PUBLISHED

UNITED STATES COURT OF APPEALS

FOR THE FOURTH CIRCUIT

CHRISTOPHER SCOTT EMMETT, *Plaintiff-Appellant,* v. GENE M. JOHNSON, Director, Commonwealth of Virginia Department of Corrections; GEORGE M. HINKLE, Warden, Greensville Correctional Center; LORETTA K. KELLY, Warden, Sussex I State Prison, *Defendants-Appellees,* and JOHN DOES 1-100, *Defendant.*	No. 07-18

Appeal from the United States District Court
for the Eastern District of Virginia, at Richmond.
Henry E. Hudson, District Judge.
(3:07-cv-00227-HEH)

Argued: May 14, 2008

Decided: July 10, 2008

Before TRAXLER, GREGORY, and SHEDD, Circuit Judges.

Affirmed by published opinion. Judge Traxler wrote the majority opinion, in which Judge Shedd joined. Judge Gregory wrote a dissenting opinion.

COUNSEL

ARGUED: Matthew S. Hellman, JENNER & BLOCK, Washington, D.C., for Appellant. Richard Carson Vorhis, OFFICE OF THE ATTORNEY GENERAL OF VIRGINIA, Richmond, Virginia, for Appellees. **ON BRIEF:** Jennifer L. Givens, Michele J. Brace, VIRGINIA CAPITAL REPRESENTATION RESOURCE CENTER, Charlottesville, Virginia, for Appellant. Robert F. McDonnell, Attorney General of Virginia, Richmond, Virginia, for Appellees.

OPINION

TRAXLER, Circuit Judge:

Christopher Scott Emmett brought this action under 42 U.S.C.A. § 1983 (West 2003), asserting that the Commonwealth of Virginia's method for lethal injection violates his right to be free of cruel and unusual punishment guaranteed by the Eighth Amendment to the United States Constitution. The district court granted summary judgment to the defendants. We affirm.

I.

Emmett was convicted by a jury of the robbery and capital murder of a coworker and sentenced to death in 2001. The Supreme Court of Virginia affirmed, and the United States Supreme Court denied certiorari. *See Emmett v. Commonwealth*, 569 S.E.2d 39 (Va. 2002), *cert. denied*, *Emmett v. Virginia*, 538 U.S. 929 (2003). After unsuccessfully challenging his conviction and sentence in state and federal habeas proceedings, *see Emmett v. Kelly*, 474 F.3d 154 (4th Cir.), *cert. denied*, 128 S. Ct. 1 (2007), the state scheduled Emmett's execution for June 13, 2007.

Emmett no longer challenges the constitutionality of his capital murder conviction or sentence of death. However, on April 19, 2007, he initiated this action under § 1983, asserting that the lethal injection method used by Virginia constitutes cruel and unusual punishment prohibited by the Eighth Amendment. The district court denied

Emmett a preliminary injunction against his impending execution, and the United States Supreme Court denied his request for a stay of execution. *See Emmett v. Kelly*, 127 S. Ct. 2970 (2007). However, because the Supreme Court had not yet acted upon Emmett's then-pending petition for certiorari review of his federal habeas petition, the Governor of Virginia granted Emmett a temporary reprieve from execution until October 17, 2007. The Supreme Court denied his certiorari petition on October 1, 2007.

In the meantime, the district court granted summary judgment to the defendants in Emmett's § 1983 action, which he appealed to this court. On the same day, the Supreme Court granted certiorari to review a similar § 1983 challenge to Kentucky's lethal injection method. *See Baze v. Rees*, 128 U.S. 34 (2007). The Supreme Court also granted Emmett a temporary stay of his scheduled October 17 execution pending final disposition of the appeal by our court or further order of the Supreme Court. *See Emmett v. Johnson*, 169 L. Ed. 2d 327 (2007). On April 16, 2008, the Supreme Court issued its opinion in *Baze*, rejecting the challenge to Kentucky's procedure. *See Baze v. Rees*, 128 S. Ct. 1520 (2008). On May 19, 2008, the Court granted the defendants' motion to vacate the October 17 stay of Emmett's execution in light of that decision, *see Emmett v. Johnson*, No. 07A304, 2008 WL 2078624 (May 19, 2008), and Emmett has now been scheduled for execution on July 24, 2008.

II.

A.

The Commonwealth of Virginia offers inmates convicted of capital murder and sentenced to death the choice of electrocution or lethal injection. *See* Va. Code § 53.1-234. If the condemned inmate refuses to make a voluntary choice at least fifteen days prior to the scheduled execution, lethal injection is imposed as the default method. *See id.*[1]

[1]Although Emmett alleged in his complaint that Virginia's method of electrocution would also violate his Eighth Amendment right to be free of cruel and unusual punishment, he has not pursued a challenge to the electrocution method, and the parties agree that this issue is not before us.

The Director of the Department of Corrections bears ultimate responsibility for providing and maintaining the state death chamber, including all equipment and substances necessary "for the proper execution of prisoners by . . . continuous intravenous injection." Va. Code § 53.1-233. The Director or assistants appointed by him "shall at the time named in the sentence . . . cause the prisoner under sentence of death to be electrocuted or injected with a lethal substance," Va. Code § 53.1-234, which "shall be applied until the prisoner is pronounced dead by a physician licensed in the Commonwealth," Va. Code § 53.1-233. Beyond these broad directives, however, the statutory scheme leaves the development and implementation of the specific procedures for lethal injection to the discretion of the Director and those he appoints to assist him. *See* Va. Code § 53.1-234.

Virginia Department of Corrections' Divisional Operating Procedure (DOP) 426 has been developed to set forth the various responsibilities, procedures, equipment, and chemicals to be used for lethal injections, as well as provisions addressing the qualifications, training, and selection of the execution team.[2] DOP 426 also contains a checklist for use during executions. However, the manual provides that "the procedures described in th[e DOP] may be amended as needed on a case by case basis when circumstances require special procedures to carry out the sentence of death." DOP 426.

Like most other states that have moved away from electrocution and towards lethal injection as the preferred means of assuring a humane death, Virginia's protocol calls for the sequential injection of three lethal chemicals into the bloodstream by intravenous (IV) catheters and lines. *See Baze*, 128 S. Ct. at 1526-27. The first chemical consists of a 2-gram dose of sodium thiopental ("thiopental" or "Pentathol"), a fast-acting barbiturate, which is divided between two syringes. When given in the amounts used for lethal injection of inmates, thiopental results in a deep, coma-like unconsciousness. It also results in the cessation of breathing, generally within a minute of its administration. It is followed by a syringe of normal saline to flush the IV line to ensure full delivery and eliminate the possibility of a chemical interaction between the thiopental and the next chemical.

[2]DOP 426 is subject to a Protective Order in this case, but has been provided to the court under seal for our review.

According to eyewitnesses, the administration of the thiopental is usually accompanied by a brief period of loud snoring, followed by the expected cessation of respiration.

The second chemical consists of 50 milligrams of pancuronium bromide (or "Pavulon"), a neuromuscular blocking agent that paralyzes the inmate, preventing all voluntary and involuntary movement of the skeletal muscles. The pancuronium bromide is followed by another syringe of normal saline to again flush the IV line.

