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The Lethal Injection Quandary:
How Medicine Has Dismantled The Death Penalty

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ARTICLES

THE LETHAL INJECTION QUANDARY: HOW MEDICINE HAS DISMANTLED THE DEATH PENALTY

*Deborah W. Denno**

On February 20, 2006, Michael Morales was hours away from execution in California when two anesthesiologists declined to participate in his lethal injection procedure, thereby halting all state executions. The events brought to the surface the long-running schism between law and medicine, raising the question of whether any beneficial connection between the professions ever existed in the execution context. History shows it seldom did. Decades of botched executions prove it.

This Article examines how states ended up with such constitutionally vulnerable lethal injection procedures, suggesting that physician participation in executions, though looked upon with disdain, is more prevalent—and perhaps more necessary—than many would like to believe. The Article also reports the results of this author's unique nationwide study

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of lethal injection protocols and medical participation. The study demonstrates that states have continued to produce grossly inadequate protocols that severely restrict sufficient understanding of how executions are performed and heighten the likelihood of unconstitutionality. The analysis emphasizes in particular the utter lack of medical or scientific testing of lethal injection despite the early and continuous involvement of doctors but ongoing detachment of medical societies. Lastly, the Article discusses the legal developments that led up to the current rush of lethal injection lawsuits as well as the strong and rapid reverberations that followed, particularly with respect to medical involvement.

This Article concludes with two recommendations. First, much like what occurred in this country when the first state switched to electrocution, there should be a nationwide study of proper lethal injection protocols. An independent commission consisting of a diverse group of qualified individuals, including medical personnel, should conduct a thorough assessment of lethal injection, especially the extent of physician participation. Second, this Article recommends that states take their execution procedures out of hiding. Such visibility would increase public scrutiny, thereby enhancing the likelihood of constitutional executions.

By clarifying the standards used for determining what is constitutional in Baze v. Rees*, the U.S. Supreme Court can then provide the kind of Eighth Amendment guidance states need to conduct humane lethal injections.*

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INTRODUCTION

On February 14, 2006, a federal district court rendered a ruling[1] that would draw criticism to the intricacies of the nation's execution process like never before.[2] For California to conduct the lethal injection execution of Michael Morales, the state had to choose one of two court-mandated options: provide qualified medical personnel who would ensure Morales was unconscious during the procedure, or alter the department of corrections' execution protocol so that only one kind of drug would be given, rather than the standard sequence of three different drugs.[3] Evidence suggested that, of the eleven inmates lethally injected in California, six may have been conscious and tormented by the three-drug regimen,[4] potentially creating an "'unnecessary risk of unconstitutional pain or suffering'" in violation of the Eighth Amendment's Cruel and Unusual Punishments Clause.[5] In a captivating legal moment, the state chose to have medical

1. *See* Morales v. Hickman, 415 F. Supp. 2d 1037 (N.D. Cal. 2006), *aff'd per curiam*, 438 F.3d 926 (9th Cir. 2006), *cert. denied*, 546 U.S. 1163 (2006).

2. *See infra* Part IV.

3. *Morales*, 415 F. Supp. 2d at 1047; *see also* Morales v. Hickman, No. 5:06-cv-00219-JF, slip op. at 1, 2 (N.D. Cal. Feb. 16, 2006) (giving mention to anesthesiologists specifically).

4. *Morales*, 415 F. Supp. 2d at 1045. The *Morales* court refers to execution problems "in at least six out of thirteen executions by lethal injection in California." *Id.* However, two of those thirteen executions were conducted by lethal gas, not by lethal injection. *See* Morales v. Tilton, 465 F. Supp. 2d 972, 975 n.3 (N.D. Cal. 2006) ("In fact, there have been only eleven executions by lethal injection in California . . . .").

5. *Morales*, 415 F. Supp. 2d at 1039 (quoting Cooper v. Rimmer, 379 F.3d 1029, 1033 (9th Cir. 2004)). The Eighth Amendment provides that "[e]xcessive bail shall not be required, nor excessive fines imposed, nor cruel and unusual punishments inflicted." U.S. Const. amend. VIII.

experts present at Morales's execution, setting the stage for a showdown between law and medicine.[6]

Immediately, medical societies protested the *Morales* court's recommendation and the ethical quandaries it posed.[7] Three groups—the American Medical Association,[8] the American Society of Anesthesiologists,[9] and the California Medical Association[10]—united in their opposition to doctors joining executioners. Even bigger surprises from *Morales* were yet to come. It took just one day for prison officials to find two anesthesiologists willing to take part in Morales's execution, after assurances were made that they would remain anonymous.[11] It soon became clear, however, that these doctors had not been fully informed of their roles. In a stunning blow to the *Morales* court's directive, both anesthesiologists resigned mere hours before the scheduled execution time.[12] Because of their ethical responsibilities, the anesthesiologists would not accept the interpretation of the U.S. Court of Appeals for the Ninth

6. Morales v. Hickman, No. C-06-219-JF, slip op. at 1–2 (N.D. Cal. Feb. 21, 2006) (order on defendant's motion to proceed with execution under alternative condition to order denying preliminary injunction).

7. Atul Gawande, *When Law and Ethics Collide: Why Physicians Participate in Executions*, 354 New Eng. J. Med. 1221, 1221 (2006). A key ethical aspect of this topic is to what extent lethal injection constitutes a "medical procedure" and violates the Hippocratic Oath to which medical students swear upon graduation. *See* Nova Online, Hippocratic Oath—Modern Version, http://www.pbs.org/wgbh/nova/doctors/oath_modern.html (last visited Sept. 23, 2007) (crediting Louis Lasagna, academic dean of the School of Medicine at Tufts University, with writing the current version of the oath in 1964).

8. *See* Press Release, Priscilla Ray, Chair, Am. Med. Ass'n Council on Ethical and Judicial Affairs, AMA Opposes Physician Involvement in Executions (Feb. 17, 2006), http://www.ama-assn.org/ama/pub/category/16007.html. The press release reiterated the American Medical Association's opposition to doctor participation in lethal injections and criticized the ruling of Judge Jeremy Fogel in the *Morales* case. *See id.*

9. *See* Dorsey Griffith, *Execution Doctors an Ethics Issue*, Sacramento Bee, Feb. 17, 2006, at A3; Valerie Reitman, *Doctors Wary of Crossing Line*, L.A. Times, Feb. 22, 2006, at A14.

10. *See* Press Release, Calif. Med. Ass'n, California Medical Assn. Objects to Physician Participation in Executions (Feb. 16, 2006), *available at* http://www.cmanet.org/publicdoc.cfm?article_id=351&docid=2&parent=1&templateinc=presssection2&all=yes (emphasizing, in response to Judge Fogel's ruling, that the California Medical Association "has for decades sought to end physician participation in capital punishment").

11. *See* Morales v. Tilton, 465 F. Supp. 2d 972, 976 (N.D. Cal. 2006); Morales v. Hickman, No. C-06-219-JF, slip op. at 2 (N.D. Cal. Feb. 21, 2006) (order on defendant's motion to proceed with execution under alternative condition to order denying preliminary injunction).

12. *See Morales*, 465 F. Supp. 2d at 976 (noting that "for reasons that remain somewhat unclear, there was a 'disconnect between the expectations articulated in the orders of this Court and the Court of Appeals and the expectations of the anesthesiologists' regarding how they would participate in Plaintiff's execution" and explaining further that "Defendants apparently had told the anesthesiologists that the anesthesiologists merely would have to observe the execution, while Defendants' counsel represented to the Court that the anesthesiologists would ensure that Plaintiff would remain unconscious after he was injected with sodium thiopental" (quoting in part Morales v. Hickman, No. C-06-219-JF, slip op. at 3 (N.D. Cal. Feb. 21, 2006) (order on defendant's motion to proceed with execution under alternative condition to order denying preliminary injunction))).

Circuit that they would have to intervene personally and provide medication or medical assistance if the inmate appeared conscious or in pain.[13] The doctors' reasons for refusing to participate spotlight a crucial predicament states face in the administration of lethal injection.

The *Morales* case unearthed a nagging paradox. The people most knowledgeable about the process of lethal injection—doctors, particularly anesthesiologists—are often reluctant to impart their insights and skills.[14] This very dilemma moved Judge Jeremy Fogel, who presided over Morales's hearings, to assume unprecedented involvement in an area that had been controlled primarily by legislatures and department of corrections personnel.[15] In response to the doctor pullout and questions about lethal injection's viability, Judge Fogel organized an unusually long and thorough evidentiary hearing.[16] The homework paid off: Examinations and testifying experts opened a window into the hidden world of executions.

13. *See Morales*, 465 F. Supp. 2d at 976; *see also* Morales v. Hickman, 438 F.3d 926, 931 (9th Cir. 2006), *cert. denied*, 546 U.S. 1163 (2006). In response to Morales's concerns that the role of the anesthesiologists was "uncertain" and that the state had not specified whether the execution chamber's anesthesiologist would do more "than to monitor Mr. Morales' level of unconsciousness," *Morales*, 438 F.3d at 930, the U.S. Court of Appeals for the Ninth Circuit clarified as follows:

> [I]f the anesthesiologists are unable to ensure that Morales "is [or] remains unconscious," we construe the order as clearly contemplating that they have the authority to take "all medically appropriate steps"—either alone or in conjunction with the injection team—to immediately place or return Morales into an unconscious state or to otherwise alleviate the painful effects of either or both the pancuronium bromide or potassium chloride. We also construe the "take all medically appropriate steps" language to require that the anesthesiologists have available the medical supplies and medications a board-certified anesthesiologist would deem necessary to carry out his or her responsibilities to "ensure" Morales is and remains unconscious.

Id. at 931 (citing Morales v. Hickman, No. C-06-219-JF, slip op. at 1, 2 (N.D. Cal. Feb. 16, 2006) (final order re: defendants' compliance with conditions; order denying plaintiff's motions for discovery of information and for reconsideration)).

14. At the same time, doctors do participate, albeit not publicly. For a discussion of the complex nature and extent of physician participation in executions, see *infra* Part II.

15. Judge Fogel acknowledged his uncommon degree of involvement. *See Morales*, 465 F. Supp. 2d at 975 ("It is hoped that the remedy . . . will be a one-time event; . . . the particulars of California's lethal-injection protocol are and should remain the province of the State's executive branch."). For a discussion of legislative changes in execution methods over time, see generally Deborah W. Denno, *When Legislatures Delegate Death: The Troubling Paradox Behind State Uses of Electrocution and Lethal Injection and What It Says About Us*, 63 Ohio St. L.J. 63 (2002) [hereinafter Denno, *When Legislatures Delegate*]; Deborah W. Denno, *Getting to Death: Are Executions Constitutional?*, 82 Iowa L. Rev. 319 (1997) [hereinafter Denno, *Getting to Death*]; Deborah W. Denno, *Is Electrocution an Unconstitutional Method of Execution? The Engineering of Death over the Century*, 35 Wm. & Mary L. Rev. 551 (1994) [hereinafter Denno, *Electrocution*].

16. *See Morales*, 465 F. Supp. 2d at 974 (noting that "the Court has undertaken a thorough review of every aspect of the protocol . . . [and] has reviewed a mountain of documents . . . [as well as] conducted five days of formal hearings, including a day at San Quentin State Prison that involved a detailed examination of the execution chamber and related facilities").

Given that lethal injection is this country's leading execution method,[17] *Morales* cast a shadow over executions across the nation. By the time Judge Fogel issued a memorandum decision on December 15, 2006, holding that California's lethal injection protocol "as implemented" violated the Eighth Amendment,[18] a Missouri district court already had reached such a conclusion concerning its own state's protocol.[19] Indeed, less than a year later, on September 19, 2007, a Tennessee district court would similarly find its state's revised protocol unconstitutional.[20]

Constitutional challenges to lethal injection currently dominate much of the nation's death penalty litigation, with no end in sight.[21] For example, on May 15, 2007, California released a new,[22] even more problematic,[23] protocol, which Judge Fogel will review again.[24] Meanwhile, during a three-month period in 2007, five other states also issued revised protocols.[25]

17. *See* Denno, *When Legislatures Delegate*, *supra* note 15, at 69. Currently, the United States has available five different types of execution methods: hanging, firing squad, electrocution, lethal gas, and lethal injection. *See id.*

18. *Morales*, 465 F. Supp. 2d at 981. For a detailed examination of the earlier stages of *Morales*, see Ellen Kreitzberg & David Richter, *But Can It Be Fixed? A Look at Constitutional Challenges to Lethal Injection Executions*, 47 Santa Clara L. Rev. 445 (2007).

19. Taylor v. Crawford, No. 05-4173-CV-C-FJG, 2006 WL 1779035, at *8 (W.D. Mo. June 26, 2006) ("determin[ing] that Missouri's current method of administering lethal injections subjects condemned inmates to an unacceptable risk of suffering unconstitutional pain and suffering"), *rev'd*, 487 F.3d 1072, 1085 (8th Cir. 2007) (reversing the district court's holding that the state's revised protocol violated the Eighth Amendment). Predictably, Taylor's lawyers have appealed to the U.S. Supreme Court. *See infra* note 417 and accompanying text.

20. Harbison v. Little, No. 3:06-01206, slip op. at 55–56 (M.D. Tenn. Sept. 19, 2007) ("[T]he court finds that the plaintiff's pending execution under Tennessee's new lethal injection protocol violates the Eighth Amendment . . . . The new protocol presents a substantial risk of unnecessary pain . . . .").

21. *See infra* Part IV; *see also* Vesna Jaksic, *Death Penalty Challenges Build: Eleven States React to Bad Convictions, Botched Executions*, Nat'l L.J., Mar. 5, 2007, at 1 (noting that "[a] perfect storm of problematic executions, wrongful convictions and recent court rulings against the practice of lethal injection has led a growing number of states to challenge the death penalty through lawsuits and legislative action").

22. *See* Report of Lethal Injection Protocol Review, Morales v. Tilton, No. C 06-219 JR RS (N.D. Cal. May 15, 2007) (submitting State of Cal., Lethal Injection Protocol Review (May 15, 2007)); San Quentin Operational Procedure 0-770 (Revised May 15, 2007), *Morales*, No. C 06-219 JR RS (submitting State of Cal., San Quentin Operational Procedure Number 0-770 Execution by Lethal Injection (Revised May 15, 2007)). For a critique of the new protocol, see Third Amended Complaint for Equitable and Injunctive Relief [42 U.S.C. § 1983], *Morales*, No. C 06-219 JR RS (N.D. Cal. July 2, 2007), and see Henry Weinstein, *New Execution Protocol Proposed*, L.A. Times, May 16, 2007, at B1 (noting the state's assurance that the new lethal injection protocol will be constitutional).

23. *See* Third Amended Complaint for Equitable and Injunctive Relief [42 U.S.C. § 1983], *supra* note 22, at 14 (criticizing the May 15, 2007, version of California's protocol, Procedure 770, as being "even more ill-conceived and deficient than the older versions").

24. *See* Henry Weinstein, *Hearing on State's Lethal Injection Protocol Delayed*, L.A. Times, Sept. 15, 2007, at B6 (noting that Judge Fogel moved the scheduled hearings on the new protocol from October 1, 2007, to December 10 and 11, 2007, thereby "making it highly likely that a court-ordered moratorium on executions in California will stretch to at least two years").

25. In addition to California, those states were Florida, Georgia, South Dakota, Tennessee, and Washington. *See* State of Cal., San Quentin Operational Procedure Number

These revisions included two overhauled versions for Florida—one in May 2007 and one in July 2007—neither of which adequately addressed the problems of the previous protocol,[26] as well as the new version for Tennessee that was rendered unconstitutional in September 2007.[27] While *Morales* served as a catalyst for this protocol-revising rush, such activity now spans the entire country.

As *Morales* makes clear, medicine is the key to understanding the problems of lethal injection. Like all lethal injection states that offer information on the chemicals used,[28] California's execution protocol provides for the intravenous administration of three drugs: sodium thiopental, a common anesthetic for surgery used to cause unconsciousness; pancuronium bromide, a total muscle relaxant that stops breathing by paralyzing the diaphragm and lungs; and potassium chloride, a toxin that induces cardiac arrest and permanently stops the inmate's heartbeat.[29] In *Morales*, the defendants urged, and the court agreed, that under the state's protocol, the listed amount of the first drug, sodium thiopental, should cause the condemned inmate to lose consciousness in less than a minute.[30] The parties concurred, however, that if the sodium thiopental was ineffective, it would be unconstitutional to inject the second and third drugs into a conscious person.[31] Because of its paralytic effects, the second drug, pancuronium bromide, would mask indications that the inmate was

0-770 Execution by Lethal Injection (Revised May 15, 2007); Fla. Dep't of Corr., Execution by Lethal Injection Procedures (July 31, 2007); Fla. Dep't of Corr., Execution by Lethal Injection Procedures (May 9, 2007); Ga. Dep't of Corr., Lethal Injection Procedure (June 7, 2007); S.D. Dep't of Corr., Policy 1.3.D.3: Execution of an Inmate (June 8, 2007) (effective July 1, 2007); Tenn. Dep't of Corr., Execution Procedures for Lethal Injection (Apr. 30, 2007); State of Wash., Dep't of Corr., Capital Punishment, DOC 490.200 (June 21, 2007). Earlier in 2007, North Carolina had also adopted a new protocol. *See* Conner v. N.C. Council of State, No. 07 Gov 0238, slip op. at 8–11 (N.C. Office of Admin. Hearings Aug. 9, 2007).

26. *See infra* notes 444–52 and accompanying text; *see also* Fla. Dep't of Corr., Execution by Lethal Injection Procedures (July 31, 2007); Fla. Dep't of Corr., Execution by Lethal Injection Procedures (May 9, 2007). The second revised protocol attempted to add more specific qualifications for execution procedures after Judge Carven D. Angel's comments in State v. Lightbourne. *See* Transcript of Proceedings at 4–27, State v. Lightbourne, No. 42-1981-CF-170 (Fla. Cir. Ct. July 22, 2007) (on file with author) (entering from the bench a temporary stay of execution and commenting on the additional information needed to make Florida's execution procedures constitutional). The July 31, 2007, protocol replaced the May 9, 2007, protocol, which was not applied in any execution. On September 10, 2007, Judge Angel lifted the stay of execution upon finding Florida's protocol constitutional. State v. Lightbourne, Nos. 1981-170 CF, SC06-2391, slip op. at 5 (Fla. Cir. Ct. Sept. 10, 2007).

27. Harbison v. Little, No. 3:06-01206, slip op. at 55–56 (M.D. Tenn. Sept. 19, 2007); *see also supra* note 20 and accompanying text.

28. *See infra* Part III.

29. *See* Denno, *When Legislatures Delegate*, *supra* note 15, at 98.

30. *See* Morales v. Tilton, 465 F. Supp. 2d 972, 978 & n.6 (N.D. Cal. 2006).

31. *See id.*

conscious and in excruciating pain from feelings of suffocation as well as intense burning as the potassium chloride entered the vein.[32]

Judge Fogel determined that California's process embodied too much risk of unconstitutionality due to "a number of critical deficiencies" in the protocol.[33] These included (1) "*inconsistent and unreliable screening of execution team members*"—highlighted, for instance, by one execution team leader's smuggling of illegal drugs into the prison while also in charge of handling the sodium thiopental (a pleasurable and addictive controlled substance);[34] (2) "*lack of meaningful training, supervision, and oversight of the execution team*"—exemplified by the court's conclusion that team members "almost uniformly have no knowledge of the nature or properties of the drugs that are used or the risks or potential problems associated with the procedure" and the shockingly indifferent reactions by team members when describing troublesome executions;[35] (3) "*inconsistent and unreliable record-keeping*"—revealed by inadequate documentation concerning whether all of the sodium thiopental prepared for an execution actually was injected and testimony that in several executions it was not, as well as evidence that "[a] number of the execution logs are incomplete or contain illegible or overwritten entries with respect to critical data;"[36] and (4) "*inadequate lighting, overcrowded conditions, and poorly designed facilities*"—noted by descriptions that the execution team members, who were in a separate room from the inmate, worked in conditions in which the lighting and sound were so poor and the space so constrained that team members could not effectively observe or hear the inmate—much less tell whether the inmate was unconscious.[37]

Other lethal injection challenges throughout the country revealed comparably disturbing details. In Kentucky, the protocol allowed improperly trained executioners to insert catheters into an inmate's neck despite a doctor's refusal to do so and heated criticism of the procedure, a practice ultimately ruled unacceptable.[38] In Missouri, a doctor who had supervised fifty-four executions over the course of a decade had a record of

32. *See id.* at 980. For further discussion of the pain and suffering created by the lethal injection drugs, see Denno, *When Legislatures Delegate*, *supra* note 15, at 97–112, and Denno, *Getting to Death*, *supra* note 15, at 379–85.

33. *See Morales*, 465 F. Supp. 2d at 979; *see also id.* at 981 ("Defendants' actions and failures to act have resulted in an undue and unnecessary risk of an Eighth Amendment violation. This is intolerable under the Constitution.").

34. *Id.* at 979.

35. *Id.*

36. *Id.*

37. *Id.* at 980.

38. *See* Baze v. Rees, No. 04-CI-1094, slip op. at 8 (Ky. Cir. Ct. July 8, 2005), *aff'd*, 217 S.W.3d 207 (Ky. 2006), *reh'g denied*, No. 2005-SC-000543-MR, 2007 Ky. LEXIS 98 (Ky. Apr. 19, 2007), *cert. granted*, No. 07-5439, 2007 U.S. LEXIS 9066 (U.S. Sept. 25, 2007), *amended*, No. 07-5439, 2007 U.S. LEXIS 11115 (U.S. Oct. 3, 2007) ("The petition for a writ of certiorari is granted limited to Questions 1, 2, and 3 presented by the petition."); *see also* Petition for a Writ of Certiorari, *Baze*, 2007 U.S. LEXIS 9066 (No. 07-5439); Deborah W. Denno, *Death Bed*, 124 TriQuarterly 141, 162 (2006) (discussing *Baze*).

more than twenty malpractice suits and revoked privileges at two hospitals.[39] A nearly two-hour execution of an Ohio prisoner who appeared to be suffocated alive in May 2007 followed a comparably controversial ninety-minute execution a year earlier that had compelled the state to revise its procedures.[40] In turn, in North Carolina, a doctor present to monitor the inmate's level of consciousness—a court-ordered requirement, but one that would violate the American Medical Association's ethical guidelines—later said he had not done so.[41] In Florida in December 2006, the execution of a tormented, conscious prisoner prompted a study that resulted in two protocol revisions and an evidentiary hearing that halted all the state's executions until September 10, 2007.[42] When, after repeated needle pokes,

39. *See supra* note 19 (discussing the procedural history and current status of *Taylor v. Crawford*, No. 05-4173-CV-C-FJG, 2006 WL 1779035, at *6 (W.D. Mo. June 26, 2006), *rev'd*, 487 F.3d 1072 (8th Cir. 2007)). For an excellent discussion of *Taylor* and its ramifications, see Ellyde Roko, Note, *Executioner Identities: Toward Recognizing a Right to Know Who Is Hiding Beneath the Hood*, 75 Fordham L. Rev. 2791, 2791 (2007).

40. For an account of the May 2007 execution of Christopher J. Newton, see Alan Johnson, *Prisoner Executed After IV Lines Cause Delay*, Columbus Dispatch (Ohio), May 25, 2007, at B1. During his execution process, Newton at one point laughed at the executioners when he was allowed to get up to use the restroom because it took them more than an hour to insert an intravenous line. *See id.* Witnesses later said Newton had turned blue as his chest heaved after the execution team finally injected the lethal chemicals. *See* Alan Johnson, *ACLU Seeks Execution Records; Inmate Suffocated, Doctor Says*, Columbus Dispatch (Ohio), June 1, 2007, at B5. For an account of the May 2006 execution of Joseph Clark, see *infra* notes 336–38 and accompanying text. Family members of Joseph Clark filed a federal lawsuit for damages in the amount of $150,000 against the state of Ohio, alleging inadequate training and supervision and deliberate indifference to a "substantial risk of a problematic execution." *See* Complaint and Jury Demand at 8, Estate of Joseph Lewis Clark v. Voorhies, No. 07 CV 510 (S.D. Ohio July 2, 2007). For an interesting argument concerning the applicability of tort doctrine to botched executions, see Julian Davis Mortenson, *Earning the Right to Be Retributive: Execution Methods, Culpability Theory, and the Cruel and Unusual Punishment Clause*, 88 Iowa L. Rev. 1099, 1106 (2003) (stating that when the government selects a particular method of execution while aware that some executed inmates will experience pain and suffering as a result, then "the responsible state actors can properly be charged with committing a reckless or knowing—and perhaps even an intentional—tort when a botched execution actually occurs" and explaining that "this 'new' understanding of botched executions is actually no more than a common-sense application of longstanding Eighth Amendment doctrine in the prison conditions context").

41. *See* Andrea Weigl, *Doc's Execution Role: 'Be Present,'* News & Observer (Raleigh, N.C.), Mar. 30, 2007, at 1A.

42. *See* Governor's Comm'n on Admin. of Lethal Injection, Final Report with Findings and Recommendations 8 (2007) [hereinafter Florida Commission Report]; *supra* note 25–26 and accompanying text (discussing Florida's two revised protocols); *see also* Marc Caputo, *Crist Signs First Warrant to Resume Executions*, Miami Herald, July 19, 2007, at 6B (discussing Florida Governor Charlie Crist's signing of a death warrant to resume executions in Florida). From May to July 2007, the state held an evidentiary hearing concerning how lethal injections were conducted in Florida. *See* Transcript of Proceedings, State v. Lightbourne, No. 42-1981-CF-170 (Fla. Cir. Ct. May 18–July 22, 2007). As a result, Judge Angel stopped the lethal injection process, questioning numerous aspects of how the state conducts executions. Excerpt from Transcript of Proceedings at 4–27, State v. Lightbourne, No. 42-1981-CF-170 (Fla. Cir. Ct. July 22, 2007) (on file with author) (issuing a ruling from the bench staying Lightbourne's execution after raising concerns about the qualifications of executioners). Judge Angel focused particularly on the age qualifications of the state's executioner, who need only be eighteen years of age. In Florida, an executioner is defined as

California inmate Stanley Tookie Williams asked his executioners, "'You guys doing that right?'"[43] Williams could have been addressing department of corrections personnel in every lethal injection state.

Medical personnel—those individuals most likely to know whether a lethal injection is being done "right"—often avoid the procedure. In 2006, when a surge of court cases and resulting media attention began to focus on botched lethal injections,[44] the president of the American Society of Anesthesiology (ASA) reacted defensively: "Lethal injection was not anesthesiology's idea," he insisted.[45] Rather, the problem rested with "American society," which "decided to have capital punishment as part of our legal system and to carry it out with lethal injection."[46] For these reasons, "the legal system has painted itself into this corner and it is not [the medical profession's] obligation to get it out."[47] What the ASA president's statement does not acknowledge, however, is that medicine is in the same corner with law, holding the paint can and the brush.

This next phase of the examination of lethal injection in this country will prove most critical: How will states handle the perplexing medical questions that lethal injection has posed? Most courts would agree with Judge Fogel that while the system of "lethal injection is broken . . . it can be fixed."[48] But how?

Part I of this Article discusses how states ended up with such constitutionally vulnerable lethal injection procedures. By analyzing the history of lethal injection, this Article shows that mistakes made three decades ago with the method's creation are being repeated today. Part II investigates the crucial link between law and medicine in the context of lethal injection. Physician participation in executions, though looked upon with disdain, is more prevalent—and perhaps more necessary—than many

"a person 18 years of age or older, who is selected by the warden to initiate the flow of lethal chemicals into the inmate." Fla. Dep't of Corr., Execution by Lethal Injection Procedures (May 9, 2007). As the judge explained,

> I don't think that any 18-year-old executioner with the pressure of a governor's warrant behind him to carry out an execution, and with the pressure of the whole world, the press and the whole world, in front of him and looking at him, is going to have enough experience and competence to stop an execution when it needs to be stopped. I just don't think that's going to happen.

Excerpt from Transcript of Proceedings at 4, State v. Lightbourne, No. 42-1981-CF-170 (Fla. Cir. Ct. July 22, 2007) (on file with author). On September 10, 2007, however, Judge Angel lifted the stay of execution upon finding Florida's protocol constitutional. State v. Lightbourne, Nos. 1981-170 CF, SC06-2391, slip op. at 5 (Fla. Cir. Ct. Sept. 10, 2007); *see also supra* note 26 and accompanying text (discussing Florida's recent lethal injection litigation).

43. Kevin Fagan, *Eyewitness: Prisoner Did Not Die Meekly, Quietly*, S.F. Chron., Dec. 14, 2005, at A12.

44. *See infra* Part IV.

45. Message from Orin F. Guidry, M.D., President, Am. Soc'y of Anesthesiologists, Observations Regarding Lethal Injection (June 30, 2006), *available at* http://www.asahq.org/news/asanews063006.htm.

46. *Id.*

47. *Id.*

48. Morales v. Tilton, 465 F. Supp. 2d 972, 974 (N.D. Cal. 2006).

would like to believe. Part III reports the results of this author's unique nationwide study of lethal injection protocols and medical participation. The study demonstrates that states have continued to produce grossly inadequate protocols that severely restrict sufficient understanding of how executions are performed and heighten the likelihood of unconstitutionality. This part emphasizes in particular the utter lack of medical or scientific testing of lethal injection despite the early and continuous involvement of some doctors but ongoing detachment of medical societies. Part IV discusses the legal developments that led up to *Morales* as well as the strong and rapid reverberations that followed, particularly with respect to medical contributions.

This Article concludes with two recommendations to ensure that states do not repeat the mistakes associated with lethal injection's adoption and the recent responses to litigation. First, much like what occurred in this country when the first state switched to electrocution, there should be a nationwide study of proper lethal injection protocols. An independent commission consisting of a diverse group of qualified individuals, including medical personnel, should conduct a thorough assessment of lethal injection, especially the extent of physician participation. Second, this Article recommends that states take their execution procedures out of hiding. Such visibility would increase public scrutiny, thereby enhancing the likelihood of constitutional executions.

At no other time in this country's history have doctors or medical organizations been this committed to evaluating a method of execution.[49] Such examination has illuminated the current finger-pointing between law and medicine concerning responsibility for lethal injection's flaws. Medical societies may have shunned involvement with lethal injection, perhaps at times inappropriately, but physicians contributed to the method's creation and continue to take part in its application. Both law and medicine turned a blind eye to a procedure about which warnings were blared repeatedly. The problem rests not only with "American society," but also with the legal and medical communities that are part of it.

