



**Fourth Court of Appeals**  
**San Antonio, Texas**

**OPINION**

No. 04-12-00238-CR

Kimberly Clark **SAENZ**,  
Appellant

v.

The **STATE** of Texas,  
Appellee

From the 217th Judicial District Court, Angelina County, Texas  
Trial Court No. CR28665  
The Honorable Barry R. Bryan, Judge Presiding

Opinion by: Catherine Stone, Chief Justice

Sitting: Catherine Stone, Chief Justice  
Marialyn Barnard, Justice  
Patricia O. Alvarez, Justice

Delivered and Filed: January 22, 2014

**AFFIRMED**

In April 2008, five patients died and at least five patients suffered adverse episodes while undergoing dialysis at a clinic in Lufkin, Texas. Kimberly Saenz, a licensed vocational nurse employed at the dialysis clinic, was charged by indictment with five counts of aggravated assault involving five separate individuals and one count of capital murder involving five different individuals. A jury found Saenz guilty of capital murder and three counts of aggravated assault. The jury acquitted Saenz on two counts of aggravated assault. Although the State sought the death

penalty, the jury sentenced Saenz to 20 years' imprisonment for each count of aggravated assault and to life in prison without parole for capital murder.

On appeal, Saenz presents twenty-one points of error alleging: (1) jury charge error; (2) insufficiency of the evidence; (3) ineffective assistance of counsel; (4) improper exclusion of evidence; and (5) improper admission of expert testimony. We overrule Saenz's appellate issues and affirm the trial court's judgment.

### **FACTUAL BACKGROUND**

During the month of April 2008, a dialysis clinic experienced an unusual increase in the number of patients who experienced episodes of illness and cardiac arrest while undergoing dialysis treatment. Three patients—Clara Strange, Thelma Metcalf, and Opal Few—experienced a cardiac arrest while undergoing dialysis treatment and died the same day. Two patients—Garlin Kelley and Cora Bryant—had similar experiences, but died several months later. At least five additional patients—Marie Bradley, Debra Oates, Graciela Castaneda, Marva Rhone, and Carolyn Risinger—had similar experiences but survived. At the time of the incidents, Saenz had been employed at the dialysis clinic for eight months. Depending on schedule requirements, Saenz functioned either as a patient care technician or as a nurse responsible for preparing medications for multiple patients.

#### *A. April 28, 2008*

On April 28, 2008, Saenz was instructed to work as a patient care technician responsible for four patients. Saenz became "teary-eyed" and was unhappy with this assignment as she preferred to function as the nurse responsible for preparing the medications, a position that had less contact with the patients. While undergoing dialysis treatment that morning, Lurlene Hamilton witnessed Saenz preparing a bleach cleaning solution by pouring bleach into a container. Hamilton then witnessed Saenz place the container on the floor, bend down, and extract bleach

into a syringe. Hamilton testified that Saenz appeared nervous. Hamilton then witnessed Saenz approach patient Carolyn Risinger, who was undergoing dialysis treatment, and inject the bleach-filled syringe into Risinger's intravenous (IV) dialysis line. Hamilton then witnessed Saenz do the same thing to patient Marva Rhone, who was asleep. Hamilton testified that Saenz injected two syringes of bleach into Rhone's IV and two syringes of bleach into Risinger's IV and that Saenz disposed of the syringes in the container designated for used syringes, the "sharps container." Hamilton was very upset by what she witnessed and reported it to another patient care technician, Yazmin Santana. When asked why she did not immediately report the incident as it was unfolding, Hamilton testified that she feared for her own safety.

Linda Hall was undergoing dialysis treatment in the chair next to Hamilton, although they were separated by two dialysis machines. Hall testified that she witnessed Saenz place a syringe in her pocket, place a container on the floor that usually contained the bleach cleaning solution, extract bleach with the syringe, and inject the syringe into Rhone's IV. Saenz then placed the used syringe into the sharps container that was assigned to the dialysis chair adjacent to Rhone. Hall testified that Saenz appeared nervous. Saenz did not use the computer next to Rhone's chair which would normally be used to chart any medication that was administered to the patient. Hall testified that she was upset by what she witnessed, but did not report it to the dialysis clinic staff until after Hamilton began reporting her observations. Hall explained that she was in disbelief, but that only a matter of seconds transpired between the time she witnessed the injection, heard Hamilton's commotion, and reported what she had seen. Saenz was told of the allegations against her and was instructed to go home for the day.

Following the reports by Hall and Hamilton, the dialysis clinic's administrators immediately sequestered the two sharps containers alleged to contain the used bleach syringes. The administrators used a testing strip that the clinic routinely used to test the dialysis machines

for bleach residue in the water line. The internal chamber of two syringes from each sharps container tested positive for bleach. Thereafter, the Centers for Disease Control (CDC), the Texas Department of Health and Human Services (TDHHS), and the Lufkin Police Department initiated an investigation into the incidents at the dialysis clinic. Most of the dialysis lines from each of the unusual events in April of 2008 were preserved by the dialysis clinic. These lines, as well as all of the sharps containers then in the clinic, were turned over to the police.

On April 29, 2008, the clinic voluntarily closed its doors and administrators conducted a mandatory staff meeting. Saenz did not attend the meeting. One of her co-workers, Werlan Guillory, contacted Saenz by phone and Saenz informed him that she was at the Exposition Center with her daughter's school and that she was not coming to the meeting. Afterwards, Guillory drove to the Exposition Center to check on Saenz. Guillory testified that Saenz appeared disheveled, was crying, and did not immediately recognize him. During their conversation, Saenz mentioned an earlier conversation with her husband and then Saenz stated to Guillory "I did not kill those people." Later that day, Saenz consented to an interview with police.

*B. April 2008 Deaths*

Clara Strange

On April 1, 2008, Clara Strange was assigned to patient care technician Werlan Guillory. Strange initially complained of shortness of breath, but was given oxygen and seemed to tolerate her dialysis treatment well for several hours. Saenz monitored Guillory's patients while he was on break. When Guillory returned from his break, he noticed that Strange was unresponsive. Strange was transported to the hospital, but efforts to revive her were unsuccessful. She died on April 1, 2008. Strange's chart indicated that Saenz had lowered her blood flow rate from 400 to 300. Guillory testified that nothing on the chart warranted lowering the blood flow rate.

Strange's dialysis lines were preserved and sent to a Food and Drug Administration (FDA) lab for analysis. A portion of Strange's dialysis line tested positive for bleach. A CDC toxicologist concluded that Strange died from injection of bleach into her dialysis line or port. Strange's blood was not tested for the 3-chlorotyrosine biomarker.<sup>1</sup>

#### Thelma Metcalf

On April 1, 2008, Thelma Metcalf's assigned patient care technician was Saenz. Several hours into her dialysis treatment, and approximately thirty minutes after Strange was found unresponsive, Metcalf was also found unresponsive. Metcalf was not breathing and had no pulse. Patient care technician Cory Smith testified that he and Saenz attempted to resuscitate Metcalf with CPR, but Saenz was not performing CPR correctly and Smith had to take over. Contrary to Smith's testimony, Nurse Dale Sockwell testified that he performed CPR on Metcalf and that Saenz was not around during that time. Metcalf was transported to the hospital but efforts to revive her were unsuccessful. She died on April 1, 2008. Metcalf's chart indicated that Saenz had lowered her blood flow rate from 300 to 200. Patient care technician Candice Lackey testified that lowering the blood flow rate would have been warranted because Metcalf's chart indicated that her blood pressure was approaching the maximum limit.

Metcalf's dialysis lines were preserved and sent to a FDA lab for analysis. A portion of Metcalf's dialysis line tested positive for bleach. A CDC toxicologist concluded that Metcalf died from injection of bleach into her dialysis line or port. Metcalf's blood was not tested for the 3-chlorotyrosine biomarker.

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<sup>1</sup> The 3-chlorotyrosine biomarker can be evidence of chlorine exposure. Saenz challenges the reliability of this scientific evidence in points of error sixteen through twenty-one.

Garlin Kelley

On April 16, 2008, Garlin Kelley's assigned patient care technician was Sharon Dearmon. Saenz was the nurse assigned to administer Kelley's medication. Several hours into the dialysis treatment, Dearmon heard the alarm on Kelley's dialysis machine sound and saw Saenz standing near the machine, preparing to turn off the alarm and reset the machine. Dearmon noticed that Kelley appeared unresponsive, so she instructed Saenz not to reset the machine. Dearmon witnessed an unusual clot in Kelley's arterial dialysis line. Dearmon performed CPR on Kelley and instructed Saenz to get help. Kelley was transported to the hospital and was resuscitated but never regained consciousness. He died on August 18, 2008.

Kelley's dialysis lines were preserved and sent to a FDA lab for analysis. A portion of Kelley's dialysis line tested positive for bleach. In addition, a syringe attached to the dialysis line tested positive for bleach. Kelley's blood sample taken after the incident tested positive for 3-chlorotyrosine. A CDC toxicologist concluded that Kelley died from injection of bleach into his dialysis line or port.

Cora Bryant

On April 22, 2008, Cora Bryant was assigned to patient care technician Martha Mann. Bryant experienced problems with her blood clotting during her treatment and her dialysis lines had to be replaced. While Mann was taking her break, the alarm sounded on Bryant's machine. Candice Lackey was in the medicine room and saw Saenz attempting to reset the machine. Lackey testified that administering medication to the patient or the clotting of blood would often cause the machine to alarm. When the machine alarms, blood stops flowing to the patient. At the time of the alarm, Bryant was in stable condition and was watching TV. Lackey returned Bryant's blood that was in the machine back to her body. Immediately, Bryant asked Lackey "What are you

giving me?" Bryant then turned her head and went into a cardiac arrest. Bryant was transported to the hospital and later died on July 15, 2008.

Bryant's dialysis lines were preserved and sent to a FDA lab for analysis. No bleach was detected on Bryant's dialysis lines; however, Bryant's blood sample taken after the incident tested positive for 3-chlorotyrosine. Additionally, Bryant's blood sample showed an elevated level of LDH.<sup>2</sup> A CDC toxicologist concluded that Bryant died from injection of bleach into her dialysis line or port.

#### Opal Few

On April 26, 2008, Opal Few was assigned to patient care technician Donya Heartsfield. Less than thirty minutes into Few's treatment and while Heartsfield was preparing the medications for Few and her other patients, she heard Few's alarm sound and noticed that Few was unresponsive. Few was transported to the hospital. Efforts to revive her were unsuccessful and she died on April 26, 2008. Heartsfield did not recall seeing Saenz that day. However, Nurse Sharon Smith testified that earlier in the day, she had instructed Saenz to administer Few's medication. After Few's incident, Smith noticed that Few's computer chart did not reflect that she had been given her medication. Smith testified that she asked Saenz and Saenz responded that she had given Few her medication but that she didn't chart it. Smith instructed Saenz to record the medication on Few's chart. Saenz then recorded administering Zemplar to Few at 9:05 A.M. Another patient's chart indicated that at 9:00 A.M. Saenz was removing the patient's dialysis lines, a procedure that takes more than five minutes.

Few's dialysis lines were preserved and sent to a FDA lab for analysis. A portion of Few's dialysis line tested positive for bleach. In addition, a syringe found in a sharps container, labeled

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<sup>2</sup> Lactate dehydrogenase (LDH) is an enzyme produced during blood hemolysis. Hemolysis occurs when bleach contacts blood.

as containing Zemplar and designated for Opal Few on 4/26/08, tested positive for bleach. Few's blood was not tested for the 3-chlorotyrosine biomarker. A CDC toxicologist concluded that Few died from injection of bleach into her dialysis line or port.

*C. April 2008 Non-Death Incidents*

Graciela Castaneda

On April 16, 2008, Graciela Castaneda lost consciousness while undergoing dialysis treatment. She was chewing gum during her treatment. The two EMS technicians who transported her to the hospital testified that she had no gum in her airway; however, a record from the hospital indicated that Castaneda may have had gum in her throat. Castaneda was diagnosed with pneumonia at the hospital. Castaneda recalled seeing Saenz during her treatment. Castaneda's husband testified that upon later seeing Saenz in the newspaper she said, "Man, I didn't know she'd do that to me." Prior to the incident, Castaneda had heart problems. Following the incident, Castaneda developed problems with her memory and required the use of oxygen.

Castaneda's dialysis lines were preserved and sent to a FDA lab for analysis. Test results of the lines were inconclusive for the presence of bleach. Castaneda's blood tested positive for 3-chlorotyrosine. Additionally, Castaneda's blood sample showed an elevated level of LDH. A CDC toxicologist concluded that Castaneda was injured from injection of bleach into her dialysis line or port.