The third chemical consists of 240 milliequivalents of potassium chloride, divided between two syringes. Potassium chloride interferes with the electrical signals that stimulate heart contractions, causing cardiac arrest and the "flat-line" electrocardiogram (EKG) reading that Virginia requires for the pronouncement of death. A third syringe of normal saline is also administered after the potassium chloride to flush the line.

By statute, "the Director or an assistant, a physician employed by the Department or his assistant, such other employees of the Department as may be required by the Director and . . . at least six citizens who shall not be employees of the Department" shall be present at each execution. Va. Code § 53.1-234. In practice, the Director, Deputy Director, and Warden of Greensville Correctional Center (where the death chamber is located) are all present during lethal injections, along with an execution team designated and trained to carry out the procedure. The execution team is comprised of a security team responsible for transporting and securing the inmate, an IV team to establish the requisite IV lines, and an executioner who injects the chemicals into the IV lines. Additional persons are present as needed to keep the execution records and attend to the equipment. The physician charged with the task of declaring death is also present and continuously monitors the inmate's heart activity via a heart monitor. A second physician, who is charged with training the IV team, is usually present as an observer.[3]

[3]By statute, "[t]he identities of persons designated by the Director to conduct [the] execution, and any information reasonably calculated to lead to the identities of such persons," remains confidential. Va. Code Ann. § 53.1-233.

All members of the execution team are trained in the lethal injection procedure on an ongoing basis. The IV team receives training in the insertion and maintenance of IV lines from a physician licensed to practice medicine by the Virginia Board of Medicine. At least two members of the IV team must "have received training as military corpsmen, cardiac emergency technicians, or should receive on-the-job training from a physician in receiving and dispensing medications, to include starting and administering IV fluids." DOP 426. The team members are trained over an initial period of at least twenty hours, but are not certified as proficient until the training physician is personally satisfied with their skill level. The executioner has been trained by his predecessor in the administration of the lethal drugs, including training on how to assess for obstructions or other problems with the IV catheters and lines. In addition, the entire execution team receives at least eight hours of monthly training, which includes participating in mock executions. In addition to refresher training conducted with the IV team members in the location and placement of IV catheters and lines, the team members are educated about how to assess for complications in the IV lines that might prevent the effective administration of the chemicals.

The current IV team consists of an individual with 20 years of medical service and EMT training, and a certified phlebotomist. The physician responsible for training the IV team testified that he has never observed any complications or mistakes by the IV team during an execution and has found the team members to be very proficient.

Before each execution, the Department of Corrections obtains enough chemicals to prepare three full sets of syringes. In addition, the IV team examines the inmate to assess venous access and any anticipated difficulty in establishing the IV lines. On the evening of the execution, the IV team prepares and fills two complete sets of the syringes. The syringes are labeled sequentially, placed on a tray, and kept by the executioner. The death chamber itself consists of a single room, with an adjacent, windowed room for the witnesses. Immediately prior to the execution, the inmate is transported to the execution room, where he is placed on a gurney, restrained, and positioned to face the adjoining witness room. The window to the witness room is then temporarily blocked by a curtain while the final preparations are

made. A second, rear curtain containing a window and two portholes is present behind the inmate's head.

The IV team establishes two IV lines, one primary and one backup, and attaches tubing to allow for a saline drip and the administration of the lethal drugs from behind the rear curtain. The IV lines are passed through the portholes in the rear curtain. The IV catheters are secured and taped down to avoid movement or migration. Once the catheters and lines are inserted, the executioner starts a continuous drip flow of IV fluids to ensure that they are properly placed, open, and flowing, which is confirmed by the IV team. The electrodes for the EKG are also connected to the inmate.

Once the IV team completes its work, all team members move behind the rear curtain. When the execution is ready to proceed, the curtain that temporarily blocks the witness room is removed. During the entire process, the Director remains in front of the rear curtain with the inmate. He is also in constant contact with the Governor's office by way of a telephone located in the death chamber. When the Director receives confirmation from the Governor's office that the execution may proceed, he instructs the Warden to start the execution. The Warden then steps behind the rear curtain and signals the executioner to begin.

The execution process is conducted in a solemn environment and the general practice is to conduct the process largely in silence and to communicate via hand signals. Once the order to proceed is given, the executioner sequentially injects each of the chemicals and intermittent saline flushes in a "rapid-flow" manner. A member of the IV team takes each labeled syringe in order from the tray and hands it to the executioner for administration. The executioner, in turn, double-checks each label for accuracy before injecting the contents of the syringe into the IV line. While doing so, the executioner is able to observe the inmate and the IV site either through the window or porthole in the rear curtain, but in practice the current executioner chooses to observe through the porthole. The distance from the porthole to the inmate's arm, where the IV is sited, is approximately three feet or less. While administering the chemicals, the executioner watches for swelling or other signs of infiltration at the IV site. The executioner is trained to feel for any resistance against the injection

of the syringe contents. If the flow is stopped, he encounters undue resistance, or he becomes concerned for any reason that the primary line has ceased to be a patent and flowing portal, he can motion for the IV team to switch to the back-up IV line.

The physician, who is also positioned behind the rear curtain, continuously monitors the EKG reading and pronounces death when all electrical activity ceases, *i.e.*, when the EKG registers a flat-line reading. The EKG is also monitored by an execution team member. The Deputy Director stands next to the physician. A timekeeper records the time that each chemical is administered, as well as the time that death is declared. The DOP 426 checklist provides that "[i]f the heart monitor does not indicate a flat line reading within ten minutes after completing the injection of the first set of lethal chemicals, then a second set of lethal chemicals will be administered (Pavulon and Potassium Chloride only), using the alternate IV line." DOP 426. In practice, the Director, who is in front of the rear curtain with the inmate and the liaison with the Governor's office, has delegated the task of overseeing the administration of the lethal drugs to the Deputy Director, who has been attending executions in Virginia since 1995. In addition to personally observing the preparations for the execution, he oversees the entire process, including all activities conducted behind the windowed curtain. He testified that if the EKG does not indicate a flat-line reading within a minute or two after administration of the first set of chemicals, he immediately orders the executioner to administer the second set of pancuronium bromide and potassium chloride.

Once the EKG registers a flat-line reading and the physician declares death, the Warden steps out from behind the back curtain and signals to the Director that death has occurred. The Director notifies the Governor's office that the death sentence has been carried out, and the curtain to the witness room is closed to prevent further observation. The body of the inmate is transported to the medical examiner's office and the execution team members meet to sign the execution log and participate in a debriefing on the execution.

B.

Emmett does not dispute that the proper administration of the thiopental called for by the Virginia protocol will ensure that he will

experience a humane death. Rather, Emmett asserts that Virginia's lethal injection procedures pose an unacceptable risk that the thiopental might not be delivered to him in an amount sufficient to render him unconscious, which would cause him to experience severe pain associated with the administration of the pancuronium bromide and potassium chloride. In light of this risk, Emmett proposes that Virginia should abandon the three-drug protocol in favor of a one-drug protocol consisting of the administration of a single, massive dose of thiopental or similar barbiturate.

The district court rejected Emmett's challenge and granted summary judgment to the defendants. On appeal, we review *de novo* the district court's award of summary judgment, viewing the facts and the reasonable inferences drawn therefrom in the light most favorable to the nonmoving party. *See EEOC v. Navy Fed. Credit Union*, 424 F.3d 397, 405 (4th Cir. 2005). Summary judgment is appropriate when "the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law." Fed. R. Civ. P 56(c); *see Celotex Corp. v. Catrett*, 477 U.S. 317, 322-23 (1986).