I. THE SEARCH FOR A MEDICALLY HUMANE EXECUTION

This country's centuries-long search for a medically humane method of execution landed at the doorstep of lethal injection. Of the thirty-eight death penalty states, lethal injection is the sole method of execution in twenty-eight states[50] and is one of two methods of execution in nine.[51] Nebraska uses only electrocution.[52]

49. *See infra* Part II.

50. *See* Ariz. Rev. Stat. Ann. § 13-704 (2006); Ark. Code Ann. § 5-4-617 (2006); Colo. Rev. Stat. Ann. § 18-1.3-1202 (West 2006); Conn. Gen. Stat. Ann. § 54-100 (West 2007); Del. Code Ann. tit. 11, § 4209 (2007); Ga. Code Ann. § 17-10-38 (2006); 725 Ill. Comp. Stat. Ann. 5/119-5 (West 2006); Ind. Code Ann. § 35-38-6-1 (West 2006); Kan. Stat. Ann. § 22-4001 (2006); Ky. Rev. Stat. Ann. § 431.220 (West 2006); La. Rev. Stat. Ann. § 15:569 (2006); Md. Code Ann., Crim. Law § 2-303 (West 2006); Miss. Code Ann. § 99-19-51

Statistics demonstrating lethal injection's dominance, however, belie the rapidly changing impact of recent lethal injection challenges. In 2006, for example, executions plunged to half of their 1999 numbers.[53] Numerous states—and the federal government—ceased executions entirely, many due, in whole or part, to lethal injection-related challenges.[54] During the 2006 to

(2006); Mont. Code Ann. § 46-19-103 (2005); Nev. Rev. Stat. Ann. § 176.355 (West 2006); N.J. Stat. Ann. § 2C:49-2 (West 2007); N.M. Stat. § 31-14-11 (2006); N.C. Gen. Stat. Ann. § 15-187 (West 2006); Ohio Rev. Code Ann. § 2949.22 (West 2007); Okla. Stat. Ann. tit. 22, § 1014 (West 2006); Or. Rev. Stat. § 137.473 (2005); 61 Pa. Stat. Ann. § 3004 (West 2006); S.D. Codified Laws § 23A-27A-32 (2006) (amended 2007); Tenn. Code Ann. § 40-23-114 (West 2006); Tex. Code Crim. Proc. Ann. art. 43.14 (Vernon 2006); Utah Code Ann. § 77-18-5.5 (West 2006); Wyo. Stat. Ann. § 7-13-904 (2006). The New York Court of Appeals held the state's death penalty statute unconstitutional in 2004, preventing executions. *See* People v. LaValle, 817 N.E.2d 341, 367 (N.Y. 2004). However, the chosen method of execution in New York remains lethal injection. N.Y. Correct. Law § 658 (McKinney 2003).

51. These nine states are divided according to the alternative execution method they allow apart from lethal injection. Alabama, Florida, South Carolina, and Virginia allow for electrocution. *See* Ala. Code §§ 15-18-82 to 82.1 (2007); Fla. Stat. Ann. § 922.105 (West 2007); S.C. Code Ann. § 24-3-530 (2006); Va. Code Ann. § 53.1-234 (West 2006). New Hampshire and Washington also have hanging as a method. *See* N.H. Rev. Stat. Ann. § 630:5 (2006); Wash. Rev. Code Ann. § 10.95.180 (West 2007). California and Missouri both have lethal gas as an alternative. *See* Cal. Penal Code § 3604 (West 2007); Mo. Ann. Stat. § 546.720 (West 2006). Idaho provides for execution by firing squad. *See* Idaho Code Ann. § 19-2716 (2006). This footnote does not include statutes designating a choice only if an inmate was sentenced before a certain date, or any of the other myriad variations in statutes that have been documented in detail elsewhere. *See* Denno, *When Legislatures Delegate*, *supra* note 15, at 188–206.

52. *See* Neb. Rev. Stat. § 29-2532 (2006).

53. Executions in the United States have decreased from a high of ninety-eight in 1999. *See* Tracy L. Snell, Bureau of Justice Statistics, Bureau of Justice Statistics Bull., No. NCJ 215083, Capital Punishment 9 (2005), *available at* http://www.ojp.usdoj.gov/bjs/pub/pdf/cp05.pdf. In 2006, states executed fifty-three people, fifty-two by lethal injection and one by electrocution. *See* U.S. Dep't of Justice, Capital Punishment Statistics: Summary Findings, http://www.ojp.usdoj.gov/bjs/cp.htm (last visited Aug. 31, 2007). Fourteen states executed condemned inmates. *See id.* Texas executed twenty-four inmates; Ohio executed five inmates; Florida, North Carolina, Oklahoma, and Virginia each executed four inmates; and Indiana, Alabama, Mississippi, South Carolina, California, Montana, Nevada, and Tennessee each executed one inmate. *See id.*

54. Illinois officially imposed a moratorium on executions in 2001. *See* Press Release, Governor's Office, Governor Ryan Declares Moratorium on Executions, Will Appoint Commission to Review Capital Punishment System (Jan. 31, 2000), http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=359. New Jersey lifted a three-month-long moratorium in March 2007, but executions still are on hold in the state after a state court declined to approve the state's revised protocol. *See In re* Readoption of N.J.A.C. 10A:23, 842 A.2d 207 (N.J. Super. Ct. App. Div. 2004); *see also* Jeff Whelan, *Christie Seeks Federal Death Penalty in Newark Slaying*, Star-Ledger (Newark, N.J.), Apr. 4, 2007, at 18. Federal district courts in California and Missouri held execution protocols unconstitutional in 2006. *See* Morales v. Tilton, 465 F. Supp. 2d 972 (N.D. Cal. 2006); Taylor v. Crawford, No. 05-4173-CV-C-FJG, 2006 WL 1779035, at *8 (W.D. Mo. June 26, 2006), *rev'd*, 487 F.3d 1072 (8th Cir. 2007). The U.S. Court of Appeals for the Eighth Circuit later held that Missouri's revised protocol did not violate the Eighth Amendment. *See* Taylor v. Crawford, 487 F.3d 1072, 1085 (8th Cir. 2007). Governors in three states, Florida, South Dakota, and Tennessee, established moratoria on executions by executive order in the 2006 to 2007 time frame. *See* Fla. Exec. Order No. 06-260 (Dec. 15, 2006), *available at* http://www.deathpenaltyinfo.org/FloridaExecutiveOrder.pdf (staying all executions after a botched execution); An Order Directing the Department of Correction to

2007 session, legislatures in nearly half of the thirty-eight death penalty states had legislation pending either to abolish the death penalty[55] or to establish a moratorium on executions.[56] Of course, there have been backlashes.[57] But undeniable evidence shows the death penalty's slide, and lethal injection is a crucial domino in the deck.

Complete a Comprehensive Review of the Manner in which the Death Penalty Is Administered in Tennessee, Tenn. Exec. Order No. 43 (Feb. 1, 2007), *available at* http://www.tennesseeanytime.org/governor/AdminCMSServlet?action=viewFile&id=969 (placing executions on hold for ninety days); Press Release, S.D. Governor's Office, Gov. Rounds Issues Statement on the Stay of Execution for Elijah Page (Aug. 29, 2006), http://www.state.sd.us/news/printDoc.aspx?i=7722. All three states subsequently enacted new protocols. *See* Fla. Dep't of Corr., Execution by Lethal Injection Procedures (July 31, 2007); S.D. Dep't of Corr., Policy 1.3.D.3: Execution of an Inmate (June 8, 2007) (effective July 1, 2007); Tenn. Dep't of Corr., Execution Procedures for Lethal Injection (Apr. 30, 2007). Both Tennessee and South Dakota executed inmates in 2007. *See* Tenn. Dep't of Corr., Tennessee Executions, http://www.state.tn.us/correction/newsreleases/tnexecutions.htm (last visited Aug. 31, 2007) (documenting the May 9, 2007, execution of Phillip Workman); *see also* S.D. Dep't of Corr., Frequently Asked Questions: Capital Punishment, http://www.state.sd.us/CORRECTIONS/FAQ_Capital_Punishment.htm (last visited Aug. 31, 2007) (documenting the execution of Elijah Page on July 11, 2007). At the same time, the respective constitutional statuses of the lethal injection protocols in Florida and Tennessee changed in September 2007. On September 10, a court lifted a temporary stay of execution in Florida upon determining that Florida's protocol did not violate the Eighth Amendment. State v. Lightbourne, Nos. 1981-170 CF, SC06-2391, slip op. at 5 (Fla. Cir. Ct. Sept. 10, 2007). In contrast, on September 19, a court determined that "Tennessee's new lethal injection protocol violates the Eighth Amendment." Harbison v. Little, No. 3:06-01206, slip op. at 55 (M.D. Tenn. Sept. 19, 2007). Courts in four other states, Arkansas, Delaware, Maryland, and North Carolina, have stayed executions and have not had a subsequent execution. *See* Nooner v. Norris, No. 5:06CV00110 SSW (E.D. Ark. June 26, 2006); Jackson v. Taylor, No. Civ. 06-300-SLR, 2006 WL 1237044 (D. Del. May 9, 2006); Evans v. State, 914 A.2d 25 (Md. 2006); Robinson v. Beck, No. 07 CVS 001109 (N.C. Super. Ct. Jan. 25, 2007). Federal executions also have ceased during the pendency of a challenge to the lethal injection protocol. Roane v. Gonzales, No. 05-2337 (RWR/DAR) (D.D.C. Feb. 24, 2006).

55. Numerous states had legislation pending during the 2006 to 2007 session to abolish the death penalty. *See, e.g.*, H.B. 2278, 48th Leg., 1st Reg. Sess. (Ariz. 2007); H.B. 07-1094, 66th Gen. Assem., Reg. Sess. (Colo. 2007); S.B. 328, 95th Gen. Assem., Reg. Sess. (Ill. 2007); S.B. 222, 82d Leg., Reg. Sess. (Kan. 2007); H.B. 200, 2007 Gen. Assem., Reg. Sess. (Ky. 2007); H.B. 225, 422d Gen. Assem., Reg. Sess. (Md. 2007); H.B. 216, 2007 Leg., Reg. Sess. (Miss. 2007); S.B. 354, 94th Gen. Assem., 1st Reg. Sess. (Mo. 2007); L.B. 476, 100th Leg., 1st Sess. (Neb. 2007); H.B. 607, 160th Leg., 2007 Sess. (N.H. 2007); S.B. 2471, 212th Leg., Legis. Sess. (N.J. 2007); H.B. 190, 48th Leg., 1st Sess. (N.M. 2007); A.B. 542, 230th Leg., 2007 Reg. Sess. (N.Y. 2007); H.B. 1195, 82d Legis. Assem., 2007 Sess. (S.D. 2007); H.B. 745, 80th Leg., Reg. Sess. (Tex. 2007); H.B. 1960, Gen. Assem., 2007 Reg. Sess. (Va. 2007); H.B. 1518, 60th Leg., 1st Reg. Sess. (Wash. 2007).

56. Pending legislation in several states sought to impose moratoria on executions in order to study capital punishment. *See, e.g.*, H.B. 205, 2007 Leg., Reg. Sess. (Miss. 2007); S.B. 439, 94th Gen. Assem., 1st Reg. Sess. (Mo. 2007); H.B. 809, 80th Leg., Reg. Sess. (Tex. 2007).

57. Several states considered legislation to expand the application of the death penalty. *See* H.B. 185, 149th Gen. Assem., Legis. Sess. (Ga. 2007); H.B. 3130, 117th Gen. Assem., 1st Reg. Sess. (S.C. 2007); H.B. 86, 57th Leg., 2007 Gen. Sess. (Utah 2007). A bill in West Virginia is attempting to reintroduce the punishment. *See* H.B. 2124, 78th Leg., Reg. Sess. (W. Va. 2007).

A. *Before Lethal Injection*

This country's turn to lethal injection reflects states' growing reliance on medicine as a response to philosophical, financial, and political pressures to eliminate the death penalty.[58] For example, New York State's increasing opposition to capital punishment in the early 1800s—a move prompted by a series of disastrous public hangings attended by crowds of thousands[59]—led the state's governor to ask the legislature in 1885 "whether the science of the present day" could not find a less barbaric means to execute.[60] The governor's appointed commission of three "well known citizens" ultimately selected the electric chair, following the commission's impressively detailed two-year study of every execution method ever used throughout history.[61]

In 1890, the murderer William Kemmler became the first person in the country to be electrocuted.[62] New York's decision to enact electrocution spurred intense legal and scientific battles, resolved only when the U.S. Supreme Court decided that the Eighth Amendment would not apply to the states.[63] Kemmler was executed in a day of confusion and horror,[64] suffering a slow demise of burning flesh and ashes.[65] Such catastrophe did not dissuade states from adopting this new method of purported scientific advancement.[66] Electrocution still was deemed superior to hanging or, at the very least, was far less visible.[67]

The problems with electrocution only worsened with the passing decades, despite (or perhaps because of) the enhanced scrutiny of the method's application.[68] By the time Allen Lee Davis was executed in Florida in 1999, over a century after Kemmler, the tragedies of the method

58. *See generally* Denno, *When Legislatures Delegate*, *supra* note 15.

59. *See generally* Philip English Mackey, Hanging in the Balance: The Anti-Capital Punishment Movement in New York State, 1776–1861 (1982).

60. *In re* Kemmler, 136 U.S. 436, 444 (1890).

61. N.Y. Comm'n on Capital Punishment, Report of the Commission to Investigate and Report the Most Humane and Practical Method of Carrying into Effect the Sentence of Death in Capital Cases (1888) [hereinafter New York Commission Report]. The commission consisted of its chair, Elbridge T. Gerry, a prominent attorney and counsel for the Society for the Prevention of Cruelty to Animals; Dr. Alfred P. Southwick, a dentist from Buffalo; and Matthew Hale, an attorney from Albany. *See id.*

62. *See Far Worse Than Hanging*, N.Y. Times, Aug. 7, 1890, at 1.

63. *In re Kemmler*, 136 U.S. at 446.

64. *See Far Worse Than Hanging*, *supra* note 62; *see also* Richard Moran, Executioner's Current: Thomas Edison, George Westinghouse, and the Invention of the Electric Chair 15–16 (2002) (discussing the Kemmler execution).

65. *See Far Worse Than Hanging*, *supra* note 62; *see also* Moran, *supra* note 64, at 15–16 (2002).

66. *See* Denno, *Electrocution*, *supra* note 15, at 604–06.

67. *See* Stuart Banner, The Death Penalty: An American History 169 (2002) (noting that fifteen states had adopted electrocution by 1913 and another eleven states used the method by 1950).

68. *See generally* Marian J. Borg & Michael L. Radelet, *On Botched Executions*, *in* Capital Punishment: Strategies for Abolition 143, 143–68 (Peter Hodgkinson & William A. Schabas eds., 2004).

appeared insurmountable: Davis suffered deep burns and bleeding on his face and body, as well as partial asphyxiation from the mouth strap that belted him to the chair's headrest.[69] Millions of people around the world viewed virtually the results of Davis's execution through the Florida Supreme Court's web site postings of Davis's post-execution color photographs—ultimately crashing and disabling the Florida court's computer system for months.[70] While the botched Davis execution did not halt electrocutions, it did prompt the Florida legislature to enable inmates to choose between electrocution and lethal injection.[71]

In light of this troubling execution method's history,[72] lethal injection's popularity is understandable. Modern hangings risked being too long and cruel, like their predecessors.[73] Lethal gas was judged the worst of all.[74] In 1992, for example, Donald Harding's eleven-minute execution and suffocating pain were so disturbing for witnesses that one reporter cried continuously, "two other reporters 'were rendered walking "vegetables" for days,'" the attorney general ended up vomiting, and the prison warden claimed he would resign if forced to conduct another lethal gas execution.[75] While the firing squad has not been systematically evaluated, and may even be the most humane of all methods, it always has carried with it the baggage of its brutal image and roots.[76] The law turned to medicine to rescue the death penalty.

The following section provides the most thorough and accurate account available of this law-medicine partnership based on historical research as well as extensive interviews with the major parties involved in lethal injection's origin. The legal system relied on anesthesiology just enough to understand the concept of lethal injection, but not to account sufficiently for its barbarity when misapplied on human beings.

69. *See* Provenzano v. Moore, 744 So. 2d 413, 442–44 (Fla. 1999) (Shaw, J., dissenting); *see also* Denno, *When Legislatures Delegate*, *supra* note 15, at 78–79.

70. *See, e.g.*, *Millions Flock to US Execution Site*, Scotsman (Edinburgh, Scot.), Nov. 1, 1999, at 22; *see also* Denno, *When Legislatures Delegate*, *supra* note 15, at 78–79.

71. *See* Fla. Stat. Ann. § 922.105 (West 2007) (providing inmates with a choice between electrocution and lethal injection).

72. *See* Borg & Radelet, *supra* note 68, at 143–68.

73. *See* Campbell v. Wood, 18 F.3d 662, 684–85 (9th Cir. 1994); *see also* Gawande, *supra* note 7, at 1222 ("Under the best of circumstances, the cervical spine is broken at C2, the diaphragm is paralyzed, and the prisoner suffocates to death, a minutes-long process.").

74. *See* Fierro v. Gomez, 77 F.3d 301, 309 (9th Cir. 1996) (finding execution by lethal gas unconstitutional).

75. Ivan Solotaroff, The Last Face You'll Ever See: The Private Life of the American Death Penalty 7 (2001).

76. *See generally* Christopher Cutler, *Nothing Less Than the Dignity of Man: Evolving Standards, Botched Executions and Utah's Controversial Use of the Firing Squad*, 50 Clev. St. L. Rev. 335, 337–98 (2002) (surveying the history and use of the firing squad in the United States). For a comparative analysis of execution methods within a medical context, see Arif Khan & Robyn M. Leventhal, *Medical Aspects of Capital Punishment Executions*, 47 J. Forensic Sci. 847 (2002).

B. *The Advent of Lethal Injection*

Lethal injection was considered a potential execution method in the United States as early as 1888.[77] The New York governor's appointed commission rejected it, in part because of the medical profession's belief that, with injection, the public would begin to link the practice of medicine with death.[78] Of course, this concern about lethal injection exists to the present day.[79]

Six decades later, Great Britain's Royal Commission on Capital Punishment also dismissed lethal injection, concluding after a five-year study of Great Britain's entire death penalty process that injection was no better than hanging, the country's long-standing method.[80] Critical to the Royal Commission's investigation of lethal injection, however, was the substantial weight the commission gave to medical opinions and expertise.[81] The commission solicited input from members of two of the country's most established medical organizations—the British Medical Association and the Association of Anaesthetists—as well as prison medical officers.[82]

The host of problems these medical experts detected with lethal injection still ring true today. For example, based on such medical contributions, the Royal Commission determined that a standard lethal injection could not be administered to individuals with certain "physical abnormalities" that make their veins impossible to locate; rather, it was likely that executioners would have to implement intramuscular (as opposed to intravenous) injection, even though the intramuscular method would be slower and more painful.[83] Significantly, the commission emphasized that lethal injection requires medical skill.[84] While the British medical societies made clear their opposition to participating in the process,[85] the Royal Commission still believed that acceptable executioners could be located, even in the medical profession.[86] Nonetheless, other obstacles to lethal injection proved

77. New York Commission Report, *supra* note 61, at 75.

78. *See* Denno, *Electrocution*, *supra* note 15, at 572–73.

79. *See infra* Part II.

80. *See* Royal Commission on Capital Punishment 1949–53, Report 258, 261 (1953) [hereinafter Royal Commission Report]. For a discussion of the creation and backdrop of the Royal Commission, see Brian P. Block & John Hostettler, Hanging in the Balance 127–35 (1997); James B. Christoph, *Capital Punishment and British Party Responsibility*, 77 Pol. Sci. Q. 19, 26 (1962).

81. Royal Commission Report, *supra* note 80, at 257–61.

82. *Id.* at 257.

83. *Id.* at 258–60.

84. *See id.*

85. *See id.* at 258. The commission quoted the view of the British Medical Association:

> No medical practitioner should be asked to take part in bringing about the death of a convicted murderer. The Association would be most strongly opposed to any proposal to introduce, in place of judicial hanging, a method of execution which would require the services of a medical practitioner, either in carrying out the actual process of killing or in instructing others in the technique of the process.

Id. (citation omitted).

86. *Id.* at 259.

determinative.[87] In particular, the commission found a lack of "reasonable certainty" that lethal injections could be performed "quickly, painlessly and decently," at least at that time.[88] Ultimately, in 1965, the British abandoned the death penalty with a few exceptions.[89]

In 1976, the United States reexamined the lethal injection issue after the Supreme Court reinstated the death penalty following a four-year moratorium.[90] Remarkably, during this reexamination, none of the medical opinion evidence gathered on lethal injection—either from the New York or the British Commissions—was addressed in legislative discussions or debates. Seemingly oblivious to prior concerns, American lawmakers emphasized that lethal injection appeared more humane and visually palatable relative to other methods.[91] It was also cheaper.[92]

1. Oklahoma Roots

In May 1977, Oklahoma became the first state to adopt lethal injection.[93] Contrary to the thorough and deliberative approaches taken by the New York and British commissions, however, accounts suggest that two doctors (at most) were the sole medical contributors to the method's creation.[94] At each step in the political process, concerns about cost, speed, aesthetics, and legislative marketability trumped any medical interest that the procedure would ensure a humane execution.

The two key legal players in the development of Oklahoma's lethal injection statute were then-Oklahoma State Senator Bill Dawson[95] and then-Oklahoma House Representative Bill Wiseman.[96] Dawson claimed that he first thought of using drugs for human execution when he was a college student.[97] Wiseman said he acquired the idea in 1976, when he

87. *See id.*

88. *Id.* at 261.

89. *See* Murder (Abolition of Death Penalty) Act, 1965, c. 71 (Eng.). Consequently, there was no reason for the British to reevaluate whether lethal injection would be preferable to other methods of execution. *See* Franklin E. Zimring & Gordon Hawkins, Capital Punishment and the American Agenda 109 (1986).

90. *See* Gregg v. Georgia, 428 U.S. 153 (1976) (plurality opinion).

91. *See infra* Part II.

92. *See infra* notes 132–35 and accompanying text.

93. *See* Denno, *Getting to Death*, *supra* note 15, at 375.

94. *See infra* notes 100–17 and accompanying text.

95. Bill Dawson died of a brain tumor in 1987. *See* Robby Trammell, *Bill Dawson, 43, Dies of Cancer*, Daily Oklahoman, Jan. 18, 1987, at A1.

96. The final bill listed Dawson and Wiseman among its sponsors. *See* An Act Relating to Criminal Procedure; Amending 22 O.S. 1971, Section 1014; and Specifying the Manner of Inflicting Punishment of Death, S.B. 10, 36th Leg., 1st Sess. (Okla. 1977). The bill passed the Oklahoma State Senate on May 3, 1977, and the Oklahoma House of Representatives on May 9, 1977. *See id.* Both the house and senate held conferences on the bill and issued a conference report, indicating that it was controversial. *See id.*

97. *See* Robert Moore, *Doctor as Executioner: The Argument Over Death by Injection*, New Physician, Sept. 1980, at 21. These thoughts were fueled further when, as a senator, Dawson received a letter from a student in his district reiterating the idea of lethal injections as a viable method for execution. *See id.*

visited his personal physician, the president of the Oklahoma Medical Association (OMA), and inquired about a more humane way to execute death row inmates.[98] Strikingly, that physician later informed Wiseman that the OMA board did not want to become entrenched in the venture because licensed physicians could not participate in executions.[99] In subsequent years, American medical societies continuously would echo the OMA's stance, balking at any official involvement in lethal injection. Yet lawmakers would proceed with their decision making, regardless.

With medical societies out of the picture, both Dawson and Wiseman turned elsewhere. Eventually, they consulted with A. Jay Chapman, then chief medical examiner for Oklahoma.[100] From the start, Chapman was upfront about his glaring lack of expertise. Indeed, when initially contacted, his "first response was that [he] was an expert in dead bodies but not an expert in getting them that way."[101] Wiseman also warned Chapman about OMA's position and the effect such views could have on Chapman's medical career.[102] Chapman was not worried: "'To hell with them: let's do this.'"[103]

The two men pulled out a pad and quickly drafted a statute based on Chapman's dictation: "'An intravenous saline drip shall be started in the prisoner's arm, into which shall be introduced a lethal injection consisting of an ultra-short-acting barbiturate in combination with a chemical

98. *See* William J. Wiseman, Jr., *Confessions of a Former Legislator*, Christian Century, June 20–27, 2001, at 6; *see also* Tim Barker, *Author of Lethal Injection Bill Recalls His Motive*, Tulsa World, Sept. 7, 1990, at A1 (noting in an article featuring former Oklahoma House Representative Bill Wiseman that Wiseman turned to lethal injection in an effort to create more humane executions, particularly relative to electrocution, and that while the debates on lethal injection were occurring, Wiseman distributed to each legislator two pictures of an inmate who had been electrocuted, commenting that the scenes "'looked like seared meat,'" and that "'[s]ome people just didn't like it'").

99. *See* Wiseman, *supra* note 98, at 6; *see also* Vince Beiser, *A Guilty Man*, Mother Jones, Sept.–Oct. 2005, at 34.

100. *See* Beiser, *supra* note 99, at 37; Moore, *supra* note 97, at 22; Wiseman, *supra* note 98, at 7; E-mails from William J. Wiseman, Jr., Adm'r, Univ. of Cent. Okla., to author (Dec. 14, 2005; Jan. 17, 2006) (on file with author); Telephone Interview with William J. Wiseman, Jr., Adm'r, Univ. of Cent. Okla. (Dec. 14, 2005); *see also* Richard Tapscott, *Drugs: A Step Toward Humane Executions?*, Tulsa Trib., Feb. 8, 1977, at 1B (noting Chapman's help). Chapman was the chief medical examiner in Oklahoma from 1971 to 1982. In 1982, Chapman left his chief medical examiner position to move to California and work in private practice as a forensic pathologist for Sonoma County. *See* Curriculum Vitae of A. Jay Chapman (n.d.) (on file with author); Telephone Interview with A. Jay Chapman, Forensic Pathologist, Santa Rosa, Cal.; Professor of Forensic Med., Inst. of Med., Tribhuvan Univ., Maharajgunj Campus, Kathmandu, Nepal (Jan. 4, 2006); E-mail from A. Jay Chapman to author (Jan. 4, 2006) (on file with author); *see also* E-mail from A. Jay Chapman to author (Jan. 15, 2006) (on file with author) (noting that Chapman moved to Nepal in 1998).

101. E-mail from A. Jay Chapman, Forensic Pathologist, Santa Rosa, Cal.; Professor of Forensic Med., Inst. of Med., Tribhuvan Univ., Maharajgunj Campus, Kathmandu, Nepal, to author (Jan. 18, 2006) (on file with author).

102. *See* Wiseman, *supra* note 98, at 7.

103. *Id.*

paralytic.'"[104] Chapman assumed that the chemicals used would be sodium thiopental (what has in fact been used) and the paralytic would be chloral hydrate; yet both Wiseman and Chapman believed the statute should be vague.[105] Neither of them was certain if or when lethal injection would be implemented or what drugs might then be available.[106] Unfortunately, such stunning unknowns had no impact on Wiseman's confidence in the procedure's potential success. As Wiseman recounted, lethal injection (a name he said he created) had the following benefits in his mind: "No pain, no spasms, no smells or sounds—just sleep, then death."[107] Such optimism is disturbing given Wiseman's complete lack of medical background[108] and other circumstances—most particularly, the problems with injection that the Royal Commission had detected,[109] critical commentary about the drugs Chapman and Wiseman were considering,[110] and the in-hindsight difficulties that recent litigation has revealed.[111]

Completely independent of Wiseman's or Chapman's input or knowledge,[112] Dawson also sought the advice of Stanley Deutsch, who then was head of Oklahoma Medical School's anesthesiology department.[113]

104. *Id.*; *see also* Tapscott, *supra* note 100 (explaining that Chapman "helped Wiseman draw up the language of the bill").

105. *See* Wiseman, *supra* note 98, at 7; *see also* E-mail from A. Jay Chapman, Forensic Pathologist, Santa Rosa, Cal.; Professor of Forensic Med., Inst. of Med., Tribhuvan Univ., Maharajgunj Campus, Kathmandu, Nepal, to author (Jan. 16, 2006) (on file with author).

106. *See* Wiseman, *supra* note 98, at 7; *see also* E-mail from A. Jay Chapman, *supra* note 105; E-mail from William J. Wiseman, Jr., Adm'r, Univ. of Cent. Okla., to author (Dec. 14, 2005) (on file with author). According to Wiseman,

> As I recall the meeting in my office, Dr. Chapman recommended that our statutory language be generic, which is why we said "ultra-short-acting barbiturate in combination with a chemical paralytic." At the time, again as I recall, Dr. Chapman told me that the actual agents would likely be, respectively, sodium pentiothol (sp?) and potassium chloride. Dr. Chapman thought that it would be better not to be overly specific about the actual agents to be used, so that reasonable judgments could make appropriate alterations as developments and the passage of time and experience might indicate.

E-mail from William J. Wiseman, Jr., Adm'r, Univ. of Cent. Okla., to author (Dec. 14, 2005) (on file with author). According to Chapman, "As best I can remember, we were quite specific with the drugs from the beginning, but we did not specify them for legislation. We simply thought it would be better not to at the time—for what precise reasons I don't remember." E-mail from A. Jay Chapman, *supra* note 105.

107. Wiseman, *supra* note 98, at 7. In fact, however, the term "lethal injection" earlier was used by the Royal Commission in their report. Royal Commission Report, *supra* note 80, at 257.

108. *See* Wiseman, *supra* note 98, at 7.

109. *See supra* notes 83–88 and accompanying text.

110. *See* Simon Berlyn, *Execution by the Needle*, New Scientist, Sept. 15, 1977, at 676, 676–77 (explaining the problems with the combination of a fast-acting barbiturate and a chemical paralytic, specifically the "terrifying possibility . . . that if an insufficient dose of barbiturates were given in execution," along with a "large" amount of paralytic, "a conscious victim would be unable to convey an experience of intense suffering").

111. *See infra* Part IV.

112. Telephone Interview with William J. Wiseman, Jr., Adm'r, Univ. of Cent. Okla. (Oct. 13, 2005) (explaining that he (Wiseman) did not know that Dawson had contacted Deutsch).

