

4-1-2015

No More Drugs! What Will North Carolina Do When Its Supplier Stops Supplying?

Cynthia D. Dixon

Follow this and additional works at: <https://archives.law.nccu.edu/siplr>



Part of the [Food and Drug Law Commons](#)

Recommended Citation

Dixon, Cynthia D. (2015) "No More Drugs! What Will North Carolina Do When Its Supplier Stops Supplying?," *North Carolina Central University Science & Intellectual Property Law Review*: Vol. 8 : Iss. 1 , Article 5.

Available at: <https://archives.law.nccu.edu/siplr/vol8/iss1/5>

This Notes and Comments is brought to you for free and open access by History and Scholarship Digital Archives. It has been accepted for inclusion in North Carolina Central University Science & Intellectual Property Law Review by an authorized editor of History and Scholarship Digital Archives. For more information, please contact jbeeker@nccu.edu.

NO MORE DRUGS! WHAT WILL NORTH CAROLINA DO WHEN ITS SUPPLIER STOPS SUPPLYING?

CYNTHIA D. DIXON*

INTRODUCTION

The death penalty is used to administer justice to the unjust. The purpose of the death penalty, in some respects, is to right a wrong and to provide legal retribution against a criminal that has committed a crime so heinous, so unthinkable, so unspeakable, that the only punishment conceivable is death. Most states in the United States rely on the death penalty to impose criminal punishment. In the past, states have relied on many different methods of execution such as: decapitation, electrocution, firing squads, hanging, and lethal gas. Today, some states that impose the death penalty rely solely on lethal injection as their method of execution; while other states rely on lethal injection as the primary method of execution, but have alternative methods in place in case lethal injection is no longer practical. What would the states that solely rely on lethal injection do if it were no longer a viable option? What method of execution would these states rely on to provide “justice” for the victims and their families?

The different methods of execution are a topic that is rarely discussed in classroom settings. Inmates on death row deserve to know how they are going to die, the method of their execution. The purpose behind the “cruel and unusual” punishment clause of the Eighth Amendment, in regards to death row inmates, is to afford those inmates a humane death despite their inhumane actions in murdering their victim(s). Thus, the method of execution is an important topic that deserves much more attention. The question of why we should concern ourselves with the method of execution is one that is commonly considered in the discussion of the death penalty. Most often the Eighth Amendment right to be free from cruel and unusual punishment is the basis of the argument against the death penalty; simultane-

* Cynthia D. Dixon is a student at North Carolina Central University School of Law, Juris Doctor Candidate, May 2016. She graduated from Mount Olive College in Mount Olive, North Carolina with a Bachelor of Arts in Business Administration in May 2013. Cynthia would like to thank her children: Josiah, Micah, Elijah, and Naomi for their patience and understanding throughout this entire experience. Additionally, Cynthia would like to thank her parents, Barbara and Freddie, for their words of wisdom and advice. Finally, Cynthia would like to thank the Biotechnology and Pharmaceutical Law Review for inspiring her to think outside the box and for its support with this article.

ously, the Eighth Amendment is the argument in favor of a particular method of execution. As a society, we want peace of mind and justice for the wrong that was committed; meanwhile, an individual with personal ties to the accused may want solace knowing that he did not suffer at the end.

This comment will focus on the lethal injection drugs used in executions with a specific focus on the single drug used in North Carolina – pentobarbital. First, the comment will discuss background information regarding constitutional and statutory law as well as previous methods of execution in North Carolina. Next, the comment will discuss what pentobarbital is, how it is used, and what drug manufacturers are doing that is preventing states such as North Carolina from obtaining the drug. Then, this comment will consider compound pharmacies, a potential source for North Carolina’s drug shortage problem. Finally, this comment will critique an alternative solution, nitrogen asphyxiation, should lethal injection cease to be a viable option for executions in North Carolina.

