

REPORTED

IN THE COURT OF SPECIAL APPEALS

OF MARYLAND

No. 1178

September Term, 2013

HARRY EASTER

v.

STATE OF MARYLAND

Meredith,
Graeff,
Leahy,

JJ.

Opinion by Graeff, J.

Filed: May 27, 2015

Harry Easter, appellant, was convicted by a jury in the Circuit Court for Prince George's County of three counts of manslaughter by vehicle, one count of causing a life threatening injury while operating a motor vehicle under the influence of alcohol, driving under the influence of alcohol, reckless driving, speeding, and other related offenses. The court sentenced appellant to an aggregate term of thirty years' incarceration.

On appeal, appellant presents the following questions for our review, which we have rephrased slightly, as follows:

1. Did the circuit court err in permitting the State to introduce the results of a blood alcohol test where the State failed to establish a proper chain of custody between the blood obtained from appellant and the blood tested to obtain those results?
2. Did the circuit court err in permitting the State's expert to offer testimony relating to the data acquired from the air bag control module of appellant's vehicle where the State failed to establish the accuracy and validity of the methodology used to acquire that data?

For the reasons that follow, we shall affirm the judgment of the circuit court.

FACTUAL BACKGROUND

On June 5, 2011, appellant drove his sport utility vehicle ("SUV"), at a speed of approximately 89 miles per hour, into the rear of another vehicle. Appellant struck the car with such force that the two rear-seat occupants were ejected through the rear window of the car and killed. The driver also was killed when the car struck a tree. The front seat passenger survived, but he sustained a fractured back, a fractured pelvis, an ankle injury, a concussion, and other serious and debilitating injuries.

When the surviving front seat passenger got out of the vehicle to look for his wife and the driver's wife, he saw appellant standing there. He asked appellant for help, but appellant just continued to stand there, offering no assistance. Appellant's blood alcohol content was .24 grams per 100 ml of blood, three times the legal limit to operate a vehicle.

We shall incorporate additional facts, relevant to each of the questions presented by appellant, in our discussion.

DISCUSSION

I.

Admission of Results of the Blood Test

Appellant first contends that the circuit court "erred in allowing the State to offer blood test results because the State failed to establish the chain of custody between the blood taken from [appellant] and the blood tested to produce [the] test result." The State disagrees, asserting that "the trial court acted within its discretion in admitting the results of [appellant's] blood test."

A.

Proceedings Below

Officer Thomas Crosby, a member of the Prince George's County Police Department, testified that, on June 5, 2011, he transported appellant from the scene of the accident to Fort Washington Hospital Center. He observed a phlebotomist draw blood from appellant to measure his blood alcohol level.

Corporal Stephen Fox supplied the hospital with a blood collection kit. He described a blood collection kit as a sealed cardboard box containing vials for blood collection, a preparatory product to clean the skin at the collection site, and security seals and integrity seals. Once the blood is collected, the vials are secured with the seals and then repackaged in the cardboard box, which is then sealed. The blood collection kit that he provided to the hospital was “new, unopened, and it was still within its expiration time period.”

Corporal Fox observed the phlebotomist draw blood from appellant. After the blood was in the vials from the blood collection kit, the phlebotomist sealed the vials with integrity seals and signed the chain of custody form, which was admitted as State’s Exhibit #14. This form contained the phlebotomist’s signature, appellant’s name, the time and date of arrest, and the time, date, and location of the sample collection.

Corporal Fox then repackaged the vials into a secured container with foam packaging, put the container into a bag, and then put the bag in the cardboard box. Corporal Fox took the repackaged blood collection kit to the Special Operations Division offices, and he placed the package into the mail to the Chemical Test for Alcohol Unit of the Maryland State Police for analysis. Corporal Fox testified that the legal limit in Maryland to operate a motor vehicle is .08 grams per 100 ml of blood.

Phlebotomist Seleshe Russom confirmed that he drew blood from appellant using a blood collection kit supplied to him by the police. He verified his signature on the police chain of custody form, which had been admitted as State’s Exhibit #14.

Wayne Shu, a forensic scientist with the Maryland State Police Crime Lab, performed the blood alcohol content testing in this case. He identified State's Exhibit #14 as "a copy of the Form 34 that's filled out and provided." He stated, however, that "there seemed to be a bottom part missing to this," explaining that his copy of the "Form 34 on the bottom has where [he] could input the results and get the control number," and that the exhibit was "a little different than [his] copy, but it's similar."