When a party has submitted sufficient evidence to support its request for summary judgment, the burden shifts to the nonmoving party to show that there are genuine issues of material fact. *See Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 586-88 (1986). However, "the mere existence of *some* alleged factual dispute between the parties will not defeat an otherwise properly supported motion for summary judgment; the requirement is that there be no *genuine* issue of *material* fact." *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 247-48 (1986). The party opposing a properly supported motion for summary judgment may not rest upon mere allegations or denials of his pleading, but "must come forward with specific facts showing that there is a genuine issue for trial." *Matsushita*, 475 U.S. at 587 (internal quotation marks & emphasis omitted); *see Rivanna Trawlers Unlimited v. Thompson Trawlers, Inc.*, 840 F.2d 236, 240 (4th Cir. 1988). "Mere unsupported speculation is not sufficient to defeat a summary judgment motion if the undisputed evidence indicates that the other party should win as a matter of law." *Francis v. Booz, Allen & Hamilton, Inc.*, 452 F.3d 299, 308 (4th Cir. 2006); *see*

Ash v. UPS, 800 F.2d 409, 411-12 (4th Cir. 1986) (per curiam) ("[U]nsupported speculation . . . is not sufficient to defeat a summary judgment motion."). Nor can the nonmoving party "create a genuine issue of material fact through mere speculation or the building of one inference upon another." *Beale v. Hardy*, 769 F.2d 213, 214 (4th Cir. 1985). "When the moving party has carried its burden under Rule 56(c), its opponent must do more than simply show that there is some metaphysical doubt as to the material facts." *Matsushita*, 475 U.S. at 586 (footnote omitted).

III.

The Eighth Amendment, applicable to the states through the Fourteenth Amendment, prohibits execution procedures that inflict cruel and unusual punishment. *See Baze*, 128 S. Ct. at 1530. Challenges to execution procedures are properly raised by condemned inmates under § 1983. *See Hill v. McDonough*, 547 U.S. 573, 576 (2006) (holding that challenge to state's lethal injection protocol is cognizable under § 1983).

A.

In *Baze v. Rees*, the Supreme Court rejected a nearly identical challenge by condemned inmates to Kentucky's lethal injection method, which also utilized a three-drug combination consisting of 3 grams of thiopental, 50 milligrams of pancuronium bromide, and 240 milliequivalents of potassium chloride. *See Baze*, 128 S. Ct. at 1528.[4] Like Emmett, the *Baze* petitioners admitted that proper administration of the thiopental would eliminate any meaningful risk of pain from the subsequent injections of pancuronium bromide and potassium chloride, but claimed there was a significant and unnecessary risk that the thiopental would not be properly administered to achieve its intended effect. *See id.* at 1530-31. The *Baze* petitioners also advocated that the state adopt a one-drug barbiturate protocol to eliminate the risk. *See id.* at 1531.

[4]Because it represents the controlling opinion of the Court, all references to *Baze*, unless otherwise noted, are to the plurality opinion authored by the Chief Justice.

The Court, however, rejected the petitioners' proposed "unnecessary risk" standard, *id.* at 1532 (internal quotation marks omitted), and held instead that condemned inmates must demonstrate "a 'substantial risk of serious harm,'" or "an 'objectively intolerable risk of harm' that prevents prison officials from pleading that they [are] 'subjectively blameless for purposes of the Eighth Amendment,'" *id.* at 1531 (quoting *Farmer v. Brennan*, 511 U.S. 825, 846, & n.9 (1994)).

Noting the settled principle that "capital punishment is constitutional" and that "there must be a means of carrying it out," *Baze*, 128 S. Ct. at 1529 (citing *Gregg v. Georgia*, 428 U.S. 153, 177 (1976)), the Court recognized that "[s]ome risk of pain is inherent in any method of execution - no matter how humane - if only from the prospect of error in following the required procedure." *Baze*, 128 S. Ct. at 1529. "[A] risk of future harm - not simply actually inflicting pain - can qualify as cruel and unusual punishment," but only if "the conditions presenting the risk [are] '*sure or very likely* to cause serious illness and needless suffering,' and give rise to 'sufficiently *imminent* dangers.'" *Id.* at 1530-31 (quoting *Helling v. McKinney*, 509 U.S. 25, 33, 34-35 (1993)). "Simply because an execution method may result in pain, either by accident or as an inescapable consequence of death, does not establish the sort of 'objectively intolerable risk of harm' that qualifies as cruel and unusual" under the Eighth Amendment. *Baze*, 128 S. Ct. at 1531.[5]

The Court also rejected the petitioners' claims that additional monitoring by trained personnel must be implemented to ensure that the

[5]In supplemental briefing, Emmett correctly points out that the *Baze* Court did not require a showing of deliberate indifference by the state separate from a demonstrated risk of substantial harm, observing instead that a substantial, objectively intolerable standard would "prevent[ ] prison officials from pleading that they were subjectively blameless for purposes of the Eighth Amendment." *Id.* at 1531 (internal quotation marks omitted). Although the district court in this case indicated that deliberate indifference was a relevant inquiry, it rejected Emmett's challenge upon his failure to demonstrate the threshold requirement of a substantial risk. In any event, because we review the record and the grant of summary judgment *de novo*, with the benefit of the Supreme Court's opinion in *Baze*, the district court's reference to a deliberate indifference requirement does not affect our disposition of this appeal.

first dose of thiopental is adequately delivered, and that a one-drug protocol should be adopted as a less-risky alternative. *See id.* at 1533. Demonstration of "a slightly or marginally safer alternative," the Court held, will be insufficient to prevail on an Eighth Amendment challenge, as adoption of a contrary rule "would threaten to transform courts into boards of inquiry charged with determining 'best practices' for executions, with each ruling supplanted by another round of litigation touting a new and improved methodology." *Id.* at 1531. It would also "embroil the courts in ongoing scientific controversies beyond their expertise, and would substantially intrude on the role of state legislatures in implementing their execution procedures - a role that by all accounts the States have fulfilled with an earnest desire to provide for a progressively more humane manner of death." *Id.* (citing *Bell v. Wolfish*, 441 U.S. 520, 562 (1979) ("The wide range of 'judgment calls' that meet constitutional and statutory requirements are confided to officials outside the Judicial Branch of Government.")). Rather, any advocated "alternative procedure must be feasible, readily implemented, and in fact significantly reduce a substantial risk of severe pain. If a State refuses to adopt such an alternative in the face of these documented advantages, without a legitimate penological justification for adhering to its current method of execution, then a State's refusal to change its method can be viewed as 'cruel and unusual' under the Eighth Amendment." *Id.* at 1532.

Turning to the petitioners' challenges, the Supreme Court observed at the outset the difficulty in "regard[ing] a practice as 'objectively intolerable' when it is in fact widely tolerated" across the nation. *Id.* "Thirty-six States that sanction capital punishment have adopted lethal injection as the preferred method of execution. The Federal Government uses lethal injection as well. This broad consensus goes not just to the method of execution, but also to the specific three-drug combination used by Kentucky . . . in varying amounts." *Id.* (citation omitted). Yet "[n]o State uses or has ever used the alternative one-drug protocol." *Id.* In addition, the Court addressed and rejected each of the specific challenges to Kentucky's existing methodology, noting in particular that the IV team was well-trained, equipped, and educated in how to detect IV failures that might occur during the execution process, and that prison personnel were in a position to observe the inmate for the obvious signs of any IV or anesthetic failure that might occur. *See id.* at 1533-34.

