IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MARYLAND/NORTHERN DIVISION

VERNON EVANS,

Plaintiff

CIVIL NO. 06-149

Vs.

Mary Anne Saar, et al,

September 19, 2006

Defendants

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TRANSCRIPT OF BENCH TRIAL

BEFORE THE HONORABLE BENSON E. LEGG,

UNITED STATES DISTRICT CHIEF JUDGE

APPEARANCES:

On behalf of the Plaintiff:

Stephen Hut, Jr, Esquire

Todd Zubler, Esquire

Kale Clark, Esquire

On behalf of the Defendant:

Laura Mullally, Esquire

Philip Pickus, Esquire

REPORTED BY:

Jacqueline Sovich, RPR, CMR, FOCRR

Official Court Reporter

(PROCEEDINGS)

THE COURT: Good morning, please be seated. Mr. Hut, are you ready to call your first witness?

MR. HUT: We are ready, Your Honor.

THE COURT: Please do.

MR. HUT: As its first witness, plaintiff calls Dr.. Mark Heath.

MS. MULLALLY: Your Honor, I don't believe either side has moved for sequestration yet. I would do so at this time.

MR. HUT: We actually invoked the rule in the pretrial order, we indicated we would. We would have no objection.

THE COURT: So you all know who your witnesses are.

MR. HUT: It's my understanding, Your Honor, the rule on witnesses does not apply on experts whose function it is, among other things, to comment upon the factual case.

THE COURT: That's correct. The rule of sequestration applies only to fact witnesses and not expert witnesses, and expert witnesses are entitled to be in the courtroom to hear any testimony they want to hear.

And if you have an expert who can't be here

physically, but who would like to listen in, we can arrange to have a feed, except we can't do it tomorrow, because we only have one line out. Good.

(The Witness is sworn.)
THE CLERK: Sir, if you would, I need you to state your name and spell your name for the record.
THE WITNESS: My name is Mark Heath, M A R K, H E A T H.
THE CLERK: Thank you.

DIRECT EXAMINATION

BY MR. HUT:
Q. May I inquire, Your Honor?
THE COURT: Whenever you're ready.
Q. Thank you.
Good morning, Dr. Heath.
What is your occupation?
A. I'm an anesthesiologist.
Q. And you received the MD degree?
A. Yes.
Q. When did you receive the MD degree?
A. 1986.
Q. And when did you receive a medical license?
A. A year and a half after that. I believe 1988.
Q. Where do you currently practice, Dr. Heath?
A. In New York City.
Q. Is there an institution in New York City in which you practice in particular?
A. New York Presbyterian Hospital. I practice at the part

that's called Columbia University Medical Center.
Q. Is New York Presbyterian affiliated with Columbia University and Columbia Medical School?
A. It's two hospitals that joined together, and one of the campuses is connected with Cornell Medical School and one of the campuses is connected with the Columbia Medical School.
Q. Since the receipt of your medical license in 1998, have you practiced as an anesthesiologist?
A. Yes. First I trained as a resident and then fellowship training, and then I became an attending anesthesiologist.
Q. Are you board certified?
A. I am.
Q. To ask a very elementary question, Dr. Heath, what is anesthesia?
A. Anesthesia is a state that anesthesiologists induce, it's

induced by drugs, and it's a state where in a person has no experience or consciousness or awareness that would be general anesthesia that's to be contrasted with regional anesthesia. Sometimes we only need to or only want to block sensation from part of the body.

So, for example, for a Cesarean section, we would often give a spinal anesthetic causing anesthesia in the lower half of the body. In that case, the person would still be awake and conscious, but they would not be able to experience any sensation, including pain from the lower half

of the body.

Q. Do you induce general anesthesia as part of your practice in the operating room at New York Presbyterian?

A. I'd say virtually every day time in the operating room I'm inducing general anesthesia.

Q. How many days per week would you say you're in the operating room?

A. It varies over the last couple months. It's been averaging about four days a week.

Q. In addition to your clinical practice and work in the operating room, do you have other responsibility or duties at New York Presbyterian or Columbia?

A. Sure. We're a teaching hospital, and there's a triad of responsibility, and that includes first and foremost clinical care of patients, and then also teaching of medical students and residents and fellows, and also performing research.

Q. Dr. Heath, are you being compensated for your testimony here today?

A. Yes.

Q. And at what rate, sir?

A. I believe it's $190 per hour.

Q. I'd like, if I may, with the Court's leave, to show to the witness what's been premarked as plaintiff's Exhibit Number 1.

What I'm doing, if it's satisfactory to the Court,

is handing a witness a pre-prepared notebook that is comprised of what I hope are all of the documents that we intend to show to him today.

As long as I'm close to the bench, if I can either hand to Your Honor for to the Court's law clerk a set of the demonstratives we may use as well today.

THE COURT: Thank you. If you would make sure they're marked? And then I'll see them, thank you.

BY MR. HUT:
Q. Dr. Heath, if you could either look at the screen, which now displays plaintiff's exhibit 1, or a tab marked plaintiff's exhibit 1 in the notebook just handed to you, could you identify plaintiff's exhibit 1 for us, please?
A. Yes. It's my curriculum vitae.
Q. Does plaintiff's exhibit 1 accurately reflect your training, experience, and qualifications?
A. Pretty close. We talked about a couple of changes now in the American Medical Association, and that's not listed here.
I think maybe one or two of these organizations that are listed here I might have, my membership might have expired. I usually renew them when I go to their meetings, but I don't go every year. American Society of Anesthesiologists, and that's not listed here.
Q. Thank you, doctor.
Where did you attend college?

A. Harvard College, or University.
Q. And what degree did you receive from Harvard?
A. A BA.
Q. What year?
A. 1983.
Q. Did you receive your BA with any honors?
A. I think it was Magna Cum Laude.
Q. Where did you attend medical school?
A. University of North Carolina Chapel Hill.
Q. Did you serve an internship following graduation from medical school?
A. Yes, I did, Washington, D.C.
Q. How long was that?
A. Internship's one year.
Q. Did you thereafter serve a residency?
A. Yes.
Q. For how long?
A. It was three years of residency and two years of fellowship.
Q. Where did you serve that?
A. All at Columbia University Medical Center.
Q. In New York City?
A. Yes.
Q. Does -- with the exception of the additions and corrections that you noted a moment ago, does plaintiff's

exhibit 1, your CV, list your principal professional associations?
A. I believe so, yes.

Q. Does the list your principal honors -- I'm directing your attention, to page four of plaintiff's exhibit 1, caption at the top, "Publications," does plaintiff's exhibit 1 accurately list publications that you have authored, Dr. Heath?
A. I believe so, yes.
Q. Are the journals listed on page 4 and at least one on page 5 of plaintiff's exhibit 1 peer-reviewed scientific journals?
A. Yes.
Q. Doctor, have you previously testified in cases concerning execution by lethal injection as an expert witness?
A. I have, yes.
Q. Approximately how many times, sir?
A. I'm guessing around 8, or 8 times, approximately, maybe 10 times.
Q. Are you addressing only in the court trial testimony or does that include depositions?
A. Well, I've testified in court and I think at least once by telephone. And then if you add -- so that was including just actual testimony.
If you add in depositions, I think there have been

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a couple more depositions, but those were for trials that ended up having testimony, but affidavits and declarations for cases where I did not testify in any form.
Q. Dr. Heath, have you done any scientific research on the subject of lethal injection?
A. I have now, yes.
Q. Could you describe it for the Court, please?
A. Over the past, approximately five years, since I became interested in this subject, I've reviewed execution protocols and execution logs from the great majority, from all the states that are doing it with any frequency and for many states that are only occasionally or never doing it.
I've had visited or have attended the inspections of lethal injection facilities in three states. I have reviewed probably thousands of pages of depositions by executioners and other participants or people who are present during the injection procedures.
I've spoken with the folks who either supervised or participated in lethal injection procedures. I write many journal articles that pertain to the practices in lethal injection or directly discuss lethal injection.
I've reviewed hundreds of, I believe I've reviewed all the postmortem toxicologies and autopsies performed for lethal injection procedures.
Q. your writings on the subject of lethal injection, have

any of those been published in peer-reviewed scientific journals?
A. I wrote a correspondence regarding a paper that was published in the Lancet that was about lethal injection or lethal injection toxicology.
Q. And the article was published in Lancet, was your correspondence on that article published in the Lancet as well?
A. Yes. It came out I think a couple months later after the initial article that I was commenting on came out.
Q. The article that you were commenting on, was the tenor of that article essentially criticism of aspects the way lethal injections are performed in the United States?
A. Yes. They were saying that 43 percent of prisoners had inadequate thiopental concentrations during their executions.
Q. And what was the tenor of your correspondence on the subject of that article that was published in the Lancet?
A. My -- our correspondence said that their methodology was completely flawed and their conclusion was totally unsupported.
Q. In other words, you criticized the criticism of lethal injection on scientific grounds; is that accurate, sir?
A. Yes. They were wrong.
Q. You mentioned, Dr. Heath, that you had occasion to study the protocols of, and numerous and perhaps most states on

lethal injection. Have you had occasion to study the protocol used in the state of Ohio?
A. I have reviewed that, yes.
Q. Have you reviewed the protocol that was used in connection with the execution of Joe Clark?
A. And it's important to understand that states frequently modify their protocols. So the protocol I looked at I'm not sure if it was the exact one used on Mr. Clark, but I have reason to believe its fundamental elements that were the same.
Q. Do those elements that remain the same to use in the Clark execution include the use of the same three drugs used in the Maryland lethal injection cocktail?
A. With minor variations, every state is using basically the statement four steps for accomplishing lethal injection executions.
Q. Dr. Heath, do you have an opinion on the death penalty?
A. I do, yes.
Q. What is that, doctor?
A. I'm not in support of it.

Q. Does your position not in support of the death penalty influence in any way your medical and scientific assessment of lethal injection?
A. I try very hard not to let it. It's something I think about. I try to keep an open mind about everything. I'm

looking at and try to assess it in the clearest light in the most accurate way.

I think discussion and debate is only hindered by inaccurate or misleading information. I think everybody needs to get the right and truthful information out there on the table and discuss it in a forthright way.

Q. In preparing the opinions that are set forth in the expert report for this case, did you attempt, to the extent you possibly could, to divorce those opinions from your opinion about the death penalty?
A. Yes.
Q. Do you think did, that your opinion that lethal injection can be performed humanely?
A. I'm very confident of that, yes. I believe it's performed on household pets, on dogs and cats, thousands of times a day in the United States or more, and it's done in a reliable and humane fashion.
Q. Dr. Heath, why did you agree to testify in this case?
A. I'd seen the protocol from prior cases in Maryland and the protocol hadn't substantially changed, and it's something that you wouldn't be allowed to do to a dog or a cat. And it doesn't meet those, doesn't even come close to veterinary standards, and this should not be done to any animal, including a human.

MR. HUT: Your Honor, plaintiffs offer Dr. Heath as

an expert in anesthesiology medicine and lethal injection procedure.

THE COURT: Anesthesiology, medicine, and lethal injection procedure.

Is there any voir dire on that?

MS. MULLALLY: Yes, Your Honor.

THE COURT: Miss Mullally, go right ahead.

BY MS. MULLALLY:
Q. Now, Dr. Heath, you're a medical doctor?

THE COURT: If you would use the podium, please, it

makes it easier for our court reporter.

BY MS. MULLALLY:
Q. Dr. Heath, you're a medical doctor, correct?

A. Yes.
Q. And do you have a degree in pharmacology?
A. The degree of medicine includes training in pharmacology, but I do not have a Ph.D. in pharmacology, no.
Q. But there are those medical doctors, however, that do have Ph.Ds in pharmacology; am I correct?
A. There are a few, yes.
Q. Okay. You mentioned the Lancet letter that you published in 2005?
A. I'm not sure of the year, but that sounds about right.
Q. Okay. Is this the only publication that you have written on the subject of lethal injection procedures?

A. I presented an abstract at a meeting a couple of years ago regarding thiopental toxicology.
Q. Okay. Did you publish anything as a result of that abstract?
A. No.
Q. You say that you've done research, scientific research in lethal injection?
A. Yes.
Q. But so far this research has not led to any publications; am I correct?
A. I haven't submitted anything, that's correct.
Q. Thank you.
THE COURT: Thank you. Is the state contesting the doctor's expertise in the three years in which he's been offered, anesthesiology, medicine, lethal injection procedures?
MS. MULLALLY: No, Your Honor.
THE COURT: Good. Thank you. Then I will accept the doctor as an expert qualified to express opinions in these three areas.
Mr. Hut, whenever you're ready to proceed.
BY MR. HUT:
Q. Judge Legg, with Dr. Heath's assistance, what I'd like do now is some stage-setting, and ask the witness to testify to an overview of lethal injection, the area Maryland facility

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where it physically takes place, people who perform it, and its origins and history.
And prefatorily, Dr. Heath, let me ask you, have you reviewed documents produced by the defendants in discovery in this case?
A. Yes.
Q. If you could turn in the notebook supplied to you to

what's been premarked as plaintiff's exhibit number 4.
Have you read plaintiff's exhibit 4 before, Dr. Heath?
A. Yes. This is the Execution Operation Manual from 2004.
Q. Directing your attention as well, Dr. Heath, to portion of exhibit 4 toward the back, the page Bates stamped number Evans 0 0 3 5 9 2, those numbers will be found in the bottom of the pages.
Are you with me?
A. Yes.
Q. Do you recognize that portion of plaintiff's exhibit 4?
A. Yes.
THE COURT: If I could ask you, Mr. Hut, 4 should be in what you just handed out?
MR. HUT: No, Your Honor. 4.
THE COURT: Good.
MR. HUT: We do have an extra copy of the trial exhibits for the court.

THE COURT: I have it here.
MR. HUT: But the book that I handed you, I'm sorry for any confusion. This may be more manageable for you.
THE COURT: That's all right. I need to get my exercise for the day.
MR. HUT: I'll hand it to the courtroom deputy just in case you change your mind.
(Pause.)
MR. HUT: Just to clarify what I handed you a moment ago is the set of demonstratives that we may be using.
THE COURT: I have plaintiff's 4 redacted memorandum, execution operations manual?
MR. HUT: That's correct, Your honor
BY MR. HUT:
Q. Dr. Heath, have you had occasion to look at recent changes that were made by the State of Maryland this year in August, changes to the protocol that are set out in the checklist at the end of plaintiff's exhibit 4?
A. Yes, I have.
Q. And if you just want to look ahead to plaintiff's exhibit 5 for a moment, do you recognize will have's exhibit 5?
A. Yes.
Q. And what is that?
A. It's a memorandum describing some alterations to the previous protocol.

Q. In addition to plaintiff's exhibit 4 and 5 and the other materials produced by defendants in discovery, have you reviewed all of the expert reports from both sides?
A. I believe so, yes.
Q. Have you reviewed the depositions taken and transcribed in this case?
A. I have, yes. There's a lot of materials, so I've skipped some parts of it that didn't appear to be directly relevant to what I need to know.
Q. But you looked at all of them; is that correct?
A. Yes.
Q. Have you reviewed the defendant's answers to plaintiff's interrogatories?
A. Yes.
Q. Did you have occasion to attend an inspection of Maryland's execution area earlier this summer?
A. Yes.
Q. And as you understand it, during that inspection, was the pertinent equipment set up as it would be during an execution?
A. Yes. It was very helpful. They laid everything out, and they kind of walked us through to the best of their ability. It wasn't a real execution, trying to portray for us what, how things would be arrayed.
Q. Were you able to ask questions of the individuals who

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were assisting at the inspection about the equipment and the facility?
A. Yes, they were helpful.
Q. Have you reviewed, Dr. Heath, photographs that were taken at the inspection by a state designated photographer?
A. Yes.
Q. And were you able to determine, based on your review of the photographs, that those depict their subjects and the views and vantage points accurately?
A. Yes, they do. Cameras have these automatic light adjustments, and so sometimes the light levels are a little difficult to interpret, but overall, yes, they're accurate. They're photographs.
Q. Directing your attention, Dr. Heath, to plaintiff's exhibit 10 in your book, which is also depicted on the easel that I've set up in the courtroom, and the demonstrative is labeled plaintiff's demonstrative exhibit 2. This is plaintiff's 10.
THE CLERK: Okay.
Q. Can you generally describe your understanding, Dr. Heath, of the Maryland execution area?
A. There are areas that are in my view regarding witnesses and movement of people, and where the prisoner is held prior to the execution.
The two areas of interest to me are the what are

called the execution room and the preparation room or the injection room. And the prisoner is on a gurney in the execution room, and the folks who were injecting the drug working with the IV's are in the preparation room or injection room.
Q. And does plaintiff's exhibit 10, the schematic, generally accurately represent the layout of the execution area?
A. It fits my recollection, from the photographs, yes. The gurney looks larger to me than I remember it being in the room, but that just may be my memory.
Q. And on the subject of the gurney, Dr. Heath, is the orientation of the gurney approximately accurate as you remember it in terms of how it is oriented when the lethal injection execution take place?
A. It seems pretty close, yes.
Q. Now, I'd like you to turn to what's been premarked as plaintiff's trial exhibit 11 A.
Do you recognize plaintiff's exhibit 11 A?
A. Yes.
Q. Can you describe it?
A. It's a photograph that's taken from the room where the injections are done looking through the one-way mirror or window into the actual execution chamber, and one of the attorneys on your team is lying on the gurney, and she's been strapped down, and had a sheet put over her by the officers.

And that's to portray what things would look like during an actual execution.
Q. And is this a generally accurate representation of the window that looks onto the execution room and the viewpoint from the preparation room into the execution room?
A. Yes.
Q. Now, let me ask you to turn to what's been premarked as plaintiff's trial exhibit 11 D.
First looking at the partial rectangle, the uppermost portion of the photograph that is plaintiff's 11 D, is that the same window that we looked at a moment ago in 11 A from a somewhat different vantage point?
A. Yes, it is.
Q. What is the smaller rectangle below and somewhat to the left of the one I just mentioned?
A. That's the slot or aperture through which IVs are in place and the IV bags and tubing are all in the execution room and they start the IV's. And then once they're placed, once the IV's are placed, then those bags are handed through that aperture into the lethal injection room, the preparation

room.
Q. Finally, if you would, Dr. Heath, turn to plaintiff's trial exhibit 11 C, please. What does trial exhibit 11 C, plaintiff's 11 C depict?
A. This is, they've rotated the table now, because initially

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the table, before the execution is in a different orientation from how it's shown here, the table's now rotated, and you can see the IV tubing arcing from the slot where it enters the execution room and then going up to the right-hand side of the gurney.
Q. Looking at the piece of tubing that appears to be running along the floor, do you see that, doctor?
A. Yes. It wasn't actually touching the floor, at least I recall at least, it was an arc that went a little bit above the floor.
Q. Where is that running to?
A. Goes to the right side of the table, and they simulated that it would be attached to the right arm.
Q. And on the other side, does it go through the aperture that you described a moment ago?
A. Yeah, on the left-hand side of this picture, if the picture extended further to the left, you'd see the aperture, the slot that the tubing's coming out of.
Q. From any location, in either the execution room where the gurney's located, or the preparation room, can any person standing in either room see the entirety of the tubing either before the IV is connected or after?
A. No.
Q. Is the tubing as it's depicted in plaintiff's 11 C, to your recollection, an accurate representation of the tubing

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as correction officials told you it would be set up at a Maryland execution?
A. Yes, to photograph it the way they set it up.
THE COURT: So, Mr. Hut, the injection room where the chemical's mixed, correct? I want to make sure we have the terminology, injection room, execution room, execution room is what we're seeing now, correct?
MR. HUT: We are seeing the, both, Your Honor. Well, in the photograph, we are seeing the execution room, that's right.
THE COURT: And then the other room is the injection room?
MR. HUT: That's correct.
THE COURT: And the question is, from the injection

room, can the observers see the entire IV line?
MR. HUT: That's one question.
BY MR. HUT:
Q. And the answer to that, doctor, is?
A. Part of the IV line's one room, part of it's in another room, and then even from the injection room when you look out of that window, you can't see parts of this arcing tubing, that's here, or where it's going into the person on the gurney.
Q. So let's take it a step at a time. The Court's question was from the preparation room, can an individual standing in

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the preparation see the entirety of the tubing as it extends into the execution room and on to the site on the inmate, and what is the answer to that?
A. No, you can't.
Q. And from the execution room, can anybody standing there see the length of the tubing during the conduct of the injection?
A. You can see the length, if you stood where the camera is and a little bit to the right of where the camera is in this picture, I think, and if you got down on your knees, you could see, you wouldn't miss the part. Under the table, you might be able to see all the tubing that's in the execution room, but you would not be able to see them what's in the lethal injection room, because that's behind a wall.
Q. And what part of the tubing is in the lethal injection room?
A. The part in the injection room is the IV bag, the drip chamber, what are called the Y ports or injection sites, the flow regulator, all of that apparatus is in a separate room. So no one person can see everything of the layout. I guess bottom line, no one person can see it all.
MR. HUT: Unless Your Honor has any more questions,
I'm going to move to the next subject.
THE COURT: Just to clarify one point. From the vantage point in the injection room, doctor, can the person

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who is pushing the plunger in the IV see the site where the injection was in the arm, what's it call? I forget what that's called.
THE WITNESS: I am not sure you call it, insertion
site.
THE COURT: Insertion site?
A. They're able to see the insertion site on the left arm,

but not on the right arm.
THE COURT: And is the view of the left arm close enough so that the person who was actually pushing the plunger could tell whether there was I think it's call the extrava --?
A. Extravasation, infiltration. You need to be at the bedside to properly assess extravasation or infiltration. You can't do it from a distance. You can't do it through a window.
And also from reading this deposition, it's very clear that he doesn't know what those things are, they needs to look for them. He has no interest in those things, and so he's not capable of doing it even if he were able to see. He's the wrong kind of person, or he doesn't have the right kind of training to be tasked with that.
THE COURT: And, doctor, the two terms extravasation and --
THE WITNESS: Infiltration.

THE COURT: -- infiltration, if you could define those for the record, please?
THE WITNESS: It's somebody asked me about that before. We use those terms in medicine, but I never thought about their exact definitions. It's a good question.
The vaso refers to vessel, so extravasation means the fluid or drug is leaving the vessel, which it is not supposed to do.
And infiltration is probably a very similar thing, but it could also refer to when the catheter itself isn't in the vessel so the fluid never enters the vessel and therefore it can't extravasate because it was never in there in the first place.
First of all, when this entity happens, whichever one you want to call it, we don't actually know what's going on inside, we see it happening, but we don't know in most cases the exact reason it's happening, whether the vein's torn or the catheter has come out, we'll call it infiltration or extravasation. We don't know which one it is. We use it interchangeably.
THE COURT: But they both mean, extravasation and infiltration are indications that what is being injected is not going into the vein, it's going into the surrounding tissue?
THE WITNESS: That's exactly right. That's the

important part.

THE COURT: Good. Thank you.
THE WITNESS: Just to clarify, at least some of it was not going into the vein, some of it could be, but to have infiltration or extravasation, some of it is not getting into the vein, possibly all of it
BY MR. HUT:
Q. Dr. Heath, what are some of the causes of extravasation or infiltration in an IV?
A. There are many. The catheter cannot be in the vein or partly not in the vein or the vein can have a tear or hole or perforation in it. Those are the two main things that happen. The catheter can dislodge or move, and the fluid that's being injected does not either enter the vein in the first place or does not stay in the vein.
Q. And is the hole or tear in the vein, what are some of the causes of such a hole or tear?
A. Well, when we put the catheter in, it's put in with, it's a sharp steel needle that goes in, and the catheter is surrounding that needle. Once we're in the vein, then we pull the needle out.
But it's I think very common for that, sharp tip of that needle to perforate the other side of the vein while we're putting the catheter in. And so I think a lot of times veins have these small holes or leaks.

Q. Have you encountered situations in which the pressure of the drug infusion itself causes a leak or a tear in the vein?
A. Oh, yes. So sometimes when we're inducing anesthesia up until that time the IV has been dripping by force of gravity, which is a relatively low pressure. And we'll also have a flow regulator also lowering the pressure of the fluids as it reaches the catheter.
But then when we start injecting drugs,we're injecting pretty significant volumes, and that increases the flow through the catheter into the vein. And that's the time when we often see, or that's the time that we often first detect an infiltration.
Q. Is that relatively early in the performance of an infusion or an injection of a drug?
A. I think you can see it any time during the induction, start to see it right away or see it in the middle or see it at the end. The earlier you see it, the better, but you can see it any time. It can happen any time.
Q. In your opinion and experience is extravasation or infiltration a common phenomenon in the performance of IV administration?
A. Oh, yeah. I think sometimes when I give talks about these injections, I'll ask the audience how many folks have and an IV. 90 percent raise their hands. How many have to have the IV replaced because of problems with it? Probably

half the hands will go up. It seems about typical.
Q. Is that informal survey result consistent with your clinical experience, Dr. Heath?
A. Yeah. IV's, unfortunately, are not perfect things. Veins have thin walls, and IVs dislodge. We have to track them carefully and assess them carefully.
Q. Dr. Heath, based on your review of the documents and the depositions and your inspection in the execution area, can you describe for the Court your understanding of the principle or essential steps in Maryland's lethal execution procedure?
A. Sure. I think it's most informative about it in four steps. The first step is obtaining the intravenous access, and that's usually done by a peripheral access, peripheral vein, in the arm and the hand or occasionally in the foot.
Or it's done by central access, which is in one of the large veins that is close to the heart.
Once that stage has been accomplished, then that second phase is to provide anesthesia. The drugs that are used later on are capable of causing excruciating suffering, so it's important to have an anesthesia step in there. That's the second step. Every state is using thiopental to accomplish that.
Then there's the third step which does not kill the prisoner and it doesn't make it more humane, in fact, it puts

him at risk of being less human ,and that's cosmetic step that's done to make it more palatable for witnesses and execution personnel.
And then there's the last step, which is the administration of the potassium. That's the drug that actually kills the prisoners.
I know from reviewing a lot of EKG's, the prisoners are still alive until the potassium reaches their heart in a great majority of executions.
Q. Now, I want to turn, if I may, to some of the individuals who play key roles in administering lethal injection in Maryland. To do that, I would like you, Dr. Heath, to turn to PDX 1.
This is the chart, Your Honor, of the key players that we discussed in part yesterday and I used it in my opening statement.
Just to be clear to the Court and counsel, we're

not offering this in evidence. This is simply a demonstrative to facilitate some of the witness description and testimony.

I understand that I'm nonetheless to proffer a copy to the courtroom deputy, which I am now doing.

A. Do I have this?

Q. I believe you do, I believe it's in the back of the book you have, under demonstrative number 1.

MS. MULLALLY: Your Honor, the defendants object to this witness seeing the photos in this chart. We have no objection to the text of the chart, but we -- since Dr. Heath has not ever seen these people, we see no reason for him to see them at this time.

MR. HUT: He's already seen the videotaped depositions, Your Honor, with the express consent of counsel for the defendants.

Seen it many times, with their consent.

THE COURT: I will overrule the objection. I don't see whatever any harm in having Dr. Heath see the pictures, provided that he understands the ground rule and the protective order, and that he would not make any attempt, based upon his familiarity with these pictures, or with the depositions, to assist people in finding out, or identifying these individuals.

So --

MR. HUT: Excuse me, Your Honor.

THE COURT: The protective order states that the identities of these individuals, who are on the Maryland execution team, will be held within a certain defined group of people. The attorneys in the case, and I think on your side experts. I don't think Mr. Evans knows who these folks are, correct?

MR. HUT: I believe that that is true, with the

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exception of the one individual who performed an assessment of his veins.

THE COURT: That's correct. And he may not even know her name.

MR. HUT: I suspect he does not.

THE COURT: And so that that is the group of people who were permitted to know the identities of the members of the Maryland execution team.

So that the rule is Dr. Heath can't use the

information that he gained during the case to help anyone else identify the members of the Maryland execution team.

And you understand that, don't you, doctor?

THE WITNESS: I understand it very well, and I completely agree with the need to protect their identities.

THE COURT: Good. Just for the record, all that's been explained to you by Mr. Hut and his team?

THE WITNESS: Yes. And I also personally think that's an important thing.

THE COURT: Good. So that with that understanding, I'll overrule the objection.

BY MR. HUT:

Q. Dr. Heath, did you read the protective order in the case?

A. I did, yes, some time back, I don't remember the details.

Q. Did you sign an acknowledgment acknowledging that you had read it and agreed to be bound by its terms?

A. Yes.

Q. And you affirm your intention to be bound by its terms once again here under oath, correct?

A. Correct.

Q. Was the chart that you're now looking at, plaintiff's demonstrative 1, prepared, doctor, at your direction, pursuant to your general supervision?

A. Yes. It's very hard to keep track of who all these folks are because of the code names that are being used for them. So this is helpful.

Q. Directing your attention to the person depicted in the left-hand column at the top row, under key members of the injection team, called Contractual Team B, do you recall either by reference to the demonstrative or otherwise what her essential role to the Maryland lethal injection?

A. Yes. From reviewing the videos and looking at the depositions, it's important to understand there's ambiguities and contradictions in the descriptions of what's going on if these executions.

But in general, she is responsible for the apparatus IV sites that are in the execution room, making sure those are working properly.