Marie Bradley

On April 23, 2008, Marie Bradley was assigned to patient care technician Tammi Grant. Saenz was charted as administering medication to Bradley. During Bradley's session, she had an event where her blood pressure dropped, requiring her to be transported to the hospital. Bradley woke up three and a half days later with no memory of April 23, 2008.



Bradley's dialysis lines were preserved and sent to a FDA lab for analysis. A portion of Bradley's dialysis line tested positive for bleach. A syringe labeled as containing Zemplar and designated for Marie Bradley on 4/23/08 tested positive for bleach. Bradley's blood tested positive for 3-chlorotyrosine. Additionally, Bradley's blood sample showed an elevated level of LDH. A CDC toxicologist concluded that Bradley was injured from injection of bleach into her dialysis line or port.

Debra Oates

On April 26, 2008, Debra Oates was assigned to patient care technician Werlan Guillory. Saenz was charted as administering medication to Oates early in her session. Several hours later, near the end of her treatment session, Oates experienced a strange taste in her mouth and asked Saenz, "What did you give me?" Nurse Sharon Smith recalled seeing Saenz administering something with a syringe and then disposing of the syringe in the sharps container, although Smith was not sure when during the session she witnessed this. Oates experienced a drop in blood pressure, chest pain, trouble breathing, and felt as if her bones were being crushed. She became nauseated, started vomiting, and her access site would not stop bleeding. She was transported to the hospital where she was treated for several days. Oates had experienced a similar incident in January 2008 that required hospital treatment.

Oates's dialysis lines were not preserved for testing. Oates's blood tested positive for 3-chlorotyrosine. Additionally, Oates's blood sample showed an elevated level of LDH. A CDC toxicologist concluded that Oates was injured from injection of bleach into her dialysis line or port.

Marva Rhone

On April 28, 2013, Marva Rhone was assigned to patient care technician Angie Rodriguez. Several hours into her session, Rodriguez took a break. Rodriguez testified that either patient care technician Tammi Grant or Saenz was responsible for monitoring her patients during her break.

Grant testified that she monitored Rodriguez's patients while Rodriguez took a break and that she never saw Saenz. When Rodriguez returned, Rhone's blood pressure had dropped and she reported that she did not feel well, was uncomfortable, and experienced pain in her ribs. Rhone became nauseated, weak, and had difficulty speaking. Rhone's illness was charted as lasting six minutes. Rhone did not require treatment at the hospital. Rhone had recently been involved in a car accident which caused discomfort in her ribs. Hall and Hamilton testified that they witnessed Saenz inject bleach into Rhone's dialysis line.

Rhone's dialysis lines were preserved and sent to a FDA lab for analysis. A portion of Rhone's dialysis line tested positive for bleach. Rhone's blood tested positive for 3-chlorotyrosine. Additionally, Rhone's blood sample showed an elevated level of LDH and potassium. A CDC toxicologist concluded that Rhone was injured from injection of bleach into her dialysis line or port.

#### Carolyn Risinger

On April 28, 2013, Carolyn Risinger was assigned to patient care technician Tammi Grant. During her session, Risinger began flopping in her chair, felt hot, and was given oxygen and saline. Grant testified that she may have taken a break, but also testified that she never saw Saenz that morning. Patient Jimmy Grammer testified that he watched Risinger throughout her session and never saw Saenz approach Risinger's machine. Risinger did not require hospital treatment. Risinger did not submit to a blood test and her dialysis lines were not preserved. Hamilton testified that she witnessed Saenz inject bleach into Risinger's dialysis line.

#### **JURY CHARGE ERROR**

In two points of error Saenz claims the jury charge erroneously failed to require unanimous agreement about which individuals Saenz allegedly killed, and about whether the patients were

killed in a single criminal transaction or as part of the same scheme or course of conduct. The Court's charge on capital murder (Count VI) stated in pertinent part as follows:

[I]f you find from the evidence beyond a reasonable doubt that on or about the 26th day of April, 2008, in Angelina County, Texas, the Defendant, Kimberly Saenz, did intentionally or knowingly cause the death of more than one of the following persons: Clara Strange, Thelma Metcalf, Garlin Kelley, Cora Bryant, or Opal Few during the same criminal transactions or during different criminal transactions, but the murders were committed pursuant to the same scheme or course of conduct, by introducing sodium hypochlorite, commonly known as bleach, or other chlorinating agent into the body's bloodstream, then you will find the Defendant guilty of the offense of capital murder as charged in the Indictment.

During closing argument, the State commented: "The State has the burden of proof to prove that the Defendant caused the death of at least two of the five victims. You don't have to agree as to which two."

Saenz argues that the jury was not told that it must unanimously agree who, or how many people, she allegedly killed, or whether this crime occurred as part of a single transaction or as part of the same scheme or course of conduct. Citing the unanimous verdict requirements of the Texas Constitution and the Code of Criminal Procedure, Saenz contends the jury must unanimously agree on the identity of the victim alleged to have been murdered and the number of additional murders committed as the circumstance aggravating the murder to capital murder. The State responds that a court may instruct a jury in the disjunctive on alternative theories of the same offense without offending the right to a unanimous verdict. The State further argues that the requirement that the jury unanimously agree on the identity of the victim applies only when there is a single victim, unlike capital murder under Section 19.03(a)(7) which is "a single penal offense that has many legal theories for proving the same crime, including proof that there was more than one victim and more than one way to group those deaths (same criminal transaction or scheme or course of conduct.)"

A. *Standard of Review*

“Our first duty in analyzing a jury-charge issue is to decide whether error exists.” *Ngo v. State*, 175 S.W.3d 738, 743 (Tex. Crim. App. 2005). “Then, if we find error, we analyze that error for harm.” *Id.* “Both Article V, Section 13 of the Texas Constitution and Article 36.29(a) of the Texas Code of Criminal Procedure require unanimous jury verdicts in all felony cases.” *Leza v. State*, 351 S.W.3d 344, 356 (Tex. Crim. App. 2011). “To discern what a jury must be unanimous about, appellate courts examine the statute defining the offense to determine whether the Legislature ‘creat[ed] multiple, separate offenses, or a single offense’ with different methods or means of commission.” *Pizzo v. State*, 235 S.W.3d 711, 714 (Tex. Crim. App. 2007) (quoting *Jefferson v. State*, 18 S.W.3d 305, 311 (Tex. Crim. App. 2006)). Jury unanimity is required on the “essential elements of the offense,” but is generally not required on “alternate modes or means of commission.” *Id.*

B. *Unanimity on Same Criminal Transaction or Common Scheme*

A person commits capital murder if: (1) the person commits murder as defined under Section 19.02(b)(1); and (2) the person commits one of the nine aggravating circumstances listed in Sections 19.03(a)(1) through 19.03(a)(9). TEX. PENAL CODE ANN. § 19.03(a) (West 2013). In the instant case, Saenz was charged with the aggravating circumstance contained in Section 19.03(a)(7), which requires the person to have murdered more than one person:

- (A) during the same criminal transaction; or
- (B) during different criminal transactions but the murders are committed pursuant to the same scheme or course of conduct.

*Id.* at § 19.03(a)(7).

Each of the nine aggravating circumstances listed in Section 19.03(a) are “alternate theories” of committing the same capital murder offense. *Kitchens v. State*, 823 S.W.2d 256, 258

(Tex. Crim. App. 1991). Thus, when a single capital murder offense is alleged, the jury may be charged disjunctively and is not required to unanimously agree about which aggravating circumstance applies. *Id.* This is true regardless of whether the aggravating circumstances are found in the same or different Section 19.03(a) subsections. *Gamboa v. State*, 296 S.W.3d 574, 584 (Tex. Crim. App. 2009). Further, the jury is not required to unanimously agree on the aggravating circumstance even when the conduct constituting the aggravating circumstance involves different victims. *Davis v. State*, 313 S.W.3d 317, 341-42 (Tex. Crim. App. 2010) (holding jury verdict unanimous where jury was charged with alternative aggravating circumstance of burglary involving two different victims); *Cabrialez v. State*, No. 13-04-163-CR, 2006 WL 146098, \*2-3 (Tex. App.—Corpus Christi Jan. 19, 2006, no pet.) (mem. op., not designated for publication) (holding jury verdict unanimous where jury was charged with alternate aggravating circumstance of robbery or burglary against any one of five named victims).

Saenz contends that subsections (A) and (B) of Section 19.03(a)(7) of the Texas Penal Code constitute separate offenses and thus “a unanimous verdict is impossible if [some] jurors believed that Ms. Saenz murdered multiple people in one criminal transaction [while] other jurors believed she did so as part of the same scheme or course of conduct.” To illustrate her point, Saenz includes the following example:

For example, if Ms. Saenz allegedly killed Clara Strange and Thelma Metcalf in one criminal transaction on the same day, that is one capital murder offense. If she allegedly killed Garlin Kelley and Cora Bryant on different days, but pursuant to the same course of conduct, that is another capital offense. If she allegedly killed all five patients, pursuant to the same course of conduct, that is another capital offense. To ensure unanimity, the trial court should have instructed the jury that its verdict must be unanimous as to each specific offense.

We disagree. Just as each of the nine aggravating circumstances listed in Section 19.03(a) are alternative theories of the same capital murder offense, subsections (A) and (B) of Section 19.03(a)(7) also are alternate theories of the same capital murder offense. Alternative theories can

exist involving any of the aggravating circumstances found in Section 19.03(a), which necessarily includes subsections (A) and (B) of Section 19.03(a)(7). Indeed, in *Gamboa*, one of the aggravating circumstances was an additional murder under Section 19.03(a)(7) while the other aggravating circumstance was a robbery under Section 19.03(a)(2). 296 S.W.3d at 582. Accordingly, the jury was not required to unanimously agree on the alternate theories of capital murder as alleged under subsections (A) and (B) of Section 19.03(a)(7).

### *C. Victim Identity Unanimity*

It is established Texas law that when the charged offense is murder, the jury must unanimously agree about who was murdered because each murder victim is considered a separate offense. See *Johnson v. State*, 364 S.W.3d 292, 295–96 (Tex. Crim. App. 2012); *Hisey v. State*, 129 S.W.3d 649, 652 (Tex. App.—Houston [1st Dist.] 2004, pet. dismissed). However, it is not established whether the jury is required to unanimously agree on exactly who was murdered if the charged offense is capital murder with multiple murders serving as the aggravating circumstance. That question is squarely presented in this case.

#### *1. Unanimity on Predicate Murder Victim*

Saenz argues that the jury must unanimously agree on the identity of the predicate victim who was murdered and the number of additional victims who were murdered as the aggravating circumstance. This argument finds some support in the law.

In *Graham v. State*, 19 S.W.3d 851, 852 (Tex. Crim. App. 2000), the jury was charged with finding that Graham committed capital murder by: (1) the murder of Hurtado and Giraldo in the same criminal transaction; (2) the murder of Hurtado while in the course of robbing him; and (3) the murder of Garcia-Castro while in the course of robbing him. For purposes of severance under Texas Penal Code Section 3.04(a), Graham argued that the jury was charged with two distinct capital murder offenses based on the identity of the victim who was murdered, i.e., (1) the murder

of Hurtado with the alternative aggravating circumstances being the murder of Giraldo or the robbery of Hurtado; and (2) the murder of Garcia-Castro with the aggravating circumstance being the robbery of Garcia-Castro. *Id.* The State argued the charge alleged different theories for committing one offense of capital murder. *Id.* The Court of Criminal Appeals held that the charge alleged two capital murder offenses because “two of the three paragraphs allege *different murders* as the basis for the capital charge.” *Id.* at 853 (emphasis in original). The court explained that the murder of Hurtado and the murder of Garcia-Castro were “two distinct capital offenses” because there were “multiple murders rather than multiple theories.” *Id.* at 854. Accordingly, *Graham* suggests that each murder victim constitutes a separate offense of capital murder, which would require the jury to unanimously agree on the identity of the predicate murder victim.

## 2. *Unanimity on Murder of More than One Person*

In its more recent decision in *Saenz v. State*, 166 S.W.3d 270 (Tex. Crim. App. 2005), however, the Court of Criminal Appeals suggests that a jury is permitted to return a general verdict of capital murder without specifying which victims were murdered. In *Saenz*, John Saenz was indicted with three counts of capital murder. 166 S.W.3d at 271. In the indictment, Count I alleged the murder of Torres aggravated by the murders of Bravo and Cain in the same criminal transaction. *See Saenz v. State*, 131 S.W.3d 43, 49 (Tex. App.—San Antonio 2003), *aff’d*, 166 S.W.3d 270 (Tex. Crim. App. 2005). Count II alleged the murder of Bravo aggravated by the murders of Torres and Cain. *See id.* Count III alleged the murder of Cain aggravated by the murders of Torres and Bravo. *See id.* Saenz was found guilty as to each count and sentenced to three concurrent life sentences. *See id.* at 45. Saenz then appealed this conviction to this court.

