

---

# CHAPTER 12

## Execution Procedures

---

In January 2014, Ohio executed Dennis McGuire with a never before used two-drug combination of midazolam and hydromorphone. The execution lasted 26 minutes and, according to a member of the press who witnessed the execution, “McGuire struggled, made guttural noises, gasped for air and choked for about 10 minutes before succumbing to [the] new two-drug execution method.”<sup>1</sup> In that same month, Oklahoma executed Michael Wilson using a three-drug cocktail, which included an injection of pentobarbital in lieu of sodium thiopental – the drug previously used to reduce unnecessary pain and suffering in execution, but which has not been available for use in executions since 2009. He reportedly said “I feel my whole body burning” during the execution.<sup>2</sup>

Over the last several years, many domestic and foreign pharmaceutical companies have objected to the use of their products in executions<sup>3</sup> and European governments, which are adamantly opposed to capital punishment, have sought to restrict export of drugs to the U.S. that will be used in executions.<sup>4</sup> These developments have led to acute shortages of the drugs used by nearly all capital jurisdictions in lethal injection. In the face of these shortages, states procured substandard supplies of sodium thiopental, resulting in the Drug Enforcement Agency’s seizure of multiple states’ supplies. In response, states have turned to compounding pharmacies, which are often unregulated and whose contaminated products have resulted in illness and death of medical patients across the U.S.<sup>5</sup> The very laws and rules governing execution are fluid in many states, fluctuating based on the availability of myriad drugs that could potentially be used to execute an inmate. States have enacted laws to shield execution protocols from freedom of information requests – or even invoked a “state secret” doctrine – to prohibit public dissemination of information on the lethal injection process or origin of lethal injection drugs.<sup>6</sup>

---

<sup>1</sup> Alan Johnson, *Inmate’s death called ‘horrific’ under new, 2-drug execution*, COLUMBUS DISPATCH, Jan. 17, 2014.

<sup>2</sup> Charlotte Adler, *Michael Lee Wilson Executed Using Pentobarbital, Prison Officials Tell TIME*, TIME.com, Jan. 10, 2014, at <http://nation.time.com/2014/01/10/oklahoma-convict-who-felt-body-burning-executed-with-controversial-drug/#ixzz2vy3GtazY>.

<sup>3</sup> Deborah W. Denno, *Lethal Injection Chaos Post-Baze* 34-40 (Nov. 13, 2013), at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2328407](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2328407) (forthcoming publication 102 GEORGETOWN L. J., 5 (2014)) (describing various drugmakers’ decisions to cease or limit manufacture and end use of their pharmaceuticals in executions, including Hospira, Lundbeck, Hikma and German healthcare provider Fresenius Kabi).

<sup>4</sup> *Id.* at 34-40.

<sup>5</sup> *See infra* note 29.

<sup>6</sup> Georgia law classifies as a “confidential state secret” the “identifying information of any person

**Recommendation 36. Jurisdictions should rely on the most current scientific knowledge to develop protocols that minimize the risk of pain or suffering, which currently demands the adoption of a one-drug protocol.**

Lethal injection is the act of injecting an inmate with a fatal dose of drugs for the purpose of causing the inmate's immediate death. Lethal injection is used for capital punishment by the federal government and every one of the 32 states where the death penalty has not been abolished. In 2007, the U.S. Supreme Court in *Baze v. Rees* found that execution by a three-drug cocktail of sodium thiopental, pancuronium bromide, and potassium chloride does not violate the U.S. Constitution.<sup>7</sup> At the time of the Supreme Court's *Baze* decision, most death penalty states used the three-drug combination for lethal injections.<sup>8</sup> The sodium thiopental induces unconsciousness; the pancuronium bromide causes muscle paralysis and respiratory arrest; and the potassium chloride stops the heart.<sup>9</sup>

