
Lethal Injection Protocols: The Failure of Litigation to Stop Suffering and the Case for Legislative Reform

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I. INTRODUCTION

Since the Supreme Court reinstated the death penalty in 1976,¹ over one thousand people have been executed in the United States.² Of those executed, roughly eighty-three percent have been put to death by lethal injection.³ In the last ten years, ninety-four percent of all executions performed have been by lethal injection.⁴ Lethal injection has been embraced by thirty-seven of the thirty-eight states that have the death penalty, and is the only method used in twenty-one of them.⁵ Lethal injection does not owe its widespread use to being more effective than any other method of execution – they all result in death. Rather, lethal injection “has become popular because it is first and foremost a medical procedure.”⁶ For most of the states that have switched execution methods to lethal injection, it is the perceived “humaneness” of lethal injection that explains why it is so widely used.⁷ This perception is largely responsible for why, of all the controversies surrounding the death penalty, lethal injection protocols receive the least amount of attention from

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¹ See *Gregg v. Georgia*, 428 U.S. 153 (1976) (holding that the death penalty did not violate the United States Constitution and that the concerns that the penalty of death not be imposed in an arbitrary or capricious manner were met by Georgia’s carefully drafted statute that ensured that the sentencing authority was given adequate information and guidance).

² Death Penalty Information Center, <http://www.deathpenaltyinfo.org/executions.php> (follow “get info” button) (last visited Oct. 18, 2006).

³ *Id.*

⁴ *Id.*

⁵ Vince Beiser, *A Guilty Man*, MOTHER JONES, September/October 2005, at 34.

⁶ STEPHEN TROMBLEY, THE EXECUTION PROTOCOL 71 (1992).

⁷ See *e.g.* *Beardslee v. Woodford*, 395 F.3d 1064, 1074 (9th Cir. 2005) (finding that “humane concerns formed a large part of the motivation in adopting lethal injection as the presumptive method of execution in California”).

the public.⁸ But the perception of a painless death is not necessarily accurate. In fact, there have been over thirty documented “botched” lethal injection executions since the Supreme Court reinstated the death penalty in *Gregg v. Georgia*.⁹ More striking is the fact that there are many doctors who believe, and a recent medical study that indicates, that in the way it is most commonly administered, lethal injection leaves open the potential for tremendous pain and suffering on the part of the inmate.¹⁰

Most lethal injections take the form of three different chemical injections administered sequentially.¹¹ The first is an anesthetic, the second induces paralysis, and the third causes death.¹² For purposes of ensuring a painless death, the most important of these injections is the anesthesia, as without it a prisoner will experience tremendous amounts of pain.¹³

Constitutional challenges to the use of lethal injection as an execution method based on the Eighth Amendment’s prohibition on “cruel and unusual punishment”¹⁴ have all been rejected.¹⁵ However, over the past several years, instead of challenging the constitutionality of lethal injections, inmates have begun to challenge the manner in which lethal injections are administered, based on a growing body of evidence that suggests that many prisoners executed by lethal injection were probably conscious and subjected to excruciating pain.¹⁶ These claims have become even more numerous since the Supreme Court unanimously held that inmates can challenge the manner in which lethal injection executions are administered through section 1983 claims.¹⁷ Despite this rise in the number of challenges to specific lethal injection protocols across the country, most courts hearing these cases have

⁸ A look at the major issues highlighted by the Death Penalty Information Center, a non-profit organization serving the media and the public with analysis and information on issues concerning capital punishment, reveals that lethal injection is not among them. Death Penalty Information Center, <http://www.deathpenaltyinfo.org> (follow “Issues” hyperlink) (last visited Oct. 18, 2006).

⁹ See Michael J. Radelet, *Post-Furman Botched Executions*, in *FACING THE DEATH PENALTY: ESSAYS ON A CRUEL AND UNUSUAL PUNISHMENT* (Michael L. Radelet ed., 1989), available at <http://www.deathpenaltyinfo.org/botched.html> (last visited Oct. 18, 2006). A botched execution can come in many forms, including executions that last for 40 minutes to searching for up to an hour to find a suitable vein to inject. *Id.* Some of the most notorious botched executions have occurred in Texas. Stephen Morin (executed in 1985) waited more than forty minutes on the gurney while technicians repeatedly failed to insert the IV line into his veins; Raymond Landry (executed in 1988) had the IV line connected to him carrying the lethal injection burst, spraying the execution team with fatal chemicals, and while he was half-dead, a new IV line had to be inserted, resulting in a situation where it took him twenty-four minutes to die; and Stephen McCoy (executed in 1989) who choked and heaved throughout the procedure because of an incorrect mix of drugs. TROMBLEY, *supra* note 6, at 74.

¹⁰ See Leonidas G. Koniaris, Teresa A. Zimmers, David A. Lubarsky, Jonathan P. Sheldon, *Inadequate Anesthesia in Lethal Injection for Execution*, 365 LANCET 1412, 1412-14 (April 15, 2005).

¹¹ Debra Denno, *When Legislatures Delegate Death: The Troubling Paradox Behind State Uses of Electrocutation and Lethal Injection and What it Says About Us*, 63 OHIO ST. L.J. 63, 97 (2002) [hereinafter Denno, *Legislatures*].

¹² Koniaris et al, *supra* note 10, at 1412-14.

¹³ *Id.*

¹⁴ U.S. CONST. AMEND. VIII.

¹⁵ See, e.g. *LaGrand v. Stewart*, 133 F.3d 1253, 1265 (9th Cir. 1998); *Poland v. Stewart*, 117 F.3d 1094, 1105 (9th Cir. 1997).

¹⁶ Colin Garrett, *Death Watch*, 29 APR *Champion* 46 (April 2005).

¹⁷ *Hill v. McDonough*, 126 S. Ct. 2096, 2100 (2006).

nevertheless found the protocols to be constitutional,¹⁸ even as some have noted that there appear to be troubling issues with lethal injection as it currently exists.¹⁹ In a few noteworthy and groundbreaking cases, two states' lethal injection protocols have been found to be unconstitutional and stays of execution have been granted to individual prisoners,²⁰ but so far these are the exception, rather than the rule.²¹

While much of our constitutional jurisprudence is sure to be tested by new technologies and scientific developments,²² the Eighth Amendment is perhaps most affected by scientific advances.²³ The Supreme Court has noted that the Eighth Amendment relies on "evolving standards of decency"²⁴ as measured by "objective factors to the maximum extent possible,"²⁵ to determine whether a punishment "involves the unnecessary and wanton infliction of pain"²⁶ or "torture or a lingering death,"²⁷ and if so, the punishment is unconstitutional.²⁸ But just because the death penalty, and current lethal injection protocols, have been held to be constitutional does not mean that they are good policy. As Justice Scalia has wryly noted, the Constitution is not charged with assessing or exploring the maximally effective sentencing scheme.²⁹ Thus the Supreme Court is neither required, nor likely to, address alternative sentencing procedures that states might find preferable, so long as it continues to find lethal injection constitutional.³⁰ That leaves the job of addressing alternative sentencing procedures to the other branches of government.

¹⁸ See discussion *infra* Part III.c.

¹⁹ See discussion *infra* Part III.c.

²⁰ See *Morales v. Tilton*, No. C 06 219 JF RS, C 06 926 JF RS, 2006 U.S. Dist. LEXIS 92243 (N.D. Cal. Dec. 15, 2006) (finding in a memorandum of intended decision and request for response from defendants that California's lethal injection protocol creates an undue and unnecessary risk that an inmate will suffer pain so extreme that it offends the Eighth Amendment); *Taylor v. Crawford*, No. 05-4173-CV-C-FJG, 2006 U.S. Dist. LEXIS 42949, at *22-26 (W.D. Mo. June 26, 2006) (staying all executions in Missouri pending approval of a revised protocol based on determination that current method of administering lethal injections subjects inmates to an unacceptable risk of suffering unconstitutional pain and suffering).

²¹ See discussion *infra* Part III.c.

²² See generally Jeffrey Rosen, *Roberts v. the Future*, N. Y. TIMES MAG., Aug. 28, 2005, at 24 (discussing the ability of then Supreme Court nominee John Roberts to adapt to changes in science and technology).

²³ See, e.g., *Cal. First Amendment Coal. v. Woodford*, 2000 WL 33173913, *9 (N.D. Cal. June 26, 2000), *aff'd*, 299 F.3d 868 (9th Cir. 2002). This case, involving California's execution protocol concerning the media's viewing of executions, is reflective of the impact of science and technology on the Eighth Amendment. In an unpublished opinion, the court noted that the prevailing opinion that lethal injection is the most "humane and painless" available execution method may change with the evolution of technology and society's perceptions, thus providing a significant reason for allowing the media to witness executions. *Id.*

²⁴ *Stanford v. Kentucky*, 492 U.S. 361, 369 (1989) (quoting *Trop v. Dulles*, 356 U.S. 86, 101 (1958) (plurality opinion)), *overruled by* *Roper v. Simmons*, 543 U.S. 551 (2005).