Because Section 19.03(a)(7) necessarily requires the murder of more than one person, this court distinguished it from “assault-type offenses that require only one victim.” *Id.* at 52. We held that “the allowable unit of prosecution for section 19.03(a)(7)(A) is more than one victim.” *Id.*

We explained that, “[i]f the allowable unit of prosecution is more than one victim, Saenz necessarily committed only one capital murder. All three counts contain the same victims, the same allowable unit of prosecution. All three counts, therefore, constitute only one offense of capital murder. Because the indictment states only one allowable unit of prosecution, Saenz can be convicted of only one offense.” *Id.* at 52–53.

The Court of Criminal Appeals affirmed our decision in *Saenz*. In construing the statute, the court distinguished 19.03(a)(7) from the other aggravating circumstances that only require one victim, concluding “the statute reflects that the killing of at least two persons allows the State to charge a single count of capital murder . . . .” 166 S.W.3d at 273. The court then looked at the legislative history of Section 19.03(a)(7) and observed that the drafters of the bill were not seeking a way to obtain multiple death penalties against mass murderers, but rather were making it possible to execute mass murderers. *Id.* The court concluded that “the most reasonable interpretation of the statute and its legislative intent is that, under the circumstances presented here, the statute allows only a single capital murder conviction. Accordingly, we hold that the Double Jeopardy Clause of the Fifth Amendment was violated when the State charged appellant with three separate counts of capital murder under Section 19.03(a)(7)(A) because the charges rely on the same three murders for each charge.” *Id.* at 274.

### 3. *Analysis*

The Court of Criminal Appeals has held that the unit of prosecution for capital murder under Section 19.03(a)(7) is the murder of “at least two persons.” *Saenz*, 166 S.W.3d at 273. In extending the *Saenz* holding to both 19.03(a)(7) sub-sections, the Court of Criminal Appeals recently re-affirmed that “the allowable unit of prosecution for this statute is not each individual, but the killing of more than one individual.” *Ex Parte Milner*, 394 S.W.3d 502, 508 (Tex. Crim. App. 2013). Although *Saenz* determined the unit of prosecution in the Double Jeopardy context,



the Court of Criminal Appeals has described its Double Jeopardy and jury unanimity jurisprudence as “closely intertwined strands” that “address the same basic question” of whether “different legal theories of criminal liability comprise different offenses” or whether “they comprise alternate methods of committing the same offense.”<sup>3</sup> *Huffman v. State*, 267 S.W.3d 902, 905 (Tex. Crim. App. 2008); *see Villanueva v. State*, 227 S.W.3d 744, 747 (Tex. Crim. App. 2007) (doubting that the Legislature would intend for the court to construe an offense in one way for double jeopardy purposes but in another way for jury unanimity purposes).

A jury “must unanimously agree about the occurrence of a single criminal offense, but they need not be unanimous about the specific manner and means of how that offense was committed.” *Young v. State*, 341 S.W.3d 417, 422 (Tex. Crim. App. 2011). The “manner and means” of committing a criminal offense refers to the *actus reus* of the crime. *Sanchez v. State*, 376 S.W.3d 767, 773 (Tex. Crim. App. 2012). Thus, when several different acts constitute the manner and means of committing a single criminal offense as opposed to the commission of several criminal offenses, the jury need only unanimously agree that the single offense was committed. *Jefferson*, 189 S.W.3d at 311; *Cosio v. State*, 353 S.W.3d 766, 772 (Tex. Crim. App. 2011); *Pizzo*, 235 S.W.3d at 715. The Court of Criminal Appeals has defined the single offense under Section 19.03(a)(7) as the murder of more than one person. *Saenz*, 166 S.W.3d at 273; *Ex Parte Milner*, 394 S.W.3d at 508. Therefore, when a jury unanimously agrees that a defendant murdered more

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<sup>3</sup> We note that, in *Paredes v. Thaler*, 617 F.3d 315 (5th Cir. 2010), the Fifth Circuit refused to apply *Saenz* to a jury unanimity issue. In that case, the court reviewed a denial of writ of habeas corpus for a defendant who was convicted for the capital murder of the same three individuals giving rise to the John Saenz case. The jury was instructed that it could convict Paredes of capital murder if it found that (1) he killed Torres and either Bravo or Cain; or (2) he killed Bravo and either Torres or Cain; or (3) he killed Cain and either Torres or Bravo. The Fifth Circuit observed that it did not have “a definitive construction of section 19.03(a)(7)(A) from the Texas Court of Criminal Appeals as to whether it is proper in a jury charge to permit the crime of multiple murder to be established by alternate means of varying combinations of more than one murder.” *Paredes*, 617 F.3d at 320–22.

than one person, it unanimously agrees that the defendant committed a single offense of capital murder under Section 19.03(a)(7).

Although *Graham* held that each predicate murder victim constituted a separate offense of capital murder, the *Saenz* court distinguished that holding as applying only to the Section 19.03(a) subsections that involve only one victim, unlike Section 19.03(a)(7) which necessarily involves more than one victim. *Saenz*, 166 S.W.3d at 273. Indeed, the requirement that the jury must unanimously agree on the identity of the predicate murder victim of a capital murder offense is derived from the concept that each predicate murder victim constitutes a separate offense. *See Young*, 341 S.W.3d at 423–24. It follows that where each predicate murder victim does not constitute a separate offense, the jury need not unanimously agree on that victim’s identity.

The Dallas Court of Appeals applied *Saenz* to a jury unanimity issue in *Anderson v. State*, No. 05-06-00233-CR, 2007 WL 2004896, at\*1–2 (Tex. App.—Dallas Jul. 12, 2007, pet. ref’d) (mem. op., not designated for publication). Anderson’s jury was charged disjunctively on four different theories of capital murder: (1) murder of Brown aggravated by murders of Hernandez or Pena; (2) murders of Hernandez and Pena; (3) conspiracy to commit robbery during which Hernandez and Pena were murdered; or (4) conspiracy to commit felony drug possession during which Hernandez and Pena were murdered. The court concluded that all four paragraphs described “different methods of committing the single offense of capital murder.” *Id.* at \*2. Although some jurors could have concluded that Brown was murdered and some jurors could have concluded that Brown was not murdered, the court held the jury was only required to unanimously agree that Anderson committed the single offense of capital murder. *Id.*

Therefore, based on the Texas Court of Criminal Appeals’ holding in *Saenz*, we conclude that the jury charge in the instant case afforded Saenz her right to a unanimous jury verdict as the jury

unanimously agreed that she committed a single offense of capital murder under Section 19.03(a)(7).

### LEGAL SUFFICIENCY OF THE EVIDENCE

In points of error three and four, Saenz contends the evidence is legally insufficient to support the capital murder conviction or the convictions of aggravated assault. The State responds that the combined direct and circumstantial evidence was sufficient for a rational juror to find guilt beyond a reasonable doubt.

#### A. *Standard of Review*

“In determining whether the evidence is legally sufficient to support a conviction, a reviewing court must consider all of the evidence in the light most favorable to the verdict and determine whether, based on that evidence and reasonable inferences therefrom, a rational fact finder could have found the essential elements of the crime beyond a reasonable doubt.” *Gear v. State*, 340 S.W.3d 743, 746 (Tex. Crim. App. 2011) (citing *Jackson v. Virginia*, 443 U.S. 307, 318–19 (1979)). “[W]hen viewing the evidence in the light most favorable to the verdict, ‘the reviewing court is required to defer to the jury’s credibility and weight determinations because the jury is the sole judge of the witnesses’ credibility and the weight to be given their testimony.’” *Winfrey v. State*, 393 S.W.3d 763, 768 (Tex. Crim. App. 2013) (quoting *Brooks v. State*, 323 S.W.3d 893, 899 (Tex. Crim. App. 2010)). “Circumstantial evidence is as probative as direct evidence in establishing guilt, and circumstantial evidence alone can be sufficient to establish guilt.” *Id.* at 771 (citing *Hooper v. State*, 214 S.W.3d 9, 13 (Tex. Crim. App. 2007)).

This court considers “all evidence in the record of the trial, whether it was admissible or inadmissible.” *Id.* at 767 (quoting *Dewberry v. State*, 4 S.W.3d 735, 740 (Tex. Crim. App. 1999)). “[I]t is not necessary that every fact point directly and independently to the defendant’s guilt; it is enough if the conclusion is warranted by the combined and cumulative force of all the

incriminating circumstances.” *Johnson v. State*, 871 S.W.2d 183, 186 (Tex. Crim. App. 1993). We measure sufficiency of the evidence by “the elements of the offense as defined by the hypothetically correct jury charge for the case.” *Malik v. State*, 953 S.W.2d 234, 240 (Tex. Crim. App. 1997).

### *B. Discussion*

As to Clara Strange, Thelma Metcalf, Garlin Kelley, Opal Few, and Cora Bryant, the State had the burden of proving beyond a reasonable doubt that (1) Saenz (2) intentionally or knowingly (3) caused the death (4) of more than one person (5) by injecting bleach into their bloodstreams (6) either during the same criminal transaction or during different criminal transactions, but the murders were committed pursuant to the same scheme or course of conduct. TEX. PENAL CODE ANN. § 19.03(a)(7) (West 2013). As to Marie Bradley, Debra Oates, Graciela Castaneda, Marva Rhone, and Carolyn Risinger, the State had the burden of proving beyond a reasonable doubt that (1) Saenz (2) intentionally, knowingly, or recklessly (3) exhibited a deadly weapon during the commission of an assault (4) by injecting bleach into their bloodstreams. TEX. PENAL CODE ANN. § 22.02(a) (West 2011).

#### *1. Evidence of Bleach Injection*

Saenz argues that the evidence is insufficient to show that each patient was injured by an injection of bleach. Rather, Saenz contends the injuries could have been caused by the “myriad of chronic and severe illnesses complicated by dialysis treatment.” Moreover, Saenz argues that none of the patients exhibited the “known indicators of bleach poisoning.” The State’s evidence of injury by bleach injection falls into three categories: (1) eyewitness testimony that Saenz injected bleach into Rhone and Risinger; (2) the presence of bleach in the dialysis lines and in syringes; and (3) the presence of the 3-chlorotyrosine biomarker in all of the patients whose blood was tested shortly after their respective incidents.

*a. Evidence of Bleach in Dialysis Lines*

Saenz argues that presence of bleach in the dialysis lines is insufficient because there is no evidence of bleach at the point where the lines enter the patient's body, and bleach was detected in the blood path on the dialysis lines of only Opal Few. Further, Saenz contends there was uncontroverted testimony establishing that the dialysis machine would have had to be turned off and the blood not flowing when the detected bleach was introduced into the line. Thus, Saenz argues that a positive result is either the result of contamination during the transporting of the dialysis lines to the lab or bleach being introduced after the machine was turned off following a treatment session. The State responds that the positive test results of bleach and chlorate on "numerous items" is consistent with a bleach exposure.

The dialysis lines were analyzed by an FDA laboratory. David Jackson, an FDA forensic chemist, testified that either bleach or chlorate<sup>4</sup> was detected in the lines of Rhone, Few, Strange, Metcalf, and Kelley. Jackson testified that in his opinion, the use of saline to push the blood through the dialysis lines would account for the negative bleach or chlorate readings in other parts of the dialysis lines. Defense expert Dr. Jonathan Neidigh, a university chemist, opined that he would expect to see evidence of bleach in other places of the dialysis lines downstream of the injection point if the bleach had been injected while the blood was moving. Although Saenz points to the testimony of Nurse Candice Lackey as evidence that the dialysis machine would have had to be turned off at the point of a bleach injection, the record does not conclusively establish that fact. At the time of Lackey's testimony on the subject, it appears she was using a demonstrative and was pointing at various parts of the dialysis machine to explain her testimony. Therefore, the jury was in a better position to understand Lackey's testimony in its entirety.

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<sup>4</sup> The presence of chlorate is an indicator of bleach.

Ultimately, it is within the jury's province to evaluate the weight and credibility of the evidence. A rational juror could have found that Jackson's testimony was more credible than that of Neidigh or Lackey. Additionally, the FDA analysis found bleach on the inside of Kelley and Few's syringes dated for the day of their incident. Kelley's syringe was attached to his dialysis line. Bleach was also detected on the inside of other syringes found inside of the sharps containers. The jury heard testimony that there was no reason for bleach to be either inside the patient syringes or on the inside of the dialysis lines. A CDC expert, Dr. Michael Schwartz, reviewed the FDA test results and concluded that the patients were injected with bleach. Hall and Hamilton testified that they witnessed Saenz injecting bleach. Given the totality of the evidence, a rational juror could have concluded that bleach was injected into the dialysis lines.

