statements by patients and relatives, reports and opinions from nurses, technicians and other doctors, hospital records, and x-rays.¹⁰

In the present case, Doctors Ophoven and Tawansy were qualified by the court to offer expert opinions on the State's differential diagnosis of shaken baby syndrome/abusive head trauma. In formulating those opinions, the doctors reviewed the family's medical history, including medical records that established the mother's Ehlers-Danlos Syndrome diagnosis.¹¹ Contrary to the trial court's belief, the doctors did not need to be experts on Ehlers-Danlos Syndrome to reasonably rely on this medical information. Nor did they need to be experts on the syndrome to offer their expert opinion that this maternal history was something that "merited further investigation" and should be considered in any differential diagnosis of J.A.'s death. Allison likewise did not need to present an expert on Ehlers-Danlos Syndrome in order to cross-examine the State's experts about their awareness of this maternal diagnosis and its significance, if any, to their own differential diagnoses.

¹⁰ Alaska Evid. R. 703 cmt. para. 5; *see also Vann v. State*, 229 P.3d 197, 202-03 (Alaska App. 2010).

¹¹ We note that the medical records were themselves admissible under the business records exception to the hearsay rule under Alaska Evidence Rule 803(6), assuming that a proper foundation could be laid. In cases where the underlying facts or data would be inadmissible for any purpose other than to explain or support the expert's opinion, the court is required to conduct a balancing test and to determine whether "the danger that they will be used for an improper purpose outweighs their value or support for the expert's opinion." Alaska R. Evid. 705(c).

Second, Allison was not required to present an expert who could diagnose J.A. with Ehlers-Danlos Syndrome “to a reasonable degree of medical certainty.” We recognize that the trial court had concerns about what it considered to be “the speculative nature” of the diagnosis.¹² But the State bore the burden of proving Allison’s guilt beyond a reasonable doubt; it was not Allison’s burden to prove his innocence. In the closely analogous context of a defendant seeking to present evidence of third-party guilt — *i.e.*, evidence that a person other than the defendant might have committed the crime — the Alaska Supreme Court has held that the analysis should focus on “whether the evidence offered tends to create a reasonable doubt as to the *defendant’s* guilt, not whether it establishes the guilt of the *third party* beyond a reasonable doubt.”¹³ The evidence offered by Allison satisfied this test; that is, it tended to create a reasonable doubt as to Allison’s guilt. The State’s proof in this case rested on its experts’ conclusions that there was no reasonable explanation for J.A.’s death other than physical abuse. Evidence that there were other possible medical explanations for her excessive bleeding was something that the jury should have heard. The fact that J.A. had not

¹² The trial court appears to have been concerned that J.A.’s mother had been diagnosed with the nonvascular type of Ehlers-Danlos Syndrome, and it is only the vascular type that is associated with rupture of blood vessels. But there was testimony from Dr. Ophoven that the distinctions between the different types of Ehlers-Danlos Syndrome were not that clear. Dr. Ophoven also testified that excessive bleeding is a concern with *any* type of Ehlers-Danlos Syndrome. Ultimately, it was the jury, not the court, who needed to assess the significance of this maternal history and the degree to which it affected the credibility and reliability of the State’s experts’ opinions.

¹³ *Smithart v. State*, 988 P.2d 583, 588 (Alaska 1999) (emphasis in original); *see also Sanders v. State*, 364 P.3d 412, 424-25 (Alaska 2015) (recognizing difference in evidentiary burden between evidence offered by the State against the defendant as opposed to evidence offered by the defendant).

herself been diagnosed with Ehlers-Danlos Syndrome went to the weight, not the admissibility, of this defense evidence.

The court's error in excluding all mention of Ehlers-Danlos Syndrome was not harmless

This Court has emphasized “the importance of a defendant’s right to present favorable evidence” and has applied the constitutional standard of review to inquire whether an error was harmless beyond a reasonable doubt “[g]iven the significance and constitutional dimension of the accused’s right to present favorable evidence.”¹⁴

As already explained, in the present case, there was no direct evidence of physical abuse. Instead, the State’s case rested on expert medical testimony — testimony that was directly contradicted by the expert medical testimony of Allison’s own experts. The trial court’s ruling precluding any and all evidence related to an alternative explanation of J.A.’s death impermissibly restricted Allison’s ability to defend himself.

First, the court’s ruling meant that Allison’s defense experts could not explain their reliance on the maternal diagnosis as foundation for their opinion that J.A.’s death was more likely caused by compounding injuries than physical abuse. Second, the court’s ruling meant that other witnesses — including J.A.’s treating neurologist — could not mention their concerns prior to J.A.’s death of the possible existence of an underlying genetic problem.

Lastly, the court’s ruling infringed on Allison’s right of cross-examination. As a result of the ruling, Allison was not allowed to cross-examine any of the State’s

¹⁴ *Kitchens v. State*, 898 P.2d 443, 448, 451 (Alaska App. 1995); *see also Smithart*, 988 P.2d at 586 (holding that “[w]hen a trial court’s evidentiary rulings substantially infringe upon the right to present a defense, the court necessarily violates the defendant’s due process rights”).

experts about their knowledge of Ehlers-Danlos Syndrome or their knowledge that J.A.’s mother had been diagnosed with this syndrome. Allison was likewise unable to cross-examine the experts about the significance of that diagnosis and whether (or why) the State’s experts believed that it could be definitively ruled out as a possible contributing factor to J.A.’s death.¹⁵

In *Dague v. State*, our supreme court found that the exclusion of an expert witness’s testimony on a subject that did not fall directly within the individual’s area of expertise was not harmless because it bolstered the defense witness’s testimony, independently supported the defense theory, and undermined the strength of the State’s case.¹⁶ We reach a similar conclusion here. The testimony related to J.A.’s maternal health history of Ehlers-Danlos Syndrome simultaneously supported Allison’s defense theory — that J.A.’s death was the result of compounding injuries — and undermined the State’s case that J.A.’s death must have been caused by physical abuse. In the context of such a lengthy trial filled with complex and conflicting medical testimony, evidence that tended to cast doubt on Allison’s guilt was critical to Allison’s ability to present his defense. The court’s exclusion of this evidence cannot be said to be harmless. Reversal of Allison’s conviction is therefore required.

¹⁵ See *Brown v. State*, 152 So. 3d 1146, 1169 (Miss. 2014) (concluding that trial court deprived defendant of the right to “fully cross-examine” State’s expert when it precluded defendant from questioning expert about possible relationship between immunizations and shaken baby symptoms).

¹⁶ *Dague v. State*, 81 P.3d 274, 282-84 (Alaska 2003).

Allison's other claims on appeal

Because we are reversing Allison's conviction based on his first claim of error on appeal, we do not need to reach the merits of his other claims. We express no opinion on the propriety of the trial court's other rulings.

Conclusion

For the reasons stated above, we REVERSE Allison's conviction. On remand, the State may elect to retry Allison.