Finally, the *Baze* Court considered and rejected the concern that the articulated standard "leaves the disposition of other cases uncertain," holding that "[a] stay of execution may not be granted on grounds such as those asserted here unless the condemned prisoner establishes that the State's lethal injection protocol creates a *demonstrated* risk of severe pain" and "show[s] that the risk is substantial when compared to the known and available alternatives." *Id.* at 1537. If a state employs "a lethal injection protocol substantially similar to the protocol" upheld in *Baze*, it will "not create a risk that meets this standard." *Id.*

B.

Virginia is one of the thirty states that has adopted the three-drug combination discussed in *Baze*. Although there are some minor variations, the protocol is largely identical to that of Kentucky and, like Kentucky's, includes a number of safeguards designed to ensure that the lethal chemicals are properly administered intravenously in a quick, humane fashion.[6] The execution team consists of IV team members and an executioner who are experienced and well-trained. The IV team members, who possess prior medical qualifications, are provided with initial training in the insertion and establishment of IV catheters and lines for the execution process and with monthly refresher sessions conducted by a licensed physician. Additionally, all members of the execution team participate in monthly walk-throughs of the execution procedure.

As previously discussed, the IV team prepares two full sets of syringes containing the lethal drugs and saline flushes before each execution, establishes two IV lines, and ensures that both lines are patent and flowing before the execution begins. The syringes are double-checked by an IV team member and the executioner before the chemicals are administered, and department superiors continuously

[6]Although Kentucky's protocol apparently calls for 2 grams of thiopental, Kentucky now voluntarily administers 3 grams of thiopental. *See Baze*, 128 S. Ct. at 1528. However, the one-gram difference is insignificant as it is undisputed that 2 grams of thiopental is independently lethal and that its proper administration in the three-drug cocktail will result in a humane death.

oversee the activities of the execution team, from preparation of the syringes through the declaration of death by the physician. During the administration of the chemicals, the executioner observes the IV site for swelling and monitors the injections for resistance, as he has been trained to do. The Director is also constantly present with the inmate and in a position to observe any obvious signs of problems or failures that might occur.

There is, however, one immediately obvious difference between the administrations of the lethal injection procedures in Virginia and Kentucky — Virginia has a much more extensive historical record of administering the death penalty by lethal injection, having conducted 70 executions by lethal injection compared to the single lethal injection conducted by Kentucky prior to the *Baze* decision. Seizing upon this distinction, Emmett argues that Virginia's method of lethal injection is *not* substantially similar to that of Kentucky because the execution records and history demonstrate risks that were not present in *Baze*. More specifically, Emmett asserts that Virginia's rapid-flow administration of the three-drug combination creates the possibility that the pancuronium bromide and potassium chloride will take effect before the thiopental has taken full effect; that there is historical evidence of prior inmates exhibiting signs of not receiving a full dose of thiopental, prompting Virginia to give a second dose of pancuronium bromide and/or potassium chloride but not thiopental; and that there is historical evidence of other errors in the implementation of the protocol. Finally, Emmett asserts that Virginia should adopt alternative procedures, including the one-drug protocol discussed in *Baze*, to eliminate such risks.

Having reviewed the record *de novo*, we conclude that Virginia's protocol is substantially similar to Kentucky's protocol and that Emmett has failed as a matter of law to demonstrate a substantial or objectively intolerable risk that he will receive an inadequate dose of thiopental, particularly in light of the training and safeguards implemented by Virginia prior to and during the execution process. We also reject Emmett's claim that we should remand for further evidentiary development of the proposed alternatives.

IV.

A.

We begin with Emmett's claim that he has produced evidence sufficient to demonstrate that Virginia's rapid-flow method of administering the lethal drugs creates a substantial risk that the pancuronium bromide and potassium chloride will take their painful effects before the thiopental has had an opportunity to take its full effect.[7] We disagree.

As noted above, Virginia's protocol calls for the injection of two syringes of thiopental, a syringe of saline, a syringe of pancuronium bromide, a second syringe of saline, two syringes of potassium chloride, and a third syringe of saline. The time records kept during the execution are only recorded in whole minutes and are, therefore, somewhat imprecise. However, they indicate that the pancuronium bromide has at times been injected as rapidly as one to two minutes after the thiopental, and that the potassium chloride has been injected as rapidly as one to two minutes thereafter.

Dr. Mark Dershwitz, an anesthesiologist retained by the state to review Virginia's execution protocol and records, performed a pharmacokinetic and pharmacodynamic analysis, and opined, to a reasonable degree of medical certainty, that inmates will be sufficiently anesthetized by the extreme overdose of thiopental to prevent the experience of pain from the second and third chemicals. According to Dr. Dershwitz, 2 grams of thiopental is a significant overdose of the drug. Proper administration of that amount would render over 99.99999% of the population unconscious, and the probability of an inmate regaining consciousness, and experiencing pain, within 30 minutes of being administered 2 grams of thiopental is 3/100 of 1 per-

[7]Although the petitioners in *Baze* challenged the failure of the Kentucky protocol to establish a rate of injection, they did so on the basis that rapid administration might lead to a failure of the IV, not upon a claim that the anesthetization might not be sufficient. *See Baze*, 128 S. Ct. at 1533. Accordingly, while it does appear that Kentucky also utilizes a rapid-flow method of injection, the *Baze* Court was not called upon to address this precise issue.

cent (.03%). Dr. Dershwitz also testified that a rapid-flow method of induction of drugs is a technique utilized in the surgical anesthesia environment and, in fact, can result in a neuromuscular blocking agent being injected before the patient loses consciousness. However, Dr. Dershwitz was "confident that [such a] person [would] lose consciousness before the paralytic drug has its pharmacological effect" in the surgical setting, J.A. 1185, and would "invariably" expect the same in the lethal injection setting, J.A. 1187. Dr. Stuart Lowson, an anesthesiologist retained by Emmett, agreed that the successful delivery of the thiopental would render the inmate sufficiently anesthetized at the time the pancuronium bromide and potassium chloride were administered.

In support of his claim that Virginia's rate of delivery creates a constitutionally unacceptable risk that the pancuronium bromide and potassium chloride might take their painful effects before the thiopental has achieved its full effect, Emmett relies instead upon testimony of Dr. Thomas Henthorn, an expert in pharmacokinetics, presented in federal court in Missouri in an unrelated case that challenged Missouri's lethal injection protocol. *See Taylor v. Crawford*, 487 F.3d 1072 (8th Cir. 2007). Based upon his review of Missouri's procedure, Dr. Henthorn testified that it would take more than a minute and a half for the thiopental to travel from the femoral vein (where it is injected in that state) to the brain and cause the inmate to achieve a state of unconsciousness known as "burst suppression." Burst suppression is indicated by a flat line on an electroencephalogram (EEG), representing no electrical activity of the brain. Because there is no "cerebral activity," there would be "no chance of any [conscious] recognition of pain." J.A. 291.