113. *See* Denno, *Getting to Death*, *supra* note 15, at 374 n.321.

Deutsch and Dawson never met, but simply talked once on the phone when Dawson called to ask Deutsch to recommend a method for executing prisoners through the intravenous administration of drugs.[114] Deutsch responded with a two-page letter that recommended two types of drugs: "an ultra short acting barbiturate" (for example, sodium thiopental) in combination with a "nueormuscular [sic] blocking drug[]" (for example, pancuronium bromide) to create a "long duration of paralysis."[115] But Deutsch's February 28, 1977, correspondence was probably sent too late to contribute to the Oklahoma State Senate's March 2, 1977, passage of the initial version of the statute, which contained language identical to the final statute.[116]

By all accounts, then, Chapman was the major, if not the primary, creator of lethal injection.[117] At the same time, he remains shocked by reports that

114. Telephone Interview with Stanley Deutsch, Professor of Anesthesiology (retired), George Washington Sch. of Med. (Jan. 20, 2006).

115. Letter from Stanley Deutsch, Professor of Anesthesiology, Univ. of Okla. Health Sci. Cen., to Bill Dawson, Okla. State Sen. (Feb. 28, 1977) (on file with author).

116. *See id.* Deutsch's letter to Dawson so closely mirrored the final wording of Oklahoma's lethal injection statute that, in hindsight, it seemed that it had served as a basic blueprint. *See* Denno, *When Legislatures Delegate*, *supra* note 15, at 97. Deutsch consistently has been given credit for suggesting the original lethal injection chemicals, an account that he and others justifiably encouraged; yet his true impact may have only been to confirm what Chapman initially suggested. *See* Telephone Interview with Lawrence D. Egbert, Visiting Professor of Anesthesiology & Critical Care Med., Johns Hopkins Univ. Sch. of Med. (Jan. 24, 2007). Regardless, in context, both doctors' recommendations were misplaced. The author's interviews and correspondence with Chapman and Deutsch indicate that the two doctors gave advice independently and that, contrary to earlier explanations and Deutsch's own personal beliefs, Deutsch probably had no actual input into the decision making because his letter was too late. *See supra* notes 104, 113 and accompanying text.

117. Other sources bolster this conclusion that Chapman was the major creator of lethal injection. For example, Ned Benton, the former director of the Oklahoma Department of Corrections, credited Chapman with influencing the state's adoption of lethal injection, explaining that Chapman, who "was a popular official," had given a "well received" presentation about lethal injection at a legislative hearing that Benton had attended. E-mail from F. Warren (Ned) Benton, Professor, John Jay Coll. of Criminal Justice and the Graduate Ctr., City Univ. of N.Y., to author (July 18, 2005) (on file with author). According to Benton, the recommendation for lethal injection drugs "didn't come from [Benton's then] Medical Director, Dr. Armond Start, because [Start] was opposed to the death penalty in principle and preferred not to participate in planning how it might take place." *Id.* (noting that, regardless, Start later took a comparable medical director post in Texas, where lethal injections were performed); *see also* Barbara Bolsen, *Strange Bedfellows: Death Penalty and Medicine*, 248 JAMA 518 (1982) (quoting Armand Start's assertion that "'there's a thousand junkies . . . who can start an IV faster than any doctors. . . . Just don't involve us doctors in this sordid business'"). Likewise, Fred Jordan, who was Oklahoma's assistant chief medical examiner when Oklahoma's lethal injection bill was being passed, explained that "Mr. Wiseman with the advice of Dr A. Jay Chapman, Chief Medical Examiner of Oklahoma at that time, wrote the law and moved it through the Oklahoma legislature." E-mail from Fred B. Jordan, Deputy Chief Med. Exam'r of Maine; Chief Med. Exam'r of Okla. (retired), to author (Jan. 17, 2006) (on file with author); *see also* Telephone Interview with Fred B. Jordan, Deputy Chief Med. Exam'r of Maine; Chief Med. Exam'r of Okla. (retired) (Jan. 17, 2006) (explaining his views on the development of lethal injection in Oklahoma). Chapman appears also to be the primary medical doctor responsible for developing the 1981 Oklahoma Department of Corrections protocol. As he explains, "I think that is correct. I probably discussed [the protocol] with Fred [Jordan]—and perhaps

lethal injection generally is not performed by doctors but rather by individuals with little to no familiarity with the procedure.[118] From the start, Chapman stated that he thought there were "no ethical constraints to a doctor administering the drug to the condemned person."[119] He also noted that he personally "would have no hesitation to participate in a judicial execution,"[120] a view he still holds,[121] because such an act "cannot reasonably be construed to be the practice of medicine."[122] Rather, he expressed the belief that, during a lethal injection, "the sensations would be

consulted with some anesthesiologist about it—that's how I know, as I told you—about the pancuronium and the thiopental simultaneous administration causing a problem—but it is my work." E-mail from A. Jay Chapman, *supra* note 101.

118. *See* Human Rights Watch, So Long as They Die: Lethal Injections in the United States 33 (2006). Chapman has also changed his mind on what he considers to be the proper chemicals. *See* Elizabeth Cohen, *Lethal Injection Creator: Maybe It's Time to Change Formula*, CNN.com, http://www.cnn.com/2007/HEALTH/05/07/lethal.injection/index.html (last visited Sept. 27, 2007); *see also* Paul Elias, *Inventor Says Fault in Lethal Injection Lies in Human Error*, Virginian-Pilot, May 11, 2007, at A8 (noting that Chapman "blames incompetent executioners" for the problems with lethal injection).

119. Tapscott, *supra* note 100. Dr. Eugene Brice, senior pastor at Tulsa Oklahoma's First Christian Church, however, offered a more accurate prediction of how the new lethal injection process and doctor involvement could unfold, "suspect[ing] problems will arise in trying to find people to administer the lethal drugs." Micki Van Deventer, *Drug Death Better? Ministers Say New Method More Humane*, Tulsa Trib., May 11, 1977, at 1E. As Brice explained, "'A qualified medical person would need to [perform a lethal injection], and I would think it would be a strain on most doctors' ethical approaches.'" *Id.*

120. A. Jay Chapman, *Lethal Injections Not Practice of Medicine*, Am. Med. News, Apr. 22–29, 1991, at 45, 45 (responding to a previous commentary by James G. Reisner, M.D., in *American Medical News* on February 25, 1991).

121. E-mail from A. Jay Chapman, Forensic Pathologist, Santa Rosa, Cal.; Professor of Forensic Med., Inst. of Med., Tribhuvan Univ., Maharajgunj Campus, Kathmandu, Nepal, to author (Jan. 5, 2006) (on file with author).

122. Chapman, *supra* note 120, at 45. As Chapman emphasized, "I grow weary of the piety of pronouncements made by groups such as the AMA Council on Ethical and Judicial Affairs. These decisions are in the province of the individual physician." *Id.*; *see also* Letter from Theodore R. Reiff, Professor of Med., Adjunct Professor of Religious Studies, Univ. of N.D., to A. Jay Chapman, Chief Med. Exam'r of Okla. (Dec. 31, 1981) (on file with author) ("You are quoted as saying that you would be willing 'to serve in any capacity' in the execution. Please let me know if you would be willing to actually inject the lethal medication."); Letter from A. Jay Chapman, Chief Med. Exam'r of Okla., to Theodore R. Reiff, Professor of Med., Adjunct Professor of Religious Studies, Univ. of N.D. (Jan. 12, 1981) (on file with author). According to Chapman,

> The quotation attributed to me in the [*American*] *Medical News* is correct in that I said that I would be willing to serve in any capacity in the execution. I certainly meant that to include that I would be willing to actually inject the lethal medication.
>
> I am perfectly aware that this flys [sic] in [the] face of the AMA stance concerning this matter, but I feel it is the duty of each individual physician to decide such issues.

Id. (referring to Chapman, *supra* note 120). *But see A New Executioner: The Needle*, Time, Sept. 4, 1981, at 80, 80 (noting that the state of Oklahoma "concluded that the injections could be administered by non-doctors" because Dr. Armond Start, who supervised inmate health care, agreed with the American Medical Association that physicians should not participate in executions, a position "[t]hat set off acrimonious debate" and "suggestions that Start [should] resign," but which ultimately ended in Start's favor).

similar to being placed under anesthetic" and "'[t]here would be nothing unpleasant.'"[123]

In theory, lethal injection might have held much appeal. Yet the lawyers and doctors so fervently advocating its use had a distorted concept of how the procedure would operate in reality. Two professions (law and medicine), blinded by resolve, plunged together into a dark legal and medical hole from which they have yet to emerge.

2. No Medical or Scientific Study

A detailed investigation of lethal injection's creation and history shows that at no point was the procedure medically or scientifically studied on human beings.[124] That the Oklahoma statute (and later, the more specifically designated protocol) did not have medical justification became clear during the legislative debate. At one point, the lethal injection bill stalled, in large part because of concern that lethal injection had not been tested sufficiently.[125] Indeed, William Hughes, a physician and chairman of the OMA's legislative committee, who might have offered an informed perspective, had not even read the bill before it was submitted to the legislature.[126] Nor did he want to.[127] Once again, the OMA turned its back on the lethal injection process.

Nevertheless, on March 2, 1977, the Oklahoma State Senate voted 26–20 to change the state's execution method from electrocution to lethal injection.[128] This vote followed a two-hour debate that focused on a range of issues—deterrence (with some senators saying that the electric chair was the better deterrent to murder), humaneness (with some senators saying that lethal injection was more humane), and retribution (with some senators arguing that lethal injection was "an easy way out").[129] One particularly

123. Tapscott, *supra* note 100. As Chapman also explained,

> "I guess I take the hardened view because I've performed so many autopsies on murder victims, but in these cases I think the individual, by nature of his act, has shown himself to be unable to ever function in society so society has no responsibility for him."

Id.

124. *See* Denno, *When Legislatures Delegate*, *supra* note 15, at 90–120.

125. *See* John Greiner, *Drug Execution Plan Suffers Senate Setback*, Daily Oklahoman, Feb. 16, 1977, at 16 (explaining that one senator "apparently had drummed up enough votes to have killed the bill had it been brought to a final vote" and noting the concerns of a former assistant district attorney that "the legislature and Senate should study [the bill] more carefully").

126. *See* Moore, *supra* note 97, at 22.

127. *See id.*; *see also* Jim Killackey & Ellen Knickmeyer, *Execution Called Uncivilized but Inmate 'Simply Goes to Sleep,' Lethal Drug Proponent Says*, Daily Oklahoman, July 20, 1987, at 3. These developments might have prompted Dawson to contact Deutsch to acquire further medical input.

128. *See* An Act Relating to Criminal Procedure; Amending 22 O.S. 1971, Section 1014; and Specifying the Manner of Inflicting Punishment of Death; and Making Provisions Separable, S.B. 10, 36th Leg., 1st Sess. (Okla. 1977).

129. *See* John Greiner, *Drug Executions Win Senate Nod*, Daily Oklahoman, Mar. 3, 1977, at 1; *see also Crisp Raps Use of Drugs in Executions*, Daily Oklahoman, Jan. 30,

critical point discussed served as an eerie harbinger of events to come—the problems that lethal injection could potentially cause.[130] Yet this subject was narrow and limited. For example, one senator warned that some drug-using inmates might be less affected by the injection and survive, rendering the inmate a "vegetable to take care of."[131] Remarkably, however, such a comment laments the economic repercussions of the problem—the state's need to provide care for an inmate after a botched execution—not the Eighth Amendment issue of cruelty or the sheer inhumanity of causing such a horrifying and preventable mistake.

In fact, questions of cost caught the attention of legislators.[132] Dawson had informed the state senate that, according to the Oklahoma Department of Corrections, $50,000 would be needed to renovate the electric chair because it had been damaged.[133] Building a gas chamber would require $250,000.[134] By contrast, "[w]hen he [Dawson] pointed out that the cost of execution by injection would be only about $10, the argument 'did seem to carry some weight' in the discussion."[135]

On April 20, 1977, the Oklahoma House of Representatives passed the bill with a 74–18 vote.[136] Critically, however, that version of the bill dropped a key amendment requiring the state to continue using the electric chair until death by drugs had been ruled legal by the U.S. Supreme Court.[137] The amendment's disappearance presents a disturbing irony: The method of execution that so dominates this country's death penalty system might never have been implemented in its state of origin without Supreme Court approval.

1977, at 64 (stating that State Prison Warden Richard Crisp had emphasized "that putting prisoners to death by use of pills 'shows more consideration for the killer than the killer showed for his victim'"). The Oklahoma State Senate debate was recorded but the tape of it could not be located in the Oklahoma State Archives. *See* Telephone Interview with Gary Harrington, Admin. Archivist, Okla. Dep't of Libraries (Apr. 5, 2007).

130. *See* Greiner, *supra* note 129.

131. *Id.*

132. Tapscott, *supra* note 100 (noting that "[t]he issue to be decided by the Legislature involves costs, ethics and philosophy").

133. *See* Moore, *supra* note 97, at 23; *see also* Capital Bureau, *'Merciful Members' of Legislature Engage in Gallows Humor*, Daily Oklahoman, Apr. 24, 1977, at 25 (quoting Wiseman's references to the cost required to repair the state's electric chair).

134. *See* Greiner, *supra* note 129.

135. Moore, *supra* note 97, at 23.

136. *See* An Act Relating to Criminal Procedure; Amending 22 O.S. 1971, Section 1014; and Specifying the Manner of Inflicting Punishment of Death; and Making Provisions Separable, S.B. 10, 36th Leg., 1st Sess. (Okla. 1977).

137. *See id.*; *see also* Mike Hammer, *Drug Death Bill Passes*, Daily Oklahoman, Apr. 21, 1977, at 65; John Greiner, *Senate Oks Drug Plan, Execution Bill Gains*, Daily Oklahoman, May 4, 1977, at 1. According to one account of the house debates, "[g]rumbling supporters" of lethal injection complained that the electric-chair-use amendment "could delay indefinitely the imposition of death sentences"; however, they claimed at a later time that the representative offering the electric-chair amendment "agreed to change the provision radically when the bill is before a Senate-House conference committee." Richard Tapscott, *Death-by-Drug Bill Passes State House*, Tulsa Trib., Apr. 21, 1977, at 1A.

Immediately after the bill's passage Chapman expressed alarm about how lethal injection would be practiced.[138] His statements in *The Daily Oklahoman* foreshadowed the problems to come, problems that have remained unresolved for thirty years:

> Dr. A. Jay Chapman, state medical examiner, said [in May 1977] that if the death-dealing drug is not administered properly, the convict may not die and could be subjected to severe muscle pain.
>
> The major hazard of using lethal drugs in the execution of criminals is missing the vein in establishing an intravenous "pathway" for the drugs, he warned.
>
> Dr. Chapman, an early proponent of the execution method, said it is not necessary that a physician administer the drug, but it should be someone knowledgeable in drug injection.
>
> . . . .
>
> In describing what he perceives as the ideal process for administering the drug, Dr. Chapman said a "drip" should be started intravenously in the prisoner's arm. Direct shots into the vein would not be used.
>
> When the intravenous pathway was secured, "one big push of drugs" would be made.
>
> Dr. Chapman said the drug injection could take only several seconds and would feel like the sudden "loss of consciousness" felt by surgery patients who have anesthesia induced.
>
> . . . .
>
> The barbiturate drug which could be used, Dr. Chapman said, is a hypnotic sedative named "thiopental." It simply would put the prisoner to sleep.
>
> The paralytic agent, which would cause respiratory muscles to cease functioning, may be a curare-type compound, he said.
>
> State Corrections Director Ned Benton said . . . his office will work throughout the summer with the medical examiner's office to find the best method of drug injection "which could be defended in court."
>
> Benton said it was his understanding that state laws do not restrict who gives shots.[139]

Chapman's initial concerns all have played out continuously in executions across the country for the last quarter century. For example, occurrences of "severe muscle pain" and "missing the vein," as well as

138. *See* Jim Killackey, *Execution Drug Like Anesthesia*, Daily Oklahoman, May 12, 1977, at 1.
139. *Id.*

fears that "the convict may not die,"[140] have been real and repeated problems. Likewise, the need to have available "someone knowledgeable in drug injection"[141] raises one of the most significant issues of all, as *Morales* and recent lethal injection litigation demonstrate.[142] But such comments also prompt a key question: How could Chapman support a bill—indeed create a procedure—knowing all too well the dangerous complications associated with it? While Chapman offered blunt statements in 2006 that he "'never knew we would have complete idiots injecting these drugs . . . [w]hich we seem to have,'"[143] from the beginning, he explicitly warned of that possibility.[144]

News articles from the late 1970s make clear the tentative status of Oklahoma's protocol. A 1979 *Daily Oklahoman* article, for example, emphasized that "[o]fficials with the State Department of Corrections say it may be years—if ever—before they are required to carry out mandates of the 1977 Legislature, which approved the drug injection law."[145] The article also noted that "[o]fficials feel that if and when they have to use the injection law, *new and better drugs may be available*."[146] Such statements suggest officials had limited confidence in the effectiveness of the chemicals that Chapman introduced, and even anticipated they might never be used. Likewise, while Oklahoma Department of Corrections officials adopted a protocol in 1978 outlining how an injection would occur,[147] the

140. *Id.*

141. *Id.*

142. *See supra* Introduction and *infra* Part IV.

143. Human Rights Watch, *supra* note 118, at 31; *see also* E-mail from A. Jay Chapman, Forensic Pathologist, Santa Rosa, Cal.; Professor of Forensic Med., Inst. of Med., Tribhuvan Univ., Maharajgunj Campus, Kathmandu, Nepal, to Stephen P. Slater, Dir. of Budget & Finance, Office of the Chief Med. Exam'r of Okla., with cc to author (Jan. 6, 2006) (on file with author) ("It seems there have been some very real problems with lethal injection—carried out by idiots—and we need to try to piece together the origins of this legislation.").

144. *See supra* notes 138–39 and accompanying text. Of course, Chapman was not the only person contributing to the hazards of lethal injection. Former State Corrections Director Ned Benton, whom *The Daily Oklahoman* quoted, has now said, in hindsight, he was not aware of the details of Oklahoma's lethal injection protocol because he believed that an execution in Oklahoma would not immediately take place. *See* E-mail from F. Warren (Ned) Benton, *supra* note 117 ("I did not believe that an actual execution was going to take place and my position was that we would study the matter."). Benton's explanation, however, would not be acceptable today. As the state corrections director, he was responsible for the contents of the protocol irrespective of when or even if it was ever going to be used. As current lethal injection litigation shows, this very kind of disengagement on the part of corrections personnel, particularly at Benton's senior level, has created a host of major difficulties in lethal injection executions. *See infra* Part IV.

145. *See* Jim Killackey, *Officials Draw Grim Executions Lethal*, Daily Oklahoman, Nov. 12, 1979, at 1; *see also supra* note 144 and accompanying text (discussing the views of Ned Benton concerning the perceived unlikelihood that an execution would occur in Oklahoma in the foreseeable future).

146. Killackey, *supra* note 145 (emphasis added).

147. Okla. Dep't of Corr., Procedures for the Execution of Inmates Sentenced to Death, No. OP-090901 (May 1, 1978) (on file with the author).

department noted that the protocol might need "a few modifications or refinements."[148]

Chapman provided those modifications in 1981 as one of his last responsibilities as state medical examiner.[149] Perhaps Chapman's most crucial change was adding a third drug, potassium chloride, to the prior two-drug lethal injection mix.[150] In doing so, Chapman effectively set the final drug framework for all future lethal injection executions.[151] It is now

148. Killackey, *supra* note 145.

149. *See* Recommended Procedures for Execution by Lethal Drug Injection (n.d.) (on file with author) (Chapman provided the author with both a handwritten and typed version.); *see also* E-mail from A. Jay Chapman, Forensic Pathologist, Santa Rosa, Cal.; Professor of Forensic Med., Inst. of Med., Tribhuvan Univ., Maharajgunj Campus, Kathmandu, Nepal, to author (Jan. 15, 2006) (on file with author). According to Chapman, he was the author of the memo, *Recommended Procedures for Execution by Lethal Drug Injection*, which he wrote in "1981–82—at the time of the approaching first execution by lethal injection." *Id.*; *see also infra* text of note 150 (discussing the 1981 modifications and protocol).

150. Letter from A. Jay Chapman, Chief Med. Exam'r of Okla., to Armond Start, Dep't of Corr., Okla. (June 24, 1981) (on file with author) (concerning the procedures for executions to be carried out at the state penitentiary). The letter states that not only would Chapman be the designated person to devise the details of the implemented protocol, but also that the protocol could include potassium chloride. *See* Killackey & Knickmeyer, *supra* note 127. In 1978, the department of corrections protocol indicated the following drug combinations:

> By law, capital punishment in Oklahoma must be carried out by means of a "continuous, intravenous administration of a lethal quantity of sodium thiopental combined with either tubocurarine, succinylcholine chloride or potassium chloride, an ultrashort-acting barbiturate combination with a chemical paralytic agent."

Memorandum from F. Warren (Ned) Benton, Dir., Okla. Dep't of Corr., to Warden, Okla. State Penitentiary, Procedures for the Execution of Inmates Sentenced to Death (Apr. 12, 1978) (on file with author). In 1981, as predicted, the Oklahoma Department of Corrections made modifications to that protocol, to which Chapman contributed. In contrast to the language used in the 1978 protocol, the 1981 protocol detailed the following drug combinations and language that Chapman recommended:

> The execution shall be by means of a continuous, intravenous administration of a lethal quantity of sodium thiopental combined with either tubo-curarine or succinylcholine chloride and/or potassium chloride which is an ultrashort-acting barbiturate combination with a chemical paralytic agent. A designated employee of the Department will acquire a sufficient quantity of the previously named chemical agents and will maintain the security of these chemical agents until the time of execution.

Memorandum from Larry R. Meachum, Dir., Okla. Dep't of Corr., Procedures for the Execution of Inmates Sentenced to Death, OP-050301 (Revised) (July 21, 1981) (on file with author).

151. Chapman has not always been clear on the reasons why all three drugs were necessary, particularly pancuronium bromide. But his rationale appears to focus on the issue of the inmate's pain, particularly within the context of the wording of the statute. As he explained:

> First of all, the issue about the prisoner waking up paralyzed—the law specifically states—as it was passed—that death is brought about by "continuous, intravenous administration of a lethal quantity of an ultrashot-acting [sic] barbiturate in combinations with a chemical paralytic agent . . . —Hence, if the infusion is "continuous" until death, there is not the slightest chance of the individual waking up from the effects of the thiopental or whatever agent is used.

E-mail from A. Jay Chapman, *supra* note 121. When pressed further on why the particular combination of drugs was suggested, Chapman offered the following explanation:

this combination of all three chemicals that makes lethal injection so controversial.[152]

Overall, lethal injection's history shows how the medically complex process became ensconced in both law and politics. This powerful dynamic surfaced in *The Daily Oklahoman*'s comment about viewing the injected inmate: "Officials do not plan to monitor the prisoner's life signs during the execution [in order to] avoid moral judgments about the procedure because of immense controversy over capital punishment."[153] That very issue remains a source of contention today. States, including California, have procedures in which an inmate's face and body cannot be fully seen during the lethal injection process.[154] From the beginning, then, the social and legislative push in favor of the death penalty permeated the lethal injection procedure—a troubling mix that continues full throttle.

3. Human Execution and Animal Euthanasia

The drive for the return of capital punishment also led other states to look at execution methods. Several states initially considered the use of lethal

> Obviously, it would not be necessary to use all three of the drugs. Any one of them would do the trick—even a massive overdose of the ultrashort barbiturate—as it is done with the euthanasia of animals. The pancuronium would also do it, but the effect would be delayed for the asphyxia to develop from the inability of the person to carry on respiration. Potassium chloride could be given alone as well, although it does cause pain as it travels through the vein in high concentration—which might [be] a problem for some folks, but that would not be a problem, so far as I am concerned.

E-mail from A. Jay Chapman, *supra* note 105. When asked again about the specific use of the pancuronium bromide within the context of the two other drugs, Chapman expanded his rationale somewhat, conceding that the pancuronium bromide may not be necessary. But he also defended his drug choice based simply on how he viewed the inmate, irrespective of the purported effectiveness of the drugs.

> I do recommend all three [drugs]. The thiopental prevents the sensation of any pain. The thiopental and the pancuronium are given to patients undergoing surgery thousands upon thousands of times every day. The potassium chloride insures rapid death. As I pointed out, the law states a "continuous" infusion of the thiopental until death is pronounced—absolute insurance of no sensation of pain or awareness of anything. The pancuronium could well be left out.
>
> Perhaps hemlock is the answer for all the bleeding hearts who completely forget about the victims—and their suffering—Socrates style. The things that I have seen that have been done to victims is [sic] beyond belief. And we should worry that these horses' patoots should have a bit of pain, awareness of anything—give me a break.

Id. Deutsch had not recommended to Dawson the use of the third drug, potassium chloride. But in an interview Deutsch expressed the opinion that the potassium chloride was a "good addition" to the chemical mixture for lethal injection because it served as a "safeguard" to ensure that the inmate would die. And potassium chloride worked more quickly. According to Deutsch, he "hadn't thought of potassium chloride" when Dawson contacted him. Telephone Interview with Stanley Deutsch, Professor of Anesthesiology (retired), George Washington Sch. of Med. (Jan. 20, 2006).

152. *See infra* Part III.

153. Killackey, *supra* note 145.

154. *See* Morales v. Tilton, 465 F. Supp. 2d 972, 980 (N.D. Cal. 2006).

injection because of comparisons between human execution and animal euthanasia.[155] In 1973, then-Governor Ronald Reagan of California recommended lethal injection when he analogized it to putting injured horses to sleep.[156] Similarly, in 1977, Texas State Representative Ben Grant, who created the Texas lethal injection bill, stated that his experiences presiding over a hearing on the humane treatment of animals persuaded him of the method's benefits.[157]

At the same time, the absence of deliberation about the best way to lethally inject a human resulted in a shocking inconsistency: The methods for euthanizing animals require substantially more medical consultation and concern for humaneness than the techniques used to execute human beings.[158] According to the American Veterinary Medical Association (AVMA), it is not acceptable for veterinarians to administer potassium chloride—lethal injection's third drug—to an animal that is not anesthetized.[159] The AVMA manual for the euthanasia of animals also specifies the association's rigorous training requirements,[160] which exhibit far more thought than the procedures set forth in most lethal injection protocols.[161] The contrasting procedures for humans and animals underscore the sheer disregard for injection's medical justification.

Not surprisingly, this issue has found its way into recent lethal injection litigation.[162] For example, the Ninth Circuit in 2005 considered it "somewhat significant that at least nineteen states have enacted laws that

155. *See* Moore, *supra* note 97, at 23; *see also* Tapscott, *supra* note 100. Bill Wiseman was influenced by the comparison between lethal injection and animal euthanasia, which prompted him to ask the following question: "'[H]ow many people would advocate hanging a stray dog or shooting it when it can be put to sleep with a shot.'" *Id.* His response was straightforward: "'All I'm saying is that if we're going to kill [the death row inmates], this [lethal injection] is the way to do it.'" *Id.*

156. *See* Henry Schwarzschild, *Homicide by Injection*, N.Y. Times, Dec. 23, 1982, at A15.

157. *See* Moore, *supra* note 97, at 23. According to Chapman, he never communicated with anyone in the Texas legislature or department of corrections, although he and others knew Texas was working on "similar legislation, and it was sort of a race to see who was going to get it first." E-mail from A. Jay Chapman, *supra* note 105.

158. *See* Moore, *supra* note 97, at 23.

159. *See* Am. Veterinary Med. Ass'n, *2000 Report of the AVMA Panel on Euthanasia*, 218 J. Am. Veterinary Med. Ass'n 669, 680 (2001).

160. *See id.* at 673.

161. *See infra* Part III.

162. Ironically, because of expert testimony that the first drug in the lethal sequence would render the inmate unconscious, some courts have not addressed the substance of the animal euthanasia argument. *See, e.g.*, Hankins v. Quarterman, No. 4:04 CV 875-Y, 2007 WL 959040, at *20-21 (N.D. Tex. Mar. 30, 2007). The animal euthanasia issue may acquire momentum as lethal injection litigation gains further steam. *See* Brown v. Beck, No. 5:06CT3018 H, 2006 WL 3914717, at *2 n.2 (E.D.N.C. Apr. 7, 2006) ("Plaintiff notes that protocols utilizing such long-acting barbiturates have been adopted by the American Veterinary Medical Association and by physicians under Oregon's Death with Dignity Act."). On the whole, however, courts have yet to give substantial attention to arguments regarding animal euthanasia. *See, e.g.*, Walker v. Johnson, 448 F. Supp. 2d 719, 724 (E.D. Va. 2006) ("[A]ny discussion by Plaintiff about the standards of animal euthanasia has no bearing on death penalty matters and is rejected by the Court.").

either mandate the exclusive use of a sedative or expressly prohibit the use of a neuromuscular blocking agent in the euthanasia of animals."[163] The question becomes, then, whether states will continue to hold the standard for executing human beings below that used by veterinarians to euthanize animals. In this country, the euthanasia of animals is a highly regulated and evolving process, based on strict guidelines periodically revised and modernized by the AVMA.[164] Lethal injection's history shows that the method was never subjected to medical and scientific study, much less held to the standards for animal euthanasia.

II. WHAT DOES "PHYSICIAN PARTICIPATION" MEAN?

Given the lack of medical justification for lethal injection, a focus on physician participation in the method's implementation is critical. As *Morales* indicated, states increasingly have looked to physician involvement in lethal injections in an attempt to prevent problems—ranging from California's option of including anesthesiologists,[165] to Missouri's requirement of a physician's presence,[166] to Georgia's recently enacted statute forbidding medical boards from reprimanding doctors who participate in executions,[167] to Florida's inclusion of "a physician" among the possible execution team members for each aspect of the execution procedure in the state's latest July 2007 protocol.[168] Although some physicians have indicated a willingness to engage in executions,[169] a number of medical associations have protested.[170]

Attempting to determine whether medical associations appropriately are shunning involvement is a daunting task. What moral measure should be used? What legal compass? On some level, the process can be compared to a Rorschach inkblot test, which psychologists use to assess individuals' perceptions of a scene. Observers' differing responses reflect their varying values, motivations, and experiences. In this sense, medical associations

163. Beardslee v. Woodford, 395 F.3d 1061, 1073 (9th Cir. 2005); *see also id.* at 1073 n.10 (noting that "[t]he most common protocol for animal euthanasia is a single overdose of a barbiturate, usually sodium pentobarbital (which is a longer acting barbiturate than sodium pentothal)").

