

SHAKEN BABY SYNDROME: AS A CONTROVERSY IN WRONGFUL CONVICTION CASES

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I. INTRODUCTION

Shaken Baby Syndrome (“SBS”) is a controversial medical diagnosis that has led to wrongful convictions. Since 2001, there have been about 2,000 cases where defendants were charged with SBS¹ and out of those, in 213 cases “charges were dropped or dismissed or convictions were overturned” when secondary analysis showed that the victim has suffered from something other than SBS.² One of the primary causes for misdiagnosis of SBS, which potentially leads to a wrongful conviction, is the misconception of signs and symptoms which, when present all at once, are considered to fall under the umbrella of SBS.³ Often, when a defendant is suspected of shaking the infant to death, the medical expert checks whether the victim has the following three symptoms, also known as the “classic ‘triad’: retinal hemorrhages (bleeding of the inside surface of the back of the eye); subdural hemorrhages (bleeding between the hard outer layer and the spongy membranes that surround the brain); and cerebral edema (brain swelling).”⁴

SBS, as a medical diagnosis, was first discovered by Norman Guthkelch, a pediatric neurosurgeon, who first discussed it in his 1971 journal article studying subdural hematomas and how they can

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¹ See *Washington Post In-Depth Investigation: Shaken Baby Syndrome*, INNOCENCE PROJECT (Mar. 23, 2015), <https://www.innocenceproject.org/washington-post-in-depth-investigation-shaken-baby-syndrome/>.

² *Id.*; see also Debbie Cenziper, *Prosecutors Build Murder Cases on Disputed Shaken Baby Syndrome Diagnosis*, WASH. POST (Mar. 20, 2015), <https://www.washingtonpost.com/graphics/investigations/shaken-baby-syndrome/> (noting approximately 200 cases where charges were dropped, defendants had their convictions overturned, or were found not guilty).

³ See Cenziper, *supra* note 2.

⁴ Deborah Tuerkheimer, *The Next Innocence Project: Shaken Baby Syndrome and the Criminal Courts*, 87 WASH. UNIV. L. REV. 1, 4 (2009), http://openscholarship.wustl.edu/law_law_review/vol87/iss1/1.

lead to whiplash injuries.⁵ This was the first medical source to talk about this diagnosis which stated that subdural hematomas can occur after repeated shaking of the infant, as opposed to “direct violence.”⁶ In other words, Guthkelch hints that SBS may occur from the repeated shaking of the child on separate occasions and is not a one-time incident.⁷ To prove his argument, he conducted an experiment where he examined twenty-three cases of children⁸ whose families were strongly suspected of child abuse and found that there is a chance that a child may undergo abuse and receive subdural hematomas, leading to SBS.⁹ Although this study is based on a small sample size, it has caused a wave of a new perspectives on child abuse from forensic and legal standpoints. Even if “solid statistics are limited regarding the incidence of [SBS]”¹⁰ its description was enough to shift public and jury perceptions of defendants suspected of causing SBS.¹¹ Therefore, Part II of this article identifies issues with definitions of SBS provided by an official, medical source and how they can influence the jury to pre-judge the defendant before evidence hearing. Part III will discuss how the court’s over-reliability on forensic expert testimony leads the jury to have a negative perception of defendants as “baby-killers.” Part IV will utilize case analysis and discuss the lack of clarity on who is an expert that can best determine whether the victim has suffered from SBS or not. Part V will discuss the necessary recommendations to be considered to eliminate wrongful conviction based on controversial SBS.

II. DEFINITIONAL ISSUES

Due to a growing concern of SBS, health departments began acknowledging it as a nationwide issue.¹² For instance, the New York State Department of Health states that “[a]n average of 33 children

⁵ See A.N. Guthkelch, *Infantile Subdural Haematoma and Its Relationship to Whiplash Injuries*, 1971 BRIT. MED. J. 430–31, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1796151/>.

⁶ *Id.* at 430.

⁷ *Id.*

⁸ *Id.*

⁹ *Id.* at 430–31.

¹⁰ John Mersch, *Shaken Baby Syndrome (Abusive Head Trauma)*, MEDICINENET, https://www.medicinenet.com/shaken_baby_syndrome_abusive_head_trauma/article.htm#shaken_baby_syndrome_facts (last visited Mar. 29, 2018).

¹¹ See, e.g., Tuerkheimer, *supra* note 4, at 3 (discussing how a woman was charged and ultimately convicted with the death of her child, even though there were no apparent signs of trauma, on the sole basis of expert testimony that the child had suffered from SBS).

¹² See Deborah Tuerkheimer, *A Spotlight on Shaken Baby Syndrome*, N.Y. TIMES (Sept. 24, 2010), <http://www.nytimes.com/2010/09/25/opinion/l25baby.html>.

under the age of 4 years old is hospitalized each year for SBS.”¹³ However, “due to various terms used in medical and hospital records as well as under-recognition of [SBS]” there is a lack of a concrete definition, along with a concise list of signs and symptoms that medical experts, judges, and lawyers can rely upon to make accurate decisions.¹⁴

Among the issues with the definitions for SBS is that it contains signs and symptoms that are known to other diagnoses as well.¹⁵ Other studies have shown that medical professionals may misdiagnose SBS for other diagnoses such as meningitis or encephalitis and therefore lead to an under-report of child abuse.¹⁶ However, in the cases being analyzed for this article, medical professionals have incorrectly claimed that these were cases of SBS and child abuse, when in fact they were not. A majority of cases which have been wrongfully identified as SBS are actually cases of Sudden Infant Death Syndrome (“SIDS”) and Venous Sinus Thrombosis.¹⁷ Illustrative examples of wrongful conviction cases where forensic experts misdiagnosed the victim to have suffered from SBS, when in actuality they have suffered from SIDS, include Teresa

¹³ *Shaken Baby Syndrome – Facts and Figures*, N.Y. DEPT OF HEALTH, https://www.health.ny.gov/prevention/injury_prevention/shaken_baby_syndrome/sbs_fact_sheet.htm (last visited Mar. 28, 2018) [hereinafter DEP’T OF HEALTH].

¹⁴ Mersch, *supra* note 10.

¹⁵ *Shaken Baby Syndrome Information Page*, NAT’L INST. OF NEUROLOGICAL DISORDERS & STROKE, <https://www.ninds.nih.gov/Disorders/All-Disorders/Shaken-Baby-Syndrome-Information-Page> (last visited Mar. 29, 2018) (“[SBS] is a type of inflicted traumatic brain injury that happens when a baby is violently shaken. A baby has weak neck muscles and a large, heavy head. Shaking makes the fragile brain bounce back and forth inside the skull and causes bruising, swelling, and bleeding, which can lead to permanent, severe brain damage or death. The characteristic injuries of [SBS] are subdural hemorrhages (bleeding in the brain), retinal hemorrhages (bleeding in the retina), damage to the spinal cord and neck, and fractures of the ribs and bones. These injuries may not be immediately noticeable. Symptoms of [SBS] include extreme irritability, lethargy, poor feeding, breathing problems, convulsions, vomiting, and pale or bluish skin. Shaken baby injuries usually occur in children younger than 2 years old, but may be seen in children up to the age of 5.”).

¹⁶ See RAINER G. GEDEIT, *THE SHAKEN BABY SYNDROME: A MULTIDISCIPLINARY APPROACH* xix–xx, 158 (Stephen Lazoritz & Vincent J. Palusci eds., 2001).

¹⁷ See *Cerebral Venous Sinus Thrombosis (CVST)*, UNIV. OF ROCHESTER MED. CTR., <https://www.urmc.rochester.edu/encyclopedia/content.aspx?contenttypeid=134&contentid=69> (last visited Mar. 29, 2018) (“Cerebral venous sinus thrombosis (CVST) occurs when a blood clot forms in the brain’s venous sinuses. This prevents blood from draining out of the brain. As a result, blood cells may break and leak blood into the brain tissues, forming a hemorrhage. This chain of events is part of a stroke that can occur in adults and children. It can occur even in newborns and babies in the womb. A stroke can damage the brain and central nervous system. A stroke is serious and requires immediate medical attention.”).