*b. 3-chlorotyrosine Evidence*

Saenz also challenges the sufficiency of the 3-chlorotyrosine evidence that was used to establish the presence of bleach in the blood samples of several patients. In collaboration with the CDC and the local health department, Dr. Mark Sochaski conducted a blind study of 54 blood samples from dialysis clinic patients. Some of the samples were taken from complainants after they had experienced adverse incidents during dialysis treatment in April 2008. Other samples were control samples taken from patients, at either the dialysis clinic or a neighboring dialysis clinic, who had not experienced an adverse incident. The study was "blind" in that only the local health department and not Dr. Sochaski knew the patients' identities. Dr. Sochaski detected no levels of the biomarker 3-chlorotyrosine in the control patients' samples; however, he detected high levels in the blood samples taken from Garlin Kelley, Cora Bryant, Marie Bradley, Debra Oates, Graciela Castaneda, and Marva Rhone. Blood samples were not available for Clara Strange, Thelma Metcalf, Opal Few, and Carolyn Risinger. 3-chlorotyrosine is naturally produced by the body and has been found in low levels in patients of dialysis, patients fighting an infection, or

those who have recently had a heart attack. The presence of 3-chlorotyrosine can also indicate the blood's exposure to chlorine from outside of the body. Because the levels of 3-chlorotyrosine in the complainants were much higher than any levels recorded as a result of being naturally produced by the body, Dr. Sochaski concluded that the complainants had been externally exposed to a chlorinating compound.

Saenz argues that the presence of 3-chlorotyrosine is not sufficient evidence that bleach was injected into the patients because (1) the original Sochaski study supporting the test results was conducted by exposing rats to chlorine gas and is inapplicable to humans, and (2) the presence of 3-chlorotyrosine is not solely indicative of bleach poisoning because the human body naturally produces 3-chlorotyrosine in certain situations.

A reviewing court must distinguish between claims of improperly admitted evidence and claims of insufficient evidence. *Moff v. State*, 131 S.W.3d 485, 490 (Tex. Crim. App. 2004). When reviewing for legal sufficiency of the evidence, we must consider all evidence before the jury at trial, whether it was properly or improperly admitted. *Id.* Although Saenz challenges the admissibility of the 3-chlorotyrosine evidence in points of error sixteen through twenty-one, we review that evidence in a sufficiency challenge as if it were properly admitted.

Saenz argues that the presence of 3-chlorotyrosine is not sufficient evidence of bleach exposure because 3-chlorotyrosine is naturally produced in the human body. Saenz points to evidence that "levels are higher in patients on dialysis, patients with cardiac disease or following heart attacks, and in patients fighting an infection." Saenz argues that these are equally plausible explanations for the 3-chlorotyrosine levels, pointing to Kelley who had E.coli pneumonia and Hepatitis C at the time of his incident and also to Bryant who suffered from myocardial fibrosis and cirrhosis of the liver. However, Dr. Schwartz, a medical officer with the CDC, testified that injection of bleach caused the 3-chlorotyrosine levels in the complainants. Dr. Schwartz explained

that the 3-chlorotyrosine levels in the complainants were 300 to 400 times greater than what would be expected from the levels that would be naturally produced by a person undergoing dialysis.<sup>5</sup> Likewise, Dr. Schwartz explained that the 3-chlorotyrosine levels in the complainants were 20 to 70 times higher than what would be expected from the levels naturally produced by a patient who had experienced a heart attack.<sup>6</sup> In addition, Dr. Schwartz testified that consistent with an external exposure to bleach, the levels of 3-chlorotyrosine in the complainants steadily declined over the seventy-two hours following their admission to the hospital, with the highest levels measured close to the time of the patient's incident at the clinic. Dr. Schwartz explained that if the presence of 3-chlorotyrosine were caused by an inflammation of the body as a result of some sort of infection, he would expect to see steady levels of 3-chlorotyrosine, not the steadily declining levels shown in the complainants. Likewise, Dr. Schwartz also would have expected to see steady 3-chlorotyrosine levels after a heart attack because the heart muscle dies and slowly seeps damaged cells.

Dr. Schwartz also explained that he tested the blood of a "control patient," Oralia Torres, who was not suspected to have been injected by bleach. Torres and Cora Bryant both had their dialysis treatment at the dialysis clinic on April 22, 2008 and were seated one chair apart. Bryant's treatment ended in her cardiac arrest that sent her to the hospital. Torres had an uneventful dialysis treatment. On April 24, 2008, Torres had to visit the hospital due to an infection. The blood samples taken on that day from Torres were negative for 3-chlorotyrosine. The blood sample for Bryant taken the day of her incident was positive for 3-chlorotyrosine. Dr. Schwartz concluded

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<sup>5</sup> Dr. Schwartz referenced the Himmelfarb study, which tested patients shortly after they had completed their dialysis treatment. Himmelfarb observed 3-chlorotyrosine levels ranging from 0.00047% to 0.006%.

<sup>6</sup> Dr. Schwartz referenced the Mocatta study, which tested heart attack patients shortly after they were admitted to the hospital. The average 3-chlorotyrosine level was 0.0019%. During her study, Mocatta also injected hydrochloric acid into a container of blood plasma and the resulting 3-chlorotyrosine level was 0.08%, which according to Dr. Schwartz was similar to the levels found in the complainants.



that each of the complainants was injured by the injection of sodium hypochlorite or bleach into their dialysis line.

Saenz further contends the jury discredited the 3-chlorotyrosine evidence when it acquitted Saenz as to Graciela Castaneda because Castaneda's results showed one of the highest levels of 3-chlorotyrosine. Saenz contends it is irrational that the jury would convict as to Cora Bryant but acquit as to Castaneda when both patients' blood samples were positive for 3-chlorotyrosine but both had dialysis lines that did not test positive for bleach.<sup>7</sup> The State responds that the jury did not discredit the 3-chlorotyrosine evidence when it acquitted Saenz as to Castaneda's injuries. Rather, the jury could have rationally concluded that Castaneda was injected with bleach, but that her injuries were caused by her choking on a piece of chewing gum.

The jury heard conflicting evidence regarding whether Castaneda's injuries were caused by choking on gum. Castaneda testified that she would chew gum during her dialysis treatment. The two EMS technicians who transported Castaneda to the hospital on April 16, 2008 testified that she was not breathing when they arrived at the dialysis clinic. One EMS technician testified that he attempted to place a tube in Castaneda's throat which required a visual inspection of the throat. He did not recall seeing any gum in Castaneda's throat and stated that he would have documented such an observation. He testified that he was ultimately unable to insert the tube because of Castaneda's clenched teeth. He had used a suction device to clear Castaneda's throat of any secretions and did not see any gum. The second EMS technician corroborated this account. However, hospital records included the notation "EMS found chewing gum in airway as per RN was in PEA." Neither EMS technician could explain this notation. Defense expert Dr. Michael

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<sup>7</sup> Bryant and Castaneda's blood lines still contained blood at the time Jackson tested them. Thus, the test results were "inconclusive" because the test depended on a color change that was not possible with the red color of blood. Defense expert Dr. Jonathan Neidigh testified that the "inconclusive" results should be "negative."

Germain opined that Castaneda suffered a respiratory arrest related to an obstructed airway due to chewing gum. Defense expert Dr. Amy Gruszecki opined that Castaneda's injury resulted from a combination of choking on gum and pneumonia.

Although it is possible that the jury may have given weight to the gum choking theory, other evidentiary differences existed between Castaneda and Bryant. For example, several eyewitnesses provided a vivid account of Bryant's cardiac arrest, which resulted immediately after the nurse returned her blood. The details of Castaneda's event, however, were provided at trial by Castaneda herself, who appeared to be plagued by memory problems. Castaneda described her incident as merely losing consciousness. Castaneda was also diagnosed with pneumonia at the time of her incident. The fact that the jury chose to acquit Saenz as to Castaneda does not necessarily mean that it discredited the 3-chlorotyrosine evidence, the other factual differences could have caused the jury to reach its different findings.

*c. Other Evidence of Bleach Injection*

Saenz argues that none of the victims evidenced known symptoms of bleach poisoning. The jury heard evidence that injecting bleach into the bloodstream could cause a cardiac arrest and trouble breathing. Symptoms can also include falling blood pressure, rapid heartbeat, or the complete cessation of blood pressure or heartbeat. Defense expert Dr. Gruszecki opined that the injection of bleach into the blood stream would cause burning, swelling, and redness. However, Dr. Gruszecki conceded during cross-examination that her opinion was based more on what one would practically expect from a bleach exposure based on the hazardous material guidelines for bleach. While there was no evidence of burning, swelling, or redness, each patient exhibited evidence of a bleach exposure consistent with a cardiac arrest or difficulty breathing. The exception would be in the cases of Castaneda and Risinger, and the jury acquitted as to those patients.

Saenz also argues that none of the alleged victims' blood samples showed signs of hemolysis. Hemolysis is the break-down of red blood cells which would result when the blood is exposed to bleach. During hemolysis, the red blood cells will burst, creating elevated levels of potassium and the LDH enzyme. Potassium levels, however, are lowered by the introduction of epinephrine. While normal potassium levels were found in Metcalf, Kelley, Few, Bryant, Bradley, and Castaneda, each of these patients received epinephrine during their emergency. Rhone was the only patient with an elevated potassium level and Rhone did not receive epinephrine. Dr. Schwartz analyzed the LDH levels of Bryant, Oates, Castaneda, Bradley, and Rhone, who were the patients who survived long enough at the hospital to give a viable blood sample.<sup>8</sup> Dr. Schwartz compared the patients' LDH levels after the event with the levels indicated in routine blood tests before the event and concluded that the source of the elevated LDH levels was acute hemolysis. A rational juror could have concluded that the complainants evidenced symptoms consistent with a bleach injection.

Lastly, Saenz argues that with the exception of Kelley and Bryant, each of the patient deaths was certified by the medical examiner as being caused by natural causes. Saenz argues that the death certificates for Kelley and Bryant were delayed and that the medical examiner certified their causes of death as exposure to bleach only after he relied on Dr. Sochaski's study. The defense expert forensic pathologist, Dr. Gruszecki, testified that in her opinion each of the patients died as a result of natural causes related to their pre-existing medical conditions. However, the jury heard considerable evidence from which it could conclude the deaths were caused by bleach injection. In addition to Dr. Schwartz's testimony, the jury heard from Dr. Imran Nazeer that in his twelve years as a nephrologist, only two patients had died while undergoing dialysis treatment.

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<sup>8</sup> The patients' pre-event and post-event levels were as follows, respectively: Bryant 199, 360; Oates 213, 781; Castaneda 219, >2150; Bradley 169, 1372; Rhone 166, 1201.

Dr. Nazeer also testified regarding a recent study finding that the chance of having a cardiac arrest during dialysis treatment was “very rare”—a 0.007% chance. The jury could have also considered that with the exception of Kelley and Bryant, who lingered for several months after their incident, the other deaths were certified before the police had fully completed their investigation and before Dr. Sochaski had completed his study of the dialysis clinic patients. Lastly, the jury could have rationally given more weight to the medical examiner who actually examined the patients, rather than the defense expert who had not examined them, but relied upon a review of their medical history.

## *2. Evidence Connecting Saenz*

Saenz contends there is no evidence that she injected bleach into anyone and challenges the eyewitness testimony of Hall and Hamilton. Saenz suggests this eyewitness testimony is unreliable because both Hall and Hamilton were elderly, suffered from poor eyesight, and provided different stories. Specifically, she argues that while both testified that Saenz drew up bleach with a syringe and injected the bleach into Rhone’s line, neither was explicit that it was same syringe. Saenz contends that even if Hall and Hamilton witnessed her extracting bleach into a syringe, doing so was a common practice at the clinic for the purposes of preparing the bleach cleaning solution. Moreover, Saenz argues that the jury disregarded the testimony of Hall and Hamilton when it acquitted her as to Risinger’s aggravated assault.

The State responds that the cumulative force of the direct and circumstantial evidence establishes that Saenz injected bleach into the patients. The State claims that once the jury concluded that Saenz injected bleach into Rhone, the jury could rationally infer that she was responsible for the other injuries caused by a bleach injection. Moreover, the State points to evidence showing that Saenz was working at the facility on each day when the incidents occurred. The State also points to “incriminating statements” made by Saenz.

*a. Eyewitness Credibility*

The jury heard live testimony from Hall and two recorded depositions from Hamilton. In 2008, Hall was 55 years old and Hamilton was 66 years old. During Hall's trial testimony in 2012, she was asked to look at a photograph exhibit and stated, "I'm not seeing very clearly. My sight has gotten worse," and later explained "My sight in 2008 was by far better than it is today." However, she was able discern the contents of the photograph shown to her at trial. Hall later testified that she was blind in one eye. Although Hall was not wearing glasses on the day in question, she testified that she required glasses only for reading.