The district court rejected Dr. Henthorn's testimony because it lacked a factual basis and failed to quantify the likelihood of an inmate actually experiencing such pain, thus finding it of "little probative value in assessing the likelihood that [Emmett would] experience such a theoretical reaction" under Virginia's procedure. J.A. 363. "Such hypothetical evidence, even if admissible," the district court noted, "is insufficient to counter the testimony of Dr. Dershwitz that [Emmett's] risk of pain is less than 3/100 of one percent (.03%), a risk that is not constitutionally significant." J.A. 363.

Having reviewed the evidence *de novo* in light of the *Baze* standard, we agree that Dr. Henthorn's testimony is insufficient to demonstrate that Virginia's procedure creates a substantial or objectively intolerable risk of severe pain. While Dr. Henthorn quantifies the time it would take (based upon Missouri's procedure) for an inmate to achieve the state of burst suppression, he acknowledges that the time necessary to achieve burst suppression is much longer than the time necessary for a person to achieve the lesser depth of unconsciousness needed for invasive surgical procedures. And he does not take issue with Dr. Dershwitz's observation that such rapid-flow inductions are utilized in the surgical context. Thus, in this respect, Dr. Henthorn's opinion does not directly conflict with Dr. Dershwitz's opinion regarding the minuscule risk of pain. Rather, Dr. Henthorn's opinion derives from the view that states should wait a sufficient interval to ensure that the inmate will achieve burst suppression because this would eliminate all possibility, however slim, of an inmate experiencing some pain from the pancuronium bromide and potassium chloride.[8]

Under the *Baze* standard, however, the relevant question is whether Emmett has produced evidence sufficient to meet his "heavy burden," *id.* at 1533 (internal quotation marks omitted), of demonstrating that Virginia's existing protocol presents a "substantial" or "objectively intolerable" risk of serious harm to Emmett, *id.* at 1531 (internal quotation marks omitted). Emmett must point to evidence demonstrating that "the conditions presenting the risk must be *sure or very likely* to cause serious illness and needless suffering, and give rise to sufficiently *imminent* dangers." *Id.* at 1530-31 (internal quotation marks omitted). Clearly, he has failed to do so. According to the uncontro-

[8]Indeed, it appears that in the *Taylor* case, the petitioner's own experts disagreed as to the level of anesthesia necessary to ensure a humane execution. The Eighth Circuit observed, as have we, that "Dr. Henthorn testified that an anesthetic depth known as 'burst suppression,' which is deeper than that required for surgery, must be reached for a humane lethal injection protocol because absent this depth, it is *possible* to be unconscious and still feel pain." *Taylor v. Crawford*, 487 F.3d 1072, 1076 (8th Cir. 2007) (emphasis added). Dr. Mark Heath, like Dr. Dershwitz, appears to have expressed the view that a humane execution under the three-chemical protocol requires only a state of anesthesia deep enough for surgery. *See id.*

verted expert testimony of Dr. Dershwitz, based upon his review of Virginia's protocol and the actual historical records of Virginia's executions, inmates receiving a rapid dose of thiopental will be sufficiently unconscious to render minuscule any risk of pain associated with the administration of the remaining two drugs. Dr. Henthorn does not opine that there is a substantial or imminent risk posed by the rapid-flow induction of the lethal chemicals, nor does he take issue with the fact that this method of administration is utilized by anesthesia professionals in the surgical setting. Rather, he deems the possible risk unnecessary in the lethal injection context because it could be lessened by delaying the administration. While Dr. Henthorn is of the view that such delay would be a better practice, we are not at liberty to dictate what is in our judgment or the judgment of any expert a "better" or "less risky" procedure.

Like some of her sister states, Virginia may choose to implement a brief pause between administration of the first and second chemicals. Or it may choose to continue the current rapid-flow method of administration as one that better serves Virginia's interest of completing humane executions as quickly and with as much dignity as possible. For our purposes, however, it is enough to observe that Virginia is not constitutionally required to eliminate every possibility that pain might occur or every unnecessary risk that may exist. Because Virginia's rapid-flow induction procedure does not present a "substantial" or "objectively intolerable" risk of serious harm to Emmett, its use is a judgment call entrusted to the officials of the Department of Corrections.

B.

Emmett next asserts that there is historical evidence that previously executed inmates in Virginia have exhibited signs of having not received a full dose of thiopental and that, in response, Virginia has given second doses of pancuronium bromide and potassium chloride but not thiopental. This, he contends, demonstrates a substantial risk that he will experience severe pain sufficient to run afoul of the Eighth Amendment. The evidentiary record, however, fails to support this claim.

1.

First, Emmett has failed to produce evidence sufficient to demonstrate that a single inmate has exhibited signs of not receiving a sufficient dose of thiopental.

According to Dr. Dershwitz, thiopental causes virtually all persons to stop breathing within a minute of its administration and causes the blood pressure to immediately fall to dangerously low levels. This, in turn, results in diminished circulation throughout the body, which would eventually lead to diminished oxygenation of the blood (hypoxemia), cardiac damage, and death. Pancuronium bromide is also independently lethal. As a result of its paralytic properties, it would result in the cessation of respiration within three minutes or less, causing the inmate to suffocate and die. However, in neither case would a flat-line EKG reading be immediate. The potassium chloride injection, on the other hand, consists of a massive dose that interferes with the electrical signals that stimulate heart contractions, causing cardiac arrest and a flat-line EKG. According to Dr. Dershwitz, it should typically take one circulation time for the potassium chloride to reach a level in the heart sufficient to stop electrical activity. In a person with normal cardiac output, this should occur in a minute or less. In a person whose cardiac output has been depressed by thiopental, it would generally take longer, although it should still occur within minutes.

As support for his theory that prior inmates have exhibited signs of not receiving the full dose of thiopental, Emmett points to the fact that in 10 of the 70 executions carried out by lethal injection in Virginia, the inmate's EKG did not immediately flat-line after administration of the first dose of the potassium chloride. In the majority of these cases, the inmate was still pronounced dead within five minutes or less; however, in the most recent, the inmate was not pronounced dead until 10 minutes after injection of the first dose of potassium chloride. From these facts, Emmett argues that the "most likely" reason for the delay in the pronouncement of death was that an insufficient amount of the first dose of potassium chloride reached the inmate's circulation, and that this, in turn, raises the possibility that a full dose of pancuronium bromide and thiopental might not been received.

Contrary to Emmett's assertion, however, he has not produced evidence that the most likely reason for the delay in the pronouncement of death in these cases is that an insufficient amount of the first dose of potassium chloride reached the inmate's circulation, and he certainly has not produced evidence that the preceding dose of thiopental was not appropriately or effectively delivered. As support for his theory, Emmett relies exclusively upon the statement of Dr. Stuart Lowson, also an anesthesiologist, who stated that the delays in the flat-line readings "raise[ ] the *possibility* that the drugs were not properly administered *or* did not reach their site of action in the heart." J.A. 100 (emphasis added). Such speculation and building of inferences, however, is wholly insufficient to create a genuine issue of material fact that Virginia has a history of failing to properly administer full doses of thiopental to its condemned inmates. *See Francis*, 452 F.3d at 308; *Beale*, 769 F.2d at 214.

In the 70 executions carried out by Virginia, there has not been a single incident in which the thiopental failed to render an inmate unconscious. There is no evidence of any inmate speaking, crying out, writhing in pain, gasping for breath, or otherwise moving during the execution process. There is no evidence of an IV catheter becoming dislodged or of the IV fluids or chemicals infiltrating into the surrounding tissue instead of entering the circulatory system. Clearly, this attests to the actual experience and proficiency of the execution team members.