And then during the execution, she's actually, she was in the past in the preparation room, although that's now been changed. And her role there to me is less clear. There

seems to be ambiguity among people's expectations of what her

role is.
THE COURT: I'm sorry. If you could say again what she does? She actually administers or puts the needle in the arm, correct?
THE WITNESS: Right. She's in charge of what we call the insertion site end of things, and but then in the past, she is at a certain point left the execution room and gone into the injection room, and she's no longer positioned where she can do that, perform that task. That has now been changed.
THE COURT: To what?
THE WITNESS: The memorandum from August of 2006 now says that she will stay in the execution room and monitor those IV sites
BY MR. HUT:
Q. Just to perhaps clarify, I hope, if you turn, Dr. Heath, to the second page of the plaintiff's trial exhibit 5, focusing on paragraph 3, in exhibit 5 on the second page, are you there? You can look on your monitor, I think we've blown that up now.
(Pause.)
Q. Does paragraph 3 on the second page of plaintiff's trial exhibit 5 and, do you see it on your monitor, Dr. Heath?
A. Yes, I see that, sorry. That's what I was talking about,

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yes.
Q. Does paragraph three provide for the presence of one or more lethal injection team members in the execution room for the remainder of the injection?
A. Yes.
Q. And the paragraph to which I'm directing you now does not state in terms that the person who will perform that function is Contractual Team B. What's the basis for your understanding that she will in fact perform that function?
A. I can't recall if it was in her deposition or I'm not sure where I have that understanding from, but it is my understanding. I'm sorry, I can't give you a citation for it.
Q. Do you recall whether it was in the second of the two depositions that she gave in the action?
A. I wouldn't want to say -- it would make sense that it was, that the change occurred and she was deposed again and she'd be doing that, but I'm not certain of that. I'm just kind of --
Q. In addition to determining the IV sites and making an insertion into the IV site on the inmate, to your understanding, did Contractual Team B also perform an assessment in January of this year of Mr. Evans's veins in person?
A. Yes.

Q. Now, I want to direct your attention to the next picture in the left-hand column of Injection Team E on the demonstrative chart of the personnel.
Did you review the deposition testimony of Injection Team E?
A. The video clips and I guess you'd call it transcripts.
Q. And before following up with respect, let me go back to Contractual Team B for a moment, based on your review of materials pertinent to Contractual Team B, to your understanding, does she have a medical background?
A. Yes.
Q. What is her medical background?
A. She's a certified nursing assistant.
Q. Shifting gears now back to Injection Team E, based on your review of his deposition, does Injection Team E have a medical background?
A. Virtually none. I think he at one point had to take a first aid course or something in the distant past.
Q. Do you recall in what room in the execution area Injection Team E stands during a lethal injection?
A. He's standing in front of the window in the preparation room, or the injection room, looking out on to the gurney in the execution room.
Q. When the IV apparatus and set up itself has been brought from the execution room back into the injection room, which

team member has the responsibility for monitoring the apparatus itself?
A. That's Injection Team E.
Q. And before it is brought back into the injection room to commence the injection itself, and while it is in the execution room, to your understanding, which team member has responsibility for monitoring the apparatus there?
A. That's the Contractual Team B.
Q. Now, I'd like to explore with you a bit functioning of the IV apparatus. And to facilitate that, Your Honor, I thought it might be good for Dr. Heath to step down from the stand so he can have some hands on contact with the machinery itself, if that's satisfactory to the Court.
THE COURT: Certainly.
Q. If you could step down, doctor, and go over to the machine, the apparatus.
Could you point out for the Court, and this is demonstrative PDX 13 for identification, also not being offered in evidence, Your Honor, just to illustrate.
What is the drip chamber on an IV bag, doctor?

A. I'll just straighten this out. So this part here is the trip chamber, it's this clear plastic area that we fill the bottom part of it with IV fluid. And then there's a tube where the fluid comes out. If you didn't have that, you can't see fluid flowing through this tubing. It's clear and

there's no way of knowing if anything's happening there. So the drip chamber allows us to approximate or assess how fast the fluid is flowing.

THE CLERK: Counsel, if I could I want to --

BY MR. HUT:

Q. In your opinion, Dr. Heath, is it important to monitor the drip chamber during the administration of anesthetic drugs?

A. Yes. It's critical.

Q. And why is that?

A. Again, it's the only way of us knowing how the fluid is flowing and that's an all important thing.

Q. And who, if anyone, in the Maryland execution team monitors the drip chamber during an injection?

A. I believe, well, from what I saw, you wouldn't be able to do it in the past, because the lights were so dim, I could not see what was going on in the drip chamber looking as closely as I possibly could.

So if that was representative of the lighting, which we were told it was, no one was that able to do it in a meaningful way before. And he also just wasn't proficient in IV technology. So I don't know if he knew to do it.

Now they've put up a light there, and I think it's -- I guess I'm assuming I don't know, but I assume it would still be Injection Team E, but I haven't actually seen that

articulated. But I assume that would be added to his job.

Q. To your understanding, Dr. Heath, do the defendants propose to augment the lighting in the injection preparation room?

A. Yes. I think my reading was they'd actually already installed a 24-inch lighting system that would be very close to where the drip chamber is located.

Q. Have you had a chance to view the area with the newly installed augmented lighting?

A. No. That's happened since we all did our inspection of their death facility.

Q. Are you therefore able to reach any opinion concerning the adequacy of the lighting in the injection preparation room to monitor the IV apparatus and the lines?

A. They're smart people. I assume they set it up in a way

they can now address this concern. The concern that I still have, though, is that these one-way mirrors that are important to them for maintaining anonymity depends on how much light is on each side of that mirror.

So I'm concerned when they turn on this new bright light next to the drip chamber that in the witness area people would now be able to see into that room because now the brightest light is in, next to this IV system. And I know that the anonymity is important to the folks there.

And so I'm worried they might still be adjusting

light levels in various places, and I'm not sure what the end result of that is.

Q. Dr. Heath, what connects the various segments of tubing by which the IV bag is ultimately connected to the IV site and catheter in the inmate?

A. Nowadays people use this kind of tubing called a lure lock. These pieces of tubing can be separated. They come in separate packages, and we attach the tubing like this. And then lock this movable part to look it in place.

Q. If Your Honor would like a closer view, I can come up, if you me to approach and carry the tubing or we can leave it here.

THE COURT: No, that's all right. I've seen them before, thank you.

Q. Sorry.

Can IV tubing, Dr. Heath, in your opinion, leak when connected with lure locks?

A. Definitely.

Q. Have you had experience yourself, or witnessed yourself a lure lock leaking in the course of your practice?

A. Absolutely.

Q. Are you aware of literature that documents the leaking phenomenon with lure locks?

A. I found an article about this. I have to say I was surprised somebody thought it was worthy of publication, but

it is such an obvious thing to all of us folks who practice with these things.

But somebody actually to my surprise they published an article saying that this can happen.

Q. If you could perhaps, Dr. Heath, leave that for the moment. I want you to come back to the apparatus, or perhaps just turn around and have a look in your notebook at plaintiff's trial exhibit 23.

Is plaintiff's trial exhibit 23, Dr. Heath, the article to which you just made reference --
A. That's right.
Q. -- what is the journal Anaesthesia?
A. They spelled in England they spell anesthesia a little differently than we do, but it's the main English or British anesthesiology publication
Q. Is it a well respected journal in the anesthesiology field?
A. Yes, it is.
Q. Is it a peer-reviewed scientific journal?
A. Yes.
MS. MULLALLY: Objection.
THE COURT: I'll overrule the objection.
Q. And if you could --
THE COURT: Well, let me ask this, is this a study or a document that you have relied upon in forming the

opinions that you're expressing in this case?
THE WITNESS: I think it would be accurate to say it bolsters my opinions this is something, any practioner, we all know lure locks can leak. I was -- for the purposes of this case, since the claims have been made they don't leak, I was trying to find something beyond my opinion that would bolster, in my opinion, some non interested party or whatever, I didn't think I'd find anything because it's such an obvious thing.
I was actually surprised to see there's an example that's very germane to the litigation about lethal injection, which is that a lure lock leaked while they were using that tubing to give anesthetic, and the reason they realized that it was leaking is because the patient wasn't deeply anesthetized as they thought they were.
So that's a really good example of why we need to assess anesthetic depth, even though we set things up and test them, it's complicated and doesn't always work right. So they were inducing anesthesia and the patient wasn't properly anesthetized.
MS. MULLALLY: Objection.
THE WITNESS: And they --
THE COURT: I'll overrule the objection. In other words, you've studied this article, the journal is one that is respected in the field of anesthesiology, and what is

reported is consistent with your own experience and the experience of other anesthesiologists with respect to leaking lure locks?

THE WITNESS: That's exactly right.

THE COURT: Thank you.

BY MR. HUT:

Q. In your opinion, Dr. Heath, is there anything the State of Maryland can do to minimize leakage from a faulty or disconnected lure lock?

A. There are many things that need to be done, one needs to, but the most important thing I would say is to be have the full system, the full IV tubing all in the room at the bedside, which is always how we induce anesthesia.

And also be not just hoping that everything works properly, but actually testing the prisoner or the patient assessing their anesthetic depth to make sure things have in fact worked properly.

Q. Now, to follow up on the first part of your question, if the apparatus were at the bedside, gurney side in this case, would that mean that fewer tubing segments would be required?

A. Oh, absolutely. You could have you know only one extension, only needs to have one attachment point, if you were right there as opposed to that multiple attachment points.

Q. If you had fewer segments and fewer attachment points

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would that minimize the risk that something could go wrong?

A. It certainly reduces it. Each point is a potential problem zone, and so they should not be gratuitously placed. They should only be used if they have to be used.

Q. Now, if you could perhaps once again, Dr. Heath, step down from the witness stand, with the Court's leave, and show the Court the pressure infusion -- well, let me ask you, is there a pressure infusion bag on the apparatus that we've marked for identification as PDX 13?

A. Yes, there is.

Q. Could you show the Court what it is?

A. Okay. So the great majority of times when we're having an IV set up, the great majority of times it's set up like this with the saline bag, the drip chamber, and then the tubing. But there are certain circumstances where we want to get the fluids in very quickly, and we're busy. It's usually trauma cases or cases where there's lots of bleeding like liver transplants, big cases.

We'll use a pressure bag to help get the fluids in.

We hang the fluid here, and this pressure bag has like a pillow, inflatable pillow, and we pump that full of air. There's a pressure gauge right here. That indicates when we've reached the proper pressure.

It's pretty high pressure, 300 millimeters of mercury, takes a while to get there.

Q. Is 300 millimeters of mercury, let me ask the predicate question.

In the executions of Steven Oken and Wesley Baker, did Maryland use a pressure infusion bag to administer its lethal injection?

A. Up until now, they've used pressure infusion bags.

Q. So in the Oken and Baker execution, they did?

A. I'm not sure if it's all of them. I know some of them, I know Oken, they were planning to use it. I believe they used it, yes.

Q. And when they used pressure infusion bag in the Oken execution, you mentioned 300 millimeters of mercury, is that the level in your understanding based on your review of the materials to which the pressure infusion bag was set?

A. Yes. They initially though it was 600, but that can't be have been right. I'm sure it was 300.

Q. Did you see any reference in the materials, including plaintiff's trial exhibit 4 to filling or increasing the pressure in the bag to the green line?

A. Right. These pressure bags come with a couple of different kinds of devices, either a gauge like this, or a little thing kind of like a tire pressure gauge that pushes out, but, yeah, we filled them to a green line which is 300 millimeters.

Q. And if I do this properly to keep the courtroom dry,

could you aiming the IV into this trash can? I'll bring it as close as I possibly can. Can you give the Court some idea of the propulsion with which the fluid is injected at that pressure level of 300 millimeters of mercury?

A. Sure. There's no catheter on here right now. That makes it -- I can do it both ways. That makes the difference. The probably would be more actually accurate to have the catheter on it.

Q. This is why I tried to make my way in the law and not in medicine.

In addition to the fact that -- I can't stand the sight of blood.

Q. I think they're both good choices.

So this is a typical catheter, there are different sizes. I think this is an 18 gauge catheter. So this is the flow regulator that one can use to control the rate of flow of the IV.

Q. Is that sometimes called a flow clamp in the materials

that you reviewed in connection with Maryland lethal injections?
A. I think this would be more of a flow clamp, but again the folks who are using these systems aren't using a lot of the terminology properly. I can't always telling what they're referring to.
Q. The device you initially pointed to has had a wheel type?

A. This has a wheel so you can vary the flow rate and the blue thing has a slot you can pull off that clamps it. They use them interchangeably, which isn't real right.
If I hold this up, you'll see how the fluid comes out when you have a pressure bag on. I think it probably would go, you know, all the way across the room.
Q. But I couldn't contain the flow across the room in the trash can, I don't believe.
THE COURT: Now, doctor, the 300 is it millimeters of mercury, is that the force that it, I remember back in high school, to move a column of mercury of 300 millimeters up an inch or something like that?
THE WITNESS: So people measure use millimeters of mercury as they put a mercury in a tube, and if you apply pressure to the bottom of the tube, the more pressure you apply, the higher you'll raise it.
So 300 millimeters is a third of a meter, about it's about a foot of mercury, mercury's very dense, so --
THE COURT: Good.
THE WITNESS: The best way to tell, if you want feel this bag, you'll get a sense of how tense it is, I can bring it over.
THE COURT: I can see.
THE WITNESS: Okay. It's really tight.
BY MR. HUT:

Q. Dr. Heath, did you participate in litigation concerning Maryland lethal injection in connection with the then contemplated execution of Steven Oken?
A. Yes.
Q. And how about in connection with the planned execution of Wesley Baker?
A. Yes.
Q. Did you also participate in that litigation?
A. Yes.
Q. In those litigations, did the State of Maryland defend its use of a pressure infusion bag in executions?

A. I remember criticizing it. I'm not sure I remember exactly what all they said, if anything to the criticism, but they kept using it. They didn't change their ways. So I guess they felt it was whatever, they kept using it is all I can say. I don't remember what they said about it, if anything.
Q. Do you recall reviewing the deposition testimony in this case of Past Team Member M?
A. Is he the person who first wrote out the protocol?
Q. He is, I believe, and if you look at the chart of personnel, that's demonstrative one at the end of the book, does that help refresh your recollection about the role the Past Team Member M played?
A. Yes, that's the person I'm thinking of.

Q. Did you review his deposition?
A. Yes.
Q. Do you recall the justification that he gave, if any?
MS. MULLALLY: Objection.
Q. About why --
THE COURT: Overruled.
Q. About why the pressure infusion bag was included in the protocol?
A. He basically copied the protocol from Delaware, and they weren't using one, but he was advised by somebody to add one in to speed things up.
Q. Does it refresh your recollection if I remind you to testify that it was to make the rate of flow even?
MS. MULLALLY: Objection.
A. I think it would be helpful.
THE COURT: Overrule the objection.
A. It would be helpful to see the actual transcript of that, if you need, they wanted a instead speedy flow of fluid.
Q. If hypothetically he described its purpose is to make the rate of flow even, in your opinion, is that a correct justification for the use of a pressure infusion bag?
A. It's ridiculous.
Q. Why is that?
A. I'm not sure where to start, but, first of all, there's no need to make the flow of fluid even. And if there were,

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this would be a ridiculous way of doing it. I'm not sure where to start. It's so far off base I can't really attach it to any good reason.
Q. As you understand the State of Maryland's stated intent as reflected in plaintiff's exhibit 5 with respect to future executions, does the state intend to cease use a pressure

infusion bag?
A. Yes. They're not going to use it anymore, at least for now. That's their current plan.
Q. Now, earlier you showed the Court I think you described as the flow regulator, the wheel that functions in part to do that; is that right?
A. Yes.
Q. And does it refresh your recollection that it is referred to in plaintiff's trial exhibit 4 and in the testimony as the flow clamp?
A. I saw it referred in different ways. I can't remember who used it in what ways. But I think it's -- I think we know what they're talking about.
Q. Who, if you recall, Dr. Heath, principally operates the flow clamp in the preparation room during a Maryland lethal injection?
A. That's the Injection Team E.
Q. And, again, is it your recollection that he has medical training?

A. I think one or both, one or several of them were state troopers who in the distant past had something like first aid training. But apart from that level of training, none of them had a medical background.
Q. Dr. Heath, why don't you resume your seat on the witness box, which I'm sure you'll be more comfortable than causing you to stand there. I think I've largely concluded with the apparatus.
And if you would take from the edge of the table the notebook that contains some of the exhibits we'll be looking at.
Directing your attention to the bottom picture in the far left-hand column, the demonstrative chart of the personnel, and focusing on Contractual Team A, what is his role?
A. He's the person who actually pushes the plungers of the syringes.
Q. Does Contractual Team A have a medical background, to your understanding?
A. He doesn't.
Q. Did you review the deposition transcript and videotape clips of Contractual Team A?
A. Yes.
Q. Do you recall in what room he --
THE COURT: I'm sorry. He does or does not have

medical training? I thought he didn't.

THE WITNESS: It's a little hard for me to keep clear. Some of them had first aid training in the past as part of their career, but nothing current and nothing beyond that.

THE COURT: Good. Thank you.

Q. In what location does Contractual Team A stand during a Maryland execution?

MS. MULLALLY: Objection, Your Honor. I don't believe this witness can testify to things that Contractual Team A rightfully should testify to. They're hearsay to this witness. And he's basically telling the Court what people said in their deposition.

We've already I think gone over the issue about the deposition designations. I think that he can testify that he reviewed his deposition, and that he can answer questions based on that. But I really don't think it's proper for him to say what Contractual Team A testified to under oath in his deposition.

THE COURT: Well, the reason in my view it's permissible is essentially this: The doctor's been qualified in three areas; anesthesiology, medicine, and then lethal injection procedures.

In order for him to express opinions, he has reviewed a field of information, which is included the

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deposition transcripts of the people who are on the team.

And so he's permitted to say why, you know, the basis for those opinions. So it's important for me to know, if he's going to express an opinion that, for example, that the medical personnel are unqualified to carry out this procedure, I need to know what he's basing that opinion on.

And, likewise, if he's going to express an opinion that the physical logistics of the delivery system is inadequate, I need to know the assumptions, what he's basing his assumptions on.

If it turns out that his assumptions are simply wrong, for example, if he has misunderstood, misperceived the testimony of any of these people, in this case, we're talking about a Contractual Team A, that's a matter that you can clear up on cross-examination.

And if it turns out that he is mistaken in his factual assumptions, then that's something that I would need to know, but it would be properly brought out on cross-examination.

So that my view in ruling is that his testimony in this area was proper and admissible, and that you're certainly at liberty to cross-examine on it.

MR. HUT: And we do intend to adduce this evidence as well through Contractual Team A and others. We are not offering this witness's recollection of the locations as

substantive evidence. We'll do that, as the Court notes, and as Miss Mullally's suggests, through the appropriate witness.
THE COURT: Right. That's the other point I failed to make, which I think Miss Mullally was explaining, the doctor's testimony in this case is not substantive evidence. So that if the doctor testifies, I read the transcript and the transcript said that the Contractual Team A had a first aid degree or took a first aid course back in 1985, the doctor's testimony on the stand is not direct evidence of the medical qualifications or disqualifications of Contractual Team A, but it does come into evidence to provide the assumptions on which he is testifying.
Mr. Hut, does that sound right?
MR. HUT: It does to me, Your Honor, thank you.
THE COURT: Thank you
BY MR. HUT:
Q. Dr. Heath, can you turn to what I suspect is the very last document, or close to the last document in your book, which is demonstrative 16. Do we have PDX 16?
Do you recognize -- well, let me ask this, doctor, was PDX 16 created by us at your request?
A. Yes. I had a plan that was like this one here, it didn't show any locations of people, and so I drew out my best understanding of where each of the personnel --
MS. MULLALLY: Objection.

A. -- are standing on a piece of paper. And then somebody, on a computer, put these colorful dots and all. But all of those arrows and circles and letters are what I drew out.
MR. HUT: And again, Your Honor --
MS. MULLALLY: Objection.
MR. HUT: -- to address what Miss Mullally may be rising to say, we're not offering this in evidence. This is just to illustrate in part the doctor's testimony in this.
THE COURT: Good. I will permit it as such with that understanding.
BY MR. HUT:
Q. Direction your attention to the pink dot in the right-hand corner of the preparation room as depicted, that says ITE, what does that pink dot represent, doctor?

A. That's where Injection Team Member E is. That's my best understanding of where he's located during the actual injection of the drugs.
Q. And right next to that is a tan dot, that's -- has the legend CTA. What does that signify?
A. So that's Contractual Team Member A. He's the person who's got the syringes in his hand, and is actually injecting the drugs. It's a little confusing. You would think Injection Team E would be the injector, but he's actually controlling that flow system in the IV tubing. Contractual Team A has the syringes is injecting them.

Q. Moving from the dot slightly away and not in front of the window, light blue circle CTF?
A. That's Contractual Team F, and she's a doctor who's there to pronounce death.
Q. Did you review her deposition, doctor?
A. I did, yes.
Q. Does she have any role other than pronouncing death in Maryland execution?
A. Well, she observes the EKG, and then based on that observation, tells the folks when she believes the prisoner is dead based on the EKG, and then they clear the room and she goes in and actually pronounces death.
Q. Let me ask you this, is she involved in any way in obtaining IV access?
A. No. She's not involved in any of the other stuff, just the decision about death itself.
Q. Is she involved in any way in mixing the drugs?
A. No.
Q. Is she involved in any way in administering the drugs?
A. She has nothing to do with any of that stuff.
Q. Is she assigned or is she involved, too, or involved in any way of monitoring the depth of anesthesia?
A. No. And she doesn't know how to.
Q. Based on her deposition testimony, as you recall it, does she have any training in anesthesia?

A. In medical school, we spend time doing rotations where we spend a couple of weeks or a month in different medical specialties, and everybody spends time, or virtually everybody I think spends time in the operating room learning a little bit about what anesthesiology is, because as a physician, many of our patients have surgery and undergo anesthesia, people need to understand a little bit about what that is. She had that exposure, but nothing more.
Q. What, if any, medical specialty does she hold?

A. She's an internist, internal medicine.
Q. As a doctor of internal medicine, would she be qualified to monitor depth of anesthesia?
A. Not just on that qualification alone. Some internists might, you know, be an attending in an intensive care unit and have undergone training to do that, it would be better suited for it, but she doesn't have anything like that. She said she doesn't know about that area.
Q. Do you recall from her deposition what she testified to as the duration of her anesthesiology rotation in medical school?
A. I think she said a month.
Q. Are there any circumstances according to her testimony in which she would monitor the depth of anesthesia of an inmate during an execution?
A. No.

Q. To your understanding, and based on your review of the discovery materials and deposition, does any member of the execution team, other than the doctor, Contractual Team B, have any medical background?
A. Not apart from what I was talking about before where there's perhaps remote first aid training.
Q. Now, moving to the left on PDX 16, is a yellow dot.
THE COURT: Before we move, why we don't take the mid-morning recess. It's quarter of 11. We'll come back at 11:00. Thank you.
(Recess.)
THE COURT: Please seated. Mr. Hut, whenever you're ready.
MR. HUT: Thank you, Your Honor.
BY MR. HUT:
Q. Dr. Heath, just before the break, we were going through the labels that have been placed on demonstrative number 16, and I was about to ask you to explain the legend on them and the significance of the yellow dot labeled ETC?
A. That stands for Execution Team Commander.
Q. And how about the dots immediately in front of what appears to be on the other side of a wall from execution team commander, the green dot and the lavender dot?
A. EC is Execution Commander as opposed to Execution Team Commander. Then the PTZ is Past Team Member Z.

Q. And is it your understanding their contemplation was to be stationed in the execution room for the scheduled execution of Vernon Evans in February?
A. Yes.

Q. Now, you show a red dot in two places connected with a hashed line, and both red dots bear the label CTB.
Can you explain the significance of the two red dots connected with the dashed line?
A. When I was drawing this out, CTB is Contractual Team B, the woman who puts the IVs in. And what I was doing a bit of mixture of things. I was trying to depict that so she spends some time in the execution room right next to the gurney and the prisoners. She's it putting in IV's, and then in the old executions, she would leave the room and come into the door and go into the preparation room, and then she'd be somewhere in the preparing room. But there was discorded testimony about where she's located in there. So I put an arrow and a question mark. I'm not really sure where she is, how close to the wall, or the window she is.
Now, or because of the change from August of 2006, she no longer leaves the room and goes into the injection room, the preparing room. She stays in the execution room, just showing a bunch of different things as reasonably as I can on one picture.
Q. I'd now like to explore, Dr. Heath, the nature of the

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drug Maryland has chosen, since the Court has some familiarity with this from the hearing in January, and in other ways, I want to do this as briefly as I possibly can.
In brief, as the Court knows, the plaintiff contends that the drug choices are poor. And I'm thinking that the Pavulon and potassium chloride in particular threaten grave harm, and better drugs in any event in the categories generically specified by the statute could have been chosen.
MS. MULLALLY: Objection. Is that a question? I'm sorry.
THE COURT: I'll overrule the objection. Keep going, please.
BY MR. HUT:
Q. Dr. Heath, can you just describe for the record, or remind the Court the three drugs that are used in Maryland's lethal injection and in what order and in what doses they are administered?
A. Sure. It's like every state has now, is now doing it's three drugs. First one is an anesthetic drug, thiopental, also called pentothal. That's the anesthetic drug.
The second drug is the paralyzing drug. It's called Pancurium Bromide, also called Pavulon.
Third drug is the drug that actually stops the heart and cause death. That's potassium chloride. We mostly

call it potassium.
Q. How about the doses in which Maryland injects each of these?
A. Maryland is intending to give three grams of thiopental, the anesthetic drug, and 50 milligrams of pancuronium, the paralyzing drug, although they actually talk about giving 50 milliquivalence, but I'm pretty sure they mean 50 milligrams. And the potassium is 50 milliquivalence.
Q. Let me ask you, Dr. Heath, to turn in the book, if you can, to plaintiff's trial exhibit 18. And let me ask you, Dr. Heath, whether you recognize exhibit 18?
A. Yes.
Q. What is it?
A. This is the first page of the package insert for thiopental or pentothal.
Q. If you page through the hard copy of your book at page 18, or tab 18, the end copy runs beyond the first page?
A. Yes, it's got a total of 10 pages.
Q. Please turn to page 2 of exhibit 18. Are you with me?
A. Yes.
Q. Do you see a line just below the top of the page that says contraindications?
A. Yes, I do.
Q. What is a contraindication?
A. It's sort of the opposite of an indication. Indication

is the reason we to do something, to do a procedure or to give a drug, to perform some medical act. And a contraindication is a reason to not perform that act, to not give a drug or do a procedure.
Q. Do you see just below contraindications the line that states absolute contraindication?
A. Yes.
Q. What is an absolute contraindication?
A. So in medicine, we're always balances risks and benefits, and we don't need to do we only do a procedure if it has potential benefit, we have a mindful of contraindication and absolute contraindications would be one we would virtually never do it if the absolute contraindication applied.
And that would be in distinction between a relative contraindication. But we'd try not do it. But if we needed to, we could go ahead and do that.
Q. The first absolute contraindication, absence of suitable veins for intravenous administration.
Did I read that correctly?
A. Yes, you're reading that correctly.
Q. Do you have an understanding as to what that absolute contraindication means?

A. I think it's pretty self-explanatory. Don't use this drug if you don't have a good vein to inject it into.
Q. Your understanding what could happen if sodium pentothal

were administered to someone without a good vein, without suitable veins?
A. If there's -- if there's leakage, what we're talking about extravasation, infiltration. The drug doesn't all get delivered through circulation, and some of it ends up in surrounding tissue.
Q. What could happen in that circumstance in a lethal injection procedure?
A. Well, first of all, the drug isn't being delivered properly into the circulation, into the brain.
Secondly, it's in the surrounding tissue, where it can cause damage.
Q. Now, with respect to the first of those, it has been suggested earlier in this proceeding by Mr. Oakley that if the anesthesia was not successfully delivered into the system, then it would surely follow that the succeeding drug --
MS. MULLALLY: Objection. We object to what Mr. Oakley said in a previous proceeding in this case
THE COURT: I'll overrule the objection.
Q. Then the hypothesis went, then the succeeding drugs also could not be delivered so there's no need to worry about the paralytic effects of the Pavulon and the pain effects of the potassium.
Do you -- in your opinion, is that a correct

hypothesis?
A. No, he's wrong.
Q. And why is that?
A. Well, there are a number of ways wherein there can be a problem getting the thiopental in, but you still get enough on the other drugs, for example, pancuronium to cause complete paralysis. He doesn't seem to know those circumstances exist, and so he's making an incorrect assertion.
Q. Now, have you read the expert reports that have been supplied in this action by Dr. Thomas Scalea and Mr. Benjamin Laughton?
A. Yes, I have.
Q. And based on those reports, and assuming those gentlemen were to testify to the opinions reflected in the reports later, is it your medical that Vernon Evans could be a person

described by the first of these absolute contraindications?
A. Well, first of all, I should say that any person can have difficult IV access. So if you're asking me is he a person who could have difficult IV access, yes, he is, because anybody can.
But on top of that, he's in a class of people who have a major risk factor for being problematic, IV access, and problems for giving drugs to intravenously. He has a history of intravenous drug abuse.

And then one has to elevate the concern even higher when you have, you know, credible people, skilled and proficient people assess him, and be concerned that there may be a problem with access, or that if access is achieved peripherally, that it's going to be a delivery problem.
So I haven't seen Mr. Evans myself. I've never had the opportunity to assess his system, but he can't discard any of those things.
If I were in a hospital and planned to anesthetize a patient and I had that information, that would hugely influence my plan.
Q. Do you see the further down the page, page 2, of trial exhibit 18, the line warnings?
A. Yes.
Q. Could you read the second sentence under warnings, it begins "this drug should be administered"?
A. The one that says this drug should be administered only by persons qualified in the use of intravenous.
Q. And why, is it your opinion that this is an important warning?
A. Yes, thiopental's a complex drug. Intravenous anesthetics tend to be complex drugs. You have to understand how to use them. And that understanding comes not just from book knowledge, from reading the science about them, but also from having practical experience using them, sort of like

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riding a bicycle. You would have had have done it, you had have to read about it and have done it in order to be qualified.
Q. In your opinions, what types of persons are qualified in the use of intravenous drug like thiopental?
A. Well, I think any physician could get qualifications as a practical matter, the people who almost all thiopental was used by anesthesiologist, it's not used very often now, but

when it was it was almost anesthesiologists, but occasionally an intensive care unit would use it, or neurologist who wanted to induce a coma, I think they used to use it occasionally.