BACKGROUND: CONSTITUTIONAL AND STATUTORY LAW, *ROBINSON V. SHANAHAN*

The Eighth Amendment to the United States Constitution and Article 1, Section 27, of the North Carolina Constitution provides that “excessive bail shall not be required, nor excessive fines imposed, nor cruel and unusual punishment imposed.”¹ North Carolina statute further defines the mode and manner of execution. North Carolina General Statute § 15-187, provides for death by administration of lethal drugs and outlaws lethal gas and electrocution:

[D]eath by electrocution under sentence of law and death by the administration of lethal gas under sentence of law are abolished. Any person convicted of a criminal offense and sentenced to death shall be executed only by the administration of a lethal quantity of an ultrashort-acting barbiturate in combination with a chemical paralytic agent.²

The N.C. Gen. Stat. § 15-188 also provides for the manner and place of execution:

[T]he mode of executing a death sentence must in every case be by administering to the convict or felon an intravenous injection of a substance or substances in a lethal quantity sufficient to cause death and until the person is dead, and that procedure shall be determined by the Secretary of the Department of Public Safety.³

1. U.S. CONST. amend. VIII.; *see also* N.C. CONST. art. I, §27.

2. N.C. GEN. STAT. § 15-187 (2014).

3. N.C. GEN. STAT. § 15-188 (2014).

All over the country there have been cases filed by death row inmates challenging the three-drug cocktail as a violation of the Eighth Amendment to the United States Constitution. In 2013, North Carolina took its first step in addressing the claims after “a statutory amendment vested the Secretary of the North Carolina Department of Public Safety with the authority to determine execution procedures in North Carolina. The change took effect during the pendency of appeal of the case of *Robinson v. Shanahan*.”⁴

In the case of *Robinson v. Shanahan*, a group of death row inmates alleged that the three-drug cocktail was a violation of the “cruel and unusual punishment” clause of the Eighth Amendment of the United States Constitution and Article 1, Section 27, of the North Carolina Constitution.⁵ “The inmates claimed that the three-drug cocktail used in North Carolina — sodium pentothal to render the condemned inmate unconscious, pancuronium bromide to paralyze all voluntary muscles (including those muscles that permit breathing), and potassium chloride to induce cardiac arrest — inflicted cruel and unusual punishment, especially if the first drug failed.”⁶ “During the pendency of the appeal, the three-drug protocol was replaced by the ‘Execution Procedure Manual for Single Drug Protocol (Pentobarbital).’”⁷ The new protocol allowed for a single-drug to be administered rather than the three-drug cocktail that was previously used, thus rendering the case moot. The inmates alleged in their brief that a catalyst for the switch to one drug may be that “the state simply ran out of its supply of the sodium pentothal used under the prior protocol.”⁸ Thus, the inmates suggest that North Carolina switched to using a single drug because it no longer had all three-drugs that it needed to administer the three-drug cocktail rather than conceding that the three-drug cocktail constituted cruel and unusual punishment.

“All states and the federal government use lethal injection as their primary method of execution. The three-drug protocol uses an anesthetic or sedative which differs by state, typically followed by pancuronium bromide to paralyze the inmate and potassium chloride to stop the inmate’s heart.”⁹ Arguably, the three-drug protocol constitutes cruel and unusual punishment if “administered in a way that could potentially cause severe pain prior to

4. *Robinson v. Shanahan*, 755 S.E.2d 398 (N.C. Ct. App. 2014).

5. *Id.*

6. Sharon McCloskey, *North Carolina Adopts a New Death Penalty Protocol*, NC POLICY WATCH: NEWS AND COMMENTARY ON PUBLIC POLICY IN NORTH CAROLINA (Nov. 5, 2013, 11:54 AM), <http://www.ncpolicywatch.com/2013/11/05/north-carolina-adopts-a-new-death-penalty-protocol/>.

7. *Robinson*, 755 S.E.2d at 398-99.

8. McCloskey, *supra* note 6.

9. *Lethal Injection: Overview*, DEATH PENALTY INFORMATION CENTER (2014), <http://www.deathpenaltyinfo.org/lethal-injection-moratorium-executions-ends-after-supreme-court-decision>.

death.”¹⁰ It may also be argued that the use of three-drugs constitutes cruel and unusual punishment because the administration of one lethal drug could be substituted for the three-drug cocktail and be just as effective. “Physicians have long known that large doses of single drugs – certain sedatives and anesthetics – can take a life painlessly, and with far less distress than the three-drug cocktail causes if the injection is botched. The second two drugs are completely unnecessary and only have a prospect of causing pain.”¹¹ The outcome is logical: if the sodium pentothal that was previously used did not induce unconsciousness, then the inmate would feel everything that followed from the other two drugs. Thus, even if the paralyzing agent was effective, the effect of the potassium chloride would allow the inmate to feel everything once he went into cardiac arrest. “This could lead to the inmate feeling chest pains and extreme discomfort, thus increasing the difficulty of breathing.”¹² “The pancuronium bromide alone would cause the inmate to experience oxygen hunger because the inmate would be unable to breathe but the inmate would be unable to move, all while being fully conscious. The potassium chloride would cause the inmate extreme discomfort that would be akin to fire or electricity coursing through the veins.”¹³