Additionally, there are other, plausible explanations for the delays in the flat-line readings of those ten inmates. Dr. Dershwitz reviewed the execution records and testified that it was "very hard to imagine that something could have gone wrong and still resulted in the recorded time of death." J.A. 1199. In the majority of the cases, death was pronounced an average of approximately four minutes after the first drug was administered. He also reiterated that, while potassium chloride typically causes a flat-line EKG within a minute of its administration, thiopental immediately slows the circulatory system and, thereby, will delay the full delivery of the potassium chloride to the heart in even a normal and fit individual. With regard to the ten-minute execution, Dr. Dershwitz noted that the EKG did show an abrupt change in electrical activity approximately one minute after the first dose of potassium chloride was administered, which is consistent

with the cessation or severe slowing of circulation, and, given that it is the third drug in the three-drug protocol, a strong indicator that the thiopental *was* effectively delivered.

In summary, Dr. Dershwitz testified that the thiopental could have essentially stopped the circulation before the potassium chloride fully reached the heart, causing an impairment of the heart's electrical pattern, but preventing the full dose of the potassium chloride from reaching the heart and causing an immediate flat-line reading on the EKG. In contrast to this plausible explanation, Dr. Dershwitz testified that an intravenous catheter that worked only intermittently would be "an extraordinary circumstance[ ]" that he has never seen and a scenario that would be "very hard for [him] to imagine." J.A. 1206. Such an intermittent failure would have to be one that allowed a sufficient amount of the second chemical (pancuronium bromide) to paralyze, but not enough of the first chemical (thiopental) to anesthetize and not enough of the third chemical (potassium chloride) to immediately stop the electrical activity of the heart. And, it would have to have been one that went undetected both at the time of the execution and after it was completed.[9]

Of course, on summary judgment we do not weigh the relative statements of these expert witnesses regarding the "possibilities" surrounding the delay in the ten EKG flat-line readings. Emmett's claim fails to survive summary judgment because it was incumbent upon him to present evidence demonstrating that Virginia's protocol presents a condition that is "*sure or very likely* to cause serious illness and needless suffering, and [which] give[s] rise to sufficiently *imminent* dangers." *Baze* at 1530-31 (internal quotation marks omitted). The possibilities and other speculative scenarios advocated by Emmett do not carry the day.

[9]Emmett's theory is also not supported by the eyewitnesses, who testified that the IV was properly placed in a working vein, that the IV lines at all times flowed smoothly and without leaks or swelling, that there were no difficulties or problems observed, and that no problems were raised during the debriefing process.

2.

Second, Emmett appears to argue that Virginia's protocol, unlike the protocol discussed in *Baze*, presents a substantial risk of severe pain because it forbids the administration of a second dose of thiopental even if an inmate were to exhibit signs of not having achieved unconsciousness. Again, the evidence does not support his claim.

The Kentucky protocol discussed in *Baze* provides that a second dose of thiopental can be administered through the secondary line if corrections officials observe that the prisoner is not sedated after the first dose of thiopental is given. *Baze* does not discuss Kentucky's protocol for giving second doses of pancuronium bromide or potassium chloride. In Virginia, administration of second doses of pancuronium bromide and potassium chloride is triggered under the checklist by a failure of the EKG to exhibit a flat-line reading immediately *after* the administration of the entire first set of drugs.[10] The

[10]Much has been made of the fact that there is some disagreement among execution team members as to whether the language of DOP 426 should be interpreted to require the executioner to wait ten minutes after administration of the first set of lethal chemicals before giving the second set of lethal chemicals. However, the Deputy Director, who orders the second set, unequivocally testified that he does *not* consider the protocol to require him to wait a full ten minutes before administering the second doses. If the EKG does not indicate a flat-line reading within a minute or two from the conclusion of the administration of the first set of chemicals, it is his practice to immediately order the executioner to administer the second doses of pancuronium bromide and potassium chloride in order to avoid any prolonged execution process or lingering death. This is also confirmed by the execution records; in each of the 10 cases relied upon by Emmett, the second dose of pancuronium bromide and potassium chloride was in fact given within 10 minutes after delivery of the first set of chemicals.

Dr. Dershwitz testified that it is not medically necessary to wait ten minutes to repeat a dose of potassium chloride, but was also of the opinion that the second doses given were probably unnecessary given the massive overdose associated with the first set of drugs. Rather, he believed the execution team simply did not wait long enough for the first dose of potassium chloride, which is slowed by the effects of thiopental

written protocol in Virginia does not address a second dose of thiopental, but it is undisputed that one is prepared in advance and available on the tray during the entire process. Although there is no evidence that the first dose of thiopental has ever failed to render an inmate immediately unconscious, there is also no evidence that the execution team would be *prohibited* by the checklist from giving the second dose of thiopental should either the Department officials or an execution team member observe a problem with the initial administration of the drug or observe an inmate failing to lose or regaining consciousness. Certainly, there is no reason to believe that the checklist somehow strips the Director and Deputy Director of the discretion otherwise reserved to them by the protocol (which explicitly recognizes the potential need for amendments on a case-by-case basis) to administer a second dose of thiopental should they encounter such a need.

In sum, the asserted comparison between Kentucky's procedure and Virginia's procedure on this issue compares apples to oranges and is insufficient to demonstrate a substantial risk that Emmett will be administered a second dose of pancuronium bromide or potassium chloride while insufficiently anesthetized.

C.

Emmett's remaining claims arise from isolated incidents which he contends add up to sufficient evidence of an inconsistent history of implementing the lethal injection protocol and a risk that it will not be reliably administered in the future. We are unpersuaded.

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upon the circulatory system, to result in the flat-line reading. Of course, giving the second dose of potassium chloride without waiting long enough for the first dose to circulate would not alone increase the risk of pain, nor is the likelihood of risk affected by whether the second dose is given within ten minutes or after ten minutes. Accordingly, while the varying interpretations of execution team members has some initial facial appeal in Emmett's argument, these members do not make the decision and their testimony regarding how the language should be interpreted does not create a genuine issue of material fact or properly factor into the evaluation of the actual risk of pain associated with the procedure.

We begin with Emmett's reliance upon three isolated incidents that occurred in prior executions. In the first incident, the executioner believed he had encountered some mild resistence when administering the first syringe of thiopental and, while the inmate exhibited the normal signs of losing consciousness (snoring followed quickly by the cessation of respiration), the executioner made the decision to switch to the backup IV line to administer the second syringe of thiopental and the remaining chemical combination. Throughout the process, however, the saline fluid continued to flow unimpeded in the primary IV line and no problem with the IV catheter or line was ever identified, indicating that there was no actual failure or accompanying risk. In the second incident, a decision was made to increase the dosage of pancuronium bromide for an overweight inmate, but not to increase the dosages of the other two drugs. However, there is no evidence that the thiopental dose given was not sufficient to achieve the desired result, and the evidence that was presented demonstrated that there were no problems observed with the execution. For his part, Emmett does not claim that the dosages need be increased due to any of his personal characteristics, and he fails to demonstrate that this incident somehow poses an unacceptable risk to him. In the third incident, Emmett complains that an inmate's history of intravenous drug use and accompanying scarring required the secondary IV line to be placed in a smaller vein in the inmate's thumb, which he asserts was not an ideal location for administration of the lethal chemicals. However, even if it were true that the thumb was not the ideal site, the primary line was well-established in the inmate's left arm and there is no evidence that the secondary line was not working or would not have been sufficient to administer the chemicals in the unlikely event that the primary line failed. In sum, having reviewed the evidence regarding these "errors" in the execution process, we believe that these isolated incidents are insufficient to demonstrate a substantial risk of future harm to Emmett necessary to establish an Eighth Amendment violation.