In Hamilton's 2008 deposition, she stated that she had glaucoma. She had difficulty reading documents during the deposition and required use of her bi-focal glasses. She stated that she was not wearing her glasses during her dialysis treatment on April 28, 2008. However, she stated that she felt she could see better without her glasses. In her first deposition, Hamilton stated that her diabetes medication made her nervous and affected her memory.

Hamilton and Hall's versions of events differed in several respects. Hamilton testified that she witnessed Saenz preparing the bleach solution and then injecting the bleach—first into Risinger and then into Rhone—with each patient receiving two injections. In contrast, Hall testified that the bleach solution was already prepared and she saw Saenz make only one injection and only to Rhone's line. Given the differences in the eye witnesses' testimony, a rational juror could conclude that Hamilton witnessed the entire episode, while Hall witnessed only the last injection.

Amy Clinton, the regional manager with the dialysis clinic, testified that she spoke with Hall and Hamilton on April 28, 2008 shortly after they reported their observations regarding Saenz. She first spoke with Hamilton and then separately spoke with Hall. She said they gave consistent accounts describing Saenz placing a bleach container on the floor, drawing bleach, and injecting

both Rhone and Risinger. However, Clinton testified that the main focus of both witness's observations was on Rhone's injection.

Although the eyewitness accounts of Hall and Hamilton differed slightly, a rational juror could have concluded that their versions of events were not irreconcilably conflicted. Both eyewitnesses were adamant about what they had seen and were considerably upset afterwards. Both eyewitnesses were seated in such a manner that they could have witnessed what they claimed to have seen. The jury saw live testimony of Hall and two video depositions of Hamilton. Ultimately, the jury determined the credibility of both witnesses.

Saenz argues that it was irrational for the jury to give weight to the eyewitness testimony because the jury disregarded the same eyewitness testimony when it acquitted Saenz as to Risinger's aggravated assault. Risinger's dialysis lines were not preserved and she never went to the hospital or provided a blood sample. Risinger was described as being sick, but she did not suffer a significant event consistent with the other patients. Risinger's husband testified at trial that her condition improved when he came to take her home. Therefore, the jury could rationally have concluded that while the eyewitness testimony established a bleach injection, the evidence was insufficient to support an injury. Further, only Hamilton witnessed an injection into Risinger's line. This was contradicted by Jimmy Grammer's testimony that he watched Risinger during her session and never saw Saenz inject anything into her dialysis line. Risinger's patient care technician, Martha Mann, testified that she never saw Saenz that day. Thus, the jury could have rationally disregarded Hamilton's testimony without disregarding Hall's testimony that Saenz injected Rhone.

*b. Bleach Mixing Procedures*

The jury heard conflicting testimony about the proper procedure for preparing the bleach solution. Two bleach solutions were to be prepared each morning before the first patient shift.

The solutions were created by mixing bleach with water in a plastic “shoebox” container. The solution was used to wash the patient chair and equipment after each session and to clean up blood spills. The proper procedure required measuring the bleach for the solution in a medicine cup, or by using a pre-drawn line on the shoebox container. Connie Baker, a former dialysis clinic employee, testified that although it was the clinic’s procedure to use a medicine cup to measure the bleach, it was a “fairly common practice” for nurses to draw up bleach with a syringe to mix the solution. However, Baker agreed that it would be difficult to use a syringe to draw bleach from a bleach bottle and that if the bottle were less than full, the bleach would have to first be poured into a separate container. Nick Luker, a former dialysis clinic employee, testified that he had witnessed dialysis clinic employees use a syringe to measure bleach for the daily bleach solution. However, Baker and Luker’s testimony was contradicted by numerous witnesses who testified that it was neither proper procedure nor a common practice to use a syringe to measure bleach and that the bleach solution should never be placed on the floor. Multiple witnesses confirmed that the facility had an adequate supply of medicine cups and no witness stated otherwise.

In her police interview, Saenz testified that on April 28, 2008, she used a syringe to extract bleach for the daily cleaning solution because the facility was out of medicine cups. She also stated that she was attempting to be precise by using a syringe instead of just pouring the bleach into the container. She stated that this was prompted by the monitors who were at the facility and the pressure the staff was feeling to follow correct procedures. However, several dialysis clinic employees testified that it would not be efficient to pour bleach into one container, draw it up with a syringe, express it into a second container, and then mix the bleach with water. Additionally, extracting bleach directly from the bleach bottle with the syringe would be practical only if the bottle was nearly full. During her grand jury testimony, Saenz stated that she poured the bleach into the bottle cap and then used the syringe to extract the bleach.

Saenz acknowledged the correct procedure for measuring bleach required using a medicine cup. Other than Saenz's own statement, there was no evidence that the supply of measuring cups was depleted. Saenz stated that she used the syringe because she was concerned about being precise and following procedure due to the monitors who were present. However, if this were truly a concern, it would seem logical that Saenz would follow the actual procedure, rather than a procedure that may have been a common practice. Therefore, the jury could have rationally discredited Saenz's explanation for using a syringe to prepare the bleach solution and considered her doing so as circumstantial evidence to support the eyewitness testimony.

*c. Saenz's Statements*

Saenz gave a statement to police and also testified before the grand jury. The jury saw video recordings of both. The State contends that further circumstantial evidence supporting Saenz's guilt is found in her statements. The State points to Saenz's admission during her police statement that she had been taking medication for depression for six weeks. The State describes Saenz during the interview as "increasingly impaired, disjointed and irrational." Lastly, the State points to the following statement by Saenz during her police interview: "I just have a habit of pushing the bleach 'cause I just – I don't know when it was last done, and I don't want to kill my patients."

During closing argument, the State suggested that Saenz's statement regarding "pushing the bleach" was a reference to injecting bleach into the dialysis lines. However, when the statement is taken in the proper context it is clear that Saenz was discussing pushing the bleach *button* on the dialysis machine. This button initiated the machine's self-cleaning process that utilized bleach. Saenz was stating that she was careful to initiate this process out of concern that contaminated water may have been the cause of the recent patient episodes. The jury watched the entire recording of the interview and was able to make this determination. Saenz does not make any



other statements that would be considered incriminating, as the State contends. However, a rational juror could note that Saenz appeared nervous during the interview and that she, not the police interviewers, was the first to mention bleach as a potential cause of the patient injuries.

*d. Internet Searches*

The State introduced evidence showing that Saenz performed several internet searches on her computer related to bleach poisoning. The evidence showed that on April 2, 2008, the day after the first incident involving Strange and Metcalf, a search was performed on Yahoo for “bleach poisoning.” Searches were also performed during the first week of May 2008 for “bleach given during dialysis” and “can bleach be detected in dialysis lines.”

During her April 29, 2008 police interview, Saenz stated that she had been searching online to find an explanation for the patient injuries. Saenz did not testify and no other explanation was provided for the internet searches. A rational juror could have considered these searches as circumstantial evidence connecting Saenz to the bleach injections.

*e. Other Evidence Connecting Saenz*

Saenz challenges the sufficiency of other circumstantial evidence offered to establish her guilt. Specifically, she claims the testimony that she reduced the blood flow rates for Strange and Metcalf was not probative because Saenz had a legitimate reason for doing so. Saenz contends the evidence of her improperly performing CPR on Metcalf was refuted by other testimony and even if true, Saenz could have been in shock as a result of Strange’s cardiac arrest moments earlier.

Saenz argues that witnesses saw Saenz approach Kelley’s machine only after the alarm sounded. Additionally, she argues that Sharon Dearmon testified that only one syringe was attached to Kelley’s line and that it was a Heparin syringe that Dearmon had placed there. A syringe on Kelley’s line later tested positive for bleach.

Saenz contends Candice Lackey did not see Saenz inject Bryant's dialysis lines and that Saenz approached Bryant only when her alarm sounded. Additionally, she argues that Lackey testified that the blood did not have time to run through the machine and into Bryant's body because treatment was stopped when the alarm sounded. Saenz notes that no indication of bleach was found on Bryant's dialysis lines.

Saenz argues the evidence was conflicting with regard to who provided medicine to Opal Few. Sharon Smith testified that Saenz was instructed to do so and that Saenz later confirmed she had administered Zemplar to Few. Smith testified that Saenz failed to chart the medication, but later updated Few's chart to reflect that she had done so at 9:05 A.M. Few's assigned nurse, Donya Heartsfield, testified that she was preparing Few's medication at the time of her cardiac arrest. Further, Saenz argues she could not have been near Few at 9:05 A.M. because she was charted as performing a procedure on the other side of the clinic at 9:00 A.M. on another patient. Saenz notes that although Few's syringe had been in a sharps container for at least five days, there was no blood or other biological matter on the syringe and that the syringe did not include Saenz's initials.

### *C. Conclusion*

"[I]t is not necessary that every fact point directly and independently to the defendant's guilt; it is enough if the conclusion is warranted by the combined and cumulative force of all the incriminating circumstances." *Johnson*, 871 S.W.2d at 186. Circumstantial evidence alone can establish guilt. *Hooper*, 214 S.W.3d at 13. Ultimately, it was within the jury's province to determine the weight and credibility of the evidence. *Brooks*, 323 S.W.3d at 899. The jury was presented with expert testimony and physical evidence supporting a conclusion that the victims were injected with bleach. If the jury believed the eyewitness testimony that Saenz injected bleach into either Rhone or Risinger, the jury could have considered that as circumstantial evidence connecting Saenz to instances where patients were injured in a similar manner by bleach injection.

Deferring to the jury's determinations and viewing the evidence in the light most favorable to the verdict, we conclude that the evidence is legally sufficient to support each of Saenz's convictions. *Winfrey*, 393 S.W.3d at 768.

### INEFFECTIVE ASSISTANCE OF COUNSEL

In points of error five through eleven, Saenz contends that her trial counsel rendered ineffective assistance of counsel. She bases her claim on the totality of the representation she received, and on trial counsel's failure to: (1) object to an erroneous jury charge; (2) object to the State's argument that unanimity was not required; (3) preserve the record to enable meaningful post-conviction review; (4) preserve the record by going off the record more than 130 times; (5) request a mistrial concerning a sleeping juror; and (6) impeach key State witnesses.

#### A. *Standard of Review*

To prevail on a claim of ineffective assistance of counsel, an appellant must prove two elements by a preponderance of the evidence: (1) deficient performance of trial counsel; and (2) harm resulting from that deficiency sufficient to undermine confidence in the outcome of the trial. *Strickland v. Washington*, 466 U.S. 668, 687 (1984); *Ex parte LaHood*, 401 S.W.3d 45, 49 (Tex. Crim. App. 2013).

Deficient performance is that which "fell below an objective standard of reasonableness" under prevailing professional norms and according to the necessity of the case." *Ex parte Moore*, 395 S.W.3d 152, 157 (Tex. Crim. App. 2013) (quoting *Strickland*, 466 U.S. at 687-88). We begin with a presumption that counsel's actions were reasonable and based on sound trial strategy. *Id.* To overcome this presumption, an appellant must establish ineffectiveness that is "firmly founded" and affirmatively demonstrated in the record. *Goodspeed v. State*, 187 S.W.3d 390, 392 (Tex. Crim. App. 2005) (quoting *Thompson v. State*, 9 S.W.3d 808, 813 (Tex. Crim. App. 1999)). A direct appeal is generally an "inadequate vehicle for raising such a claim because the record is

generally undeveloped.” *Id.* Trial counsel “should ordinarily be afforded an opportunity to explain his actions before being denounced as ineffective.” *Id.* (quoting *Rylander v. State*, 101 S.W.3d 107, 111 (Tex. Crim. App. 2003)). Absent that opportunity, deficient performance should be found only if the trial counsel’s conduct was “so outrageous that no competent attorney would have engaged in it.” *Menefield v. State*, 363 S.W.3d 591, 593 (Tex. Crim. App. 2012) (quoting *Garcia v. State*, 57 S.W.3d 436, 440 (Tex. Crim. App. 2001)).

Deficient performance is prejudicial to an accused when there is a “reasonable probability that the outcome of the trial would have been different but for counsel’s deficiency.” *LaHood*, 401 S.W.3d at 50. “Reasonable probability” is “a probability sufficient to undermine confidence in the outcome” of the trial. *Id.* (quoting *Strickland*, 466 U.S. at 694).

#### *B. Totality of Representation*

Saenz argues that even if this court “disagrees that any individual deficiency meets the criteria for ineffectiveness, the errors taken as a whole absolutely denied . . . her right to effective representation.” Saenz points to the fact that the same trial judge in her case previously determined her trial counsel to be ineffective in an unrelated case, although the Court of Criminal Appeals ultimately found no ineffective assistance in that case. *See Ex Parte Flores*, 387 S.W.3d 626, 636 (Tex. Crim. App. 2012).