Engberg-Lehmer,¹⁸ Joel Lehmer,¹⁹ and Sean Ralston.²⁰ Cases involving Venous Sinus Thrombosis include Julie Baumer²¹ and Drayton Witt.²² Other misdiagnoses include Hypoxic Brain Damage²³ found in the case of Krystal Voss,²⁴ and sickle cell anemia²⁵ in the case of Melonie Ware.²⁶ Each of these diagnoses includes retinal hemorrhages, internal bleeding, and brain damage, which are also symptoms of SBS.²⁷ Therefore, since 2009, “the [American Academy of Pediatrics] reclassified [SBS] as Abusive Head Trauma to be more inclusive of all the ways a child’s head can be injured through abuse, including but not limited to violent shaking.”²⁸ However, in the past, because SBS has been given much attention and discussed as a syndrome that has been under-reported,²⁹ the forensic experts have diagnosed it to numerous victims, leading to

¹⁸ See Maurice Possley, *Teresa Engberg-Lehmer*, NAT’L REGISTRY OF EXONERATIONS (July 29, 2012), <https://www.law.umich.edu/special/exoneration/Pages/casedetail.aspx?caseid=3952> [hereinafter *Teresa Engberg-Lehmer*].

¹⁹ See Maurice Possley, *Joel Lehmer*, NAT’L REGISTRY OF EXONERATIONS (July 29, 2012), <https://www.law.umich.edu/special/exoneration/Pages/casedetail.aspx?caseid=3953> [hereinafter *Joel Lehmer*].

²⁰ See Maurice Possley, *Sean Ralston*, NAT’L REGISTRY OF EXONERATIONS (Oct. 25, 2014), <https://www.law.umich.edu/special/exoneration/Pages/casedetail.aspx?caseid=4531> [hereinafter *Sean Ralston*].

²¹ See Stephanie Denzel, *Julie Baumer*, NAT’L REGISTRY OF EXONERATIONS, <https://www.law.umich.edu/special/exoneration/Pages/casedetail.aspx?caseid=3017> (last visited Mar. 29, 2018) [hereinafter *Julie Baumer*].

²² See Maurice Possley, *Drayton Witt*, NAT’L REGISTRY OF EXONERATIONS (Nov. 1, 2012), <https://www.law.umich.edu/special/exoneration/Pages/casedetail.aspx?caseid=4043> [hereinafter *Drayton Witt*].

²³ See *Anoxic Brain Damage*, MOUNT SINAI HOSP., <http://www.mountsinai.org/patient-care/service-areas/neurology/diseases-and-conditions/anoxic-brain-damage> (last visited Mar. 29, 2018) (“[I]njury to the brain due to a lack of oxygen. Hypoxia is the term to describe low oxygen. Brain cells without enough oxygen will begin to die after about 4 minutes.”).

²⁴ See Maurice Possley, *Krystal Voss*, NAT’L REGISTRY OF EXONERATIONS (Sept. 20, 2017), <https://www.law.umich.edu/special/exoneration/Pages/casedetail.aspx?caseid=5198> [hereinafter *Krystal Voss*].

²⁵ See *Sickle Cell Anemia*, MEDLINE PLUS, <https://medlineplus.gov/sicklecellanemia.html> (last visited Mar. 29, 2018) (“Sickle cell anemia is a disease in which your body produces abnormally shaped red blood cells. The cells are shaped like a crescent or sickle. They don’t last as long as normal, round red blood cells. This leads to anemia. The sickle cells also get stuck in blood vessels, blocking blood flow. This can cause pain and organ damage.”).

²⁶ See Alexandra Gross, *Melonie Ware*, NAT’L REGISTRY OF EXONERATIONS, <https://www.law.umich.edu/special/exoneration/Pages/casedetail.aspx?caseid=3814> (last visited Mar. 29, 2018) [hereinafter *Melonie Ware*].

²⁷ See Tara Haelle, *Doctors Devise a Better Way to Diagnose Shaken Baby Syndrome*, NAT’L PUB. RADIO (July 29, 2015), <https://www.npr.org/sections/health-shots/2015/07/29/427449852/doctors-devise-a-better-way-to-diagnose-shaken-baby-syndrome>.

²⁸ *Id.*

²⁹ See *Shaken Baby Syndrome-Description of the Problem*, N.Y. STATE DEP’T OF HEALTH (Apr. 2010), https://www.health.ny.gov/prevention/injury_prevention/shaken_baby_syndrome/description.htm.

wrongful conviction.

Therefore, to achieve an accurate expert testimony, it is important for the forensic expert, from either the prosecution or the defense, to notify the judge or jury that certain symptoms may be similar to other diagnoses. The expert should further discuss the possibility of the victim to have been suffering from SBS alone and not any other relatable diagnoses.³⁰ However, in the mentioned wrongful conviction cases, “[t]he presence of these three signs was understood to be pathognomonic—or exclusively characteristic—of SBS,”³¹ until new research discoveries which showed that there are diagnoses which may be falsely considered as SBS, making it a controversial medical diagnosis.

In order to appropriately rely on forensic expert testimony during deliberations, the jury must be instructed as to the definitions of important terminology related to the evidence discussed in the courtroom.³² Mayo Clinic, a first-ranked hospital in the nation,³³ defines SBS as a form of child abuse which differs from physical abuse in the way that this abuse causes internal brain damage and may not be evident on the victim’s body.³⁴ Among the causes, the Mayo Clinic states that SBS is usually committed “when a parent or caregiver severely shakes a baby or toddler due to frustration or anger—often because the child won’t stop crying.”³⁵ This definition alone contains a range of important factors, which if presented to the jury in the courtroom, may lead to a biased verdict. Specifically, the definition points to two possible aggressors, the parents or the caregivers.³⁶ In other words, if the defendant is the parent or caregiver, then the definition already provides a guilty verdict for the defendant. It does not clarify that there might be other possible

³⁰ See Daniel M. Albert et al., *Ensuring Appropriate Expert Testimony for Cases Involving the “Shaken Baby”*, 308 JAMA 39, 40 (July 4, 2012).

³¹ Tuerkheimer, *supra* note 4, at 38.

³² See Paul Roberts, *Paradigms of Forensic Science and Legal Process: A Critical Diagnosis*, 370 PHIL. TRANS. R. SOC. B 1, 7 (May 11, 2015).

³³ *Ranked #1 in the Nation*, MAYO CLINIC, <https://www.mayoclinic.org/about-mayo-clinic/quality/top-ranked> (last visited Mar. 29, 2018).

³⁴ See *Shaken Baby Syndrome*, MAYO CLINIC, <https://www.mayoclinic.org/diseases-conditions/shaken-baby-syndrome/symptoms-causes/syc-20366619> (last visited Mar. 29, 2018) (“[SBS]—also known as abusive head trauma, shaken impact syndrome, inflicted head injury or whiplash shake syndrome—is a serious brain injury resulting from forcefully shaking an infant or toddler. [SBS] destroys a child’s brain cells and prevents his or her brain from getting enough oxygen. [SBS] is a form of child abuse that can result in permanent brain damage or death.”).

³⁵ *Id.*

³⁶ See Keith A. Findley et al., *Shaken Baby Syndrome, Abusive Head Trauma, and Actual Innocence: Getting It Right*, 12 HOUS. J. HEALTH L. & POL’Y 209, 217 (2012).

aggressors or even incidents that can cause the same diagnoses.³⁷ Further, the definition also describes a possible event that could have occurred between the aggressor and the victim, causing the fatal end.³⁸ If such definition is presented by the prosecutor to the jury, it already provides a visual chain of events that might have occurred between the defendant and the victim. Since the Mayo Clinic is considered as an official and valid source for definitions, then such a definition could potentially be presented in the courtroom. This is true even if definitions contain inculpatory information that can cause the jury to pre-judge the defendant before hearing out all the present evidence.

Like the Mayo Clinic, HealthLine, a consumer health information site,³⁹ states that “[s]haking a baby is a serious and deliberate form of abuse.”⁴⁰ This definition hints to the defendant’s intent or *mens rea*⁴¹ in causing SBS which, along with the *actus reus*,⁴² points to the presence of a crime, thereby allowing the prosecution to press charges and the jury to convict the defendant.⁴³ In addition, the definition includes the term “deliberate,”⁴⁴ which hints to the fact that the defendant must have shaken the infant either purposely or knowingly, calling forth the prosecutor to seek the most serious charge for the defendant and a harsher sentence.⁴⁵

Therefore, to support the presence of the defendant’s criminal

³⁷ See *id.*

³⁸ See *id.* at 220–21.

³⁹ See *About Healthline.com, Meet Our Team*, HEALTHLINE, <https://www.healthline.com/health/about-us?ref=footer#link-MeetOurTeam> (last visited Mar. 29, 2018).