- *Sodium Thiopental* is an ultra-short acting barbiturate that is used for anesthesia induction. When sodium thiopental reaches the brain, it causes an unconscious state. A full medical dose of sodium thiopental reaches the brain in 30 seconds. The dose used for lethal injection is around 2-5 grams, much higher than the typical anesthesia dose of 0.35 grams.<sup>10</sup>
- *Pancuronium Bromide*, also called *Pavulon*, is a non-depolarizing muscle relaxant. After it is injected into a person's bloodstream, the entire muscle system is paralyzed and the respiratory system is shut down. It has no anesthetic properties and does not reduce pain. Such paralysis would preclude a person from communicating pain or distress. The dose used for lethal injection is 0.2 mg/kg, sufficient to causes 4 to 8 hours of paralysis.<sup>11</sup>
- *Potassium Chloride* is an electrolyte. A lethal injection of potassium chloride affects the electrical conduction of the heart muscle and ultimately stops the cardiac cells from generating impulses. A lethal dose is 100 mEq, about 10 times the usual intravenous dosage.<sup>12</sup>

---

or entity that manufactures, supplies, compounds, or prescribes the drugs, medical supplies, or medical equipment utilized in the execution of a death sentence..." GA. CODE § 42-5-36(d)(2) (2013).

<sup>7</sup> *Baze v. Rees*, 553 U.S. 35 (2008).

<sup>8</sup> *Id.*; see also Death Penalty Information Center, State by State Lethal Injection, at [www.deathpenaltyinfo.org](http://www.deathpenaltyinfo.org).

<sup>9</sup> *Baze*, 553 U.S. at 44.

<sup>10</sup> See *Ex Parte O'Brien*, 190 S.W.3d 677, 681 & n.12 (Tex. Crim. App.) (Cochran, J., concurring).

<sup>11</sup> University of California School of Law Death Penalty Clinic, *The Drugs and the Process*, at <http://www.law.berkeley.edu/clinics/dpclinic/LethalInjection/LI/documents/kit/drugs.pdf>.

<sup>12</sup> University of California School of Law Death Penalty Clinic, *History of Lethal Injection Protocol*, at

The three drugs must be administered in the proper order to achieve the desired effect and minimize pain and suffering. The injection of “pancuronium bromide and potassium chloride, either separately or in combination, would result in a terrifying excruciating death,” if injected into a conscious person.<sup>13</sup> Without the proper dose of anesthesia, the inmate will experience both the conscious suffocation caused by the pancuronium bromide and the excruciating pain caused by the potassium chloride, but will appear peaceful to observers.<sup>14</sup> Thus the proper administration of anesthesia is crucial for the humane execution of an inmate.

The lethal injection systems most states implement create a high risk of improper administration of anesthesia. One problem is that the administered dosage of anesthesia does not completely anesthetize all inmates, some of whom have been drug abusers for many years. Another problem is improper drug preparation. Before injecting sodium thiopental, the execution team must prepare the drug and load it into syringes. One dose of thiopental must be mixed from six separate kits of 0.5 grams of powder, each of which must be mixed individually.<sup>15</sup> This process requires numerous steps and many opportunities for error, especially if the execution team members are not trained medical professionals.<sup>16</sup>

Administering the thiopental into the vein also poses issues. There have been numerous reports of execution team members being unable to find inmates’ veins. In one report from Ohio, the execution team failed for two hours to find a suitable vein to execute a prisoner.<sup>17</sup> In another case, the needle was improperly inserted toward the prisoner’s hand rather than his body, causing the drug’s reaction to be delayed.<sup>18</sup> Problems also can occur upon the insertion of the IV into the vein. Certain drugs require different rates of injection and inserting the drug too vigorously can affect how fast the chemicals are absorbed by the body. These risks would be diminished with proper facilities and medically trained personnel, but without such, the three-drug cocktail poses a risk of avoidable inmate pain and suffering.

---

<http://www.law.berkeley.edu/clinics/dpclinic/LethalInjection/LI/documents/kit/history.pdf>.

<sup>13</sup> *Harbison v. Little*, 511 F. Supp. 2d 872, 884 (M.D. Tenn. 2007).

<sup>14</sup> Brief for Petitioners at 10-11, *Baze v. Rees*, 553 U.S. 35 (2008) (No. 07-5439), 2007 WL 3307732 at \*10-\*11.

<sup>15</sup> Brief for Petitioners at 12, *Baze v. Rees*, 553 U.S. 35 (2008) (No. 07-5439), 2007 WL 3307732 at \*12.

<sup>16</sup> *See, e.g., Morales v. Tilton*, 465 F. Supp. 2d 927, 980 (N.C. Cal. 2006) (“Among other things, [execution] team members’ admitted failure to follow the simple directions provided by the manufacturer of sodium thiopental further complicates the inquiry as to whether inmates being executed have been sufficiently anesthetized).