This court has held that reversible error can be shown when “trial counsel’s errors are so fundamental with such far-reaching implications that no one could excuse them as ‘trial strategy’ because no reasonable lawyer would do them.” *Green v. State*, 899 S.W.2d 245, 247–48 (Tex. App.—San Antonio 1995, no pet.). However, the same cannot be said of this case. After reviewing the record as a whole, we conclude that none of trial counsel’s conduct rises to the level of being “so outrageous that no competent attorney would have engaged in it.” *Menefield*, 363 S.W.3d at 593. Trial counsel mounted a rigorous defense that included a thorough examination of

each State witness, as well as presentation of rebuttal witnesses for almost all of the State's key witnesses. Trial counsel presented multiple viable defense theories. Further, trial counsel conducted multiple offers of proof to preserve excluded evidence. On the whole, the record does not establish that trial counsel rendered ineffective assistance.

*C. Jury Unanimity*

In points of error six and seven, Saenz alleges ineffective assistance of counsel related to the jury charge's alleged failure to require unanimity. Because we have decided that there was no error in the jury charge, the claim of ineffective assistance on that ground also fails. Failure to object to a jury charge or comments related to the jury charge when there was no error is not deficient performance. *Luster v. State*, 85 S.W.3d 865, 871 (Tex. App.—Eastland 2002, pet. ref'd) (trial counsel had no duty to object where there was no jury charge error); *Vaughn v. State*, 888 S.W.2d 62, 71 (Tex. App.—Houston [1st Dist.] 1994, pet. denied) (same).

*D. Failure to Preserve Record*

In points of error eight and nine, Saenz argues that her counsel rendered ineffective assistance when he failed to adequately preserve the record for meaningful post-conviction review. Specifically, she contends that trial counsel went off the record more than 130 times. She argues that trial counsel's behavior fell below the professional norm as defined by the State Bar of Texas Guidelines for Capital and Non-Capital representation which imposes a duty on counsel to preserve the record for appellate review.

Citing to *Ex parte Welborn*, 785 S.W.2d 391, 393 (Tex. Crim. App. 1990), Saenz argues there is no presumption of sound trial strategy when counsel has failed to conduct an adequate factual and legal investigation. Saenz argues that trial counsel's failure to preserve the record is evidence that his legal investigation was inadequate because it shows that he did not understand Texas Rule of Appellate Procedure 33.1 and the Texas Rules of Evidence. She points to off-record

exchanges that, based on their context, may relate to the following: (1) a discussion or possible ruling regarding possible *Brady* evidence; (2) a possible ruling regarding whether Connie Baker could testify about why she left the dialysis clinic; (3) the possible voir dire of expert witness Dr. Jonathan Neidigh; and (4) a possible ruling on evidence possibly connecting Sharon Smith as an alternate perpetrator.

“Reviewing courts are obliged to defer to strategic and tactical decisions of trial counsel, so long as those decisions are informed by adequate investigation of the facts of the case and the governing law.” *Frangias v. State*, 392 S.W.3d 642, 653 (Tex. Crim. App. 2013). However, we cannot determine that trial counsel was not adequately apprised of the governing law when there has been no evidentiary hearing to discern trial counsel’s strategic motivations. *Hollis v. State*, 219 S.W.3d 446, 462 (Tex. App.—Austin 2007, no pet.). Unlike the court in *Ex Parte Welborn*, in this case there is no evidentiary record to establish that trial counsel did not understand the governing law. “It is not sufficient that the appellant show, with the benefit of hindsight, that his counsel’s actions or omissions during trial were merely of questionable competence.” *Mata v. State*, 226 S.W.3d 425, 430 (Tex. Crim. App. 2007). Thus, we cannot conclude that the mere existence of possible off-record exchanges “affirmatively demonstrates” that trial counsel misunderstood the procedure for preserving error, especially where the record is replete with other instances where trial counsel demonstrated a strong understanding of those procedures. *Bone v. State*, 77 S.W.3d 828, 835 (Tex. Crim. App. 2002). To do so would require us to speculate regarding trial counsel’s motivations, which we cannot do. *Lopez v. State*, 343 S.W.3d 137, 142 (Tex. Crim. App. 2011). Rather, we must strongly presume that trial counsel acted in accordance with a reasonably sound trial strategy. *Id.* at 143.

“[T]he presumption that trial counsel’s performance was reasonably based on sound trial strategy, coupled with the absence of any supporting evidence in the record of unreasonableness,

compels a reviewing court to consider ways in which trial counsel's actions were within in the bounds of professional norms." *Mata*, 226 S.W.3d at 431. It is conceivable that trial counsel did not insist on a record of certain exchanges because the exchanges either were not substantive or did not include an objection or ruling from the trial court. Indeed, there are instances on the record where trial counsel approaches the bench to argue an evidentiary issue and insists on a record of the exchange. Therefore, Saenz has failed to rebut the presumption that her trial counsel's performance was reasonably based on a sound trial strategy.

*E. Sleeping Juror*

Next, Saenz argues that her trial counsel rendered ineffective assistance when he failed to preserve error regarding a sleeping juror by failing to move for a mistrial or make a bystander bill. Outside of the presence of the jury, trial counsel stated to the trial court:

And I don't know that we necessarily need to do it now, but I'm just bringing it to your attention. One of the jurors has been sleeping through part of the trial. I don't know if you noticed it or not. It's been brought to my attention, but I don't know –

The judge responded that he saw audience members looking at the jury box but did not see anyone sleeping. Trial counsel named the juror, who had indicated earlier he would be working at his construction job in addition to serving on the jury.

When a juror has been observed sleeping during court proceedings "it is incumbent upon the objecting party to make a contemporaneous objection." *Thieleman v. State*, 187 S.W.3d 455, 458 (Tex. Crim. App. 2005). Error is preserved if the objecting party objects to the presence of the sleeping juror on the jury, moves for a mistrial, alleges juror misconduct in a motion for new trial, or files a bill of exception. *Id.* at 458 n. 3; *Harleston v. State*, No. 01-09-00481-CR, 2010 WL 2873590, at\*2 (Tex. App.—Houston [1st Dist.] Jul. 22, 2010, pet. ref'd). "The trial court should consider whether 'the sleeping juror missed large portions of the trial or [whether] the

portions missed were particularly critical.’” *Menard v. State*, 193 S.W.3d 55, 60 (Tex. App.—Houston [1st Dist.] 2006, pet ref’d) (quoting *United States v. Freitag*, 230 F.3d 1019, 1023 (7th Cir. 2000)); *Lopez v. State*, No. 03-10-00654-CR, 2012 WL 104468, at\*2 (Tex. App.—Austin Jan. 11, 2012, no pet.) (trial court did not abuse its discretion in denying mistrial where witnesses were not certain what evidence, if any, the juror missed).

Saenz has not established that trial counsel’s performance was deficient when he did not object to the presence of a sleeping juror. Because we presume that trial counsel was acting pursuant to a sound trial strategy, trial counsel may have decided not to pursue the objection after balancing the trial judge’s own observations against whatever source trial counsel had available to prove the juror was potentially sleeping. In addition, trial counsel could also have taken into consideration whether he could establish that the sleeping juror missed a significant portion of the testimony. Moreover, we cannot determine that the outcome of the trial would have been affected if the juror had been properly challenged. It would be within the trial court’s discretion whether to remove a juror after hearing relevant evidence of the conduct. There is no assurance in the record that the trial court would have sustained an objection given his observation that he did not see any juror sleeping.

#### *F. Failure to Impeach Witnesses*

In point of error eleven, Saenz contends her trial counsel rendered ineffective assistance when he failed to properly impeach State witnesses Linda Hall, Werlan Guillory, Stephen Abbott, Dr. Imran Nazeer, and Sharon Smith. A trial counsel’s decision not to impeach can be considered sound trial strategy. *See Davis v. State*, 276 S.W.3d 491, 502 (Tex. App.—Waco 2008, pet. ref’d). With a silent record, the court must presume that trial counsel was acting pursuant to a sound trial strategy unless the “conduct was so outrageous that no competent attorney would have engaged in it.” *Menefield*, 363 S.W.3d at 593. After a full review of the record, we cannot conclude that the



outcome of the trial was affected by trial counsel's failure to impeach the listed witnesses nor can we discern outrageous conduct by trial counsel.

**WITNESS SHARON SMITH**

Points of error twelve through thirteen concern the testimony of a State witness, Sharon Smith. Saenz contends that she was denied her right to confrontation when: (1) she was denied meaningful cross-examination of Smith; and (2) the trial court did not allow her to develop evidence of Smith as an alternate perpetrator.

Sharon Smith worked as a nurse at the dialysis clinic during the month of April 2008. According to trial counsel's statements on the record and outside of the presence of the jury, Smith had a romantic relationship with a married man and attempted to kill him with a knife. At some point thereafter, the man received a syringe in the mail with an anonymous note stating "Inject this. Bang, bang. They're coming to test it." It was never determined what substance was inside the syringe. The State objected to the evidence of these events on the grounds that it was irrelevant and prejudicial. The court sustained the objection. Trial counsel then conducted an offer of proof outside of the presence of the jury and examined Smith. Smith denied each of these allegations.

The crux of Saenz's argument is that the trial court erred in not allowing her to develop evidence of Smith as an alternate perpetrator. "Although a defendant obviously has a right to attempt to establish his innocence by showing that someone else committed the crime, he still must show that his proffered evidence regarding the alleged alternative perpetrator is sufficient, on its own or in combination with other evidence in the record, to show a nexus between the crime charged and the alleged 'alternative perpetrator.'" *Wiley v. State*, 74 S.W.3d 399, 406 (Tex. Crim. App. 2002). Such evidence is subject to Rule 403 balancing. *Id.* at 408. "It is not sufficient for a defendant merely to offer up unsupported speculation that another person may have done the crime. Such speculative blaming intensifies the grave risk of jury confusion, and it invites the jury

to render its findings based on emotion or prejudice.” *Id.* at 407 (quoting *United States v. McVeigh*, 153 F.3d 1166, 1191 (10th Cir. 1998)).

Saenz failed to offer any evidence to support the alleged incident involving Smith and the syringe. Smith denied each allegation on the record and the exhibits offered by Saenz during the offer of proof are not probative. Even assuming Saenz could have established the alleged incident during a cross-examination of Smith in front of the jury, Saenz offers no nexus between the crime of injecting patients with bleach and the alleged act of mailing a threatening note with a syringe containing an unknown substance to an individual completely unrelated to the case at bar. Moreover, the introduction of such highly speculative evidence is not admissible under Rule 403 because it would present a great threat of confusion of the issues, requiring the State to disprove that Smith was the perpetrator. *See id.*

#### **EVIDENCE CONCERNING THE DIALYSIS CLINIC**

In points of error fourteen and fifteen, Saenz argues that (1) the trial court reversibly erred in finding her crucial defensive evidence irrelevant; and (2) she was denied due process when she was prevented from presenting a complete defense. Saenz argues that she was unable to present evidence to prove that the dialysis clinic was engaged in a “cover-up.” Specifically, she challenges the trial court’s exclusion of: (1) TDHHS records wherein the dialysis clinic was cited; (2) testimony from cleaning employees concerning an unusually large amount of document shredding; and (3) testimony regarding unsanitary conditions at the dialysis clinic. Additionally, Saenz argues that the trial court erred in excluding any evidence that was “negative” to the dialysis clinic such as incidents involving other patients who had become sick at the clinic. Inasmuch as the trial court’s ruling was based on Rule 404(b), Saenz contends that the rule was inapplicable because the dialysis clinic is a corporation and not a person.

The State responds that Saenz failed to properly preserve error by not objecting to much of the challenged evidence. Alternatively, the State urges that the evidence is not relevant and thus inadmissible.

*A. Standard of Review*

We review a trial court's decision to exclude evidence under the Texas Rules of Evidence for an abuse of discretion. *Montgomery v. State*, 810 S.W.2d 372, 391 (Tex. Crim. App. 1990). A trial court abuses its discretion if its decision falls outside the zone of reasonable disagreement. *Green v. State*, 934 S.W.2d 92, 101–02 (Tex. Crim. App. 1996).

*B. TDHHS Report*

Saenz challenges the trial court's ruling excluding a 2008 TDHHS report wherein the dialysis clinic was cited for a number of problems. The trial court granted a motion in limine to exclude the report until a foundation for relevance was established. The court explained that the report was not relevant to the extent that it established the dialysis clinic had done "bad things" to patients who were not complainants. At several times during the trial, the trial court explained that the foundation for the report would not be established until some other evidence was introduced to link the adverse occurrences in the report to the complainants. Ultimately, the TDHHS report was offered as an exhibit during an offer of proof. For purposes of review, we will assume that trial counsel preserved error as to the TDHHS report.