We also summarily reject Emmett's concern that Virginia's practice of conducting executions in a solemn environment, largely with hand signals, creates a confusing environment rife with the potential for error. There is no evidence that any member of the execution team, which trains monthly via walk-throughs in the same degree of silence, does not understand the nonverbal signals used to communi-

cate during the execution or that the team members are prohibited from verbal communication if necessitated by the circumstances.

Finally, we reject Emmett's argument that the inmates are not adequately observed during the execution process because the executioner only observes the inmate through the porthole, and the Director, although with the inmate, is also on the telephone with the Governor's office. Again, Emmett has failed to demonstrate a substantial risk that he will not be sufficiently anesthetized or that signs of consciousness will not go detected. While those who are in a position to monitor the inmates are charged with other duties, the unrebutted evidence is that the current executioner is able to and does conduct visual monitoring of the IV site during the administration of the chemicals, which takes place only three feet away, and that the Director, who is ultimately responsible for oversight of the entire execution process, is in a position to fully observe the inmate for any signs of inadequate anesthetization. Virginia implements a number of procedures and requirements designed to ensure that the lethal chemicals are successfully administered to the inmates, and Emmett's concerns regarding the observation process are woefully insufficient to establish a substantial or imminent risk that he will not be sufficiently anesthetized.

D.

Finally, Emmett asks that we remand this case to allow him to develop evidence on the efficacy of alternative methods of carrying out the lethal injection process that would reduce the risk of pain under Virginia's protocol. Specifically, he asserts that Virginia should prohibit the injection of pancuronium bromide and potassium chloride until at least three minutes have elapsed since the injection of the thiopental and that Virginia should never give second doses of pancuronium and potassium without first giving a second dose of thiopental. But, claiming that neither of these additional safeguards would actually suffice to render the procedure constitutionally sufficient, Emmett primarily asserts that the best and most feasible alternative procedure would be to adopt the one-drug protocol also advocated by the *Baze* petitioners.

As noted previously, Emmett cannot successfully challenge Virginia's "method of execution merely by showing a slightly or marginally

safer alternative." *Id.* at 1531. Rather, he is required to demonstrate that the alternative procedure is "feasible, readily implemented, and in fact significantly reduce[s] a substantial risk of severe pain." *Id.* at 1532.

In *Baze*, the Court considered and rejected petitioners' claims that additional safeguards should be constitutionally mandated to ensure that the first dose of thiopental has been adequately delivered, as well as the identical "one-drug protocol" advocated here, concluding that none of the proffered alternatives would "significantly reduce a substantial risk of serious harm." *Id.* at 1532. For the reasons discussed above, Emmett has likewise failed to do so. *See id.* at 1532 n.3 (noting that the "threshold requirement . . . of a substantial risk of serious harm or an objectively intolerable risk of harm," along with "the substantive requirements in the articulated standard," should assuage any concern that courts will "function as boards of inquiry determining best practices for executions" (internal quotation marks omitted)).

Similarly, Emmett, like the *Baze* petitioners, has failed to demonstrate that the one-drug protocol is feasible or readily implemented. *See id.* 1532-33 (noting at the outset that "[t]hirty states, as well as the Federal Government, use a series of sodium thiopental, pancuronium bromide, and potassium chloride, in varying amounts[,]" but that "[n]o State uses or has ever used the alternative one-drug protocol.").

Because Virginia's current protocol does not create a substantial or objectively intolerable risk of severe pain, and given the Supreme Court's recent rejection of the same claim, we reject Emmett's request that we remand for further development of the record.

V.

To conclude, Virginia's protocol for lethal injection is substantially similar to that approved by the Supreme Court in Kentucky. The lethal injection procedures are supervised by Department officials and the execution is carried out by experienced, well-trained personnel. And, in the 70 executions previously conducted by Virginia, there have been no reported problems.

For his part, Emmett has failed to produce evidence quantifying the likelihood of any such problem occurring in the future under Virginia's procedures, much less evidence that would demonstrate a substantial risk of severe pain to him. Instead, Emmett has sought to avoid defendants' properly supported summary judgment motion with allegations and inferences about incidents that could have occurred in the past, or might occur in the future, none of which are supported by objective evidence. Such unsupported speculation is insufficient to defeat the defendants' properly supported summary judgment motion. Because Emmett has failed to produce evidence sufficient to create a genuine issue of material fact that would demonstrate a "substantial" or "objectively intolerable" risk of harm during his execution, the district court did not err in granting summary judgment to the defendants.

AFFIRMED

GREGORY, Circuit Judge, dissenting:

As a court of appeals, we have a "heightened responsibility . . . to insist, even at the risk of delay, on having the fact-finding process carried out properly at the level intended rather than to assume, even indirectly, a fact-finding role." *Lewis v. Bloomsburg Mills, Inc.*, 773 F.2d 561, 577 (4th Cir. 1985). In the present case, my colleagues transgress our role by deciding a factual question never presented to the district court.

In *Baze v. Rees*, the Supreme Court issued an extremely narrow holding, "concluding that *Kentucky's* procedure is consistent with the Eighth Amendment." 128 S. Ct. 1520, 1538 (2008) (plurality opinion) (emphasis added). Thus, despite the myriad other questions addressed by the majority, whether Virginia's protocol is *in fact* substantially similar to the procedure upheld in *Baze* is the singular issue at hand. Although this legal determination is inextricably tied to complex factual issues that have never been addressed by the district court in light of *Baze*, the majority remarkably concludes that "Virginia's protocol for lethal injection is substantially similar to that approved by the Supreme Court." (Majority Op. 26.) Because I cannot condone usurping the district court's unique ability to make factual findings in the first instance, I must dissent.

The barbiturate sodium thiopental plays a crucial role in ensuring the humanity of the execution process. According to the *Baze* Court, "[t]he proper administration of the first drug [sodium thiopental] ensures that the prisoner does not experience any pain associated with the paralysis and cardiac arrest caused by the second and third drugs." *Baze*, 128 S. Ct. at 1527. Additionally, the plurality explained that pancuronium bromide and potassium chloride, when given absent *a proper dose of sodium thiopental*, create "a substantial, constitutionally unacceptable risk of suffocation from the administration of pancuronium bromide and pain from the injection of potassium chloride." *Id.* at 1533. As such, Kentucky's written protocol regarding the administration of sodium thiopental is essential to the *Baze* holding. Virginia's protocol significantly differs with respect to the safeguards Kentucky takes to guarantee the proper administration of that essential first drug. With all due respect, the majority's conclusion otherwise is simply wrong.