²⁵ *Id.* (quoting *Coker v. Georgia*, 433 U.S. 584, 592 (1977) (plurality opinion)).

²⁶ *Gregg v. Georgia*, 428 U.S. 153, 173 (1976) (citing *Furman v. Georgia*, 408 U.S. 238, 394-93 (1972) (Burger, C.J., dissenting)).

²⁷ *In Re Kemmler*, 136 U.S. 436, 447 (1890).

²⁸ *Id.*

²⁹ See, e.g., *Herrera v. Collins*, 506 U.S. 390, 428 & n.* (1993) (Scalia, J. concurring) (lamenting other Justices' unwillingness to acknowledge the "unhappy truth that not every problem was meant to be solved by the United States Constitution, nor can be.").

³⁰ Douglas A. Berman, Foreword: Addressing Capital Punishment Through Statutory Reform, 63 OHIO ST. L.J. 1, 8 (2002).

States with the death penalty have statutes that describe what crimes are eligible for a punishment of death, as well as a statute that specifies the execution method.³¹ But the actual role of developing the lethal injection protocol is delegated to state corrections departments, who almost uniformly, based on a lack of medical personnel or expertise, “are not qualified to devise a lethal injection protocol, much less carry one out.”³²

This comment will show how vague and confidential lethal injection protocols run the risk of subjecting inmates to a cruel and painful death. New medical evidence indicating that those put to death by lethal injection endured pain and suffering, and the inability of litigation to consistently bring about meaningful changes to lethal injection protocols, warrants greater oversight and a serious reexamination by state legislatures and corrections departments of current lethal injection protocols to ensure that inmates put to death are not made to suffer.

Part II of this comment will document the science and technology behind lethal injection: how it is supposed to work; why the three-drug protocol was chosen; and what each drug is supposed to do to the body. Part III of this comment will examine the problems with the protocol, exploring a study published in the British medical journal the *Lancet* suggesting that inmates put to death have in fact been conscious, unable to move, and in tremendous pain. This part will also examine state statutes and protocols, and the deficiencies in them that cause inmates to suffer, coupled with an analysis of recent cases that have challenged lethal injection protocols. Finally, Part IV of this comment synthesizes the moral, medical, and legal issues to propose that with the failure of the judiciary to reliably grant stays to prisoners about to be executed by lethal injection, it is incumbent upon legislatures to take the lead and ensure that those put to death by lethal injection do not suffer unnecessarily.

II. THE CHEMISTRY BEHIND THE KILLING

a. The Three Drug Protocol

The typical lethal injection combination, used by twenty-seven of the thirty-six states that use lethal injection,³³ consists of three different chemicals.³⁴ The first chemical is a frequently used surgical anesthetic called sodium thiopental, an ultra-short acting barbiturate.³⁵ The purpose of the sodium thiopental is to induce a deep sleep and a loss of consciousness in the inmate so that he will not feel any pain during the administration of the other two drugs.³⁶ Adequate levels of anesthesia are necessary to ensure that the condemned prisoner does not experience the excruciating pain that would be caused by the other two drugs.³⁷ Sodium thiopental

³¹ See Denno, *Legislatures*, supra note 11, at 65.

³² *Id.* at 66.

³³ *Id.* at 117.

³⁴ *Id.* at 97.

³⁵ *Id.* A barbiturate is any of a group of barbituric acid derivatives that act as central nervous system depressants and are used as sedatives or hypnotics. *Id.* at 97-98. Ultra-short acting barbiturates are meant to rapidly cause unconsciousness and do not last long. *Id.*

³⁶ *See id.* at 98.

³⁷ *See id.* at 99 (noting that “The ‘fast acting’ aspect of sodium thiopental can have horrifying effects if the inmate awakens while being administered the other two drugs”).

is generally administered in a non-lethal dosage,³⁸ but, if administered properly, can be given in a dosage high enough to kill the prisoner without requiring the other two chemicals.³⁹

The second chemical typically used is pancuronium bromide, a total muscle relaxant.⁴⁰ In high enough dosages, pancuronium bromide causes one to suffocate by paralyzing the diaphragm and lungs.⁴¹ Pancuronium bromide, also known by its brand name Pavulon, however, has no effect whatsoever on awareness, cognition, or sensation.⁴² Pavulon paralyzes the entire body, making it impossible for an inmate to move if he is experiencing any discomfort or pain and even preventing an inmate from making a facial expression indicating any suffering.⁴³ Put another way, this second drug prevents the inmate from “screaming or convulsing as their hearts are squeezed to a stop” by the third drug.⁴⁴ In the words of an anesthesiologist who has studied the lethal injection process, Pavulon “creates a ‘chemical veil’ that prevents witnesses from seeing or otherwise detecting the inmate’s suffering.”⁴⁵

The final chemical in the three-drug protocol is potassium chloride,⁴⁶ an “extraordinarily painful chemical”⁴⁷ that activates the nerve fibers lining the person’s veins and interferes with the rhythmic contractions of the heart.⁴⁸ Potassium chloride is supposed to induce cardiac arrest by stopping the inmate’s heart permanently.⁴⁹ However, some in the medical profession believe that potassium chloride most likely causes death by suffocation rather than cardiac arrest.⁵⁰

b. History of Protocol

Oklahoma was the first state to pass a lethal injection statute.⁵¹ Oklahoma reinstated the death penalty following the Supreme Court’s ruling that the death penalty could be used provided the laws imposing the death penalty were less

³⁸ See *id.* at 97-98 (stating that the purpose of sodium thiopental is only to sedate condemned prisoners).

³⁹ See *Beardslee v. Woodford*, 395 F.3d 1064, 1071 (9th Cir. 2005). California is one of the only states to specify an amount as high as 5 grams of sodium thiopental in their protocols, whereas most other states either require 2 grams or have no specific amount. See Denno, *Legislatures*, *supra* note 11 at 150 tbl. 15 (providing table of dosages various states administer in their lethal injection protocols).

⁴⁰ *Beardslee*, 395 F.3d at 1071.

⁴¹ *Id.*

⁴² *Id.*

⁴³ *Abdur'Rahman v. Bredeesen*, 181 S.W.3d 292, 302 (Tenn. 2005).

⁴⁴ *Beiser*, *supra* note 5, at 38-39.

⁴⁵ *Abdur'Rahman*, 181 S.W.3d at 302.

⁴⁶ See *Koniaris et al*, *supra* note 10, at 1412-14 (listing the chemicals that are typically administered sequentially).

⁴⁷ *Beardslee*, 395 F.3d at 1071.

⁴⁸ See *id.* (describing the biological process of a lethal injection and how it results in cardiac arrest).

⁴⁹ *Koniaris et al*, *supra* note 10, at 1412-14.

⁵⁰ See *Harris v. Johnson*, 323 F. Supp. 2d 797, 807 (S.D. Tex. 2004), for a case involving this claim made by death row inmate David Ray Harris. In support of his claim, Harris refers to the affidavit of James J. Ramsey, a certified perfusionist and currently the Program Director in the Program in Cardiovascular Perfusion at Vanderbilt Medical, that was presented in a Tennessee case challenging lethal injection protocols. *Id.*

⁵¹ Denno, *Legislatures*, *supra* note 11, at 96. Passage occurred on May 11, 1977. Texas adopted lethal injection as its execution method the following day. *Id.*

arbitrary than before.⁵² The lethal injection protocol appears to come from notes written up by a University of Oklahoma anesthesiology professor who was approached by an Oklahoma legislator interested in devising a “more humane” method of executing its prisoners.⁵³ Georgia changed its methods of execution to lethal injections for similar reasons, finding lethal injection “the most humane possible way to execute people on death row.”⁵⁴ Other states switched their laws primarily by adopting what states had done before them, right down to passing vague statutes that left state corrections departments to establish protocols for lethal injection.⁵⁵

Tennessee is an example of such a state. Ricky Bell, warden of the maximum-security prison in Tennessee that houses death row inmates, testified that he headed up the committee of correction officials, not one of whom was a doctor or medical professional, that developed Tennessee’s protocol.⁵⁶ The committee arrived at their choice of adopting the three-drug protocol outlined above by looking at what other states had done. The dosages selected were based on Texas’ protocol because Texas had performed the most executions in the country.⁵⁷ Bell admitted that he had no medical knowledge of the drugs other than what he learned from studying the lethal injection process in other states.⁵⁸ Furthermore, Bell admitted he had no specific knowledge as to the effects of Pavulon, perhaps the most controversial of the drugs used.⁵⁹ The record of how other states adopted their protocols is similarly rife with non-medical personnel studying other states’ practices and merely copying their protocols.⁶⁰

Fred Leuchter, the original creator of most execution equipment in this country, is thought to be the first to propose potassium chloride as the third drug to be used in the execution protocol,⁶¹ although the origins of the use of the third chemical are not totally clear.⁶² Because the medical literature did not have articles specifying the amount that would be lethal for humans, Leuchter “relied on the information that was available for pigs and estimated accordingly.”⁶³ Despite having no medical credentials and later being discredited,⁶⁴ Leuchter’s recommendations still form the

⁵² *Id.*

⁵³ *Id.*

⁵⁴ Karen Kaplan, *Lethal Injections May Not Be Pain-Free*, L.A. TIMES, April 15, 2005.