Trial counsel indicated that the report showed the dialysis clinic was not reporting its adverse occurrences 68% of the time. An adverse occurrence is when a patient suffers some illness or incident during dialysis treatment. On appeal, Saenz argues this evidence went to the heart of her theory that the dialysis clinic was engaged in a "cover-up." The fact that the dialysis clinic was not meeting its regulatory obligations does not necessarily mean that the clinic was purposely concealing information from the State or that it was engaged in a cover-up related to Saenz's case.

Without further evidence to support such a cover-up, the trial court did not abuse its discretion when it excluded the report.

*C. Document Shredding*

Saenz argues that the alleged cover-up was further established by the testimony of two cleaning contractors who testified that following the April 2008 incidents, the clinic was disposing of an unusual amount of shredded paper. The State objected that the evidence was not probative and alternatively, that it was more prejudicial than probative. The trial court excluded the evidence unless the cover-up was further established. Trial counsel then introduced the testimony through an offer of proof. Again, Saenz has failed to demonstrate how the alleged document shredding was relevant to her case. It was not established that any of the documents were related to Saenz's case or the incidents involved. The trial court did not abuse its discretion in excluding the testimony regarding document shredding.

*D. Unsanitary Conditions*

The trial court also excluded testimony from a cleaning contractor who testified that she had observed unsanitary conditions at the dialysis clinic. The trial court excluded the evidence until "there's a showing that would link cleanliness to adverse reactions in the patients." Trial counsel offered the testimony through an offer of proof. It is not clear how the existence of any unsanitary conditions at the facility would tend to prove that the dialysis clinic was engaged in a cover-up. As it was not alleged that the complainants' injuries were caused by the unsanitary conditions, Saenz has failed to establish the relevance of this evidence. Accordingly, the trial court did not abuse its discretion in excluding it.

*E. Rule 404(b)*

Lastly, Saenz argues that the trial court erred when it excluded evidence casting the dialysis clinic in a negative light because Rule 404(b) is inapplicable to corporations.<sup>9</sup> Specifically, Saenz points to the testimony of dialysis clinic administrator Sandy Lawrence. Before Lawrence answered a question regarding “problems” the clinic was experiencing, trial counsel ask to approach the bench. The bench conference was conducted outside of the presence of the jury. The State never objected on the record. It appears that trial counsel was complying with the motion in limine by approaching the bench before asking the question. As trial counsel did not object on the record, Saenz claims he failed to preserve error on this issue. However, the ruling by the trial court was based on relevance. Although the State’s argument analogized the situation to its inability to introduce bad acts concerning the defendant, the trial court explained that trial counsel had failed to establish a foundation for relevance. Therefore, it is not necessary to address the issue of whether Rule 404(b) applies to corporations.

**EXPERT TESTIMONY**

Saenz contends the trial court failed in its gatekeeping function and committed harmful error by admitting evidence that affected her rights to a fair trial. Specifically, Saenz argues that: (1) the trial court erred by not conducting a hearing to determine the admissibility of Dr. Sochaski’s testimony when she requested a hearing; (2) Dr. Sochaski was not qualified to testify that the 3-chlorotyrosine detected in the complainants’ blood came from a bleach injection because the theory underlying his opinion was unreliable; and (3) Dr. Sochaski’s testimony and report were prejudicial and unhelpful, confusing, and misleading to the jury.

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<sup>9</sup> Texas Rule of Evidence 404(b) provides in pertinent part, “Evidence of other crimes, wrongs or acts is not admissible to prove the character of a person in order to show action in conformity therewith.”

The State responds that Saenz waived her right to a gatekeeping hearing when she agreed to have the court make the determination based on the experts' affidavits. The State also argues that a gatekeeping hearing actually was conducted because the trial court heard arguments from counsel on February 21, 2012 and considered the affidavits. Alternatively, the State argues that the trial court properly admitted Sochaski's testimony and report.

The party offering expert testimony under Texas Rule of Evidence 702 must prove by "clear and convincing evidence that it is sufficiently reliable and that it is relevant in the sense that it will help the jury reach an accurate result." *Blasdell v. State*, 384 S.W.3d 824, 829 (Tex. Crim. App. 2012). Thus, the proponent must prove (1) the witness qualifies as an expert by reason of his knowledge, skill, experience, training, or education; (2) the testimony is based on a reliable scientific foundation; and (3) it is relevant to the issues in the case. *Tillman v. State*, 354 S.W.3d 425, 435 (Tex. Crim. App. 2011); *Davis v. State*, 329 S.W.3d 798, 813 (Tex. Crim. App. 2010). We review the trial court's determination of reliability and relevance for an abuse of discretion and will not reverse if it is "within the zone of reasonable disagreement." *Tillman*, 354 S.W.3d at 435.

#### A. *Gatekeeping Hearing*

On February 21, 2012, the trial court held a pre-trial hearing on Saenz's Motion to Exclude Lay Testimony and Expert Testimony. During that hearing, trial counsel stated "Now, we're asking the Court, based on *Daubert* and *Kelly*, to exclude [Sochaski's] findings based on the science." For the next thirty minutes, both sides made arguments related to the reliability of Dr. Sochaski's study. The trial court indicated that it wanted to rule on the motion based on the expert affidavits to avoid the need for a live hearing during the trial. On the record, both of Saenz's attorneys indicated their agreement to this approach. Again on February 28, 2012, both sides argued the reliability of the Sochaski study for over thirty minutes. Again, the trial court indicated

its intent to rule on the motion after considering the affidavits of Dr. Sochaski and Dr. Schwartz. On the first day of trial, March 5, 2012, the trial court denied Saenz's motion to exclude Dr. Sochaski's testimony after considering "the oral arguments of counsel, the written pleadings, and the affidavits."

Before scientific evidence may be admitted, "the trial court must conduct a hearing outside the presence of the jury" to determine whether the proponent has established its reliability. *Jackson v. State*, 17 S.W.3d 664, 670 (Tex. Crim. App. 2000). We review a trial court's decision "whether, when, and how" to hold a gatekeeping hearing for abuse of discretion. *Piro v. Sarofim*, 80 S.W.3d 717, 720 (Tex. App.—Houston [1st Dist.] 2002, no pet.). Thus, a trial court is afforded flexibility to determine whether and in what manner it will conduct a gatekeeping hearing. *DeLarue v. State*, 102 S.W.3d 388, 398 (Tex. App.—Houston [14th Dist.] 2003, pet. ref'd) (citing *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 594 (1993)). There is no requirement that the court conduct a live evidentiary hearing. It may be proper for a court to make a determination considering live testimony or written materials such as depositions, affidavits, or publications. *Piro*, 80 S.W.3d at 720 (citing *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 152–53 (1999)); *Bonner v. State*, No. 10-09-00120-CR, 2010 WL 3503858, at\*17 (Tex. App.—Waco Sept. 8, 2010, pet. ref'd) (mem. op., not designated for publication). Here, the trial court exercised its discretion to determine the reliability of the Sochaski evidence by a combination of pre-trial hearings and affidavits from the experts. At one point, the trial court indicated that it preferred this approach so that it could review the scientific evidence in a more contemplative manner. The trial court also expressed a desire to promote efficient use of jury's time at trial. As there is no requirement that the trial court's gatekeeping determination involve live testimony from the expert, the trial court did not abuse its discretion by conducting the gatekeeping hearing in this manner.

## *B. Reliability*

Saenz argues that Dr. Sochaski's testimony is unreliable because Dr. Sochaski relied, in part, on a study involving rats and mice which Saenz asserts (1) has not been shown to be applicable to humans, and (2) used a methodology that could not be used in testing on human subjects.

The study on which Saenz focuses was conducted by Dr. Sochaski in conjunction with a scientist from the Environmental Protection Agency. One purpose of the study was to examine human exposure to chlorine gas for homeland security and workplace safety reasons. Dr. Sochaski exposed rats and mice to chlorine gas. The animals were then sacrificed and their nasal tissue analyzed. A gas chromatography mass spectrometer was used to determine the concentration of 3-chlorotyrosine in the samples. The study concluded that as the dose amount of chlorine increased in the rats, their 3-chlorotyrosine levels increased. At trial, several experts likened this to the relationship between alcohol consumed and one's blood alcohol content. After completing the study, Dr. Sochaski wrote a "methods development" article regarding the use of 3-chlorotyrosine as a biomarker to indicate chlorine exposure, and the article was peer reviewed and published in the *Journal of Analytical Toxicology*.

In its response, the State focuses on waiver and offers no substantive counter-argument on the reliability issue.

### *1. Reliability Factors*

We review the trial court's determination of reliability for an abuse of discretion. *Tillman*, 354 S.W.3d at 435. In order for scientific evidence to be reliable, "(a) the underlying scientific theory must be valid; (b) the technique applying the theory must be valid; and (c) the technique must have been properly applied on the occasion in question." *Vela v. State*, 209 S.W.3d 128, 133



(Tex. Crim. App. 2006) (quoting *Kelly v. State*, 824 S.W.2d 568, 573 (Tex. Crim. App. 1992)).

The following list of non-exhaustive factors could affect a trial judge's determination of reliability:

(1) the extent to which the underlying scientific theory and technique are accepted as valid by the relevant scientific community, if such a community can be ascertained; (2) the qualifications of the experts testifying; (3) the existence of literature supporting or rejecting the underlying scientific theory and technique; (4) the potential rate of error of the technique; (5) the availability of other experts to test and evaluate the technique; (6) the clarity with which the underlying scientific theory and technique can be explained to the court; and (7) the experience and skill of the person(s) who applied the technique on the occasion in question.

*Kelly*, 824 S.W.2d at 573.

As previously noted, Saenz's principal contention regarding the reliability of Dr. Sochaski's testimony concerns the inapplicability of the methodology used in the rat study to humans.

*a. Underlying Scientific Theory*

The science itself is not in dispute. Chlorine is a naturally occurring element that exists in a gaseous form. Sodium hypochlorite is the scientific name for bleach. Sodium hypochlorite is chemically composed of sodium, oxygen, and chlorine. When the human body is exposed to either chlorine or sodium hypochlorite, both chlorine and sodium hypochlorite will turn into hypochlorous acid in the body. Hypochlorous acid can also be produced by the body "endogenously" or naturally in certain situations. For instance, when the body has an infection such as a bacterial infection, the white blood cells will attack the bacteria and secrete hypochlorous acid in order to kill the infection. Hypochlorous acid also is produced during a heart attack. Regardless of the source of the hypochlorous acid, it is immediately absorbed by the body and quickly reacts to form additional compounds. One of the more stable compounds that the body will produce is 3-chlorotyrosine.

Although Saenz chooses to focus on Dr. Sochaski's rat study, Dr. Sochaski also has demonstrated the reliability of the 3-chlorotyrosine biomarker in humans. In conjunction with the CDC's investigation into the deaths at the dialysis clinic, Dr. Sochaski was sent a total of 54 blood samples in May and June of 2008. The samples were identified only by a number and Dr. Sochaski had no way of knowing the source of each sample. According to testimony from Dr. Schwartz, the blood samples consisted of samples from dialysis clinic patients, patients from a dialysis clinic in a neighboring county, and patients from the hospital. Dr. Sochaski used the same methodology he had developed in the earlier rat study to test the blood samples (this testing is referred to as the CDC study). None of the control samples showed any level of 3-chlorotyrosine. The complainants' blood samples, however, showed relatively high levels of 3-chlorotyrosine. Both Dr. Sochaski and another expert, Dr. Schwartz, testified that the levels of 3-chlorotyrosine shown in the complainants' samples were higher than any levels they had ever seen in reported literature, with one exception: the Mocatta study. In the Mocatta study, the researcher purposely mixed equal volumes of bleach and human blood plasma together *in vitro* for thirty minutes. The highest level in that study was 0.08%.<sup>10</sup>

In addition to the rat study and the CDC study, the fact that 3-chlorotyrosine levels increase as the amount of hydrochlorous acid increases is not a novel idea. Defense expert Dr. Jonathan Neidigh testified as follows regarding the relationship between 3-chlorotyrosine and chlorine exposure.

COUNSEL: So you said there are -- you said that chlorine can cause 3-chlorotyrosine?

NEIDIGH: That's correct.

COUNSEL: Can it cause -- can it cause 3-chlorotyrosine at low levels?

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<sup>10</sup> Dr. Schwartz testified that this level was close to the average level of the complainants observed in blood samples taken on or close to their event. Their levels were as follows: Kelley, 0.044%; Oates, 0.14%; Bryant, 0.071%; Bradley, 0.019%; Castaneda, 0.131%.