And a neurosurgeon working with a neurologist, they would together agree that the patient should be placed in a thiopental coma, but it's --

Q. How about certified registered nurse anesthetist?

A. Yes. Sorry. Also nurse anesthetists. When we use thiopental, they also used it a lot.

Q. In your opinion, are the individuals who administer the thiopental during Maryland lethal direction qualify in the use of intravenous anesthesia, such as thiopental?

A. They're clearly not very qualified.

Q. Are you aware, Dr. Heath, of any problems that have been encountered in mixing sodium thiopental when used for lethal injection?

A. Yes.

Q. Could you describe those?

A. In Missouri --

MS. MULLALLY: Objection.

THE COURT: Overruled. You may answer.

A. Unclear exactly what happened the persons recollection was blurry about it. But there was some range in the way of the thiopental was applied, and when he tried to adapt to that change, he -- in mixing the powder into the solution, he couldn't get it all into solution. And so he made a change to the protocol in terms of how much he was giving, because he couldn't get it all into solution.

Q. What was the change in protocol that he effected?

A. He reduced the amount of thiopental that was being administered.

Q. Briefly, Dr. Heath, is what is pancurium bromide, or Pavulon?

A. So that's a drug that interferes with the communication between nerve endings and muscles. It blocks the signal that goes between a nerve and a muscle, and that results in paralysis of all of our muscles that we normally can control of our own volition.

Q. Are the muscles that are paralyzed, do they include the diaphragm and other respiratory muscles?

A. Right. Even though we don't have total control of our

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respiratory muscles, if we try hold our breath, eventually our brain will force us to take a breath if we don't want to,

but apart from that we have great control, using it to generate speech. And pancuronium blocks those muscles completely.
Q. If the respiratory muscles in the diaphragm are paralyzed, and that is not remediated, what will happen to the individual?
A. They can't breathe, and they will suffocate.
Q. And how long would it take for suffocation caused by Pavulon at the doses specified in Maryland lethal injection to cause suffocation, if not immediate?
A. That sort of a difficult question to answer. It would vary from person to person. There's no -- I'm not aware of any science that's been done to answer this question, so I'm just going to based on first principles and common sense about these drugs.
He'd stop breathing. Most people lose consciousness. They try very hard to draw breath, but they can't, go through a period of excruciating desire to inhale, and they can't do it.
And then they start to black out for lack of oxygen, and that would probably happen after a couple minutes.
And then after further time, the heart is not --

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does not have enough oxygen, so it would stop pumping blood and then that would be death.
Q. Does Pavulon affect consciousness or the ability to feel pain?
A. Not at all. It doesn't even, the brain is surrounded by membranes, which we call the blood brain barrier, and Pavulon really doesn't enter that. Even if it did, there's no nerve muscle connection there. So Pavulon has no effect on consciousness or experience.
Q. Let me ask you this, then, in your opinion, could it occur that an individual could be suffocating from paralytic effects of Pavulon while remaining aware of what was happening to him and unable to signal for help?
A. With certainty, that's exactly what would happen if you gave Pavulon to an unanesthetized person, they would become paralyzed, but they would be completely conscious of that experience and of the suffocation until they blacked out from lock of oxygen.
Q. Are you aware of any instances in which that has occurred?
A. Are you talking executions or in medical settings or both?
Q. Either.
A. Well, certainly, it occurs if people are paralyzed but awake during surgical procedures. Generally, they're on a

ventilator, so they don't actually -- they wouldn't be suffocating.
But they're in their own form of unpleasantness. I will guess we would say they are in extreme pain. They're awake and can feel the pain of surgery. Even though that pain can be very great, they're completely unable to move or indicate in any way they're awake.
Q. Is that called intraoperative awareness?
A. Yes.
Q. Does pancurium bromide, in your opinion, Dr. Heath, serve as medical purpose in Maryland lethal injection executions?
A. None whatsoever. It serves the opposite of the medical purpose. It gratuitously increased the risk of the procedure being inhuman and preventing people from recognizing it and doing anything about it.
Q. If there's no medical purpose, to what purpose, if any, in your understanding, was Pavulon used?
A. There is a concern that witnesses would observe movement during death, what we call agonal movements or terminal movements, and those movements are real. They do occur in many patients, and there's every reason to think that they occur in some executions. They've been seen in a number of execution. So I think they're a fact that they occur.
And the thinking is that by stopping those movements, the execution will be more, you know, palatable or

less disturbing for witnesses.
And in some jurisdictions, I can't remember if it's in Maryland, it's also done to make it more psychologically tolerable for the execution staff. But I can't remember if that was articulated here or not.
Q. In lay terms, are agonal and terminal movements that you mentioned things like jerking and spasms and twitching?
A. Exactly, yes.
Q. Do you think -- and this may be implicit in your last answer, but let me bring it out, in your opinion, does jerking or do seizures necessarily occur during all lethal injections in the absence of pancurium bromide?
A. My opinion is based on speculation and conjecture, which is based on my medical knowledge and understanding of these drugs, because executions haven't been --
MS. MULLALLY: Objection, Your Honor, if his opinion is based on speculation and conjecture. I understand he has many credentials, but I don't believe he's allowed to speculate to this Court.
Q. Let me rephrase the question and see if I can put this better.

Based on your medical knowledge and experience, is it your opinion that absent USE of pancurium bromide jerking and spasms and twitching would necessarily occur in all executions?

A. I don't think it would occur in all executions. But clearly it would occur in some of them.
Q. Are you familiar, Dr. Heath, with principles of medical ethics?
A. I'm not an expert in it, but all physicians get some exposure to that.
Q. Based on --
A. Not during just during our training, but during our practice.
Q. Based on your exposure during the course of your practice, can you tell the Court whether medical ethics speak to what physicians should do for the benefit of loved ones at the time of the death of the -- impending death of a close relative or a friend, when that individual about to undergo death may suffer for twitching or jerking or movement?
A. First of all, we don't let them suffer from twitching, but they sometimes exhibit it. The medical ethics speak to a common situation in intensive care units, where we determine that further carries futile and undignified and improper, and in discussions with the family, we decide that it's appropriate to withdraw supportive therapy, since that therapy is keeping the person alive when we withdraw it, they will die, sometimes quickly and sometimes over a period of hours.
And many times the family wants, or usually they

want to sit at the bedside in the intensive care unit and hold the hand. It's a very sad time and an important time for everybody.
And we spend a lot of time bringing the family up to speed, telling them what we think is going to happen. Our best guess, at the array of different things that can happen, they want to know how long will this take, will they suffer, and we talk to them about that.
One of the things we tell them is that, as the person's dying, especially when the heart, when the circulation gets very sloppy, and the heart stops, there can be these movements, agonal or terminal movements, and it's important to explain to the families that these are not representative of suffering or anything like that, but they're just a natural thing that happens when an animal or

person dies.
Q. Based on your understanding, acquired in the course of your practice, is it medically ethical in that circumstance to administer a neuromuscular blocking agent like pancurium bromide to the individual on his current death bed?
A. No, that would be against my ethics. But it's also been articulated by committees that have reviewed this.
Q. And as with end of life loved ones, in your opinion, could witnesses to an execution, or for that matter execution staff, be told that there might be jerking or spasms or

twitching in connection with death during an execution?
A. Oh, yes. In some states I know they are told that, but in some states they do see twitching and jerking and convulsions, so they tell people ahead of time to be prepare for it.
Q. Let's turn to potassium chloride, is it as administered in Maryland lethal injection intended to cause cardiac arrest?
A. I can't exactly speak to the intention, but it was just copied, my understanding from, the Delaware protocol, which was itself copied. I'm not sure I'd use the word intentional, but that's the effect it achieves, it's the agent that stops the heart.
Q. In ordinary medical usage would a large dose of potassium chloride ever be administered to an unanesthetized patient?
A. Never.
Q. Why not?
A. First of all, it would kill them if it's given rapidly.
Secondly, it would, if it were high concentration, it would be agonizing.
Q. What is the mechanism or mechanisms by which potassium chloride would inflect agonizing pain if unanesthetized while administered?
A. It's similar how it stops the heart. The heart is an electrical organ and so are nerves. The way they fire their

electrical signals is using ions, potassium and sodium ions, to make those electrical signals.
And if a high concentration of potassium ions are outside of a nerve cell or outside of a cardiac cell, they'll interfere with electrical activity of that cell, they could fire very excessively.
So if it's a heart cell, it means the heart basically seizes up. If it's a nerve cell, it makes the nerve cell fire off signals as though it were being very

stimulated.
Q. Are there nerve cells or nerve fibers on the inside of a human's vein?
A. Yes.
Q. And can you describe generally the quantity?
A. Well, veins are richly innervated and can deliver a tremendous amount of pain. I think people scream from drugs that are causing burning in their vein.
Q. In lay terms, and perhaps you've just said it, what would the administration of a large dose of potassium chloride feel like to an unanesthetized individual?
A. Well, in these kind of concentrations that we're talking about here, it would cause maximum stimulation, maximal pain that the vein can deliver. I think they'd scream unless they were incredibly stoic.
Q. Was anyone involved in Maryland execution, Dr. Heath, to

your understanding, to ensure that an inmate is sufficiently anesthetized prior to the administration of potassium chloride?
A. Nobody's doing that.
Q. Now, based on your review, Dr. Heath, of the documents produced by the state here in discovery, and the deposition testimony, have you acquired some familiarity with the history of Maryland's lethal injection protocol?
A. A little bit of familiarity, yes.
Q. Have you reviewed the deposition testimony of Past Team Member M?
A. Yes.
Q. Do you recall what Past Team Member M's involvement was, if any, in the creation of the lethal injection protocol?
A. I think so, yes.
Q. What was that?
A. He went to Delaware, and they gave him their protocol, their written protocol. And then he copied that word-for-word into the - to make the initial version of the Maryland protocol, and then that has since been modified.
Q. At the time he created the Maryland protocol in the way you just described, based on your review of his deposition, did he consult with any doctors?
A. No.
Q. I think you testified, but let me just establish again,

if I can, have you studied the history of lethal injection in the United States?
A. I have, yes.
Q. What have you done to do so?

A. It's not well-documented anywhere. And so I you know corresponded with the actual individuals who, to my understanding, and to their representations, are the people who created it.
Q. Based on your review of that history, do you know whether the drugs used in Maryland are used by other states?
A. Yes, they are.
Q. In light of the testimony that we expect to hear later in this proceeding, and I apologize if I've asked you this already, are you familiar with the Ohio protocol?
A. Basic outlines, yes, you know I haven't studied it specifically for this case, but I know what its main outlines are, yes.
Q. Does Ohio use the same three drugs as Maryland?
A. Yes, it's basically the same thing.
Q. To your recollection, based on your review of the deposition testimony of Pat Team Member M, was there any review process -- let me withdraw the question and ask it this way.
In connection with the adoption of this three-drug protocol in other states before it was done in Maryland, to

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your understanding, was there any review process by additional medical doctors?
A. No. When I first tried to find out what was happened, I assumed there would be some sort of panel of experts who sat down, or committee, and talked it through and come up with some good way of doing it.
In fact, it's the opposite. There was never any, you know, people putting their heads together to talk about the pros and cons of different methods and to come up with what's being used now.
Q. Did the State of Maryland ever subject its lethal injection protocol or procedures to professional reviews by doctors?
A. Not that I can see.
Q. Who, Dr. Heath, is Ray Chapman?
A. Jay Chapman.
Q. Jay Chapman? Excuse me.
A. Jay Chapman, he's a physician who was the Chief Medical Examiner in Oklahoma, when Oklahoma brought back the death penalties I think in the 1970s.
And he was asked by a legislator, a state legislator, to help him devise a method of executing people by lethal injection.
Q. Is Jay Chapman a doctor?
A. Yes. He's a medical examiner, a pathologist.

Q. And did he devise for Oklahoma the same three-drug injection as used in Maryland?
A. Well, what happened is he went over to the legislator's office, and they took out a yellow legal pad, and he just dictated the statutory language. And it's actually he just mentioned two drugs. He says a continuous infusion of ultra-short acting barbiturate, which is be thiopental, and then a chemical paralytic. He didn't talk about three drugs, just two drugs. That became -- that was adopted word-for-word as the statute.
Q. Have you communicated with Dr. Chapman concerning his views about lethal injection as practiced today?
A. Yes.
Q. Did Dr. Chapman indicate to you in any way his view of whether lethal injection as practiced today is a good thing?
MS. MULLALLY: Objection.
THE COURT: I'll overrule the objection.
A. Yes, he did.
We talked about what the problems are. Yes, the answer is yes.
Q. And did Dr. Chapman indicate whether, if he knew today or if he knew at the time, he advised in connection --
THE COURT: Well, what did he say?
A. Pretty long correspondence, but if I could just say the thrust of it is is that he thought this would be done by

people who knew what they were doing. I think at one point he used the word "idiots," if he knew it was being done by idiots, he wouldn't have set it up this way or wouldn't have supported it, or something like that. I forget the exact, exactly how he was saying it.
But to my mind was he thought it would be professionals doing it. It didn't cross his mind that it wouldn't be experts.
He also said, in retrospect, the choice of thiopental was a mistake. I think he meant because it's not being done by experts.
Q. Dr. Heath, as lethal injection is performed in the states that use it, to your knowledge, are there physicians who participate in the process?
A. Yes, there are, in some states.
Q. Can you tell the Court what you know about that participation?
A. It's a pretty big subject.
Q. Let me ask it this way, have you seen any articles or come across any literature that has detailed the participation of individual doctors in the lethal injection process?
A. Sure. I've read articles. I've talked to doctors who have been involved. I've read depositions or transcripts of

physicians, lots of -- there's a lot of information about

that.
Q. Are doctors involved in states in the placement of a central line?
A. Definitely, yes.
Q. What states, if you know?
A. Oh. Georgia, Missouri, Texas, Arkansas, Indiana. I'm missing a lot. It's commonplace. I just want to make sure I don't misstate anything. But it's common for central lines to be needed for states to have needed central lines, and they're done by doctors. Arizona.
Q. Based, Dr. Heath, on your review of the depositions in this case, do you believe that the execution team in Maryland has any medical knowledge about the drugs used in their respective effects?
A. No. They either testified that they don't know, or they say something that's flat-out incorrect. I'm not sure which one is worse.
Q. Do the people who administer them, in your opinion, understand what the drug do?
A. No. Same thing, they either don't know, or they've got it backwards. And, again, I'm not sure which one is worse.
Q. And based on your review, do any of the members of the team know why the drugs were selected?
A. No.
Q. Now, in your opinion, Dr. Heath.

THE COURT: Before we move away from that subject,
I wasn't able to write fast enough.
This series of three questions concerning the knowledge of the people administering the protocol in Maryland, and the three subjects were what again, doctor? You said they didn't know what the drugs do?
THE WITNESS: I said you get different answers. In
the deposition the attorney would say can you tell me, do you know what pancuronium does? Sometimes the person would say I don't know. Or sometimes they would say I think it numbs the body, which is terrible. That's the opposite of what it does. It paralyzes the body, but leaves the body completely able to sense pain.
THE COURT: So that the people who administer, based upon the depositions that you reviewed, the members of the Maryland execution team, either did not know what the three drugs did medically, or they were incorrect?

THE WITNESS: Right.
THE COURT: They either said I don't know, or they were incorrect?
THE WITNESS: That's exactly right.
THE COURT: Good. Thank you.
BY MR. HUT:
Q. Now, Dr. Heath, as a general matter, is it your opinion that it is important for a person to have training in general

anesthesia if she or she is going to induce anesthesia?
A. Absolutely, yes.
Q. And why is that?
A. Well, in the essential part of inducing anesthesia is being able to assess the anesthetic depth as it's changing, as one's proceeding through the induction.
And as one's determining the induction it has been satisfactory and complete, the assessment of anesthetic depth requires training.
Q. During and after the administration of an anesthetic agent, do you and other anesthesiologists monitor the depth of anesthesia in a patient?
A. Yes.
Q. What do you do in order to do that?
A. It's a little bit difficult to describe is what we call ineffable, how do you ride a bicycle, you say you turn the pedals and move the steering wheel, but it's really more than those things.
We're standing right at the bedside and are actually at the head of the bed, in most cases, and we have an array of monitors that are providing us with a continuous stream of information about the patient's vital signs and other status. And we're also observing what the surgeons are doing, and making assessment of how stimulating that will be. And then looking for responses that we see in those monitors.

And then whenever we're able, which is in the majority of cases, we're assessing the patient's actual skin and appearance, we can assess the moisture on their skin because people who are paralyzed but awake sweat a lot, Or start to sweat, and that moisture, as it comes on, can be a warning sign they're getting light or not anesthetized properly.
We look at the pupils, look for movement in unparalyzed patients. And, obviously, it would be completely wrong to use movement as an indicator in a paralyzed patient,

which most of my patients are paralyzed.
So, basically, we're integrating and synthesizing many different streams of information and constantly evaluating to come up with a real time rolling assessment of where the patient the is in terms of their pain and anesthesia.
Q. Do you look for signs that patient may not be anesthetized?
A. Absolutely, yes.
Q. And what are those signs?
A. Things like a high heart rate, elevated blood pressure, the moisture of the skin, the size of the pupils, movement, lacromation, lack of formation of tears in the eyes.
We have monitors that look at the electrical activity in the brain. They can be useful adjuncts to help

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us assess the depth, a range.
Q. What does lacromation indicate, in particular.
A. When I see a patient forming a tea while they're under my care, while they're paralyzed I'm extremely concerned that they're too light.
Q. How, if at all, do you confirm that the requisite plane or depth of anesthesia has been achieved?
A. Well, we never know for certain. The only -- we're just -- we're using our training and skills and information to come up with our best assessment of what the depth is. And it's partly art, partly science. We do our best.
The only way we know if we do a post-operative interview with the patient, we ask them what's the last thing you remember?
They'll say I remember going to the operating room, or something like that. And we'll ask what's the next thing you remember? They'll say next thing I know I was in my hospital room and my sister was sitting next to me.
Even that doesn't prove they didn't have awareness. People can have awareness but then not remember it. That's the best we can do.
Q. This may be self-evident, but let me ask it anyway. In your opinion, is it necessary to monitor the depth of anesthesia before forming a potentially painful procedure?
A. It's essential, yes.

Q. And why is that?
A. If you don't know what the depth is, then you can't make your best educated assessment of whether it's adequate for

the procedure that's about to occur.
Q. With respect to your earlier testimony that the dose of thiopental used in Maryland executions is three grams, is that a relatively large dose?
A. Yes, it is.
Q. In your opinion, is it necessary to monitor the depth of anesthesia even when a comparably large dose is being administered?
A. Absolutely.
Q. Why is that?
A. Because our goal is to get the right anesthetic depth. And while we do things that we think are going to lead to that state, they don't always do that.
So since it's easy to assess depth, it doesn't harm the patient to do it. There's no medical cost to doing it. We do that.
Q. In your opinion, Dr. Heath, must monitoring the depth of anesthesia be done by someone with appropriate medical training?
A. Well, yes. Otherwise, it's not meaningful. You can't do this if you don't know how to do it.
Q. In your opinion, doctor, is the selection of a

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barbiturate that is described as an ultra short-acting like pentothal, is a good one for the lethal injection process?
A. I agree with Dr. Chapman, the person who conceived the protocol that in retrospect, given that we what we now know how lethal injection is being practiced, it was not a good choice.
Q. Why?
A. Because it can wear off quickly, and there are alternatives that don't wear off quickly that take a very long time to wear off.
Q. In your opinion, does the statutory prescription for ultra short-acting barbiturate affect in any way the need to maintain an adequate depth of anesthesia?
A. I'm not sure what you mean. You're asking me to interpret the statute?
Q. No. Let me try again.
What does the statute's prescribing an ultra short-acting barbiturate mean for the need to maintain an adequate depth of anesthesia, in your opinion?
A. Well, the statute dictates whatever statutes do. It specifies, instructs that a continuous infusion of an ultra short-acting barbiturate be given.
Dr. Chapman, the person who conceived this, we know was cognizant of the short-acting properties, which is why he wanted it to be flowing, you know, continuously.

So if there was some problem with administration, it would be less likely to wear off, because you're giving more, if the IV's working properly. I'm not sure if that's what you're asking about.
Q. I think so. Let me move to a related but different subject.
Based on your review of the execution manual and the review that you've made of the depositions, does the Maryland lethal injection procedure specify that a medically qualified person monitor the anesthetic depth of an inmate?
A. It doesn't mention anesthetic depth anywhere. It certainly doesn't specify that somebody be charged with ensuring that the depth is adequate.
Q. Based on your review of the testimony, and without regard to what the manual or protocol specifies, is anyone on the execution team, as you understand it, actually assigned to monitor the depth of anesthesia?
A. Nobody's assigned to do that job.
Q. To your knowledge, does anyone in execution has training in anesthesia?
A. Nobody does, except for the Contractual Team I think one month in medical school.
Q. In your opinion, do these factors raise reasonable concern about the practice of lethal injection in Maryland?
A. Yes, they do.

Q. Why?
A. Well, if you're going to use potassium, which is extremely painful, you have to make sure that the person's adequately anesthetized, unless you want to treat the person worse than you treat a dog.
Q. At New York Presbyterian where you work, Dr. Heath, would a certified nursing assistant ever be tasked or assigned with monitoring the depth of anesthesia of a patient?
A. I'm not sure if New York State has -- whether or not New York State has somebody who's termed a certified nursing assistant. But I would say this, only -- the only people who we would ever allow to monitor anesthetic depth is somebody under general anesthesia would be an anesthesiologist, attending anesthesiologist, or anesthesiologist in training, or a certified registered nurse anesthetist, which is a special kind of nurse who's highly and specifically trained to work anesthesia field.
Q. And you read the deposition testimony of Contractual Team B; is that correct?
A. Yes.
Q. Did you read the portion of the deposition in which she described her medical training?

A. Yes.
Q. Did you read, or have you reviewed the CV of Contractual Team B?

A. Yes.
Q. In your opinion, is Contractual Team B a certified nursing assistant qualified to administer or monitor anesthesia?
A. Not at all.
Q. I'd like to now show you a small portion of a videotaped deposition of Contractual Team B. And perhaps the way do this, can we move the monitors just away from the courtroom so that individuals in the back are not able to see the monitor.
MS. MULLALLY: Your Honor, the defendants would object to this.
THE COURT: Well, we talked about this a couple days ago. Can't you arrange the monitors, Mr. Thompson, so that only I can see and the doctor can see?
THE CLERK: I can arrange so that you can see, the three monitors that are working is where counsel is, this one, and yours.
MS. MULLALLY: Your Honor, that is not the basis, I'm sorry, of the defendant's objection.
It's -- we're not objecting to who can see. I think we've already covered that. We're objecting to that being the basis. He needs to testify based upon his recollection.
He hasn't been asked if he needs his recollection

refreshed in any way, and what we're concerned about is this snippet of deposition will be into evidence in the case and that the Court will consider it, whereas it's really, if at all usable only for the witness to review if he cannot recall what he had to say on this point.
THE COURT: Well, Mr. Hut, the purpose for playing the part of the deposition is what again?
MR. HUT: Well, I think it is to ask him his opinion about the implications of that testimony. I think that it is the usual function, Judge Legg, of an expert, to provide opinions based on his understanding of the facts.
This testimony is part of the factual record in the case. We're not offering to put it in at this time as evidence. It will either come in because Contractual Team B

will testify consistently in their deposition or if not she will be impeached with her deposition and her prior inconsistent statement would then come in under Rule 801(a).
But I think this is -- we're not going do this in excess of -- there may be five or six times as we go through the testimony of Dr. Heath where I would like him to view the deposition and to tell the Court in his opinion what its implications are.
THE COURT: Good. I'll overrule the objection. Say again who's going to be able to see the picture?
THE CLERK: You'll see -- actually, I can just turn

off the others.
MR. HUT: If we turn off our three monitors, it can be left on for the witness, for Your Honor, for Mr. Thompson and Miss Short, and I think this is off, anyway.
Is that satisfactory?
THE COURT: That's satisfactory.
(Pause.)
(Tape played)
BY MR. HUT:
Q. Dr. Heath, my question to you is what, if anything, in your opinion, does this testimony say about Contractual Team B's understanding of anesthesia?
A. It's very rudimentary. She asked to discuss anesthetic depth. She relies on movement, things that require control, voluntary movement.
And in most of our patients, when they're paralyzed, that's the one thing you can't rely on. It will completely deceive you if you try to rely upon that.
Q. Dr. Heath, to your recollection and understanding, does Maryland's lethal injection protocol call for the injection of the drugs in any particular rate or speed?
A. It does, yes.
Q. Do you recall what rate is prescribe in the protocol?
A. Between one to one and a half cc's per second.
Q. And is that the same to one to one and a half milliliters

per second?
A. That's the same thing.
Q. In New York Presbyterian, are drugs or fluids ever injected at a fixed or prescribed rate?
A. I wouldn't do that for the induction of general anesthesia. There are some drips that we would set up at a prescribed rate, but for injecting from syringes by hand,

never.
Q. Tell the Court why you would not do that for the injection of anesthesia?
A. We -- when we inject drugs, we're doing it at the right rate for that person. It's hard to describe. It's a combination of knowing about the IV, the size of the catheter, whether their veins are thin or likely to rupture, the pressure feeling from the syringe.
All we can say is we give it at the right rate. We do from experience. It's a little hard to put into words better than that.
Q. As you're administering anesthesia, as you just described it, would you vary, would you have occasion to vary the rate at which you're injecting the anesthesia depending on the manifestations of a particular patient?
A. Well, yes. If I'm injecting the drug and I start, and I feel back pressure as we call it on the syringe plunger, it's not advancing as smoothly as I expect, first of all, I need

to investigate what the cause of that is, but it would influence how much pressure I'm willing to apply.
Q. Are you able to say whether you consider the rate of 1 to 1.5 cubic centimeters a second to be a fast rate of speed for administration of an anesthetic drug?
A. It's relatively fast. Again, depends on the individual person, the IV's, overall conditions.
Q. Would you consider it fast in a person in whom venous access might be problematic?
A. If you're concerned, in particular, you're always concerned of IV, but if you have a person where it's of particular concern, you're very tentative with the injection. The important thing to do is get the drug in, and moving quickly is very rarely a consideration, but there are exigent circumstances where we need to move quickly. But in a great majority, we don't. We could never sacrifice security for speed. Only in exigent circumstances would we sacrifice security for speed.
Q. Would one to one and a half cubic centimeter, would be fast for a person with intravenous drug use?
A. I think that would increase the chance of blowing their vein. I would be much more tentative if I was concerned about their venous system.
Q. Does the size of the IV catheter matter in determining the proper rate of flow or injection for an anesthetic?

A. It's hard to describe this. There's -- you don't want to

give it too fast. You don't want to give it much too slowly, but giving slowly is rarely, if ever, a problem, only a problem during certain kinds of inductions do we need to do it quickly.

But in the normal scenario, giving it too slowly is not going to be a problem, so we give it at a reasonable speed for that person.

We would not specify a specific rate. I've never told a resident give it at a half cc per second or 1 cc per second or anything like that.

Q. Let me ask you this question, have you encountered situations in which you encounter resistance to the administration of anesthesia?

A. Where the plunger doesn't advance as easily as I was expecting, absolutely, yes.

Q. If you're encountering resistance, would you push harder on the plunger or less hard?

A. I would push less hard. But, first of all, I would have to determine why I'm encountering that resistance. That's a cardinal sign of a problem, potential problem, and so you can't just ignore it and keep pushing.

But the best answer to your question I would certainly push less hard.

Q. And you reviewed the deposition testimony of Contractual

Team A, who pushes the syringe plunger in Maryland?

A. I have, yes.

Q. Do you recall that Injection Team A testified that he always pushes the drug within a certain window of time?

A. Right. He's aiming for that rate they're specifying.

Q. Do you recall whether he testified concerning whether he ever varies the rate of injection to make it faster or slower, depending on circumstances?

A. I think he's trying to keep the rate about the same, but he has to push harder. He says he pushes harder if he feels more resistance, because he's clock watching, in effect. He's trying to get the job done in a certain amount of time.

Q. In your professional opinion, is pushing harder to achieve the injection in a certain amount of time, if resistance is encountered, the correct thing to do?

A. It's ridiculous. And dangerous.

Q. Do you recall testimony by Contractual Team A that he adjust the pressure on the syringe plunger on the Baker execution because the state used a smaller catheter in that execution?

A. I recall something along the lines of that, but not to the specificity that you're asking about. Give me a transcript, that could help.

Q. Perhaps we can use a video clip for a moment, I think, Your Honor to refresh the recollection of the witness. This

is --
MS. MULLALLY: Objection, Your Honor.
Q. Page 80, line 13.
THE COURT: Overruled. Go ahead.
(Tape played)
BY MR. HUT:
Q. Based on his description of his actions in the Baker execution, do you believe that he pushed harder or less hard on the syringe plunger given the use of a smaller catheter?
A. So overall both from him and from Injection Team E, they're -- when things, when they get a counter-resistance or slowdown, they fight against it. They push harder against it. They tried to speed thing up.
And that's backwards from what one needs to do, especially if you're doing this from a different room, which you ought not to be doing in the first place.
Q. Do you recall the testimony of contractual B concerning the use of a small catheter with Wesley Baker?
A. Yes.
Q. Do you know the reason she gave for use of a small catheter?
A. I don't remember the exact wording, no. She felt it was indicated, but I don't know exactly what the thinking was.
Q. Does it refresh your recollection if I say it was because he had a history of intravenous drug use?