“Cardiac arrest is the abrupt loss of cardiac function which causes the heart to stop beating.”¹⁴ After the inmate has suffered a tremendous amount of agonizing pain, the inmate will slip into unconsciousness, notwithstanding the ineffective injection of sodium pentothal, because the circulatory system no longer carries oxygen.¹⁵ When the inmate goes into cardiac arrest he experiences a loss of a palpable pulse and breath.¹⁶ If the execution is botched, or does not effectively kill the inmate, then the inmate could be left with brain damage.¹⁷ Brain damage results from the lack of oxygen to the brain.¹⁸ The brain only accounts for two percent of the body’s mass, but

10. Jeff Welty, *The Death Penalty in North Carolina: History and Overview*, UNC SCHOOL OF GOVERNMENT, April 2012, <http://www.unc.edu/~fbaum/teaching/articles/Welty-DP-overview.pdf>.

11. Denise Grady, *Three-Drug Protocol Persists for Lethal Injections, Despite Ease of Using One*, N.Y. TIMES, (May 1, 2014), http://www.nytimes.com/2014/05/02/science/three-drug-protocol-persists-for-lethal-injections-despite-ease-of-using-one.html?_r=0.

12. *What is Cardiac Arrest?*, WISEGEEK (2014), <http://www.wisegeekhealth.com/what-is-cardiac-arrest.htm>.

13. David Kroll, *Why Don't Pharmacy Groups Condemn Lethal Injection Role?*, FORBES, (May 14, 2014, 10:17 AM), <http://www.forbes.com/sites/davidkroll/2014/05/14/why-dont-pharmacy-groups-condemn-practitioner-role-in-lethal-injection/>.

14. Melissa Conrad Stöppler, *Cardiac Arrest Symptoms and Causes*, MEDICINET.COM, Sept. 8, 2014, http://www.medicinenet.com/cardiac_arrest_symptoms_and_causes/views.htm.

15. *What is Cardiac Arrest?*, *supra* note 12.

16. *Id.*

17. Stöppler, *supra* note 14.

18. C. Robin Timmons & Leonard W. Hamilton, *Drugs, Brains and Behavior: Psychopharmacological Concepts: The Blood Brain Barrier*, <http://www.rci.rutgers.edu/~lwh/drugs/chap03.htm> (last visited Apr. 18, 2015).

the brain requires twenty percent of the body's oxygen to continue to function properly.¹⁹ Aside from the facts and the surmounting number of botched executions around the country, it was not until international suppliers begin placing restrictions on the distribution of their drugs within the United States that North Carolina switched from the three-drug cocktail to the single-drug, pentobarbital, as the sole drug used to carry out executions. However, the international suppliers of the drugs used in lethal injection had a solution for that as well.

THE INEVITABLE UNAVAILABILITY OF PENTOBARBITAL: INTERNATIONAL SUPPLIERS GROW A BACKBONE AND A HEART

“Pentobarbital is a narcotic and sedative barbiturate drug formerly used to relieve insomnia.”²⁰ “Pentobarbital slows the activity of your brain and nervous system.”²¹ “Pentobarbital is also used as an emergency treatment for seizures and as an anesthetic.”²² One of its effects is that it “depresses breathing, and the patient, or the defendant in this case, stops breathing, and eventually all the body systems stop.”²³ Pentobarbital is currently used in North Carolina as the sole method of execution for inmates on death row.²⁴ Pentobarbital, on its face, is the perfect solution because the use of a single drug is more humane and less prone to error. The inmate and his loved ones will not be concerned with the possibility of one drug being ineffective because there would only be one drug. The problem, however, is that states that impose the death penalty are forced to find new drugs to use because European-based manufacturers banned United States' prisons from using their drugs for execution purposes.²⁵ One of these manufacturers is the Danish company Lundbeck, maker of pentobarbital.²⁶ These companies are requesting that their drugs be used for their intended therapeutic and anesthetic purposes.²⁷ Additionally, the manufacturers were the main source of

19. *Id.*

20. OXFORD'S DICTIONARY, OXFORD UNIVERSITY PRESS, (2014), http://www.oxforddictionaries.com/us/definition/american_english/pentobarbital.