164. *See generally* Am. Veterinary Med. Ass'n, *supra* note 159.

165. *See* Morales v. Hickman, 415 F. Supp. 2d 1037, 1047 (N.D. Cal. 2006), *aff'd per curiam*, 438 F.3d 926 (9th Cir. 2006), *cert. denied*, 546 U.S. 1163 (2006).

166. *See* Taylor v. Crawford, No. 05-4173-CV-C-FJG, 2006 WL 1779035, at *8 (W.D. Mo. June 26, 2006), *rev'd*, 487 F.3d 1072 (8th Cir. 2007).

167. *See* Ga. Code Ann. § 17-10-42.1 (2006). The statute reads, "Participation in any execution of any convicted person carried out under this article shall not be the subject of any licensure challenge, suspension, or revocation for any physician or medical professional licensed in the State of Georgia." *Id.*

168. *See* Fla. Dep't of Corr., Execution by Lethal Injection Procedures 2-3 (July 31, 2007) (laying out specific procedures).

169. *See infra* Part II.C.

170. *See infra* Part II.A–B; *see also* Linda L. Emanuel & Leigh B. Bienen, *Physician Participation in Executions: Time to Eliminate Anonymity Provisions and Protest the Practice*, 135 Annals Internal Med. 922 (2001); Jonathan I. Groner, *Lethal Injection: The Medical Charade*, 20 Ethics & Med. 25 (2004).

will view the scene of a lethal injection far differently from a legislature pressing to perpetuate the death penalty. The legal system is concerned with retribution and deterrence; the medical system is centered on health and well-being.

This "inkblot" phenomenon characterized some of the chaos of *Morales*. While anesthesiologists initially agreed to participate, they pulled out when faced with the Ninth Circuit's interpretation of their role; that role reflected the court's concern for the constitutionality of the execution but conflicted with medical association guidelines on participation in executions.[171]

When the inkblot's pool of observers includes the whole of society—ranging from the public to the courts to the supervising wardens—the vast array of interpretations of the lethal injection scene becomes increasingly intricate. The Supreme Court—the ultimate arbiter of such conundrums—has so far not taken the inkblot test. The result is legal disarray.

A. *Copying Oklahoma*

Concerns over the lack of medical testing initially were considered so pronounced that Oklahoma's lethal injection bill stalled prior to state senate approval.[172] Legislative history indicates that lethal injection was not to be used so quickly and confidently, if at all. And the Oklahoma legislature at one point considered requiring that injection could not supplant electrocution without "being ruled legal by the U.S. Supreme Court."[173]

Such uncertainty did not tarnish the method's appeal. After Oklahoma adopted lethal injection on May 11, 1977, Texas followed suit the next day and Idaho and New Mexico soon after.[174] From 1977 to 2002, thirty-seven states adhered to this adoption pattern, switching to lethal injection in a fast-moving cascade of multistate clusters, indicating that shared forces and communications fueled legislative action.[175] Likewise, eleven states changed to lethal injection in the eight-year stretch between 1994, when Virginia adopted the method, and 2002, when Alabama did.[176]

Currently, evidence suggests that the protocols in lethal injection states that reveal their chemical information are modeled after Oklahoma's original three-drug combination:[177] (1) sodium thiopental, (2) pancuronium bromide,[178] and (3) potassium chloride.[179] Therefore, most states mirror

171. *See supra* notes 11–13 and accompanying text.
172. *See supra* note 125 and accompanying text.
173. *See supra* note 137 and accompanying text.
174. *See* Denno, *When Legislatures Delegate*, *supra* note 15, at 92 n.183.
175. *See id.* at 100–16.
176. *See id.* at 131; *see also* Ala. Code § 15-18-82.1 (2006).
177. *See infra* notes 320–22.
178. *See supra* notes 150–51 (noting the inclusion of tubo-curarine and succinylcholine chloride in Oklahoma's 1981 protocol, drugs which are comparable to pancuronium bromide).
179. *See supra* note 150 (referring to potassium chloride); *see also infra* Part III; *see e.g.*, Nicholas K. Geranios, *Lethal Injection State's New Killer*, Journal Star (Peoria, Ill.), May 11, 1987, at B8 ("'We based our [lethal injection] procedures on what they do in Oklahoma and

the legal and scientific choices that Oklahoma officials made thirty years ago. Lethal injection was not actually used, however, until 1982, when Texas botched the execution of Charles Brooks, Jr.[180] Not even the substantial numbers of comparably botched executions that followed deterred states from switching to the method with relative confidence and speed.[181]

Despite the benefits of hindsight, states did not medically improve upon the method that consistently had resulted in documented debacles.[182] As the court in *Baze v. Rees* recently concluded, "[T]here is scant evidence that ensuing States' adoption of lethal injection was supported by any additional medical or scientific studies . . . . [Rather,] the various States simply fell in line relying solely on Oklahoma's protocol . . . ."[183] Further passage of time has made no difference. In 2007, for example, Ohio conducted an execution that lasted nearly two hours,[184] quite an outcome for a procedure originally intended to last just a few minutes.

B. *Medical Associations Respond*

Recent litigation has revealed both new and long-standing positions of medical associations toward lethal injection. These associations stress the significance of the Hippocratic Oath[185] and ethical standards debunking medical participation in executions of all kinds.[186] They range from associations with a national base—the American Medical Association,[187]

Texas,' said [Illinois] Department of Corrections spokesman Nic Howell. 'It was obvious it worked and was something we could adapt for our work.'"). For a discussion of the problems with the chemicals, see Ty Alper, *Capital Cases: Lethal Incompetence*, Champion, Sept.–Oct. 2006, at 41.

180. *See* Steve Carrell, *Execution Controversy Faces Physician*, Am. Med. News, Jan. 21, 1983, at 37.

181. *See generally* Denno, *When Legislatures Delegate*, *supra* note 15 (analyzing the disregard states had for botched executions in adopting lethal injection as an execution method).

182. *See infra* Part III.

183. Baze v. Rees, No. 04-CI-1094, slip op. at 2 (Ky. Cir. Ct. July 8, 2005), *aff'd*, 217 S.W.3d 207 (Ky. 2006), *reh'g denied*, No. 2005-SC-000543-MR, 2007 Ky. LEXIS 98 (Ky. Apr. 19, 2007), *cert. granted*, No. 07-5439, 2007 U.S. LEXIS 9066 (U.S. Sept. 25, 2007), *amended*, No. 07-5439, 2007 U.S. LEXIS 11115 (U.S. Oct. 3, 2007) ("The petition for a writ of certiorari is granted limited to Questions 1, 2, and 3 presented by the petition."); *see also* Carrell, *supra* note 180, at 37 (noting that all three drugs were available in the first lethal injection execution in this country).

184. *See supra* note 40 and accompanying text.

185. *See* Nova Online, *supra* note 7.

186. *See, e.g.*, Code of Ethics E-2.06 (Am. Med. Ass'n 2000). For an overview of the perspectives of medical associations on this issue, see Kenneth Baum, *"To Comfort Always": Physician Participation in Executions*, 5 N.Y.U. J. Legis. & Pub. Pol'y 47 (2001).

187. *See* Code of Ethics E-2.06 (Am. Med. Ass'n 2000) ("A physician, as a member of a profession dedicated to preserving life when there is hope of doing so, should not be a participant in a legally authorized execution.").

the American Society of Anesthesiologists,[188] the American Nurses' Association,[189] and the National Commission on Correctional Health Care[190]—to organizations representing the voices of particular states, such as the California Medical Association[191] and the North Carolina Medical Board.[192]

Some of these associations adopted a hands-off approach to lethal injection even prior to this country's first 1982 lethal injection execution. For this reason, a focus on these early positions provides perspective on states' confusion and ignorance surrounding lethal injection and why this situation has persisted for so long.

1. The American Medical Association

From the start, the American Medical Association (AMA) firmly abdicated any role in the lethal injection arena. In 1980, the AMA's Council on Ethical and Judicial Affairs released its first report opposing physician participation in executions, a stance the council regularly has updated through 2000.[193] In the council's view, "A physician, as a member

188. Message from Orin F. Guidry, *supra* note 45 (stating that the American Society of Anesthesiologists had adopted the AMA's Code of Ethics regarding capital punishment in 2001).

189. Am. Nurses Ass'n, Position Statement: Nurses' Participation in Capital Punishment (1994) *available at* http://www.needlestick.org/readroom/position/ethics/etcptl.htm. "The American Nurses Association (ANA) is strongly opposed to nurse participation in capital punishment. Participation in executions is viewed as contrary to the fundamental goals and ethical traditions of the profession." *Id.*

190. Nat'l Comm'n on Corr. Health Care, Standards for Health Services in Prisons P-I-08 (2003) (on file with author). "The correctional health services staff do not participate in inmate executions." *Id.* at 1.

191. *See supra* note 10.

192. *See* N.C. Med. Bd., Position Statement: Capital Punishment (2007), http://www.ncmedboard.org/Clients/NCBOM/Public/PublicMedia/capitalpunishment.htm. The board adopted the AMA's position on capital punishment, noting, however, that

> [t]he Board recognizes that N.C. Gen. Stat. § 15-190 requires the presence of 'the surgeon or physician of the penitentiary' during the execution of condemned inmates. Therefore, the Board will not discipline licensees for merely being 'present' during an execution in conformity with N.C. Gen. Stat. § 15-190. However, any physician who engages in any verbal or physical activity, beyond the requirements of N.C. Gen. Stat. § 15-190, that facilitates the execution may be subject to disciplinary action by this Board.

Id. On September 21, 2007, however, a North Carolina superior court judge ruled that, based on its interpretation of the legislature's intent in devising N.C. Gen. Stat. § 15-190, the North Carolina Medical Board "improperly exceeded its authority . . . to regulate the practice of medicine" by virtue of "declar[ing] physician conduct unethical and subject to discipline even though such conduct is specifically authorized and required by law." N.C. Dep't of Corr. v. N.C. Med. Bd., No. 07-CVS-3574, at 4 (N.C. Super. Ct. Sept. 21, 2007) (order granting plaintiff's request for declaratory relief and denying defendant's motion to dismiss). The court has thereby prohibited the North Carolina Medical Board "from enforcing the Position Statement and taking disciplinary action against physicians who have participated in or otherwise have been involved in judicial executions by lethal injection" or who will be so involved in the future. *Id.* at 5.

193. *See* Code of Ethics E-2.06 (Am. Med. Ass'n 2000).

of a profession dedicated to preserving life when there is hope of doing so, should not be a participant in a legally authorized execution."[194] Although the council's position pertains to all methods of execution, it is particularly applicable to lethal injection because of the method's perceived affiliation with the medical profession.[195] The council focused on a variety of potential aspects of a physician's contributions, as the following guidelines specify:

> Physician participation in an execution includes, but is not limited to, the following actions: prescribing or administering tranquilizers and other psychotropic agents and medications that are part of the execution procedure; monitoring vital signs on site or remotely (including monitoring electrocardiograms); attending or observing an execution as a physician; and rendering of technical advice regarding execution.
>
> In the case where the method of execution is lethal injection, the following actions by the physician would also constitute physician participation in execution: selecting injection sites; starting intravenous lines as a port for a lethal injection device; prescribing, preparing, administering, or supervising injection drugs or their doses or types; inspecting, testing, or maintaining lethal injection devices; and consulting with or supervising lethal injection personnel.[196]

The council's definition of "physician participation" encompasses everything from the most basic medically symbolic role of simply "attending or observing an execution as a physician," to the more involved tasks, such as "monitoring vital signs on site or remotely."[197] Such a broad brush stroke includes, of course, those intricate and medically complex facets of lethal injection that have created problems for individuals with far less medical training, for example, "selecting injection sites" or "prescribing, preparing, administering, or supervising lethal injection drugs."[198] The council's guidelines even prohibit a physician from "consulting with . . . lethal injection personnel,"[199] an activity that could occur well before the execution, thereby precluding the need for the doctor's attendance. Presumably, then, when a Texas judge in 1997 asked a testifying expert anesthesiologist to inspect in open court the syringe viability of an inmate's veins during this country's first evidentiary hearing on lethal injection,[200] that expert violated the council's ethical guidelines by doing so. Such a violation would hold even though the anesthesiologist's

194. *Id.*

195. *See generally* David J. Rothman, *Physicians and the Death Penalty*, 4 J.L. & Pol'y 151 (1995) (discussing the historical role of physicians in executions).

196. Code of Ethics E-2.06 (Am. Med. Ass'n 2000).

197. *Id.*

198. *Id.*

199. *Id.*

200. *See* Exhibit of Application for Post-Conviction Writ of Habeas Corpus, *Ex parte* Miguel A. Richardson, No. 81-CR-1548 (Tex. Crim. App. Dec. 16, 1996).

sole purpose for testifying was to educate the court about the gross medical deficiencies underlying the state's lethal injection procedure.[201]

In essence, the AMA maintains that a physician's role in a lethal injection execution should be limited to certifying death after others have pronounced or declared the inmate dead.[202] This position is consistent with a range of medical associations.[203] According to the AMA's position, then, many state statutes and lethal injection protocols are unethical.[204] But because the AMA council's guidelines are not legally enforceable, it is difficult to assess how much weight they carry. Most physicians in this country, including most anesthesiologists, are not even members of the AMA.[205] Likewise, it does not appear that any medical association, including the AMA, has disciplined a physician for participating in a lethal injection execution.[206] Although this possibility was raised in North Carolina, a court has, for the present time, prohibited the North Carolina Medical Board from disciplining such participating physicians.[207] In light of this backdrop, medical associations may have difficulty convincing states to take seriously their perception of lethal injection.

The AMA's stance also might not be particularly realistic. Recent revelations show that the extent of physician participation in executions has been underestimated.[208] Likewise, this author's surveys of lethal injection statutes and protocols indicate that a number of states conceded a certain level of physician participation.[209] Potentially, then, the AMA's position reflects the ideology of a bygone era that preceded discovery of the wide-ranging hazards of lethal injection executions.[210] As the following discussion suggests, medical associations also were generally apathetic both

201. *See supra* notes 196–99 and accompanying text (interpreting the AMA council's guidelines).

202. *See* Code of Ethics E-2.06 (Am. Med. Ass'n 2000).

203. *See supra* notes 186–89.

204. *See* Denno, *When Legislatures Delegate*, *supra* note 15, app. 1 at 156–69 tbl. 17.

205. *See* Yuji Noto, American Medical Association (AMA) and Its Membership Strategy and Possible Applications for the Japan Medical Association (JMA) 14 (1999); *see also* Am. Med. Ass'n, Physicians in the United States and Possession by Selected Characteristics (2001), http://www.ama-assn.org/ama1/pub/upload/images/373/internettable.gif (noting that in 2000, there were 813,770 physicians in the United States).

206. *See* Zitrin v. Ga. Composite State Bd. of Med. Examiners, No. 2005CV103905 (Ga. 2006).

207. N.C. Dep't of Corr. v. N.C. Med. Bd., No. 07-CVS-3574, at 5 (N.C. Super. Ct. Sept. 21, 2007) (order granting plaintiff's request for declaratory relief and denying defendant's motion to dismiss); *see also* Complaint at 2, N.C. Dep't of Corr. v. N.C. Med. Bd., No. 07-CVS-3574 (N.C. Super. Ct. Mar. 6, 2001) (alleging that executions are not medical procedures regardless of participation by physicians or emergency medical technicians and, therefore, requesting a preliminary injunction preventing the North Carolina Medical Board from taking action against doctors who participate and requesting the court declare that executions are not medical procedures); *supra* note 192 and accompanying text (summarizing the substance of the litigation).

208. *See infra* Part II.C.

209. *See infra* Part II.D.

210. Baum, *supra* note 186, at 58–67 (detailing the reasons why arguments against physician participation in executions are outdated).

about lethal injection's problems and the physicians who were involved with them, with very few exceptions.

2. A Breach of Trust

In 1994, physician and human rights organizations released *Breach of Trust*, a startling report detailing the extent of physician participation in executions in the United States and the ethical questions it invoked.[211] The discovery after the 1990 Illinois lethal injection of Charles Walker that three physicians supervised the creation of Walker's intravenous line, as well as his entire execution, prompted the *Breach* report.[212] Thereafter, medical organizations made fervent efforts to prevent further physician involvement in Illinois executions, but failed.[213] The Illinois legislature quickly passed a bill providing that all individuals participating in Illinois executions would be anonymous.[214] Subsequent protests from Illinois physician groups went unheeded, bringing "into sharp focus the discrepancy between medical ethics and state laws on this subject."[215]

The *Breach* report's perspective on the law-medicine conflict was just the beginning of a string of stunning revelations. Page after page documented that "physicians continue to be involved in executions, in violation of ethical and professional codes of conduct," that state law frequently mandated the involvement, and that "[e]ven when state laws are vague about requiring physician participation . . . in practice, physicians are often directly involved in the execution process."[216] The report's criticisms were unrelenting and justified: "[E]xecution is not a medical procedure, and is not within the scope of medical practice."[217] While states promoted "the appearance of humane, sterile or painless executions," the *Breach* report was alarmed that physicians increasingly would be lured into the process, thereby compromising their medical commitments to heal.[218] While physicians "are entrusted by society to work for the benefit of their patients and the public . . . [t]his trust is shattered when medical skills are used to facilitate state executions."[219] Likewise, offering the execution process a

211. Am. Coll. of Physicians et al., Breach of Trust: Physician Participation in Executions in the United States (1994) [hereinafter Breach of Trust].

212. *See id.* at 1. Ironically, an article published in the *American Medical News* concerning the prospect of physician involvement prior to Walker's execution quoted one of the three Illinois Department of Corrections doctors as saying that it would be "absurd" to expect any of the three prison physicians to be involved in the execution. As that same doctor emphasized, "'Executions don't fall into my job qualifications . . . . This is a difficult enough place to work in already.'" Barbara Dow, *Physicians Ponder Role as the Agent of Death*, Am. Med. News, Sept. 4, 1987, at 9.

213. *See* Breach of Trust, *supra* note 211, at 1.

214. *See id.*

215. *Id.*

216. *Id.* at 3.

217. *Id.*

218. *Id.*

219. *Id.*

substantial degree of "medical legitimacy"[220] raised deeper concerns about the "larger picture," specifically the doctor's role in promoting state-sanctioned executions: "[T]he physician is taking over some of the responsibility for carrying out the punishment and in this context, becomes the handmaiden of the state as executioner."[221] While physicians might help decrease the pain of executions, they also perform "under the control of the state, doing harm."[222]

As *Breach of Trust* indicated, physicians contribute far more to lethal injection than any other execution method.[223] An examination of physician participation today suggests that the involvement is more extensive than even the *Breach* report could have predicted.

C. *Physicians Still Participate*

Physicians have a long-standing relationship with lethal injection. For example, A. Jay Chapman basically originated the procedure.[224] In turn, physician Ralph Gray, the medical chair of the Texas prison system, was present at the first lethal injection execution, that of Charles Brooks, Jr.[225] That procedure, which Gray considered highly problematic,[226] typified the quandary medical professionals continue to face. Gray had checked the veins in Brooks's arms and predicted difficulties because of Brooks's heavy drug use.[227] Yet, Gray would not assist directly in the execution even though "tempted" when the nonphysician employees "repeatedly missed" Brooks's veins and Brooks started bleeding.[228] Gray's response to colleagues criticizing his decision to check Brooks's arms is understandable: "'I really don't see what I did wrong. I wanted things to go properly.'"[229]

Other physicians also voiced concern about lethal injection soon after its first use. Jack Kevorkian, for example, was a strong initial proponent of lethal injection because the method enabled inmates to donate their organs if they desired.[230] At the same time, Kevorkian cautioned early on that

220. *Id.* at 38.
221. *Id.*
222. *Id.*
223. *See generally id.* (conducting a nationwide survey of physician participation in lethal injection executions).
224. *See supra* note 117 and accompanying text.
225. *See* Carrell, *supra* note 180, at 37.
226. *See id.* at 37–38.
227. *See id.* at 37.
228. *Id.* at 37.
229. *Id.* at 37.
230. *See* Jack Kevorkian, Prescription: Medicide, the Goodness of Planned Death 17–99 (1991) [hereinafter Kevorkian, Prescription] (emphasizing that the great majority of death row inmates want to donate their organs in order to "repay a social debt" despite anti-donation arguments by the medical profession); Jack Kevorkian, *Opinions on Capital Punishment, Executions and Medical Science*, 4 Med. & L. 515, 515–33 (1985) [hereinafter Kevorkian, *Opinions on Capital Punishment*] (contending that lethal injection is the preferred execution method and that inmates should be allowed to donate their organs).

"only the highest degree of technical competence should be relied upon to insure trouble-free lethal injection, to avert unnecessary suffering, and, even more important, to minimize the potential danger of inadvertent suffocation of the condemned."[231] Likewise, in a small unscientific survey Kevorkian conducted for a medical journal article, he found that medical personnel would choose, if considering competency only, a doctor to administer their own lethal injection if they were to be executed.[232]

Kevorkian's heed about lethal injection's hazards might not have garnered serious attention because of his other controversial stances.[233] At the same time, additional physicians have been similarly dismissed. In 1990, for example, Lawrence Egbert, then a professor of anesthesiology at the University of Texas Southwestern Medical School,[234] moved to vote against the use of lethal injections in executions during the annual meeting of the Association of University Anesthesiologists.[235] Egbert long had criticized the administration of lethal injections and the particular drugs that injection used.[236] Yet, the matter was tabled, and never addressed again[237] until the ASA's president raised it in 2006[238] in response to the swirl of media attention and case law.

Nonetheless, Egbert's arguments impressed another member at the same meeting, Edward A. Brunner, then chair of the department of anesthesiology at Northwestern University Medical School.[239] Both Brunner and Egbert eventually began to testify as experts in some of the initial evidentiary hearings on the constitutionality of lethal injection.[240] Because so little was known about lethal injection executions at the time, Brunner and Egbert focused on the problematic combination and administration of lethal injection's three chemicals.[241]

Not until the start of the twenty-first century would attorneys gather more details about the dearth of executioner training and the conditions of lethal

231. Kevorkian, Prescription, *supra* note 230, at 63.

232. Kevorkian, *Opinions on Capital Punishment*, *supra* note 230, at 522.

233. *See generally* Neal Nicol & Harry Wylie, Between the Dying and the Dead: Dr. Jack Kevorkian's Life and the Battle to Legalize Euthanasia (2006) (discussing Kevorkian's life and career and all of its controversies).

234. Telephone Interview with Lawrence D. Egbert, Visiting Professor of Anesthesiology & Critical Care Med., Johns Hopkins Univ. Sch. of Med. (Jan. 24, 2007).

235. *Id.* The Association of University Anesthesiologists does not keep minutes of their meetings. Telephone Interview with Lawrence D. Egbert, Visiting Professor of Anesthesiology & Critical Care Med., Johns Hopkins Univ. Sch. of Med. (Aug. 23, 2007).

236. *See* Lawrence D. Egbert, *Physicians and the Death Penalty*, America, Mar. 7, 1998, at 16.

237. *See* Telephone Interview with Lawrence D. Egbert, Visiting Professor of Anesthesiology & Critical Care Med., Johns Hopkins Univ. Sch. of Med. (Jan. 24, 2007).

238. *See* Message from Orin F. Guidry, *supra* note 45.

239. Telephone Interview with Edward A. Brunner, Chair (retired), Dep't of Anesthesiology, Northwestern Univ. Med. Sch. (Mar. 19, 2007).

240. *See* Denno, *Getting to Death*, *supra* note 15, at 373–87 (discussing the early lethal injection litigation and Brunner's and Egbert's contributions).

241. *See id.*

injection executions.[242] This added information has opened another chapter of medical experts testifying in lethal injection challenges. The two primary expert physicians are Mark Dershwitz, a professor at the University of Massachusetts Medical School,[243] and Mark Heath, a professor at Columbia Presbyterian Medical Center.[244] While the two often disagree, the contributions of both—most particularly Heath—are transforming the lethal injection landscape.

New evidence in 2006 and 2007 again reveals a surprising degree of physician participation in lethal injection executions. Such involvement ranged from the disturbing revelations of Missouri's "Dr. Doe," who began performing lethal injections in the mid-1990s,[245] to the acknowledgement of Carlo Musso, a Georgia physician, that he has maintained a three-year presence in that state's injection executions.[246] Most recently, in March 2007, Obi Umesi, a North Carolina physician, admitted that he had attended at least two of the state's most recent executions but, for ethical reasons, failed to monitor the inmate's consciousness both times, contrary to a federal judge's expectations.[247] Not to be discounted are the handful of anonymous physicians and a nurse who were interviewed as part of Harvard Medical School Professor Atul Gawande's 2006 article, *Why Physicians Participate in Executions*.[248]

The compelling stories of these medical professionals recounted in Gawande's article highlight the "inkblot" nature of how some physicians view the lethal injection scene. According to one anonymous doctor, Dr. C, for example, the state of which he was a citizen needed his services to perform executions humanely: "'[J]urors . . . have made a decision. And if I live in that state and that's the law, then I would see it as being an obligation to be available.'"[249] Like those medical care personnel who responded to Kevorkian's survey,[250] Dr. C could empathize with a desire for condemned individuals to have the most competent lethal injection possible.[251] Musso, the only physician in Gawande's article who revealed his name, echoed the perspective that doctors were not deciding who gets the death penalty. "'[T]his is an end-of-life issue, just as with any other terminal disease. It just happens that it involves a legal process instead of a

242. *See infra* Parts III, IV.

243. *See* Mark Dershwitz—Biochemistry and Molecular Pharmacology Faculty—UMass Medical School, http://www.umassmed.edu/bmp/faculty/dershwitz.cfm (last visited Aug. 31, 2007).

244. *See* Columbia Presbyterian Medical Center Staff Profile, Mark J. Heath, M.D., http://asp.cpmc.columbia.edu/facdb/profile_list.asp?uni=mh22&DepAffil=Surgery (last visited Aug. 31, 2007).

245. *See* Roko, *supra* note 39, at 2791–92.

246. *See* Gawande, *supra* note 7, at 1228.

247. *See* Andrea Weigl, *Did Doctor Stand Idle, or Monitor Executions?*, News & Observer (Raleigh, N.C.), Mar. 29, 2007, at 1A.

248. *See* Gawande, *supra* note 7, at 1223–38.

249. *Id.* at 1226.

250. *See supra* note 232 and accompanying text.

251. *See* Gawande, *supra* note 7, at 1226.

medical process.'"[252] In turn, all the professionals interviewed for the article could agree with Dr. B: "'If the doctors and nurses are removed, I don't think [lethal injections] could be competently or predictably done.'"[253]

Following the controversy over Umesi's participation in North Carolina, inmates challenged the state's protocol after the North Carolina Medical Board issued its position statement precluding participation in a lethal injection by a physician.[254] An administrative law judge ordered the state to reconsider its adoption of a new protocol that required the presence of a physician but failed to require a doctor to monitor the inmate's level of consciousness.[255] The judge, however, held as a conclusion of law that state officials did not err in including physician involvement in the state's protocol, a position that a North Carolina superior court judge has recently reinforced:[256]

> Angel of mercy, not agent of harm, is the role the inmates seek for the doctor. They want help, not harm, from a doctor. Palliative care from a doctor to prevent unnecessary suffering, prior to a person being injected with lethal drugs which can cause excruciating pain, is not unprofessional or unethical.[257]

Of course, these positions conflict with the AMA's stance on the matter: "While physician participation may potentially add some degree of humaneness to the execution of an individual, it does not outweigh the

252. *Id.* at 1228.

253. *Id.* at 1226.

254. *See* Conner v. N.C. Council of State, No. 07 Gov 0238, slip op. at 7 (N.C. Office of Admin. Hearings Aug. 9, 2007).

255. *See id.* at 12 (including as a factual finding that "[t]rained medical personnel should be available to observe the inmate and measure vital signs, including heart rate, blood pressure, and breathing").

256. *Id.* at 13; *see also* N.C. Dep't of Corr. v. N.C. Med. Bd., No. 07-CVS-3574, at 5 (N.C. Super. Ct. Sept. 21, 2007) (order granting plaintiff's request for declaratory relief and denying defendant's motion to dismiss); *supra* notes 192, 206-07 and accompanying text (discussing a North Carolina superior court judge's decision prohibiting the North Carolina Medical Board from disciplining doctors involved in lethal injection executions). This issue is a growing source of controversy and debate within the medical profession. For example, physician David Waisel makes a compelling case for why physician participation in lethal injections is "necessary to ensure a good death." David Waisel, Commentary, *Physician Participation in Capital Punishment*, 82 Mayo Clin. Proc. 1073, 1073 (2007) (contending that "it is honorable for physicians to minimize the harm to . . . condemned individuals and that organized medicine has an obligation to *permit* physician participation in legal execution"). On the other hand, medical ethicist Arthur L. Caplan contends that the need for "technical expertise," which he claims is the major reason for involving physicians in lethal injections, "does not justify medicine's acceptance of physician involvement in executions," but rather only the requirement that nonmedical executioners be properly trained. Arthur L. Caplan, Editorial, *Should Physicians Participate in Capital Punishment?*, 82 Mayo Clin. Proc. 1047, 1048 (2007). For an overview and backdrop to this particular debate, see William L. Lanier & Keith H. Berge, Editorial, *Physician Involvement in Capital Punishment: Simplifying a Complex Calculus*, 82 Mayo Clin. Proc. 1043 (2007) (criticizing physician involvement in executions).

257. Conner v. N.C. Council of State, No. 07 Gov 0238, slip op. at 14 (N.C. Office of Admin. Hearings Aug. 9, 2007).

greater harm of causing death to the individual."[258] The ASA president's views were even stronger, stressing that the medical profession has no obligation to rescue either American society or the legal system.[259]

D. *Physician Participation in Context*

The *Breach* report's nationwide statutory analysis never has been updated, even though it is cited frequently. This section provides such an update, with a brief 2007 overview of modern statutes' current designation of physician participation or lack thereof. And the results, once again, are striking. Consistent with the *Breach* report's assessment, the vast majority of lethal injection states refer to the extent of medical or physician involvement in their statutory codes.[260] At the same time, these statutes vary tremendously from state to state, suggesting that views on physician involvement are mired in value-laden interpretations of the lethal injection scene.