A. I have to -- I don't specifically recall that you'd have to show me the transcript so I can comment for the Court. Or video, something.
Q. Let's see if we can refresh your recollection with a bit of her testimony.
(Pause.)
MS. MULLALLY: Your Honor, I'd like to make a continuing objection to the playing of all of these video snippets.
THE COURT: Certainly, that would more efficient. I'll be happy to give you a continuing objection.
MS. MULLALLY: Thank you.
(Tape played)
MS. MULLALLY: Your Honor, I would object, then, to Mr. Hut's characterization of Baker having -- Baker having been in an IV drug abuser. I don't believe there's been any testimony in that snippet.
MR. HUT: I agree. It doesn't seem to be the correct clip. We'll see if we can correct that over the

lunch break. I'll pass to another question.
THE COURT: Why don't we do this, since you're moving to another subject, it's 12:10, we'll break for lunch at 1:00, but why don't we just take a 10-minute recess just to stretch? Thank you.
(Recess.)

THE COURT: Please be seated. Mr. Hut, whenever you're ready.
MR. HUT: Thank you, Your Honor.
BY MR. HUT:
Q. Dr. Heath, do you recall from testimony that you have reviewed whether Injection Team E communicates with Contractual Team A if the latter pushes the drug by pressing the syringe plunger?
A. Yes. There is that communication, yes.
Q. If Contractual Team A is encountering resistance, do you recall what Injection Team E testifies, that Injection Team E would do with the flow clamp, that wheel that you showed the Court earlier?
A. Show Injection Team E, even though he's not injecting, he's controlling the IV flow system, he has his hand on the flow manipulator the thing you can turn to control the rate of flow.
And if that's the flow that's going through the tubing, and then at the same time, the other gentleman is injecting with the syringe into that tubing.
And so Injection Team E, paradoxically, will speed up the flow of fluid, if Contractual Team A says, the syringe injector says he's having a hard time injecting, he'll speed up the flow of fluid from the IV bag toward the prisoner.
Q. When you say paradoxically, in your opinion is this what

one ought to do if one is encountering resistance?
A. It makes no sense at all, within the whole context of this thing isn't sensibly structured, it makes -- it's a further lack of sense.
Q. And if it turns out that the drugs were easy for Contractual Team A to push, that there was relatively less resistance, what does Injection Team E testify that he would do with respect to the flow regulator?
A. Then he would slow it down.
Q. In your opinion, is that the correct approach?
A. It's all incorrect, and but, yes, but within that incorrect structure, it makes further nonsense.
Q. Are you familiar, Dr. Heath, with the deposition

testimony about how Maryland went about choosing the rate of speed, the one to 1.5 cc per second?
A. I don't recall exactly where it came from. What I remember there was testimony about that.
Q. Let me ask you this, do you recall from the testimony whether the rate of speed, 1 to 1.5 milliliters per second was specified in the original lethal injection protocol?
A. It was not. It was added in later on.
Q. Is it your recollection, or do you recall how the Division of Correction arrived at that particular rate?
A. There were conversations about it, but I don't recall the exact nature.

Q. Let me see if I can show you a portion of the deposition testimony from Past Team Member Z, and see if that reflects your recollection.
This is from the transcript of past team member Z page 44 lines 2 to 19.
(Tape played)
Q. Dr. Heath, in your opinion, would a certified nursing assistant, like Contractual Team B, advise on the rate of injection for anesthesia at the hospital in which you work?
A. It's absurd. No, she will not.
Q. Is a certified nursing assistant, like Contractual Team B, qualified in your opinion to select a greater flow for administration of anesthetics?
A. Not at all.
Q. Do you recall how Contractual Team B in her deposition characterized a drug injection rate of 999 or approximately a thousand milliliters per hour?
A. She said that was a fast rate.
Q. Approximately how many milliliters per second does a thousand per hour or 999 an hour translate to, if you know?
A. That there're 3,600 seconds in an hour. So if giving a thousand cc's in those 3,600 seconds, it's a little less than a third of cc per second. It's much -- it's about three to five times slower than what they're giving in their lethal injection context in Maryland.

Q. Do you recall what Contractual Team B said about, or said in characterizing 1 to 1.5 milliliters per second in terms of whether it was fast or slow?
A. I don't remember her exact wording. If you can show me her transcript, that would help me.
Q. Can we show page 91, line 8 through 91, line 12?
THE COURT: You may.
(Tape played)

Q. Are her answers with respect to a thousand milliliters per hour and 1 to 1.5 milliliters per hour consistent?
A. No, she's contradicting herself. She says a thousand cc's an hour is fast, but that's again between one third and one fifth the rate that she then characterizes as slow. So it makes no sense.
Q. Now, let me direct your attention, Dr. Heath, back to plaintiff's exhibit 5, that's the August 16th, memorandum concerning contemplated changes in the Maryland protocol that we looked at earlier.
With respect to the change that is set forth in I believe paragraph 3, on the second page of plaintiff's exhibit 5, provided for the presence of an execution team member, in the execution room, in your opinion, and assuming that change were implemented, is it a good change?
A. I'm sorry. I'd have to catch up with my book here. Could you repeat the question? I'm sorry.

Q. Let me rephrase the question.
Directing your attention to the change specified in paragraph 3 on page 2, which provides or contemplates the presence of a person on the execution team in the execution room with the inmate to monitor the IV, in your opinion, is that a good change?
A. It's a mixed thing. On the one hand, it's better than the absence of the person in the room. That's a very bad situation. But to the extent that it would instill a sense of false confidence that now everything has to go properly and, therefore, we don't have to worry about misadventure anymore, it's a bad thing.
And she's the wrong person to be in the room. She can be in the room, I suppose, but there needs to be additional people with additional knowledge and experience.
And so having her -- if it gives anybody comfort, then that would be a bad thing, because it would be false comfort.
Q. As you understand the change contemplated to the protocol that's set out in that paragraph, would she be assigned to monitor anesthetic depth of the inmate?
A. No, nothing like that.
Q. To your understanding, is there anything in the revised protocol or anything that you heard about in testimony concerning any contemplated changes that would provide or

specify any person assigned a task of monitoring anesthetic

depth?
A. Nobody's doing that. Or at least there's no mention of it.
Q. Does the paragraph 3 of the exhibit 5 specify the qualifications of the execution team member, who is to be in the execution room with the inmate?
A. It does not.
Q. Based on the inspection that you made this past summer of the execution area, Dr. Heath, do you believe that the person who injects the drug from the preparation room would be able to communicate with a person in the execution room charged with monitoring the inmate?
A. It would be very difficult. The person in the execution room can't see through that one-way mirror, or at least they couldn't where they put up this new light. I don't know what the new light, how that it's going to influence the properties of the mirror, then you have so you can't use visual communication. There's that slot, but you can't get good sound through the slot. And they're supposed to be quiet anyway.

And then you have these lights that are -- just give very minimal information and are hard for me to understand exactly what they're doing as one goes through the protocol.

Q. Can you describe for the Court how you understand the lights that you just referred to, to work?
A. Yeah. It's a little complicated, but, basically, there's a light switch in each of the two rooms, and there's a light that can be either red or green in each of the two rooms. And so at various times, a red light or a green light has various meaning.

So if everybody's on the same page in terms of where you are in the process, and one has the correct memory of what those lights mean at that time, then they are conveying certain information, like this drug is flowing, or this drug is complete.

But they have no ability to communicate anything more nuanced than that. Like I'm worried there might be infiltration or the back pressure on the syringe doesn't feel right, could you please feel the IV site? It's obviously impossible to convey anything of that complexity this context.
Q. Why, Dr. Heath, in your judgment, is it important to have a more nuanced atmosphere, flexible system for communication than is provided for by the lights?
A. Well, because these are exactly the kind of things that can and do go wrong during the use of IV's and during the injection of anesthetics through IV's. And that's why we stand in the same room, and we have -- we can see the full

extent of the tubing, and we can see the insertion site.
We can touch it, which helps feel, helps give us indication if it's infiltrating or not. We don't need to communicate because it's ourselves doing it, either one or two of us are there at the bedside doing it. So there's no problem of separate rooms and between which communication needs to flow.
Q. During the inspection you made of the execution area, Dr. Heath, and before the change announced that may be implemented for the next execution, did you form an opinion concerning the adequacy of a level of lighting in the execution room?
A. Yes, I did.
Q. And what are your opinions in that respect?
Let's first take the level of lighting in the execution room, where the gurney's located. What was your opinion based on your inspection concerning the level of lighting there?
A. You say during the initial part where they're placing the IV's? My sense of the lighting was it was perfectly fine. Sometimes it's helpful to have a bright light shown on the area where you're trying to get IV access, but, in general, it was perfectly reasonable.
Then during the execution, they had turned down that light a little bit and the folks in the injection room

are having to look through a one-way mirror.
So I'd say it's on the dim side, especially since they're trying to evaluate IV insertion sites and look for leaks and stuff like that. It's on the dim side.
Now, in terms of inside the actual injection room itself, that's way too -- or was way too dark.
You never, unless you absolutely had to, tried to do something complicated like induction of anesthesia or administering of these drug, handling different syringes and drip chambers and stuff under those circumstances. That was way out of line.
THE COURT: I'm sorry. The light where was too low?
THE WITNESS: Inside the preparation room.
THE COURT: During?
THE WITNESS: While they're doing the execution, I think before the witnesses come in, that's when they lower the light in that room so that the one-way mirror does its trick.
And they have to keep that light dim so it looks like a mirror to the witnesses. And from that point on, it's

too dark for the job they're doing, that they were trying to do.
Now they've put additional lighting in there.
Q. And when you say out of line, have you had opportunity to

view the level of lighting in the room where the injection is actually made, in other state facilities?
A. Yes.
Q. How does the level of lighting in the Maryland injection preparation room compare to the level of lighting at those other state facilities in comparable areas of the execution locale?
A. It was lower. So that the lowest I've seen, I don't know what it is now, because they've put this other additional light in place.
Q. Dr. Heath, in your opinion, is it important to monitor the IV sites on a person that are chosen by the medical staff for venous access during the induction of general anesthesia?
A. Yes, it is, very important.
Q. And why is that?
A. Because for the induction works properly, that's dependent of the IV's working properly and IV's often don't work properly, we need to be very much on top of that problem.
Q. When you say IV's often work properly, what do you look for when monitoring the IV sites?
A. Leaking infiltration or feeling the back pressure on the syringe. We're integrating all that information because we're standing right next to our patient.
Q. Now, I believe you testified earlier in response to

question from the Court that extravasation and infiltration were approximately synonymous; is that right?
A. I think most of us -- when we're working in the OR, we use the terms fairly interchangeably.
Q. Would you expect someone who professes familiarity with establishing IV sites and determining venous access to know the word extravasation?
A. Yeah. That's a word, that's an important medical word, if you're a person who works with IV's.
Q. What does unfamiliarity with the word extravasation tell you, if anything, about a person's supposed qualifications to establish IV sites?
A. Well, it's not a good sign. People can know something without knowing all the language about it, but in general, not a positive sign, put it that way.
Q. Does extravasation always quickly cause visible swelling

at the IV site?
A. No.
Q. If someone like Contractual Team B, for example, says that extravasation will always cause visible swelling, what, if anything, does that tell you about her competence to establish and monitor reliable IV sites?
A. She's getting a very rosy view of things. It would be nice if there were some glaring reliable sign that infiltration's occurring. That would help us to not miss

infiltrations, but that's not the case. Infiltration occurs, we don't see it, and sometimes it's because there's not much visible evidence there.
You need to feel, or we find out because the drugs are already starting their proper effect, or through some other means.
There's a variety of ways it comes to our attention that we have that problem. It would be nice if some flag went up on the arm saying the problem's there.
Q. Let's turn briefly back to the question of the monitoring IV lines that goes on in each of the rooms in the execution area.
Let me play you a portion of the deposition of Injection Team E. This is from page 119, line 21 of the deposition transcript to page 120, line 8.
(Tape played)
Q. Based on your inspection of the execution area, Dr. Heath, is Injection Team accurate when he states that he can see the administration of the IV tubing?
A. It doesn't comport with what I saw, and I believe that the folks were trying to set things up in the way than the way things are.
I wasn't there for the execution that he's talking about, but doesn't fit with anything that I saw at all. It's opposite.

The arm, you can't see it properly at all, and you can't see all the tubing.
Q. Given the structure of a wall and IV port, is it even physically impossible from where Injection Team E stands to see all of the IV tubing?
MS. MULLALLY: Objection.
THE COURT: Overruled.

A. No. It goes through that slot, and then it's dangling, arcing low over the floor. I tried to lean as far forward to see it. I couldn't see all of it.
And then it's going under the table, and then it's going up under the arm. And I got up on my tippy toes to try to see, you know, as much as I could, and I'm fairly tall. Unless he's really really tall, then seeing, he could see something that I can't, then he doesn't have a good view of the right side.
Q. Let me play another portion of the deposition testimony by Injection Team E. This time from page 122, line 21 to 123, line 4.
(Tape played)
Q. To your understanding, Dr. Heath, is it Injection Team E, who is in charge of monitoring the IV line and sites from the lethal injection room to the preparation room?
A. He's supposed to be in charge of that, but he doesn't, he's not doing a proper job of it based on his description.

Q. Based on the review that you have made of the changes that Maryland proposes to make to the lethal injection protocol procedures, do you believe that all of the IV tubing will now be monitored during lethal injection?
A. I can't say for sure what Contractual Team B will be located and how much she's willing to move.
If she were really moving around a lot, getting up and down on her knees and really checking the IV's, and she knew were able to communicate with the folks in the injection room exactly what they were doing and which IV they were using, it might be possible. But it would require a lot of hustling around. It's not laid out in the way it would be in any can kind of clinical setting where we care about making sure the drug gets in.
Q. Apart from leaks in the lines, Dr. Heath, is there anything else that can go wrong with IV tubing during the induction of general anesthesia?
A. It can disconnect at the site where it was attached to the catheter. It can kink. It can have air in it. Then catheter can have the problems that can happen with the catheter , which I think we talked about.
The infiltration and extravasation and leaking of the vein itself, it can block off with some material that can clog it.
It's probably not a complete list, but those are

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things that come to mind.
Q. I think you testified about extravasation of the site. With respect to kinking and clogging about which you just testified, have you seen examples of those in your clinical practice?
A. Definitely, yes.
Q. What would be the result of those complications?
A. Depends. When the sequence of the induction, when they occur, and when they're recognized and all of that. I can't give you -- there's no one way to properly answer that question.
Q. Can you suggest a variety of potential risks or --
A. From kinking or clogging?
Q. Sure.
A. If it's a complete occlusion at the beginning of the injection, then you can't inject anything. That's usually not a problem, because you haven't embarked upon your induction.

Once you embark upon the induction, you're committed, and you need things go smoothly and properly. If they don't, you have to be able to detect and correct right away.

So if you have an obstruction in the middle of the induction, then you're going to have to try to relieve that right away, or get another IV in quickly, because now you're

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kind of in this halfway place. It's not a good place to be.
Q. And can you, Dr. Heath, characterize the frequency with which some of the problems you just identified had occurred in your clinical practice?
A. I can't put a number on it, but there are -- these are all things that happen that everybody's seen many times.
Q. Given some of the things that you described that can go wrong just now, and earlier in your testimony, in your opinion, how important is it to monitor IV lines and tubing for during the induction of general anesthesia?
A. It's extremely important. We have the IV bag and the tubing all laid out, so that we can visualize to the full extent to where it goes into the patient. And we are surveying that as we're using it.

Only under some exigent circumstances where we couldn't do that and we had to induce anesthesia would we not be surveying all of those things.
Q. In your opinion, Dr. Heath, in taking into account the changes recently proposed in Maryland's protocol, are the IV lines adequately monitored during the induction of general anesthesia during lethal injection?
A. No. They can't be if they're doing it from a different room.
Q. In your opinion, doctor, is it important that the -- that a state's execution protocol include directions for dealing

with possible complications or problems that may arise during execution?
A. It's essential unless you have a qualified person who has that all in their head and can, you know, detect and then correct and trouble shoot as you go along.
So you either have to have it in a person's head who's supervising, or you have to have it written out for these folks who don't really know how to handle this technology.
Q. And just to be clear, in your judgment, is a qualified person able to have everything in his or her head and trouble shoot on the Maryland execution team?
A. Not that I'm aware of.
Q. Do you recall, from your review of the protocol, Dr. Heath, how many IV lines are in fact set up in a Maryland lethal injection?
A. Yes, I do.
Q. How many?
A. Two.
Q. Are drugs, during the execution, administered actually through both lines?
A. Typically, not. There's a -- if there's a need to, then, that probably would be done.
Q. Well, does the lethal injection protocol address what actually would be done if a line leaked or otherwise failed,

and the injection had to be switched and given through the second IV line?
A. No, sorry. It doesn't address that in the protocol at all.
Q. Do you recall the testimony by Contractual Team A and Injection Team E of the possibility of switching lines mid procedure?
A. Yes. I recall they testified about it. I don't remember their exact words.
Q. Perhaps we can play the clips and see if that refreshes your recollection about substance of the testimony.
Let's first have a look at the testimony by Contractual Team A. From page 52, line 9 to page 53, line 2 of his deposition.
(Tape played)
Q. And now let's see if we can refresh your recollection about the substance of the testimony by Injection Team E, and have a look at his deposition testimony on page 73, line 15, to page 75, line 6 of his deposition transcript.
(Tape played)

Q. Dr. Heath, what is your opinion as to whether Injection Team E and Contractual Team A are prepared to effect a switch in the lines if that became necessary during the course of an execution?
A. That is sad, they are not. They're not. They have not

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been given what they need, the instructions, the preparation, that they would need to be able to offer that under those circumstances.
Q. In your opinion, doctor, what, if anything, does the state's failure to give them the necessary instruction imply with respect to the need for a written protocol addressing switching of lines?
A. You know, they'd need to write out the scenarios. They're all the foreseeable scenarios, which would warrant corrective action. But, even doing that, a lot of these folks haven't seen all the instructions. They don't know the instructions.
And part of troubleshooting is having the experience to formulate an ad hoc plan in response to a given situation. And I'm just -- to me, I can just tell these folks don't have the background that's needed to do that. They need someone there who can, you know, supervise them, and help them through this whole thing.
I can't think of all the things that could go wrong, and to the point where we're confident that they've got the instructions that they need.
Q. Let me close this line out by showing you some testimony from the lethal injection officer in charge, that's Contractual Team A, depicted in the center column on the DXY. This is from page 83, line 5 to 12, and page 85, line 10 to

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86, of his deposition transcript.
(Tape played)
Q. What, if anything, doctor, in your opinion, does this testimony tell you about the ability of the defendants in addressing a leaking line to assure that adequate dose of the anesthetic is in fact injected?
A. Right now, the team doesn't appear to have the, you know, the savviness or wherewithal to undertake tasks like that. They haven't, don't seem to have thought them through, planned for them, or are able to address them.
Q. Does the protocol that you as understand it address the scenario you described just now in the deposition excerpt by Contractual Team A?
A. No. The protocol doesn't have any discussion of how to handle these foreseeable situations.

Q. Does the execution manual or lethal injection checklist address the administration of fluids through any IV site on the inmate other than peripheral site?
A. From what I've seen, no. It doesn't discuss central access in anyway.
Q. In your opinion, is this a deficiency in the protocol?
A. Central access is sometimes necessary to establish IV access both in clinical settings and in execution settings.
Q. Other than its failure to address central access, does the protocol address what would happen if peripheral access

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could not be obtained at all?
A. No.
Q. Contractual Team B testified that she had never been made aware of what would happen if IV access, peripheral access were not possible.
In your opinion, is that a cause for reasonable concern?
A. Yes. She's the person who's in charge of enacting the peripheral IV access, and she needs to be apprised of what the overall game plan here is, and that influences her ability to make informed decision about which veins she'll go for, how reliable they need to be, and all of that. She has to know what the overall game plan is.
Q. Have you seen anything in the materials you've reviewed, Dr. Heath, that gives you any reason to believe that access, peripheral IV access, might be a problem in connection with any execution of Vernon Evans?
A. Yes.
Q. What is that?
A. The reports from Dr. Scalea and Mr. Laughton, and also his history of having used intravenous drugs in the past, are -- raised a concern. But, as I said, this is something I need to be prepared for in any time where you have to get IV access, and any person.
THE COURT: If I could stop you. It's 1. And

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we'll take the luncheon break and then come back at 2.
MR. HUT: Thank you, Your Honor.
(Luncheon recess.)
(Recess.)
THE COURT: Please be seated, Mr. Hut, whenever you're ready, sir.
MR. HUT: Thank you, Your Honor.
BY MR. HUT:
Q. Dr. Heath, are you familiar with a cut-down procedure?
A. Yes, I am.

Q. You brought to court with you today photographs that depict a cut-down procedure, PDX 9 A, B, and C. Let's see if we can -- if you can looking at those, perhaps describe to the Court the cut-down procedure by reference to the photographs that you brought with you?

MS. MULLALLY: Your Honor, we object to these photographs. They're extremely gory. It's our opinion that they're probative of nothing except that there was a lot of blood on human skin and there's some cut flesh exposed.

THE COURT: Well, my understanding is these are coming in. These are demonstrative exhibits?

And the cut-down procedure has been referenced a number of times in this case in the earlier proceedings, and if this illustrates what a cut-down procedure is, then it would be helpful me to understand it. So I will overrule the

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objection.

BY MR. HUT:

Q. I'd like to generally begin for a description of what cut-down procedure is and use photographs to illustrate that as we proceed, doctor?

A. So a cut-down procedure is a surgical procedure where one makes an incision and opens up the tissue and extends that incision till one can find the structure you're trying to reach.

Usually, that's a vein or sometimes an artery. So it makes a difference for the skin and then for subcutaneous layers and fat or muscle between the surface and the structure that you're trying to reach.

THE COURT: Good. Thank you.

Q. Why don't you now explain to the Court what the pictures demonstratives 9 A, 9 B, and 9 C, show with respect to a cut-down procedure?

A. So this is a photograph from after an execution the viewing of the body is still in the execution room.

Q. That is 9 A?

A. It is the one I have in front of me, I'm not sure I have the names of them. It has a picture of lots of circles with the numbers 5 through 9 on it.

Q. What do those circles indicate?

A. The medical examiner has circled each attempt at IV

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access. They've been putting the catheter in through the skin and either had a return of blood or not been able to advance the catheter satisfactorily into the vein. So these are series of failed attempts.

One can infer there's also number one, two, three, and four. I don't know if you have those photographs. And eventually they abandon the peripheral access and proceed to a cut-down.
Q. Now, proceeding to the next picture, which has been marked for identification as PDX 9 B, what does that show?
A. That it shows the cut-down to get give orientation, that area is called the antecubital fascia, and it's the basically the front of the elbow.
You can see in the middle of that incision there, there's a little purple structure there, which I'm 95 percent sure is the vein they were cutting down to.
Q. What does the bright red area depict?
A. That's the tissue that we see it's between the skin and the vein. It's in this location, it's a mixture of fat and connective tissue, and the skin. I'm not sure when they cut over to the side there, they may also be into a little bit of muscle, but I can't tell from this picture.
Q. Turning to PDX 9 C, would you tell us what that depicts?
A. Yes. This one shows a better view. You can very well see there's a cycle on the upper right, that was attempt

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number 1.
And then next to that is attempt number 2. Down below the incision was attempt number 10.
And then finally 11 is when they went to the cut-down. Now you have a better view of the vein inside there.
Q. What is the -- or what is - -how does the vein inside there look in terms of what we are seeing on the photo?
A. It's the purple shiny structure near the bottom of the incision, about two thirds of the way down, and, yes.
Q. Now, are you aware that the execution team commander for the Oken and Baker executions Past Team Member Z and the execution team commander, both testified that Contractual Team F, the physician who pronounces death, would perform a cut-down, if necessary?
A. I recall documentation about that and discussion of it, but I don't remember exactly which one of it was and exactly what they said. But it was along those lines, yes.
Q. And let me now show you testimony on this subject from Contractual Team F. This from page 69, line 17, to page 70, line 24 of her deposition.
(Tape played)
Q. Dr. Heath, what do you think of Contractual Team member F's testimony on cut-down procedure and whether she'd do one?
A. Well, she's the physician, who's there to pronounce

death. The great majority of physicians don't do cut-downs and, you know, aren't proficient at doing cut-downs.

I think I'd do a cut-down if there was nobody else to do it and it was a life and death situation. Otherwise, they will not do a cut-down.

Q. In your opinion, doctor, is there a cause for reasonable concern about her testimony that no one ever communicated to her the expectation that she would perform a cut-down?

A. Well, contrast with the documents the Department of Corrections had where they will say that was their plan to do a cut-down.

Again, I think I said before, everybody needs to know what the game plan is, and she clearly hasn't been told what that game plan is.

Q. In your opinion, would Contractual Team B, the certified nursing assistant, be qualified to perform a cut-down?

A. Definitely not.

Q. Who would be?

A. None of these folks got into a cut-down.

Q. Based on your review of the expert reports of Dr. Scalea and Mr. Laughton, do you recall whether they formed any expert opinion about how venous access would have to be obtained in Mr. Evans?

A. They're -- yes, I do.

Q. And what was that method?

A. Through a central line.

Q. Can you describe a central line for the Court?

A. Yes. It's sort of a colloquial expression, but it means a central, an IV catheter is placed into a central vein. We think of the heart as kind of Grand Central Station, and Penn Station, and everything comes or out of the heart. So the large vessels that are close to the heart are considered to be central veins. That would be the internal jugular vein, which you can see shown on the neck there, the two larger or fatter veins that are in the neck. Internal jugular veins or central veins. Subclavian are the arched veins at the top of the chest. Underneath, the color bone or clavicle. And femoral vein is kind of an interesting one.

Some people would say it's not a central line, because it's not close enough to the heart to constitute a central line, but when we talk about central lines in clinical practices, there is nobody who would say a femoral catheter is a peripheral catheter.

It's clearly up in the large vessel. The catheter itself stands up into the abdomen. So, colloquially, it's termed central line. So I think that's the best way of referring to it.

Q. What kind of persons are qualified to place central lines?
A. It's got to be a person who's been trained to do it, to

know what the complications, know how to recognize and treat the complications.

Usually, it's physicians who, you know, do them a fair amount in their practice, surgeons anesthesiologists, ER physicians, radiologists who are going to catheterize people to inject dye into their hearts are constantly doing central lines. Intensivists, doctors who work intensive care units, those are the types of physician who place central lines as part of their practice.

Q. Can any complications occur during the placement of central line?
A. Definitely.
Q. What sorts?
A. There's some complications that are common to all central lines. Pain and bleeding can happen at any time you place a central line. But there are no others that are particular to the actual location.

So if you put a central line where you're trying to put it in the subclavian vein, that is very, very close, just millimeters from the chest cavity where the lung is.

And if there's a perforation there, then air can leave the lung and collect inside the chest cavity called a pneumothorax where the column collapses because air is filling the chest outside of the lung. If it's not treated, it's often fatal. It's extremely distressing. You're

suffocating.
Q. Are these complications?
A. I was going to say there's more complications.
Q. Sorry. I didn't mean to interrupt.
A. Sorry. One of major concern is one is canulating or catheterizing the jugular vein and the carotid artery is right next to the internal jugular vein. And so if you -- we often accidentally enter the carotid artery, that gets damaged or lacerated it can do couple bad things, first of all, result in a stroke if blood isn't properly delivered to part of the brain as a result of that.

And also blood can leave the artery under pressure and swell up in the neck and people, their trachea, their airway is collapsed by that slowing so they would then be strangled by that effect of what you have to do is slash the

neck open to drain the blood or else they'll suffocate.
Q. Are the complications that you just described more likely to occur if a central line were placed by a person with insufficient training and experience?
A. Of course, yes. It's a complicated thing, and you have to know what you're doing. The less you know what you're doing, more likely you are to have a complication.
Q. To your understanding, Dr. Heath, is anyone on the execution team qualified to place a central line?
A. The only person who potentially, very potentially could

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do it is the doctor, Contractual Team F, but she herself says she doesn't do those things. So she's not qualified, either.
Q. In order to place a central line, does the operating platform on which a patient is resting have to be able to tilt?
A. Yes. You need to believe tit the bed. So, for example, if you want to put the central line in the neck on subclavian site, by raising the feet and lowering the head, that makes blood pool in the upper part of the body, and that distends the veins and increases the chance of getting the right target and therefore decreases the chance of hitting one of the other structures that you don't want to hit.
Q. To your knowledge, does the gurney in the execution room have any capability of tilting to be used to place a central line?
A. No. I looked at that. It's not a medical gurney. It's a fixed steel table, and there's no -- I could not see any possible ability to tilt it in that way.
Q. Dr. Heath, could you turn to plaintiff's exhibit 29, please, in your book?
A. Turn to page 3?
A. I'm sorry, my book seems to go from 28 to 30.
Q. Oh, let's then try --
A. Maybe I'm in the wrong place.
(Pause.)

A. I can see the screen here, if that's okay.
Q. Perhaps we can try to accommodate this in exhibit 30. Yes.
Turn to exhibit 30, that will do.
A. I have 30.
Q. Directing your attention to -- well, first of all, exhibit 30 is, appears to be an e-mail from Mark Dershwitz to Scott Oakley.
Have you seen exhibit 30 before?
A. I have, yes.

MS. MULLALLY: Your Honor, defendants would object to the display of plaintiff's exhibit 30. It's clearly hearsay. This witness -- it's the defendant's position that's being offered for the truth of the matter asserted.

THE COURT: Well, it is not received for the truth of the matter asserted, but as part of the simply to show part of the raw material upon which the doctor bases his opinion, and I will receive it on that basis.

BY MR. HUT:

Q. Let me ask you to look at what's been marked by Dr. Dershwitz as paragraph 8. Let me read it.

"I agree that there needs to be a plan B if the execution team cannot place a peripheral IV. Most states with which I am familiar have arranged for an experienced physician to place a central IV via jugular vein in the neck

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or femoral vein in the groin. While no procedure is risk-free, using an experienced physician for this procedure should satisfy a judge.

"An exception to this practice is Kentucky, as he cites. When I was an expert for Kentucky, I told them they needed a better plan B. When I testified in a hearing here, I was not asked about this issue."

Did I read that paragraph accurately?