21. *Pentobarbital (Generic Name); Nembutal Sodium, Nembutal (Brand Name)*, DRUGS.COM (2014), <http://www.drugs.com/mtn/pentobarbital.html>.

22. *Id.*

23. *North Carolina Wants New Drug for Death Row Execution, but Where Will it Come From?*, NORTH CAROLINA PUBLIC RADIO (Feb. 27, 2014), <http://wunc.org/post/north-carolina-wants-new-drug-death-row-executions-where-will-it-come>.

24. *Methods of Execution*, DEATH PENALTY INFORMATION CENTER (2014), <http://www.deathpenaltyinfo.org/methods-execution?scid=8&did=245#nc>.

25. Josh Levs, Ed Payne, and Greg Botelho, *Oklahoma's botched lethal injection marks new front in battle over executions*, CNN (Sept. 8, 2014), <http://www.cnn.com/2014/04/30/us/oklahoma-botched-execution/index.html>.

26. *Id.*

27. *Id.*

lethal injection drugs used for executions.²⁸ The ban was inevitable and foreseeable because capital punishment is not recognized in Europe.²⁹ Thus, North Carolina continues to have drug shortage problems. If the allegation that North Carolina switched to the single-drug protocol due to the shortage of the other drugs is true, then North Carolina is still likely to run into issues in the future. The one-drug protocol may potentially be short-lived.

The European Union ban on drug distribution to the United States poses other risks as well. Drugs distributed in the United States for the sole purpose of execution have other potential uses. As previously mentioned, pentobarbital may be used as an anesthetic in the medical field.³⁰ If international companies cease to supply its drugs to the United States due to fear that the drugs will not be used for its intended purposes, this could have a negative effect on hospitals and their ability to obtain drugs for medical purposes.

The European companies are serious in their efforts to boycott their drugs for use in executions, but how effective are their attempts when states can simply switch the type of drugs they use in executions and order a new batch? It is apparent that this method has proven to be very effective. “The goal-posts keep shifting under the death penalty states,” said Richard Dieter, Director of the Death Penalty Information Center. “As soon as they move to a new protocol, the boycott spreads.”³¹ For example, “Missouri threw out its three-drug lethal injection procedure after it could no longer obtain the drugs. State officials altered the method in 2012 to use propofol, which was found in the system of pop star Michael Jackson after he died of an overdose in 2009.”³² “The anti-death penalty European Union threatened to impose export limits on propofol if it were used in an execution, jeopardizing the supply of a common anesthetic needed by hospitals across the nation. Recognizing the potential issue, days later, the state announced it had switched to a form of pentobarbital obtained from an alternate source.”³³ The fact that Missouri changed its method of execution to a drug that was used in the death of Michael Jackson raises a few red flags. Is this what death by lethal injection is coming to? Are states going to track down autopsy reports for all individuals that die from a drug overdose and test the

28. *Id.*

29. Kroll, *supra* note 13.

30. *Pentobarbital (Generic Name); Nembutal Sodium, Nembutal (Brand Name)*, *supra* note 21.

31. Ed Pilkington, *European Boycott of Death Penalty Drugs Lowers Rate of US Executions*, THE GUARDIAN (Dec. 19, 2013), <http://www.theguardian.com/world/2013/dec/19/death-penalty-boycott-drugs-execution-new-low>.

32. Jim Salter, *Executions Could Go Back to Gas Chamber, Electric Chair*, LAS VEGAS REVIEW JOURNAL (Jan. 28, 2014), <http://www.reviewjournal.com/news/executions-could-go-back-gas-chamber-electric-chair>.

33. *Id.*

drug on death row inmates as if they are test subjected guinea pigs? This could potentially subject states to more controversy and litigations by those opposed to the death penalty as another form of cruel and unusual punishment that is a violation of the Eighth Amendment to the United States Constitution. Most notably is the fact that the effort of one state's death penalty policy has the potential to subject the nation to a possible drug shortage inadvertently affecting hospitals throughout the nation.