While the statutes differ substantially in their wording, at least twenty states mention the potential presence of a physician at a lethal injection execution.[261] At least sixteen states have statutory language stating that a

258. Council on Ethical and Judicial Affairs, Am. Med. Ass'n, *Council Report: Physician Participation in Capital Punishment*, 270 JAMA 365, 366 (1993).

259. *See* Message from Orin F. Guidry, *supra* note 45 ("Lethal injection was not anesthesiology's idea. American society decided to have capital punishment as part of our legal system and to carry it out with lethal injection. The fact that problems are surfacing is not our dilemma. The legal system has painted itself into this corner and it is not our obligation to get it out.").

260. For state statutes on physician participation, see Ala. Code §§ 15-18-82.1, 15-18-83 (2007); Ariz. Rev. Stat. Ann. § 13-704 (2006); Cal. Penal Code § 3605 (West 2007); Colo. Rev. Stat. Ann. §§ 18-1.3-1204, 18-1.3-1206 (West 2006); Conn. Gen. Stat. Ann. § 54-100 (West 2007); Del. Code Ann. tit. 11, § 4209 (2007); Fla. Stat. Ann. §§ 922.105, 922.11 (West 2007); Ga. Code Ann. §§ 17-10-38, 17-10-41, 17-10-42.1 (2006); Idaho Code Ann. § 19-2716 (2006); 725 Ill. Comp. Stat. Ann. 5/119-5 (West 2006); Ind. Code Ann. § 35-38-6-6 (West 2006); Ky. Rev. Stat. Ann. §§ 431.220, 431.250 (West 2006); La. Rev. Stat. Ann. §§ 15:569-570 (2006); Miss. Code Ann. §§ 99-19-51, 99-19-55 (2006); Mont. Code Ann. § 46-19-103 (2005); Nev. Rev. Stat. Ann. § 176.355 (West 2006); N.H. Rev. Stat. Ann. § 630:5 (2006); N.J. Stat. Ann. §§ 2C:49-2, 2C:49-3, 2C:49-7, 2C:49-8 (West 2007); N.M. Stat. § 31-14-15 (2006); N.Y. Correct. Law §§ 660, 661 (McKinney 2003); N.C. Gen. Stat. Ann. §§ 15-190, 15-192 (West 2006); Ohio Rev. Code Ann. § 2949.25 (West 2007); Okla. Stat. Ann. tit. 22, §§ 1014, 1015 (West 2006); Or. Rev. Stat. §§ 137.473, 137.476 (2005); S.C. Code Ann. § 24-3-560 (2006); S.D. Codified Laws § 23A-27A-32 (2006) (amended 2007); Tenn. Code Ann. § 40-23-116 (West 2006); Tex. Code Crim. Proc. Ann. art. § 43.20 (Vernon 2006); Utah Code Ann. § 77-19-10 (West 2006); Va. Code Ann. § 53.1-234–235 (West 2006); Wash. Rev. Code Ann. § 10.95.180 (West 2007); Wyo. Stat. Ann. § 7-13-904 (2006).

261. Those states are Alabama, Colorado, Connecticut, Florida, Georgia, Indiana, Kentucky, Louisiana, Mississippi, Nevada, New Jersey, New Mexico, New York, North Carolina, Ohio, Oklahoma, Oregon, Tennessee, Texas, and Virginia. *See* Ala. Code § 15-18-83 (2007); Colo. Rev. Stat. Ann. § 18-1.3-1206 (West 2006); Conn. Gen. Stat. Ann. § 54-100 (West 2007); Fla. Stat. Ann. § 922.11 (West 2007); Ga. Code Ann. § 17-10-41 (2006); Ind. Code Ann. § 35-38-6-6 (West 2006); Ky. Rev. Stat. Ann. § 431.250 (West 2006); La. Rev. Stat. Ann. § 15:570 (2006); Miss. Code Ann. § 99-19-55 (2006); Nev. Rev. Stat. Ann. § 176.355 (West 2006); N.J. Stat. Ann. § 2C:49-7 (West 2007); N.M. Stat. § 31-14-15 (2006); N.Y. Correct. Law § 660 (McKinney 2003); N.C. Gen. Stat. Ann. § 15-190 (West 2006); Ohio Rev. Code Ann. § 2949.25 (West 2007); Okla. Stat. Ann. tit. 22, § 1015 (West 2006);

physician pronounces or certifies death.[262] At least eight states provide that lethal injections do not constitute the practice of medicine.[263] Additionally, some states specifically note that the involvement of physicians is optional.[264] In Illinois, the statute makes it explicit that medical personnel are not allowed to participate in executions.[265] New Jersey's statute has a similar provision, but does allow a physician to sedate an inmate and to be present at an execution.[266]

In the majority of states, the existence of statutory language concerning medical personnel indicates that medical association guidelines and the *Breach* report have had minimal impact. In general, states—either ignorant of or with disregard for ethical guidelines—include physicians in their lethal injection statutes. Illinois's statute demonstrates the potential way legislatures can compose language to comport with such guidelines. But, for now, Illinois is the exception.

Indeed, a minimum of three states have statutory provisions that fly in the face of the medical ethical guidelines. These states ban disciplinary action, such as license suspension or revocation, against doctors who participate in

Or. Rev. Stat. § 137.473 (2005); Tenn. Code Ann. § 40-23-116 (West 2006); Tex. Code Crim. Proc. Ann. art. 43.20 (Vernon 2006); Va. Code Ann. § 53.1-234 (West 2006).

262. Those states are Colorado, Florida, Georgia, Idaho, Kentucky, Mississippi, New Hampshire, New Jersey, New York, North Carolina, Oklahoma, South Carolina, Utah, Virginia, Washington, and Wyoming. *See* Colo. Rev. Stat. Ann. § 18-1.3-1204 (West 2006); Fla. Stat. Ann. § 922.11 (West 2007); Ga. Code Ann. § 17-10-41 (2006); Idaho Code Ann. § 19-2716 (2006); Ky. Rev. Stat. Ann. § 431.220 (West 2006); Miss. Code Ann. § 99-19-51 (2006); N.H. Rev. Stat. Ann. §§ 630:5 (2006); N.J. Stat. Ann. § 2C:49-8 (West 2007); N.Y. Correct. Law § 661 (McKinney 2003); N.C. Gen. Stat. Ann. § 15-192 (West 2006); Okla. Stat. Ann. tit. 22, § 1014 (West 2006); S.C. Code Ann. § 24-3-560 (2006); Utah Code Ann. § 77-19-10 (West 2006); Va. Code Ann. § 53.1-235 (West 2006); Wash. Rev. Code Ann. § 10.95.180 (West 2007); Wyo. Stat. Ann. § 7-13-904 (2006).

263. Those states are Alabama, Delaware, Florida, Georgia, New Hampshire, New Jersey, Oregon, and South Dakota. *See* Ala. Code §§ 15-18-82.1 (2007); Del. Code Ann. tit. 11, § 4209 (2007); Fla. Stat. Ann. § 922.105 (West 2007); Ga. Code Ann. § 17-10-38 (2006); N.H. Rev. Stat. Ann. § 630:5 (2006); N.J. Stat. Ann. § 2C:49-3 (West 2007); Or. Rev. Stat. § 137.473 (2005); S.D. Codified Laws § 23A-27A-32 (2006) (amended 2007).

264. *See, e.g.*, Mont. Code Ann. § 46-19-103(6)(a) (2005) ("[T]he person administering the injection need not be a physician, registered nurse, or licensed practical nurse licensed or registered under the laws of this or any other state."); N.H. Rev. Stat. Ann. § 630:5 (2007) (same); S.D. Codified Laws § 23A-27A-32 (2006) (amended 2007) (same).

265. The statute reads in relevant part, "The Department of Corrections shall not request, require, or allow a health care practitioner licensed in Illinois, including but not limited to physicians and nurses, regardless of employment, to participate in an execution." 725 Ill. Comp. Stat. Ann. 5/119-5(d-5) (West 2007).

266. *See* N.J. Stat. Ann. §§ 2C:49-2, 2C:49-3 (West 2007). Specifically, a New Jersey statute provides that

> [t]he commissioner shall designate persons who are qualified to administer injections and who are familiar with medical procedures, other than licensed physicians, as execution technicians to assist in the carrying out of executions, but the procedures and equipment utilized in imposing the lethal substances shall be designed to ensure that the identity of the person actually inflicting the lethal substance is unknown even to the person himself.

N.J. Stat. Ann. § 2C:49-3 (West 2007).

executions.[267] One more state, North Carolina, was considering a similar statutory provision.[268] This increasingly bitter battle between law and medicine already has hit the courts, as medical boards have faced lawsuits in both Georgia and North Carolina.[269]

In light of the extent of physician involvement, the current controversy swirling around lethal injection could be a form of déjà vu. While *Breach* was published a dozen years before the recent revelations indicating the difficulties surrounding lethal injections,[270] it just as well could have been written this year. Yet the litigation of today is not merely recycling an old dilemma. Even more is at stake now in terms of the physician's role.

First and foremost, the recommendations that *Breach* proposed never have been followed. Just the opposite has occurred. According to *Breach*, "The laws and regulations of all death penalty states should incorporate AMA guidelines on physician participation," particularly "laws mandating physician presence and pronouncement of death should be changed to specifically exclude physician participation."[271] Likewise, "Laws should not be enacted that facilitate violations of medical ethical standards (such as anonymity clauses) [because] [t]he medical profession cannot regulate and police itself properly if laws protect violators from scrutiny and review."[272] Yet, as this part shows, many lethal injection statutes have either embraced the physician's role or cloaked expectations in vague language,[273] perhaps confirming the *Breach* report's own conclusion that, the vaguer the statute, the more likely the physician participation.[274]

While the *Breach* report's impact appears negligible,[275] the questions the report raises have become only more significant. Since 1994, for example, an additional one-third of the death penalty states have adopted injection; with rare exception, any other execution method is a relic.[276] As such, further revelations about injection indicate a far more complicated and troublesome process than any legislature, court, or physician's group

267. Those states are Arizona, Georgia, and Oregon. *See* Ariz. Rev. Stat. Ann. § 13-704 (2006); Ga. Code Ann. § 17-10-42.1 (2006); Or. Rev. Stat. § 137.476 (2005).

268. *See* H.B. 442, 2007 Gen. Assem., Reg. Sess. (N.C. 2007); *see also* N.C. Dep't of Corr. v. N.C. Med. Bd., No. 07-CVS-3574, at 5 (N.C. Super. Ct. Sept. 21, 2007) (order granting plaintiff's request for declaratory relief and denying defendant's motion to dismiss); *supra* notes 192, 206–07, 256.

269. *See N.C. Dep't of Corr.*, No. 07-CVS-3574; Complaint, *N.C. Dep't of Corr.*, No. 07-CVS-3574; Complaint, Zitrin v. Ga. Composite State Bd. of Med. Exam'rs, No. 2005-CV-103905 (Ga. Super. Ct. July 2005).

270. *See infra* Part IV.

271. Breach of Trust, *supra* note 211, at 45.

272. *Id.* at 45–46.

273. *See supra* notes 261–64 and accompanying text.

274. *See supra* note 216 and accompanying text.

275. One explanation may be that the report was speaking for a minority of the medical profession, especially since two of the report's four authors are generic anti-death penalty groups; other national-based organizations, such as the AMA or the ASA, were not even mentioned. *See* Breach of Trust, *supra* note 211, at ix.

276. *See supra* note 50 and accompanying text.

possibly could have realized.[277] According to the AMA council, for example, medically trained nonphysicians could perform the technical aspects of executions—thereby ensuring humanity to the procedure (albeit relatively less of it) without physician involvement.[278] Yet the council's conclusions were made in 1993.[279] The presumption of many states that nonphysician personnel can serve as apt substitutes for physicians has proven inaccurate time and time again.[280]

In *Morales*, Judge Fogel agreed that "[b]ecause an execution is not a medical procedure, and its purpose is not to keep the inmate alive . . . the Constitution does not necessarily require the attendance and participation of a medical professional."[281] Judge Fogel also recognized, however, that such participation could increase the odds of a humane procedure, a conclusion that strikes at the core of the controversy: "[T]he need for a person with medical training would appear to be inversely related to the reliability and transparency of the means for ensuring that the inmate is properly anesthetized . . . ."[282] After all, Eighth Amendment doctrine centers on risk—the risk of "unnecessary and wanton infliction of pain"[283]—not foolproof perfection. While even the participation of medical personnel does not guarantee a humane execution,[284] the greater the availability of medical expertise, the more likely the procedure will be humane and meet constitutional commands.[285]

III. THE IMPORTANCE OF PROTOCOL

In lethal injection litigation, protocols take center stage. Courts have not defined the meaning of "protocol," but rather use the term broadly. In *Morales*, for example, California's protocol was multifaceted; the parties discussed not only whether physicians should participate in executions, but also which drugs and doses should be used as well as under what kinds of circumstances.[286]

277. *See infra* Parts III, IV.

278. *See* Council on Ethical and Judicial Affairs, Am. Med. Ass'n, *supra* note 258, at 366 ("Even when the method of execution is lethal injection, the specific procedures can be performed by nonphysicians with no more pain or discomfort for the prisoner.").

279. *See id.*

280. *See* Denno, *When Legislatures Delegate*, *supra* note 15, at 121–28; *see also id.* app. 1 at 256–69 tbl. 17.

281. Morales v. Tilton, 465 F. Supp. 2d 972, 983 (N.D. Cal. 2006).

282. *Id.*

283. Farmer v. Brennan, 511 U.S. 825, 834 (1994). For an extensive analysis of Eighth Amendment standards in the context of execution methods, see generally Denno, *When Legislatures Delegate*, *supra* note 15, and Denno, *Getting to Death*, *supra* note 15.

284. *See* Taylor v. Crawford, No. 05-4173-CV-C-FJG, 2006 WL 1779035, at *7 (W.D. Mo. June 26, 2006), *rev'd*, 487 F.3d 1072 (8th Cir. 2007).

285. *See Morales*, 465 F. Supp. 2d at 983; *see also* Harbison v. Little, No. 3:06-01206, slip op. at 33 (M.D. Tenn. Sept. 19, 2007) (noting that in Tennessee, with lethal injection executions, there "are known risks—accidents which, given enough of an opportunity, will occur—for which the executioners are completely unprepared. In many cases, the executioners are not even aware that the risks exist").

286. *See generally Morales*, 465 F. Supp. 2d 972.

A pivotal debate in *Morales*, one with constitutional implications, focused on the interpretation of one short but key phrase: "five grams of sodium thiopental."[287] Why was this measurement so important and what did it mean? According to the state's anesthesiologist expert, the phrase signified that an execution under California's protocol would be unquestionably humane.[288] Such a large amount of this barbiturate quickly would render unconscious even the most drug-resistant inmate, irrespective of any effect the other two drugs would have.[289] The plaintiff's expert agreed in theory.[290] Yet that expert emphasized that the practice of California's lethal injection procedure would heighten the risk that the inmate never would receive all five grams.[291] Therefore, the execution would be inhumane, due to problematic injections, leaks, or mistakes.[292] As one California executioner explained during testimony in *Morales*, "sh[-]t does happen" when executions are conducted, no matter what the protocol says in writing.[293]

In 2001, this author conducted a nationwide study (Study 1) of the lethal injection protocols for all thirty-six states that used the method.[294] The study focused on a number of key criteria common to many protocols, including the types and amounts of chemicals that are injected; the selection, training, and qualifications of the lethal injection team; and the involvement of medical personnel. One of the study's most problematic findings, however, was that the criteria set out in many of the protocols were far too vague to allow adequate assessment. When the protocols did offer details, such as the amount and type of chemicals that executioners inject, they often revealed striking errors and a shocking level of ignorance about the procedure.[295] The study concluded that such inaccurate or missing information heightened the likelihood that a lethal injection would be botched and suggested that some states were not capable of executing an inmate constitutionally.[296]

Four years later, this author conducted a second nationwide survey (Study 2) to determine if states had changed their protocols during the years in which lethal injection litigation gained traction.[297] The results of this study, published here for the first time, focus on the protocols as they existed in 2005. This second survey provides a snapshot of lethal injection protocols at a key point in time—at the cusp of the increased scrutiny of

287. Morales v. Hickman, 415 F. Supp. 2d 1037, 1039 (N.D. Cal 2006), *aff'd per curiam*, 438 F.3d 926 (9th Cir. 2006), *cert. denied*, 546 U.S. 1163 (2006).
288. *See id.* at 1043–44.
289. *See id.*
290. *See id.* at 1044.
291. *See id.*
292. *See id.*
293. Morales v. Tilton, 465 F. Supp. 2d 972, 979 n.8 (N.D. Cal. 2006).
294. *See generally* Denno, *When Legislatures Delegate*, *supra* note 15.
295. *See id.* at 90–128.
296. *See id.* at 128.
297. *See infra* Part IV.

protocols, but untainted by the onslaught of lethal injection challenges starting in 2006.

Lethal injections are far more complicated than the image of an inmate simply falling asleep might suggest. With the exception of Judge Fogel and a few other engaged courts,[298] the entities most responsible for implementing the state's death sentence never want to be associated with the details of it—not the legislatures, not the courts, and, until September 25, 2007, not the Supreme Court.[299] Primarily, the matter is left in the hands of department of corrections personnel, who have little to no expertise and depend on unreliable advice about how lethal injections should be conducted. Yet every element of a protocol could affect whether an execution involves the risk of "unnecessary and wanton infliction of pain."[300]

In essence, the technical terms of lethal injection protocols implicate Eighth Amendment standards when implemented. In light of the significance of this information, however, states have scrambled in wildly different directions because they do not know which direction is right. Nor do they attempt to find out. Some states have changed their statutes to accommodate the terms of the protocol. Other states have modified their protocols to fortify the state's use of lethal injection against constitutional attack. And yet another group of states has done nothing, leaving their statutes and protocols the same—inaction that does not indicate constitutional viability, but rather stubborn adherence to the status quo.

A. *Lethal Injection Statutes*

By 2001, all death penalty states in this country had switched to lethal injection, either entirely or as an option, with two exceptions.[301] In 2002, Alabama changed from an electrocution-only execution state to a state that allows inmates to choose between electrocution and lethal injection.[302] Nebraska still uses just electrocution.[303]

Only recently, however, has any state substantially changed the language of its lethal injection statute. In the early part of 2007 the powerful effects

298. *See infra* Part IV.

299. *See* Baze v. Rees, No. 07-5439, 2007 U.S. LEXIS 9066 (U.S. Sept. 25, 2007) (granting certiorari), *amended*, No. 07-5439, 2007 U.S. LEXIS 11115 (U.S. Oct. 3, 2007) ("The petition for a writ of certiorari is granted limited to Questions 1, 2, and 3 presented by the petition."); Petition for a Writ of Certiorari, *Baze*, 2007 U.S. LEXIS 9066 (No. 07-5439).

300. *See* Gregg v. Georgia, 428 U.S. 153, 173 (1976); *see also* Louisiana *ex rel.* Francis v. Resweber, 329 U.S. 459, 463 (1947) (plurality opinion).

301. *See supra* notes 50–52.

302. *See* Ala. Code § 15-18-82.1 (2006). Therefore, Alabama is in this author's 2005 study although it was not in the 2001 study. While the 2005 study adds Alabama, it excludes New York. New York, which rendered its death penalty unconstitutional in 2004, *see* People v. Lavalle, 817 N.E.2d 341, 367 (N.Y. 2004), is not in the 2005 study for methodological reasons; however, lethal injection remains the state's method of execution. *See* N.Y. Correct. Law § 658 (McKinney 2003).

303. *See supra* note 52.

of snowballing litigation resulted in such statutory changes in two states—South Dakota[304] and Wyoming.[305] Both states enacted legislative changes to correspond more closely to the actual injection procedure. While both states started with identical statutes, they went in opposite directions. Neither state's revision is quite explicable or adequate. Wyoming's statute became more specific—naming the three lethal injection chemicals to conform to the state's protocol.[306] In contrast, South Dakota's statute became more general—simply referring to "the intravenous injection of a substance or substances in lethal quantity."[307]

The comparison between Wyoming and South Dakota demonstrates the inconsistent reactions of states to the threat of lethal injection botches. Wyoming's statute provides more information, giving more guidance to corrections personnel and decreasing the power delegated to them by specifying the kinds of chemicals to be used. Therefore, the legislature controls more of the decision making. In contrast, the South Dakota legislature delegates nearly all power, giving the warden considerable control.

Both types of changes are problematic. At the height of lethal injection litigation, the Wyoming legislature adopted a three-drug regimen that has been questioned for years[308] and remains under investigation.[309] South

304. S.D. Codified Laws § 23A-27A-32 (2006) (amended 2007). The South Dakota governor stayed the execution of a condemned inmate on the day of the execution after attorneys for the inmate pointed out a discrepancy between the state's lethal injection statute and the information a spokesman for the department of corrections had provided for the survey of lethal injection protocols published in this author's 2002 article in the *Ohio State Law Journal*. *See* Nestor Ramos & Dan Haugen, *Law Flawed, Death Denied*, Argus Leader (S.D.), Aug. 30, 2006, at 1A. South Dakota's statute mentioned the use of only two drugs, but the spokesman had stated that the protocol required three drugs. *Compare* S.D. Codified Laws § 23A-27A-32 (2006) (amended 2007), *with* Denno, *When Legislatures Delegate*, *supra* note 15, app. 3 at 251. In July 2007, South Dakota carried out its first execution in six decades. *See* Monica Davey, *Execution in South Dakota, Delayed a Year by Debate on Method, Is First in 6 Decades*, N.Y. Times, July 13, 2007, at A12.

305. Wyo. Stat. Ann. § 7-13-904 (2007).

306. *See id.* Like many states (including Oklahoma), Wyoming's original lethal injection statute referred only to two chemicals—"an ultra-short acting barbiturate in combination with a chemical paralytic agent." Wyo. Stat. Ann. § 7-13-904 (2006) (amended 2007). Yet the state's protocol specified three chemicals, including potassium chloride. *See* Denno, *When Legislatures Delegate*, *supra* note 15, app. 3 at 260. The 2007 legislative change thereby added the phrase "and potassium chloride or other equally effective substances sufficient to cause death." Wyo. Stat. Ann. § 7-13-904 (2007).

307. South Dakota, which had the identical two-chemical wording in its statute as Wyoming, S.D. Codified Laws § 23A-27A-32 (2006) ("an ultra-short acting barbiturate in combination with a chemical paralytic agent"), made its statutory information more vague: "The punishment of death shall be inflicted by the intravenous injection of a substance or substances in lethal quantity." An Act to Provide for the Substances Used in the Execution of Sentence of Death and to Allow the Choice of the Substances Used in an Execution Under Certain Circumstances, H.B. 1175, 82d Leg. Assem., 2007 Leg. Sess. (S.D. 2007). In addition, the revised statute clearly delegates the decision making to the department of corrections, adding that "[t]he warden . . . shall determine the substances and quantity of substances used for the punishment of death." *Id.*

308. *See supra* Part I.B.

Dakota's approach also is troublesome, combining the over-delegation of authority with gaps in information—the same combination that has created so many of the difficulties with lethal injection. Instead of attempting to rectify the conflict, South Dakota retreated into greater secrecy, illustrating the common tendency for states to withhold when constitutional challenges appear threatening.

B. *The Public Availability of Protocols*

Since Study 1, states have withdrawn even more information from public scrutiny. In Study 2, states provided as little information about their protocols as possible, an indication of the validity of the *Morales* court's concern about "transparency."[310] States never have been forthcoming about how they perform lethal injections; remarkably, however, unless prompted by litigation, they now reveal less than ever before. States likely withhold crucial details because, almost invariably, the more data states reveal about their lethal injection procedures, the more those states demonstrate their ignorance and incompetence. The result is a perpetual effort by states to maintain secrecy about all aspects of the execution.[311]

For example, Study 2 showed that only a small number of the thirty-six states provided complete public protocols, offering basic information about how they conducted their lethal injections.[312] On its own, this finding was dramatic. In comparison to Study 1, this finding is extraordinary. The number of states with complete public protocols fell to less than one-third of the 2001 numbers—from nineteen states in 2001 to six states in 2005.[313]

309. *See* Baze v. Rees, No. 07-5439, 2007 U.S. LEXIS 9066 (U.S. Sept. 25, 2007) (granting certiorari), *amended*, No. 07-5439, 2007 U.S. LEXIS 11115 (U.S. Oct. 3, 2007) ("The petition for a writ of certiorari is granted limited to Questions 1, 2, and 3 presented by the petition."); Petition for a Writ of Certiorari, *Baze*, 2007 U.S. LEXIS 9066 (No. 07-5439); *see also supra* notes 17–27 and accompanying text (discussing ongoing lethal injection challenges).

310. *Id.*

311. *See infra* Part III.B.

312. This study defines "complete public protocol" as those protocols with information readily available on all of the factors analyzed in this study. A state that claimed its protocol was confidential did not give relevant information on any of the factors.

313. Those states are Colorado, Connecticut, Georgia, New Mexico, Oregon, and Washington. *See infra* Appendix; *compare id.*, *with* Denno, *When Legislatures Delegate*, *supra* note 15, app. 1 at 181 tbl. 19. All six of those states with public protocols in 2005 had public protocols in 2001. *Compare infra* Appendix, *with* Denno, *When Legislatures Delegate*, *supra* note 15, app. 1 at 181 tbl. 19. Of the states with public protocols in 2001, five states changed to a confidential protocol in 2005: Idaho, Illinois, Montana, North Carolina, and Texas. *Compare infra* Appendix, *with* Denno, *When Legislatures Delegate*, *supra* note 15, app. 1 at 181 tbl. 19. An additional four states with public protocols in 2001 did not have protocols at all in 2005. *Compare infra* Appendix, *with* Denno, *When Legislatures Delegate*, *supra* note 15, app. 1 at 181 tbl. 19. New Jersey's protocol was under revision in 2005; New York's highest court declared the death penalty unconstitutional in 2004; New Hampshire and Wyoming both were listed as having partially private protocols in 2001, but are listed as not having a protocol for 2005. *Compare infra* Appendix, *with* Denno, *When Legislatures Delegate*, *supra* note 15, app. 1 at 181 tbl. 19. And six states (Arizona, Arkansas, California, Florida, Oklahoma, and South Dakota) moved from a public protocol

Despite the increasing recognition of the significance of protocols (or perhaps because of it), states have released less information over the years.

This lack of information makes it difficult—if not impossible—to evaluate the constitutionality of lethal injection on any level without further investigation. For example, in Study 1, department of corrections officials asserted that the lethal injection protocols for four states were confidential and could not be revealed.[314] In Study 2, the number of states claiming confidentiality increased nearly fourfold (to fifteen states), while two states said protocols did not exist and one state provided no information whatsoever. In other words, one-half (eighteen) of the states that currently apply lethal injection do not allow any evaluation of the protocol, either because the information is confidential or nonexistent.[315] An additional ten states had "limited"[316] or "somewhat limited"[317] protocols that gave some information, but not enough to determine how lethal injection is applied.

C. *Changes in Lethal Injection Protocols*

When available, the protocol information on lethal injection chemicals is disturbing. Because of the trend toward confidentiality, however, fewer states provided data on which chemicals they use. In Study 1, twenty-nine (80%) of the states surveyed disclosed chemical details. In Study 2, twenty-seven states (75%) provided such information.[318] The contrast is more acute than it seems because some states that had revealed the

to partially private protocol. *Compare infra* Appendix, *with* Denno, *When Legislatures Delegate*, *supra* note 15, app. 1 at 181 tbl. 19. Only one state, Virginia, provided more information in 2005 than in 2001, moving from a confidential protocol to a partially private protocol. *Compare infra* Appendix, *with* Denno, *When Legislatures Delegate*, *supra* note 15, app.1 at 181 tbl. 19.

314. *See* Denno, *When Legislatures Delegate*, *supra* note 15, at 116 n.369. The four states were Nevada, Pennsylvania, South Carolina, and Virginia. *See id.*

315. *See infra* Appendix. The fifteen states claiming confidentiality are as follows: Alabama, Delaware, Idaho, Illinois, Indiana, Kentucky, Mississippi, Missouri, Montana, Nevada, North Carolina, Ohio, Pennsylvania, Texas, and Utah. New Hampshire and Wyoming said protocols did not exist, while South Carolina provided no information whatsoever. Again, such information can be obtained, in part, through litigation.

316. *See infra* Appendix (Arizona, Arkansas, Kansas, Louisiana, Maryland, Oklahoma, Tennessee, and Virginia). In the 2001 survey, Kansas and Kentucky had indicated that information did not exist. *See* Denno, *When Legislatures Delegate*, *supra* note 15, app. 1 at 146 tbl. 11.

317. *See infra* Appendix (California and Florida).

318. In 2005, twenty-seven states provided information on the drugs used in lethal injections. *See infra* Appendix. In turn, twenty-nine states had disclosed this information in 2001. *See* Denno, *When Legislatures Delegate*, *supra* note 15, app. 1 at 146 tbl. 11. In 2005, twenty-six states used a lethal combination of sodium thiopental, pancuronium bromide, and potassium chloride. *See infra* Appendix. Those states are Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Florida, Georgia, Indiana, Kansas, Kentucky, Louisiana, Maryland, Missouri, Montana, New Mexico, North Carolina, Ohio, Oregon, Pennsylvania, South Dakota, Tennessee, Texas, Utah, Virginia, and Washington. *See infra* Appendix. In 2005, Oklahoma was the sole exception. *See infra* Appendix.

information in Study 1 did not do so in Study 2, and vice versa.[319] Yet, in both studies, with two negligible exceptions,[320] all states that reported their lethal injection drugs shared the same three-chemical combination originally created in Oklahoma.[321]

Bucking the trend to provide less information, thirteen, or nearly half, of the twenty-seven states that revealed the chemicals used in lethal injections also disclosed the quantities of those chemicals in 2005.[322] Previously, in

319. For example, six states (Delaware, Idaho, Illinois, Mississippi, New Jersey, and Wyoming) that had provided information on the combination of chemicals used in lethal injections in 2001 did not do so in 2005. *Compare* Denno, *When Legislatures Delegate*, *supra* note 15, app. 1 at 146 tbl. 11, *with infra* Appendix. This figure of six does not include New York, which was in the survey sample in 2001 but not in the survey sample in 2005 because the state's death penalty statute had been declared unconstitutional in 2004. *See supra* note 50. Four states that had not provided data in 2001 on the chemicals used did disclose such information in 2005 (Kansas, Kentucky, Pennsylvania, and Virginia). *Compare* Denno, *When Legislatures Delegate*, *supra* note 15, app. 1 at 146 tbl. 11, *with infra* Appendix. This figure does not include Alabama, which switched to lethal injection as an alternative method of execution in the interim period between studies. *See supra* note 302 and accompanying text. Information for two states, Kansas and Kentucky, did not exist in 2001, but was provided in 2005. *Compare* Denno, *When Legislatures Delegate*, *supra* note 15, app. 1 at 146 tbl. 11, *with infra* Appendix. Information for Pennsylvania and Virginia was confidential in 2001, but those states provided the information in 2005. *Compare* Denno, *When Legislatures Delegate*, *supra* note 15, app. 1 at 146 tbl. 11, *with infra* Appendix.