⁵⁵ Denno, *Legislatures*, *supra* note 11, at 92-93.

⁵⁶ *See* *Abdur'Rahman v. Bredeesen*, 181 S.W.3d 292, 302 (Tenn. 2005) (holding that despite testimony to the contrary, overwhelming evidence supported that lethal injection comported with standards of decency).

⁵⁷ *Id.* at 300.

⁵⁸ *Id.* at 300-01.

⁵⁹ *Id.*

⁶⁰ Adam Liptak, *Critics Say Execution Drug May Hide Suffering*, N.Y. TIMES, Oct. 7, 2003, at A18 [hereinafter Liptak, *Hide Suffering*].

⁶¹ Denno, *Legislatures*, *supra* note 11, at 99.

⁶² *See id.* (detailing the history of selecting chemicals for the lethal injection process).

⁶³ *Id.*

⁶⁴ Leuchter’s qualifications were severely criticized when he participated in a study at the behest of neo-Nazis to prove that the Holocaust never happened. Testing the walls of concentration camps in Poland, he concluded that there was no mass killing of Jews by gas chamber because there was no evidence of lethal gas found in the walls. It was revealed that Leuchter’s only qualifications were college classes in chemistry and physics while studying for a Bachelor of Arts degree. TROMBLEY, *supra* note 6, 74-77.

basis of the three-drug protocol that is used in the overwhelming majority of states that use the death penalty. As Deborah Denno, author of the most comprehensive study of death penalty protocols in the United States, observes, “it is not clear how or why this chemical combination has persisted.”⁶⁵

III. PROBLEMS WITH THE PROTOCOL

a. The Medical Study

It is undisputed that “substantial pain and suffering *can* occur when the inmate receives an inadequate dosage of sodium pentothal⁶⁶ and therefore retains consciousness and sensation during the injection of the second and third chemicals.”⁶⁷ After studying the results of autopsies performed on prisoners executed by lethal injection, three physicians and an attorney released a report in the British medical journal the *Lancet* strongly suggesting that the pain inmates suffer is no longer just hypothetical. According to their report, without adequate amounts of anesthesia, prisoners that are put to death using the standard three-drug protocol “would experience asphyxiation, a severe burning sensation, massive muscle cramping, and finally cardiac arrest.”⁶⁸ In the most distressing, and controversial,⁶⁹ aspect of that same medical study, the authors found that toxicology reports from forty-nine executed inmates showed that forty-three of them (88%) had levels of Thiopental, the anesthetic, lower than required for surgery, and twenty-one of them (43%) had concentrations in their blood that were consistent with awareness.⁷⁰ The prison officials who administer the injections are in separate rooms, leading the authors of the study to conclude that without monitoring and with the use of the paralytic agent (Pavulon), “any suffering of the inmate would be undetectable.”⁷¹ The *Lancet* article is the first published empirical research showing the possibility of unnecessary cruelty and suffering caused by the standard three-drug lethal injection protocol⁷² that is most commonly used by the twenty-seven states that solely use lethal injection to execute their prisoners.⁷³

As the *Lancet* study points out, in sharp contrast to its medical applications, anesthesia in executions “has not been subjected to clinical trials, governmental regulation, extensive training of practitioners, standardization, or the supervision of peer-review and medicolegal liability.”⁷⁴ Because there is no documentation of anesthesia in prisoners who are executed, the authors of the *Lancet* study relied on

⁶⁵ Denno, *Legislatures*, *supra* note 11, at 97.

⁶⁶ Brand name of sodium thiopental.

⁶⁷ Debra Denno, *Getting to Death: Are Executions Constitutional?*, 82 Iowa L. Rev. 319, 380 (1997) (emphasis added) [hereinafter Denno, *Getting to Death*].

⁶⁸ Koniaris et al, *supra* note 10, at 1412.

⁶⁹ See, e.g. Jonathan I. Groner, Letter to the Editor, *Inadequate Anesthesia In Lethal Injection For Execution*, 366 LANCET 1073 (Sept. 24, 2005) (challenging the findings of the Lancet study based on the difficulty of extrapolating thiopental toxicology levels postmortem).

⁷⁰ Koniaris et al, *supra* note 10, at 1412-14.

⁷¹ *Id.*

⁷² *Brown v. Crawford*, 408 F.3d 1027, 1028 (E.D. Mo. 2005).

⁷³ Denno, *Legislatures*, *supra* note 11 at 69.

⁷⁴ Koniaris et al, *supra* note 10, at 1412.

postmortem toxicology reports from four states that detailed the levels of sodium thiopental in the blood.⁷⁵ The authors obtained autopsy toxicology reports from forty-nine executions in Arizona, Georgia, North Carolina and South Carolina. Even though the lethal injection protocols of all four states specify 2 grams of thiopental be used, concentrations of the drug in the blood ranged from only trace amounts to 370 milligrams per liter.⁷⁶ While conceding that estimating ante mortem levels of sodium thiopental in the blood based on postmortem toxicology reports is “admittedly problematic,”⁷⁷ the authors of the study found that “a large range of blood concentrations resulted from nearly identical protocols across and within individual states.”⁷⁸ Noting the wide variations among prisoners, the study concluded that based on the relative medical expertise of the medical examiners, compared to the unskilled executioners, the results “strongly suggest that the variation is probably due to differences in drug administration in individual executions.”⁷⁹

Ultimately, the study concluded that lethal injection anesthesia methods in the United States are flawed.⁸⁰ Although the study was unable to definitively determine that inmates suffered while put to death, because they were not tested while being executed, the results nonetheless demonstrate that “failures in protocol design, implementation, monitoring and review might have led to the unnecessary suffering of at least some of those executed.”⁸¹ The study finally concluded that based on the ethical prohibition of doctors in the protocol design or implementation, “adequate anesthesia cannot be certain.”⁸²

The *Lancet* study is not the only research that has been done to suggest the possibility of consciousness among prisoners put to death by lethal injection. An autopsy of Edward Harper, the last person to be executed in Kentucky by lethal injection,⁸³ similarly revealed “troubling” levels of sodium thiopental.⁸⁴ The level of barbiturate found in Harper’s blood varied from 3 to 6.5 milligrams per liter, which according to standards of Dr. Mark Dershwitz, an anesthesiologist who often testifies on behalf of state corrections departments, means a sixty-seven to one hundred percent chance of consciousness.⁸⁵ Dr. Dershwitz, who developed the standards that Kentucky relied upon, said, “the blood level should be a lot higher than seven.”⁸⁶ But instead of finding the blood levels to be conclusive proof of potential suffering, Dr. Dershwitz suggested the autopsies were conducted improperly.⁸⁷ Noting that the

⁷⁵ *Id.*

⁷⁶ *Id.* at 1413.

⁷⁷ *Id.*

⁷⁸ *Id.*

⁷⁹ *Id.*

⁸⁰ *Id.* at 1414.

⁸¹ *Id.*

⁸² *Id.*

⁸³ Adam Liptak, *On Death Row, a Battle over the Fatal Cocktail*, N.Y. TIMES, Sept. 16, 2004, at A16 [hereinafter Liptak, *Fatal Cocktail*].

⁸⁴ *Id.*

⁸⁵ *Id.*

⁸⁶ *Id.*

⁸⁷ *Id.*

drug is typically put into 500 milligram syringes, with four required for the 2 gram dosage, Dr. Dershwitz admitted that “one of the possibilities is that instead of injecting four of these syringes they injected one.”⁸⁸ Most troubling about this statement is the acknowledgment of the possibility of incorrect dosages of sodium thiopental being administered. In fact, improper administering of the first drug, especially when the total dosage is as low as two grams, is one of several ways in which an inmate can be conscious during the procedure.