The anti-death penalty European Union's determination to limit the use of its drugs places a serious threat not only on the State of North Carolina, but on the United States as a whole and all practice areas that prescribe or use execution drugs. This domino effect has the potential to reach those aside from death row inmates. To summarize in laymen's terms: the ban international drug companies have placed on exporting their drugs to the United States would not only directly affect the prisons that are trying to obtain the drugs, but could indirectly affect the field of medicine. This could impact individuals that need these medications to heal. The possible problems are infinite.

"The last person to be executed in North Carolina was Samuel Flippen, who was put to death on August 18, 2006."³⁴ As previously stated, in 2006 North Carolina's method of execution included lethal injection through the use of three-drugs: sodium pentothal, pancuronium bromide, and potassium chloride.³⁵ North Carolina's new one-drug protocol does not include the use of any of these drugs. North Carolina's one-drug protocol uses pentobarbital.³⁶ Pentobarbital has a shelf-life of three years. Assuming North Carolina has been able to procure pentobarbital from its international supplier within the last three years, the state is slowly running out of time to use the drug before it expires. North Carolina currently has 159 inmates on death row awaiting execution.³⁷ How will North Carolina execute all of these inmates without a supplier? Like many other states, North Carolina may turn to special pharmacies, known as compound pharmacies, for their supply of lethal injection drugs.

COMPOUND PHARMACIES: THE FUTURE OF DEATH BY LETHAL INJECTION OR JUST ANOTHER TEMPORARY FIX

"Compound pharmacies combine, mix, or alter drugs; traditionally compounding is used to meet the specific needs of an individual patient in re-

34. Welty, *supra* note 10.

35. See McCloskey, *supra* note 6.

36. *Robinson*, 755 S.E.2d at 398-99.

37. Charles Montaldo, *North Carolina Death Row Inmates*, ABOUT NEWS (2014), <http://crime.about.com/od/deathrow/jg/North-Carolina-Death-Row/>.

sponse to a prescription.”³⁸ “Compound pharmacies only recently became involved in the administration of capital punishment, primarily out of necessity. In 2011, the first of three drugs previously used in lethal injections, sodium thiopental, was discontinued by the only FDA-approved manufacturer of the drug, Hospira.”³⁹ Drug shortages and pharmaceutical manufacturers have made it more difficult for prisons to obtain the drugs used in lethal injections; therefore, some states have turned to compound pharmacies as its main source for execution drugs.⁴⁰ States that rely on compound pharmacies refuse to reveal the source of their drugs. States often enter into agreements with the compound pharmacies that the source of the drugs will remain confidential as not to provide unwanted publicity for the pharmacy. “In return for formulating the execution drugs, corrections authorities keep the pharmacy’s identity secret.”⁴¹ “For example, the state of Oklahoma legislated this arrangement in 2011 as follows: ‘The identity of all persons ... who supply the drugs ... for the execution shall be confidential and shall not be subject to discovery in any civil or criminal proceedings.’”⁴² States like Oklahoma not only want to execute their inmates with un-approved drugs, but they also want to shield the pharmacies responsible from potential lawsuits should the drugs fail. Compound pharmacies that enter into these types of agreements are protected by anonymity and are not being held accountable by the state. This is the states’ way of incentivizing these pharmacies to provide them with drugs that they may not otherwise be able to obtain. It is a win-win for the state and the pharmacies, but what about the inmate? The states’ actions are at the expense of the inmate. The inmate is the one that will suffer if the drugs are not effective.

“Pharmacy compounding is the art and science of preparing personalized medications for patients. Compounded medications are made ... [from scratch] – individual ingredients are mixed together in the exact strength and dosage form required by the patient.”⁴³ “Compound pharmacies do not face the same approval process for their products that large manufacturers face, leading to concerns about the safety and efficacy of their products.”⁴⁴ “Compounded drugs are not approved by the United States Food and Drug

38. *Compounding Pharmacies*, DEATH PENALTY INFORMATION CENTER (2014), <http://www.deathpenaltyinfo.org/compounding-pharmacies>.

39. Kroll, *supra* note 13.

40. *Compounding Pharmacies*, *supra* note 38.