320. The two states that deviated from their 2001 protocols are easily explained. Oklahoma substituted vecuronium bromide in 2005 for pancuronium bromide in 2001. *Compare* Denno, *When Legislatures Delegate*, *supra* note 15, app. 1 at 146 tbl. 11, *with infra* Appendix. North Carolina did not mention potassium chloride as part of its combination in 2001, but listed it as the third chemical in 2005. *Compare* Denno, *When Legislatures Delegate*, *supra* note 15, app. 1 at 146 tbl. 11, *with infra* Appendix. Oklahoma's substitution is not significant because vecuronium and pancuronium are very similar compounds. *See* A.G. McKenzie, *Historical Note: Prelude to Pancuronium and Vecuronium*, 55 Anaesthesia 551, 551–55 (2000).

321. *See supra* notes 150–51 and accompanying text.

322. Those states were Alabama, California, Colorado, Connecticut, Florida, Georgia, Kentucky, Maryland, New Mexico, North Carolina, Tennessee, Texas, and Washington. *See infra* Appendix. The chemical combinations in those states were as follows:

- Alabama: 1. Sodium Pentothal (50 cc); 2. Sodium Pentothal (50 cc); 3. Saline (60 cc); 4. Pavulon (50 cc); 5. Saline (60 cc); 6. Potassium Chloride (60 cc), Saline (60 cc);
- California: 1. Sodium Pentothal (5 g) in 20–25 cc of diluent; 2. Pancuronium Bromide (50 cc); 3. Potassium Chloride (50 cc);
- Colorado: 1. Sodium Pentothal (2.5 g); 2. Pancuronium Bromide (100 mg); 3. Potassium Chloride (100 mEq);
- Connecticut: 1. Thiopental Sodium (2500 mg) in 50 ml of clear Sodium Chloride 0.9% solution of approximate concentration of mg/ml or 5%; 2. Pancuronium Bromide (100 mg) (contents of ten 5 ml vials of 2 mg/ml concentration) in 50 ml; 3. Potassium Chloride (120 mEq) (contents of two 30 ml vials of 2 mEq/ml concentration) in 60 ml;
- Florida: 1. No less than 2 g of Sodium Pentothal (two syringes); 2. Saline solution; 3. No less than 50 mg of Pancuronium Bromide (two syringes); 4. Saline solution; 5. No less than 150 mEq of Potassium Chloride;
- Georgia: 1. Sodium Pentothal—six packages each containing 1 g + 50 cc of sterile water; 2. Pavulon (Pancuronium Bromide)—fifteen vials each containing 10 mg; 3. Potassium Chloride—nine vials each containing 40 mEq; 4. Intervals of saline;

2001, only nine (less than one-third) of the states had disclosed this information.[323]

As *Morales* showed, chemical quantities offer the most valuable and revealing indication of a particular state's knowledge of the lethal injection process. But the mere listing of chemicals is no assurance that department of corrections officials are conducting procedures correctly. This point became paramount in *Morales* when the court turned to the proper concentration of California's three-drug mixture.[324] Expert testimony revealed that the sodium thiopental was so highly concentrated that it could cause severe pain for an inmate.[325] As the expert explained, California's

- Kentucky: 1. Sodium Pentothal (3 g); 2. Saline (25 mg); 3. Pavulon (50 mg); 4. Saline (25 mg); 5. Potassium Chloride (240 mEq);
- Maryland: 1. 120 cc/3 g/two 60 cc syringes of Sodium Pentothal; 2. 50 cc/50 mEq./one 50 cc syringe of Pavulon; 3. 50 cc/50 mEq/one 50 cc syringe of Potassium Chloride;
- New Mexico: 1. One syringe of 2 g of Sodium Pentothal (contents of four 500 mg vials dissolved in the smallest amount of diluent possible to attain complete, clear suspension); 2. Three syringes each of 50 mg Pavulon; 3. Three syringes each of 50 mEq of Potassium Chloride; Two syringes each of 10–50 cc of saline;
- North Carolina: 1. No less than 3000 mg of Sodium Pentothal; 2. Saline flush; 3. No less than 40 mg of Pancuronium Bromide (Pavulon); 4. No less than 160 mEq of Potassium Chloride, saline to flush the intravenous lines clean;
- Tennessee: 1. Diluted Sodium Pentothal (50 cc); 2. Pancuronium Bromide (100 cc); 3. Potassium Chloride (100 cc);
- Texas: 1. 30 ml of solution containing 3 g of Thiopental Sodium (Sodium Pentothal); 2. 50 ml of solution containing 100 mg of Pancuronium Bromide; 3. 70 ml of solution containing 140 mEq of Potassium Chloride;
- Washington: 1. Thiopental Sodium (2 g); 2. Normal saline (50 cc); 3. Pancuronium Bromide (100 mg); 4. Normal saline (50 cc); 5. 1.50 to 2.70 mEq/kg, based on body weight, Potassium Chloride (KCl).

See infra Appendix.

323. *See* Denno, *When Legislatures Delegate*, *supra* note 15, app. 1 at 150 tbl. 15. Those nine states were California, Connecticut, Florida, Mississippi, Montana, New Mexico, North Carolina, Tennessee, and Washington. *Id.* Five states providing the quantities of chemicals in 2005 had not offered that information in 2001. *See infra* Appendix. Those states were Colorado, Georgia, Kentucky, Maryland, and Texas. *See id.* Notably, Alabama also provided this information in 2005. *See id.* Two states (Mississippi and Montana) that had disclosed the quantities of the chemicals used in 2001 did not do so in 2005. *Compare* Denno, *When Legislatures Delegate*, *supra* note 15, app. 1 at 149 tbl. 14, *with infra* Appendix. For two states (North Carolina and Washington), the amounts specified in 2005 differed from the amounts provided in 2001. *Compare* Denno, *When Legislatures Delegate*, *supra* note 15, app. 1 at 150 tbl. 15, *with infra* Appendix. All other states that provided the chemical quantities in 2001 gave the same information in 2005. *Compare* Denno, *When Legislatures Delegate*, *supra* note 15, app. 1 at 150 tbl. 15, *with infra* Appendix.

324. In general, chemical quantities should be specified in two ways to determine if the chemical concentration is sufficient: (1) by weight, which is indicated by grams (gm) or milligrams (mg), and (2) by volume, which is indicated by cubic centimeters (cc) or milliliters (ml). *See* Denno, *When Legislatures Delegate*, *supra* note 15, at 119. Information on both the weight and the volume of diluent can indicate whether the concentration is so weak it will have no effect, or so dense it can irritate an inmate's veins and cause pain. *See* Transcript of Proceedings at 503–04, Morales v. Tilton, 465 F. Supp. 2d 972 (N.D. Cal. 2006) (No. C-06-0219-JF) (testimony of Mark Heath, M.D.).

325. *See id.* ("I've never heard of anybody making up pentothal at 20 percent. That's an off-the-charts concentration of pentothal . . . .").

protocol mixture was "reckless" and "very injurious,"[326] as well as inexplicable: "There's no advantage in making it up like this, and there's significant disadvantage."[327]

While the chemical information the thirteen states revealed in Study 2 has the potential to provide insight, it lacks constitutionally critical details. Without knowing the concentrations of these chemicals, it is impossible to determine whether an inmate actually will be unconscious during the execution. Most states are inconsistent in their treatment of these calculations, indicating that they do not understand their importance.[328] For example, while Washington's 2001 protocol included suitable chemical concentration information,[329] such information was missing entirely from the state's 2005[330] and 2007[331] protocols, heightening the likelihood of a problematic execution.

After the conclusion of Study 2, a flurry of states made minor revisions to their protocols to placate the courts. Judges in California, Missouri, and North Carolina ordered the revision of state lethal injection protocols.[332]

326. *Id.*

327. *Id.* at 504.

328. As the quantities listed in note 322, *supra*, indicate, for half of the six states that had no specified quantities in 2001, the information provided in 2005 is inadequate. For example, Alabama, Colorado, and Kentucky have incomplete protocols in which at least one, if not more, chemical does not have both volume and weight. Therefore, the chemical concentrations are unknown. For the other three, the specified concentrations for Georgia, Maryland, and Texas seem relatively orderly and proper, at least on paper. The fact that Maryland's protocol is written in a cumbersome way, however, suggests that its authors do not appear to be medically sophisticated. North Carolina and Washington, which both specified the quantities of chemicals in 2001, changed their specifications in 2005. The 2005 North Carolina protocol is a substantial improvement over its 2001 variant because it mentions a proper concentration of potassium chloride; nonetheless, the 2005 North Carolina protocol only mentions the weight but not the volume of sodium thiopental and pancuronium bromide. The protocol for Washington became more problematic from 2001 to 2005. In 2001, Washington was one of four states in which the weights and volumes for sodium thiopental and pancuronium bromide were specified and predictably lethal; in turn, only the weight was provided for the potassium chloride. Yet, in 2005, there were a host of problems with the Washington protocol that make it more difficult to interpret. For example, the protocol provides only the weight, and not the volume, of the three chemicals. Overall, then, the passage of time has had an odd and unexpected detrimental effect. Mississippi and Montana are perhaps the most perplexing because they made available their chemical quantities in 2001 but refused to give the information in 2005. *See* Denno, *When Legislatures Delegate*, *supra* note 15, at 118–21. In general, states that reported the same information at both time points also vary in the extent of their sophistication.

329. *See* Denno, *When Legislatures Delegate*, *supra* note 15, at 119–20; *see also id.* app. 1 at 150 tbl. 15.

330. *See supra* note 328.

331. *See* State of Wash., Dep't of Corr., Capital Punishment DOC 490.200 (June 21, 2007). The amounts for the 2005 and 2007 protocols are the same. In both, however, relative to the 2001 protocol, the concentration ratios for two drugs (sodium thiopental and pancuronium bromide) are unknown (only their weights are reported, not their volumes), and the weight for pancuronium bromide is doubled. *See id.*; *supra* note 328.

332. *See* Morales v. Hickman, 415 F. Supp. 2d 1037, 1044–46 (N.D. Cal. 2006), *aff'd per curiam*, 438 F.3d 926 (9th Cir. 2006), *cert. denied*, 546 U.S. 1163 (2006); Taylor v. Crawford, No. 05-4173-CV-C-FJG, 2006 WL 1779035, at *9 (W.D. Mo. June 26, 2006), *rev'd*, 487 F.3d 1072 (8th Cir. 2007); Conner v. N.C. Council of State, No. 07 Gov 0238,

And at least seven states adopted new protocols altogether: California, Florida, Georgia, North Carolina, South Dakota, Tennessee, and Washington.[333] Georgia, South Dakota, and Tennessee executed inmates within weeks of issuing the new protocols.[334] Additionally, both Oklahoma and Ohio altered their protocols while facing litigation regarding lethal injection procedures. In 2006, Oklahoma increased the amount of sodium thiopental used.[335] In Ohio, the Department of Rehabilitation and Corrections investigated the state's lethal injection protocol following the botched May 2006 execution of Joseph Clark.[336] According to the department, the state's protocol would adopt several changes,[337] including the review of an inmate's medical file.[338] But, as the May 2007 botched execution of Christopher Newton in Ohio showed, the protocol revisions did not result in an improved execution process.[339]

Florida's recent lethal injection litigation stands out because the state changed its protocol twice in quick succession, first on May 9, 2007, following the state commission's recommendations addressing the botched execution of Angel Diaz,[340] and then again on July 31, 2007, after a judge's order responding to several testimony-packed days of evidentiary hearings

slip op. at 8 (N.C. Office of Admin. Hearings Aug. 9, 2007) (discussing the February 2007 approval of a new protocol for North Carolina).

333. *See Conner*, No. 07 Gov 0238, slip op. at 8–11; State of Cal., San Quentin Operational Procedure Number 0-770 Execution by Lethal Injection (Revised May 15, 2007); Fla. Dep't of Corr., Execution by Lethal Injection Procedures (July 31, 2007); Ga. Dep't of Corr., Lethal Injection Procedure (June 7, 2007); S.D. Dep't of Corr., Policy 1.3.D.3: Execution of an Inmate (June 8, 2007) (effective July 1, 2007); Tenn. Dep't of Corr., Execution Procedures for Lethal Injection (Apr. 30, 2007); State of Wash., Dep't of Corr., Capital Punishment DOC 490.200 (June 21, 2007). Florida also had issued a new protocol on May 9, 2007. Fla. Dep't of Corr., Execution by Lethal Injection Procedures (May 9, 2007). Tennessee's protocol, however, has since been rendered unconstitutional. Harbison v. Little, No. 3:06-01206, slip op. at 55–56 (M.D. Tenn. Sept. 19, 2007).

334. *See* Davey, *supra* note 304; Death Penalty Info. Ctr., Execution in the United States in 2007, http://www.deathpenaltyinfo.org/article.php?did=1666 (last visited Sept. 27, 2007) (noting the execution of John Hightower on June 26, 2007); Tenn. Dep't of Corr., Tennessee Executions, http://www.tennessee.gov/correction/newsreleases/tnexecutions.htm (last visited Sept. 27, 2007) (listing the May 9, 2007 execution of Phillip Workman). This circumstance is all the more disturbing in light of Judge Aleta A. Trauger's recent determination that the current Tennessee protocol is unconstitutional. *Harbison*, No. 3:06-01206, slip op. at 55–56.

335. *See* Jay F. Marks, *Inmates Fight to the Death: Lawsuits Try to Execute Lethal Injection Tactics*, Oklahoman, Aug. 21, 2006, at 9A (noting that the state had increased the amount of anesthesia). Oklahoma did not provide the amount of chemicals used in the 2005 survey. *See supra* note 328.

336. *See* Letter from Terry J. Collins, Dir., Ohio Dep't of Rehab. & Corr., to Gov. Bob Taft (June 27, 2006) (on file with author); *see also* Jim Provance & Christina Hall, *Clark Execution Raises Lethal-Injection Issues*, Blade (Toledo, Ohio), May 4, 2006, at 1.

337. *See* Letter from Terry J. Collins, *supra* note 336 (indicating changes including making every effort to establish two intravenous lines, one in each arm, and using a slow-drip process instead of a high-pressure syringe injection as well as removing time constraints on how quickly execution team members must complete their tasks).

338. *See id.*

339. *See supra* note 40 and accompanying text.

340. *See infra* notes 443–46 and accompanying text.

detailing the weaknesses of the May 9 protocol.[341] Anticipating the judge's concerned reactions to the highly critical testimony, the state released its second protocol on the same day the judge's order came out.[342]

By itself, Florida's nonexistent turnaround time in creating a revised protocol implicates the state's lack of care and consideration of its execution process. Yet subsequent litigation has revealed information showing that the July 2007 protocol is also grossly flawed on every level—ranging from the lumping together of a wide span of possible executioners (from physicians and nurses to those with only minimal medical expertise),[343] to unjustifiably retaining the complete anonymity of whoever is involved in the process,[344] to the inadequate provisions for measuring an inmate's consciousness, and down to the skeletal nature of the written procedures and checklists.[345] Like the criticisms of California's revisions,[346] Florida's latest protocol is also "even more ill-conceived and deficient than the older versions."[347] The more visible the attempts made by department of corrections officials to correct what protocols they have, the more obvious the flaws in the execution process.

IV. THE SEARCH FOR A HUMANE EXECUTION CONTINUES

In one respect, the superficial similarity among states' lethal injection protocols has provided a shield for states to hide behind. When an inmate in one state would challenge a protocol, the court would point out that more

341. *See supra* notes 448–53 and accompanying text. The official order in State v. Lightbourne, No. 81-170-CF-A-01 (Fla. Cir. Ct. July 31, 2007), directed the state to modify its protocol to include

> qualifications, training, licensure, and credentials for each member of the execution team that is necessary to perform the various technical functions, such as starting intravenous lines, that are part of the lethal injection procedure; setting out the training that shall be required for each of the designated executioners, and specifically training for contingencies that might arise; creating checklists for the [sic] each function performed by execution and technical team members; correcting scrivener's errors; setting time frames and providing for periodic review of the procedures by the Department; providing for certification of the readiness of the Department to carry out an execution; and clearly setting forth in plain language that any observed problems or deviations from the procedure should be brought immediately to the attention of the warden in charge of the execution team.

Id. at 3–4. The court ordered a temporary stay of execution and also ordered the state to submit the modified procedures to the court for review. *Id.* at 4. On September 10, 2007, however, the stay of execution was lifted. State v. Lightbourne, Nos. 1981-170 CF, SC06-2391, slip op. at 5 (Fla. Cir. Ct. Sept. 10, 2007). *See also supra* notes 26, 42 and accompanying text (discussing Florida's recent lethal injection litigation).

342. *See supra* note 341 and accompanying text.

343. *See* Motion to Vacate Sentence or Stay Execution, State v. Schwab, No. 91-7249-CF-A (Fla. Cir. Ct. Aug. 15, 2007).

344. *Id*.

345. *Id.*

346. *See* Third Amended Complaint for Equitable and Injunctive Relief [42 U.S.C. sec. 1983], *supra* note 22, at 14 (criticizing the May 15, 2007, version of California's protocol Procedure 770).

347. *Id.*

than twenty states used the same drugs and that no court had held that any protocol violated constitutional mandates.[348] For this reason, the recent success of inmates challenging lethal injection protocols has created a snowball effect. Once one court found a protocol problematic, an inmate in another state could point to the similarities of that state's protocol to bolster a comparable challenge.[349]

This part considers how the current wave of lethal injection lawsuits originated, particularly during the last few years of unprecedented speed and impact of litigation. Several themes arise. First, the past four years include an unusual level of Supreme Court review of an execution method. The consequences of the Supreme Court's attention were nearly immediate, as it legitimized inmates' challenges, triggering the domino effect. Second, such litigation has revealed the depth of the medical problems associated with injection. While lethal injection challenges began immediately after the method's hasty enactment in 1977,[350] at no time during the past three decades has information concerning medical complications and doctor participation been so pronounced.[351] It is this kind of "objective evidence" that Judge Fogel found so compelling in *Morales*.[352] Finally, this part briefly examines the parallel success of inmates attacking lethal injection from different angles. The growing sophistication of the legal parties and the complexity of the medical aspects of the litigation have invited a focus beyond simply a traditional Eighth Amendment lens, leading to more in-depth scrutiny.

A. *The Supreme Court's Involvement*

A notable oddity of the American death penalty is the Supreme Court's constitutional disregard for how inmates are executed.[353] While the Court

348. *See, e.g.*, Evans v. Saar, 412 F. Supp. 2d 519, 522 (D. Md. 2006) ("Circuit after Circuit (including the Fourth) has ruled that the [same lethal injection protocol that Maryland uses] does not run afoul of the Eighth Amendment."); Abdur'Rahman v. Bredesen, 181 S.W.3d 292, 306–07 (Tenn. 2005) (noting that Tennessee used the method employed by the vast majority of the states, which had not been held unconstitutional), *aff'd*, 181 S.W.3d 292 (Tenn. 2005), *cert. denied*, 126 S. Ct. 2288 (2006). Indeed, most recently, this argument was raised in Tennessee in the context of a governor-appointed protocol committee whose purpose was to review the "pros" and "cons" of the state's three-drug protocol. Harbison v. Little, No. 3:06-01206, slip op. at 3–6 (M.D. Tenn. Sept. 19, 2007). A key "pro" for retaining the three-drug regime was that "[o]ther states do it." *Id.* at 6.

349. *See, e.g.*, Cooey v. Taft, 430 F. Supp. 2d 702 (S.D. Ohio 2006) (staying the execution of a condemned inmate), *remanded by* Cooey v. Strickland, 479 F.3d 412, (6th Cir. 2007), *reh'g denied*, 489 F.3d 775 (6th Cir. 2007). In granting the stay, the district judge took note of the stays granted in challenges in California, Missouri, and North Carolina and the mounting evidence questioning the constitutionality of lethal injection protocols. *See Cooey*, 430 F. Supp. 2d at 706–07.

350. *See generally* Denno, *When Legislatures Delegate*, *supra* note 15, at 100–16.

351. *See supra* Part II.

352. *See* Morales v. Hickman, 415 F. Supp. 2d 1037, 1039 (N.D. Cal. 2006), *aff'd per curiam*, 438 F.3d 926 (9th Cir. 2006), *cert. denied*, 546 U.S. 1163 (2006).

353. *See* Denno, *When Legislatures Delegate*, *supra* note 15, at 70. For an excellent umbrella analysis of the Supreme Court's response to capital punishment during the last

continually has recognized the Eighth Amendment hazards associated with prison conditions, particularly through section 1983 claims, it never has reviewed evidence of the constitutionality of execution methods despite repeated and horrifying mishaps.[354] Nonetheless, starting in December 2003, the Court granted certiorari for two lethal injection-related cases within just over a two-year span.[355] These cases centered on the procedural aspects of lethal injection, but the Court's interest in the topic served as an impetus for broader movement in lethal injection litigation.

First, the Court agreed to hear *Nelson v. Campbell*, in which a condemned inmate sought to challenge the use of a cut-down procedure in his lethal injection.[356] David Nelson had filed his section 1983 claim three days before his execution, alleging that the cut-down procedure, which the state could not even guarantee would be performed by a physician, violated his Eighth Amendment rights.[357] A federal district court in Alabama—a state that had adopted lethal injection as an execution method only a year earlier—had dismissed Nelson's complaint at the pleading stage, characterizing the claim as a successive habeas application, and finding it barred, which the U.S. Court of Appeals for the Eleventh Circuit affirmed.[358] The Supreme Court reversed, however, concluding that the mere issuance of a stay did not convert a valid section 1983 claim into a

four-plus decades, see James S. Liebman, *Slow Dancing with Death: The Supreme Court and Capital Punishment, 1963–2006*, 107 Colum. L. Rev. 1 (2007).

354. *See* Denno, *Getting to Death*, *supra* note 15, at 321–48; *see also* Hill v. McDonough, 126 S. Ct. 2096 (2006) (holding that an inmate can use section 1983 to challenge an execution procedure, but not addressing the substantive claims). This circumstance may change with the Court's September 25, 2007, grant of certiorari in *Baze v. Rees*, No. 07-5439, 2007 U.S. LEXIS 9066 (U.S. Sept. 25, 2007), *amended*, No. 07-5439, 2007 U.S. LEXIS 11115 (U.S. Oct. 3, 2007) ("The petition for a writ of certiorari is granted limited to Questions 1, 2, and 3 presented by the petition."). *See* Petition for a Writ of Certiorari, *Baze*, 2007 U.S. LEXIS 9066 (No. 07-5439) (requesting the Court's guidance on the proper Eighth Amendment standard for evaluating execution methods).

355. *See* Hill v. Crosby, 126 S. Ct. 1189 (2006) (granting stay of execution and granting leave to petition for writ of certiorari); Nelson v. Campbell, 540 U.S. 1046 (2003) (granting writ of certiorari for an inmate's section 1983 claim challenging the use of the cut-down procedure in a lethal injection in Alabama). The Supreme Court agreed to hear the *Nelson* case on December 1, 2003, and agreed to hear the *Hill* case on January 25, 2006. *See Hill*, 126 S. Ct. at 1189; *Nelson*, 540 U.S. at 1046. For insightful discussions of *Hill*, see Douglas A. Berman, *Finding Bickel Gold in a* Hill *of Beans*, 2005–2006 Cato Sup. Ct. Rev. 311 (2006); Note, *A New Test for Evaluating Eighth Amendment Challenges to Lethal Injections*, 120 Harv. L. Rev. 1301 (2007).

356. *Nelson*, 540 U.S. at 1046 (2003). The Supreme Court granted certiorari on "[w]hether a complaint brought under 42 U.S.C. § 1983 by a death-sentenced state prisoner, who seeks to stay his execution in order to pursue a challenge to the procedures for carrying out the execution, is properly recharacterized as a habeas corpus petition under 28 U.S.C. § 2254[.]" *Id.* (internal quotation marks omitted). The state had planned to use a cut-down procedure on the inmate, who had a long history of drug abuse, which involved cutting into the skin to establish intravenous access. *See* Nelson v. Campbell, 541 U.S. 637, 640–41 (2004).

357. *See Nelson*, 541 U.S. at 639.

358. *See id.* at 640, 642–43.

successive habeas petition.[359] While the Court followed an entirely procedural path to reach its holding, the decision highlighted an alternative avenue through which to bring such challenges, as opposed to the highly restricted federal habeas corpus petition.[360]

The Supreme Court handed down its decision in *Nelson* in May 2004, but did not address the question posed; the Court found it unnecessary to determine whether the inmate's claim was properly characterized as a section 1983 claim because the state conceded that it was.[361] While the Supreme Court in *Nelson* remanded the case for consideration of the constitutionality of the cut-down procedure, the Court agreed again to address the procedural question in *Hill v. McDonough*.[362]

In the interim, however, the Supreme Court did not ignore the increasing number of attacks lodged against lethal injection. Rather, a case before the U.S. Court of Appeals for the Eighth Circuit that relied on an unprecedented medical study kept the Justices apprised of the validity of such challenges.[363] That medical study, which appeared in an April 2005 issue of *The Lancet*, a British medical periodical, reported that the level of sodium thiopental used in lethal injection executions might be insufficient, particularly given the potential of poorly trained executioners, of previous inmate substance abuse, and of the heightened level of anxiety in inmates (who generally are not pre-medicated).[364]

The *Lancet* study and its results, both medical and legal, have proved controversial.[365] Regardless, at least initially, condemned inmates and their

359. *See id.* at 645–47.

360. *See id.* at 646–47; *see also* Berman, *supra* note 355 (providing a comprehensive and revealing analysis of the Court's path).

361. *See Nelson*, 541 U.S. at 644. However, the Supreme Court reversed and remanded the case, finding "[t]hat venous access is a necessary prerequisite does not imply that a particular means of gaining such access is likewise necessary." *Id.* at 645, 651.

362. 126 S. Ct. 2096, 2099 (2006) (finding that inmate could bring a section 1983 claim to challenge the lethal injection procedure; however, the claimant still must prove the elements necessary for the issuance of a stay of execution).

363. *See* Brown v. Crawford, 408 F.3d 1027 (8th Cir. 2005) (Bye, J., dissenting).

364. Leonidas G. Koniaris et al., *Inadequate Anaesthesia in Lethal Injection for Execution*, 365 Lancet 1412, 1412 (2005). This article examined the post-execution toxicology reports of forty-nine inmates and concluded that twenty-one of those inmates, or 43%, had levels of anesthesia "consistent with awareness." *Id.* The authors of the study have since conducted a relatively more reliable analysis of other data, raising further questions about the adequacy and humaneness of the chemical composition used in lethal injections. *See* Teresa A. Zimmers et al., *Lethal Injection for Execution: Chemical Asphyxiation?*, 4 Plos Med. 0001 (2007). For a discussion and commentary on the more recent article, see Karen Kaplan, *Study Faults Lethal Injection*, L.A. Times, Apr. 24, 2007, at A1.

365. After the *Lancet* study was published, seven prominent medical researchers, in three separate commentaries, responded with a range of criticisms. *See* Jonathan I. Groner, Mark J.S. Heath, Donald R. Stanski, Derrick J. Pounder, Robyn S. Weisman, Jeffrey N. Bernstein & Richard S. Weisman, *Inadequate Anaesthesia in Lethal Injection for Execution*, 366 Lancet 1073, 1073–74 (2005). The *Lancet* study's authors responded in turn. *See* Teresa A. Zimmers et al., *Authors' Reply*, 366 Lancet 1074, 1074–76 (2005). While it is beyond the scope of this Article to enter this debate among researchers, it is worthwhile to note both the benefits and drawbacks of the *Lancet* study and to provide perspective on what utility the study may have had for attorneys litigating lethal injection cases.

lawyers seized on the *Lancet* study's empirical evidence to support section 1983 claims challenging lethal injection.[366] In May 2005, the Eighth Circuit refused to grant a stay of execution for a Missouri inmate challenging the state's lethal injection protocol, but a dissenting judge cited the *Lancet* article and noted that the state had not rebutted the article's findings.[367] Justice John Paul Stevens, dissenting from the Supreme Court's denial of the stay, wrote that he would have granted the stay for the same reasons as the dissenting Eighth Circuit judge, alluding indirectly to the *Lancet* article.[368] While the Court chose not to hear the substantive issue of the section 1983 challenge, the Eighth Circuit case indicates that at least some Justices took note of the recent revelations regarding the effectiveness of lethal injection protocols.[369]

Clarence Hill, a Florida inmate, also relied on the *Lancet* article in bringing his section 1983 challenge.[370] The Supreme Court of Florida had rejected the claim, noting that the court already had addressed the question of the constitutionality of the state's lethal injection protocol.[371] But the U.S. Supreme Court granted certiorari to answer the limited procedural question of whether a section 1983 claim to challenge a lethal injection protocol could be classified as a successive habeas petition.[372] The Court held that Hill could bring his claim as a section 1983 action;[373] however, the lower courts declined to grant Hill the stay of execution he needed to litigate his claim because he could not show a likelihood of success on his

366. *See, e.g.*, Rutherford v. Crosby, 438 F.3d 1087 (11th Cir. 2006); Brown v. Crawford, 408 F.3d 1027 (8th Cir. 2005); Timberlake v. Donahue, No. 1:06-CV-1859-RLY-WTL, 2007 WL 141950 (S.D. Ind. Jan. 16, 2007); Crowe v. Head, 426 F. Supp. 2d 1310 (N.D. Ga. 2005); Hill v. State, 921 So. 2d 579 (Fla. 2006); Bieghler v. State, 839 N.E.2d 691 (Ind. 2005).

367. *See Brown*, 408 F.3d at 1027 (denying a stay of execution for an inmate attempting to challenge Missouri's lethal injection protocol under section 1983). The Eighth Circuit dismissed the inmate's challenge to lethal injection; however, a dissent from the denial of stay cited the *Lancet* article's findings that executed inmates might not have been anesthetized adequately. *Id.* at 1028 (Bye, J., dissenting).