NEIDIGH: Well, the level of 3-chlorotyrosine is a function, a factor of the amount of chlorinating agent. It's a dose response kind of thing in chemical terms. So if I have a small amount of chlorine, I get a small amount of chlorotyrosine.

COUNSEL: Okay. Can bleach cause 3-chlorotyrosine?

NEIDIGH: Yes.

Dr. Neidigh testified that there had been about "a dozen" studies concerning 3-chlorotyrosine since the 1990s. Although many of these studies involved measuring 3-chlorotyrosine as a result of endogenously produced hydrochlorous acid, it was established at trial that the same hydrochlorous acid is produced, whether it be endogenously or from an external exposure to chlorine. Additionally, the Mocatta *in vitro* study observed high levels of 3-chlorotyrosine. Likewise, Dr. Schwartz stated in his affidavit that "[t]he formation of 3-chlorotyrosine from hypochlorous acid is well recognized by multiple experts." At trial, Dr. Schwartz testified that Dr. Sochaski's study was applicable to humans because 3-chlorotyrosine would be produced regardless of whether the hypochlorous acid was produced endogenously or as a result of an external exposure.

Thus, the underlying scientific theory that increases in bleach exposure result in increased levels of 3-chlorotyrosine was not established exclusively by Dr. Sochaski's rat study. Rather, that study reinforced existing common scientific knowledge that exposure to chlorine results in increased levels of 3-chlorotyrosine. Accordingly, the trial court did not abuse its discretion in determining that the underlying scientific theory was valid.

*b. Validity of Technique Applying the Underlying Theory*

Dr. Sochaski testified that his methodology utilized a gas chromatography mass spectrometer (GCMS) to analyze a given tissue for 3-chlorotyrosine. Dr. Sochaski explained that he used the GCMS to break down proteins in the tissue and separate out the 3-chlorotyrosine so that it could be measured on a molecular level that was common to all organisms. In his affidavit, Dr. Sochaski stated that "[t]he method of isotope dilution with [GCMS] is one of the most accurate

methods currently available for the quantitative analysis of chemicals, including chloro-tyrosine, in biological tissues such as plasma.” Dr. Neidigh testified that use of the GCMS was the proper instrument to analyze for levels of 3-chlorotyrosine. Dr. Schwartz also accepted this technique as proper. Accordingly, the trial court did not abuse its discretion in determining that the technique used to apply the theory was valid and was properly applied. *See Jones v. State*, 716 S.W.2d 142, 148–49 (Tex. App.—Austin 1986, pet. ref’d) (GCMS used to extrapolate rat tissue study to human tissue tests where nurse was accused of injecting patient).

*c. Acceptance by the Relevant Scientific Community*

Saenz contends that Dr. Sochaski’s rat study is not peer accepted, and she purportedly cites to a report by Dr. Melinda Schaeffer, a State witness who never offered testimony, in which Dr. Sochaski’s study is described as a “novel” test that is not specific for bleach exposure. Saenz’s citation to Dr. Schaeffer’s report, however, is a citation to her trial counsel’s unsworn pretrial motion to exclude Dr. Sochaski’s expert testimony. Attached as an exhibit to this motion is a one page PowerPoint slide titled “Limitations” which includes a bullet point with the following text, “Novel test [;] – Not specific for bleach exposure [;] – Chlorotyrosine endogenously produced.” This single bullet on a PowerPoint slide is open for interpretation and hardly supports the contention that Dr. Schaeffer disagrees with Dr. Sochaski’s methodology. Moreover, Dr. Schaeffer’s epidemiological report includes the results of the CDC study.

In addition, Dr. Sochaski’s study involving the rats was peer-reviewed and published. Dr. Schwartz testified that he accepted Dr. Sochaski’s methodology as applied to humans. Dr. Schwartz also cited the CDC study in his conclusion that the complainants were injured by a bleach injection. Although two defense experts testified that they would not accept Dr. Sochaski’s methodology as applied to humans, the requirement is not one of unanimous acceptance. Accordingly, the trial court did not abuse its discretion in finding that Dr. Sochaski’s study was

accepted in the relevant scientific community, especially given the uncontroverted acceptance of the underlying scientific theory.

*d. Testability and Rate of Error*

Saenz argues that because Dr. Sochaski's study cannot be ethically tested on live human subjects, it is not testable and any rate of error cannot be established. Saenz points to a conflict between Dr. Sochaski's February 2008 article and his statements at trial. In his February 2008 article, Dr. Sochaski stated:

The method presented in this paper is only applicable to the use of determining exposure levels in *laboratory animals*, as the collection of samples for assessing human exposure using the current technique would be too invasive. Additional investigations need to be conducted on making this method less invasive and more "user friendly" for diagnostic purposes . . . Although the method presented in this manuscript is *not likely* to be used as a diagnostic for human chlorine gas exposures, it does represent *a good starting point* for future method development and has value for applications in research of chlorine absorption in various regions of their respiratory tract.

(emphasis added).

However, in his affidavit and at trial, Dr. Sochaski stated that his methodology was just as applicable to human blood plasma as it was to rat nasal tissue. Dr. Sochaski explained that the test is only concerned with the amino acid modification of tyrosine to 3-chlorotyrosine and that all organisms have tyrosine, whether they be a human, a whale, a rat, or a tobacco leaf. Moreover, the Mocatta study also demonstrates the applicability of the theory to humans.

*e. Other Kelly Factors*

The clarity with which the underlying scientific theory and technique can be explained to the court weighs in favor of reliability. Dr. Sochaski testified there was a four-step process in which the GCMS is used to measure 3-chlorotyrosine concentration. He likened this concentration to a BAC's measure of alcohol consumed. He explained that the test is equally applicable to each

organism because all organisms possess tyrosine. Finally, other literature exists which links hydrochlorous acid to 3-chlorotyrosine.

## 2. *Conclusion*

Applying the *Kelly* factors to Dr. Sochaski's testimony, we hold that the trial court did not abuse its discretion in admitting the testimony because the trial court could have concluded from the evidence presented that: (1) the underlying scientific theory is valid and can be clearly explained; (2) the use of a GCMS to apply the theory to humans is valid and similar to a BAC measurement of alcohol consumed; (3) the theory is accepted by the relevant scientific community; (4) the theory has been applied in testing on human blood plasma; and (5) literature exists which supports the underlying scientific theory.

## C. *Qualification*

Saenz argues that Dr. Sochaski was not qualified because (1) he had no experience testing 3-chlorotyrosine or any other chlorine compound on humans; and (2) his expertise was inapplicable because he was not a medical doctor.<sup>11</sup>

“If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, [then] a witness qualified as an expert by knowledge, skill, experience, training, or education may testify thereto in the form of an opinion or otherwise.” TEX. R. EVID. 702. As the Court of Criminal Appeals has explained:

Qualification is a two-step inquiry. A witness must first have a sufficient background in a particular field, and a trial judge must then determine whether that background goes to the matter on which the witness is to give an opinion. The proponent must establish that the expert has knowledge, skill, experience, training, or education regarding the specific issue before the court that would qualify the expert to give an opinion on that particular subject. The focus is on the fit between

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<sup>11</sup> We reject the State's claim that Saenz waived her right to challenge Dr. Sochaski's testimony and report because Saenz did not object when Dr. Sochaski was called to testify. Saenz properly preserved error by filing a motion to exclude the expert evidence and objecting during two pre-trial proceedings. See *Gueder v. State*, 115 S.W.3d 11, 13 (Tex. Crim. App. 2003).

the subject matter at issue and the expert's familiarity with it. Because the spectrum of education, skill, and training is so wide, a trial court has great discretion in determining whether a witness possesses appropriate qualifications as an expert on a specific topic in a particular case.

*Davis*, 329 S.W.3d at 813 (citations omitted) (citing *Vela v. State*, 209 S.W.3d 128, 131–36 (Tex. Crim. App. 2006)).

Dr. Sochaski is a research investigator and manager of analytical chemistry services at the Hamner Institutes for Health Science, a non-profit organization that focuses on drug and chemical safety for humans. Dr. Sochaski has a Master's degree in environmental chemistry and a Ph.D. in bio-analytical chemistry from the University of South Carolina. Dr. Sochaski testified that he studied analytical methods, development, and sample analysis—"a pretty broad range of different research topics." He is a member of the American Chemical Society, the Society of Toxicology, and the American Society of Mass Spectrometry. Dr. Sochaski's opinion related to the 3-chlorotyrosine levels he recorded while conducting the CDC study. While there had been other studies involving 3-chlorotyrosine, Dr. Sochaski's rat study was the only study to measure 3-chlorotyrosine levels after exposing a live subject to a chlorinating compound. Accordingly, Dr. Sochaski had a sufficient background in the field of bio-analytical chemistry, and that background was sufficiently relevant to the subject of his opinion—levels of 3-chlorotyrosine.

However, Dr. Sochaski also testified that the 3-chlorotyrosine levels detected in the complainants' blood samples were not endogenously produced, but rather the result of an "external exposure" to a chlorinating compound, although he did not specify that the compound was sodium hypochlorite. Saenz argues that Dr. Sochaski was not qualified to give this opinion because he is not a medical doctor. Saenz points to a purported communication between Dr. Sochaski and the Lufkin Police Department in which Dr. Sochaski stated that the 3-chlorotyrosine levels were the result of an exposure to some form of chlorinating compound, but then seemed to contradict that

statement by stating that, because he was not a medical doctor, he could not rule out a “massive infection” as a possible source. At trial, he also testified that the elevated 3-chlorotyrosine levels were caused by an external exposure to a chlorinating compound and were not endogenously produced. However, at trial, he did not base his opinion on ruling out the existence of a massive infection, but on the fact that he had never seen levels as high in any published literature.

We find no abuse of discretion even if we assume that Dr. Sochaski was not qualified to determine that the source of the 3-chlorotyrosine levels in the complainants was from an external exposure to chlorine. We recognize that because he is not a medical doctor, Dr. Sochaski had no way of ruling out an infection as an endogenous source. Nonetheless, any error from Dr. Sochaski’s unqualified opinion was rendered harmless by Dr. Schwartz’s expert testimony. An error related to the improper admission of expert testimony is a non-constitutional error. *Coble v. State*, 330 S.W.3d 253, 280 (Tex. Crim. App. 2010). A non-constitutional error is not reversible if it does not affect the substantial rights of the defendant. TEX. R. APP. PROC. 44.2(b). “A substantial right is affected when the error had a substantial and injurious effect or influence in determining the jury’s verdict.” *Coble*, 330 S.W.3d at 280. In conducting this harm analysis, we consider “everything in the record” including other testimony and evidence before the jury and “the character of the alleged error and how it might be considered in connection with other evidence in the case.” *Morales v. State*, 32 S.W.3d 862, 867 (Tex. Crim. App. 2000); *accord Davison v. State*, 405 S.W.3d 682, 688 (Tex. Crim. App. 2013). Thus, “[a] criminal conviction should not be overturned for non-constitutional error if the appellate court, after examining the record as whole, has fair assurance that the error did not influence the jury, or had but a slight effect.” *Johnson v. State*, 967 S.W.2d 410, 417 (Tex. Crim. App. 1998).

Dr. Schwartz, a licensed medical doctor and toxicologist whose qualifications are not in dispute, testified that the 3-chlorotyrosine levels found in the complainants were not produced



endogenously, but as a result of an external exposure to a chlorinating compound, specifically sodium hypochlorite. Dr. Schwartz's conclusion was based upon the 3-chlorotyrosine levels recorded in Dr. Sochaski's CDC study, but it was not based on Dr. Sochaski's opinion, at trial or otherwise, regarding the source of the 3-chlorotyrosine. Dr. Schwartz's opinion was reached after he reviewed the medical histories of the complainants. He testified that the 3-chlorotyrosine levels observed in the CDC study were not consistent with an infection because the levels gradually degraded over time, unlike what would be expected in the event of an infection. Dr. Schwartz also based his conclusion on the control patient, Oralia Torres, who had an infection and showed no levels of 3-chlorotyrosine. Additionally, Dr. Schwartz relied on peer-reviewed studies to rule out other endogenous sources of the 3-chlorotyrosine such as that arising from a heart attack or routine dialysis treatment. Thus, even assuming Dr. Sochaski was not qualified to rule out an endogenous source for the complainants' 3-chlorotyrosine levels, Dr. Schwartz was so qualified and he did rule out an endogenous source. Therefore, any error related to Dr. Sochaski's opinion was harmless as it did not have a substantial and injurious effect or influence on the jury's verdict.

#### **CONCLUSION**

The court's charge to the jury properly submitted the capital murder charge and the jury's verdict on that charge is supported by legally sufficient evidence. There is no showing of ineffective assistance of trial counsel. Finally, the trial court's evidentiary rulings were proper. The judgment of the trial court is affirmed.

Catherine Stone, Chief Justice

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