Mr. Shu described the blood analysis process, in relevant part, as follows:

The blood kit is hand delivered to the Maryland State Police Crime Lab, which is then received by our receiving unit. At that time, it's logged into our system, which is our evidence tracking system. When I'm ready for analysis, I call down to receiving and I pick up the kit, which I do. After that, I bring it to our toxicology unit, which is our locked lab which only approved personnel can get into; namely, the forensic scientist working toxicology and also the supervisors and management.

After the kit is taken into the lab, it's then locked in our refrigerator, which has key to it, and it stays there until I'm ready to analyze the blood kit.

At that point, that blood kit is taken out and we run our analysis in batches But . . . only one kit is opened at one time to make sure there's no tube switching, and I make sure that the numbers on the kit corresponds with the evidence kit itself.

After I make sure of that . . . we [test] two vials for quality assurance. The results have to be duplicated. After that, I . . . make a sequence. And after I check the sequence with the worksheet, make sure it corresponds to the evidence kit itself, I run the instrument and the instrument prints out the results after it's finished the analysis. And I review the analysis and submit the findings to our . . . Chemical Testing for Alcohol Unit . . . they send a report to me, I review it and sign it after I make sure everything is correct.

Mr. Shu explained that, in this case, he received appellant's blood kit from "our [central] receiving unit," and he "put it into the refrigerator in our toxicology unit until [he] was ready to analyze the blood." When he was ready, he took it out of the refrigerator, "sampled it," and then followed the testing procedure that he outlined for the jury. After the blood sample was analyzed, a report was printed, and he wrote down the results. Once he received the final report, he made sure the information was correct, and he signed the report.

The State then moved into evidence, as State's Exhibit #13, the report indicating Mr. Shu's findings. Appellant objected, arguing that the "State has not established chain of custody. They haven't established that the blood that was taken by this phlebotomist, Mr. Russom, was the blood that was analyzed by this particular witness." Appellant asserted that the parties did not "have the actual blood kit that was taken, the actual blood that was taken, the vials, the cardboard box, any of the notations on the cardboard box." Instead, all the parties had was State's Exhibit #14, "which would have been the only marking or only indication of what was actually given to" Mr. Shu, and Mr. Shu had indicated that the exhibit was "not what was provided to him," but rather, it was only "similar." Thus, he concluded, the State had not established that the blood that was drawn was the same blood that was analyzed by Mr. Shu.

The court then allowed the State to further examine Mr. Shu about the condition of the blood collection kit when he received it. Mr. Shu explained that he had received the package from the police Central Receiving Unit. The blood collection kit was a cardboard

box with evidence tape over it to seal it. Mr. Shu broke the “evidence seal and opened the cardboard box. Inside the box was a “plastic clam shell that has evidence seals alongside of it.” Mr. Shu broke the seals on the “clam shell” to get to the two test tubes, and he ensured that there was no evidence of tampering.

After that testimony, the State again sought to admit into evidence the results of appellant’s blood alcohol test. Appellant objected, arguing that Mr. Shu had indicated that he received the package via hand-delivery, and Officer Fox had testified that he had mailed the kit. He asserted that there was a “hole in the chain of custody,” and “if we had the vials and the cardboard kit and the attached signatures on that cardboard kit, then perhaps the State could establish chain of custody. We don’t have that. All we have at this point is . . . State’s Exhibit 14, which doesn’t indicate anything at this point.”

The court overruled appellant’s objection. State’s Exhibit #13, along with Mr. Shu’s testimony regarding the results of Mr. Shu’s testing of appellant’s blood, was admitted. Appellant’s blood alcohol concentration was .24 grams of alcohol per 100 ml of blood.

On cross-examination, appellant asked Mr. Shu about the difference between State’s Exhibit #14 and Mr. Shu’s copy of the form. Mr. Shu explained that his copy had the same top portion, but it had a “bottom tear off that says laboratory use.” He stated: “Basically, it has a portion where I can note the condition of the seal,” and in “this case, I know the seal was okay.

On redirect, Mr. Shu stated that the form that he had brought with him to court was different from State's Exhibit #14 in that the exhibit "does not include the laboratory tear off copy of [his] signature and [his] statement which [he] wrote on" the form. Other than that, the forms were identical.

B.