A. Yes.

Q. Do you agree with Dr. Dershwitz about the need for plan B providing for placement of a central line?

A. I do, yes.

Q. And while we're on the subject of Dr. Dershwitz and exhibit 30, could you turn to page 2 of exhibit 30, please?

A. Yes.

Q. Paragraph 22, toward the top of the page, he states, quote "It is reasonable to require that when general anesthesia is administered to a patient and survival is desired, an anesthesiologist or nurse anesthetist perform the procedure. In a judicial execution, it is reasonable for paraprofessionals; e.g, nurses, EMS's, et cetera, under the direction of the physician to administer the medications."

Did I read that accurately?

A. Yes.

Q. Do you agree with Dr. Dershwitz concerning the reasonable

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need for paraprofessionals under the direction of a physician to administer medications?

A. If the physician were a person who themselves had the

right credentials and experience and background, and were there to supervise and troubleshoot and intervene, in principle, I think he's being reasonable there.
Q. Based on the review that you have made of the materials produced in discovery and the deposition testimony, have the defendants in the State of Maryland arranged for a qualified physician to place a central line in executions?
A. Not to my knowledge.
Q. Now, let me ask you a question or two about the experience of Contractual Team B with respect to IV insertions.
Is there any difference between establishing an IV for the purpose of administering a saline drip and establishing a IV for administration to port drug or fluids like anesthetics?
A. Yes, there is.
Q. And what is the difference?
A. It's important us to, a saline drip is, when a patient is on the floor in the hospital, they're not the critically ill patient, let's say they're in the hospital for treatment of pneumonia and need intravenous antibiotics given them to them three times a day, that they'll have the IV set up, but that

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that IV infiltrated and wasn't recognized for an hour or there would be no real harm in that.
Very different from a setting where you're inducing anesthesia, and you need everything to go properly, and you're injecting drugs much more at a more rapid rate. And if the IV fails, then you likely to have significant problem on your hands.
Q. Doctor, at New York Presbyterian, would a -- would somebody with the qualifications of a certified nursing assistant be allowed to choose a vein for administering a saline drip?
A. Again, I don't think we'd have exactly the saline, but I think what we're talking about here, yes, that would be a reasonable thing.
Q. And recognize that I'm talking about qualifications and not necessarily the title, would someone with the qualifications of a CNA be able to choose a vein for administration of an anesthetic in New York Presbyterian?
A. I'll say this, if she were practicing, if she were up in New York and she were working on the floor and started IV's on patients and then one of those patients needed to come to the operating room and they came into my care, I would may or may not use the IV. Depends. Not based on who she is, or anything like that, but based on my assessment of the quality of the IV. So it doesn't really matter so much who does it,

it's a matter of my assessment of the IV itself.
Q. So you and a similarly situated anesthesiologist would make your own assessment of the IV sight previously selected?
A. Right. I would not allow her to assess the IV and without myself looking at it go ahead and induce anesthesia in that person. I would assess it myself and see if I agreed with her assessment or not.
Q. Do you recall the testimony by Contractual Team B concerning IV insertion in the breast?
A. I do, yes.
Q. Have you ever heard of -- let me ask you this, have you ever inserted yourself an IV in the breast?
A. I have not.
Q. Have you heard of that before?
A. I don't think I have. I certainly can't recall hearing about it before. It's a very bizarre thing.
Q. At New York Presbyterian, would somebody with a qualifications comparable to a certified nursing assistant be permitted to place an IV in the external jugular vein?
A. Only with elbow-to-elbow supervision. I teach medical students to do things, and I teach nurses to do things that are more complex than that. But my hand is hovering right over theirs. We're literally side-by-side. But apart, she will not be allowed do it by herself.
Q. Do you recall testimony by Contractual Team B that she

personally has placed IV's into the external jugular?
A. Yes, I think so, along those lines.
Q. Does the testimony she gave about placement of IV's in the breast and external jugular create any reasonable grounds for concern about her ability to perform duties on the execution team, in your opinion?
A. She said she's placed IVs in breasts hundreds of times and.
MS. MULLALLY: Objection.
THE COURT: I'll overrule the objection.
MS. MULLALLY: Your Honor, that's a mischaracterization of what she's testified to, and I must object.
THE COURT: Well, you'll have an opportunity to delve in it on cross-examination.
MR. HUT: Perhaps we should have a look just to make sure that we're going over a the same ground of testimony of contractual testimony team, beginning at page 67 line 5 to line 14 and page 67 line 23 to page 68 line 3 of the transcript, is that available?
(Pause.)
(Tape played)

BY MR. HUT:
Q. Is that consistent with your recollection of her testimony about hundreds of times?

A. Yes.
Q. Now, in her deposition, Contractual Team B also testified that she was unaware of any risks associated with injecting drugs at a higher rate.
Do you recall that?
A. Yes.
Q. Given this, what is your opinion about her ability to assess the suitability of an inmate's vein for administration of lethal injection?
A. It's pretty elementary, when you inject drugs more rapidly, the risk of problem with the catheter or injury to the vein wall leakage is increased, and anybody who is going to be injecting drugs rapidly has to know that, or else they won't be primed or prepared for that complication.
So it just sort of -- it doesn't make sense that she would say that, and, yet, be charged with supervising that.
Q. To your understanding, Dr. Heath, are all members of the execution team provided with copies of the lethal injection checklist that we saw as part of plaintiff's exhibit 4?
A. It wasn't -- occurred to me somebody said they didn't see it. I don't know if they haven't been provided with it. I'm not sure. But some of them weren't, you know, knowledgeable about it.
Q. Let me show you now an excerpt of testimony by

Contractual Team A, who is responsible for pushing a plunger of the syringe. This is deposition transcript at page 53, line 14 through 54, line 18.
(Tape played)
Q. And, Your Honor, I think that counsel for defendants will agree that the deposition exhibit 15 to which that testimony referred, is in fact at trial here plaintiff's exhibit 4, including the lethal injection checklist.
Dr. Heath, focusing on the language that Contractual Team A read just there from the checklist and about which he said, quote, "it just doesn't have to do with what I do" unquote, who was supposed to perform the tests he was referring to during the lethal injection, as you understand it?
A. He's the person who injects the drugs. So it sort of defies comprehension when you talk about injecting syringes of drugs, says it doesn't have to do with what he does.

Q. In your review of deposition testimony, doctor, did you see other evidence of confusion about the meaning and duties that are set out in the lethal injection checklist?
A. Yes, I did.
Q. Did you ask that a summary of certain of those be prepared?
A. Yes, I did.
Q. Let me show you what we've marked for identification as

PDX 6. It is the chart; that is, PDX 6, a portion of the summary that you directed to be prepared to illustrate some of the confusion?
A. Yes.
Q. And do you see on PDX 6 the highlighted in yellow portion, which is an excerpt from a lethal injection checklist that reads slow the IV to KVO?
A. Yes.
Q. By the way, what does KVO stand for?
A. Just an abbreviation for the expression keep vein open. And it means setting up the drip chamber so if there's an occasional drip, that stops blood from going back into the catheter and clotting and stops the vein from clotting.
Q. But while the slow the IV KVO instruction along is deposition testimony, just take a moment to read that excerpt of testimony.
(Pause.)
Q. In substance what does the excerpted testimony say about who completes the slow IV to KVO step during lethal injection?
A. Well, B says that E does it. But E says the opposite. E says that B does it. And, further, B doesn't even know what it is, doesn't know what KVO means.
Q. Does that failure on the part of Injection Team E to know what KVO means, in your opinion, cause reasonable ground for

concern or give rise to reasonable grounds for certain?
A. Again, I think it's one of the many pieces of evidence that he does not have the right background to be working with IV systems. He's the person who's supposed to control the flow rate of the drugs.
And if you don't know what KVO means, it basically proves you haven't been around the environment where these things are done, and so he just doesn't have the wherewithal and savvy to handle the kind of things that can come up.
Q. Would you turn to PDX 8 A?

Is this another chart that you asked to be prepared to depict some of the confusion that you saw concerning the operation of portions of the checklist?
A. Yes. Sorry. I just found it in my book.
Q. It should be also on the screen, I think.
A. Yeah.
Q. Do you see at the top testimony by Past Team Member Z is excerpted about his understanding of the flow clamp?
A. Yes.
Q. Was Past Team Member Z correct in his testimony about what a flow clamp is, or what it does?
A. I don't see how he can be. The flow clamp, when it's closed, it stops flow. It completely occludes the tubing.
Q. As you understand it, was Past Team Member Z the execution commander for the Baker and Oken executions?

A. I believe so, yes. But I don't believe he is now in charge.
Q. Do you understand that he will be present in the execution room during any execution of Vernon Evans that might take place?
A. Yes. I think now he would be standing along with the execution commander in the corner of the actual room where the prisoner is.
Q. Directing your attention to the excerpt from his deposition testimony at the bottom portion of PDX 8 A, who, as you understand this, does Past Team Member Z believe was responsible for adjusting the flow rate during the execution of Wesley Baker in the execution of Steven Oken?
A. Well, he doesn't seem to recognize that it's Injection Team E. He's referring to some other entity. He's not using what I understand to be the official terminology. I think maybe he's referring to the execution team commander who would be in that injection room, that he doesn't seem to understand, he doesn't know what's going on in there or who's doing what.
Q. Now, let me direct your attention toward the front of the exhibit book that we supplied to you to plaintiff's exhibit 8.
Turn, if you would, to page 13.
Are you with me?

A. Sorry. I had to catch up here. Okay. I'm with you.
Q. Interrogatory 14 asked defendant to, quote, "set forth in any detail any problems, malfunctions or abnormalities encountered in any previous lethal injection carried out by

defendants (including leakage of IV lines, respiration after administration of sodium pentothal, and or a low postmortem sodium pentothal levels)."

The answer after objection states, quote "Following the Tyrone Gilliam execution on November 16, 1998, former Commissioner William Sandorvan and/or former Assistant Commissioner Lewis Stewart reported to Assistant Commissioner Randall Watson that the IV catheter that had been inserted in Gilliam's left arm partially or completely pulled out prior to the administration of the lethal drugs, but that the lethal drugs were therefore administered through the IV catheter in Gilliam's right arm, and that the IV catheter that had been inserted in Gilliam's left arm continued to drip saline solution onto the floor creating a small puddle."

Did I accurately read and interrogatory and the pertinent portion of the answer?

A. Yes.

Q. Have you heard or read essentially the same information as defendants have set forth in verified form in their answer to interrogatory number 14?

A. I'm sorry. I didn't understand your question.

same information about ongoing during the execution of Tyrone Gilliam?

A. Yes. I was aware of this from the Oken litigation, they had said in the Oken litigation that there had been no problems in prior executions, but then this emerged. They had to give some discovery, and the log showed this had happened.

Then I talked to a witness, who had seen the fluid collected on the floor.

Q. Have any changes been made to the protocol to address a problem set forth in this answer that occurred in the Gilliam execution?

A. The protocol makes no mention of the possibility of leaks; so, therefore, no changes have been made.

Q. Have you reviewed the postmortem thiopental levels that were taken from samples following the Gilliam execution?

A. I have, yes.

Q. Do those levels suggest that Gilliam was in fact adequately anesthetized during his execution?

A. I believe he was. Again, there are caveats surrounding the use and interpretation of postmortem thiopental values. It does not prove that he was anesthetized properly when he got the potassium or pancuronium, but certainly strongly supports that view.

Q. So what does it matter that the line may have leaked in the Gilliam execution if adequate amounts of the anesthesia made it into his veins?

A. Well, leaks can happen. They happen to all anesthesiologists. The important thing is what you do about it once you have a leak, and how you change your procedures once you have had that happen.

And if they didn't know about leaks beforehand, they surely knew them after this execution. And yet you saw from the testimony they still haven't set in place the necessary knowledge base to -- and plans and protocol to address this. It's not just a hypothetical for them. It's a real thing for them. And yet, even with that, they didn't do anything about it.

Q. And on the subject of the postmortem thiopental levels measured for Tyrone Gilliam, would you have a look at plaintiff's trial exhibit 26, please?

Do you recognize that, plaintiff's trial exhibit 26?

A. I do, yes.

Q. Is that a report about the thiopental levels made from the postmortem examination of Mr. Gilliam?

A. I believe it is, yes.

Q. Have a look at exhibits 25, 27, 28, please.

A. Okay.

Q. Are those similar post-mortem reports of thiopental levels found upon examination in the bodies of Flynn Hunt, Steven Oken, and Wesley Baker?

A. The report's written in different formats, but they report thiopental values. Some of them report additional information.

Q. And have you created a bar graph that summarizes the information contained in those most mortem reports?

A. I have these exhibits here, can you refresh me on the number or tell me the number,> actually, I don't know.

Q. I come in contact with assistance?

A. 11.

Q. It's 11, do you have it?

A. I found it, yes.

Q. Could you turn to the third page of PDX 11, which contains 8 bars set out on a graph.

(Pause.)

A. Yes.

Q. Do you see that, doctor?

A. Yes.

Q. What information is displayed in this bar graph?

A. It's for executions. It shows the postmortem thiopental concentration measured, and it shows the number of grams of thiopental they were intending to deliver under the protocol for each execution.

Q. Does this reflect that between the Gilliam execution and the Oken execution, the dose of thiopental was increased by Maryland from two to three grams?
A. It does, yes.
Q. Which inmate as depicted in the postmortem reports and this bar graph show the highest level of postmortem thiopental as recorded after the examination?
A. Hunt is the highest.
Q. And how many grams does Mr. Hunt receive?
A. He was -- the plan was to give him two grams. I don't know how much he actually received.
Q. And which of the inmates had or recorded the lowest measured thiopental level postmortem?
A. Steven Oken.
Q. How many grams does Mr. Oken receive?
A. Again, we don't know how much he received. He was under a protocol intending to deliver three grams.
Q. What medical conclusion, if any, do you draw from the data that you've caused to be depicted on this graph?
A. Well, there's -- clearly, there's inconsistency in the concentration that's being measured, that is being achieved.
As I've said, one has to be careful interpreting postmortem thiopental values. It's a tricky area.
But given that Mr. Oken was supposed to receive more thiopental, for example, than Mr. Hunt, I'm not aware of

anything that can account -- I don't have an explanation for effectively the tenfold difference in concentrations between the two executions. The thing that could do that, it's my understanding those are not in play in this -- in these autopsies or these toxicologies. So, for example, Mr. Oken's weight is not 8 times the weight of Mr. Hunt. And the timing of these blood draws is important, but I don't have information to explain why there's an eightfold difference in concentration.
Q. What conclusion, if any, were you able to draw about the postmortem thiopental level reflected for Steven Oken?
A. It's obvious, it's much lower than some of the other executions. It's by more than a factor of two lower than the next lower one, and that's a value of thiopental. That does not -- doesn't look what one wants to see after an execution. If it's drawn earlier, one wants to see a nice high value, you know, up in the twenties or above.
Q. Let me ask you this question, Dr. Heath. If 10 milligrams per liter was the blood concentration in Steven Oken, I think his nervous system at the time of the administration of Pavulon and potassium chloride, can you comment on the extent of the possibility that he may have been conscious during the administration of one or both of those drugs?

A. I can't put a number on it, but off the top of my head,

but we people use numbers as low as 7 to give a 50 percent probability of consciousness. Some people use a higher number.

If you used a number of 7, that is just an very approximate guess. It could be around 10 percent. If one took a value of 12 as giving you a percent of chance of consciousness, then there had be a 70 percent chance of consciousness.

Again, these are very approximate numbers.

Q. Numbers 7 and 12 in your answer refer to milligrams per liter?

A. Yes. Depends on what a 50 percent value is, and literature supports some range in those values.

Q. Let me try to bring this direct examination to a close and just --

THE COURT: If I could ask, we're looking at Steven Oken, 10 milligrams per liter in the evident postmortem blood examination to determine the concentration of the sodium thiopental.

What is your best testimony, based upon the literature, of the likelihood that Oken was conscious when the second drug hit his system?

THE WITNESS: It's a difficult question to answer. I can't put a number on it. The literature on postmortem thiopental distribution, which is a real phenomenon, I'm very

confident that's a real phenomenon, but details of this behavior, we don't have enough information obtained as in a scientific fashion to establish the values that would he need to put a number on this.

All I can say is it compared with, so it's my understanding that these values were drawn within an hour at the time of death. That was the description gave by the person who actually drew the blood, he described, he put an outside time of an hour, so that it was within an hour.

This is a low value for blood that's drawn after execution within an hour. But no one's done virtually all the information known about postmortem thiopental comes from execution in humans. There's nothing in animals. I can't find anything about it. I'm just able to give you the best information I've gotten from what has been done so far.

THE COURT: So it's a low value, but you can't assign a number or percentage probability that Mr. Oken was

awake or aware?
THE WITNESS: I don't think -- I don't think it would be proper to try to do that with the information that's available. All I can say it is a very concerningly low number.
THE COURT: Good. Thank you.
BY MR. HUT:
Q. I'll try to wrap this up now, Dr. Heath.

Yesterday in opening statements, we were told by counsel for the state that in the five recent relatively recent executions in the State of Maryland, everything has gone properly, and that, in substance, what comes to those who are well-prepared.
In your opinion, has everything gone properly in the five previous Maryland execution by lethal injection of which you're aware?
A. The Gilliam execution had the leaking IV, but I think in all likelihood based on the thiopental value, they had success in anesthetizing him. But, again, because prisoners have been paralyzed, we don't know.
We don't know, certainly like in somebody like Mr. Oken, we have nothing to tell us he was properly anesthetized. He didn't struggle or cry out, but that doesn't mean anything, because he was paralyzed.
The thiopental value is not comfortingly high. I can't be sure. I can't ask Mr. Oken if he remembered or experienced anything, and that would be the only way to know for sure. But it's certainly a concerning situation.
Q. With respect to the preparation of the execution team for executions, your opinion is the Maryland execution team prepared for the executions they perform?
A. No. They're not properly prepared at all.
Q. Do the participants even understand fully the protocol,

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in your opinion?
A. No. I think they don't even understand how unprepared they are.
Q. In your opinion, is Maryland's lethal injection protocol sufficient to avoid the unreasonable risk of the inflection of great pain to an inmate?
A. No. There are many steps that need to be set in place that are reasonable steps that can be easily taken, and it will reduce the likelihood of a misadventure in the execution.
Q. Finally, in your opinion, are there reasons to think that

such risks would be greater in the case of an execution of Vernon Evans, Junior?
A. Well, again, was of his venous -- the concerns that have been raised about his venous system, one has to be particularly careful with him.
So, yes, the risks are greater, if the personnel aren't prepared to address them properly.
MR. HUT: Your Honor, that concludes my direct examination of the witness.
THE COURT: Thank you. Before Miss Mullally takes over, let's take a recess until 15 minutes after the hour.
(Recess.)
THE COURT: Please be seated.
Miss Mullally, your witness.

MR. HUT: Your Honor, as we advised Your Honor at the pretrial, and as we've reminded Miss Mullally and Mr. Pickus and with their acquiescence, we wanted to interrupt, with leave of the Court, the cross-examination of Dr. Heath in order to be able to present the testimony and complete the cross-examination today of Dr. Scalea, who is only available today.
THE COURT: Oh, that's right. Scalea's available right now.
MR. HUT: Right.
THE COURT: Good.
MR. HUT: My colleague, Todd Zubler, will conduct the examination.
MR. ZUBLER: Plaintiff calls as its next witness Dr. Thomas Scalea.
THE COURT: Good. Thank you. Good afternoon.
THE WITNESS: Good afternoon.
(The Witness is sworn.)
THE CLERK: Please be seated. And if you would, sir, I need you to state your name and then spell your name for the record.
THE WITNESS: My name is Dr. Thomas Scalea, S C A L E A.

DIRECT EXAMINATION

BY MR. ZUBLER:

Q. Good afternoon, Dr. Scalea.
A. Hello.
Q. Could you please state for the record what is your occupation?

A. I'm a surgeon.
Q. And from where did you receive your undergraduate degree?
A. University of Virginia.
Q. And from where did you receive your medical degree?
A. The Medical College of Virginia.
Q. When did you receive your medical degree?
A. Long time ago, 1978.
Q. Are you board certified?
A. I am.
Q. In what areas or specialties?
A. In surgery with a certificate of added qualifications in surgical critical care.
Q. In what positions are you currently employed?
A. I am currently the physician in chief at the R. Adams College Shock Trauma Center At the University of Maryland. I am the Francis X. Kelly Professional of Trauma Surgery, Director of the Program and Trauma, and the Director of the Charles Mack Mathias National Study Center for trauma and EMS, University of Maryland School of Medicine.
Q. Turning first to your position as a professor at the University of Maryland Medical Center, how long have you been

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a professor there?
A. Just shy of ten years.
Q. Are you a tenured professor?
A. I am.
Q. And as a professor, what types of students do you instruct?
A. I teach medical students from the University of Maryland. We have rotating medical students from all over the United States. I teach the emergency medicine in surgery, and I guess orthopedic residents from the University of Maryland.
We have approximately 350 emergency medicine surgery and orthopedic residents from 17, I think, different programs in the country, that come to shock trauma to receive part of their education, and I interact with most or all of them.
Q. Now, with respect to your position as chief of trauma, what is the Baltimore shock trauma center?
A. Shock Trauma Center's the only freestanding trauma hospital in the country. It sits on top of what almost everybody would agree is the most sophisticated EMS system in the country. It's a parametal system of care, parametal system of care that is designed to deliver the right person to the right place, in the right amount of time.
Within the system, approximately 85 percent of patients are cared for perfectly well in local emergency

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departments.
Approximately half of the other 15 percent receive care in area-wide trauma centers. And the other seven and a half percent or so receive care in specially designated centers.
The geography of the state and the investment of the state in a very sophisticated helicopter system allows us to bring the patient to the resources instead of doing it the opposite way, bringing the resources to the patient, as happens in most municipalities.
In that system, the shock trauma center serves as the principal adult difficult resource center for injury in Maryland. It serves as the designated neurotrauma center for Maryland, and it sits as the designated hyperbarics center for Maryland.
Q. So how do the patients that come to the Baltimore Trauma -- Shock Trauma Center Compare, to say, the patients that would go to the emergency room at another Baltimore hospital?
A. There are state EMS protocols that decide at least loosely guide the pre-hospital providers as to who goes to an emergency department. Those would be people with no suspicion of injury, or serious injury based on mechanism of injury, fell from a standing position, no evidence of co-morbidities, not very old, not very young, and no evidence of injury on exam.

So the chances that that person would have a serious injury will not be zero, but should be a very small number.
On the other end of that, it would be a person with a very serious mechanism of injury, fell 50 feet, who has evidence of co-morbidities, cardiac disease, 80 years old and has obviously severe injuries either anatomically because you can see that their bones are broken, or physiologically, that they have evidence of low blood pressure, some other physiological derangements.
Those people get transported to the highest level of care, and that would be a person that would be brought to the shock trauma center, all other things being equal.
Q. So is it fair to say that the Baltimore Shock Trauma Center receives some of the more -- most complicated emergency patients?
A. That would be true.
Q. And what are your duties as Physician In Chief of the Shock Trauma Center?
A. The as Physician In Chief, am the administrative physician in charge of running the hospital. I provide a great deal of direct patient care, the administrative duties range from writing the call schedule for group to overseeing

the quality management process to sitting on a number of committees.

In addition to that, I am an active educator, as I noted before, and a relatively prolific researcher.

Q. So in your average workweek, approximately, how many hours would you typically devote to administrative duties?

A. Maybe 20 or so, round numbers.

Q. And in your typical workweek, approximately how many hours would you devote to your educational activities?

A. Five or ten.

Q. And in your typical workweek, approximately how many hours would you spend providing patient care?

A. 70 or 80.

THE COURT: Do some of those hours overlap, I hope?

THE WITNESS: No, sir.

Q. How long have you been at the Shock Trauma Center?

A. Nine and a half years.

Q. And does the care that you provide to patients include assessing intravenous access in patients?

A. It does.

Q. Do you ever insert peripheral IV's in patients?

A. I do.

Q. How often do you do that?

A. A few times a week, typically.

Q. Compared to other doctors, how frequently do you establish IV's in patients?

A. The residents do it more often than I do. I tend to do

the ones that in patients where people are having problems, or if I happen to be the most available person, just kind of depends.

Q. When was the last time you inserted an IV?

A. Yesterday.

Q. And under what circumstances do you insert IV's as opposed to say, for example, a nurse or technician?

A. Well, yesterday the firsts couldn't get an IV in, so I put it in.

Q. Is that a peripheral IV?

A. That was a peripheral IV.

Q. After you have established IV's in patients, will you administer drugs and fluids through those IV's?

A. We will, sometimes I do. But a number of people.

Q. And how would drugs typically be administered through an IV?

A. That depends. Either they are administered over a rate of time, we're going to give something over 20 minutes, 30 minutes, an hour, or it is loaded into a syringe and pushed into the IV.
Q. What is a central line?
A. A central line is an intravenous line that is inserted into a more central vein. Typically, these -- that term is used to describe lines that are inserted into the femoral veins, the internal jugular vein, or subclavian veins.

Q. And do you ever insert central lines into patients?
A. I do.
Q. How often?
A. A few times a week.
Q. And under what circumstances would you personally establish a central line on a patient as opposed to another medical professional at the Shock Trauma Center?
A. When the patients come in and they're very sick, like they have no blood pressure, I'm much more likely to put that line in myself than would be if the patient was perfectly stable.
It is not uncommon for us to get multiple casualties at once. At that point, everybody kind of divides and conquers. And that may well mean that it's me and a nurse taking care of a patient, then I do everything myself.
Q. How would you describe the relative health of the patients that you see at shock trauma?
A. We see a reasonable number of people with either chronic, with chronic venous disease or venous incompetence.
Q. And what might be a cause of the venous incompetence?
A. Chronic venous disease from varicose veins will make veins difficult to find. People that are readmitted, who have been in the hospital for a long time, that have their veins used because we used them, would be difficult.
Baltimore City is, as I understand, still the per

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capita heroin capital of the United States, so we see our share of people with intravenous drug use.
People who come in, who are very sick, and particularly those people who are very sick from blood loss, particularly if they are cold, will have very difficult venous access. And some people just have lousy veins.
Q. Now, before coming to Baltimore Shock Trauma, where did you work?
A. I worked at the Kings County Hospital, down state, University School of Medicine in Brooklyn.
Q. And for how long were you there?

A. 13 years.
Q. And what was your position and role there?
A. I had a number. I started as a staff physician. I became chief of critical care, chief of trauma, chief of the university intensive care unit.
And my last job was that I was a professor and chairman of the department of emergency medicine and chief of emergency services at Kings County Hospital.
Q. And in your medical practice there, did you also assess intravenous access?
A. I did.
Q. And did you establish peripheral IV's on a regular basis?
A. I did.
Q. And did you inject drugs in those IV's there?

A. I did.
Q. And did you establish central lines there as well?
A. I did.
Q. So for how many years in total have you been establishing IV access in patients and administering drug through IV's?
A. 13.
Q. Is that 13?
A. 3 0.
Q. 0, 30.
Dr. Scalea, have you published any articles in medical journals?
A. I have.
Q. Approximately how many?
A. 225 or so.
Q. And approximately how many of those are in peer-reviewed medical journals?
A. 225.
Q. Dr. Scalea, I have put next to you a binder that I've asked you to look at, which has an exhibit I'd like for you to look at. It's plaintiff's exhibit 35 behind tab 35.
Dr. Scalea, what is this document?
A. It's my CV.
Q. And does it accurately reflect your training and qualifications?
A. It does.

Q. Is there anything that has occurred since the preparation of that CV that you would like to add or subtract?
A. It was published, I'm not sure when this was prepared, but there are a few more articles that have either been accepted or have been published.
And as of I guess as of the first of September, I

became the director of the National Study Center, that's not on here, September first, so that's not on the CV.
Q. What is the National Study Center?
A. National Study Center, to my knowledge, is the only federally mandated research center that is designed to investigate underlying mechanisms of injury with a focus on the epidemiologic and prevention aspects of injury, also charged with investigation of physiology of injury.
MR. ZUBLER: Your Honor, we offer Dr. Scalea as an expert in intravenous access, intravenous administration of drug and in medicine generally.
THE COURT: Thank you.
Miss Mullally, any questions, or had Mr. Pickus?
MR. PICKUS: This will be my witness. We have no questions and no objection to the designation.
THE COURT: Thank you. Then I will accept Dr. Scalea as an expert in intravenous access, intravenous I believe you said delivery?
MR. ZUBLER: Administration of drugs.

THE COURT: Medicine, and emergency medicine. Good. Thank you.
BY MR. ZUBLER:
Q. Thank you. Dr. Scalea, do you have a position on the death penalty?
A. I think it's a complicated issue.
Q. Do you -- are you in favor of it or against it?
A. I've spent 22 years in medical practice designed to save people's lives. Therefore, it is not part of my nature to kill people.
On the other hand, a significant number of people that I care for, including the number of people who die, are injured by acts of senseless violence. That doesn't make a lot of sense to me.
It is also I believe that for a number of reasons that are far too complicated for me to understand, that there comes a time when a person is probably no longer rehabilitatable. What to do with that person becomes a pretty complicated issue.
Q. Other than this case, have you ever been involved in any other litigation regarding lethal injection or the death penalty?
A. Not that I remember.
Q. And are you charging a fee for your work in this case?
A. No.

Q. How did you come to be an expert witness in this case?
A. Well, Mr. O'Toole called me, Mr. O'Toole is a former patient, and said, hey, I'm looking for somebody that's an expert that knows a lot about intravenous access that cares for a significant portion of people that have poor veins, particularly drug addicts, I'd like him to be willing to go to death row to evaluate this person. I'd like him to be willing to testify, and I would like him to do it for free. Do you know anybody that's willing to do that? It was a fairly short list.
Q. And you volunteered at that point?
A. Yeah.
Q. Volunteer may be --
A. I said I was willing to go. And I told him that he would get my opinion, whether it made him happy or not.
THE COURT: Well, it sounds like, given the fact you're working about 120 hours a week, you probably weren't busy with anything else.
THE WITNESS: Well, we can squeezed it into the margins.
Q. Your slow periods.
I'd like to ask you a few questions about what materials you've reviewed in this case.
Have you reviewed any documents produced by the defendants in this case?