⁴⁰ Valencia Higuera, *Shaken Baby Syndrome*, HEALTHLINE (Jan. 11, 2016), <https://www.healthline.com/health/shaken-baby-syndrome#diagnosis4>.

⁴¹ *Id.*; see *Mens Rea*, CORNELL LEGAL INFO. INST., https://www.law.cornell.edu/wex/mens_rea (last visited Mar. 29, 2018) (“*Mens Rea* refers to criminal intent. . . . The *mens rea* requirement is premised upon the idea that one must possess a guilty state of mind and be aware of his or her misconduct.”).

⁴² See *Actus Reus*, CORNELL LEGAL INFO. INST., https://www.law.cornell.edu/wex/actus_reus. (last visited Mar. 29, 2018) (“The act or omissions that comprise the physical elements of a crime as required by statute. . . . The *actus reus* includes only the willed bodily movements (i.e. voluntary acts). Thus, if a defendant acted on reflex, then the defendant’s conduct does not satisfy the *actus reus* requirement.”).

⁴³ See Tuerkheimer, *supra* note 4, at 4.

⁴⁴ See *Deliberate*, CORNELL LEGAL INFO. INST., <https://www.law.cornell.edu/wex/deliberate> (last visited Aug. 19, 2010) (defining deliberate as being with “intention, or premeditation”).

⁴⁵ While the prosecution seeks to impose the most serious charge when there is evidence to suggest that a baby was shaken knowingly or purposefully, the lack of such evidence does not preclude the imposition of such charges. See Derick R. Vollrath, *Shaken Baby Syndrome as Felony Murder in North Carolina*, 34 CAMPBELL L. REV. 423, 425 (2012) (“All Shaken Baby Syndrome deaths in North Carolina can be prosecuted as first-degree murder. This holds even if the defendant did not act with the purpose to kill and if the defendant did not perceive the possibility that a child might die as a result of the shaking.”).

mind, the Mayo Clinic clarifies that “[s]haken baby syndrome isn’t usually caused by bouncing a child on your knee, minor falls or even rough play.”⁴⁶ In addition, Baby Center: An Expert Advice, which also defines SBS, states that “[a]n accidental fall is also extremely unlikely to cause the condition,”⁴⁷ which eliminates other types of criminal intent.⁴⁸ Further, if the defendant will provide his or her own story of the incident, the above-mentioned clarifications are already present to dispute any story that will describe accidental or self-inflicted injuries by the child or an accident during a play.

In terms of who may be the guilty party, Mayo Clinic states that “men are more likely to cause shaken baby syndrome than are women.”⁴⁹ Such conclusion is provided to the public without any statistical support.⁵⁰ As a result, it may cause potential jurors to harshly convict a male defendant being charged with child abuse due to SBS, as seen in the wrongful conviction cases of Sean Ralston,⁵¹ Warren Hales,⁵² Joel Lehmer,⁵³ John Peel,⁵⁴ and Drayton Witt.⁵⁵

Furthermore, when it comes to the risk factors, the Mayo Clinic states that the aggressors, either the parents or the caregivers, may have or be unable to deal with “unrealistic expectations of babies[, y]oung or single parenthood[, s]tress[, d]omestic violence[, a]lcohol or substance abuse[, u]nstable family situations[, d]epression[, a] history of mistreatment as a child.”⁵⁶ All of these factors are

⁴⁶ *Shaken Baby Syndrome*, *supra* note 34.

⁴⁷ K. Miles, *Shaken Baby Syndrome*, BABY CTR., https://www.babycenter.com/0_shaken-baby-syndrome_1501729.bc (last visited Mar. 30, 2018).

⁴⁸ See Addison K. Goff, IV, *Point the Finger . . . At the Gun*, 23 CHAMPION 34, 34 (1999) (“In criminal law, traditionally there have been two types of criminal intent required for a crime . . . [g]eneral intent is present whenever the offender adverts to the prescribed criminal consequences as ‘reasonably certain’ to result from his act or failure to act. Specific intent exists when the offender actively desires the consequences of his actions.”).

⁴⁹ See *Shaken Baby Syndrome*, *supra* note 34.

⁵⁰ To the contrary, some research has suggested that shaken baby syndrome abusers are equally gendered. See M. Salamon, *In Shaken Baby Syndrome, Women as Likely to be Perpetrators as Men: Study*, HEALTHDAY (March 7, 2011), <https://consumer.healthday.com/caregiving-information-6/infant-and-child-care-health-news-410/in-shaken-baby-syndrome-women-as-likely-to-be-perpetrators-as-men-study-650594.html> (“In data collected over 10 years on 34 cases of abusive head trauma (AHT) in infants, researchers found that abusers’ gender was evenly split and that female abusers were typically significantly older than males.”).

⁵¹ See *Sean Ralston*, *supra* note 20.

⁵² See M. Possley, *Warren Hales*, NAT’L REGISTRY OF EXONERATIONS (July 29, 2012), <https://www.law.umich.edu/special/exoneration/Pages/casedetail.aspx?caseid=3962> [hereinafter *Warren Hales*].

⁵³ See *Joel Lehmer*, *supra* note 19.

⁵⁴ See Alexandra Gross, *John Peel*, NAT’L REGISTRY OF EXONERATIONS, <https://www.law.umich.edu/special/exoneration/Pages/casedetail.aspx?caseid=3813> (last visited Mar. 30, 2018) [hereinafter *John Peel*].

⁵⁵ See *Drayton Witt*, *supra* note 22.

⁵⁶ See *Shaken Baby Syndrome*, *supra* note 34.

potentially associated with the defendant and the family where the victim grew up. Overall, this association gives a negative impression of the defendant rather than a neutral or sympathetic one, which may lead to a harsher sentence.

III. COURT RELIABILITY

It has been shown in the past that there is a tendency for the court system to blindly accept the forensic expert testimony as proof beyond a reasonable doubt.⁵⁷ As a result, it has opened a venue for unreliable, invalid and biased forensic testimony which led to wrongful convictions.⁵⁸ One reason is because forensic experts utilize hard science (biology, chemistry, etc.) to examine evidence, which makes it more reliable and “cloaked in the robes of scientific truth.”⁵⁹ Because attorneys and prosecutors make sure to have forensic expert testimony in almost every criminal case, it may be “litigation-driven.”⁶⁰ In other words, for the prosecution and the defense, it becomes a challenge to find strong evidence that will prove their side of the argument. Forensic expert testimony may be considered the best option. As such, when evidence is being analyzed it is often that it is being viewed through pre-conceived assumptions and conclusions which lead to biased expert testimony in the courtroom.⁶¹ Sean Ralston’s case is illustrative.⁶² When authorities had

⁵⁷ See Catherine E. White, Comment, “*I Did Not Hurt Him . . . This Is a Nightmare*”: *The Introduction of False, But Not Fabricated, Forensic Evidence in Police Interrogations*,” WIS. L. REV. 941, 944, 972–73 (2015).

⁵⁸ See Daniel G. Orenstein, Comment, *Shaken to the Core: Emerging Scientific Opinion and Post-Conviction Relief in Cases of Shaken Baby Syndrome*, 42 ARIZ. ST. L.J. 1305, 1306 (2010).

⁵⁹ See White, *supra* note 57, at 945.

⁶⁰ See Joelle Anne Moreno & Brian Holmgren, *The Supreme Court Screws Up the Science: There Is No Abusive Head Trauma/Shaken Baby Syndrome “Scientific” Controversy*, 2013 UTAH L. REV. 1357, 1357 (2013).

⁶¹ See *id.* at 1358.