368. *See* Brown v. Crawford, 125 S. Ct. 2289 (2005) (refusing to grant a stay of execution for a Missouri inmate challenging the state's lethal injection protocol). Justice John Paul Stevens dissented from the denial of stay and, in a two-sentence opinion in which Justices Ruth Bader Ginsburg and Stephen Breyer joined, stated that he would grant the stay for the reasons discussed. *Id.*

369. *Id.*

370. *See* Hill v. State, 921 So. 2d 579 (Fla. 2006) (denying challenge to lethal injection with a dissent noting the reasons to have an evidentiary hearing on the issue). The inmate cited the *Lancet* article in alleging the state's lethal injection protocol could constitute cruel and unusual punishment. *Id.* at 582.

371. *Id.* at 582–83 (agreeing with the trial court that the information did not sufficiently call into question the holding in Sims v. State, 754 So. 2d 657 (Fla. 2000), which found that Florida's protocol did not violate the ban on cruel and unusual punishment). One judge would have granted an evidentiary hearing based on the fact that the evidence from *The Lancet* and supporting affidavit were "totally beyond anything considered by this Court or the trial court in *Sims*" and the state had failed to rebut the findings. *Id.* at 586–87 (Anstead, J., concurring and dissenting).

372. *See* Hill v. Crosby, 126 S. Ct. 2096 (2006).

373. *Id.*

argument that Florida's execution procedures violated his constitutional rights.[374] The state's highest court had determined the state protocol's constitutionality in *Sims v. State* in 2000.[375] The new evidence provided by the *Lancet* article did not overcome the judicial precedent.[376] The district court in Florida found that Hill had not filed his claim in a timely manner, but rather was trying to delay his execution, which the Eleventh Circuit affirmed.[377]

B. *The Ripple Effects of* Nelson *and* Hill

While the Supreme Court has so far addressed only the procedural aspect of execution method challenges, the rarity of such attention awoke inmates and their lawyers, as well as the courts, to the legitimacy of such claims. In what proved to be a foreshadowing of things to come, a New Jersey court refused to allow the application of the state's new lethal injection regulations two months after the Supreme Court agreed to hear Nelson's challenge.[378] A group of citizens advocating for a death penalty moratorium challenged the adoption of new regulations implementing New Jersey's lethal injection statute.[379] The court required the department of corrections to justify changes in the procedure,[380] stressing its concern over the lack of medical involvement in assessing the merit of the changes.[381] Although the challenge in New Jersey took a different form from subsequent actions, the theme of a lack of medical input persisted. Indeed, the New Jersey advocacy group later filed an amicus brief in the Supreme Court in *Hill*.[382]

374. *See* Hill v. McDonough, 464 F.3d 1256 (11th Cir. 2006) (denying Hill's request for a stay of execution); Hill v. McDonough, No. 4:06-CV-032, 2006 WL 2556938 (N.D. Fla. 2006) (dismissing condemned inmate's section 1983 complaint for unnecessary delay in filing).

375. *Sims*, 754 So. 2d 657; *see Hill*, 2006 WL 2556938, at *3 (noting that "[w]hile the Lancet study itself may be relatively new, the factual basis of Hill's claim . . . has been raised and disposed of in other cases").

376. *See Hill*, 464 F.3d at 1259.

377. *Id.*

378. *In re* Readoption of N.J.A.C. 10A:23, 842 A.2d 207 (N.J. Super. Ct. App. Div. 2004). The New Jersey court halted executions in the state because the department of corrections had failed to justify proposed regulations for lethal injection, describing some of the regulations as "arbitrary and unreasonable." *Id.* at 210. For instance, the court stated that the department of corrections had not justified a regulation removing the use of a heart monitor by merely stating that there was no need for an emergency revival cart and that the lethal substances rejected are in fact lethal; rather, the court stated a medical opinion to that effect might be necessary to justify the regulation. *Id.* at 210–11.

379. *Id.* at 209.

380. *Id.* at 211.

381. *See id.* "Our concern is that [the department of corrections] itself does not have medical expertise, and nothing in the record suggests medical consultation and opinion on the reversibility issue or, indeed, whether there are any appropriate lethal drugs whose effects might be reversible." *Id.*

382. *See* Brief of New Jerseyans for Alternatives to the Death Penalty as Amicus Curiae Supporting Petitioner, Hill v. McDonough, 126 S. Ct. 2096 (2006) (No. 05-8794).

Challenges to lethal injection protocols existed years before these two recent Supreme Court cases,[383] but the Court's spark of encouragement, no matter how indirect, propelled attorneys to bring claims that may have remained dormant otherwise. While the *Nelson* case started the ball rolling, the effects of the Court's decision to take up *Hill* were widespread and immediate. The simple granting of certiorari in *Hill* served as the basis for stays of executions for condemned inmates bringing section 1983 claims.[384] The broad ripples of these cases spread quickly and could be felt in state and federal courts, in legislatures, and in governors' offices in a number of states. The following sections examine seven states in particular.

1. California

The *Morales* litigation in California that stretched throughout 2006, and now into 2007, emphasized many of the common issues embodied in a majority of lethal injection challenges.[385] *Morales*, however, was not California's first encounter with a section 1983 challenge to the state's lethal injection procedures. Inmates had used section 1983 to challenge the state's lethal injection procedures before.[386] In fact, Judge Fogel, the same district court judge who presided over the *Morales* case, had denied a preliminary injunction for one of those inmates, Donald Beardslee.[387] On appeal, the Ninth Circuit found that the district court should have conducted an analysis of the facts to determine whether Beardslee could have brought his claim earlier.[388] Nonetheless, the Ninth Circuit affirmed the dismissal of Beardslee's claim because its review of the district court's decision was "limited and deferential."[389]

Indeed, when the U.S. District Court for the Northern District of California considered this same question in *Morales*,[390] it was only because the anesthesiologists withdrew at the last moment[391] that the court held evidentiary hearings that set the stage for Morales's lethal injection challenge, in which he ultimately prevailed.[392] Courts in three of the states

383. *See* Denno, *When Legislatures Delegate*, *supra* note 15, at 90–116.

384. *See, e.g.*, Jackson v. Taylor, No. Civ. 06-300-SLR, 2006 WL 1237044 (D. Del. May 9, 2006) ("[I]t was agreed that the Supreme Court's decision in *Hill* will have a dispositive effect on plaintiff's claims and that staying this litigation is the most prudent course of action."); *see also* Roane v. Gonzales, No. 05-2337 (D.D.C. Feb. 24, 2006).

385. *See supra* Introduction.

386. *See* Beardslee v. Woodford, 395 F.3d 1064, 1067 (9th Cir. 2005), *cert. denied*, 543 U.S. 1096 (2005); Cooper v. Rimmer, 379 F.3d 1029 (9th Cir. 2004).

387. *See Beardslee*, 395 F.3d at 1066. Donald Beardslee previously had asserted challenges to both lethal gas and lethal injection. *See id.* at 1068.

388. *See id.* at 1070.

389. *Id.* at 1076 (internal quotation marks omitted).

390. *See* Morales v. Hickman, 438 F.3d 926, 927 & n.2 (9th Cir. 2006) (citing the district court order), *cert. denied*, 546 U.S. 1163 (2006).

391. *See* Morales v. Hickman, No. C-06-219-JF, slip op. at 2 (N.D. Cal. Feb. 21, 2006) (order on defendant's motion to proceed with execution under alternative condition to order denying preliminary injunction).

392. *See supra* note 352 and accompanying text.

discussed below (Missouri, North Carolina, and Florida) took judicial notice of the California district court's February 21, 2006, order.[393] Indeed, the lawyers representing the inmates in California also represented the inmate who challenged Missouri's implementation of lethal injection.[394]

2. Missouri

In June 2005, Michael Anthony Taylor, a death row inmate, brought a section 1983 claim in the U.S. District Court for the Western District of Missouri.[395] A year later, in the same month that the Supreme Court handed down its decision in *Hill*, the Missouri district court became the first court to hold a state's lethal injection protocol, as implemented, unconstitutional.[396] Ironically, the district court initially denied Taylor's claims.[397] But after a second, more complete round of discovery and evidentiary hearings, the court uncovered shocking details about Missouri's lax execution procedures.

On June 5, 2006, attorneys representing Taylor conducted an anonymous deposition of the supervising execution doctor, known in court records only as John Doe I.[398] When asked about Missouri's written execution procedures, Dr. Doe said he had never seen any written procedures.[399] When asked about the method of mixing a solution of sodium thiopental—a drug that, when improperly mixed, can cause an inmate excruciating pain—Dr. Doe said he improvised because the powder form of the drug had not been dissolving.[400] When asked why he did not remember preparing lower doses of sodium thiopental for some inmates, Dr. Doe responded that he had dyslexia, which hindered his memory: "So, it's not unusual for me to make mistakes . . . . That's why there are inconsistencies in what I call drugs. . . . [B]ut it's not medically crucial in the type of work I do as a

393. *See* Taylor v. Crawford, No. 05-4173-CV-C-FJG, 2006 WL 1779035, at *6 (W.D. Mo. June 26, 2006), *rev'd*, 487 F.3d 1072 (8th Cir. 2007); Brown v. Beck, No. 5:06CT3018 H, 2006 WL 3914717, at *3 (E.D.N.C. Apr. 7, 2006); Diaz v. State, 945 So. 2d 1136, 1144 (Fla. 2006), *cert. denied*, 127 S. Ct. 850 (2006).

394. *Compare* Morales v. Tilton, 465 F. Supp. 2d 972, 973 (N.D. Cal. 2006), *with Taylor*, 2006 WL 1779035, at *1.

395. *See Taylor*, 2006 WL 1779035, at *1.

396. *Id.* at *8; *see also supra* notes 18–19 and accompanying text.

397. *See* Taylor v. Crawford, 445 F.3d 1095 (8th Cir. 2006) (remanding to the district court). The Eighth Circuit previously had reversed a stay of execution for the inmate that the district judge had ordered to allow for time for evidentiary hearings, which the judge's calendar could not accommodate until after the execution date. *Id.* at 1097–98. The Eighth Circuit had reassigned the case to a different judge who held limited evidentiary hearings before the execution date. *Id.* at 1098. However, the Eighth Circuit ruled that the limited evidentiary hearing did not suffice and noted that the Supreme Court's decision to hear the *Hill* case (which had not yet been decided) militated in favor of remanding the case and giving thirty days for discovery and thirty days for hearings. *Id.* at 1099.

398. *See Taylor*, 2006 WL 1779035, at *4.

399. *See id.* at *4–5.

400. *See id*. at *5.

surgeon."[401] Dr. Doe's deposition also revealed that he had sole authority to modify the state's protocol at a moment's notice.[402]

Three weeks after Dr. Doe's deposition, the district court held unconstitutional Missouri's lethal injection protocol.[403] The court found numerous problems with Missouri's execution procedures. The state lacked a written protocol, and Dr. Doe had cut in half the amount of sodium thiopental used.[404] The court expressed grave concern for the complete discretion Dr. Doe had in modifying the protocol, especially given that he seemed unqualified for the job and lacked training in anesthesiology.[405] As a result, not only did the district court conclude that such procedures subjected inmates to an unnecessary risk of unconstitutional pain and suffering, but the court also banned Dr. Doe from participating in executions in the future.[406]

In its order, the district court stated that a board certified anesthesiologist had to mix the lethal drugs and must directly observe the injection of the drugs.[407] The court also required that the dose of sodium thiopental be at least five grams, and that the anesthesiologist certify that the inmate had reached a sufficient anesthetic depth before injecting the next two drugs in the sequence.[408] The court ordered the constant monitoring of the inmate by the anesthesiologist.[409]

Yet the court's insistence on an anesthesiologist was short-lived. Missouri sent a letter to 298 anesthesiologists in the area, asking for their participation.[410] The department of corrections submitted an affidavit to the

401. *Id.* (emphasis omitted).
402. *See id.* at *7.
403. *See id.* at *8.
404. *See id.* at *7.
405. *See id.* at *4, *7.
406. *See id.* at *8; *see also* Taylor v. Crawford, No. 05-4173-CV-C-FJG (W.D. Mo. Sept. 12, 2006) (order rejecting state's revised protocol).
407. *See Taylor*, 2006 WL 1779035, at *8.
408. *See id.* at *9.
409. *See id.*
410. Affidavit of Terry Moore, Taylor v. Crawford, No. 05-4173-CV-C-FJG (W.D. Mo. July 14, 2006). The three-paragraph letter stated in relevant part the following:

> You might have seen recent news reports that a federal judge ordered the Missouri Department of Corrections to use the services of a board-certified anesthesiologist when the department executes a condemned prisoner by means of lethal injection. In an effort to comply with this order, we obtained the names of all board-certified anesthesiologists in certain geographical areas.
>
> Executions occur at the Eastern Reception, Diagnostic, & Correctional Center in Bonne Terre, Missouri. There is no regular schedule for executions, but they normally occur during the early morning hours on Wednesdays. There are fewer than five executions in a typical year in Missouri. The anesthesiologist would assist with the execution but would not actually administer the lethal drugs. The anesthesiologist would be notified well in advance of each execution and would be compensated for these services.
>
> If you think that you might be willing to provide your professional services as an anesthesiologist during executions, please contact me as soon as possible for a brief, confidential discussion. My telephone number is . . . .

Id. at 3.

court eight days after mailing the letter, representing that the department had been unable to retain an anesthesiologist.[411] In September 2006, the district court subsequently revised its requirement of a board-certified anesthesiologist, allowing the state to use a physician trained in anesthesiology, potentially in combination with equipment purchased to monitor anesthetic depth, but maintained that Dr. Doe was banned from participating in future executions.[412] Missouri appealed to the Eighth Circuit, arguing that the district court exceeded its authority in fashioning a remedy beyond what the Constitution required.[413] A panel of the Eighth Circuit reversed the district court, finding that the protocol did not violate the Eighth Amendment.[414] For this conclusion, the court presumed a proper implementation of the state's protocol:

> Because of the pain that undoubtedly would be inflicted by the third chemical if administered without adequate anesthetization, it is imperative for the State to employ personnel who are properly trained to competently carry out each medical step of the procedure. The protocol adequately requires trained medical personnel to carry out these steps and to verify that the IV is working properly. The protocol provides no opportunity for personal judgment regarding the proper dose, because the protocol mandates a dose large enough to render anyone deeply unconscious, as long as it is delivered properly. The protocol is designed to ensure a quick, indeed a painless, death, and thus there is no need for the continuing careful, watchful eye of an anesthesiologist or one trained in anesthesiology, whose responsibility in a hospital's surgery suite (as opposed to an execution chamber) is to ensure that the patient will wake up at the end of the procedure.[415]

The Eighth Circuit declined to rehear the case en banc.[416] And Taylor's lawyers have appealed to the Supreme Court.[417]

411. *See id.* at 1.

412. *See* Taylor v. Crawford, No. 05-4173-CV-C-FJG (W.D. Mo. Sept. 12, 2006) (order rejecting state's revised protocol).

413. *See* Brief of Appellants at 51–61, Taylor v. Crawford, No. 06-3651 (8th Cir. Dec. 4, 2006).

414. Taylor v. Crawford, 487 F.3d 1072 (8th Cir. 2007).

> In a post-oral argument submission, the State informed our court that it was no longer its intention to utilize the services of Dr. Doe I. Although the State's frequent and solemn prior representations to us and to the district court that it had always used a 5-gram dose of thiopental proved to be erroneous, in this instance we will take the State at its word.

Id. at 1077 n.3.

415. *Id.* at 1084.

416. *See Court Declines to Rehear Appeal on Missouri Capital Punishment*, N.Y. Times, Aug. 9, 2007, at A11.

417. *See* Petition for a Writ of Certiorari, Taylor v. Crawford, No. 07-303 (U.S. Sept. 5, 2007), 2007 U.S. WL 2667411.

3. North Carolina

In a similar section 1983 challenge in North Carolina during 2006, Willie Brown, Jr., a condemned inmate, achieved limited success.[418] The U.S. District Court for the Eastern District of North Carolina found that the state needed to revise its protocol to ensure the inmate was unconscious.[419] In response, the department of corrections chose to purchase a machine to monitor the inmate's level of consciousness.[420] The district court found the execution could proceed.[421] The U.S. Court of Appeals for the Fourth Circuit affirmed over the dissent of one judge,[422] who maintained that the state's solution was inadequate because of evidence that the machine on its own could not provide a sufficient measure of anesthetic depth.[423] Additionally, while medical personnel must monitor the machine's output readings, the district court order "ma[de] no provision for these medical professionals to actually *do* anything" if a sufficient level of anesthetic depth was not achieved.[424] Likewise, "even if a medical professional could respond," there was no evidence to show that "the professional would possess the skills necessary to ensure Brown's unconsciousness."[425] Nonetheless, North Carolina executed Brown on April 21, 2006.[426]

In practice, North Carolina's response proved flawed. First, the manufacturer of the machine protested its use in executions:[427] It did not want to give the execution the appearance of a medical procedure.[428] In fact, California had attempted to purchase the same machine from the company for Morales's execution, but the company refused to sell the machine to the state.[429] North Carolina, however, stated on its order form that the machine would be used to monitor inmates recovering from

418. *See generally* Brown v. Beck, No. 5:06-CT-3018, 2006 WL 3914717 (E.D.N.C. Apr. 7, 2006).

419. *See id.* The district court found that Willie Brown, Jr., raised sufficient doubts about the constitutionality of his execution that the state needed to address before the execution could proceed. *Id.* at *8. "Specifically, the Court finds that the questions raised could be resolved by the presence of medical personnel who are qualified to ensure that Plaintiff is unconscious at the time of his execution." *Id.* The district court gave the state one week in which to respond. *Id.*

420. *See Brown*, 2006 WL 3914717, at *8 (ruling that North Carolina could proceed with the execution because it had taken sufficient precautions to make sure the inmate was unconscious through the use of the monitoring device).

421. *See id.*

422. *See* Brown v. Beck, 445 F.3d 752 (4th Cir. 2006).

423. *See id.* at 754 (Michael, J., dissenting).

424. *Id.* at 755.

425. *Id.* at 756.

426. *See* N.C. Dep't of Corr., Execution Carried Out Under Current Death Penalty Statute, http://www.doc.state.nc.us/DOP/deathpenalty/executed.htm (last visited Sept. 27, 2007).

427. *See* Robert Steinbrook, *New Technology, Old Dilemma—Monitoring EEG Activity During Executions*, 354 New Eng. J. Med. 2525 (2006) (examining the use of bispectral index monitors in executions).

428. *See id.* at 2526.

429. *See id.*

surgeries.[430] The company subsequently enacted a policy that required departments of corrections to sign contracts specifying that the machine would not be used in executions.[431] Of course, the company may be powerless to contain the use of its equipment, because machines are offered for resale on the Internet.[432]

Events in 2007 also called into question the adequacy of the state's response to the court's order and highlighted the validity of the dissenting judge's concerns. In March 2007, a North Carolina state court halted executions until the state could guarantee the participation of a licensed physician, as required by the state's lethal injection statute.[433] On that same day, the North Carolina Department of Correction filed a complaint against the state medical board seeking to prevent the board from taking disciplinary actions against those physicians who chose to participate in executions.[434] In depositions taken for that lawsuit, however, the parties discovered a deviation from the district court's order allowing the execution to proceed.[435] The physician present at previous executions said he did not monitor inmate unconsciousness and that the department of correction had never informed him of the order requiring such monitoring.[436] As a result of such revelations, the lawyers who represented a North Carolina inmate executed in August suggested they would file a wrongful death lawsuit against the state.[437]

Then, in August 2007, an administrative law judge required North Carolina to reconsider the February 2007 approval of its new protocol.[438] The judge noted that department of correction officials "did not discuss in any detail the types of drugs used, the purchase or use of the BIS [bispectral index] monitor, or the prevention of an inmate's undue pain and suffering . . . ."[439] Nor had the state given any attention to concerns raised about the protocol by inmates and their lawyers.[440] Instead, state officials

430. *See id.* at 2527.
431. *See id.*
432. *See id.* at 2526.
433. *See* North Carolina v. Holman, No. 97-CRS-49226 (N.C. Super. Ct. Mar. 6, 2007) (canceling the execution until the state could meet the requirements of the statute).
434. N.C. Dep't of Corr. v. N.C. Med. Bd., No. 07-CVS-3574, at 5 (N.C. Super. Ct. Sept. 21, 2007) (order granting plaintiff's request for declaratory relief and denying defendant's motion to dismiss) (prohibiting the North Carolina Medical Board "from enforcing the Position Statement and taking disciplinary action against physicians who have participated in or otherwise have been involved in judicial executions by lethal injection" or who will be so involved in the future). For further discussion of this decision, see *supra* notes 192, 206–07, 256, 268.
435. *See* Weigl, *supra* note 247.
436. *See* Weigl, *supra* note 41.
437. *See id.*
438. *See* Conner v. N.C. Council of State, No. 07 Gov 0238, slip op. at 15 (N.C. Office of Admin. Hearings Aug. 9, 2007).
439. *Id.* at 8.
440. *Id.*

"seemed intent on approving the protocol and allowing the legislature and courts to further examine the issues involved."[441]

4. Florida

While Hill emerged successful from the Supreme Court, the victory proved to be of little use to Hill himself. The federal courts in Florida declined to grant Hill a stay so he could pursue the challenge, and Florida executed Hill on September 20, 2006.[442] The next chapter in Florida's battle with lethal injection began three months later. Florida would execute two more inmates before the execution of Angel Diaz would cast Hill's claims in a new light.[443]

For thirty-four minutes on December 12, 2006, execution personnel in Florida attempted to put Diaz to death.[444] But Diaz was not dying. Newspaper accounts of the execution painted the gruesome scene: Diaz lay on the execution table, squinting and grimacing, while trying to speak; executioners had to inject a second round of chemicals.[445] The medical examiner's report revealed that the intravenous injection had infiltrated, meaning that the lethal chemicals flowed into Diaz's tissue, rather than his bloodstream.[446] Ironically, Diaz unsuccessfully had challenged the state's lethal injection procedures.[447]

Two days after the Diaz execution (and, notably, the day of the *Morales* decision), Florida Governor Jeb Bush established a commission to investigate the state's lethal injection procedure.[448] During the first two months of 2007, the commission held five days of evidentiary hearings,[449] concluding in a report that the state's protocol and execution training procedures needed revising.[450] Specifically, the report noted that, during Diaz's execution, execution team members had failed to establish the intravenous access properly or even to follow the state's protocol.[451] The commission recommended ways to address these problems (including ensuring the inmate's level of unconsciousness); yet, citing ethical reasons, the three medical professionals on the commission "refrained from rendering [their] medical expertise or consent[ing] to these specific

441. *Id.*

442. *See* Fla. Dep't of Corr., Execution List: 1976 to Present, http://www.dc.state.fl.us/oth/deathrow/execlist.html (last visited Aug. 31, 2007).

443. *See id.*

444. *See* Florida Commission Report, *supra* note 42, at 8.

445. *See id.*

446. *See id.* at 8.

447. *See* Diaz v. State, 945 So. 2d 1136, 1144 (Fla. 2006), *cert. denied*, 127 S. Ct. 850 (2006).

448. *See* Fla. Exec. Order No. 06-260 (Dec. 15, 2006), *available at* http://www.deathpenaltyinfo.org/FloridaExecutiveOrder.pdf (staying all executions after the botched execution of Angel Diaz).

449. *See* Florida Commission Report, *supra* note 42, at 3–4.

450. *See id.* at 9–13.

451. *See id.* at 8.

recommendations."[452] These same medical professionals concluded that the recommendations would require the employment of medical personnel who would violate ethical guidelines and, as such, "the inherent risks, and therefore the potential unreliability of lethal injection cannot be fully mitigated."[453]

Florida issued a new protocol in May 2007, but then revised that version two months later.[454] A judge's concerns over the qualifications of executioners prompted the quick revisions.[455] And, like Judge Fogel in California and the district judge in Missouri, the Florida judge ordered additional hearings on the new protocol.[456]

5. Tennessee

In early 2007, Tennessee provided a ninety-day moratorium and less than an hour of public hearings for its "quick fix" examination of its lethal injection procedures, which delegated all responsibility for the study to the corrections department.[457] In the Tennessee governor's own words, the ninety-day review "would give the state time to correct 'sloppy cut and paste' execution proceedings that were 'full of deficiencies.'"[458] Yet the governor himself mirrored the same kind of mistakes he accused the department of corrections of making. The constrained ninety-day time frame was "neither responsible nor realistic."[459] Accounts also indicate that no medical personnel spoke at the public hearings and there was no clear documentation that any attended.[460]

The U.S. Court of Appeals for the Sixth Circuit characterized the resulting protocol as "better."[461] But continuing criticism predicted well

452. *See id.* at 15.

453. *Id.*

454. *See supra* notes 25–26 and accompanying text.

455. *See supra* notes 26, 42 and accompanying text.

456. *See supra* notes 26, 42, 341 and accompanying text. The Florida judge has since concluded that Florida's execution protocol is constitutional. State v. Lightbourne, Nos. 1981-170 CF, SC06-2391, slip op. at 5 (Fla. Cir. Ct. Sept. 10, 2007).

457. Sheila Burke, *Progress of Execution Rules Disputed; State Says Workman to Die May 9 as Scheduled*, Tennessean, Apr. 6, 2007, at B1.

458. Jared Allen, *Critics Say 90-Day Execution Review Unrealistic, Inadequate*, Nashville City Paper, Apr. 6, 2007, at 7.

459. *Id.* (quoting Michael Passino, a Nashville attorney).

460. *See id.*

461. Workman v. Bredesen, 486 F.3d 896, 911 (6th Cir. 2007), *cert. denied*, 127 S. Ct. 2160 (2007) ("Having refused to challenge the old procedure on a timely basis, [Workman] gets no purchase in claiming a right to challenge a *better* procedure on the eve of his execution."). However, the dissent noted that the court declined to stay the execution for review

> despite the extensive and detailed allegations . . . tending to show that Tennessee's new lethal-injection protocol will subject him to pain and suffering in violation of the Eighth Amendment; despite . . . testimony from physicians familiar with lethal-injection protocols, medical studies, and evidence from recent botched executions; despite the statements from federal courts across the United States expressing deep skepticism with similar lethal-injection protocols adopted by other states; and

the Tennessee protocol's constitutional vulnerability. On September 19, 2007, in a thorough and sophisticated opinion, a district court judge rendered the protocol unconstitutional; in so doing, the judge questioned many aspects of the protocol's construction, ranging from the three-drug regimen, to the qualifications of the executioners, and, most significantly, the gross disregard of those in charge of creating a humane execution procedure.[462]

6. Kentucky, Maryland

Relative to the successes garnered in California, Missouri, and North Carolina, inmates initially pursued challenges in far less dramatic fashion in a slew of other states. For example, two states, Maryland and Kentucky, halted executions based on violations of administrative enactment procedures.[463] Maryland's ruling still stands; yet the Kentucky court reversed its ruling after finding that subjecting lethal injection procedures to public review would turn the process into "nothing but a series of collateral attacks precluding capital punishment."[464]

For Kentucky, however, other legal pursuits were in the making. On September 25, 2007, the Supreme Court agreed to hear an appeal by two Kentucky death row inmates arguing, among other things, that the state's use in lethal injection executions of the standard three chemicals, either alone or in combination, constitutes an Eighth Amendment violation in light of the availability of other less problematic chemicals.[465] The Court's

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> despite the deference that an appellate court owes to the judgment of a district court.

Id. at 921 (Cole, J., dissenting).

462. Harbison v. Little, No. 3:06-01206, slip op. at 55–56 (M.D. Tenn. Sept. 19, 2007); *see also supra* notes 20, 27, 285, 309, 333, 334, 348.

463. *See* Evans v. State, 914 A.2d 25, 80–81 (Md. 2006); Bowling v. Ky. Dep't of Corr., No. 06-CI-00574, slip op. (Ky. Cir. Ct. Nov. 30, 2006) (granting plaintiff summary judgment).

464. Bowling v. Ky. Dep't of Corr., No. 06-CI-00574, slip op. at 8 (Ky. Cir. Ct. Dec. 27, 2006).

465. *See* Baze v. Rees, 217 S.W.3d 207, 211 (Ky. 2006), *reh'g denied*, No. 2005-SC-000543-MR, 2007 Ky. LEXIS 98 (Ky. Apr. 19, 2007), *cert. granted*, No. 07-5439, 2007 U.S. LEXIS 9066 (U.S. Sept. 25, 2007), *amended*, No. 07-5439, 2007 U.S. LEXIS 11115 (U.S. Oct. 3, 2007) ("The petition for a writ of certiorari is granted limited to Questions 1, 2, and 3 presented by the petition."); *see also* Petition for a Writ of Certiorari, *Baze*, 2007 U.S. LEXIS 9066 (No. 07-5439). The petition for a writ of certiorari in *Baze* posed the following four questions:

> (I) Does the Eighth Amendment to the United States Constitution prohibit means for carrying out a method of execution that create an unnecessary risk of pain and suffering as opposed to only a substantial risk of the wanton infliction of pain?
>
> (II) Do the means for carrying out an execution cause an unnecessary risk of pain and suffering in violation of the Eighth Amendment upon a showing that readily available alternatives that pose less risk of pain and suffering could be used?
>
> (III) Does the continued use of sodium thiopental, pancuronium bromide, and potassium chloride, individually or together, violate the cruel and unusual

decision to review lethal injection on a substantive level allows the Court an opportunity to provide the Eighth Amendment guidance states need to help quell the litigation chaos so evident in recent years.

C. *Parallel Success Without a Solution*

Historically, challenges to execution methods have followed a fairly predictable Eighth Amendment path. When one method of execution became problematic, such as hanging, for example, states would sense constitutional vulnerability and switch to another method, such as electrocution or lethal gas. When those two methods established a record of serious botches, states switched to lethal injection. Yet the past four years have shown a striking array of continually changing strategies, ranging from action in the courts in the form of the more frequent section 1983 challenges and less frequent administrative law claims to gubernatorial attempts to investigate lethal injection without court involvement and state legislative efforts to permit doctor participation in executions.

In 2006 alone, two district courts held state lethal injection protocols unconstitutional, two governors put executions on hold, and another handful of states effectively halted executions as inmates pursued lethal injection challenges.[466] Indeed, the actions in California, Maryland, and Florida occurred over five days in December 2006.[467] In early 2007, a Delaware

punishment clause of the Eighth Amendment because lethal injections can be carried out by using other chemicals that pose less risk of pain and suffering?