<sup>17</sup> Michael L. Radelet, Examples of Post-*Furman* Botched Executions (March 27, 2014), at [http://www.deathpenaltyinfo.org/some-examples-post-furman-botched-executions#\\_edn43](http://www.deathpenaltyinfo.org/some-examples-post-furman-botched-executions#_edn43).

<sup>18</sup> Elizabeth Cohen, Lethal Injection Creator: Maybe It’s Time to Change Formula, CNN, at [http://articles.cnn.com/2007-05-07/health/lethal.injection\\_1\\_sodium-thiopental-lethal-injection-lethal-three-drug-cocktail?\\_s=PM:HEALT](http://articles.cnn.com/2007-05-07/health/lethal.injection_1_sodium-thiopental-lethal-injection-lethal-three-drug-cocktail?_s=PM:HEALT).

Moreover, as states devise new methods of execution and procure new sources of execution drugs in light of shortages, *Baze* has effectively been rendered moot. The Committee, therefore, urges states to develop methods that attempt to minimize the risk of physical pain or suffering beyond that which is inherent in an execution. States are urged to adopt a one-drug protocol that achieves death by an overdose of a single anesthetic or barbiturate, as opposed to the three-drug method. A one-drug method would decrease the problems associated with drug administration and eliminate the risks from using paralyzing or painful chemical agents. In Oregon, the only state with legalized physician-assisted suicide, patients take an overdose of barbiturate.<sup>19</sup> The one-drug method is also preferred over the three-drug method by veterinarians for euthanizing animals because the one-drug method is more humane and less prone to error.<sup>20</sup>

The choice of the specific drugs used in lethal injections should be revisited periodically. States should base their choices on the latest scientific knowledge about the effects of such drugs and not base their decisions on the availability of drugs alone. Further, any changes to lethal injection protocols should include meaningful input from recognized and legitimate scientific experts on the effects of such drugs on humans.

### **Recommendation 37. Jurisdictions should act with transparency in the development and administration of lethal injection protocols.**

Over the last several years, states have scrambled to revise existing protocols and adopt new ones for execution by lethal injection. According to Professor Deborah Denno, who examined over 300 cases involving litigation over the method of execution in light of *Baze* and execution drug shortages, death penalty states have “modif[ied] virtually any aspect of their lethal injection procedures with a frequency that is unprecedented among execution methods in this country’s history. There have been more changes in lethal injection protocols during the past five years than there have been in the last three decades.”<sup>21</sup>

Execution warrants in many of these states have been issued, even though the drugs needed to execute the prisoner are not available. As Denno points out, states have “turn[ed] to increasingly nontraditional sources of drugs, such as compounding pharmacies,” resulting

---

<sup>19</sup> Daniel Engber, *How Does Assisted Suicide Work?*, SLATE, Oct. 6, 2005, at [http://www.slate.com/articles/news\\_and\\_politics/explainer/2005/10/how\\_does\\_assisted\\_suicide\\_work.html](http://www.slate.com/articles/news_and_politics/explainer/2005/10/how_does_assisted_suicide_work.html) (noting that the patient takes one of two kinds of barbiturates – Seconol or Nembutal).

<sup>20</sup> For example, “Due to the risk that pancuronium bromide could cause an animal to suffocate to death while paralyzed but fully awake, the use of the drug on animals for purposes of euthanasia is prohibited in Tennessee by the Nonlivestock Humane Death Act.” *Harbison*, 511 F. Supp. 2d at 883 (quoting Tenn. Code Ann. § 44-17-301, *et seq.*).

<sup>21</sup> Denno, *supra* note 3, at 5.

in “overwhelming criticism and legal challenges.”<sup>22</sup> Many of the new methods of execution significantly depart from the protocol evaluated by the U.S. Supreme Court in *Baze*.

In response, the states “have intensified their efforts to obscure information regarding the development and implementation of their lethal injection protocols.”<sup>23</sup> This poses an unacceptable risk that inmates will face an unnecessarily cruel and painful death, violative of the U.S. Constitution. States such as Arkansas, Georgia, South Dakota and Tennessee have recently passed laws to keep secret the sources of drugs to be used in execution.<sup>24</sup> After Michael Lee Wilson’s execution, discussed earlier in this chapter, the Oklahoma corrections department “refused to say where Wilson’s injection was made, who sold it to the state and whether it had been tested.”<sup>25</sup> Such secrecy undermines the public’s faith in the integrity of the justice system as it conceals from the public, lawyers, and those facing execution critical information about the lawfulness and reality of states’ execution procedures.