⁶² See *Sean Ralston*, *supra* note 20. Sean Ralston, a U.S. Army private first class was convicted of involuntary manslaughter and sentenced to 10 to 15 years in prison for the death of his three-month-old son, Bryan. *Id.* In 1984, the victim was brought in to Cutler Army Hospital at Ayer, Massachusetts where he was pronounced dead. *See id.* The emergency room physician concluded that the victim suffered from Sudden Infant Death Syndrome. *Id.* Police authorities inquired about the victim and noticed “a dark mark on the baby’s back,” which the emergency room physician clarified was “a normal result of blood pooling and that the frothy material [in the baby’s throat] was epinephrine that he had administered,” but when the physician affirmed that he was not familiar with the SBS, which the authorities considered in this case, Ralston was invited for interrogation. *Id.* When Ralston said “yes” to the following question: “Do you believe that by shaking your baby, the baby was injured and the injury caused the baby to die?” he was arrested. *Id.* At trial, in 1989, chief of pathology in hospital, testified that the victim has suffered from SBS. Ralston’s statement during interrogation was filed as admission to the crime. *See id.* Two defense experts’ testimonies were “confusing, disorganized and ineffective,” and may have contributed to Ralston’s conviction in 1989. *See id.* When the

preconceived assumptions that the child had suffered from SBS, despite the conclusions of a medical expert who first examined the victim, it was simple for the prosecution to prove their side using forensic evidence, wrongly convicting Ralston.⁶³

When it comes to criminal cases involving child victims, once convicted, the defendant is labeled as a “baby killer.”⁶⁴ Take, for instance, the case of Drayton Witt, who carried this serious stigma with him to prison where he was attacked by other inmates.⁶⁵ In part, this is due to the fact that the National Child Abuse and Neglect Data System suggests that these cases may be overlooked by noting that “children are the most vulnerable for many reasons, including

newly hired defense re-investigated the case, they obtained three experts proving Ralston’s innocence. *See id.* A specialist in Sudden Infant Death Syndrome found that prosecution expert “was clearly wrong” with his diagnosis. *Id.* An infant pathologist found that prosecution expert was “grossly mistaken in his interpretation of the data in this case.” *Id.* And a specialist on SBS found that the infant did, in fact, die from Sudden Infant Death Syndrome. *Id.* The last expert testimony also proved the emergency physician’s testimony who first saw the victim. *Id.* In 1991, Ralston was granted a new trial. *Id.* The judge cited Ralston’s trial counsel for incompetency and found that the prosecution expert’s autopsy methods were “distinctly unorthodox, incorrect and improper.” *Id.*

⁶³ *See id.*; see also Susan Haack, *What’s Wrong with Litigation-Driven Science? An Essay in Legal Epistemology*, 38 SETON HALL L. REV. 1053, 1078–79 (2008) (noting that forensic scientists and technicians working for the prosecution may become biased in their judgments due to their implicit desire to be helpful).

⁶⁴ *See* CHILD TRENDS, INFANT HOMICIDE: INDICATORS OF CHILD AND YOUTH-WELLBEING 7 (Feb. 2015), <https://www.childtrends.org/indicators/infant-homicide/>.

⁶⁵ Drayton Witt was convicted of second-degree murder and sentenced to twenty years for the death of his girlfriend’s five-month-old son, Steven in Phoenix, Arizona. *Drayton Witt, supra* note 22. The victim “had been fraught with medical problems from birth, when he was delivered with the umbilical cord wrapped around his neck. He was a ‘blue baby,’ had aspirated fecal matter and suffered from respiratory problems.” *Id.* “[A]fter he was prescribed medication for flu-like symptoms, he began to suffer seizures.” *Id.* When the victim was undergoing another seizure, Holt, the victim’s mother notified Witt and he took them to the hospital six miles away. *Id.* At the hospital, the victim arrived with cardiac arrest, but survived. *Id.* Doctors found that the victim had “retinal bleeding, [which] suggested a non-accidental head trauma,” in other words, SBS, and reported to the authorities. *See id.* The next day, the victim died. *Id.* Authorities seized Witt’s car for evidence and entered Holt’s home with a search warrant. *Id.* In 2000, Witt was arrested for murder. *Id.* In 2002, at trial, the doctors from the hospital and prosecution experts testified that the victim suffered from SBS. *Id.* The defense expert argued that the victim may have died from “severe dehydration,” but was not certain. *See id.* Witt was convicted. *Id.* While waiting for an appeal, Witt was attacked by other inmates since he was considered to be a “baby-killer.” *See* Carrie Sperling, *Innocence Project TCS New York City Marathon 2016*, CROWDRISE, <https://www.crowdrise.com/innocenceprojectnyc2016/fundraiser/carriesperling> (last visited Mar. 30, 2018). “In 2008, the Arizona Justice Project began re-examining Witt’s case.” *Drayton Witt, supra* note 22. The defense presented testimony from eight experts who found that Witt was innocent. *Id.* In 2012, as more studies revealed the controversy behind SBS diagnosis, a motion for new trial was sought. *See id.* Among the forensic experts at trial, one found that the victim suffered from “classic picture of venous thrombosis.” *Id.* In addition, the doctor who did the autopsy recanted from his earlier testimony finding Steven’s death homicide. *Id.* In 2012, Witt was released and the charges were dismissed. *Id.*

their dependency, small size, and inability to defend themselves.”⁶⁶ As a result, the prosecutor and the jury take on the role of “protectors of the innocent baby victims,” who have to mete out justice on those who are accused of crimes against children. However, the jury’s verdict has to be precisely accurate and not allow the sentencing of an innocent for child abuse or the acquittal of a child abuser.⁶⁷

The defense attorney ends up being the only courtroom member who is trying to battle the power of the prosecutor’s forensic expert testimony from blinding the jury with its “extraterrestrial” language and, usually, a confident affirmation of the defendant’s guilt.⁶⁸ Unfortunately, there is a tendency for the jury to convict the defendant charged with child abuse, including SBS, simply because the defense attorney did not have any strong evidence, or a convincing forensic expert.⁶⁹ As a result, the jury may convict the defendant of child abuse or child murder by relying only on the prosecution’s expert testimony.⁷⁰ In sum, forensic expert testimony plays a major role in SBS cases. As a result, SBS cases come down to the battle between two or more forensic experts, from the prosecutor’s and the defense’ sides.⁷¹ Once it is clear that the defendant’s side does not have a solid explanation for the child’s death that proves the defendant’s innocence, the jury will most likely convict the defendant.⁷²

However, wrongful convictions in SBS cases are also caused due to ineffective defense representation.⁷³ During the trial, the court participants get to see whatever is admissible and available for the prosecution and the defense. Therefore, if the defense did not thoroughly investigate for evidence supporting the defendant’s innocence, the defendant is likely to be wrongly convicted. Abigail Tiscareno’s case demonstrates this.⁷⁴ In her case, the autopsy report

⁶⁶ John Mersch, *Shaken Baby Syndrome (Abusive Head Trauma)*, MEDICINENET, https://www.medicinenet.com/shaken_baby_syndrome_abusive_head_trauma/article.htm#shaken_baby_syndrome_facts (last visited Mar. 30, 2018).

⁶⁷ Cf. Rachel Burg, Note, *Un-Convicting the Innocent: The Case for Shaken Baby Syndrome Review Panels*, 54 U. MICH. J.L. REFORM 657, 660 (2012) (proposing a plan for greater protections of defendants accused on an SBS theory).

⁶⁸ See Tuerkheimer, *supra* note 4, at 38, 40.

⁶⁹ See *id.* at 38.

⁷⁰ See *id.* at 46.

⁷¹ See *id.* at 38–39.

⁷² See *id.* at 39–40.

⁷³ See *id.* at 41 n. 252.

⁷⁴ Abigail Tiscareno was convicted of second-degree child abuse but was never sentenced for the injury of one-year-old Nathan who attended Abby’s Day Care, which she owned in Utah. Maurice Possley, *Other Shaken Baby Syndrome Cases: Abigail Tiscareno*, NAT’L REGISTRY OF EXONERATIONS (Apr. 18, 2014), <https://www.law.umich.edu/special/exoneration/Pages/casedet>

stating that the victim has suffered bleeding in the brain days prior to the incident is significant because it not only supports Tiscareno's innocence but also questions the reliability of the SBS diagnoses.⁷⁵ In terms of the diagnoses, a study in 1998 proved that bleeding in the brain, one of the symptoms for SBS, does not have to occur right away—thus the last person who was with the victim may not be the perpetrator.⁷⁶ This was true in Abigail Tiscareno's case.⁷⁷

Further, the National Registry of Exonerations shows that there have been SBS wrongful conviction cases where charges remain severe despite increasing prevalence of studies showing lack of validity in the science behind SBS.⁷⁸ From 1984 to 2005, half of wrongful conviction cases on SBS grounds involved murder charges.⁷⁹ The breakdown of charges is as follows: first-degree murder (Letha Jean Hockersmith and her husband Terry Hockersmith,⁸⁰ Mary

ail.aspx?caseid=4413 [hereinafter *Abigail Tiscareno*]. Tiscareno found that the child had difficulty breathing and called 911. *See id.* At the hospital, the doctors found that the victim had “bleeding between the brain and the skull,” and were able to save his life, but he had “suffered severe brain damage.” *Id.* A pediatrician at the hospital notified the authorities that the victim has sustained the injuries from severe shaking at the daycare center. *See id.* Tiscareno was interrogated for five hours until she admitted that “she had mildly shaken the boy when he failed to respond.” *Id.* At trial, in 2004, jury was presented testimonies from an expert in SBS, the surgeon who performed the operation on the victim, and a pediatrician who all testified that the victim suffered from SBS. *See id.* As a result, the jury convicted Tiscareno, but she was free on bond before sentencing. *Id.* During this period, new counsel identified that “the pathology report had not been turned over to Tiscareno’s trial attorney.” *Id.* In 2005, Tiscareno was granted a new trial without a jury, and the judge acquitted her. *Id.*

⁷⁵ *See id.*; *see also* M.G.F. Gilliland, *Interval Duration Between Injury and Severe Symptoms in Nonaccidental Head Trauma in Infants and Young Children*, 43 J. FORENSIC SCI. 723, 724 (1998) (noting that the interval between injury to showing signs of needing medical attention is less than twenty-four hours when the cause is shaking).