According to Dr. Mark J.S. Heath, an anesthesiologist at Columbia University who has testified on behalf of prisoners challenging lethal injection protocols, there are countless ways for prison personnel to fail to properly deliver the first drug. Among them are mistakes in mixing the drug, which is stored as a powder, problems with intravenous tubes, and the possibility that “the drug may be diluted or diverted by personnel intending to use it for purposes of substance abuse.”⁸⁹ The chance of a mistake is further increased by the fact that paramedics, technicians or other prison employees, who do not have special training in anesthesia, administer lethal injections in most states.⁹⁰

b. State Specifics

One of the single biggest obstacles to learning whether or not a state’s particular protocol is likely to cause pain and suffering is learning what the protocol is.⁹¹ In fact, most state statutes do not specify with any detail how the lethal injection is to be carried out.⁹² The job of developing protocols and administering lethal injection is left to state corrections departments.⁹³ Four states, including Pennsylvania, keep their execution protocol confidential,⁹⁴ three states do not have any protocol,⁹⁵ and twenty-seven states do not specify the quantity of lethal injection chemicals to be used.⁹⁶

Only nine states specify the quantities of lethal injection chemicals they use.⁹⁷ As such, there is no way to determine if sufficient quantities of sodium thiopental are being given in the rest of the states.⁹⁸ In fact, even where states do specify dosages, there is no guarantee that the inmate will receive the entire dosage.⁹⁹ The chances of

⁸⁸ *Id.*

⁸⁹ *Id.*

⁹⁰ Denise Grady, *Doctors See Way to Cut Suffering in Executions*, N.Y. TIMES, June 23, 2006, at A1.

⁹¹ Denno, *Legislatures*, *supra* note 11, at 116.

⁹² *See id.* at app. at 142, which describes how there are three basic types of statutes that deal with lethal injection. Eleven states refer to an injection of a “substance or substances in a quantity sufficient to cause death,” or language close to that wording. Thirteen states, including Pennsylvania, refer to a “lethal quantity of an ultrashort-acting barbiturate or other similar drug in combination with a chemical paralytic agent until death,” or language close to that wording. One state simply refers to lethal injection. *Id.*

⁹³ *Id.* at 66.

⁹⁴ *Id.* at 116. The other three states are Nevada, South Carolina, and Virginia.

⁹⁵ *Id.* These three states are Kansas, Kentucky, and New Hampshire. Kansas and New Hampshire’s excuse for not having a protocol is that they have never carried out an execution. *Id.*

⁹⁶ *Id.* at 118.

⁹⁷ *Id.*

⁹⁸ *Id.*

⁹⁹ *See* discussion *infra* Part III.c.

the injection not being administered properly are high based on the lack of medical expertise of the executioners. There is rarely information available on who measures the chemicals or even if the full amount of chemicals are administered.¹⁰⁰ Paradoxically, it is the states that have performed the fewest executions, or none at all, that are the most informative in their protocols, and the number of states that have performed the most executions that are the most secretive in how they execute people.¹⁰¹

Furthermore, age, sex, and body weight all contribute to an individual's response to a drug.¹⁰² The condition of one's veins plays a significant role in how receptive the body is to the drugs as well.¹⁰³ Studies have shown that nearly one-quarter of the prison population's veins may be inaccessible because they are too deep, flat, below layers of fat, or damaged and inoperative from drug use.¹⁰⁴

In sharp contrast to the method that most states use to execute prisoners, nineteen states, including Texas and Tennessee, have criminalized the use of a paralyzing agent, like Pavulon, in conjunction with a sedative, such as sodium thiopental, to euthanize animals because of the risk of unrecognized suffering.¹⁰⁵ As the editorial page of the *Tennessean* put it, Tennessee law "reflects more sensitivity about the process used to euthanize livestock than the process to execute a human being."¹⁰⁶

i. Pennsylvania's Lethal Injection Statute

Pennsylvania's statute on the method of execution states that it shall be by injection, but does not specify what drugs are to be used.¹⁰⁷ As a result, it does not specify the actual dosages of the drugs, what order the drugs are given, or even who determines the answer to these questions.¹⁰⁸ The statute is also silent as to the minimum qualifications for who determines the above answers, and who monitors the prisoner to make sure that he is not suffering.¹⁰⁹ Normally these issues are answered in the protocols developed by state corrections departments. But unfortunately for inmates trying to ensure that they will not suffer unnecessary pain, Pennsylvania keeps its protocol confidential.¹¹⁰

In *Travaglia v. Dept. of Corrections*,¹¹¹ Michael Travaglia, a death-row inmate, sued the Pennsylvania Department of Corrections ("DOC") under the state's Right-

¹⁰⁰ Denno, *Legislatures*, *supra* note 11, at 120-21.

¹⁰¹ *Id.* at 120.

¹⁰² Denno, *Getting to Death*, *supra* note 67, at 381.

¹⁰³ *Id.*

¹⁰⁴ *Id.*

¹⁰⁵ *See, e.g.,* *Beardslee v. Woodford*, 395 F.3d 1064, 1073 (9th Cir. 2005) (finding it somewhat significant that at least nineteen states have enacted laws that either mandate the exclusive use of a sedative or expressly prohibit the use of a neuromuscular blocking agent in the euthanasia of animals).

¹⁰⁶ Editorial, *Ban the Use of Pavulon*, THE TENNESSEAN, Oct. 26, 2005, at A10.

¹⁰⁷ *See* 61 PA. STAT. ANN. § 3004 (West 1999), which states that "[t]he death penalty shall be inflicted by injecting the convict with a continuous intravenous administration of a lethal quantity of an ultrashort-acting barbiturate in combination with chemical paralytic agents approved by the department until death is pronounced by the coroner."

¹⁰⁸ *Id.*

¹⁰⁹ *Id.*

¹¹⁰ *See supra* note 94 (describing how certain states do not specifically reveal their protocol).

¹¹¹ 699 A.2d 1317 (Pa. Commw. Ct. 1997), *appeal denied*, 705 A.2d 1313 (Pa. 1997).

to-Know Act, requesting information as to the specific manner in which the state carried out lethal injections.¹¹² The Commonwealth Court of Pennsylvania upheld the government's refusal to produce records pertaining to actual methods of injection and related security measures because a risk to the public might result.¹¹³ Through the trial it was revealed that the DOC "acknowledged that it has a manual . . . that describes in detail the actual procedures for lethal injection."¹¹⁴ The DOC, however, "regards [the manual] as confidential," and refuses to release it or the information it contains.¹¹⁵ Perhaps most troubling for condemned inmates seeking to ensure they will be sufficiently anesthetized when put to death, the DOC says that its "manual" only "set[s] guidelines and goals, not obligations for its personnel," it "fix[es] no obligations or duties of personnel," and it "do[es] not carry any penalties for deviation from the [manual's] suggestions."¹¹⁶ The DOC's admission that there are no binding rules governing its lethal injection practices is confirmed by the fact that the DOC has never promulgated any regulations regarding lethal injection, as it is required to do as an "administrative department" under Pennsylvania law.¹¹⁷

The idea that the DOC operates without any rules is further supported by a letter it wrote in response to a letter from the attorney of a death-row inmate, laying out what appears to be the model of its execution process. The letter states that the DOC uses three chemicals: sodium pentothal, pancuronium bromide (brand name "Pavulon") and potassium chloride.¹¹⁸ While the first two drugs are specifically referred to in the statute, there is no mention of the type of agent that potassium chloride is.¹¹⁹ The DOC still refused to disclose the dosages of the drugs or the rate at which they are administered. The DOC did not reveal the credentials of the personnel that administer the injection or explain what training or experience the team has in the specific tasks they must perform during an execution, including monitoring the inmate's depth of anesthesia, if the process is to be humane.¹²⁰ Pennsylvania's failure to divulge information regarding its processes and procedures for lethal injection acts as a significant obstacle in determining exactly what and how the drugs that are administered to prisoners affect their bodies, and hence, whether or not it truly is painless.

Furthermore, Pennsylvania law only allows a few select people to witness a lethal injection besides prison officials, the news media, and victims.¹²¹ The defendant's counsel is not allowed to witness the execution, and there are no guidelines for who the "six reputable adult citizens" statutorily allowed to witness an execution should

¹¹² *Id.* at 1318.

¹¹³ *Id.*

¹¹⁴ *Id.* at 1321.

¹¹⁵ *Id.*

¹¹⁶ *Id.*

¹¹⁷ See *Small v. Horn*, 722 A.2d 664, 668-69 (Pa. 1998) (noting that Pennsylvania law set forth procedures that must be followed any time an administrative agency issues binding regulations).

¹¹⁸ Complaint at 12-13, *Banks v. Beard*, (M.D. Pa.) (on file with author).

¹¹⁹ See *supra* note 107.

¹²⁰ See *Travaglia*, 699 A.2d at 1321 (refusing to require the Pennsylvania Department of Corrections to release its lethal injection protocol).