41. Kroll, *supra* note 13.

42. *Id.*

43. *What is compounding*, PCCA (2014), <http://www.pccarx.com/what-is-compounding/what-is-compounding/>.

44. *Compounding Pharmacies*, *supra* note 38.

Administration (“FDA”).⁴⁵ “This means that FDA does not verify the safety, or effectiveness of compounded drugs.”⁴⁶ Compounded drugs also lack a FDA finding of manufacturing quality before such drugs are marketed.⁴⁷ FDA approval provides manufacturers and consumers with information regarding the safety of the product that is being distributed. There is no evidence that drugs produced by compound pharmacies are safe or effective, yet states are still willing to obtain compounded drugs from these pharmacies to use in executions. It comes as no surprise that defense lawyers are filing suits left and right challenging the use of these drugs.

According to the FDA, “one of the risks associated with compounded drugs is that the drugs are made using poor quality practices may be sub- or super-potent, contaminated, or otherwise adulterated.”⁴⁸ Ironically, “compound pharmacies have had severe problems with contaminated drugs in recent years, [hence,] death penalty opponents and defense lawyers have begun to protest their use.”⁴⁹ “In 2012, a compounding pharmacy in Massachusetts was found to be the source of an outbreak of fungal meningitis that infected over 700 people in 20 states, leaving 63 people dead including 24 people in 2013.”⁵⁰ In order to circumvent drug shortages or refusal by other manufacturers to sell execution-sized drug doses to state corrections authorities, at least nine states have inquired or contracted with custom, compounding pharmacists to prepare the drug solutions used for lethal injection.⁵¹ Arizona, Colorado, Georgia, Missouri, Ohio, Pennsylvania, South Dakota, Texas, and Wyoming are among these states.⁵² Although North Carolina is not included in this list, due to the current drug shortage, the state may turn to compound pharmacies once it reaches a point of desperation.

The proposed solution of using compound pharmacies seems only to be temporary. Currently, twenty states authorize lethal injection as the sole method of execution.⁵³ Sixteen other states provide for lethal injection as the primary method of execution, but, should the drugs become unavailable, provide alternative methods of execution depending upon the choice of the

45. *Compounding and the FDA: Questions and Answers*, FDA: U.S. FOOD AND DRUG ADMINISTRATION (Dec. 16, 2014), <http://www.fda.gov/Drugs/GuidanceComplianceRegulatoryInformation/PharmacyCompounding/ucm339764.htm>.

46. *Id.*

47. *Id.*

48. *Id.*

49. Grady, *supra* note 11.

50. *Compounding Pharmacies*, *supra* note 38.

51. Kroll, *supra* note 13.

52. *Id.*

53. See *Methods of Execution: Lethal Injection*, THE CLARK COUNTY PROSECUTING ATTORNEY (2014), <http://www.clarkprosecutor.org/html/death/methods.htm>.

inmate, the date of the execution or sentence, or the possibility of the method being held unconstitutional.⁵⁴ Alternate methods of execution include electrocution, firing squads, and lethal gas. North Carolina does not offer an alternate method of execution.⁵⁵ So what now? What other potential alternatives are out there for North Carolina to explore? Will North Carolina return to a previously used method of execution or will North Carolina be among the first to venture out and try a new method of execution? I propose that North Carolina, being the progressive state that it is, choose the latter, venture out, and try a new method of execution that has never been tried before ... death by nitrogen asphyxiation.

NITROGEN ASPHYXIATION – UNTESTED, UNPROVEN: WILL NORTH
CAROLINA BECOME THE FIRST STATE TO USE NITROGEN ASPHYXIATION
AS AN ALTERNATIVE SOLUTION FOR EXECUTIONS?