⁷⁶ Gilliland, *supra* note 75, at 724; Burg, *supra* note 67, at 667.

⁷⁷ *See Abigail Tiscareno*, *supra* note 74.

⁷⁸ *Browse Cases*, NAT'L REGISTRY OF EXONERATIONS, <http://www.law.umich.edu/special/exoneration/Pages/browse.aspx> (search in search bar for “Shaken Baby”) (last visited Mar. 30, 2018); *see* Tuerkheimer, *supra* note 4, at 16;

⁷⁹ *Browse Cases*, *supra* note 78.

⁸⁰ Letha Jean Hockersmith was charged with first-degree murder and sentenced to life in prison for the death of her adopted two-year-old daughter in Tulsa, Oklahoma. *See* Maurice Possley, *Letha Jean Hockersmith*, NAT'L REGISTRY OF EXONERATIONS (Aug. 4, 2013), <https://www.law.umich.edu/special/exoneration/Pages/casedetail.aspx?caseid=4134> [hereinafter *Letha Jean Hockersmith*]. Her husband Terry was also charged but the charges were dismissed. *Id.* In 1992, Hockersmith brought her daughter to the hospital after she has fallen. *Id.* The child died of respiratory failure. *Id.* A County medical examiner found evidence of retinal hemorrhaging, and brain swelling which indicated SBS and reported that this was a homicide. *Id.* Hockersmith was tried in 1994 where the prosecutor expert testified that the cause of the victim's death was severe shaking. *Id.* The defense expert testified that the victim's injuries came from an accidental fall as described by the defendant. *Id.* The Oklahoma Court of Criminal Appeals reversed the conviction. *Id.* The defense presented evidence that Hockersmith's ex-husband had a history of beating their older child and could have done the same to the victim. *Id.* In 1999, Hockersmith was acquitted. *Id.*

Weaver,⁸¹ Warren Hales,⁸² Krystal Voss⁸³), felony murder (Melonie

⁸¹ Mary Weaver was charged with first-degree murder and sentenced to life imprisonment without parole for the death of eleven-month-old Melissa Mathes in Marshalltown, Iowa. See Maurice Possley, *Mary Weaver*, NAT'L REGISTRY OF EXONERATIONS (July 29, 2012), <https://www.law.umich.edu/special/exoneration/Pages/casedetail.aspx?caseid=3954>. In 1993, Weaver, a babysitter, called 911 after noticing that the victim stopped breathing. *Id.* An autopsy showed that the victim "sustained severe head injuries, including a massive skull fracture, sometime before her death." *Id.* "The doctors who examined the body opined that the older injuries were not the cause of death and that the more recent injuries showed she had been shaken to death" and concluded that she suffered from SBS. *Id.* The defense presented evidence that the victim's mother "inquired about the cost of a grave site about a month before Melissa died. The case ended in a mistrial." *Id.* In 1994, at the second trial, Weaver was convicted. *Id.* In 1995, the Iowa Court of Appeals upheld the conviction. *Id.* At the third trial, the defense expert testified that the victim's "vulnerable neurological state on the morning she was picked up combined with the trauma described by the new witnesses offered a reasonable medical explanation for the acute conditions that precipitated the child's death." *Id.* In 1997, Weaver was acquitted. *Id.*

⁸² Warren Hales was charged with first-degree murder and sentenced to five years to life imprisonment for the death of his girlfriend's son (aged five months) in South Lake, Utah. See *Warren Hales*, *supra* note 52. In 1985, the victim was "flung from his car seat into the dashboard when Hales slammed on the brakes of his truck while driving to a babysitter." *Id.* The victim was diagnosed with ear infection and prescribed antibiotics. *Id.* Hales was the last person to be the victim and was the one who found the victim "limp with his eyes half-open." *Id.* At the hospital, doctors found "bruising on the baby's face, but no evidence of impact injury." *Id.* As a result, it was concluded that the victim suffered from SBS. *Id.* The victim survived but was brain-damaged causing him to be paralyzed. *Id.* Deem, the victim's mother defended Hales and stated that he never hurt the child. *Id.* Authorities could not press charges against Hales due to lack of evidence for intent. *Id.* In 1997, the victim died due to aspiratory pneumonia. *Id.* In 2000, the Utah Attorney General's Office filed charges against Hales. *Id.* At trial, in 2004, Deem changed her story and stated that Hales apologized that he hurt the child. *Id.* Hales was convicted by the jury. Hales' new attorneys filed for a new trial arguing that his previous defense was inadequate. *Id.* In 2007 the Utah Supreme Court reversed the conviction and the Utah Attorney General's office dismissed the charges due to lack of factual evidence. *Id.*

⁸³ Krystal Voss was charged with first-degree murder and child abuse and sentenced to 20 years for the death of her seventeen-month-old son, Kyran in Alamosa, Colorado. See *Krystal Voss*, *supra* note 24. Voss's boyfriend, Ramirez babysat the victim while Voss was working. *Id.* In 2003, the victim was found unconscious and without a pulse. *Id.* At the hospital, a doctor questioned Voss and Ramirez about the bruises on the boy's abdomen, which hinted on child abuse and were reported to Social Services and law enforcement. *Id.* Ramirez stated that the victim fell backward off his shoulders and hit his head resulting in Ramirez accidentally hitting the victim with his elbow at the abdomen. *Id.* The victim was found to have "subdural hematoma and that his injuries were the result of violent shaking" and died soon after. *Id.* It was concluded that the victim suffered from SBS. *Id.* Ramirez was charged with "child abuse causing serious bodily injury and reckless endangerment." *Id.* During an interrogation Voss "admitted that she grabbed the boy, shook him violently two or three times, and then swiftly laid him on the bed." *Id.* A pathologist "performed an autopsy and concluded that the boy died from complications of a closed head injury when he was struck by a blunt object or hurled against a blunt object." *Id.* Ramirez pled guilty to child endangerment and tampering with evidence and sentenced to one year. *Id.* In 2004, Voss was convicted. *Id.* In 2007, the Colorado Court of Appeals upheld Voss' conviction, but the Colorado Supreme Court refused to hear an appeal. *Id.* In 2014, Voss' attorney, Walsh motioned for a new trial, citing medical studies showing that "the same triad of symptoms said to be SBS could be caused by a fall." *Id.* At the second trial, defense experts presented medical evidence that questioned those of the prosecution experts. *Id.* A forensic pediatric pathologist testified, "It's entirely consistent with

Ware⁸⁴), first-degree reckless homicide (Audrey Edmunds⁸⁵), second-degree murder (Drayton Witt⁸⁶), involuntary manslaughter (Teresa

the facts of the case that the child fell from the shoulders of his caregiver and became sick with hypoxic brain damage and died.” *Id.* In addition, the defense expert stated that the initial expert “dismissed the original history of this being from a fall and testified that the most consistent mechanism would be shaking and slam, and that’s not correct.” *Id.* Besides pediatric neuro-ophthalmologist and pediatric radiologist, the pathologist who first examined the victim’s body recanted his testimony based on new studies that questioned the legitimacy of SBS. *Id.* In 2017 charges against Voss were vacated and new trial was set due to ineffectiveness of Voss’ previous counsel. *Id.* The judge held that the case was built on “unclear and speculative” evidence and the district attorney dismissed all charges. *Id.*