Chain of Custody

Appellant argues that the State failed to establish the necessary chain of custody between the blood drawn by Mr. Rossum and the blood tested by Mr. Shu. Noting that Corporal Fox testified that he sent the blood collection kit through the mail to the Maryland State Police, and Mr. Shu testified that he obtained the kit from the Receiving Unit of the Maryland State Police, appellant argues that there was a "hole in the chain of custody," as the items were handled and transferred by numerous unknown people, both throughout the postal service en route to the State Police, and by people within the State Police Receiving Unit before [being] retrieved by Mr. Shu." Moreover, he argues, there "was no evidence that the chain of custody documentation in State's Exhibit 14 accompanied those items during the journey and remained attached to those particular items throughout those undocumented parts of their journey." In addition, as Mr. Shu testified that there was a portion of State's Exhibit #14 missing, there was no evidence that the exhibit "was full, complete, and accurate."

The State contends that it is not necessary for the State to "present testimony from every human being who touched an item before that evidence may be admitted into

evidence,” nor is there “any requirement that the State provide any written documentation whatsoever concerning chain of custody.” It asserts that the authenticity of an item offered at trial may be established almost entirely by circumstantial evidence, and the only issue before the court is whether the evidence presented is sufficient to support a finding that the matter in question is what its proponent claims it to be. The State argues that, in this case, the testimony was sufficient to allow a rational fact finder to determine that the blood tested by Mr. Shu was the same blood collected from appellant.

With respect to appellant’s argument that there is a “missing” portion of State’s Exhibit #14, the State responds in two ways. First it asserts that the “missing” portion was not actually missing, as Mr. Shu had with him a copy of the complete form, which included the bottom portion. Moreover, it argues, there is nothing in the record to indicate that the presence or absence of the “missing” portion of the form would prevent the jury from determining that the unsealed blood vials received by Mr. Shu were the same vials mailed by Corporal Fox. Indeed, the “part of the form that [Mr.] Shu filled out had nothing to do with the authentication of the blood when [Mr.] Shu received it.”

Determinations regarding the admissibility of evidence generally are left to the sound discretion of the trial court. *Hajireen v. State*, 203 Md. App. 537, 552, *cert. denied*, 429 Md. 306 (2012). This Court reviews a trial court’s evidentiary rulings for abuse of discretion. *State v. Simms*, 420 Md. 705, 724-25 (2011). *Accord Nixon v. State*, 204 Md. 475, 483 (1954) (reviewing trial court’s ruling excluding evidence based on inadequate chain of

custody for an abuse of discretion). A trial court abuses its discretion only when “no reasonable person would take the view adopted by the [trial] court,” or when the court acts “without reference to any guiding rules or principles.” *King v. State*, 407 Md. 682, 697 (2009).

Chain of custody evidence is necessary to demonstrate the “ultimate integrity of the physical evidence.” *Best v. State*, 79 Md. App. 241, 256, *cert. denied*, 317 Md. 70 (1989). In most cases, an adequate chain of custody is established through the testimony of key witnesses who were responsible for the safekeeping of the evidence, i.e., those who can “negate a possibility of “tampering” . . . and thus preclude a likelihood that the thing’s condition was changed.” *Jones v. State*, 172 Md. App. 444, 462 (quoting *Wagner v. State*, 160 Md. App. 531, 552 (2005)), *cert. denied*, 399 Md. 33 (2007). What is necessary to negate the likelihood of tampering or of change of condition will vary from case to case. *Best*, 79 Md. App. at 250. The existence of gaps or weaknesses in the chain of custody generally go to the weight of the evidence and do not require exclusion of the evidence as a matter of law. *See Jones*, 172 Md. App. at 463 (upholding the admission of the evidence, but noting that the gaps in the State’s chain of custody supported defense counsel’s remarks in closing that the jury should discount its value).

Here, the evidence showed that Corporal Fox responded to the hospital with a blood collection kit that was “new, unopened, and it was still within its expiration period.” He then observed the phlebotomist, Mr. Rossum, draw blood from appellant. Mr. Rossum then

sealed the vials, and Corporal Fox placed them in a secured container, which was then “sealed into a bag,” and then placed in the cardboard box. The box was then mailed to the Maryland State Police Crime Lab, where Mr. Shu took possession of the box, with its seals still intact. The box was kept in a locked and secure area of the crime lab while Mr. Shu performed his analysis. Mr. Shu testified that he inspected the cardboard box, in which the blood was delivered, the interior container protecting the vials, as well as the vials themselves, before performing his tests, and he saw no evidence of any tampering. This chain of custody evidence was sufficient to allow a rational fact finder to determine that the blood Mr. Shu tested was the same blood that Mr. Rossum collected from appellant and turned over to Corporal Fox.

II.

Admission of the SUV’s Recorded Data

Appellant next contends that the circuit court “erred in permitting the State to offer evidence derived from the air bag control module of [appellant’s] vehicle because there was no evidence that the data was based upon a reliable methodology.” The State contends that appellant is wrong and “misapprehends the standard for the admission of both scientific evidence and expert testimony.”