“Nitrogen asphyxiation is a medical condition in which a person dies from a lack of oxygen because there is too much nitrogen in his system. This is almost exclusively an accidental death, and it can happen easily because there are no immediately noticeable effects.”⁵⁶ “Nitrogen asphyxiation would seal the inmate in an airtight chamber pumped full of nitrogen gas and would cause the inmate to die due to the lack of oxygen.”⁵⁷ “Nitrogen gas has yet to be put to the test as a method of capital punishment.”⁵⁸ In previous years, states have used lethal gas, including sulfuric acid (Missouri) and hydrogen cyanide (North Carolina), to execute inmates in gas chambers. “Nitrogen gas is not a lethal gas, but can be fatal if not mixed with a sufficient amount of oxygen.”⁵⁹ Nitrogen is found in all living things. Nitrogen is found in the air we breathe. “In its purest form, nitrogen can be dangerous.”⁶⁰ “It can act as an asphyxiant by displacing available oxygen in the air.”⁶¹

Nitrogen asphyxiation is not currently being used by any state as a method of execution.⁶² “Since the mid-1990s, nitrogen asphyxiation has been

54. *See Id.*

55. *Id.*

56. *What is Nitrogen Asphyxiation?*, WISEGEEK (2014), <http://www.wisegeek.com/what-is-nitrogen-asphyxiation.htm>.

57. Tom McNichol, *Death by Nitrogen, If lethal injection falls out of favor, death penalty states could turn to a new method: nitrogen gas*, SLATE.COM, (May 22, 2014), http://www.slate.com/articles/news_and_politics/jurisprudence/2014/05/death_by_nitrogen_gas_will_the_new_method_of_execution_save_the_death_penalty.html.

58. *Id.*

59. *States Consider Lethal Injection Alternatives*, CORRECTIONALNEWS (Jun. 11, 2014), <http://www.correctionalnews.com/articles/2014/06/11/states-consider-lethal-injection-alternatives>.

60. *Uses of Nitrogen*, USES OF (2014), <http://www.usesof.net/uses-of-nitrogen.html>.

61. *What is Nitrogen*, WISEGEEK (2014), <http://www.wisegeek.org/what-is-nitrogen.htm>.

62. McNichol, *supra* note 57.

brought up for consideration as a capital punishment but, as of 2011, it had not been used for this purpose.”⁶³ However, research shows that it would result in a more humane death.⁶⁴ Proponents say that death by nitrogen ... adheres to the constitutional prohibition against cruel and unusual punishment.⁶⁵ The death row inmate “would detect no abnormal sensation breathing the odorless, tasteless gas, and would not undergo the painful experience of suffocation, which is caused by a buildup of carbon dioxide in the bloodstream, not by lack of oxygen.”⁶⁶ Carbon dioxide in the bloodstream is exhaled under normal circumstances.⁶⁷ When the inmate breathes in pure nitrogen, he will exhale carbon dioxide without resupplying oxygen, thus foregoing the painful and traumatic feeling of suffocation.⁶⁸

Normally, when an individual feels as if he is suffocating, there is a sudden urge to breathe. However, the inmate will not feel this urge to breathe while inhaling pure nitrogen even if there is a lack of oxygen because nitrogen is a chemical that is found in the air. Nitrogen is a part of an individual’s daily intake. The inmate will not suffocate because it will be as if he is breathing a breath of fresh air. There is no discernible difference between the look, taste, or feel of oxygen and pure nitrogen; the only noticeable distinction is the natural effects each chemical element has on the human body. The human body needs oxygen to thrive. There is a comfortable balance between the oxygen and the nitrogen that is presented in the air that we breathe. Thus, an individual that is exposed to pure nitrogen may continue to live if the pure nitrogen is offset by the proper balance of oxygen. For example, if an individual sitting in a car releases pure nitrogen into the air, the individual need only open the car door to survive. The opening of the car door would effectively offset the severity of the individual’s exposure to pure nitrogen. “When asphyxiation begins, it only takes several breaths until it affects the body’s oxygen supply, and a minute of nitrogen exposure may cause someone to fall unconscious. It generally takes less than ten minutes for someone to die from this, though there may be convulsions beforehand.”⁶⁹

63. *What is Nitrogen Asphyxiation?*, *supra* note 56.

64. McNichol, *supra* note 57.

65. *Id.*

66. *Id.*

67. Lawrence J. Gist II, *Introduction to Nitrogen Asphyxiation*, International Humanitarian Law Hypoxia Project, Oct. 11, 2010, <http://www.gistprobono.org/ihhp/index.html>, (last accessed Dec. 29, 2014). (As of April 2015, the International Humanitarian Law Hypoxias Project website is no longer accessible).

68. *Id.*

69. *What is Nitrogen Asphyxiation?*, *supra* note 56.