⁸⁴ Melonie Ware was charged with felony murder and sentenced to life imprisonment for the death of nine-month-old Jaden Paige whom she babysat in Decatur, Georgia. *See Melonie Ware, supra* note 26. In 2004, Ware found the victim unresponsive and called 911. *Id.* The victim was hospitalized but died soon after. *Id.* Ware was questioned and arrested. *Id.* In 2005, at trial, County Medical Examiner testified that after conducting an autopsy “he found bruising on the scalp, bleeding in the brain and eyes, and a leg fracture,” indicating that the victim suffered from SBS. *Id.* According to the victim’s medical records, he suffered from sickle cell disease, but the prosecution expert assured that this was not the case. *Id.* In 2005, Ware was convicted. *Id.* In 2006, Ware’s conviction was vacated due to ineffective legal representation. *Id.* In 2009, during retrial, defense experts testified that the victim actually did suffer from sickle cell anemia, as well as “infection and blood-clotting problems that caused the internal bleeding” whereas the “bruises on the child’s scalp and his leg injury likely resulted from hospital procedures initiated to try to save” the victim. *Id.* In 2009, Ware was acquitted. *Id.*

⁸⁵ Audrey Edmunds was charged with first-degree reckless homicide and sentenced to eighteen years for the death of seven-month-old Natalie, whom she babysat in Waunakee, Wisconsin. *See Alexandra Gross, Audrey Edmunds, NAT’L REGISTRY OF EXONERATIONS*, <https://www.law.umich.edu/special/exoneration/Pages/casedetail.aspx?caseid=3201> (last visited Mar. 31, 2018) [hereinafter *Audrey Edmunds*]. Before the incident, the victim’s mother, Beard notified Edmunds that the victim “was fussy that morning and took only half of her bottle.” *Id.* Edmunds found the victim choking and unresponsive and called 911. *Id.* Paramedics found the victim “with fixed and dilated pupils, taking short breaths” and later died. *Id.* The autopsy showed that the victim had “extensive brain damage.” *Id.* In 1996, prosecution experts testified that this was the case of SBS and that the victim died soon after the injuries were inflicted. *Id.* Even if medical records reveal that days prior, the victim was taken to the doctor multiple times for “lethargy, irritability, and vomiting,” it was held that this was irrelevant to the case. *Id.* The defense expert, a pediatric neurologist, testified that the victim’s injuries could have come from before. *Id.* In 1996, Edmunds was convicted. *Id.* Edmund’s motions for an appeal and new trial were denied. *Id.* In 2001, she was denied parole. *Id.* “In 2003 the Wisconsin Innocence Project took on her case”. *Id.* Due to medical discoveries about SBS, the forensic pathologist who conducted the victim’s autopsy recanted his initial testimony. *Id.* Based on this, in 2007, Edmunds’ defense motioned for a new trial, but the motion was denied. *Id.* In 2008, Wisconsin District Court of Appeals “overturned the conviction in light of the new scientific evidence about SBS and ordered a new trial.” *Id.* The same year, Edmunds was released on bond and later her charges were dismissed. *Id.*

⁸⁶ *See Drayton Witt, supra* note 22.

Engberg-Lehmer and her husband Joel Lehmer,⁸⁷ Sean Ralston⁸⁸), manslaughter (John Peel⁸⁹), first-degree child abuse (Julie Baumer⁹⁰), second-degree child abuse (Abigail Tiscareno⁹¹), and child endangerment (Brandy Briggs⁹²).

⁸⁷ Teresa Engberg-Lehmer and her husband, Joel Lehmer were charged with first-degree murder, but pled guilty for involuntary manslaughter and were sentenced to fifteen years in prison for the death of their three-month-old son, Jonathan in Council Bluffs, Iowa. *See Joel Lehmer, supra* note 19; *Teresa Engberg-Lehmer, supra* note 18. In 1997, Teresa put the victim to sleep and the next morning found him “cold and unresponsive.” *Teresa Engberg-Lehmer, supra* note 18. When the victim was taken to the hospital “he was pronounced dead at 12:28 a.m.” *Id.* State Medical Examiner reported that the victim suffered from SBS. *Id.* Lehmer’s attorney sent the medical report to the Iowa City pathologist and Omaha forensic pathologist who concluded that the victim has suffered from something other than SBS. *Id.* In 1998, attorney motioned for a new trial where new forensic expert testimonies were presented. *Id.* After the hearing, in 1998, both were released. *Id.*

⁸⁸ *See Sean Ralston, supra* note 20.

⁸⁹ *See John Peel, supra* note 54. John Peel was charged with first-degree murder, but pled no-contest for manslaughter and was sentenced to ten years for the death of his two-month-old son, John Jr., in Pinellas, Florida. *Id.* The night before, the victim was asleep on Peel’s chest, and in the morning the victim was found dead on the tile floor. *Id.* “Peel was arrested and brought in for questioning; he claimed the baby had fallen out of the bed while he was sleeping.” *Id.* The county medical examiner conducted an autopsy and ruled that this was a homicide case and claimed that the victim suffered from SBS. *Id.* Due to a growing number of accusations against the medical examiner, Peel’s case was re-examined and it was found that the victim did sustain injuries from the fall, and did not have any signs of SBS. *Id.* Based on new facts, in 2002, Peel was released. *Id.*

⁹⁰ *See Julie Baumer, supra* note 21. Julie Baumer was charged with first-degree child abuse and sentenced to ten to fifteen years in prison for the death of her six-week-old nephew in Michigan. *Id.* Baumer took care of the victim since the victim’s mother was a drug addict. *Id.* Baumer took the victim to the hospital since he was “lethargic, fussy, and unwilling to eat.” *Id.* At the hospital, the victim was pronounced dead and the doctors found “a skull fracture and a large amount of blood” and reported it to the authorities. *Id.* Baumer was arrested. *Id.* During the trial, the hospital doctors aiding the victim testified that the victim “had suffered blunt force trauma,” and suffered from SBS. Denzel, *Julie Baumer, supra* note 21. There were no experts on the defense side to prove Baumer’s innocence, as a result, she was convicted. *Id.* In 2009, the Michigan Innocence Clinic took over the case and “Macomb County Circuit Court judge overturned Baumer’s conviction” holding that prior defense counsel was ineffective. *Id.* In 2010, during the second trial, six defense experts testified “that the baby was suffering from Venous Sinus Thrombosis, a form of childhood stroke whose effects can be mistaken for those of Shaken Baby Syndrome,” after which Baumer was acquitted by a jury. *Id.*

⁹¹ *See Abigail Tiscareno, supra* note 74.

⁹² *See Alexandra Gross, Brandy Briggs, NAT’L REGISTRY OF EXONERATIONS, <https://www.law.umich.edu/special/exoneration/Pages/casedetail.aspx?caseid=3812> (last visited Mar. 31, 2018) [hereinafter *Brandy Briggs*]. Brandy Briggs was charged with first-degree felony injury to a child, pled guilty to child endangerment, and was sentenced to seventeen years for the death of her two-month-old baby Daniel Lemons in Highlands, Texas. *Id.* Briggs found the victim “limp, barely breathing and unconscious at her home” and called 911. *Id.* At the hospital, a breathing tube was inserted shortly before the victim’s death. *Id.* The county forensic pathologist declared that the victim sustained “cranio-cerebral trauma with complications” which was “a clear case of Shaken Baby Syndrome” and reported it to the authorities. *Id.* Briggs stated that she was innocent, but because her counsel assured her that she will not be able to afford defense experts, she pled guilty. *Id.* In 2002, Briggs motioned for a new trial, but was denied. *Id.* Briggs’ new defense counsel “asked two pediatricians to examine the cause of the baby’s death, and both concluded that he had died from complications*

The above-mentioned cases also point to the fact that it was quite simple for the medical professionals and the child abuse community to convince the justice system that, though underreported, SBS can be easily determined.⁹³ As a result, without any reliable data, the forensic experts had influence on the justice system. Proponents argued that their “ability to convict in court provided validation of the SBS hypothesis. Within the legal system, this argument worked.”⁹⁴ Because of this, in some wrongful conviction cases, the charges were only dismissed when the defense motioned for a new trial based on scientific studies questioning SBS.⁹⁵

IV. WHO IS AN EXPERT?

Controversies often occur because the following question is left unanswered: Who is an expert in SBS? An analysis of fifteen wrongful conviction SBS cases shows that there is a list of medical experts who come forth, either for the prosecution or defense, to testify in SBS cases.⁹⁶ It is often that during an appeal or second trial, another set of medical experts testify, this time to exonerate the defendant.⁹⁷ That is why it is unclear who can be considered as the ultimate expert that will know best whether the victim has suffered from SBS. This section will discuss the variety of specialists who testified as experts in these cases and how their testimonies impacted wrongful convictions.