In lieu of current practices, the initial investigation, drafting, review, adoption, revision and implementation of lethal injection protocols should be handled in a transparent manner that allows for appropriate levels of legal, media and public scrutiny. States should allow for public review and comment before finalizing a protocol. States should make their protocols readily available to the public and media, including by posting on their department of correction website. Such transparency should include the nature, characteristics and origins of the specific drugs used in lethal injections.

All administrative decisions related to lethal injection protocols should be made in a manner that complies with the provisions of any applicable administrative procedure act, although such compliance alone may not be sufficient to achieve the appropriate level of transparency. All public records related to lethal injections should be treated as subject to the provisions of any applicable public disclosure law. Such transparency need not include the identities of specific persons involved in the administration of executions. However, such specific information, along with details of prison security arrangements in connection with a pending execution, or other information that might give rise to a significant security risk, should be made available, under seal if necessary, upon issuance of a valid court order.

**Recommendation 38. Jurisdictions should use only drugs obtained in compliance with all laws and approved by the U.S. Food and Drug Administration for use in humans and should take appropriate measures to ensure the quality of the drugs.**

---

<sup>22</sup> *Id.* at 58.

<sup>23</sup> *Id.* at 59.

<sup>24</sup> *Id.* at 52-54.

<sup>25</sup> Katie Fredland, *Oklahoma scrambles to find lethal injections for two imminent executions*, COLORADO INDEPENDENT, Mar. 18, 2014, at <http://www.coloradoindependent.com/146553/oklahoma-scrambles-to-find-lethal-injections-for-two-imminent-executions>.

The specific drugs used in lethal injections should be approved by the federal Food and Drug Administration (“FDA”). Although many states require the use of sodium thiopental in their lethal injection procedures, the shortage of the drug for executions has caused states to scramble to find alternative supplies or to begin using a different drug as a replacement. States have begun using pentobarbital in place of sodium thiopental.<sup>26</sup> However, pharmaceutical company Lundbeck, the Danish manufacturer of pentobarbital, will not supply the drug for executions in the U.S.<sup>27</sup>

As a result, some states, including Arizona, California and Georgia, have acquired pentobarbital from sources outside the United States, including Dream Pharma, a company in the United Kingdom that operated out of the back of a driving academy.<sup>28</sup> This extralegal acquisition caused a controversy regarding what role the FDA should play in regulating the supply of drugs used in executions. It also appears that even more states have resorted to the use of compounding pharmacies to obtain drugs for execution by lethal injection. Compounding pharmacies have traditionally been regulated by the states, not by the FDA.<sup>29</sup> Consequently, states are requesting drugs from the very entities that the state is responsible for regulating. Lax state regulations mean that drugs produced in compounding pharmacies have been subjected “to less rigorous testing, and may include contaminants that cause significant pain.”<sup>30</sup>

The Committee believes that states and the FDA should ensure that lethal injection drugs are lawfully obtained in compliance with all relevant laws. In addition to using FDA-approved drugs, states should take additional measures to ensure the effectiveness of the specific drugs used in lethal injections, including appropriate procedures to ensure the proper transportation, handling, storage and use of the drugs. States should implement a strict “chain of custody” requirement to minimize the risk of adulteration or contamination of the drugs. They should also require a check of the expiration date before use to ensure that the drugs retain their effectiveness for their intended purposes.

---

<sup>26</sup> State by State Lethal Injection, *supra* note 8.

<sup>27</sup> *Atler*, *supra* note 2.

<sup>28</sup> Death Penalty Information Center, Picture of Dream Pharma, at <http://www.deathpenaltyinfo.org/picture-dreampharma>.

<sup>29</sup> Andrew Pollack, *Checks Find Unsafe Practices at Compounding Pharmacies*, N.Y. TIMES, Apr. 12, 2013. In November 2013, Congress passed a law to clarify and enhance the FDA’s role in overseeing compounding pharmacies, but the bill falls “short of giving the agency fuller regulatory power.” Sabrina Tavernise, *Bill on Drug Compounding Clears Congress a Year After a Meningitis Outbreak*, N.Y. TIMES, Nov. 18, 2013.