“Nitrogen gas, unlike the lethal drugs that states have relied on, is widely available[,]” and could help the states avoid an untimely shortage.⁷⁰ “The gas is used extensively in industrial settings, from aerospace to oil and gas production.”⁷¹ There is no medical expertise necessary for nitrogen asphyxiation whereas medical expertise is necessary for any intravenous lethal injection.

As breathing is an absolute requirement for human life, no physical condition of a living subject can prevent the prompt completion of this procedure. Properly condemned individuals could be executed without physical trauma and without the arguably unethical use of medical skill, essentially by withdrawing life support. Some people experience claustrophobia when presented with an anesthetic gas mask before surgery, and some subjects might react similarly. Nitrogen could be introduced into a standard gas chamber, however, without difficulty. Execution by lethal injection, in contrast, requires medical skill and has occasionally been prolonged when it was difficult to insert the injection needle into an open vein.⁷²

When applying the nitrogen asphyxiation method the inmate would be overcome by the nitrogen gas within minutes and would die with little to no warning at all, similar to going under an anesthetic during a medical procedure. This proposed method would leave very little room for error. Alternatively, lethal injection, if not properly administered, may cause death-row inmates to suffer a death that may be considered cruel and unusual. States have conceded that the one-drug protocol is a much better solution than the three-drug protocol because the one-drug protocol is an all-in-one solution. However, execution by nitrogen asphyxiation is the best alternative solution to the one-drug protocol in North Carolina if drug suppliers cease supplying their drugs to the United States for execution purposes, and North Carolina is unable to obtain the drug from sources within the United States. Furthermore, if the Supreme Court rules that compounding pharmacies are not an appropriate or just alternative drug supplier, nitrogen asphyxiation may be the only option.

North Carolina previously used gas chambers as its sole method of execution in the mid-thirties, but the gas chamber was deemed an improper method of execution by association with its use by the Nazis. The German Nazis used gas chambers to commit mass genocide during the Holocaust. “The shock of Auschwitz and other atrocities helped make North Carolinians and other Americans increasingly uncomfortable about the use of the

70. *Id.*

71. *Id.*

72. Gist, *supra* note 67.

gas chamber.”⁷³ Although history is a very important indicator of how executions should or should not be handled, the use of gas chambers was in its early stages in the mid-1930s and has since advanced. Today, with the advances in technology and medicine, the use of gas chambers to exude nitrogen gas to the death-row inmates is a prominent solution in the event that lethal injection ceases to be a viable option in North Carolina.

CONCLUSION

North Carolina currently uses lethal injection as its sole method of execution. In recent years, North Carolina has gone from a three-drug state to a one-drug state. The decision to use a single-drug was enacted during the pendency of an appeal by inmates on death row alleging that the three-drug protocol constituted cruel and unusual punishment. However, the single-drug used in North Carolina, pentobarbital, may no longer be an option for many drug companies have decided to stop supplying the drug to the United States because of its use for lethal injection. This decision will directly affect North Carolina. Alternatively, North Carolina could attempt to obtain pentobarbital from a compound pharmacy, but compound pharmacies have been scrutinized recently because of severe problems with drug contamination.

Nitrogen asphyxiation affords the inmate the opportunity to die a quick and painless death. This method upholds the existing purpose of death by lethal injection and falls outside the realm of the “cruel and unusual punishment” clause of the Eighth Amendment to the United States Constitution and Article 1, Section 27 of the North Carolina Constitution. It is my contention that the use of nitrogen asphyxiation is a reasonable solution that provides society with peace of mind that the inmate has been punished for his action, as well as comfort to the inmates’ family in knowing that their relative died peacefully and painlessly. In the words of White House spokesman Jay Carney, as reported by CNN, “[w]e have a fundamental standard in this country that even when the death penalty is justified, it must be carried out humanely.”⁷⁴ Although there is not a right way to kill, there must be compassion in our efforts. For, if the death penalty is to be carried out in a humane way, we must display a sense of care and concern for the new victim as was displayed for the original. Humanity must be shown in the method of the execution as well as in the act of executing.

73. Scott Christianson, *North Carolina's Gas Chamber Years*, NEWSOBSERVER.COM (July 2, 2010), http://www.newsobserver.com/2010/07/02/561324_north-carolinas-gas-chamber-years.html?rh=1.

74. Levs, *supra* note 25.