¹²¹ 61 Pa. Stat. Ann. § 3005 (West 2006) (designating who may witness an execution, including prison officials, victims, the media, "six reputable adult citizens selected by the secretary," and "one spiritual adviser, when requested and selected by the inmate").

be.¹²² Pennsylvania's failure to disclose its execution protocol, combined with its limits on witnesses to an execution, greatly increases the chances that inmates put to death by lethal injection will be subject to extreme pain or suffering.

c. Judicial Challenges

An examination of cases that have sought to challenge the constitutionality of lethal injection protocols reveals the arbitrariness of death penalty administration. The inconsistency of court decisions dealing with granting stays of execution was summed up by Judge Boyce Martin Jr. of the United States Court of Appeals for the Sixth Circuit in his dissent in *Alley v. Little*.¹²³ Judge Martin wrote,

[t]he dysfunctional patchwork of stays and executions going on in this country further undermines the various states' effectiveness and ability to properly carry out death sentences. We are currently operating under a system wherein condemned inmates are bringing nearly identical challenges to the lethal injection procedure. In some instances stays are granted, while in others they are not and the defendants are executed, with no principled distinction to justify such a result.¹²⁴

Many of the judicial challenges to states' lethal injection protocols have failed on procedural grounds.¹²⁵ Even when the merits of the case are reached, courts often have found that inmates failed to prove that they themselves are at risk of suffering from the pain of a botched execution in order to warrant a stay of execution.¹²⁶ The scope of different litigation mechanisms to challenge lethal injection is beyond the scope of this comment. Nevertheless, the fact that so many cases are dismissed based on procedural grounds demonstrates that litigation has proven to be an inadequate vehicle for bringing about meaningful change to the lethal injection process.

In an earlier case from Tennessee, *Abdur'Rahman v. Bredesen*,¹²⁷ the Supreme Court of Tennessee rejected an appeal by an inmate, Abdul-Ali Abdur'Rahman, that challenged the constitutionality of Tennessee's lethal injection protocol.¹²⁸

¹²² *Id.* Who is allowed to watch an execution is vitally important to ensuring that the execution meets contemporary notions of evolving standards of decency. *See* Cal. First Amendment Coal. v. Woodford, 2000 WL 33173913, (N.D. Cal. June 26, 2000), *aff'd*, 299 F.3d 868 (9th Cir. 2002) (noting the importance of having witnesses to executions).

¹²³ 447 F.3d 976, 977 (6th Cir. 2006) (Martin, J., dissenting). In *Alley*, the court denied a petition for rehearing en banc of a decision by a Sixth Circuit panel to vacate a grant of a stay of execution for a condemned inmate who challenged Tennessee's lethal injection protocols. *Id.* (majority opinion).

¹²⁴ *Id.* at 977 (Martin, J., dissenting). On June 28, 2006, Sedley Alley became only the second person to be executed in Tennessee since the death penalty was reinstated in 1976. Theo Emory, *Man Executed in Tennessee; 2d Wins Stay*, N.Y. TIMES, June 29, 2006 at A18.

¹²⁵ It was not until June 2006 that the Supreme Court clarified the procedural form in which an inmate could seek to challenge lethal injection protocols. *Hill v. McDonough*, 126 S. Ct. 2096 (2006) (unanimously holding that inmates can challenge the manner in which lethal injection executions are administered through section 1983 claims). Because this issue was just resolved, many inmates used to be required to file habeas corpus petitions, and often the decision would hinge on whether or not the inmate filed the correct claim within the correct time frame. *See* Beardslee v. Woodford, 395 F.3d 1064 (9th Cir. 2005).

¹²⁶ *See* Beardslee, *Abdur-Rahman*, *Brown*, discussed *infra*.

¹²⁷ 181 S.W.3d 292 (Tenn. 2005).

¹²⁸ *Id.*

Abdur'Rahman argued that the use of Pavulon, in conjunction with sodium pentothal and potassium chloride created a risk of unnecessary physical and psychological suffering.¹²⁹ The Court affirmed the trial court's ruling, which despite finding the protocol to be constitutional, had some choice words to say about the protocol. Writing about the use of pancuronium bromide, the trial judge wrote that it "serves no legitimate purpose" in executions and is used only to make them "more palatable and acceptable to society."¹³⁰ Detailing a potential worst-case scenario, the judge went on to write, "the subject gives all the appearances of a serene expiration when actually the subject is feeling and perceiving the excruciatingly painful ordeal of death by lethal injection."¹³¹ The opinion continued, stating that the use of the second chemical "taps into every citizen's fear that the government manipulates the setting and gilds the lily."¹³² But despite her misgivings, the judge ruled that the use of pancuronium bromide was not unconstitutional because it was widely used in other states and because "there is less than a remote chance that the prisoner will be subjected to unnecessary physical pain or psychological suffering."¹³³ It was primarily on this basis that the Tennessee Supreme Court affirmed the trial court's decision.¹³⁴

In *Beardslee v. Woodford*,¹³⁵ decided in the beginning of 2005, the United States Court of Appeals for the Ninth Circuit affirmed the District Court's refusal to grant a preliminary injunction and stay of an execution. The inmate, Donald Beardslee, brought a section 1983 action, challenging California's three-drug protocol as a violation of his Eighth Amendment right to be free from cruel and unusual punishment.¹³⁶

In deciding whether to grant Beardslee's stay, the court framed the issue as "not whether Beardslee has raised serious questions about the protocol itself, but whether, in this specific challenge, he has shown enough of a likelihood that *he* will be conscious during the administration of pancuronium bromide and potassium chloride to experience pain."¹³⁷ The court concluded that Beardslee did not show a noteworthy likelihood of consciousness, based largely on the fact that even his own expert witness testified as to the low likelihood of consciousness based on California's 5-gram dosage of sodium thiopental.¹³⁸

Despite denying the stay, the court expressed serious reservations about the state's failure to offer a single justification for the use of pancuronium bromide, one of the key issues of the case.¹³⁹ The court noted that California's failure to provide

¹²⁹ *Id.* at 305.

¹³⁰ Liptak, *Hide Suffering*, *supra* note 60.

¹³¹ *Id.*

¹³² *Id.*

¹³³ *Id.*

¹³⁴ See *Abdur'Rahman*, 181 S.W.3d at 309 (agreeing that Tennessee's lethal injection protocol has been adapted from other states and noting that what "could be done to update the protocol is not the appropriate legal inquiry to be undertaken by this or any other reviewing court").

¹³⁵ 395 F.3d 1064 (9th Cir. 2005).

¹³⁶ *Id.*

¹³⁷ *Id.* at 1076 (emphasis added).

¹³⁸ *Id.* at 1075.

¹³⁹ *Id.* at 1075-76.

such justification was “to say the least, troubling.”¹⁴⁰ But the court was not deciding the case on the merits, and made a point to state that review of a denial of a preliminary injunction is “limited and deferential,”¹⁴¹ and the resolution of the merits will have to “await another day, based on a full record.”¹⁴²

California’s lethal injection protocols have since been found to be unconstitutional in *Morales v. Tilton*.¹⁴³ The issue in *Morales* was whether California’s lethal injection protocol, as actually administered in practice, creates an undue and unnecessary risk that an inmate will suffer pain so extreme that it offends the Eighth Amendment.¹⁴⁴ At the evidentiary hearing to determine whether a stay would be granted, the court reviewed in detail evidence from execution logs that indicated “inmates’ breathing may not have ceased as expected in at least six out of thirteen executions by lethal injection in California.”¹⁴⁵ The court issued an order on February 14, 2006, conditionally denying Morales’ request for a stay of execution, while at the same time fashioning a remedy that would permit the state to proceed with the execution as scheduled by executing Morales using only barbiturates or by retaining the services of a qualified expert to ensure that Morales would be unconscious when exposed to the painful drugs.¹⁴⁶ When the state was unable to comply with the requirements set forth by the court, based on an inability to find an anesthesiologist to perform the actual injections, a stay of execution was automatically granted.¹⁴⁷

Both parties agreed that it would be unconstitutional to inject a conscious person with pancuronium bromide and potassium chloride in the amounts prescribed by California’s protocol, Operational Procedure No. 0-770 (OP 770).¹⁴⁸ The issue was then whether OP 770, as implemented, provides constitutionally adequate assurance that condemned inmates will be unconscious when they are injected with the last two drugs.¹⁴⁹ A thorough examination of the evidence led the court to conclude that OP 770 and the state’s implementation of it suffer from a number of critical deficiencies, including inconsistent and unreliable screening of execution team members; a lack of meaningful training, supervision, and oversight of the execution team; inconsistent and unreliable record-keeping; improper mixing preparation, and administration of sodium thiopental by the execution team; and inadequate lighting, overcrowded conditions, and poorly designed facilities in which the execution team must work.¹⁵⁰ As a result of the “major flaws”¹⁵¹ of the protocol and the lack of reliability and

¹⁴⁰ *Id.* at 1076.