A. I have.
Q. Do you recall what documents you've looked at?
A. My memory is that I looked at reports from Dr. Dutton, Heath, Dershwitz and Mr. Laughton, Contractual Team B, and maybe one other.
Q. Did you review any deposition testimony?
A. I reviewed depositions as well.
Q. Did you review the deposition testimony of the person we've identified as Contractual Team B?
A. I did.
Q. And did you review any of the lethal injection protocol materials?
A. I reviewed it, yes.
Q. Based on your review of those documents, do you have some understanding about how Maryland's lethal injection procedure works?
A. I have some understanding.
Q. And what is that understanding?
A. That intravenous access is established, and then in series, the patient is injected with sodium pentothal, pancuronium, and potassium chloride.
Q. Who do you understand performs the IV insertion during that procedure?
A. A member of the Injection Team.
Q. Do you understand Contractual Team B to be that person?

A. I understand her to be certainly one of those people. I don't know whether she is the only person.
Q. Dr. Scalea, what does it mean for an IV to infiltrate?
A. IV's are plastic catheters loaded onto a needle. The way it works, it's supposed to work is puncture the vein, you get a flashback of blood, and then you thread the catheter into the venous lumen, then connect it to whatever you want to inject into the patient.
If fluid leaves the vein, there are a number of terms that are used to describe that. Infiltration would be one. Extravasation would be another.
Q. How often in your medical practice do you see an example of infiltration?
A. It's reasonably common.
Q. How often in say a month would you see it?
A. A few times, maybe a couple of times a week.
Q. When during the course of establishing an IV and administering drugs can infiltration occur?
A. It can occur any time. Sometimes you put the IV in, and it's maybe poorly placed, or it's up against the valve, or the vein makes a sudden turn, and you start, or you're not really in the vein, and you start to run fluid in it, and it becomes immediately obvious that all is not well.
So that there is sudden obvious infiltration of IV fluid, or whatever it is you're putting in, into the

subcutaneous tissue space.
On the other hand, sometimes this happens much later. And depending where the fluid goes, may well be asymptomatic for a good period of time.
Q. Am I understanding correctly, after you've established an IV, infiltration could occur as soon as you start a saline flow?
A. Correct.
Q. And it could -- could it also occur when you inject drugs?
A. Absolutely.
THE COURT: I'm sorry, doctor. I missed something.
THE WITNESS: Yes, sir?
THE COURT: I believe that you said that often, or usually, infiltration is immediately obvious, but that it can be also asymptomatic for a time?

THE WITNESS: It can be, if the infiltration occurs right the injection site, then it's easy to see, as long as you look for it.

On the other hand, if infiltration occurs in a less obvious place, patients may be asymptomatic for a significant amount of time.

Several weeks ago, I walked in to see one of my patients, and he held his arm up and he said, look, his arm was swollen. His IV had infiltrated. He hadn't really

developed symptoms. We obviously kept running fluid in, because his arm got pretty swollen.

And then, you know, some hours later, I walked in, and he holds his arm up and he says, you know, what's the matter with my arm?

So there's an example of somebody whose IV was working for a while, and then it infiltrated, but apparently it wasn't immediately obvious. The infiltration occurred in a place not immediately adjacent to where the IV had been placed.

Does that answer your question?

THE COURT: You did, thank you, doctor.

BY MR. ZUBLER:

Q. Does the forcible injection of drugs into a vein raise or have any effect on the risk of infiltration?

A. Sure. You know, if you, veins are very thin walled blood vessels, as opposed to arteries, which have a thick muscular portion. So anything that steadily raises the pressure in the vein makes them at higher risk to infiltrate or to leak, or whatever term you want to use to describe that.

So if you put an IV in, and you just hook it up to a gravity drip, there's very -- that is dripping under really no force.

Still sometimes veins will rupture and infiltration will occur. But if you load up a syringe full of whatever it

is that you want to inject and you inject it under some force, there is sudden ballooning, if you will, of the vein. And depending on how strong the vein is and how high the pressure is, then those veins may be at risk for rupture.

Q. And how does the risk of infiltration compare in a patient who has compromised veins, as we discussed earlier,

with the danger that of infiltration for a patient with normal healthy veins?
A. It is kind of complicated issue, and I'll try to, if you promise not to speak lawyer speak, I will try not to speak medical speak here.
Q. It's a deal.
A. The simple answer is that it increases the risk depending on the nature of the venous disease. What it is flowing in the IV, where the IV is located. And particularly where the IV is located in relationship to where the veins are no longer healthy.
Q. So all of those things could affect it?
A. It --
THE COURT: If I could ask a question, doctor? When we speak of compromised veins because of intravenous drug use, is it that the veins themselves start to collapse and are therefore visibly hard to find because they're just not as big?
Or is it that they look just the same, but they're

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a lot weaker because of the corrosive effect of the intravenous drug use, or is it both?
THE WITNESS: It's actually neither.
THE COURT: Neither?
THE WITNESS: What happens is, if you -- veins are delicate blood structures, blood vessels, and so they weren't meant to be stuck. That is not how they were designed to work.
So if you damage the wall by repeatedly sticking it with a needle, and then you inject a corrosive substance into it, the walls harden actually, and ultimately the veins no longer have blood flow in them.
Now, where that is, how that is, depends obviously on where it is you're injecting, how often it is you're injecting, and --
Q. Where does the blood go, then?
A. Well, what happens is --
THE COURT: In the capillaries?
THE WITNESS: No. What happens is -- may I?
THE COURT: Certainly.
THE WITNESS: This is not a particularly accurate diagram, but it will work for us.
So these are the superficial veins. These are the veins you can see in your hand. It's not a big surprise, since most IV drug abusers are not trained phlebotomists,

they hit the veins that are easy to see first.
And so the veins that they can easily access go first. So if you do it for a long time, all of the superficial veins are damaged, thrombosed. There's cords in them, of clotted blood. The walls get thick, and they don't really support flow.
Normally, between the superficial veins and the deep veins, are perforators, so they communicate. So blood flows here. Blood flows there. Blood can flow between, but ultimately, all of these empty into the axillary vein here. Or, I'm sorry, here, which is a deep vein, and ultimately if subclavian veins, and that's how you get blood back to your heart.
Well, this is a situation that's not so different from the freeway when it gets clogged. What do people do they get off on the exit ramps. So if you've got no flow here, no flow through the perforators, in order to get the blood back, body develops collateral blood vessels.
These are typically quite small. And very numerous. And so the blood find its way, it goes down the arteries, into the capillaries, that's where the body unloads the oxygen and the nutrients and dumps the waste back in so you can breathe the CO2 out and then it kind of meanders back through the collateral blood vessels ultimately to join up at some place with some of the deep veins, if they haven't been

injected, too.
And ultimately into the subclavian, if that hasn't been injected, and ultimately back to the right side of the heart.
Is that clear?
THE COURT: Good. Thank you.
BY MR. ZUBLER:
Q. I'd like to pick up where you were with the collateral veins, but before we go there, I just wanted to close out the questioning I was asking a moment ago.
You identified a number of factors that would affect the risk of infiltration including the placement of an IV and so forth. But is it fair to say, all other things equal, someone who has veins damaged by intravenous drug use will have a higher probability of infiltration than someone else?
A. I think that's a fair statement.
Q. With respect to the collateral veins that you were discussing, what kind of flow of blood can they handle?
A. Not a lot. And they are numerous, and they are small, and they don't really have the ability to expand in any real

way.
Q. If infiltration were to occur in a patient, would it -- would it be the collateral veins that might be the ones that --

A. In a person with IV drug abuse?
Q. Yes.
A. Might be.
And if that happened, since it's deep in the muscles, it might not be symptomatic, because you wouldn't see it. You can't see it by looking at the arm.
Q. Did there come a time when you performed an examination of Vernon Evans' veins?
A. I did.
Q. Do you recall when that was?
A. I can't give you a date.
Q. Was it January of this year?
A. It wasn't yesterday.
Q. How many times have you examined Mr. Evans' veins?
A. Just once.
Q. And do you recall where the examination was?
A. In on death row in a room, or at least adjacent to death row in a room.
Q. How long did your examination last?
A. 20 minutes or so.
Q. And when you first met Mr. Evans, did you ask him for any information about his medical condition?
A. We had a general conversation about his medical condition. I specifically asked him if he was an IV drug user.

Q. And what did he say to you?
A. That he had about a 30-year history of drug use, including in jail, and that he had quit recently. I can't -- I don't frankly remember how many months he said it had been since he'd been shooting.
Q. And what parts of Mr. Evans's body did you examine?
A. I examined both upper extremities and his lower extremities up about to his knees.
Q. When you say upper extremities, what are those?
A. Arms.
Q. And lower extremities are?
A. Legs.
Q. Could you please describe how you examined Mr. Evans' upper extremities?
A. First, I just looked at them. They seemed to be reasonably normal. They weren't swollen in any particular

way.
I felt his pulses. He had good pulses in his good radial pulses.
I then put a tourniquet on his arm and looked to see if any veins would pop up. And then I put an ultrasound machine on the veins in his upper arm and ascertained whether the flow increased when I compressed his forearm.
Q. Let's back up for a minute.
What's the purpose of using a tourniquet?

A. Well, pressure in veins is very low. It's two or three, or zero millimeters of mercury. So if you block flow out, by putting a tourniquet on, which raises the pressure in the veins at the level of the tourniquet above venous pressure, it occludes the veins.
And a simple tourniquet, you can't occlude the arteries, so blood will go in, and blood will stop flowing back, since it can't get out at least in the superficial veins. That means they pop up, they dilate up. Then you can assess whether they are, whether you're going to be able to put an IV into them.
Q. And did you apply a tourniquet to both of his arms?
A. I did.
Q. And when you had the tourniquet applied, were you able to either see or feel any usable veins?
A. He had a couple of small veins on the dorsum of his hand that were very small.
Q. Anything on the upper part of his arm?
A. I couldn't feel anything, no.
Q. Or see anything?
A. Or see anything.
Q. And is that answer the same for both arms?
A. Yes.
Q. Now, you mentioned that you also examined Mr. Evans' arms with an ultrasound; is that correct?

A. Correct.
Q. What kind of ultrasound was that?
A. It was a Doppler ultrasound.
Q. And could you explain how that works, and why you use it?
A. An ultrasound is a device, it's a little ultrasound box, and it has a band that comes out, and if you put some conducting jelly on it, and you listen over the blood vessels, you can hear the flow in those blood vessels.
Q. And so in can a Doppler ultrasound reveal veins that you might not be able to see?

A. You can demonstrate flow in them, with the ultrasound if you can't see them, yes.
Q. And can a Doppler ultrasound also reveal that a vein that you do see doesn't have venous flow?
A. I expect it could.
Q. How often do you use that a Doppler ultrasound in your private practice?
A. We use it a few times a week.
Q. And what was the -- what were the results of your examination with the Doppler ultrasound?
A. Well, what I was able to do is hear flow in the deep veins up high.
Now, assuming there is good flow in the lower veins, if you compress the forearm, that should significantly increase flow through the deep veins, and you hear a whoosh.

So, you know, arterial flow, if you put the Doppler over the artery, it's (indicating sound), because it's very rapid flow under pressure.
If you put the Doppler on the vein, (indicating sound), because its flow under with two millimeters of mercury pressure.
There's no -- it's a high flow, but a very low pressure system.
If you then augment flow and suddenly increase flow in that vein, you'll hear a whoosh.
Q. Can you describe what you mean by augment flow?
A. By if you squeeze the forearm and there are good superficial veins, or big deep veins, and you increase the pressure in the vein, they empty quickly. So the flow in the deep veins should increase, and you should be able to hear that with by listening over the vein.
Q. And when you did that, what did you hear on Mr. Evans?
A. He had very poor augmentation. So the flow didn't really go up much.
Q. And is that the same with respect to both arms?
A. It was the same with both arms.
Q. And the lack of good augmentation, what does that indicate generally about?
A. The smaller collateral veins are not very compressible. So you -- if you squeeze the arm, they don't much increase

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flow.
What that means to me is that he has no flow in his

cephalic and basilic system veins and probably not a lot of great flow even in the deeper veins but certainly, and that -- not the superficial veins, and that didn't surprise me particularly since I didn't see any.
Q. In your opinion, based on your examination of Mr. Evans with the Doppler ultrasound, do you think that the veins in Mr. Evans' upper extremity could be used to administer a lethal injection?
A. I think it's very questionable. If I had to guess, I would say that the answer is no. But I certainly don't think I can be confident and say that the answer is yes.
Q. What are some of the risks if the state couldn't obtain reliable venous access during an execution?
A. Well, I suppose if you never got an IV in, then you probably aren't going to execute him by lethal injection.
If you get an IV in, if it's possible to put an IV in, and then any volume of fluid is injected under pressure, my concern is that those collateral veins are going to rupture, because they are now being asked to augment flow to increase blood flow, over a short period of time, and then I think after that, everything's unpredictable. Some stuff goes, some stuff stays in.
And I don't know that you can reliably say what's

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going to happen after that. I don't think you can.
Q. Well, first of all, if the thiopental that's injected, if that were to infiltrate into the skin, what would a consequence of that be?
A. I think it would depend on how much infiltrated and how much didn't. How much got into the central circulation because it infiltrated. So you may get no effect. You may get partial effect. It's hard to know.
Q. So would you say it's possible that the Pavulon and potassium chloride could be absorbed into Mr. Evans' blood stream and take effect even without the thiopental?
A. Yeah. I just don't know what will happen.
It's -- some of it will depend on volume. Some of it would depend on how rapidly it was injected. I don't know.
Q. If the state were to attempt to gain venous access first in the antecubital fascia area, and then if that were to fail to try to use veins more distant or distal, from the body, what would be the consequence of that?
A. It would depend what happened when, whoever was trying to put the IV in the antecubital fascia, what happened.
If you puncture the artery instead of the vein, the artery will bleed. That will set up a situation where the pressure in the tissue was now higher than it was before.
Remember, the pressure in the vein is two

millimeters of mercury. You can raise it by forcefully injecting, but there will be no relative venous outflow obstruction, so harder to get the stuff around.

If they hit the vein and go through the vein, but then are unable to canulate the vein, get the catheter to go into the direction up toward the shoulder, you now have a hole in the vein.

Now you forcefully inject, you increase flow, as you increase flow in that vein, you certainly -- one possibility is stuff goes out instead of going up. It kind of depends, hard to know.

Q. So if I'm understanding you correctly, that the attempt to gain intravenous access in the antecubital fascia area could make holes, I guess?

A. Correct. So I mean if you stick the vein and get into the vein, and then you try to thread the catheter, I mean, thread the catheter goes out the back wall, because you can't really see the vein, assuming you try to hit a deep vein, blindly into the antecubital fascia, then you've got two holes in the vein.

Now, you rapidly increase flow, well, maybe some of that flow comes out the holes as opposed to going up the vein.

Q. Is it like a leaky garden hose?

A. It's not so dissimilar.

Q. We talked earlier about your examination of Mr. Evans' upper extremities, his arms. We -- I didn't mention your examination of his hand. You started to mention that. You said you --

A. He had several very small veins on his hands.

Q. And would those be suitable for use in a lethal injection?

A. Not in my opinion.

Q. Why not?

A. They're very small. It's going to be hard to get an IV in reliably. I am not at all convinced that there is good drainage from those veins up through his forearm up into his upper arm.

And in some ways, you know, if you have a few veins left on your hand, and then flow is limited through the forearm, it's kind of like putting the tourniquet on. Those get bigger.

So you get this false sense that these veins maybe usable, but they're only big because they don't empty. Only there because they don't empty.
Q. So is it fair to say that if you wanted to use the hand veins for such an injection, you also need to have an appropriate level of venous flow higher up the arm for it to work?
A. Correct.

Q. Is there a method of intravenous access that could be used reliably to administer Maryland's lethal injection procedure?
A. Central line, or perhaps a ultrasonic graphically guided placed line in a deep vein up high, central line would probably be the most reliable way to do it.
Q. What about a cut-down procedure?
A. I think a cut-down procedure is unlikely to be successful anywhere in the hand or in the -- at the ankle. The only place you could do a cut-down procedure.
I mean, I suppose you could cut-down on any vein, so if you wanted to theoretically open his chest and put a line directly into his right heart, that's a cut-down of sorts. But it's kind of a big cut-down.
The place that are typically used for cut-downs is the saphenous vein at the ankle, and he doesn't have one. The only other the place where you could, perhaps, though not necessarily reliably do a cut-down, would be in his groin and that would mean making a decent size incision identifying the saphenous vein if it's patent, at the junction between the saphenous vein and the femoral vein and canulating that, or directly canulating the femoral vein.
Q. Who would be qualified to do -- let's all take first a cut-down procedure?
A. Surgeon, maybe an emergency physician at the groin, a

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cut-down.
Q. And ordinary internist wouldn't be qualified?
A. No.
Q. Would a certified nurse's assistant?
A. No.
Q. What about a central line?
A. The only people I am aware of that are -- well, let me say it this way, hospital privileges are a local phenomenon so hospitals give privileges. If I want to get privileges at Franklin Square Hospital, the fact that I've privileges at

the University of Maryland doesn't mean anything. I can't walk into Franklin Square and say I have privileges at Maryland, let me operate here. I have to get privileges from Franklin Square. Franklin Square could tell me our criteria for doing this procedure is different from the criteria at Maryland, or somewhere else.

So as far as I know, in hospitals, at least in the State of Maryland, the only people I know that are allowed to place central lines are physicians and nurse practitioners.

Q. And with respect to the possibility you mentioned of using an ultrasonic injection or ultrasonic location, I guess, is maybe what you said, who in your experience has the qualifications trained to do that?

A. You have to be pretty good with an ultrasound probe. I couldn't do that because I don't know how to. I've never

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been trained to do that.

Vascular surgeons are usually pretty good. You know some nurse practitioners are very good. People that put in pic lines, those are percutaneous lines threaded up for long-term antibiotics or nutrition are good at accessing deeper veins, with ultrasound guidance.

But you would need certainly to have some advanced practiced degree, and be specially trained in that technique.

Q. Is that something that a patient care technician or CNA would do?

A. No.

Q. Are you familiar with Dr. Mark Dershwitz?

A. I read his deposition.

Q. And do you recall any testimony by him about the possibility of venous rupture infiltration?

A. Yeah. He was of the opinion that that didn't really happen.

Q. And what is your opinion of Dr. Dershwitz's testimony?

A. I think that it's very likely he takes care of different kind of patients, perhaps than I do. Because I see venous rupture. You know, we see it. It's not uncommon. It is not that you scratch your head when you see it and say I've got to wonder what that is, it's a fairly recognizable scenario for us.

It may not be in the operating room at Mass

General, I guess, which is where he works. But it certainly happens in my hospital.

Q. Do you know Benjamin Laughton?

A. I do.
Q. Who is he?
A. He is the program manager for the nurse practioner program at the Shock Trauma Center.
Q. Is he a nurse practioner himself?
A. He is.
Q. And what is your opinion regarding Mr. Laughton's medical knowledge and skill?
A. He's a pretty sophisticated clinician.
Q. Do you personally work with him on occasion?
A. I do.
Q. How often?
A. Few times a month, he does a lot of administrative work, but he's a practicing clinician, so I work with him on the wards a few times a month.
Q. Are you aware Mr. Laughton examined Mr. Evans' veins in connection with this case?
A. I'm only -- only realized that because I read his report. I had no knowledge that he was going to do that.
Q. Does he report to you at the hospital?
A. It's -- it probably not. In the organizational chart of the hospital. But functionally, since I'm kind of the boss,

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he does in some, in a functional way, I would say he does.
Q. And I believe you said you only became aware that he examined Mr. Evans' veins after he did so; is that correct?
A. That's correct.
Q. Are you -- did you talk with Mr. Laughton, have you ever talked to him about this case?
A. No.
Q. Are you aware that Mr. Laughton submitted an expert report in this case?
A. I read it.
Q. Did you review it prior to his submission of it?
A. No.
Q. Did you review it prior to submitting your report?
A. No.
Q. And from your review of his report, how did his examination compare to your examination?
A. My memory is they were pretty similar.
Q. And are you referring to the methods he used or the results?
A. The results.
Q. Do you recall how the methods compared?
A. He used a different kind of ultrasound device. He used an ultrasound with a screen on it, so now you can see, not only can you hear the flow, you can see the blood vessel on the screen, so-called color flow, because it's expensive

machines, at least they're in color, so you can watch the blood flow. Therefore, you could see if the blood vessel was narrowed. And I didn't use that.
Q. Would that tend to reveal more or less information about a person's veins than a Doppler ultrasound?
A. It's different information. I guess it's probably additional information. I think that's a fair statement.
Q. And do you recall what Mr. Laughton's findings were?
A. Yeah. My memory is he didn't find anything suitable on the hands or in the lower articles, but that he was able to demonstrate the flow through the deep system with his ultrasound, higher up in the arm.
Q. And what do you make of that finding in comparison to yours?
A. I don't think they're so different. I think they're about the same.
Q. Does his finding of some flow in the arm affect your opinion about whether the state could obtain reliable venous access to Mr. Evans?
A. No. Because if you could hit one of those deep veins higher up in the arm with ultrasound guidance, because you would have to, it would be hard to hit it without ultrasound guidance, I think, then that will be, if you got it in, then that's reliable venous access. But you'd have to have all of the knowledge and expertise to do that.

In most basic terms, it's no different from when I put a probe on and I could hear it, he put a probe on it and he could see it.
Q. Now, based on your review of the documents in this case, do you have an understanding about the role of Contractual Team B in examining inmates subject to lethal injection?
A. Yeah. My understanding is that this individual is responsible for ascertaining reliability of venous access and then placing the IV.
Q. And do you understand that Contractual Team B has examined the veins of Mr. Evans?
A. I am.
Q. And based on your review of her deposition testimony and her expert report, what do you understand about her examination?
A. My memory is that she thought that there were a large number of usable veins, seven on one side, eight on the other is my memory, though I could be off by one or two.
Q. What is your understanding regarding how she examined Mr. Evans?
A. With a tourniquet.
Q. And do you know whether she used an ultrasound?
A. My understanding it was that she didn't. At least I

didn't see any mention of that.
Q. So do you have any possible explanation for how she was

able to find multiple, several veins on each arm, and you didn't find anything?
A. No.
Q. Now, isn't it possible that a person's veins, their appearance, can vary depending on his or her condition at any given time?
A. Not that much.
Q. Now, based on your review of Contractual Team B's expert report and deposition testimony, did you see anything that caused you concern about her ability to assess intravenous access?
A. To be able to assess intravenous access?
Q. Uh-huh.
A. No. She -- I know does that or he or she I guess does that as part of his or her job, but I have no explanation, and it -- I find it almost impossible to reconcile that I was unable to find any, and he or she was able to find 14, 15, whatever the correct number was. I can't explain it.
Q. Do you recall in her second deposition that she mentioned that she was able to locate both the radial and ulna veins?
A. I do remember that.
Q. Do you have a professional opinion regarding that finding?
A. Yes, she's factually incorrect.
Q. How do you know that?

A. Because you can't see the radial and the ulnar veins. They're not visible from the skin.
Q. What veins can you typically?
A. You can see -- you can see the cephalic and basilic venous system by limiting flow through it. This is actually it's not drawn to scale. The radial and the -- veins and arteries come in matched pairs.
So you have a radial artery and radial vein, ulnar artery, you have the ulnar vein, you have a brachial artery, you have a brachial vein. They get smaller as you get closer to the end of your extremities.
The radial artery and the ulnar artery are really small. When you work on them, you have to put magnifying blood pressures on in order to be able to actually see the inside. Veins aren't any bigger. And they are deep in the structure of your arm.

You can put your finger on your snuff box and feel the radial artery, but you can't see it. You can't even feel the ulnar artery, or you may be able to. But there is no way that you can see the radial and the ulnar vein by putting the tourniquet on. It can't be done.

Q. Thank you.

Contractual Team B also testified that she actually uses the radial ulnar veins for IV insertion quote "all the time" unquote. What is your opinion regarding that?

A. She's factually incorrect.

Q. And why is that?

A. Because you can't see them; therefore, you can't use them.

Q. Dr. Scalea, earlier today we heard a deposition clip in which Contractual Team B testified that she personally had inserted IV's in the breast quote "hundreds of times" unquote.

Does that testimony, how does that comport with your medical experience?

A. I think I've seen one IV inserted into a breast vein. I would frankly consider that below the standard of care in a acute care hospital, certainly a hospital the quality of the (SEALED).

Q. Do you recall testimony of Contractual Team B regarding how often she has been able to successfully obtain IV access?

A. Yes. She said that she thought she had missed once or twice in ten years.

Q. And what is your opinion regarding that testimony?

A. Well, we could do, I mean, she's testified that she -- can I write on this?

Q. Please.

A. She testified she puts 10 IV's in per shift. If she works 12 hour shifts, then she works three a week. So that's 30 a week.

She works 50 hours, 50 weeks a year, that's 1500 IV's a year. If she's worked ten years, that's 15,000 IV's she has put in, and she's missed twice.

So that would be a miss rate of 0.001 percent.

Nobody's that good.

Q. Not even you?

A. Not even me. But there is nothing that that is good in clinical medicine. Nobody hits it 99.99 percent of the time.

Q. I'd like to show you a clip of her deposition testimony,

starting at page 71 of her second deposition.
MR. PICKUS: Your Honor, the defendants object to the showing of any clips of the deposition. There have been no attempt to see if this witness even remembers the deposition.
There is nothing whatsoever in the Federal Rules of Evidence that allow the clip to be played in these circumstances.
THE COURT: What I'll do is I'll address, because it will be a number of experts, I will address ground rules later and some research that uncovered all this area. But for the purposes of time, I'll overrule the objection now and you may show the clip.
Q. Page 71 of her second deposition, beginning at line 6.
(Pause.)
(Tape played)

Q. Based on your review of her deposition testimony, including that clip, do you have a professional opinion about Contractual Team B's knowledge of the risks associated with IV access?
A. I don't agree with her. I think she's wrong.
Q. Do you recall testimony of Contractual Team B regarding her knowledge of the term extravasation?
A. Not as I sit here today.
Q. If I told you that she didn't know what that term meant, would you find that surprising?
A. It's a fairly common term. I mean, it's a common term used in our hospital, by a number of levels of healthcare providers.
Q. I'd like to direct you to another clip beginning on page 70 of her second deposition, line 15.
(Tape played)
Q. Dr. Scalea, do you have a professional opinion regarding the accuracy of that testimony?
A. I've already said I don't think it's right, so I don't think it's right.
Q. Do you recall testimony by Contractual Team B regarding how a patient's blood pressure affects infiltration?
A. I do.
Q. What do you recall about that testimony?
A. She said that the reason that IV catheters backed out of

the vein was due to the arterial blood pressure, or fairly close to that.
Q. And what is your professional opinion regarding that

testimony?
A. It's factually incorrect.
Q. Why is it incorrect?
A. Because there's no relationship to the blood pressure, and venous catheter dislodgment. Arterial blood pressure is measured by occluding the artery and measuring flow through an artery. So when your heart beats, it forces blood into the arterial system. You measure a systolic blood pressure by blowing the cuff up to a level where it stops the flow.

The diastolic component is the amount of blood pressure in the arteries that exist during cardiac relaxation. And so a typical arterial blood pressure would be, if it's good, is 110, 120 over 70, millimeters of mercury, and the mean blood pressure the average blood pressure of that artery about 120 over 70. 85. So 85 millimeters of mercury.

Pressure is measured by blow and resistance. The arteries are big muscular walls. The blood now goes down and comes around and, it's in the veins. The veins, as I said earlier, do flow, work very well, but they don't have any pressure in them the average blood pressure, if you will, in a vein, is two millimeters of mercury. It's essentially

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zero.

So the pressure has nothing to do with pushing a catheter out or displacing a catheter, or any of those things.
Q. I'd like to show you another clip, this one beginning on page 102 of the first deposition, line 9.

(Tape played)
Q. Based on your professional experience, Dr. Scalea, is that testimony accurate?
A. No.
Q. Why not?
A. Because it's a plastic catheter, but the veins are very, very delicate structures. And so a venous plastic catheter could damage a vein and rupture it or end up outside the vein. It has nothing to do with the needle no longer being in.
Q. I'd like to show you another clip, this one beginning on page 118, of first deposition, line 13.

(Tape played)
Q. Dr. Scalea, what is your opinion regarding that testimony?
A. She's factually incorrect.
Q. Why?
A. You don't -- dopamine is a vaso active drug. It's not given through a peripheral IV.

There are a class of drugs that cannot be given because either of they are so caustic they damage the peripheral veins, such as high intensity nutrition, or vaso-actives, such as Dopamine and neosynephrine, and those really need to be administered through a central line vein.
Q. With respect to her testimony about feeling competent to monitor an IV administering anesthesia, what is your opinion regarding that aspect of her testimony?
A. I guess I'm not sure, I guess I'm not sure what that means. You put an IV, it either works or it doesn't work. She doesn't work in the operating room, to the best of my ability, to tell. There's some things that are little different in the operating room than they are in a CCU or on the floor, not at least of which is the patient's covered up, so it's a little harder to see the patient.
So we have, we don't allow, and I am not aware of any place in the state or the country, that has a person at the level of a patient care technician, monitoring intravenous access in the operating room.
THE COURT: Good. Counsel, why don't we take just a 10-minute recess and come back at 20 minutes of.
(Recess.)
THE COURT: Please be seated. We're ready to continue.
BY MR. ZUBLER:

Q. I believe I have just a couple more questions.
Dr. Scalea, I would like to show you just one last clip from Contractual Team B's deposition starting on page 89, line 1. And if you could turn the monitors off just to observe confidentiality. should be lines 1 through 4.
(Tape played)
Q. Dr. Scalea, based on your experience, what is your opinion of this testimony?
A. Epinephrine is not anti arrhythmic, unless you consider cardiac stand still. Arrhythmia --
Q. What is arrhythmia?
A. Irregular heart beat.
Q. So you wouldn't use epinephrine to correct irregular heart beat?
A. Not unless there was no heart beat at all.
MR. ZUBLER: I have no further questions.
THE COURT: Thank you.
Mr. Pickus, your witness, sir.
MR. PICKUS: Thank you, Your Honor.
CROSS-EXAMINATION
BY MR. OAKLEY:
Q. Good afternoon, doctor.