First, the initial dose of sodium thiopental is different: Kentucky administers three grams of sodium thiopental, whereas Virginia uses only two grams. Second, Virginia employs a so-called "rapid flow" technique, under which the lethal chemicals and saline flushes are administered quickly one after the other without pause. Conversely, Kentucky's written protocol provides a brief pause between the first and second drugs to ensure that the inmate is sedated properly.[1] Third, in Kentucky, if the inmate is *not* adequately sedated after the administration of the first three grams of sodium thiopental to the primary IV site, a second three grams of sodium thiopental is administered to the alternate IV site. *Id.* at 1528. Conversely, Virginia has no such procedure to ensure that the inmate is properly sedated before proceeding to the second and third drugs. In fact, Virginia does not even administer a second dose of sodium thiopental when the first round of injections fails to kill the inmate. Virginia's alternate line allows only for the administration of additional pancuronium bromide and potassium

[1]Kentucky's protocol notes in writing that "[i]f it appears to the Warden That [sic] the condemned is not unconscious within 60 seconds to his command to 'proceed', the Warden *shall stop* the flow of Sodium Thiopental in the primary site and order that the backup IV be used with a new flow of Sodium Thiopental." *Baze*, 128 S. Ct. at J.A. 978-79 (emphasis added).

chloride.[2] Thus, Kentucky's protocol provides up to three times as much sodium thiopental as Virginia.

The majority, however, completely glosses over these significant distinctions, flippantly referring to them as "minor variations" and calling Virginia's procedure "largely identical to that of Kentucky." (Majority Op. 13.) With respect to the amount of sodium thiopental, the majority states that "Kentucky's lethal injection method . . . *also* utilized a three-drug combination consisting of 3 grams of thiopental, 50 milligrams of pancuronium bromide, and 240 milliequivalents of potassium chloride." (Majority Op. 10 (emphasis added).) This statement is misleading, as it implies that both Virginia and Kentucky administer *three* grams of sodium thiopental, which quite clearly is not the case.

Additionally, the majority misconstrues the role of sodium thiopental altogether, stating that "there has not been a single incident in which the thiopental failed to render an inmate unconscious." (Majority Op. 20.) Thus, the majority fails to understand that the purpose of sodium thiopental is not merely to render an inmate unconscious but to ensure that the inmate does not experience any *pain* associated with the administration of the second and third drugs. Moreover, the majority reveals further misunderstanding, writing that "[t]here is no evidence of any inmate speaking, crying out, writhing in pain, gasping for breath or otherwise moving during the execution process." (Majority Op. 20.) However, even absent a sufficient dose of sodium thiopental, an inmate would be unable to speak, cry out, writhe, gasp, or otherwise move. Under Virginia's "rapid flow" method, the pancuronium bromide would have been administered moments after the sodium thiopental, rendering the inmate paralyzed and incapable of communicating. Thus, the fact that inmates do not move about or express pain speaks only to the success of the pancuronium bromide

[2]According to Emmett, the failure to include a second administration of sodium thiopental is a procedural idiosyncrasy unique to Virginia. (Appellant's Supp. Br. 17 ("Counsel is unaware of any other jurisdiction that excludes thiopental from a back-up dose as part of its protocol, and some jurisdictions have added the back-up dose in response to concerns that omitting it increases the danger of inhumane executions.").)

and indicates nothing about whether the sodium thiopental has served its purpose in dulling the inmates' pain.

Furthermore, the majority dispenses with Virginia's failure to provide a second administration of sodium thiopental simply by stating that

> [t]here is . . . no evidence that the execution team would be *prohibited* by the checklist from giving the second dose of thiopental should either the Department officials or an execution team member observe a problem with the initial administration of the drug or observe an inmate failing to lose or regaining consciousness.

(Majority Op. 23 (emphasis in original).) Failing to prohibit something is quite different than explicitly providing for it. The plurality in *Baze* explained that the risk associated with lethal injection "is already attenuated, given the steps Kentucky has taken to ensure the proper administration of the *first drug*." *Baze*, 128 S. Ct. at 1536 (emphasis added). Thus, it was the explicit measures Kentucky took to ensure the proper administration of sodium thiopental that made the protocol in *Baze* constitutional. Nothing in Virginia's protocol *provides* for an additional amount of sodium thiopental. Something as serious as the humane extinguishing of a human life, which is required under the Constitution, demands deliberate care and precision. We should not be left to conjuring additional, nonexistent safeguards from whole cloth and then thinly justifying them with the argument that they are not prohibited. Despite what the majority might argue, failing to forbid an additional administration of sodium thiopental is not an unspoken authorization to administer it as needed.

Unlike the majority, I simply cannot read *Baze* to condone any combination of sodium thiopental, pancuronium bromide, and potassium chloride. Merely using identical drugs, but in varying amounts and at varying times in the procedure, hardly yields "largely identical" lethal injection protocols. A cocktail of the very same three drugs has the potential to end in quiet, painless death or excruciating, silent torture depending upon how those drugs are administered. Furthermore, which of those outcomes will result can only be determined by assessing the written protocol as it exists, like the Supreme Court in *Baze*,

not by grafting any number of new measures onto the current protocol based solely on the flawed logic that those procedures are not explicitly prohibited. Given the centrality of sodium thiopental to the constitutionality of Kentucky's procedure, it is clear that Virginia's use of a mere third of the sodium thiopental allowed in Kentucky, coupled with Virginia's failure to readminister sodium thiopental with the second round of pancuronium bromide and potassium chloride, raises genuine issues of material fact that mandate a remand to the district court for additional fact-finding. The majority, however, does not agree.

After concluding that two grams of sodium thiopental is adequate, the majority appears to take further solace in the facts that pancuronium bromide on its own "would result in the cessation of respiration within three minutes or less, causing the inmate to suffocate and die" and that potassium chloride stops the heart after one full circulation, something that usually takes a minute or less in a normal person, yet potentially longer in someone sedated by sodium thiopental. (Majority Op. 19.) Although Emmett points to evidence that certain inmates may not have been adequately sedated, the majority notes that in *most* of those cases "the inmate was still pronounced dead within five minutes or less." (Majority Op. 19.) No one contests the lethal effectiveness of Virginia's protocol. So far as ensuring death, the current procedure is one-hundred percent effective: no inmates have survived execution. The question Emmett poses, conversely, is whether Virginia's lethal injection protocol creates a substantial risk of severe pain, which *Baze* clearly prohibits. From the comfort of a judicial bench, five minutes may pass quickly and without note. However, when in the course of five minutes a lethal chemical navigates a person's veins rendering him incapable of breathing, let alone crying out in anguish, followed by a second deadly chemical—a salt—that excruciatingly scorches the membrane of every blood vessel it touches as it travels the length of his circulatory system until finally stopping his heart, that same five minutes becomes a drastically longer period of time. By providing less sodium thiopental in the first set of chemicals and none in the second, Virginia fails to employ the same safeguards against this horrific and terrifying outcome as used in Kentucky. The district court, however, has never had a chance to address the factual implications of these significant disparities.

In short, the majority effectively grants summary judgment on a crucial issue never presented to the district court: whether material differences exist between Kentucky's and Virginia's protocols. The mere fact that both states use the same three chemicals to execute inmates does little to establish that the protocols are substantially similar, let alone "largely identical," when such glaring differences exist as to how the executioner administers sodium thiopental, the single drug vital to the procedure's humanity. Recently, the Supreme Court observed that "[w]hen the law punishes by death, it risks its own sudden descent into brutality. . . ." *Kennedy v. Louisiana*, No. 07-343, 2008 U.S. LEXIS 5262, at *24 (June 25, 2008). And failing to remand to the district court for further fact-finding sends us tumbling faster into that abyss.