¹⁴¹ *Id.* at 1068 (quoting *Southwest Voter Registration Educ. Project v. Shelley*, 344 F.3d 914, 918 (9th Cir. 2003)).

¹⁴² *Id.* at 1076. Donald Beardslee was executed on January 19, 2005. *Morales v. Hickman*, 415 F. Supp. 2d 1037, 1043 (N.D. Cal. 2006).

¹⁴³ No. C 06 219 JF RS, C 06 926 JF RS, 2006 U.S. Dist. LEXIS 92243 (N.D. Cal. Dec. 15, 2006).

¹⁴⁴ *Id.* at *4.

¹⁴⁵ *Morales*, 415 F. Supp. 2d at 1045.

¹⁴⁶ *Id.* at 1047.

¹⁴⁷ *Morales*, 2006 U.S. Dist. LEXIS 92243, at *14.

¹⁴⁸ *Id.* at *17-18.

¹⁴⁹ *Id.* at *18.

¹⁵⁰ *Id.* at *20-24.

¹⁵¹ *Id.* at *26.

transparency, the court found an undue and unnecessary risk of an Eighth Amendment violation.¹⁵² However, the court noted that, “under the doctrines of comity and separation of powers, the particulars of California’s lethal-injection protocol are and should remain the province of the State’s executive branch.”¹⁵³

Ultimately the court directed the executive branch to address the significant problems with the protocol before issuing formal findings of fact and conclusions of law with respect to the deficiencies in the administration of the protocol.¹⁵⁴ In this case, even when the court intervened and stayed an execution, the task of reforming the protocols still remains the responsibility of the executive branch, which has nevertheless been unable to devise or implement protocols that will guarantee inmates put to death are unconscious with any reliability or consistency in the past.

In *Brown v. Crawford*,¹⁵⁵ the inmate, Vernon Brown, brought a section 1983 civil rights action, contending that Missouri, in order to avoid the Eighth Amendment ban on cruel and unusual punishment, was required to prove, before his execution, that the levels of sodium thiopental that would be administered to him would be sufficient to render him unconscious throughout the entire procedure, and that the prison personnel who were to administer it to him were sufficiently qualified. A two judge majority denied Brown’s motion for a stay of execution and dismissed the appeal in a one paragraph per curiam opinion, merely noting that the court “has carefully considered the motion and appellee’s response, and the motion is denied.”¹⁵⁶

A blistering dissent in *Brown* pointed out that Missouri is “using a combination of chemicals they knew or should have known would cause an excruciating death when they were telling the public it was like putting a dog to sleep, when their own veterinarians would lose their licenses for using the same chemicals on a stray.”¹⁵⁷ The record was absent as to the dosage of Sodium Pentothal that Missouri uses, and the state did not put forth any medical evidence of its own, relying solely on procedural and legal defenses.¹⁵⁸ Having proffered no evidence of their own, the dissent rightfully noted that “the state’s failure to counter Brown’s medical evidence leaves Brown’s evidence uncontroverted,”¹⁵⁹ distinguishing this case from *Beardslee*, where the state successfully put forth their own medical evidence. The dissent went on to point out the weakness of the state’s procedural argument, and concluded that for all of the above reasons, Brown’s motion to stay his execution should be granted.¹⁶⁰

Like California, Missouri’s lethal injection protocols have since been found to be

¹⁵² *Id.* at *28.

¹⁵³ *Id.* at *28 (quoting *Morales v. Hickman*, 415 F. Supp. 2d 1037, 1046 (N.D. Cal. 2006)).

¹⁵⁴ *Id.* at *29. This case was decided as this article was going to print, and so the lasting impact and result of it are still yet to be seen, especially considering the court views the problems with the protocol as “correctable” and it is only a memorandum of intended decision.

¹⁵⁵ 408 F.3d 1027 (8th Cir. 2005) (per curiam).

¹⁵⁶ *Id.* Vernon Brown was executed on May 18, 2005. *Nation in Brief*, WASH. POST, May 19, 2005, at A28.

¹⁵⁷ *Brown*, 408 F.3d at 1028 (Bye, J., dissenting) (quoting Pl.’s Motion for Temporary Restraining Order).

¹⁵⁸ *Id.* at 1029.

¹⁵⁹ *Id.*

¹⁶⁰ *Id.* at 1031.

unconstitutional as well. In *Taylor v. Crawford*¹⁶¹ the court faced the same question as in *Morales*, “whether or not there is a reasonable possibility that Plaintiff will be conscious when he is injected with pancuronium bromide or potassium chloride, and, if so, how the risk of such an occurrence may be avoided.”¹⁶² After appealing the district court’s initial determination that the method used by Missouri did not violate the Eighth Amendment, the Eighth Circuit Court of Appeals allowed Taylor further discovery that revealed that the state contradicted itself with regard to the amount of thiopental it used during executions.¹⁶³ Upon learning of this information the district court submitted interrogatories to, and allowed Taylor to conduct an anonymous deposition of, the physician that mixes the drugs used during executions, John Doe I.¹⁶⁴

John Doe I stated that he was not aware of the protocol being written down in any form,¹⁶⁵ and that it was his understanding that, despite being only a surgeon and not an anesthesiologist, he had the independent authority to change the dose based on his own medical judgment.¹⁶⁶ During his deposition, John Doe I stated that he just relies on his memory and judgment when mixing the drugs¹⁶⁷ and admitted to “improvising” based on problems he had encountered trying to mix more than three or four grams.¹⁶⁸ Furthermore, John Doe I admitted that he sometimes transposes numbers even when he’s staring at the two numbers. He stated, “it’s not unusual for me to make mistakes. . . . But I am dyslexic and that is the reason why there are inconsistencies in my testimony.”¹⁶⁹

After reviewing the evidence, the court found that “it is apparent that there are numerous problems” with how Missouri carries out executions.¹⁷⁰ The court was concerned about the fact that there is no written protocol, that John Doe I possesses total discretion for the execution protocol, and has a condition that causes him confusion with regard to numbers that he does not think is medically crucial. Contrary to the assertions of John Doe I, the court found that the process of mixing drugs and knowing the correct amount to use involves precise measurements in order to humanely end life.¹⁷¹ Based on all the above, the court concluded that Missouri’s lethal injection procedure subjects condemned inmates to an unnecessary risk that they will be subject to unconstitutional pain and suffering when the lethal injection drugs are administered.¹⁷²

¹⁶¹ No. 05-4173-CV-C-FJG, 2006 U.S. Dist. LEXIS 42949 (W.D. Mo. June 26, 2006).

¹⁶² *Id.* at *18.

¹⁶³ *Id.* at *9.

¹⁶⁴ *Id.* at *10.

¹⁶⁵ Missouri’s lethal injection protocol is not mandated by statute. *Taylor v. Crawford*, 445 F.3d 1095, 1097 (8th Cir. 2006) (remanding case to allow for further discovery and a continuation of hearing).

¹⁶⁶ *Taylor*, 2006 U.S. Dist. LEXIS 42949, at *10-11. In one instance, John Doe I determined to use 2.5 grams of sodium pentothal instead of 5 grams because of difficulty in dissolving powder, obtained from a new supplier, containing more than 2.5 grams in the liquid that could be accommodated in a syringe. *Id.* at *11.

¹⁶⁷ *Id.* at *13.

¹⁶⁸ *Id.* at *14.

¹⁶⁹ *Id.* at *15.

¹⁷⁰ *Id.* at *19.

¹⁷¹ *Id.* at *19-21.

¹⁷² *Id.* at *22. Missouri subsequently submitted revised protocols to the district court, which ruled on

But a Kentucky trial court found that the three-drug protocol Kentucky uses to execute its prisoners is neither cruel nor unusual.¹⁷³ A significant factor in the decision was a ruling the judge had previously made to raise the initial dosage of sodium thiopental.¹⁷⁴ This is significant for a number of reasons. First, as a matter of near medical certainty, two grams of sodium thiopental is enough to render anyone unconscious, with the exception of someone who might weigh 800 pounds.¹⁷⁵ Next, in raising the dosage to 5 grams, the judge, whether he realized it or not, raised the bar for human error and other factors that contribute to inmates not being properly anesthetized, thereby tacitly admitting the possibility that at the lower dosage, the entire amount was not being injected properly.¹⁷⁶ This argument is also implicit in the dissent in *Brown*, where Judge Bye theorized that all the state must do to totally ensure that the inmate will be rendered unconscious is raise the amount of Sodium Pentothal to a higher dosage.¹⁷⁷ But *Morales* demonstrates that even when a state uses 5 grams of sodium thiopental, if it is not administered properly, the inmate still risks being conscious.¹⁷⁸