A. Hello.
Q. You are currently the physician in chief at Shock Trauma; is that correct?

A. I am.
Q. And Dr. Dutton is an employee at Shock Trauma, correct?
A. He works at the Shock Trauma center, yes.
Q. And you are his supervisor?
A. I am his clinical supervisor.
Q. And Mr. Laughton, or Nurse Laughton, is also one of your employees at the Shock Trauma, correct?
A. He works at the Shock Trauma, yes.
Q. You also sponsor Mr. Laughton in his nurse practioner agreement; is that also correct?
A. I believe so.
Q. The patients that come to Shock Trauma, you describe that you get the worst of the worst, is that a fair statement?
A. We get a lot of very sick people, yes.
Q. And they all suffer from trauma, some sort of trauma?
A. Most of them do, yes.
Q. Is it fair to say that the patients you're dealing with are more difficult than, say, what the average hospital deals with?
A. Yes.
Q. Is it also fair to say that a lot of times the actual trauma itself can cause problems to a person's veins?
A. No.
Q. Well, do trauma patients lose a lot of fluid?
A. The consequences of injury can make venous access

challenging, yes, but the trauma itself doesn't do it.
Q. So the consequences of trauma, which is what you deal with, can make venous access difficult?
A. Yes.
Q. And how often do you personally do peripheral IV's?
A. A few times a week.
Q. Do you know how often Nurse Laughton does peripheral IV's?
A. I don't.
Q. Have you put a peripheral IV in a patient with compromised veins?
A. Yes.
Q. Have you successfully put a peripheral IV in a person with compromised veins?
A. Yes.
Q. Do you get significant amount of patients at Shock Trauma who have compromised veins for reasons not related to their

injuries?
A. We get a fair number.
Q. Is it possible for to you put a percentage on that number for me?
A. We probably see 10 percent of our patients, our intravenous drug abusers. I'm guessing here. I mean, so I'm just, these are very much ballpark figures. We see a number of people who are elderly who may have fragile peripheral

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veins.
I can tell you that a little bit more specifically about 25 percent of the people that we see are over the age of 65, I couldn't tell you what percentage of those people have problems with their veins.
Q. And are there other medical situations that cause problems with people's veins, such as dialysis, or other situations?
A. Yes.
Q. So is it fair to say a large percentage of people coming into your hospital have compromised veins?
A. You would need to be a little bit more specific and define large.
Q. Is it over 50 percent?
A. I don't think so.
Q. Close to 50 percent?
A. I don't think so.
Q. Well, when you factor in the fact that they likely or could suffer compromised veins as a consequence of their injury, does the number take you over 50 percent?
A. I don't think so.
Q. Is it over 25 percent?
A. You're asking me for, I don't know.
Q. You said that 10 percent of your patients are IV drug users?

A. You asked me for a number. I told you I was giving you my best guest, so --
Q. And those patients probably have compromised veins?
A. I think drug users have difficult veins, no question about that.
Q. In addition to that, elderly patients could have compromised veins?
A. Yes.
Q. In addition to those, you could have people who have compromised veins for medical reasons?
A. Correct.

Q. In addition to those people, you could have people compromised veins solely as a consequence of their injury?
A. Correct.
Q. And is it fair to say there are people out there who just have problematic veins even though --
A. Some people have lousy veins, no question.
Q. And, again, the patient you work with, is it fair to say that peripheral IV's are in most situations the line of choice at Shock Trauma?
A. Peripheral IV's are the initial line of choice.
Q. And is that because they're quicker and easier?
A. Yes.
Q. And when you say they're the line of choice, we're comparing it to central lines; is that correct?

A. Correct.
Q. Is it fair to say that -- I'm sure there are probably a few situations where you may go right to the central line, but in general, you try to get a peripheral IV before going to the central line?
A. Depends on the patient.
Q. Do you usually try to get a peripheral IV in before getting a central?
A. More often than not, we try to put a peripheral IV in, or they come with a peripheral IV.
Q. And who does peripheral IV's at Shock Trauma?
A. Technicians do, nurses do, doctors do.
Q. Are they patient care technicians?
A. Yeah, I -- we call them patient care technicians, yes.
Q. And how often do patient care technicians do peripheral IV?
A. Every day.
Q. Are you satisfied with their skill level of putting in IV's at Shock Trauma?
A. Usually.
Q. And you briefly talked about this, to Mr. Zubler's questions, but central lines can cause some of their own complications; is that fair to say?
A. Absolutely.
Q. And my understanding there's essentially three kind of

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central lines, is that fair?
A. There are three sites where central lines are generally inserted.
Q. That would be the femoral vein?
A. Internal jugular and subclavian vein.
Q. Could you tell us what the complications are for central

lines?
A. Depends on the site.
Q. Okay. Let's start with the femoral vein.
A. Femoral vein is infection and thrombosis of the femoral vein, and poor placement or consequences of the poor placement.
Q. And what are the consequences of poor placement?
A. The central line migrates out of the vein, and the patient then gets their IV fluids outside of the vein and/or bleeds into the area around the vein.
Q. So it sounds to me like it's the same consequences as infiltration on a peripheral IV?
A. Can be.
Q. Any other complication you can think about for central line?
A. Those are the main ones.
Q. How about subclavian?
A. Same think cardiac arrhythmias, when you put the guide wire in.

Less risk of infection.
Pneumothorax or hemothorax. That means the lung collapses because you puncture the lung on the way to the vein or you bleed into the chest.
Q. And how about a central line placed in jugular vein?
A. About the same as subclavian though, probably a little less frequent.
Q. And who can place a central line in Shock Trauma?
A. Nurse practitioners or I guess nurse anesthetists and physicians.
Q. Okay. And if Maryland were to go to a central line during its lethal injection procedure, they would need, in your opinion, to have one of those two types of qualified people?
A. Those are the people in our hospital that we believe are qualified to put lines in.
Q. Can a normal RN do a central line, to your knowledge?
A. Not in our hospital.
Q. Can a nursing assistant, they can't do a central line?
A. No, they can't, not in our hospital.
Q. Would it surprise you if Maryland had difficulty obtaining an MD to actively participate in an execution?
A. Would it surprise me? I guess not. I haven't really thought about it.
Q. And when you do a central line, is anesthesia used prior

to the putting in of the central line?

A. Local anesthesia is used.
Q. And what exactly what kind of local anesthesia is used?
A. Lidocaine.
Q. Do you ever do a peripheral IV anesthesia before doing central vein?
A. Occasionally.
Q. When would you do that?
A. Somebody's really very nervous, or very apprehensive, it makes them feel better to get Lidocaine sometimes.
Q. So you would actually use general anesthesia before doing the central line; is that correct?
A. No, that's not what I said. I said we use local anesthesia.
Q. Well, what do you use when you use a peripheral IV prior to a central line what are you administering?
A. I don't understand your question.
Q. You testified that you occasionally use a peripheral IV prior to doing a central line?
A. Correct.
Q. What drug is going in the peripheral IV?
A. Usually IV fluids, maybe antibiotics, depends on why we're putting the central line in.
Q. Do you ever use anesthesia through a peripheral IV prior doing a central line?

A. General anesthesia?
Q. Yes. Any kind of anesthesia?
A. We will occasionally give somebody some pain medicine in or some sedation, just depends on the patient, depends on the situation, depends on the whole case.
Q. But as far as your examination of Mr. Evans, did you review any of his medical records?
A. No.
Q. And he told you you have -- he had an IV history?
A. Correct.
Q. Now, you testified that you are fairly familiar with dealing with patients who have an IV drug history; is that correct?
A. Correct.
Q. And when you deal with those patients and you're trying to get a peripheral IV, will you ask them what name they use when they were using IV drugs?
A. Sometimes.
Q. When would you do that?
A. Sometimes they volunteer it, they say stick over here. Sometimes if I find nothing, I ask them if you're still shooting, is there a place that's useful? I don't remember doing that recently. But I have in the past.
Q. Have you ever gotten useful information from that question?

A. I guess I don't remember.
Q. So you're testifying now that you've never asked an IV drug user what veins he or she didn't or did use?
A. Yes. The question you asked me is had I ever gotten useful information. The answer is I don't remember. I didn't say it didn't happen. I just don't remember a situation where it happened.
Q. If an IV drug user is conscious, what is your practice as far as asking him about what veins he may use?
A. I don't recall doing it, and in a long time.
Q. Did you ask Mr. Evans what veins he used?
A. No.
Q. Do you ask Mr. Evans if he had ever had any lapses in his use?
A. No, I didn't.
Q. Did Mr. Evans indicate to you recently he stopped using IV drugs?
A. He did, but I don't remember the answer.
Q. Was it in terms of days, months, or years?
A. Months is my memory.
Q. And you examined his arms up to his biceps?
A. Up to just to his upper biceps, up near his axilla.
Q. And his leg up to his knees?
A. Approximately.
Q. And his hands and feet?

A. Correct.
Q. So you did not examine his chest?
A. Correct.
Q. You did not examine his groin?
A. Correct.
Q. Did not examine his back?
A. Correct.
Q. On the upper extremities of Mr. Evans, his arms, was there any swelling present in either arm?
A. No.
Q. Was there any bruising present in any arm?
A. No.
Q. Did you measure the circumference of either arm?
A. No.
Q. Did you measure circumference of either leg?
A. No.
Q. Was there any swelling in any of the legs?
A. Not that I remember.
Q. Was there any bruising in either leg?
A. Not that I remember.
Q. And as far as the ultrasound is concerned, you only use that on the arms, correct?

A. Correct.
Q. And when you use the ultrasound, you could in fact see some flow in the deep veins?

A. Yes.
Q. Do you have an opinion as to the health of his deep veins?
A. He had flow in at least one of them. That's really all I can say.
Q. And then you augmented the arms while you were using ultrasound; is that correct?
A. No.
Q. What did you do while you were using the ultrasound?
A. The arm was out, I put the ultrasound on, I don't remember elevating the arms.
Q. I didn't say elevate, I meant augment.
A. Augment, I'm sorry. I squeezed his forearm to see if the flow in the deep vein that I was listening to increased.
Q. And you did that on both arms?
A. I did.
Q. Can you quantify what the augmentation was?
A. It was minimal.
Q. Can you quantify what that augmentation was?
A. 10 percent, or so, is my memory, if you want a number.
Q. 10 percent of what?
A. 10 percent of baseline flow.
Q. What I'm saying, can you quantify that augmentation as compared to an infusion rate of fluid?
A. You mean cc's of fluid?

Q. Yes.
A. No.
Q. So you can't tell me how your augmentation compared to the rate of infusion under the Maryland protocol, correct?
A. Correct.
Q. And you testified that when some of the veins become damaged, thrombosed, or sclerosed, collateral is developed, is that correct?
A. Correct.
Q. Is it fair to say these collaterals are more numerous than the veins they replace?
A. Yes.
Q. Is it also fair to say that when this occurs, the blood flow of the person remains the same?
A. Remains?
Q. The same?
A. Approximately.

Q. So the collaterals that develop are essentially carrying the same load of blood in the prior veins carried; is that correct?
A. Approximately.
Q. And as the blood flows around the damaged veins through these collaterals, the fluid is dispersed among the collaterals?
A. Yes.

Q. And if there was any pressure, the pressure would also be dispersed among the collaterals; is that correct?
A. Yes.
Q. So if you had one vein and had an infusion through lethal injection, the pressure would be far greater than if you have collaterals where the fluid is being dispersed; is that a fair statement?
A. I guess I don't understand what you're saying.
Q. Let's say we have, under the Maryland execution protocol I do know it's 1 to 1.5 milliliters per second. If someone has a healthy vein and traveling path to the heart is through one particular vein, there would be pressure on that vein from the infusion, correct?
A. Correct.
Q. If that vein is damaged and collaterals develop, the infusion will be dispersed amongst the collaterals?
A. That's right.
Q. And it would be a different level of pressure on each individual collateral compared to what it would have been for a single vein?
A. I think your pressure is a function of volume and compliance of the vein wall. So that the pressure in the vein is dependent on how much is flowing through and how much the vein can expand.
So if I take something that big, and I push a

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volume of fluid through, and it expands up, there will be more flow, but maybe no more pressure.
If I take something and push it through the same sized hole, there will be more flow and higher pressure.
Q. Okay. If an IV was successfully put in in Mr. Evans, it would regionally be in one vein?
A. Correct.
Q. And then your testimony is at some point it would hit collaterals and be dispersed, correct?
A. No. I'm sorry?
Q. Your testimony is if we did get an IV into Mr. Evans?
A. In his hand you're talking about?

Q. Well, we can use the hand for example, certainly.
A. Okay.
Q. Let's say we got an IV in his hand, originally the infusion is in one vein, correct?
A. Yes.
Q. And your testimony is that his veins are likely damaged and therefore collaterals have developed correct?
A. That's correct.
Q. So as the infusion travels, at some point you believe that the infusion would be dispersed amongst collaterals?
A. Correct.
Q. And the rate of infusion is 1 to 1.5 milliliters a second?

A. Correct.
Q. So that original vein has a certain amount of pressure on it?
A. Okay.
Q. Is that -- is that your understanding?
A. There is a certain pressure in the vein, that's correct.
Q. Okay. And the volume of this fluid would be dispersed amongst collaterals?
A. Correct.
Q. And the pressure would be reduced among individual collaterals?
A. Not necessarily.
Q. Do you have any idea how many collaterals develop in a situation like this?
A. No, I couldn't give you a number.
Q. Can you give me a range?
A. No, it's a significant number.
Q. What do you mean by significant?
A. 20, maybe.
Q. 20 maybe?
A. Yeah, I can't give you a number. We don't map those, and I expect there are -- there is a variable number depending on the person. I've never counted them.
Q. Do these collaterals develop simply at the point where the vein is actually harmed?

A. It -- they form around the vein where the vein is no longer carrying fluid.
Q. And they reconnect with the vein further up the line?
A. Usually, yes.
Q. And do you have any idea as far as Mr. Evans is concerned where this collateral development occurred?
A. No.

Q. You can't tell me if it's in his hand, forearm or upper arm?
A. I would expect it's in his forearm.
Q. You would expect it's in his forearm?
A. Uh-huh.
Q. Do you have any reason to believe collaterals developed in his upper arm?
A. It's possible. It would depend on where the collaterals came back into the main veins.
Q. And these veins that have been damaged from IV drug use, is it possible they can heal?
A. It depend on what state of disease they are.
Q. So if they haven't reached a point of no return, for lack of a better term, they can possibly heal?
A. It's possible.
Q. When you wrote your report in this case, you stated that Mr. Evans may not have veins suitable to handle Maryland lethal injection procedure; is that correct?

A. Yes.
Q. And is it fair to say, since you used the term may, that he may very well have veins that are suitable for handling Maryland's lethal injection procedure?
A. It's hard to say. I can't say yes, and I can't say no.
Q. You can't say he definitely would have; is that correct?
A. That's correct.
Q. What is the difference between extravasation and infiltration?
A. I think they're largely the same thing. They both refer to fluid leaving the vascular space.
Q. So if Contractual B in a deposition several clips were played to you knew the definition of infiltration, is it fair to say that she understood the concept?
A. Yes.
Q. And does extravasation and infiltration, if they're going to be symptoms, are they the same symptoms?
A. Yes.
Q. What are those symptoms?
A. Depends on where the fluid extravasates, depends on what -- depends on what fluid leaves the vein, lumen, it depends on how much and over what rate.
Q. So all these variables, volume is a variable?
A. Volume is a variable.
Q. Is the actual toxicity, or if it's caustic is a variable?

A. Yes.
Q. The rate is variable?

A. Rate and volume ought to be related.
Q. And what were the other variables?
A. The location.
Q. So we have infiltration at the IV site, what symptoms would you expect to see?
A. You would see swelling. The patient would likely have pain, that would be about it.
Q. And where are the other possible sites of infiltration?
A. Well, if you rupture the collateral veins, then you infiltrate fluid or drug in the deep spaces of the hand, I would think that would be likely asymptomatic for a period of time.
Q. And what kind of period of time are we talking?
A. Minutes, hours, depends on the volume. It depends on the toxicity of the substance.
Q. And the example you gave about walking into a patient's room the other day, you believe that was an as symptom make extravasation or infiltration?
A. Yes. At least initially.
Q. Do you know at what point that IV infiltrated?
A. No.
Q. Hypothetically it could have infiltrated seconds before you got to that room?
been switched to the other arm, so it hadn't happened immediately.
Q. What hadn't happened immediately?
A. He didn't get symptoms immediately, because he wasn't getting IV fluid in that arm at the time he had symptoms.
Q. Did he get the symptoms in the new arm or the old arm?
A. He had the symptoms in the old arm. The arm that was not currently being used.
Q. So are you saying that he got infiltration symptoms in an arm that no longer had an IV?
A. Correct.
Q. And the variability of volume, is it fair to say that the larger the volume of fluid, the more likely to see symptoms of infiltration?
A. I would say so.
Q. And toxicity, or causticness, is it fair that the more caustic a substance is, the more likely you're going to see symptoms of infiltration?
A. Yes, I would think so.
Q. And do you know anything about sodium pentothal?
A. In terms of how toxic it is?
Q. Yes.
A. No.
Q. Do you know what the pH level of sodium pentothal is?

A. No.
Q. If I told you it had a pH of approximately 11, what would you say about that?

A. It's fairly basic.
Q. And basic for all of our meaning, it's an alkali?
A. It's an alkali.
Q. What would you suspect if it's got into the subcutaneous tissue?
A. I suspect it would develop some symptoms, I don't know over what period of time.
Q. What kind of symptoms would you expect?
A. Probably pain.
Q. When you testified that Mr. Evans may or may not have suitable for handling Maryland lethal injection, you previously talked about saying he did not have suitable veins that could handle IV infusion for a significant amount of time?
A. I believe that's probably true.
Q. And how do you define a significant amount of time?
A. It maybe minutes. It may be seconds. It may be minutes. If you drip it in very slowly, it's possible those veins would last longer.
Q. As you previously testified at your deposition that you believed significant time was hours?
A. I don't remember. But I'm saying that I believe it

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depends on the rate you infuse and the volume, and the causticness of the substance as to how well, how long that IV will last and whether he will get symptoms. And how big an IV catheter you put in I guess also would be important.
Q. If there is infiltration, you testified that it is possible that some of the infiltrated drug could still make its way to the heart; is that correct?
A. I think that once the vein is ruptured and some goes in and some goes out, it's hard to know what's going to happen. I just don't know a way to predict it.
Q. Is it possible some of the fluid gets to the heart?
A. It is possible.
Q. And if there is infiltration and none of the first chemicals sodium pentothal is getting to the heart, is it possible the second two drugs can get to the heart?
A. I think it is possible. It would depend on, you know, which of the collaterals ruptured, how fast you were injecting the fluid. I just think that once that starts to happen, it is impossible to know what's going to happen after that. I just don't know what will happen.
Q. Did you read Dr. Dutton's deposition?
A. I did.
Q. Are you aware that he said it is unlikely that the second and third drug could be successfully delivered and the first drug not be delivered?

A. I think I remember that, yes.
Q. And what are your views on that statement?
A. I think Rick and I are probably going to disagree on that, or Dr. Dutton and I will probably disagree on that.
Q. You believe there's a possibility the second and third drugs can successfully be delivered without the first drug?
A. I don't know they can be completely delivered. I think parts of them could be, I'm going stay again, once this starts to happen, I don't know what's going to happen.
Q. Can you give me a percentage on how many times you've seen, you've personally been involved in patients who have had infiltration, or actually I'll use the word rupture, or a successful IV was placed but something further up the arm collateral or another vein ruptured?
A. It's reasonably common.
Q. How do you define that?
A. We see it a few times a week.
Q. And how many patients do you have a week?
A. In the resuscitation unit? I would see a third of them, round numbers. We probably see around, let me do the math here average, if the resuscitation is about 15. So we're on call two point something times a week. So it's 30 something. And I probably see it, of those 30 something I probably personally see 30, or somewhere in the 20s, and I would say I see it three or four times a week.

Q. And how do you know it happened?
A. Because the patient will ultimately develop symptoms, or the drugs we give don't get effect.
Q. And what is the typical IV you guys are running as far as volume?
A. When we -- depends on why we put the IV in. If we put an IV in for trauma resuscitation in, when the patients first get there, we would put a 16 or 18 gauge, or 16 or 14 gauge IV in, if we can get one. And then we run the bags open. We don't put them on pressure bag. We just let them drip by gravity.
Q. So can you give me -- let's say you're just using fluids, not medication, give me the range of the volume you might be using?
A. If we regulate the volume it will be as low as 50 or 20 cc's an hour. If we put a big IV in and we just let it run by gravity, in a person with normal veins, we could probably get a liter of fluid in 10 or 14 minutes under gravity.
Q. And if a faster -- if a larger volume or faster rate were used, the chances of symptoms would be higher; is that correct?
A. I think so, yes.
Q. Now, you testified that Nurse Laughton did see flow in the upper arms?

A. It's my memory, yes.

Q. And is that another thing you're going to have to disagree with?
A. No. I heard flow in the arm, but in the deep veins of the arm.
Q. And you also testified that you believed the hand, there were several veins in the hand that could handle an IV, correct?
A. Yes.
Q. And you also said that that, those hand veins could handle a slow rate of --
A. I said you could put a very, put a small IV in, and they would probably handle a slow rate of infusion.
Q. And you are aware Mr. Laughton does not even believe that that a catheter can be placed in his hands?
Is that a yes?
A. Yes.
Q. So you disagree with Mr. Laughton on that point?
A. I think you could probably get an IV in him at least when I saw his veins, yes.
Q. So is it fair to say then Mr. Laughton didn't see something that you saw during your examination?
MR. ZUBLER: Objection. Misstates the evidence.
THE COURT: I'll overrule the objection.
A. I think Mr. Laughton, I wasn't there when Mr. Laughton examined Mr. Evans. I don't know what he saw. It is all I

can say is I saw what I saw, and my opinion's what my opinion is.
Q. Okay. So getting back to the possibility of seeing symptoms for infiltration, one variability is volume, correct?
A. Yes.
Q. And the larger the volume the more likely the symptoms, correct?
A. I think so.
Q. The other variability is whether the drug is caustic?
A. Correct.
Q. Sodium pentothal is caustic, correct?
A. What I said is it's got a high pH, I don't know over what period of time, you would develop symptoms if that infiltrated subcutaneous tissue or into your deep muscles.
Q. And did you have rate as a separate variability?
A. I said volume and rate were approximately should be the same thing.
Q. And I believe you compared, well, what do you think of

Maryland's rate of one to 1.5 milliliters per second?
A. It's about five and a half liters an hour.
Q. What do you think about it as a rate of infusion?
A. It's pretty fast.
Q. Compared to what?
A. Compared to putting an IV in and letting fluid drip in by

gravity.
Q. Okay. Do you ever have situations where you use a higher rate of infusion?
A. We use a higher rate of infusion on machines.
Q. You compared Maryland's rates of infusion to your use of CT scan infusion, correct?
A. Correct.
Q. What is the rate of infusions on CT scans?
A. It's about 4 cc's per second.
Q. So if Maryland is 1 to 1 and a half cc's per second, your infusion of CT scans?
A. About twice as fast.
Q. Well at least twice as fast, maybe even four times as fast?
A. Four times 1.5 would be 6.
Q. It's 1 to 1.5, correct?
A. Okay. Fine.
Q. So it could be as much as four times as fast?
A. Correct.
Q. And I assume at that significant difference in rate, there would be a higher chance of we'll loop it all in the term problems?
A. Yes.
Q. And, again, I'm going to ask you, you do not believe these veins are durable for any significant period of time?

A. I think it's very unlikely.
Q. And, again, how do you define significant period of time?
A. It depends on what you accident veins to do. I mean, I've said this four times. Depends on what you ask the veins to do. If you put a very small IV in, and you drip fluid in, at a very, very, very low rate, they'll last longer than if you put a bigger IV in, and you try to put more fluid in.
Q. Is it fair to say that the longer the infusion, the more likely there's a chance of a problem?
A. If you tried to put fluid in for three hours as opposed to putting it in for three minutes, it's more likely there will be a problem after three minutes, yes.
Q. So the converse, obviously, the shorter IV, the less likely there is a problem?

A. The less likely, that's correct.
Q. And I also believe you testified that it's possible for people to see different things, different veins, on a different day of an examination; is that a fair statement?
A. I think that there is some degree of variability.
MR. PICKUS: That's all I have, Your Honor.
THE COURT: Thank you. Is there any redirect?
MR. ZUBLER: Nothing at this time, no redirect.
THE COURT: Good. Thank you, Dr. Scalea. I won't keep you long. I just had a couple questions.
You had mentioned possibility of using of accessing

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a vein using ultrasound?
THE WITNESS: Yes.
THE COURT: And which enables you to visualize where the needle and the catheter are?
THE WITNESS: Correct.
THE COURT: And the veins that I believe you said that can be accessed that way are in the upper arm?
THE WITNESS: Mr. Laughton testified that he saw. I heard flow. Mr. Laughton was able to look at the vein on a screen with his ultrasound machine.
So he would be able, or somebody would then, with that skill, could look at the vein on the screen, watch a needle go into the vein, and deploy a catheter into the vein. It's a fairly sophisticated technique.
THE COURT: Can the same, I believe you testified, or correct me if I'm wrong, the same technique can be used to access deep veins in the body?
THE WITNESS: Yeah. The only place where it's really clinically applicable is in the upper extremities. So that when we put these long term IV lines in, they're done under ultrasound guidance up here, in branches of the deep veins.
THE COURT: That's what I thought I heard.
THE WITNESS: If you're going to use, in the leg, the veins are much deeper, they're not as numerous, and

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you're talking about puncturing a huge distance. So it's just not anything we do.
The only other way to use ultrasound to guide venous access would be to use it to guide central venous access, the femoral vein, subclavian vein or internal jugular vein. Drug abusers will shoot up anywhere. So some of them

have used their femoral veins. Some of them have used their jugular veins. Some of them maybe have used their subclavian veins. And some of them have tried to access those veins and hit arteries. So it's a complicated set of venous anatomy.

I have no idea of the status of Mr. Evans' deep veins or how easy it would be to place a central line. I haven't thought about it. Didn't try it, I have no idea.

THE COURT: All right. So would the bottom line sense would be that, based upon your inspection of Mr. Evans, that his peripheral veins are compromised, that it should be possible to access either a central line or a deeper vein using one of the techniques that you've discussed today.

But that nobody on the Maryland execution team as presently constituted would be qualified in your opinion to use one of those more sophisticated techniques?

A. As far as I know the composition of the team, I am not aware that anybody is trained sufficiently to be able to do anything other than to insert a peripheral IV, which, as I've said now many times, I think is unreliable.

THE COURT: And if the execution were to begin with an attempt to access one of the peripheral veins, and there was an inability do so, then they'd have to stop the execution, find somebody who had the requisite qualifications to come back some other day?

THE WITNESS: I guess that would be your option.

THE COURT: Good. Thank you very much for coming, doctor. And appreciate your involving yourself in this case gratis. It is a real help to me and to counsel in this case to elucidate these issues. Thank you.

THE WITNESS: You're welcome.

THE COURT: Good. So tomorrow, Mr. Thompson, what have you arranged?

MR. HUT: I didn't mean to interrupt Your Honor, but I did as long as I have rise to wonder whether we could possibly whether there's time since we had talked about possibly.

THE COURT: Finishing?

MR. HUT: The cross-examination of Dr. Heath if that's possible.

THE COURT: That's fine. How much longer? Where are we with Dr. Heath.

MR. HUT: It's Miss Mullally's witness.

THE COURT: Good. And you hadn't started yet?

MS. MULLALLY: No, I have not, Your Honor.

THE COURT: Do you have any idea?
MS. MULLALLY: I will be at least an hour.
THE COURT: Good. That's fine. Why don't we just take a 10-minute recess and then come back.
(Recess.)
THE COURT: Please be seated.
Is Dr. Heath back? Good afternoon, doctor.
THE WITNESS: Good afternoon.
THE COURT: Miss Mullally, whenever you're ready.

CROSS-EXAMINATION

BY MS. MULLALLY:
Q. Good afternoon, Dr. Heath.
A. Good afternoon.
Q. On September 25, 2005, you wrote a letter to a publication called the Lancet, is that correct?
A. That sounds about the right. I think I wrote it quite a bit, sometime before then, sounds, I think it was --
Q. Okay. Published on September 24, 2005?
A. Sounds about right.
Q. Okay. Now, the Lancet is a publication that is fairly well respected in the community; am I correct?
A. Yes.
Q. Is that a British or an American publication.
A. It's British.
Q. And you wrote this letter in response to a paper that had

been published by a doctor named -- I hope I pronounce it right, Leonodis Koniaris?
A. That sounds right to me, I'm not sure.
Q. We both now how it's spelled, but pronunciation is something else.
And Dr. Koniaris and his colleagues had published a study that they had done on a number of executed inmates in the United States, and their conclusions, correct me if I'm wrong, was that 43 percent of all the inmates that had been executed in their study were conscious at the time of execution.
Am I correctly summarizing?
A. In broad strokes, yes.
Q. Okay. Now, you wrote a letter, I take it you read that, you read this paper, and you wrote a letter because you disagreed with that; am I correct?
A. Correct.
Q. Okay. I'm going to show you -- is this showing up? Focus is -- I think your letter starts right there. Can you read that, doctor?
A. The focus is playing havoc right now.
Q. I have a paper copy.