(IV) When it is known that the effects of the chemicals could be reversed if the proper actions are taken, does substantive due process require a state to be prepared to maintain life in case a stay of execution is granted after the lethal injection chemicals are injected?

Id. at ii–iii.

466. Federal district courts in California and Missouri held execution protocols unconstitutional in 2006. *See* Morales v. Tilton, 465 F. Supp. 2d 972 (N.D. Cal. 2006); Taylor v. Crawford, No. 05-4173-CV-C-FJG, 2006 WL 1779035, at *8 (W.D. Mo. June 26, 2006), *rev'd*, 487 F.3d 1072 (8th Cir. 2007). In 2006, governors in three states, Florida, South Dakota, and Tennessee, imposed a moratorium on executions by executive order. *See* Fla. Exec. Order No. 06-260 (Dec. 15, 2006), *available at* http://www.deathpenaltyinfo.org/FloridaExecutiveOrder.pdf (staying all executions after a botched execution); An Order Directing the Department of Correction to Complete a Comprehensive Review of the Manner in which the Death Penalty Is Administered in Tennessee, Exec. Order No. 43 (Feb. 1, 2007), *available at* http://www.tennesseeanytime.org/governor/AdminCMSServlet?action=viewFile&id=969 (placing executions on hold for ninety days); Press Release, S.D. Governor's Office, *supra* note 54. Courts in other states, Arkansas, Delaware, and Maryland, stayed executions in 2006 and have not had an execution since the stay. *See* Nooner v. Norris, No. 5:06CV00110 SSW (E.D. Ark. June 26, 2006); Jackson v. Taylor, No. Civ. 06-300-SLR, 2006 WL 1237044 (D. Del. May 9, 2006); Evans v. State, 914 A.2d 25 (Md. 2006). In February 2007, the U.S. District Court for the District of Delaware certified the suit challenging Delaware's lethal injection protocol as a class action lawsuit and joined to the suit the additional fifteen death row inmates. *See* Jackson v. Danberg, 240 F.R.D. 145, 146 (D. Del. 2007).

467. The U.S. District Court for the Northern District of California issued its opinion holding the state's protocol unconstitutional as implemented on December 15, 2006; the Florida governor issued an executive order halting executions on the same day; and the Maryland Court of Appeals followed on December 19, 2006. *See Morales*, 465 F. Supp. 2d

court certified a class action section 1983 lawsuit by the state's sixteen death row inmates,[468] and Tennessee's governor established a ninety-day stay of executions to review the state's procedures,[469] an effort that has resulted in a court's rendering the Tennessee protocol unconstitutional.[470] The start of 2007 also showed a high level of involvement on the part of state legislatures.[471] Questions about the appropriate degree of medical participation served as one common thread weaving through these actions.

Presumably, the impact and visibility of this litigation, and the problems it revealed, would encourage states to make substantial changes in their protocols as well as assess issues pertaining to medical involvement. However, the disjointed ways in which states have reviewed their protocols—at times responding on the fly to court orders, as in California, or establishing a quick-and-dirty review of execution procedures, as in Florida—indicate a need for a more comprehensive and cohesive effort to address the problems. The next part offers recommendations for such a response.

V. THE SEARCH FOR SOLUTIONS

In *Morales*, Judge Fogel stated that the lethal injection process can be "fixed."[472] Yet it is questionable whether any of the remedies that have been proposed across the country can fix lethal injection protocols with a sufficient degree of reliability. The difficulty with identifying the "fix" is that states have not provided enough information on the problems. Recent revelations about lethal injection in this country have resulted in more questions than answers: What is the appropriate level of medical

at 972; *Evans*, 914 A.2d at 80; Fla. Exec. Order No. 06-260 (Dec. 15, 2006), *available at* http://www.deathpenaltyinfo.org/FloridaExecutiveOrder.pdf.

468. *See Jackson*, 240 F.R.D. at 149 (certifying a class action suit challenging Delaware's lethal injection protocol and joining to the suit the additional fifteen death row inmates).

469. An Order Directing the Department of Correction to Complete a Comprehensive Review of the Manner in which the Death Penalty Is Administered in Tennessee, Exec. Order No. 43 (Feb. 1, 2007), *available at* http://www.tennesseeanytime.org/governor/AdminCMSServlet?action=viewFile&id=969

470. Harbison v. Little, No. 3:06-01206, slip op. at 55–56 (M.D. Tenn. Sept. 19, 2007).

471. For example, the governor of South Dakota signed two bills relating to lethal injection. First, revisions to the lethal injection statute eliminated the reference to "an ultra-short-acting barbiturate in combination with a chemical paralytic agent" and replaced it with the phrase "substance or substances in a lethal quantity." *See* An Act to Provide for the Substances Used in the Execution of a Sentence of Death and to Allow the Choice of the Substances Used in an Execution Under Certain Circumstances, H.B. 1175, Legis. Assem., 82d Sess. (S.D. 2007) (signed February 23, 2007). Second, a separate bill repealed any mention of physician involvement from the death penalty sections of the statutory code. *See* An Act to Repeal the Requirement for Physician Involvement in the Execution of a Sentence of Death by Eliminating Certain Specified Roles, H.B. 1160, Legis. Assem., 82d Sess. (S.D. 2007) (signed February 23, 2007).

472. Morales v. Tilton, 465 F. Supp. 2d 972, 974 (N.D. Cal. 2006). While Judge Fogel was referring specifically to California, his views have been echoed by courts and departments of corrections throughout the country. *See supra* Part IV.

involvement? And who should decide? Are states using the correct drugs? Do less constitutionally problematic alternatives exist?

This Article declines to join blindly the search for solutions without complete knowledge and understanding of the problems. Nor should legislatures, courts, governors, or departments of corrections fall into such a trap. Lethal injection requires some kind of medical expertise, of course, but the nature and extent of it are unknowable unless the state provides material information about how executions are performed. Until that point is reached, this country cannot justly make the necessary legal and ethical choices about what role the medical profession can or should assume in executions. This Article's goal, then, is to avoid following the faulty roads of uninformed recommendations that states continue to create but which often lead only to inhumanity.

Therefore, this part recommends a method for solving the underlying problem—the lack of accurate information—as a prerequisite for answering the key questions. First, states should provide for adequate time to conduct an in-depth study of the proper implementation of lethal injection. Second, states should make transparent lethal injection procedures. An apt analysis of the constitutionality of lethal injections cannot succeed without states' release of all critical information on the execution process.

A. *In-Depth Study of Lethal Injection*

States adopted lethal injection without medical or scientific justification for the procedure.[473] As such, it is not surprising that Texas botched this country's first lethal injection[474] and that states continuously have failed to prevent such debacles. From the start, however, the medical profession strongly opposed the use of lethal injection for executions, fearing that the public would associate the practice of medicine with death.[475] Yet lethal injection's link to medicine did make executions appear more humane and palatable—a perception states encouraged.[476] The vision of a serene inmate gently falling asleep evoked all the beneficial associations that only the medical profession could bring. Such inaccurate depictions have shielded states from careful review of their implementation of lethal injection.

Within the past few years, however, growing skepticism over troublesome executions has dented this shield, as well as threatened the viability of the death penalty itself.[477] In response, a few states attempted to review and possibly repair their lethal injection procedures. In both Florida and Ohio, for example, highly publicized botched executions served as the focal point for the states' appointed commissions.[478]

473. *See supra* Part I.B.2 and accompanying notes.
474. *See supra* note 180 and accompanying text.
475. *See supra* notes 193–96 and accompanying text.
476. *See supra* Part II.
477. *See supra* notes 53–56 and accompanying text; *see also* Part IV.
478. *See supra* notes 40, 42 and accompanying text.

On the surface, these efforts seem like sensible solutions to lethal injection's problems. The commissions incorporate, for example, a number of the Human Rights Watch report's recommendations to state and federal corrections agencies for improving lethal injection procedures. These include an effort to "[r]eview lethal injection protocols by soliciting input from medical and scientific experts, and by holding public hearings and seeking public comment."[479] Florida assembled such a commission,[480] but a greater amount of time would have enabled a more thorough final report, which was released less than four months after Diaz was executed.[481]

Other states have fared even worse than Florida. In North Carolina, for instance, officials ignored concerns of condemned inmates and their lawyers and requests to provide input, instead focusing solely on approving the new protocol quickly.[482] Ohio's "study" of the causes of its lethal injection botch resulted in a two-and-a-half page report.[483] In Ohio, only when a condemned inmate strapped to the gurney told the state, "'It's not working,'"[484] did department officials acknowledge their lethal injection procedures might be "broken."[485] Ironically, the Sixth Circuit found that Ohio's revisions were not relevant to an inmate's section 1983 method-of-execution challenge.[486] The court rejected the inmate's claim as barred by statute of limitations.[487]

Neither Florida nor Ohio has fared well in the aftermath of their protocol revisions. Florida released its first revision in May 2007, but a judge then harshly criticized it.[488] While on September 10, 2007, the same judge found the July 2007 revision constitutional, the skeletal, scientifically unsupported, and contradictory composition of the judge's five-page order prompts continuing concerns over the state's lethal injection procedure.[489] Likewise, in May 2007, an Ohio execution lasted nearly two hours as executioners attempted to find a suitable vein, thereby demonstrating that Ohio's protocol revision had been futile.[490]

The shortcomings in the resulting protocols exemplify the built-in failures of attempted speedy resolutions. Overall, these states' efforts at examining lethal injection have been so limited in time and expertise that their recommendations should carry no weight. Ironically, execution

479. *See* Human Rights Watch, *supra* note 118, at 7.
480. *See supra* notes 448–53 and accompanying text.
481. *See* Florida Commission Report, *supra* note 42.
482. *See supra* notes 438–41 and accompanying text.
483. *See* Letter from Terry J. Collins, *supra* note 336.
484. Adam Liptak, *Trouble Finding Inmate's Vein Slows Lethal Injection in Ohio*, N.Y. Times, May 3, 2006, at A16.
485. *See* Letter from Terry J. Collins, *supra* note 336.
486. Cooey v. Strickland, 479 F.3d 412, 424 (6th Cir. 2007), *reh'g en banc denied*, 489 F.3d 775 (6th Cir. 2007).
487. *Id.* at 424.
488. *See supra* notes 454–56 and accompanying text.
489. State v. Lightbourne, Nos. 1981-170 CF, SC06-2391, slip op. at 5 (Fla. Cir. Ct. Sept. 10, 2007).
490. *See supra* note 40 and accompanying text.

moratoria fuel these rushed and reckless assessments of lethal injection's problems and solutions because of the pressure to carry out the punishments. Regardless of the establishment of moratoria, states should conduct an extensive review.

In contrast to recent cursory reviews of lethal injection, New York's nineteenth-century approach to examining execution methods was far more thorough than any other examination subsequently attempted in this country. The state's 1890 commission spent two years evaluating every execution method ever used, while also conducting a massive review of materials to prepare for a detailed evidentiary hearing on electrocution.[491] Given the medical complexity of lethal injection, modern attempts at studying execution methods are frivolous in comparison.

There is also impressive precedent from mid-twentieth-century Great Britain.[492] For example, the Royal Commission consisted of a group of the highest-ranking experts in the United Kingdom.[493] Over a five-year period, these experts produced a 500-page report considering all aspects of capital punishment, including a detailed assessment of execution methods, particularly lethal injection.[494]

With this perspective, the Royal Commission could make relatively informed recommendations on how the country should proceed if in fact the death penalty would continue. For instance, highly respected medical societies participated in the review, even though they opposed their participation in executions.[495] The commission took seriously expert medical input about the hazards and impracticalities of injection, but also believed that the medical profession's unwillingness to be involved only "magnified" the "consequences" of medicine's link to capital punishment and was not a reason for rejecting a particular execution method.[496] Indeed, the commission favored another medical take on the matter: The medical profession should view physician participation "as one of individual conscience, and not all doctors would feel debarred from giving instruction for such a purpose."[497]

491. *See* New York Commission Report, *supra* note 61 and accompanying text.

492. *See supra* notes 80–89 and accompanying text.

493. *See* Royal Commission Report, *supra* note 80, at iii.

494. *See generally id.*

495. *Id.* at 258. For example, the commission quoted the view of the British Medical Association:

> "No medical practitioner should be asked to take part in bringing about the death of a convicted murderer. The Association would be most strongly opposed to any proposal to introduce, in place of judicial hanging, a method of execution which would require the services of a medical practitioner, either in carrying out the actual process of killing or in instructing others in the technique of the process."

Id.

496. *Id.* at 259.

497. *Id.* Such a view conforms to the finding of a recent survey of American physicians, in which nineteen percent of those physicians polled stated that they would be willing to administer drugs in an execution, despite opposition from influential medical societies. *See* Neil J. Farber et al., *Physicians' Willingness to Participate in the Process of Lethal Injection for Capital Punishment*, 135 Annals Internal Med. 884, 886 (2001).

Of course, one key factor of current analyses of lethal injection in the United States concerns physician participation. But this area is the most immersed in paradox. While the AMA Ethics Council derided physician involvement in executions, the council also concedes that physicians can make executions more humane.[498] This stance bears on the Eighth Amendment because it brings some substantive contours to the "very narrow question" of whether a "lethal-injection protocol—as actually administered in practice—create[s] an undue and unnecessary risk that an inmate will suffer pain so extreme that it offends the Eighth Amendment[.]"[499] Without physician participation, is any pain an inmate experiences "unnecessary"? That question is one that demands the input of medical organizations, but they are loathe to provide it. As Judge Fogel noted in *Morales*, "[T]he need for a person with medical training would appear to be inversely related to the reliability and transparency of the means for ensuring that the inmate is properly anesthetized."[500]

While the medical associations can—and perhaps should—protest their involvement, most doctors are not even members of these organizations. A more thorough study might reveal the willingness of a sizable number of doctors to participate—something the law does not prohibit. In turn, medical associations' participation in evaluations of lethal injection could give their arguments against it more credibility. As time has shown, the current hands-off strategy of medical associations has not worked. In addition to decrying medical participation in lethal injections, medical associations should accept the reality that some doctors do participate and work to solve the conflict, rather than contribute to it.

B. *Increased Transparency of Lethal Injection Procedures*

Of course, even the most thorough and comprehensive study would prove meaningless if its recommendations were not implemented properly. As Judge Fogel emphasized in *Morales*, "the reliability and transparency" of the injection process impacted the need to have medical personnel involved.[501] Such a philosophy need not be limited to medical involvement. It should be applied to every aspect of lethal injection.

Evidence shows that states currently do not follow even their vague protocols. Missouri's Dr. Doe altered the amount of sodium thiopental delivered. Ohio executioners failed to maintain the required dual intravenous access lines. The Florida commission acknowledged that the execution team did not heed the state's existing guidelines for the delivery of chemicals. In California, state officials misled the anesthesiologists about their role while some of those involved in executions claimed during the *Morales* hearings that they had never seen the state's protocol. And, in

498. *See supra* note 258 and accompanying text.
499. Morales v. Tilton, 465 F. Supp. 2d 972, 974 (N.D. Cal. 2006).
500. *Id.* at 983.
501. *Id.*

North Carolina, the state and participating doctor ignored a court order to monitor the inmate's level of unconsciousness.[502]

Given such blatant disregard for existing procedures, states cannot be trusted to perform executions without oversight. States have withdrawn information in the face of challenges, reinforcing the belief that they lack the ability or willingness to conduct executions in line with constitutional mandates. As this author's study showed, in 2005 a disturbingly high number of states failed to provide public protocols, thereby hiding from public scrutiny how they execute. States' agencies have the ability to change protocols without informing the public, and often information about protocols is not subject to state freedom of information laws.[503] Even the mere delegation of execution procedures to corrections officials decreases their visibility.[504]

Judge Fogel tried to improve transparency by placing the responsibility of lethal injection where it belonged—with the governor, an elected official.[505] Ironically, California's governor insisted on operating in complete secrecy for the protocol review, a request that Judge Fogel rightly denied.[506] Likewise, the state court decisions in Maryland and Kentucky struck at the heart of this matter, with inmates arguing that implementation regulations should be subject to public review.[507] Maryland found such review necessary; while the Kentucky court initially ruled in the same way, it then reversed the ruling, fearing that the focus of such proceedings would be the death penalty itself rather than the regulations for implementing lethal injection.[508] On the other hand, a North Carolina administrative law judge rightly ruled that the state had to consider inmates' input or risk denying them due process.[509]

Such public availability of execution procedures is critical, however, to ensuring the constitutionality of executions. And such transparency might also help resolve the conflict between law and medicine because society will start to take responsibility for implementing executions. Devoid of the distracting need to finger point, law and medicine can work jointly, sharing

502. *See supra* Part IV.B.3.

503. *See, e.g.*, Cooey v. Strickland, 479 F.3d 412, 426–28 (6th Cir. 2007) (Gilman, J., dissenting) (noting that "Ohio is free to periodically change its lethal-injection protocol" but that "information about lethal-injection training, procedures, and procurement falls outside the scope of the Ohio Public Record Law" (internal quotation marks omitted)), *reh'g en banc denied*, 489 F.3d 775 (6th Cir. 2007).

504. *See* Roko, *supra* note 39, at 2812.

505. Morales v. Tilton, 465 F. Supp. 2d 972, 982 (N.D. Cal. 2006) (noting that the governor's office "is in the best position to insist on an appropriate degree of care and professionalism").

506. *See* Morales v. Tilton, No. C-06-0219-JF (N.D. Cal. Mar. 6, 2007) (order denying without prejudice joint motion for a protective order).

507. *See supra* notes 463–64 and accompanying text.

508. *See supra* note 464 and accompanying text.

509. *See* Conner v. N.C. Council of State, No. 07 Gov 0238, slip op. at 14–15 (N.C. Office of Admin. Hearings Aug. 9, 2007).

communications and expertise to better understand how to "fix" the "broken" system.

CONCLUSION

On February 20, 2006, Michael Morales was hours away from execution when two anesthesiologists declined to participate in the lethal injection procedure. As Judge Fogel would later explain, there had been "a disconnect" between the anesthesiologists' and the courts' "expectations" of what the doctors' roles should be.[510] This disconnect, however, went beyond one execution in California. The events surrounding Morales's impending fate brought to the surface the long-running schism between law and medicine, raising the question of whether any beneficial connection between the professions ever existed in the execution context. History shows it seldom did. Decades of botched executions prove it.

Until states address this schism, instead of ignoring it, lethal injection will remain constitutionally vulnerable. Inmates will continue to challenge the implementation of the method; states will continue to make uninformed changes to ensure the death penalty survives. Only by conducting a thorough study of the method will society be able to know whether lethal injection can meet constitutional mandates. And by clarifying, in *Baze v. Rees*, what those mandates should be, the Supreme Court can then provide the kind of Eighth Amendment guidance states need to foster humane executions.

510. Morales v. Tilton, 465 F. Supp. 2d 972, 976 (N.D. Cal. 2006) (internal quotation marks omitted).

APPENDIX: SOURCES FOR 2005 PROTOCOLS FOR THIRTY-SIX STATES**

Alabama	Facsimile from Brian Corbett, Pub. Info. Officer, Ala. Dep't of Corr., to Daniel Auld, Research Assistant, Fordham Univ. Sch. of Law (June 15, 2005) (on file with author) (providing syringe preparation sheet with chemical names and quantities).
Arizona	Ariz. Dep't of Corr., Ariz. State Prison Complex—Florence, http://www.azcorrections.gov/prison/FlorenceHist.htm (last visited June 15, 2007) (containing information on Arizona's lethal injection procedures, including the chemicals); E-mail from Jill Berger, Executive Sec'y, Deputy Dir.'s Office, Ariz. Dep't of Corr., to Daniel Auld, Research Assistant, Fordham Univ. Sch. of Law (July 20, 2005) (on file with author) (stating Arizona's policy is restricted).
Arkansas	Facsimile from Dina Tyler, Pub. Info. Officer, Ark. Dep't of Corr., to Daniel Auld, Research Assistant, Fordham Univ. Sch. of Law (June 16, 2005) (on file with author) (providing information on Arkansas's procedures with handwritten revisions).
California	Cal. Dep't of Corr. & Rehab., Lethal Injection Procedures, http://www.corr.ca.gov/CommunicationsOffice/CapitalPunishment/lethal_injection.asp (last visited June 15, 2005) (giving some details of California execution procedure); Telephone Interview with Vernell Crittendon, Pub. Info. Officer, San Quentin State Prison (June 15, 2005) (concerning California procedure).
Colorado	Colo. Dep't of Corr., Execution Day, http://exdoc.state.co.us/secure/combo/frontend/index.php/contents/view/474 (last visited Aug. 28, 2007) (detailing the procedure that occurs in Colorado on execution day and providing the chemical names); Telephone Interview with Katherine Sanguinetti, Spokeswoman, Colo. Dep't of Corr. (July 1, 2005) (providing additional information on Colorado procedures).
Connecticut	State of Conn. Dep't of Corr., Directive 6.15: Administration of Capital Punishment (effective Oct. 19, 2004); Telephone Interview with Brian Garnett, Dir. of External Affairs, Conn. Dep't of Corr. (June 15, 2005) (providing additional information on Connecticut's execution procedure).
Delaware	Del. Dep't of Corr., http://www.state.de.us/deathp_history.html (last visited June 16, 2005) (providing Delaware's protocol);

** This appendix omits New York, which declared its death penalty unconstitutional in 2004. *See* People v. Lavalle, 817 N.E.2d 341, 367 (N.Y. 2004); *supra* note 302 (noting the need to exclude New York from the 2005 protocol study for methodological reasons). Also, many of the web sites listed in the appendix no longer contain the information on lethal injection protocols that the author collected in 2005; in some cases, the sites have been taken down completely. The information that was available on these sites in 2005, however, is on file with the author.

	Telephone Interview with Beth Welch, Chief of Media Relations, Del. Dep't of Corr. (July 1, 2005).
Florida	Sims v. State, 754 So. 2d 657, 665 n.17 (Fla. 2000) (listing chemical information); Facsimile from Debbie Buchanan, Pub. Affairs Office, Fla. Dep't of Corr., to Daniel Auld, Research Assistant, Fordham Univ. Sch. of Law (June 20, 2005) (on file with author) (providing Florida's protocol with portions redacted).
Georgia	Letter from Rhoda S. McCabe, Senior Assistant Counsel, Ga. Dep't of Corr., Legal Office, to Daniel Auld, Research Assistant, Fordham Univ. Sch. of Law (July 25, 2005) (on file with author) (containing information regarding Georgia's lethal injection procedures).
Idaho	E-mail from Melinda O'Malley Keckler, Pub. Info. Office, Idaho Dep't of Corr., to Daniel Auld, Research Assistant, Fordham Univ. Sch. of Law (July 19, 2005) (on file with author) (stating that Idaho's information on lethal injection was confidential).
Illinois	Telephone Interview with John Hosteny, Ill. Dep't of Corr., (July 13, 2005) (stating that the Illinois procedure is confidential).
Indiana	Ind. Dep't of Corr., Execution Process (n.d.) (containing information on chemicals, but not the quantities); Telephone Interview with Barry Nothstine, Spokesman, Ind. State Prison (June 20, 2005).
Kansas	Facsimile from Frances Breyne, Pub. Info. Officer, Kan. Dep't of Corr., to Daniel Auld, Fordham Univ. Sch. of Law (July 19, 2005) (on file with author) (containing execution procedure with portions redacted).
Kentucky	Ky. Corr. Policy and Procedure 9.5: Execution (effective Dec. 17, 1998); Letter from Jeff Middendorf, Gen. Counsel, Ky. Justice and Pub. Safety Cabinet, Office of Legal Servs., to Daniel Auld, Research Assistant, Fordham Univ. Sch. of Law (July 11, 2005) (on file with author) (listing chemical quantities for Kentucky).
Louisiana	Facsimile from Sara Calvert, Office of the Sec'y, La. Dep't of Pub. Safety and Corr., to Daniel Auld, Research Assistant, Fordham Univ. Sch. of Law (June 20, 2005) (on file with author) (containing Louisiana Department of Public Safety and Corrections Regulation C-03-001 Field Operations Death Penalty); Telephone Interview with Deputy Warden Richard Peabody, Angola Penitentiary (July 19, 2005) (providing additional information about Louisiana's procedure).
Maryland	Facsimile from George Gregory, Pub. Info. Officer, Md. Dep't of Pub. Safety and Corr. Servs., to Daniel Auld, Research Assistant, Fordham Univ. Sch. of Law (Aug. 12, 2005) (on file with author) (containing Maryland Department of Public Safety

	and Correctional Services Execution Operations Manual).
Mississippi	E-mail from Tara Frazier, Commc'ns Officer, Miss. Dep't of Corr., to Daniel Auld, Research Assistant, Fordham Univ. Sch. of Law (July 1, 2005) (on file with author).
Missouri	Telephone Interview with John Fougere, Chief Pub. Info. Officer, Mo. Dep't of Corr. (June 29, 2005).
Montana	Mont. Dep't of Corr., http://www.cor.state.mt.us/Facts/deathrow.asp (last visited June 25, 2005); Montana State Prison Policies and Procedures, MSP 3.6.1, Executions (effective Feb. 5, 2001); Telephone Interview with Linda Moodry, Pub. Info. Officer, Mont. State Prison (July 19, 2005).
Nevada	Telephone Interview with Fritz Schlottman, Pub. Info. Officer, Nev. Dep't of Corr. (July 1, 2005) (stating that Nevada's protocol is confidential).
New Hampshire	E-mail from Jeffrey Lyons, Pub. Info. Officer, N.H. Dep't of Corr., to Daniel Auld, Research Assistant, Fordham Univ. Sch. of Law (June 20, 2005) (on file with author) (stating that New Hampshire has no formal policy).
New Jersey	E-mail from Matthew Schuman, Spokesman, N.J. Dep't of Corr., to Daniel Auld, Research Assistant, Fordham Univ. Sch. of Law (Aug. 3, 2005) (on file with author) (stating that the New Jersey protocol is under revision).
New Mexico	Telephone Interview with Keith Norwood, Deputy Warden, Penitentiary of N.M., Santa Fe (July 19, 2005) (stating that New Mexico's protocol had not changed since it was provided in 2001).
North Carolina	Facsimile from Pamela Walker, Dir. of Pub. Info., N.C. Dep't of Corr., to Daniel Auld, Research Assistant, Fordham Univ. Sch. of Law (June 30, 2005) (on file with author) (containing an affidavit of Marvin L. Polk, Warden of Central Prison in Raleigh, N.C., taken September 27, 2004); N.C. Dep't of Corr., Execution Method, http://www.doc.state.nc.us/DOP/deathpenalty/method.htm (last visited Aug. 31, 2007).
Ohio	Ohio Dep't of Rehab. & Corr., Capital Punishment in Ohio, http://www.drc.state.oh.us/public/capital.htm (last visited Mar. 22, 2005); Facsimile from Andrea Dean, Commc'ns Chief, Ohio Dep't of Rehab. and Corr., to Daniel Auld, Research Assistant, Fordham Univ. Sch. of Law (June 29, 2005) (on file with author); Telephone Interview with Andrea Dean, Commc'ns Chief, Ohio Dep't of Rehab. and Corr. (June 29, 2005) (answering questions about Ohio's protocol).
Oklahoma	Okla. Dep't of Corr., http://www.doc.state.ok.us/DOCS/CapitalP.HTM (last visited July 19, 2005).

Oregon	Or. Dep't of Corr., Div. 24: Capital Punishment, http://arcweb.sos.state.or.us/rules/OARS_200/OAR_291/291_024.html (last visited Aug. 31, 2007); Or. Dep't of Corr. Pub. Affairs, Capital Punishment in Oregon, http://www.oregon.gov/DOC/PUBAFF/cap_punishment/cap_punishment.shtml (last visited Aug. 31, 2007); Telephone Interview with Perrin Damon, Commc'ns Manager, Or. Dep't of Corr. (June 30, 2005); Telephone Interview with Leigh Mann, Pub. Info. Officer (July 19, 2005).
Pennsylvania	Penn. Dep't of Corr., http://www.cor.state.pa.us/deathpenalty/site/default.asp?portalNav=%7C (last visited June 29, 2005); Telephone Interview with Sue McNaughtan, Press Sec'y, Penn. Dep't of Corr. (June 29, 2005).
South Carolina	The South Carolina Department of Corrections was called multiple times during June–August 2005, but its officials never returned calls or provided any information.
South Dakota	South Dakota Execution Guidelines, S.D. Codified Laws § 23A-27A-15 to 23A-27A-41 (2006) (amended 2007); Telephone Interview with Michael Winder, Commc'ns & Info. Manager, S.D. Dep't of Corr. (July 20, 2005).
Tennessee	Tenn. Dep't of Corr., The Execution Process, http://www.state.tn.us/correction/newsreleases/executionprocess.html (last visited June 30, 2005); Telephone Interview with Ricky Bell, Warden, Riverbend Maximum Sec. Inst. (June 30, 2005); Telephone Interview with Amanda Sluss, Commc'ns Officer (June 30, 2005).
Texas	E-mail from Susan Schumacher, Exec. Dir.'s Office, Tex. Dep't of Crim. Justice, to Daniel Auld, Research Assistant, Fordham Univ. Sch. of Law (Aug. 10, 2005) (on file with author) (providing chemical combination and quantities for Texas); Telephone Interview with Jim Frazier, Gen. Counsel's Office, Tex. Dep't of Crim. Justice (Aug. 3, 2005).
Utah	Letter from Bruce Bailey, Dir. of Records, Utah Dep't of Corr., to Daniel Auld, Research Assistant, Fordham Univ. Sch. of Law (Aug. 22, 2005) (on file with author) (containing Tom Anderson, Capital Punishment and the Utah State Prison (2004)); Telephone Interview with Bruce Bailey, Dir. of Records, Utah Dep't of Corr. (Aug. 3, 2005).
Virginia	E-mail from Larry Traylor, Dir. of Commc'ns, Va. Dep't of Corr., to Daniel Auld, Research Assistant, Fordham Univ. Sch. of Law (July 7, 2005) (on file with author).
Washington	Wash. Dep't of Corr., The Washington State Death Penalty, http://www.doc.wa.gov/deathpenalty.deathpnlty.htm (last visited June 15, 2005) (providing a broad description of the execution process); Telephone Interview with Laurie Scamahorn, Media Liaison, Wash. Dep't of Corr. (June 30, 2005).

Wyoming	Telephone Interview with Melinda Brazzale, Pub. Info. Officer, Wyo. Dep't of Corr. (June 30, 2005) (explaining that the state did not have a protocol, but was developing one for an upcoming execution).