In one of the few earlier cases where a prisoner succeeded in receiving a temporary restraining order (“TRO”) precluding his execution at the district court level, *Harris v. Johnson*,¹⁷⁹ the Court of Appeals quickly reversed.¹⁸⁰ In challenging Texas’ lethal injection protocol, Harris made similar arguments to the other cases that had been brought: that the neuromuscular blocker “paralyzes all skeletal or voluntary muscles, but has no effect on awareness, cognition, or sensation,” such that the condemned will appear “serene and pain-free” while he is, in fact, experiencing “excruciating pain.”¹⁸¹ The decision to grant Harris’ TRO was based largely on the fact that the district judge determined he was not challenging his death sentence.¹⁸² This was due to the fact that Harris personally proposed two alternatives to the protocol Texas uses: “the protocol used in New Jersey, which does not include the neuromuscular blocking agent pancuronium bromide” and only

Sept. 12, 2006 that although an improvement, the state’s proposals still do not meet Eighth Amendment standards. *Taylor v. Crawford*, No. 05-4173-CV-C-FJG, 2006 U.S. Dist. LEXIS 74896, at *2 (W.D. Mo. Oct. 16, 2006). On October 6, the state resubmitted the same protocols and asked the court to reconsider its ruling, without providing any grounds for reconsideration. The district court denied reconsideration, and restated its previous determination that the “protocol proposed by the State of Missouri is unconstitutional because it subjects inmates to unreasonable risk of cruel and unusual punishment.” *Taylor*, 2006 U.S. Dist. LEXIS 74896, at *3-4.

¹⁷³ Deborah Yetter, *Judge Upholds Use of Lethal Injection*, THE COURIER-JOURNAL (Louisville, Ky.), July 9, 2005.

¹⁷⁴ *Id.*

¹⁷⁵ See, e.g., *State v. Webb*, 750 A.2d 448, 451-52 (Conn. 2000) (discussing the how much Connecticut’s dosage of Sodium Thiopental exceeds the amount used for surgery in an individual weighing 150 pounds).

¹⁷⁶ This is not the first time it has been acknowledged that it is possible prisoners do not receive the entire dosage. Recall the statement of Dr. Dershwitz, admitting the possibility that only one of the four syringes of anesthetic was injected. See Liptak, *Fatal Cocktail*, *supra* note 83.

¹⁷⁷ See *Brown v. Crawford*, 408 F.3d 1027, 1029 (Bye, J., dissenting).

¹⁷⁸ See *Morales v. Tilton*, No. C 06 219 JF RS, C 06 926 JF RS, 2006 U.S. Dist. LEXIS 92243, at *25 (N.D. Cal. Dec. 15, 2006).

¹⁷⁹ 323 F. Supp. 2d 797 (S.D. Tex 2004).

¹⁸⁰ *Harris v. Johnson*, 376 F.3d 414 (5th Cir. 2004).

¹⁸¹ *Harris*, 323 F. Supp. 2d at 800.

¹⁸² *Id.*

consists of sodium thiopental and potassium chloride, “or a protocol that includes a higher dosage of barbiturate,” such as California’s.¹⁸³ But this quickly turned into a pyrrhic victory for Harris when the TRO was vacated by the Fifth Circuit.¹⁸⁴ The Fifth Circuit held that Harris was not entitled to equitable relief because the real purpose behind his claim was to seek a delay of his execution, not merely to effect an alteration of the manner in which it was carried out.¹⁸⁵ The court did not decide whether Harris properly stated a claim under section 1983.¹⁸⁶ The court assumed though that even if Harris did state a claim, “he is not entitled to the equitable relief he seeks”¹⁸⁷ because after being on death row for eighteen years, he waited until his execution was imminent to challenge the protocol that existed before he was on death row.¹⁸⁸

Ironically, another state where legal challenges have so far been successful is New Jersey, which does not use the most controversial of the three drugs, pancuronium bromide. New Jersey’s lethal injection regulations were recently determined to be unacceptable because they did not provide for the presence of equipment to resuscitate a prisoner once the lethal injection process began should the prisoner receive a last-minute stay.¹⁸⁹ In the case of *In re Readoption with Amendments of Death Penalty Regulations*, New Jersey citizens opposed to the death penalty challenged the regulations of the DOC, which has the responsibility of establishing the procedures for carrying out lethal injections.¹⁹⁰ This case is notably different from the others in that it was not brought by a death row inmate, but by citizens. Also crucial to the plaintiffs’ success was the ability to gain access to documents that the DOC claimed were privileged. Although the court found that the crux of the plaintiffs’ constitutional challenge was to the statutory authorization of the death penalty, and not the DOC regulations,¹⁹¹ the court analyzed whether the regulations were consistent with contemporary standards of decency and morality. As for the challenges that New Jersey’s lethal injection technique might cause unnecessary pain and suffering, the court concluded that these concerns were “functions not of the [DOC] regulations but of the capital punishment statute itself. Given the underlying adjudicated constitutionality thereof, we cannot say that the regulations fail reasonably to implement the statute.”¹⁹² The court crystallized the difficulty prisoners have in challenging lethal injection protocols based on Eighth Amendment concerns by concluding that “as long as capital punishment by lethal injection remains a constitutionally unobjectionable legislative choice, the regulations are reasonably based on adequate evidential support and are consistent

¹⁸³ *Id.* at 802.

¹⁸⁴ *Harris*, 376 F.3d at 419.

¹⁸⁵ *Id.* at 417.

¹⁸⁶ *Id.* The Supreme Court in *Hill* answered this question with a definitive yes. *See Hill v. McDonough*, 126 S. Ct. 2096 (2006).

¹⁸⁷ *Harris*, 376 F.3d at 417.

¹⁸⁸ *Id.*

¹⁸⁹ *In re Readoption with Amendments of Death Penalty Regulations*, N.J.A.C. 10A:23 By the N.J. Dep’t of Corr., 842 A.2d 207, 211 (N.J. Super. Ct. App. Div., 2004).

¹⁹⁰ *Id.*

¹⁹¹ *Id.* at 210.

¹⁹² *Id.* at 213.

with the legislative objectives.”¹⁹³

IV. MORAL, MEDICAL AND LEGAL REASONS FOR LEGISLATIVE ACTION

a. Failure of Litigation

As part of the Eighth Amendment analysis of “evolving standards of decency” that the Supreme Court has set forth, courts look to how other states handle the issue. Because over thirty states use the exact same protocol, it is very difficult to convince a court that the use of pancuronium bromide is not consistent with the evolving standards of decency. Inmates challenging the use of pancuronium have pointed to the fact that nineteen states do not allow animals to be put to death with it, and the leading professional association of veterinarians has set forth guidelines for animal euthanasia that preclude the use of a sedative in conjunction with paralytic agents¹⁹⁴ to show that the use of pancuronium is not consistent with evolving standards of decency. So far this argument has yet to persuade any court.

As the above cases demonstrate, mounting a constitutional challenge to lethal injection protocols has proven to be a difficult task. This is precisely why the task of reforming lethal injection falls to state legislatures. State legislatures have historically been responsible for the acceptance, evolution, (and in rare circumstances, abolishment) of capital punishment starting in the colonial era.¹⁹⁵ While the Supreme Court has had a considerable role in shaping the modern death penalty era with its ruling in *Furman v. Georgia*,¹⁹⁶ the court recognized and legitimized the centrality of state legislative action in *Gregg*. In *Gregg*, the court concluded that the death penalty does not transgress “evolving standards of decency,” the touchstone of the Eighth Amendment’s prohibition on cruel and unusual punishments, by relying heavily on the fact that so many state legislatures had re-enacted capital statutes following *Furman*.¹⁹⁷ Central to the Supreme Court’s decisions finding the execution of the mentally retarded and juveniles to be unconstitutional were an examination of how many states banned those practices.¹⁹⁸ As the Supreme Court has stepped into the death penalty debate, it has still made sure that “legislatures and their statutory choices have remained a principal and central determinant of the capital punishment landscape.”¹⁹⁹

¹⁹³ *Id.* at 212.

¹⁹⁴ See 2000 Report of the American Veterinary Medical Association Panel on Euthanasia, 218 JOURNAL OF THE AMERICAN VETERINARY MEDICAL ASSOCIATION 669, 680-81 (2001). A note was added to the report stating that the “2000 Report of the AVMA Panel on Euthanasia has been widely misinterpreted” and “the guidelines in this report are in no way intended to be used for human lethal injection.” *Id.*

¹⁹⁵ Berman, *supra* note 30, at 1.

¹⁹⁶ 408 U.S. 238 (1972). In *Furman*, a deeply-divided Supreme Court voted 5 to 4, with every Justice writing separately, that capital punishment schemes which gave juries complete and unguided discretion in the imposition of death sentences violated the Eighth Amendment’s prohibition of cruel and unusual punishments. *Id.*

¹⁹⁷ *Gregg v. Georgia*, 458 U.S. 153, 179-81 (1976).