A.

Proceedings Below

Corporal Frank Carson, a member of the Prince George's County Police Department, investigated the collision. He testified at trial, without objection, as an expert witness in crash data retrieval and air bag control module analysis. During voir dire, Corporal Carson testified that he had been an accident reconstructionist for 15 years. He described the training and experience he had regarding how to use specialized equipment to retrieve "crash data" from vehicle air bag control modules, as well as how to analyze that information "as it applies to accident reconstruction and crashes." Corporal Carson had qualified as an expert in crash data retrieval for air bag control modules on two prior occasions.

After he was accepted as an expert, Corporal Carson explained that the air bag control module determines whether a vehicle's air bag should deploy by measuring "deceleration and time." Analogizing to a parachute that opens on impact, which is not helpful, he noted that an air bag must be deployed prior to impact to be effective. The module attempts to predict when a collision is imminent by measuring the severity of rapid decelerations. Although Corporal Carson knew how to retrieve and analyze "crash data" from the air bag control module, he acknowledged that he did not know the specific "engineering parameters" that the module used in determining whether to deploy the air bag, stating that this was "a trade secret."

With respect to the collision in this case, as part of the investigation, Corporal Carson removed the air bag control module from appellant's SUV. He attached the module to a "special interface," and then attached that to a computer running a particular program. He then was able to retrieve the data from the module and download the information from the module to his computer. Software on his computer then produced "a readable formatted report" of the data retrieved from the module. The method he used to retrieve the data is "accepted within the scientific community of reconstructionists."

The State then offered into evidence, as State's Exhibit #12, the report Corporal Carson generated. Appellant objected to the admission of the report, as well as Corporal Carson's testimony regarding the report, on the ground that the State had not established the reliability of the data. He argued that Corporal Carson's testimony was "simply saying this is what the computer shows or the computer system shows in the vehicle, but there's no indication that that computer system is reliable." Moreover, he asserted that the "retrieval tool" used to collect the data was version "4.0," and he proffered to the court that the "latest software . . . is actually a version 10.3." Counsel directed the court to the "warning at the top of this State's Exhibit Number 12 that the latest retrieval system or latest software should be used."

The court asked if counsel had any cases addressing the reliability of the crash retrieval system, and counsel said that he did not "have any with me right now." The court then allowed the prosecutor to ask additional questions.

Corporal Carson testified that he had investigated 175 fatal motor vehicle collisions, including cases in which air bag control modules and crash data retrievals had been involved. With respect to his opinion regarding the reliability and accuracy of “crash data retrieval,” Corporal Carson stated that, in his experience as an accident reconstructionist, “air bag control modules are very accurate, especially if they’re involved in cases in the direction they’re designed to sense,” meaning forward and backward decelerations. He stated that National Traffic Safety Administration (“NTSA”) studies have shown that the modules were accurate to “between a half and two miles an hour, in most cases.”

The court ultimately overruled appellant’s objection.¹ It stated that appellant’s argument went “more towards whatever argument you want to make in terms of the weight the jury should give to it, but the [c]ourt is satisfied that it’s admissible.”

Corporal Carson then discussed the data retrieved from the air bag control module. He testified that, one second prior to the crash, the vehicle was going 89 miles per hour, the brake was not applied, and the air bag did not deploy.

B.

Basis for Expert Opinion

Appellant contends that the court erred in allowing the testimony derived from the air bag control module of his SUV because the State “offered no information concerning the

¹ After a lunch break, counsel for appellant did present a case saying that a foundation for testimony must be laid, but the court stated that the facts were “completely distinguishable from the situation” in this case.

reliability of the system used to record and relate that data.” Therefore, he asserts, Corporal Carson did not have a sufficient factual basis for his expert testimony.

The State contends that, contrary to appellant’s position, it “is not necessary for an expert to be able to describe, in detail, the software code used to retrieve information.” Rather, “it is enough that the information [the expert] relied upon is of a type generally relied upon by similar experts.” In this case, it asserts that “there was direct testimony that the module was a reliable and accurate source of data in general.” Moreover, “any complaints regarding the accuracy of the information recorded by the control module in [appellant’s] car went to its weight, not its admissibility.”