<sup>30</sup> *Atler*, *supra* note 2. In 2012, for example, “tainted injectable drugs from a compounding pharmacy in Massachusetts caused a meningitis outbreak that killed 64 people across the country, according to the Centers for Disease Control and Prevention.” Pollack, *supra* note 29.

Qualified personnel who are independent of the correctional agency responsible for the administration of executions should conduct or supervise the development and implementation of these quality assurance measures. States should periodically review the quality assurance measures and their implementation and revise them when necessary.

**Recommendation 39. Jurisdictions should ensure that qualified medical personnel are present at executions and responsible for all medically-related elements of executions.**

The physical process of preparing drugs, syringes, IVs, etc. involved in a lethal injection execution may be straightforward, but it is susceptible to error. Such errors can, and have, resulted in botched executions. For example, in 2006, Florida executed Angel Diaz by lethal injection. After the first injection was administered, Diaz continued to move, and was squinting and grimacing as he tried to mouth words. A second dose was administered, and 34 minutes passed before Diaz was declared dead. At first a spokesperson for the Florida Department of Corrections claimed that this was because Diaz had a form of liver disease.<sup>31</sup> After performing an autopsy, the medical examiner stated that Diaz’s liver was undamaged, but that the needle had gone through Diaz’s vein and out the other side, so the deadly chemicals were injected into soft tissue, rather than the vein.<sup>32</sup>

Execution team members who are responsible for medically-related functions, like preparing drugs and syringes, setting IVs, administering drugs, assessing the medical state of the inmate and declaring the time of death should have the appropriate medical training and expertise that allows them to properly perform these functions. Such training and expertise should, at a minimum, require that team members are licensed, practicing doctors, nurses or emergency medical technicians who are responsible for performing functions in their day-to-day practice that are similar to those they will perform at the execution.

This requirement may, however, conflict with various professional medical societies’ policies or codes of medical ethics. For example, since 1992, the American Medical Association’s Code of Medical Ethics has specifically forbidden any participation by medical doctors in executions, with the exception of prescribing sedation beforehand and later signing the death certificate.<sup>33</sup> The National Association of Emergency Medical Technicians issued a similar position statement strongly opposing the participation in capital punishment by an

---

<sup>31</sup> Terry Aguayo, *Florida Death Row Inmate Dies Only After Second Chemical Dose*, N.Y. TIMES, Dec. 15, 2006; see also Radelet, *supra* note 17.

<sup>32</sup> *Id.*

<sup>33</sup> AMERICAN MEDICAL ASSOCIATION, OPINION 2.06 – CAPITAL PUNISHMENT, at <http://www.ama-assn.org/ama/pub/physician-resources/medical-ethics/code-medical-ethics/opinion206.page>.

emergency medical technician, paramedic or other emergency medical practitioners.<sup>34</sup> At the same time, some states, such as Georgia and Oregon, have laws forbidding sanctions against medical professionals who participate in executions. Oregon, in fact, affirmatively stipulates that medical professionals be involved in the execution procedure.<sup>35</sup> Doctors and other medical professionals should not be compelled to violate medical ethics. The result may be that medical professionals will not be able to be present for executions and therefore a state may not be able to complete an execution while adhering to these recommendations. However, so high are the risks of conducting executions without the involvement of medical professionals that the Committee maintains its recommendations for medical professionals to be present and responsible for all medically-related elements of executions despite this possibility.

---

<sup>34</sup> NATIONAL ASSOCIATION OF EMERGENCY MEDICAL TECHNICIANS, NAEMT POSITION STATEMENT: EMT OR PARAMEDIC PARTICIPATION IN CAPITAL PUNISHMENT, at <http://www.naemt.org/Libraries/Advocacy%20Documents/1-26-10%20EMT%20or%20Paramedic%20Participation%20in%20Capital%20Punishment.sfb>.

<sup>35</sup> Alan Gustafson, *State DOC Makes Changes to Execution Procedure*, STATESMAN JOURNAL, Nov. 18, 2011, at <http://www.statesmanjournal.com/article/20111118/NEWS/111180329/State-DOC-makes-changes-execution-procedure>.