From the fifteen wrongful conviction cases, the majority of victims had been taken to the hospital, most often by those who later were

related to a urinary tract infection contracted shortly after birth.” *Id.* In addition, the medical examiner who examined the victim was accused of being biased in infant death cases left shortly thereafter. *Id.* In 2004, the new county medical examiner reviewed autopsy reports for Briggs case “and found no evidence of SBS or any other form of abuse.” *Id.* It was also found that when the victim was brought to the hospital, the breathing tube was mistakenly inserted into his stomach instead of his lung; as a result, he suffered from asphyxia. *Id.* Briggs’ defense counsel motioned for a writ of habeas corpus, on the basis that Briggs’ previous counsel was ineffective. *Id.* The Texas Court of Appeals vacated the charges against Briggs. *Id.* In 2006, “[a]ll charges against Briggs were finally dropped.” *Id.*

⁹³ See Steven C. Gabaeff, *Exploring the Controversy in Child Abuse Pediatrics and False Accusations of Abuse*, 18 LEGAL MED. 90, 91 (2016); see, e.g., DEP’T OF HEALTH, *supra* note 13 (“SBS is usually caused by a frustrated parent or caregiver who shakes a baby when it will not stop crying, or because of some other personal stress like money or relationship problems.”).

⁹⁴ Gabaeff, *supra* note 93, at 91.

⁹⁵ See, e.g., *Audrey Edmunds*, *supra* note 85.

⁹⁶ See *Exoneration Detail List*, NAT’L REGISTRY OF EXONERATIONS, <https://www.law.umich.edu/special/exoneration/Pages/detailist.aspx> (last visited Mar. 31, 2018); see, e.g., *Audrey Edmunds*, *supra* note 85; *Julie Baumer*, *supra* note 21; *John Peel*, *supra* note 54.

⁹⁷ See, e.g., *Audrey Edmunds*, *supra* note 85; *Drayton Witt*, *supra* note 22; *Krystal Voss*, *supra* note 24.

wrongly charged and convicted for the death of the victim.⁹⁸ Therefore, in five cases, hospital doctors,⁹⁹ other physicians,¹⁰⁰ and surgeons¹⁰¹ were the first to declare that the victim has suffered from SBS and reported it to the authorities. From this point, in almost all cases, when the authorities, including police and prosecutors, dealt with the case, they blindly relied on the physician's certainty that the case was a homicide.¹⁰² As a result, SBS became a pass ticket for the medical professionals to gain "power within the legal community" and build a reputation.¹⁰³

After hospital doctors, physicians, and surgeons, the county medical examiner is the most common accuser that the victim has suffered from SBS. Of the fourteen cases, medical examiners have misdiagnosed SBS in three cases.¹⁰⁴ A county medical examiner in the Peel case had also been investigated for having errors in autopsy reports which led to her termination from the job.¹⁰⁵

Among the specialists who have accused defendants of causing SBS were: forensic pathologists in two cases,¹⁰⁶ a pediatric neurosurgeon,¹⁰⁷ a hospital chief of pathology,¹⁰⁸ a pediatrician,¹⁰⁹ an expert in SBS,¹¹⁰ and the head of the Denver Family Crisis Center.¹¹¹ There have also been cases where the accuser has later been investigated by the police for giving invalid expert testimony that caused wrongful conviction. Examples include a county forensic pathologist in the Briggs case¹¹² and a state medical examiner in the Lehmer case.¹¹³

⁹⁸ See, e.g., *Julie Baumer*, *supra* note 21; *Drayton Witt*, *supra* note 22; *Krystal Voss*, *supra* note 24.

⁹⁹ See *Julie Baumer*, *supra* note 21, *Warren Hales*, *supra* note 52.

¹⁰⁰ See *Drayton Witt*, *supra* note 22; *Krystal Voss*, *supra* note 24.

¹⁰¹ See *Abigail Tiscareno*, *supra* note 74.

¹⁰² See *Gabaeff*, *supra* note 93, at 91.

¹⁰³ See *id.*

¹⁰⁴ See *Letha Jean Hockersmith*, *supra* note 80; *Melonie Ware*, *supra* note 26; *John Peel*, *supra* note 54.

¹⁰⁵ See *John Peel*, *supra* note 54.

¹⁰⁶ See *Audrey Edmunds*, *supra* note 85; *Krystal Voss*, *supra* note 24.

¹⁰⁷ See *Warren Hales*, *supra* note 52.

¹⁰⁸ See *Sean Ralston*, *supra* note 20.

¹⁰⁹ See *Abigail Tiscareno*, *supra* note 74.

¹¹⁰ See *id.*

¹¹¹ See *Krystal Voss*, *supra* note 24.

¹¹² *Brandy Briggs*, *supra* note 92 ("Meanwhile, Harris County's chief medical examiner criticized Dr. Moore's 'defective and improper work' and her bias towards police and prosecutors in infant death cases. Dr. Moore left Harris County to work in Florida.").

¹¹³ *Teresa Engberg-Lehmer*, *supra* note 18 ("Bennett resigned as medical examiner two weeks after the couple pled guilty in October 1997 amid an investigation of the administration of his office. Meanwhile, at least two other [SBS] diagnoses made by Bennett had come under fire. In one case, the prosecution, faced with contradictory evidence, declined to bring charges.

In comparison to the number of experts who accuse defendants of causing SBS, more experts have testified to prove defendants' innocence. Among those who have testified for defendants are pediatric neurologists,¹¹⁴ and forensic pathologists.¹¹⁵ Specific titles include: pediatricians,¹¹⁶ a city pathologist,¹¹⁷ a state forensic pathologist,¹¹⁸ a county medical examiner,¹¹⁹ an emergency physician,¹²⁰ an expert in SBS,¹²¹ a forensic pediatric pathologist,¹²² a pediatric neuro-ophthalmologist,¹²³ a pediatric radiologist,¹²⁴ a pediatric neuropathologist,¹²⁵ a pediatric neurosurgeon,¹²⁶ an ophthalmologist,¹²⁷ a mechanical engineer,¹²⁸ and biomechanics experts.¹²⁹ Mechanical engineers and biomechanics were also experts in SBS cases examining the acceleration and deceleration of the victim's head being shaken.¹³⁰ These experts, along with related studies, argue that "shaking alone produces insufficient force to cause the observed injuries" found in victims.¹³¹ Within the fourteen cases being analyzed, the least number of experts required to overturn a conviction was one—specifically, a new medical examiner who was hired once it was found that the previous one was providing flawed testimonies.¹³² The largest number of experts required was eight experts from various fields, including medical and mechanical.¹³³ The need is evident for far more experts to testify in wrongful conviction cases to prove the defendant's innocence.¹³⁴ This is a classic example of the "guilty until proven innocent"

In the other, the prosecution dismissed the case almost immediately after the trial began.”).

¹¹⁴ See *Audrey Edmunds*, *supra* note 85; *Warren Hales*, *supra* note 52.

¹¹⁵ See, e.g., *Audrey Edmunds*, *supra* note 85.

¹¹⁶ See *Brandy Briggs*, *supra* note 92.

¹¹⁷ See *Teresa Engberg-Lehmer*, *supra* note 18.

¹¹⁸ See *Warren Hales*, *supra* note 52.

¹¹⁹ See *John Peel*, *supra* note 54.

¹²⁰ *Sean Ralston*, *supra* note 20.

¹²¹ *Id.*

¹²² See *Krystal Voss*, *supra* note 24.

¹²³ See *id.*

¹²⁴ See *id.*

¹²⁵ See *Drayton Witt*, *supra* note 22.

¹²⁶ See *id.*

¹²⁷ See *id.*

¹²⁸ See *Krystal Voss*, *supra* note 24.

¹²⁹ See *Drayton Witt*, *supra* note 22.

¹³⁰ See Faris A. Bandak, *Shaken Baby Syndrome: A Biomechanics Analysis of Injury Mechanisms*, 151 FORENSIC SCIENCE INT'L 72–73, 74, 75, 78 (2005).

¹³¹ Orenstein, *supra* note 58, at 1312.

¹³² See e.g., *John Peel*, *supra* note 54 (examining the impact of the new expert medical testimony by a single doctor changing the outcome of a case).

¹³³ See *Drayton Witt*, *supra* note 22.