The decision whether to admit or exclude expert testimony is a matter within the discretion of the trial court, and the court’s decision in this regard “will seldom constitute a ground for reversal.” *Donati v. State*, 215 Md. App. 686, 742 (quoting *Bryant v. State*, 393 Md. 196 (2006)), *cert. denied*, 438 Md. 143 (2014). *Accord Massie v. State*, 349 Md. 834, 851 (1998) The court’s decision will be reversed only if it constitutes an abuse of discretion, *Stevenson v. State*, ___ Md. App. ___, No. 2018, Sept. Term, 2013, slip op. at 11 (filed April 2, 2015) (quoting *Massie*, 349 Md. at 850-51), which occurs when a decision is “well removed from any center mark imagined by the reviewing court and beyond the fringe of what the court deems minimally acceptable.” *In re Ashley S.*, 431 Md. 678, 704 (2013) (quoting *In re Yve S.*, 373 Md. 551, 583-84 (2003)).

Maryland Rule 5-702 governs the admissibility of expert testimony:

Expert testimony may be admitted, in the form of an opinion or otherwise, if the court determines that the testimony will assist the trier of fact to understand the evidence or to determine a fact in issue. In making that determination, the court shall determine (1) whether the witness is qualified as an expert by knowledge, skill, experience, training, or education, (2) the appropriateness of the expert testimony on the particular subject, and (3) whether a sufficient factual basis exists to support the expert testimony.

Appellant's claim rests on the third prong, whether Corporal Carson had a sufficient factual basis for his opinion. Appellant asserts that he did not because the State failed to establish that his testimony was supported by a reliable process or methodology. We disagree.

To be sure, "simply because a witness has been tendered and qualified as an expert in a particular occupation or profession, it does not follow that the expert may render an unbridled opinion, which does not otherwise comport with Md. Rule 5-702." *Giant Food, Inc. v. Booker*, 152 Md. App. 166, 182, *cert. denied*, 378 Md. 614 (2003). Rather, "[a]n expert's opinion testimony must be based on [an] adequate factual basis so that it does not amount to 'conjecture, speculation, or incompetent evidence.'" *Id.* at 182-83 (quoting *Uhlik v. Kopec*, 20 Md. App. 216, 223-24 (1974)). *Accord City Homes, Inc. v. Hazelwood*, 210 Md. App. 615, 678-79, *cert. denied*, 432 Md. 468 (2013).

The parties have not cited, and we have not found, any Maryland case addressing the issue regarding the reliability of vehicle air bag control modules. Other jurisdictions, however, have concluded that "black box" data from a motor vehicle's recording system, is reliable and admissible.

In *Com. v. Zimmermann*, 873 N.E.2d 1215 (Mass. App. Ct. 2007), in a trial for motor vehicle homicide by negligent operation, the Appeals Court of Massachusetts agreed with the trial court that evidence taken from the event data recorder (EDR) in the defendant's vehicle was sufficiently reliable to be admissible. The Commonwealth's expert had conducted 200 tests on EDRs, and he testified that the technology behind the EDR had been known for many years, that he and other experts had found the EDRs to be reliable, that EDRs needed no maintenance and calibration for 10 years, and that his calculations based on the physical and other evidence were consistent with the EDR data from the defendant's vehicle. *Id.* at 1220. Under these circumstances, the appellate court held that the trial court did not abuse its discretion in finding that the EDR data was reliable and admissible. *Id.* at 1221.

Similarly, in *People v. Christmann*, 776 N.Y.S.2d 437 (N.Y. Justice Ct. 2004), the court held, in a prosecution for speeding and failing to exercise due care, that accident data recorded in a motor vehicle's sensing diagnostic module (SDM) was admissible because it was reliable. It held that such evidence was "generally accepted as reliable and accurate by the automobile industry and [NTSA]." See *Bachman v. Gen'l Motors Corp.*, 776 N.E.2d 262, 281 ("crash sensors such as the SDM have been in production in automobiles for over a decade" and are generally accepted as a tool of accident reconstruction), *appeal denied*, 787 N.E.2d 154 (Ill. App. Ct. 2002).

Here, Corporal Carson, who had extensive training and experience in how to use specialized equipment to retrieve data from control modules, had qualified as an expert in crash data retrieval from air bag modules on two different occasions. As the State notes, he testified that the method he used to retrieve the data was accepted within the scientific community of reconstructionists, and that, in his experience, air bag control modules are very accurate. He also testified that NHTSA studies have shown them to be accurate.

The testimony here regarding the reliability of the air bag control module was not extensive. It was sufficient, however, for us to conclude that the circuit court did not abuse its discretion in determining that “black box” data derived from the air bag control module of appellant’s SUV was sufficiently reliable to support the expert’s testimony.

JUDGMENT AFFIRMED. COSTS TO BE PAID BY APPELLANT.