¹⁹⁸ See *Atkins v. Virginia*, 536 U.S. 304, 344 (2002) (holding that the execution of the mentally retarded violates the Eighth Amendment, and noting that “clearest and most reliable objective evidence of contemporary values is the legislation enacted by the country’s legislatures”); *Roper v. Simmons*, 125 S. Ct. 1183, 1192, 1200 (2005) (holding that the Eighth Amendment forbids the imposition of the death penalty on juvenile offenders under eighteen, and noting that thirty states prohibit executing juveniles).

¹⁹⁹ Berman, *supra* note 30, at 2.

Perhaps not coincidentally, in January 2006, New Jersey became the first state to impose a moratorium on the death penalty through its state legislature, and the third state overall to impose a moratorium.²⁰⁰ The bill, which received huge bipartisan support, imposed a one-year moratorium on the death penalty so that its fairness and expense could be studied.²⁰¹ Interestingly, this legislative action was not a direct result of the ruling in *In Re Readoption*, and does not address the state's lethal injection protocol at all.²⁰² Nevertheless, it is an opportunity for opponents of current lethal injection protocols to have their voices heard, even though this was not listed as a reason for the moratorium.²⁰³

The California legislature is also debating a moratorium on the death penalty. As a sign of the magnitude of wrongfully taking an innocent person's life, in addition to the usual supporters of such a moratorium, a group of current and former prosecutors – including the author of the state's 1978 death penalty initiative – endorsed the proposed bill as well.²⁰⁴ Some of the signatories of the letter support the death penalty and some oppose it, but nevertheless, they are united in their concern for the death penalty being administered fairly.²⁰⁵ The moratorium supporters declared that “[w]e agree that a temporary suspension of executions in California is necessary while we ensure, as much as is possible, that the administration of criminal justice in this state is just, fair and accurate.”²⁰⁶ Among the signatories to the letter was Ira Reiner, former Los Angeles County district attorney, who sent dozens of people to death row.²⁰⁷ “If the state is going to have the moral authority to take a life,” he said, “it has to be done when there are no questions about the fairness of the trial.”²⁰⁸ While neither the California nor New Jersey moratoriums are geared specifically toward the issue of lethal injection protocols, the fact that legislatures are beginning to step in to the debate in ways previously unheard is positive news for those advocating changes to lethal injection.

b. Role of Medical Profession

The American Medical Association (AMA) officially prohibits doctors from taking part in executions.²⁰⁹ The AMA's Council on Ethical and Judicial Affairs has defined physician participation in executions to include three categories of actions:

²⁰⁰ David Chen, *Suspension of the Death Penalty Is All but Assured in New Jersey*, N.Y. TIMES, Jan. 6, 2006, at B1.

²⁰¹ *Id.*

²⁰² *Id.*

²⁰³ On January 2, 2007, a New Jersey legislative commission convened for the purposes of studying the death penalty released a report recommending New Jersey become the first state to abolish the death penalty since states began reinstating their capital punishment laws in 1976. Laura Mansnerus, *Panel Seeks End to Death Penalty for New Jersey*, N.Y. TIMES, Jan. 3, 2007, at A1.

²⁰⁴ Henry Weinstein, *Moratorium on Executions Is Urged*, L.A. TIMES, Jan. 10, 2006, at B3.

²⁰⁵ *Id.*

²⁰⁶ *Id.*

²⁰⁷ *Id.*

²⁰⁸ *Id.*

²⁰⁹ The AMA's statement on physician participation in executions reads as follows: “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.” Council on Ethical and Judicial Affairs, Am. Med. Ass'n, Council Report: Current Opinions with Annotations, Op. 206 (2000).

(1) actions that “directly cause the death of the condemned,” such as administering the lethal injection itself; (2) actions that “assist, supervise, or contribute to the ability of another individual to directly cause the death of the condemned,” such as prescribing the necessary drugs; and (3) actions that “could automatically cause an execution to be carried out on a condemned prisoner,” including determinations of death during an execution.²¹⁰ The AMA’s opposition to physician involvement in executions holds considerable weight because the AMA is recognized as the voice of organized medicine, both inside and outside the profession.²¹¹

Beyond the Hippocratic Oath’s dictates to “never do harm to anyone,” physician and human rights organizations published an ethical analysis of physician participation in executions that justified their prohibition on more specific grounds.

Although physician participation in some instances may arguably reduce pain, there are many countervailing arguments. First, the purpose of medical involvement may not be to reduce harm or suffering, but to give the surface appearance of humanity. Second, the physician presence also serves to give an aura of medical legitimacy to the procedure. Third, in the larger picture, the 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. In return for possible reduction of pain, the physician, in effect, acts under the control of the state, doing harm.²¹²

Despite the ethical prohibitions of the AMA, a survey of American physicians found that nineteen percent would inject lethal drugs, and forty-one percent said they would take part in at least one action prohibited by the AMA guidelines.²¹³ Indeed, some argue that it is only with the cooperation of the medical profession that lethal injection can become more humane.²¹⁴ Physician participation in the execution process can take on many forms. First, the doctor could assist in preparatory actions, such as examining the condemned and the condemned’s medical record to see if any preexisting medical condition might interfere with the execution process.²¹⁵ Next, a doctor could take preparatory actions that take place directly prior to the execution, like preparing syringes, locating appropriate veins that will deliver the lethal solution, and inserting the catheters.²¹⁶ Further, a doctor could help administer and monitor the lethal solution and vital signs of the condemned.²¹⁷ Finally a doctor

²¹⁰ Council on Ethical and Judicial Affairs, Am. Med. Ass’n, Council Report: Physician Participation in Capital Punishment, 270 JAMA 365 (1993).

²¹¹ Kenneth Baum, “*To Comfort Always*”: *Physician Participation In Executions*, 5 N.Y.U. J. LEGIS. & PUB. POL’Y 47, 56, 81 (2001/2002). The AMA represents nearly 300,000 of the nation’s 800,000 physicians and medical students.

²¹² THE AM. COLL. OF PHYSICIANS ET AL., BREACH OF TRUST: PHYSICIAN PARTICIPATION IN EXECUTIONS IN THE UNITED STATES 38 (1994).

²¹³ Editorial, *Medical Collusion in the Death Penalty: An American Atrocity*, 365 LANCET 1361 (April 15, 2005).

²¹⁴ Baum, *supra* note 211, at 51.

²¹⁵ *Id.* at 52.

²¹⁶ *Id.*

²¹⁷ *Id.* at 53.

should pronounce the death of the condemned.²¹⁸

So long as the AMA prohibits doctors from participating in executions, and can pursue sanctions against doctors who do, the clear thrust of that position is that doctors should not be using their knowledge to bring about death.²¹⁹ While most state death penalty statutes allow for, or even require, a physician to be present during executions, many medical practice acts expose doctors to professional disciplinary action for such participation, creating a difficult dilemma for doctors that do participate.²²⁰

Inherent in any discussion of lethal injection protocols is the difficulty of coming up with new technologies considering the AMA's prohibition of physicians to take part in executions. While physicians have long taken part in executions in varying degrees,²²¹ the lack of AMA approval makes the role of physicians in developing and administering new and more humane methods of executions an ethical and legal controversy not likely to be resolved any time soon. But that does not mean that we should maintain the status quo in the face of mounting evidence that lethal injection can cause extreme pain and suffering.

V. CONCLUSION

In light of the fact that courts have given medical evidence introduced on behalf of inmates challenging the constitutionality of lethal injection protocols entirely varying degrees of weight, and have more often than not denied stays of execution in almost every case, it is clear that legal challenges cannot alone bring about change to current lethal injection protocols. Until the Supreme Court finds lethal injection protocols in their current state to constitute "cruel and unusual punishment" under the Eighth Amendment, it is the job of state legislatures and executive branches to reform lethal injection. Where the constitutionally mandated minimum is failing to protect inmates from suffering extreme pain, it is incumbent on legislatures to take the lead on the issue. Pennsylvania is one of four states that keep their protocol confidential.²²² Based on all of the aforementioned problems with the lack of standardization and the inherent danger of an inmate suffering extreme pain even when the protocol is codified, it is incumbent on state legislatures to statutorily require corrections departments to make their protocols public and impose a moratorium on lethal injections until it can be proven by the state that prisoners are not at risk of suffering.

²¹⁸ *Id.*

²¹⁹ The inability to find an anesthesiologist to perform a lethal injection in California is an example of the considerable weight many physicians place on their ethical duty. *See Morales v. Tilton*, No. C 06 219 JF RS, C 06 926 JF RS, 2006 U.S. Dist. LEXIS 92243 (N.D. Cal. Dec. 15, 2006).

²²⁰ Baum, *supra* note 211, at 51.

²²¹ Denno, *Legislatures*, *supra* note 11, at 113.

²²² *Id.* at app. 142.