¹³⁴ See *id.*

phenomenon. As shown, there are many cases where the guilt of the defendant is established by the forensic expert testimony. It is crucial that expert testimony be properly contextualized so that the jury will make a verdict strictly following the facts of the case, rather than convicting or acquitting in a biased fashion.

The cornerstone of controversy, when it comes to diagnosing SBS, is that medical professionals rely too heavily on the triad symptoms without looking “outside the box.”¹³⁵ As a result, even if there have been numerous studies calling for medical professionals to look further into the symptoms, these actions may be disfavored because of the effort to discredit SBS in certain medical institutions.¹³⁶ Such was the case of a British pediatric neuropathologist, Waney Squier, whose name was erased from the medical registry despite her practice of thirty-two years.¹³⁷ The main reason for her disgrace was because she claimed that SBS does not necessarily mean that the child was abused,¹³⁸ but that the symptoms may be from “innocent causes, such as choking.”¹³⁹ Eventually, the case reached British High Court, which held that Dr. Squier should have her license reinstated because “her views were genuinely held” by other professionals around the world who argue that the “shaken baby theory has never been proven.”¹⁴⁰ The Court also emphasized a need for further investigation into the validity of SBS diagnoses.¹⁴¹

Since SBS had become an international label, physicians and pediatricians in the United States, United Kingdom, Australia and other countries have been particularly suspicious of infant death cases, claiming that the child had been abused.¹⁴² For instance, in one court report, a forensic expert argued that certain rib fractures strongly tend to be non-accidental, indicating that an adult has squeezed the child’s chest and shaken him or her.¹⁴³ While this may

¹³⁵ See Joseph Shapiro, *Rethinking Shaken Baby Syndrome*, NAT’L PUB. RADIO (June 29, 2011), <https://www.npr.org/2011/06/29/137471992/rethinking-shaken-baby-syndrome>.

¹³⁶ Christina England, *Shaken Baby Syndrome Expert and World Renowned Neuropathologist Banned from Practicing Medicine*, HEALTHIMPACTNEWS (Mar. 23, 2016), <http://healthimpactnews.com/2016/shaken-baby-syndrome-expert-and-world-renowned-neuropathologist-banned-from-practicing-medicine/>.

¹³⁷ See *id.*

¹³⁸ See *id.*; Howard Walker, *‘Shaken Baby’ Expert Witness Found Guilty of Misleading Courts*, NEW SCIENTIST, (Mar. 19, 2016), <https://www.newscientist.com/upfront/3065/>.

¹³⁹ See *id.*

¹⁴⁰ See Sue Luttnner, *Dr. Waney Squier Reinstated*, ON SHAKEN BABY (Nov. 7, 2016), <https://onsbs.com/2016/11/07/dr-waney-squier-reinstated/>.

¹⁴¹ See *id.*

¹⁴² See Molly Gena, Comment, *Shaken Baby Syndrome: Medical Uncertainties Casts Doubt on Convictions*, 2007 WIS. L. REV. 701, 712, 720–21, 722, 723 (2007).

¹⁴³ See *Devon County Council v. EB* [2013] EWHC 968 (Fam).

be the case, there may also be non-abuse causes such as vitamin K deficiencies, bone fragility due to prematurity, or birth trauma.¹⁴⁴ In other words, it has been argued that SBS lacks “objective evidence” in support of its central theory: that the triad symptoms are caused by severe shaking of the infant.¹⁴⁵ Based on this, medical experts should look further into the symptoms before making any claims in the courtroom.

When it comes to medical professionals who testify in court, many do not accuse a defendant of SBS deliberately.¹⁴⁶ Just as they blind the jury that the case is a homicide, experts are blinded as well with the belief that if a child has died in the care of the parent or the caregiver and has the following three symptoms,¹⁴⁷ then the child must have been abused by shaking. As a result, they do not take the time to look further into the symptoms to identify the real cause behind the victim’s injuries. Recently, many physicians who once were firm believers in SBS have stepped down and called forth other medical experts to stop following this “dogmatic” point of view on such cases, since it may cause wrongful convictions.¹⁴⁸

V. RECOMMENDATIONS

To eliminate SBS cases, states such as Pennsylvania have passed legislation, which provides the opportunity for the public to participate in an SBS Program that teaches how to care for a child without causing harm.¹⁴⁹ This is a necessary incentive as it not only teaches parents and caregivers about childcare but also could reduce the rate of offenses and wrongful convictions based on SBS diagnoses.

Moreover, a similar Act was passed in Massachusetts in 2006.¹⁵⁰

¹⁴⁴ See Tonia J. Brousseau et. al, *Vitamin K Deficiency Mimicking Child Abuse*, 29 J. EMERGENCY MED. 283, 285–86 (2005); Blake Bulloch et. al, *Cause and Clinical Characteristics of Rib Fractures in Infants*, 105 PEDIATRICS, no. 4, Apr. 2000, <http://pediatrics.aappublications.org/content/pediatrics/105/4/e48.full.pdf>.

¹⁴⁵ Rachel Burg, *Un-Convicting the Innocent: The Case for Shaken Baby Syndrome Review Panels*, 45 U. MICH. J. L. REFORM 657, 662 (2012).

¹⁴⁶ Debbie Cenziper et. al, *Doctors Who Diagnosed Shaken Baby Syndrome Now Defend the Accused*, WASH. POST: SHAKEN SCIENCE (Mar. 20, 2015), <https://www.washingtonpost.com/graphics/investigations/shaken-baby-syndrome/Doctors-who-diagnosed-Shaken-Baby-Syndrome-now-defend-the-accused.html>.

¹⁴⁷ See Tuerkheimer, *supra* note 4, at 4 (describing the triad of symptoms that trigger a diagnosis of SBS).

¹⁴⁸ Cenziper et al., *supra* note 146.

¹⁴⁹ See, e.g., *Shaken Baby Syndrome Program*, PENN. DEP’T OF HEALTH, http://www.health.pa.gov/My%20Health/Infant%20and%20Childrens%20Health/Newborns%20and%20Infants/Pages/Shaken-Baby-Syndrome.aspx#.Wh3_m1Xia71 (last visited Apr. 2, 2018).

¹⁵⁰ Leslie Rideout, *Nurses’ Perceptions of Barriers and Facilitators Affecting the Shaken Baby Syndrome Education Initiative: An Exploratory Study of a Massachusetts Public Policy*,

This Act directs that nurses be trained on how to appropriately care for the infant and instruct parents.¹⁵¹ Just as the Act in Pennsylvania, the Massachusetts Act allows the parents to gain knowledge and proper training so they will not harm their child.¹⁵² Looking back at the wrongful conviction cases, even if some parents might have harmed their child, they certainly did not do so deliberately, despite courtroom arguments to that effect.

Further, when it comes to expert testimony in SBS cases, it may be helpful to initiate periodical training among medical professionals who tend to take the role of an expert in the courtroom. This will ensure that “medical experts are indeed . . . expert, experienced, and unbiased” as well as “providing them the prerequisite training, experience, and knowledge of the literature regarding [SBS].”¹⁵³ In addition, experts should undergo training on “rules of ethical conduct” to ensure that the experts did not base their testimony on “untested hypotheses” that may lead to wrongful convictions.¹⁵⁴

VI. CONCLUSION

SBS continues to be a controversial topic discussed both in the medical and legal fields. Despite the substantial lack of scientifically proven evidence behind the legitimacy of SBS, the justice system has still relied upon forensic expert testimony in support of it, leading to wrongful convictions. Through the analysis of fourteen wrongful conviction cases, this paper examined the definitional issues that are present in the SBS diagnosis. Namely, definitions of the diagnosis were used to sway the jury’s perception, characterizing defendants as baby-killers. This has led to a shift in the public’s perception of infant deaths as underreported child abuse cases. Further, this paper also focused on the lack of consensus among medical professionals who testify in SBS cases. When it comes to proving the defendant’s innocence, the cases show that a wide variety of experts are necessary than for conviction. Lastly, this paper provides recommendations to improve the clarity in forensic expert testimony for SBS cases to potentially eliminate miscarriages of justice.

23 J. TRAUMA NURSING 125, 126 (2016).

¹⁵¹ *Id.*

¹⁵² *Id.*

¹⁵³ Daniel M. Albert et. al, *Ensuring Appropriate Expert Testimony for Cases Involving the “Shaken Baby”*, 308 JAMA 39, 40 (July 2012).

¹⁵⁴ *Id.*