A. That would be better. Thank you.
MS. MULLALLY: Your Honor, if I may approach?
THE COURT: You may.

MS. MULLALLY: I may be approaching throughout my examination, if it please the Court.
There you are. If we could mark this as defendant's Exhibit Number 1, I think Mr. Pickus is going to do the marking for you, and we'll give them to you Mr. Clerk at the end of the day. Thank you.
THE CLERK: That's fine.
MS. MULLALLY: Actually, it might be better if I just hand out copies.
MR. HUT: Counsel, do you have a copy of this?
THE CLERK: Defendant's 1.
MS. MULLALLY: Defendant's 1 and a courtesy copy for the Court.
THE COURT: Thank you.
BY MS. MULLALLY:
Q. Now, Dr. Heath, I want to ask you about a paragraph in your letter starting here. Do you see that?
"When death ensues before equilibrium, as in the case during lethal injection, postmortem passive diffusion from blood into tissues can cause thiopental concentrations in blood to decline. Results studied on postmortem if drug infusion effects suggests that this is a likely explanation for low concentrations of thiopental in blood samples several hours to days after death."
Those are your words, aren't they?

A. Yes. I didn't find this, the paragraph until just as you finished reading it, but that sounds right.
Q. Okay. And you still agree with what you put down in your letter over a year ago?
A. I do, yes.
Q. Okay. So I know I'm not a doctor, but let me see if I can summarize it. There's something call postmortem distribution of thiopental. It is believe believed such a thing exists; am I correct?
A. I think by most people except the authors of this paper.
Q. Okay. And that's not unique to thiopental because there are a number of different drugs that have postmortem distribution?
A. That's right.
Q. And you were shown earlier the lab results that were taken after the execution of Wesley Baker, Tyrone Gilliam, Flint Gregory Hunt, and Steven Oken?

A. Correct.
Q. Correct?
A. Yes.
Q. Now, looking at Wesley Baker's, okay. Just to cut to the chase here, blood, heart, thiopental, 44 MG/L. What does MG/L mean?
A. Milligram per liter.
Q. Okay. If Wesley Baker was a patient of yours, and I know

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this is an execution, but if he had been a patient of yours, and you wanted to determine if he was adequately anesthetized at the time of the procedure, would you feel better when you saw a level of 44?
A. If I knew that was the level at the time he underwent the painful think the painful --
Q. Yes.
A. -- procedure, as a patient, yes, that's a good level of thiopental.
Q. Okay. All right. Showing you the toxicology from Tyrone Gilliam blood heart drug test thiopental 24 MG/L. Do you also agree that if Tyrone Gilliam had been a patient of yours, if you saw this lab result, you would be satisfied in retrospect that he'd been adequately anesthetized at the time of painful procedure occurred on his body?
A. If it was 24 at the time in his blood at that time, yes.
Q. Okay. All right. There we go.
Showing you next, it's a little hard to see deceased name Flint G. Hunt, do you see that up there?
A. Yes.
Q. Blood femoral, drug test, thiopental, and it's a little hard to read, but that looks like 80 MG/F.
Would you feel the same if Flint Hunt had been a patient of yours at the time of a painful procedure that he was sufficiently anesthetized?

A. Yes.
Q. Okay. Now, do you, you have seen Dr. Mark Dershwitz's charts that he's prepared in anticipation of the litigation in this court, correct?
A. Yes.
Q. Okay. And I suspect that you have read Dr. Dershwitz's deposition?
A. Yes.
Q. And you've read the affidavit I think he submitted earlier this year in this court?
A. Yes.
Q. Okay. Now, Dr. Dershwitz says that a -- it's been a long

day.
A thiopental level of 7 approximately 50 percent of the population is anesthetized and 50 percent is conscious, or maybe I should say unconscious versus conscious, do you accept that, or do you agree with that?
A. That's what he said, yes.
Q. Okay. Now, I think that you testified a little while ago in your direct that it might have been in answer to the Court's question that you believe that Steven Oken that there was approximately a 10 percent chance that Steven Oken was conscious at the time that the other the two drugs were injected.
Do you recall saying that?

A. I wasn't trying to say exactly that, no.
Q. Okay. Were you trying to say around 10 percent?
A. Well, I'm not saying around 10 percent. Again, it's predicated, when I answered your prior question, on knowing what the actual concentration was at the time of the painful event. So this blood is drawn sometime within an hour at most of the time of the painful procedure, but --
Q. Okay. So the drug is drawn after the painful procedure?
A. The blood is drawn.
Q. Yes. Steven Oken, approximately at the outside an hour, do you agree with that?
A. That's my understanding of what the gentleman said, yes.
Q. Okay. The gentleman being Dr. Fowler, the medical examiner?
A. The medical examiner.
Q. Who took Steven Oken's heart blood?
Now, in your Lancet letter, one of the problems you saw with Leonodis Koniaris' study was that he didn't factor in postmortem distribution; isn't that what you said?
A. Their data analysis was very, very sloppy. So while they say they did that, I have -- I believe the exact same autopsy reports that they used, and they -- their analysis was very, very sloppy, and while they may say they tried to factor it in, they do say that, it was a completely unrigorous, sloppy attempt, and one loses any correlations.

Q. Okay. But in postmortem distribution, even though somebody is deceased, their heart is not pumping, their circulation is not going, nonetheless, certain drugs in their body dissipate into the fatty tissues, they're called lipophilic drugs, right?

A. The distribution means moving from one location to another location.
Q. Okay. They don't rely upon the circulation to do that, because, obviously, they have no circulation at that time, correct?
A. That's correct.
Q. Okay. And you've looked at -- I guess you've looked at all of the Maryland test results, and is it fair to say that the only individual that we know of, that we know the time that his blood was drawn, is Steven Oken, based on Dr. Fowler's deposition?
A. It was my sense that was their standard practice, that the way it unfolded it would be within an hour, that was just sort of the outside limit. But we don't have an exact time point for any of them, no.
Unlike many autopsies where they specify the time that something was done, it wasn't done, to my knowledge, in these Maryland toxicology sampling and body views.
Q. Because Maryland's chief medical examiner, the bottom line is, they don't respond if you will to a body until

there's a body; am I correct?
Did you understand that from Dr. Fowler's deposition?
A. I don't know what their general policy is, but in this instance, they don't come until they're called, and it takes a little time for them to get here, not here but to get to the bedside.
Q. Okay. Now, these drugs, these lab results, would you agree with me that these levels of thiopental in all of these individuals are at the very minimum consistent with unconsciousness?
A. Could you repeat the question?
Q. Do you agree with me that the lab results of all of these individuals, the ones that we just went through, I will show you them again if you would like to see them, would you agree that these results of all four of them are consistent with unconsciousness?
A. The Oken one is one that could be conscious or could be unconscious. It's certainly possible for him to have been unconscious.
Q. It could have been possible for him to be unconscious?
A. I think it's possible that he was unconscious. I do not know. We don't know enough about the details of the behavior of the drug to be sure. The only way we know for sure if somebody was conscious or not is to ask him afterwards.

Q. Okay. And of, course, we can't do that in an execution?
A. That's right.
Q. Well, didn't you tell Judge Legg that there was approximately a 10 percent chance, today, didn't you tell him that there was approximately a 10 percent chance that he was conscious?
A. I wasn't trying to say that. I was saying if you use this, what I meant to say, if one used this blood value and then it would depend on the value that one uses at 50 percent value and one uses a value of 7, but the literature also supports higher values, depending on which value one used, that would translate to level of consciousness -- I'm making off the top-of-my-head guesses 10 percent, but it could go up to 60 percent, again depending on what value is used for the 50 percent mark.
Q. Well, do you disagree with Dr. Dershwitz using the value of 7?
A. There's a variety of numbers. He took the one that is the lowest one.
Q. Now, I notice you don't mention the variety of those numbers in your Lancet letter, since the issue, of course, was whether or not those executed people were conscious?
A. Well, yes, I guess you've noticed that. I can't dispute that you've noticed it. Would you like an explanation for why it's not there?

Q. Sure.
A. Okay. The article I believe is limited. I forget the word length, but I think it's 300 words Lancet allows. I asked to be able to have more space, and was not given it. I'm not sure if 300 is the right number, but there was some fixed number, and I believe we hit it within just a couple of words.
Q. Okay.
A. Further, it's not exactly the point of what we were, the main point that we were trying to bring up. The main thing we wanted to bring up was postmortem redistribution occurs, and that all of these values, or the authors didn't realize it because of their sloppy analysis. In fact, all of these values were taken for many hours after time of death. That's the main thing we wanted to get across. There are many other things if we had more space we would have put in that. We had to triage, given the space allocated.
Q. Okay. Now, do you recall, Dr. Heath, being in this very courtroom on January 27, 2006?
A. That sounds like the right date, January.
Q. It was last winter. And you remember you were Mr. Hut's witness, and I believe he examined you and my predecessor, Mr. Scott Oakley, examined, Judge Legg was on the bench; does that ring --
A. Everything except for the date.

Q. Okay. Do you remember telling in response to Mr. Hut's question, do you remember giving a value of a 5 percent chance that Steven Oken was conscious at the time of his death?
A. I don't specifically remember that. You have to show me the transcript.
Q. Yes, would you like me to show it to you?
A. That would be helpful, thank you.
Q. If we could, counsel, do you have this?
It's page 45.
Courtesy copy for the Court. Yours is coming.
Dr. Heath, maybe just to refresh your recollection, if you could look at the first page, given the date, and the caption of the case, is it ringing a bell here?
A. Yes, I'm sure this is the case.
Q. Okay. Now, I'd actually like for you to start on page 45 at lines, let's start on line 13, and if you could just read through 46, 47, 48, and then on to page 49, stopping at line 10.
(Pause.)
A. Do you want me to read them out loud or to myself?
Q. Why don't you read them to yourself and then I'm going to ask you some questions.
A. Sure. Starting on paragraph.
Q. Page 45, starting line 13.

A. Line 13, going till where?
Q. Going on to page 49, ending at line 10.
(Pause.)
A. Okay.
Q. Okay. Now, on page 45, sort of toward the end of the page you state I believe in answer to Mr. Hut's question, that among other things, it's medically inconceivable somebody could be conscious with a thiopental level of 44.
Do you recall saying that?
A. It says that there, yes.
Q. But do you recall it? The reason I'm showing this is to refresh your recollection?
A. I don't recall the exact of speaking those words, but I can read the text here, and I expect that it's accurate.
Q. Now, 44, that was Wesley Baker's thiopental level.
So do you believe that it's medically inconceivable that Wesley Baker could have been conscious at the time that painful drugs were administered to him during his execution?

A. Again, we don't know this is the concentration at the time the painful drugs were given. If they get the order of the drug wrong, then the thiopental could be given after the pancuronium, so I can't say with certainty.
Q. Do you have any evidence that he was given drugs in the wrong order?
A. None whatsoever.

Q. Okay.
A. I have no evidence that he was given drug in the right order.
Q. Okay. And you're -- well, strike that.
Looking at the top the page, 46, correct me if I'm wrong, but are you saying that you know drugs can affect some people some way, and other people in an less intense manner? Sort of like if Mr. Pickus and I were planning go to the bar after here because it's been such a stressful day, and we have two martinis, and he has to drive me home because I can't stand up, and he on the other hand is perfectly capable of driving home, would that surprise you?
A. No.
Q. Okay. Because sometimes things affect people in different ways than drugs affect one person one way and one person another way, correct?
A. Different intensities of effects, yes.
Q. Okay. Now, looking at the bottom of page 48, line 23, okay. You'd been looking at Dr. Dershwitz's graphs, and you point out 7 is the midpoint of his curve and that half the people would be conscious with a value of 7 and half would not be conscious. And you state, and so it keeps going up toward 10, the number declines.
Now, I think you did after that you did a little calculation. And correct me if I'm wrong, but you stated "So

I have to interpolate bit to guess, but this graph would say with a probability of consciousness for somebody with a level of 10, but it might be somewhere around 5 percent."
Now, you testified today that it would be 10 percent.
A. I --
MR. HUT: Objection, Your Honor. There's no inconsistency. I think this is describing interpretation of graphs, and the earlier examination is not with respect to graphs.
THE COURT: Well, I'll overrule the objection. Dr.

Heath can explain.
A. I'd have to say this is the off-the-top-of-my head, I did not have the graph in front of me. I was doing my best, since that is what was being asked of me to estimate it, and I tried to make it abundantly clear that I was just estimating.
Q. Okay. So in January, you estimated that there was a 5 percent chance that Steven Oken with a thiopental level of 10 was conscious?
A. I was doing more than estimate, it's a different kind of estimation. I had graphs in front of me, and I was interpolating. And, again, it was a little bit of a thumbnail. I didn't do a calculation, but a thumbnail mental assessment or gauging or weighing.

Q. But, Dr. Heath, you're a very intelligent, educated, and experienced medical clinician. You took a look at this information, and that was the answer that you gave?
THE COURT: Why don't we do this, I don't mean to interrupt, but I get the point --
MS. MULLALLY: Okay.
THE COURT: -- that --
MS. MULLALLY: Okay.
THE COURT: -- the testimony in January was 5 percent, the testimony today was something around 10 percent, but you couldn't be sure, I think I understand the point that you're making, and I do recall this testimony.
THE WITNESS: If I could say, I was referring to a graph that did have a fixed value of that 50 percent number, and when I was meaning to indicate today, I'm not sure if I made that clear, that number itself perhaps calling into question is the wrong thing to do, but saying there are different values of what people have given as to what that 50 percent number would be when one factors that in, it affects the percentage of, that one would put on it.
I'm trying to give you an overall gestalt. I'm doing my best. I said it's approximate.
Q. Dr. Dershwitz, do you find Maryland's levels to be at all reassuring assuring?
A. My name is Dr. Heath.

Q. I'm sorry, Freudian slip.
Do you find these levels to be at all reassuring, Dr. Heath, 44, 24, 80, and 10?
A. Again, if I knew the drugs had been given in the right sequence, and these were the concentrations at the time the

potassium was administered, then for three of them, those are numbers that are would be comforting under those circumstances.

But the number 10 is not. And when one puts the numbers together, the whole cluster of numbers absent some by telling them, oh, we measured it differently or drew the blood differently, or there was enormous difference in the weight, which I don't believe there is, then that variability is concerning. It does not speak to consistent administration.

Q. Okay. But also once again, going back to Mr. Pickus and I in our planned trip to the bar at the end of today, you would -- it's possible that drugs affect different bodies in different ways; isn't that true?

A. I think that's a fact.

Q. Okay. Now, I'd like to ask you some questions about anesthetic depth. You state in your report -- have you reviewed your expert report before you came here today?

A. I have, yes.

Q. Okay. Do you recall stating that it's important to have

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a trained anesthesiologist present?

A. It would help me if you could show me exactly where I said that.

Q. Would you like to see your report?

A. That will be helpful to this discussion, I have a feeling.

Q. Okay. This page 7, paragraph G, counsel.

Your Honor, if I could just show this to the witness --

THE COURT: Absolutely. Go ahead.

Q. -- to refresh his recollection?

Okay. Looking at the top sentence, does that refresh your recollection?

A. Yes.

Q. Okay. And you stated that it was -- it's all the more important to have a trained anesthesiologist present?

A. That's what I wrote, yes.

Q. Okay. Now, you believe, I believe you testified on direct that anesthesiology is both an art and science and that it takes many years of training and education to be able to perform the duties of an anesthesiologist; am I correct?

A. I would agree with that. I think I testified along those lines.

Q. Okay. And it's your opinion that Maryland, of course, if it executes someone should have an anesthesiologist present

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to assess anesthetic depth and to induce anesthesia?
A. If it's going to use potassium, yes. If you're going to do it by a different method, then that might change the necessity of that.
Q. Do you I believe you stated in your report that you found it was medically unacceptable that Maryland didn't have such an individual to induce anesthesia and to assess anesthetic depth medically unacceptable?
A. If they're using potassium, yes.
Q. And do you believe today that it's medically unacceptable not to have an anesthesia -- an anesthesiologist present during a Maryland execution?
A. Well, somebody who's capable of assessing anesthetic depth is what matters, yes.
Q. Okay. Do you approach -- well, let me back up and ask you this, you've never participated in an execution, have you?
A. Not of a human being, no.
Q. Okay. You've euthanized some animals?
A. That's correct.
Q. And you've looked at protocols in a lot of places, and you've looked at what Maryland has, and am I correct in stating that because you are a clinician, you approach this issue from a medical perspective?
A. Well, no, I think that's not fully correct. It's

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partially correct.
Q. Okay. But what you bring with you is many, many years inducing anesthesia, assessing anesthetic depth, training residents, interns, and nurses; am I correct?
A. That's part of what I bring, yes.
THE COURT: I think if I could, my familiarity with the case, I think the point that you're making, and it's a good point, is there's a difference between crafting protocol for a medical procedure, where the objective is to is to cure a person and an execution where the objective is to end life.
So that there's a fundamental difference between the two. But I think that the inquiry here is whether, you know, what medical procedures are necessary to avoid the risk of the excruciating death.
So perhaps, doctor, what's the difference in, if you could, and then I'll turn it back to Miss Mullally, between looking at these protocols with a medical eye toward, you know, preserving the patient and with the looking at them to see whether they're an acceptable execution protocol?
THE WITNESS: Well, the issue is that because of the way it's being done, because potassium is being used, a medical procedure is required, if you want it to be humane. Another medical procedure is required the placing of IV access, especially if that's going to be a central line.

But certainly the anesthesia is necessary. That's

not what's killing the person. The anesthesia is not necessary in my opinion for the judicial sentence. You can execute somebody without anesthesia, and it's been done many times.

But if you're picking a way of doing it, which the Department of Corrections has, they've added in potassium, not mentioned anywhere in the statute, and we know potassium hurts a lot. Now you need a medical procedure to make sure that it's humane.

The goal of that procedure is not to kill the person. The goal of the anesthesia is not to kill the person.

THE COURT: If I could ask a follow-up question? In the three-drug protocol, the first drug is not painful, and that's the pentothal?

THE WITNESS: That's right.

THE COURT: And the second drug is pancuronium bromide is painful, correct?

THE WITNESS: I'm not sure it would cause pain, but agony, excruciating --

THE COURT: The third is potassium time is painful because of the mechanism of the scouring of the nerves and the veins?

THE WITNESS: That's correct.

THE COURT: If I'm remembering correctly from

January a massive dose of the first drug is also lethal?

THE WITNESS: Correct.

THE COURT: So that could Maryland reform its protocol simply by to an acceptable degree of acceptable to you using medical standards simply by dispensing with number two and number three and administering a massive dose of number one, because if for some reason the dose doesn't get there, the person who's being executed isn't going to suffer, he just doesn't die?

THE WITNESS: That's exactly right. That's the majority, to my understanding the majority of animal euthanasia procedures are performed with a very large of barbiturate and nothing after that. That's exactly right.

Potassium is added in, but it is not -- if they give the thiopental as they're intending, it will reliably

produce death.
If they somehow fail to give it properly, then it won't produce death. But if that's going to happen, they'd better not be giving pancuronium and potassium. Exactly right.
THE COURT: Good. Thank you, Miss Mullally?
BY MS. MULLALLY:
Q. Yes. Dr. Heath, I believe you stated in your expert report that medical practice dictated that a person mixing medications be trained to do so such as a doctor, a nurse or

a pharmacist, and you were concerned about the high risk of error in medication mixing, correct?
A. That's correct. We're concerned about the errors made by those personnel, by doctors and pharmacists and nurses, because they clearly happen. And it's a major problem.
Q. Now, you're aware, are you not, that in Maryland, the Department of Correction purchases Pavulon and potassium chloride that are already premixed?
A. That's correct.
Q. And that Maryland purchases powder thiopental and a diluent is mixed in with the powder?
A. Purchase it, purchase it is separate. They're not mixed when it purchases them, but they have to be mixed after they're purchased, after. In fact, shortly before they're used.
Q. And you've mixed thiopental before that way, haven't you?
A. I've mixed it many many times, yes.
Q. Okay. Would you say that it's a very difficult task to accomplish?
A. I think the mechanics of doing it can be imparted. There's no reason to be imparted, but a couple of hours most of practice and training. The important thing, though, is recognizing when something's going wrong. One has to understand what the drug is, what its chemical properties are, and one has to know there's a package insert that has

instructions about what do when it happens. One needs to have a wealth of background information in addition to just the mechanics of doing it.
Q. So you think that someone needs a wealth of background information to take diluent, put it in with the powder, shake it up, and draw it out in a syringe?
A. To know something is going wrong, they have to rely on additional information other than just the teaching of the mechanical act.
Q. To know something is going wrong right at that stage, the

mixing stage?
A. I've seen from on the states where personnel who have put -- done this improperly, so while it seems like a simple thing, when it doesn't work properly, you have to be able to recognize that. I could teach a five-year old to type out a ten-letter word. And after a couple hours, they probably would be able to do it. It doesn't mean they know what the word means, or can type anything else out, or they can read and write.
Q. Do you think --
A. Go ahead.
Q. Do you think the fact that Maryland's team practices on a monthly basis and then when a warrant of execution is signed, they practice on a weekly basis moving up to a daily basis, do you find that at all reassuring?

A. Not with this group of people, it sure isn't.
Q. Well, what about practices in general?
A. If your practice involves supervision and flow of knowledge and wisdom experience from a person who can impart that, who's present at the practices, then it would be a good thing.
But this group of people, the totality of all their knowledge is grossly inadequate. And then spending time together is not going to increase the totality of their knowledge. If anything, it's likely to lead them astray to -- to further areas of misconception, misunderstanding.
Q. Well, let me ask you this, Dr. Heath, do you recall my question to you in your deposition on August 29th, question being are you in favor of execution team members practicing on a regular basis with one another following their steps practicing an execution to prepare again and again, do you recall that question?
A. I don't specifically recall your asking that, no, perhaps if you could show me the relevant area of the transcripts.
Q. Counsel, page 157, line 8.
First the question, doctor.
(Pause.)
Q. And what was your answer, sir, you can read it out loud?
A. I will reread the question, "Are you in favor of execution team members practicing on a regular basis with one

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another following their steps, practicing an execution to prepare again and again?"
And my answer written here is "Yes. I think that for a complex endeavor like this and with very high stakes

and where things can have a potential to go terribly wrong and where there's all the time in the world to practice, that it's very important that extensive practicing is undertaken."
Q. Thank you.
Now, you are an anesthesiologist, but I think you testified today earlier you're not a pharmacologist, correct?
A. Anesthesiology applies pharmacology. I do not have a Ph.D. in pharmacology.
Q. Okay. Would you defer to a pharmacologist on the question of a time course or the effect of a particular drug?
A. Perhaps. Depends what they were saying about it.
Q. Okay.
A. Because they just because they say something doesn't make it true. If doesn't comport with my experience and knowledge, then I would not defer.
Q. Do you recall stating in your deposition that you considered among other people Dr. Mark Dershwitz to be an expert in lethal injection?
A. Yeah. I think there was some discussion acknowledging that to call this a field, call lethal injection a field, would be making a claim about it that I'm not sure it

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warrants. But certainly there's a group of people who spend time thinking about this and reviewing material and data, and he's certainly one of those people.
Q. Now, you believe that Pavulon provides no medical benefit whatsoever to the executed inmate?
A. That's correct.
Q. Correct?
And you testified today that a person who is in an agonal situation, at the end of his life after say the administration of a lethal dose of thiopental, that one would expect to see the inmate undergo muscular contractions, you mentioned jerking twitching, spastic movements?
A. I think those are all possibilities, yes.
Q. I think that you also testified today that the person could have some type of seizure, let me see if that was -- convulsion, I think that was the word you used. Do you remember testifying to that?
A. I don't specifically recall.
Q. Have you seen a convulsion before?
A. Have I seen a convulsion? Yes. A person that had a convulsion, I have, yes.
Q. Okay. Tell us what a human being does when a human being is having a convulsion?
A. They move part of their body or parts of their body, or sometimes all of the parts of their body in a relatively

rapid to and fro jerking motion.
Q. And as a physician, that I guess when you witness something like that, that doesn't upset you because you know what's happening, correct?
A. Well, it's troubling because it's a dangerous state for a patient to be in. And I -- unless it were an end of life situation, almost all clinical settings where I'm trying to preserve life and welfare of my patients, I'm troubled by seeing a convulsion.
Q. Okay. So even you are troubled by convulsion. I take it lay people, people that aren't familiar with convulsions, people that don't see them on a regular basis might find that to be a bit disturbing?
THE COURT: If I could interrupt, I think it's in my view it's, and in looking at the role of the Pavulon, I think it's from what I've read, it's used so that to spare the members of the execution team and the witnesses emotional angst, and that to that extent it is a worthwhile, it's worthwhile, I don't think that Dr. Heath would dispute that.
I think that he's talking about with respect to the person who's being executed, the Pavulon serves no useful purpose.
Is that correct?
THE WITNESS: It's correct that it is serves, certainly is not at all to the benefit of the person who's

being executed. But when you say that I think it's worthwhile that the witnesses be protected from that?
THE COURT: No. I meant that the -- let me backtrack for a second.
I understood your testimony to be that the Pavulon serves no useful purpose for the person being executed, and that you haven't ventured any opinion as to whether it serves a useful purpose for the other people who are watching the execution.
My understanding is that the Pavulon is administered to spare them, because under law there have to be witnesses, and there have to be people who carry out the execution, and the more convulsions, twitching, and other movements, the harder it is on them, it seems to me. So that is my understanding of the subject.
BY MS. MULLALLY:
Q. Dr. Heath, I know that you're aware that Maryland has changed its execution protocol, and you have had an opportunity I know to review those changes.
And do you recall being asked whether or not any of those changes have improved Maryland's procedures at all? Do

you remember being asked that in your deposition on August 29th?
A. I don't specifically recall, so if you could show me the transcript if it's there.

Q. Okay.
MR. HUT: Your Honor the transcript that Miss Mullally has is different from are the transcript that we have. We have never received from the court reporter a final copy, final transcription of that deposition.
We have a rough, which doesn't particularly correspond to what it is you're reading.
THE COURT: Why don't you take a look?
MR. HUT: And the doctor has neither reviewed nor signed this, as he's permitted to do under the rulings.
MS. MULLALLY: Would you like to see it, Mr. Hut?
(Pause.)
MR. HUT: But I guess I'd have an objection to using a rough, incomplete, unsigned transcript to impeach the testimony of a witness.
THE COURT: Well, I will permit it.
Q. All right. Going back to the question, do you think that any of these changes have improved Maryland's procedures at all, do you remember being asked that? Right here, sir?
A. If I could just read what the changes are that you're talking about, that overall section?
Q. Okay.
A. Starting up around here, right here.
Q. Okay.
A. Changes in the last 10 days.

Q. Uh-huh.
(Pause.)
THE COURT: The essential question is whether you remember testifying that way during your deposition, and does this refresh your recollection?
Q. Does this refresh your recollection, Dr. Heath?
A. Yes.
Q. Okay. And what was your response when I asked you if changes had improved Maryland's procedures at all?
A. I think you asked me if any of the chances, not the changes.
Q. Okay. Do any of them, do you recall your answer to that question, then, if any of the changes had improved?
A. I think I said yes, I do.
Q. Now, perhaps, Mr. Hut, if you could put up plaintiff's demonstrative exhibit number 6. Could you do that for me.

MR. HUT: I don't think I can.
(Pause.)
Q. Now, Dr. Heath, you mentioned that one person could not see all of the tubing, right? Because it's on two sides of the wall?
A. That's correct.
Q. But you would agree with me that people in the execution room are capable of seeing the tubing on that side of the port and that people in the injection room are capable of

seeing the tubing on that side of the port?
A. The people in the execution room depending on where they're standing would not be able to see the full scope of the tubing.
Q. Well I guess my question was is their capable, since everybody has two eyes and two feet, is it possible, if one wanted to look, one could see it?
A. If one were to stoop down onto the table, you know, bend over and get their head lower, then they'd be able to see the, yes.
Q. Right. And if one walked around the gurney, because it might be hard to see it from one position, but walking around, this not what I am looking for, I'm sorry, I'm looking for the one with the dots all over the diagram of the execution room.
A. Correct.
MR. HUT: 16.
Q. 16? There. Did you see that, Dr. Heath?
A. Yes. That's the diagram that I instructed that I drew out the sketch, yes.
Q. These colored dots, are they drawn to size at all, they're not -- they're just dots indicating people, correct?
A. Yeah. I tried to draw them again just gestalt, my best drawing of how big they would be relative my recollection of the size of the window, for example.

Q. All right.
A. But you're right, the person not shaped like that, a person is looking from the top is more oval.
Q. Now, you haven't met Contractual Team A or Injection Team E, have you?
A. No.
Q. Okay. And you have stood at the window and looked out, and it's the three foot five, three foot window?
A. I forget the exact dimensions, but I remember a feel for the size of the window, yes.
Q. But you put these dots right in front of the window. Do

those dots, they don't mean to imply that those two people are completely blocking the window, do they? You didn't mean to convey that idea, did you?
A. This, I don't know about completely blocking the window. I think it depends on how one looks around, but I think they're around 300 pound folks, I think that's what they said, and that just looking at their body habitus in the videos, I saw the top third of their bodies, they looked like burley people. They didn't seem to be 300 pounds because they were tall and lanky, and so it's just an approximation.
Q. All right. So it's not a conclusion you reach, and there's no -- you don't have any evidence that they are blocking anyone's view out of the window, do you?
A. I believe there was deposition testimony, I forget from

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whom that they had a hard time seeing because of the first people standing there.
And they're -- given their disregard for checking for IV tubing leaking, and the lack of understanding about what they're doing, they're occupying far too large of percent of the view of the window.
Q. So you think they're doing that on purpose, or carelessly?
A. I suspect they were told to stand in that location, although I don't know for sure. So I think they're standing there on purpose. I don't think they're standing there accidentally. I don't think their intent is to block other people's views, but I don't know what is in their heads.
Q. You don't know for certain they do block other people's views, do you?
A. They had to obscure a large part of the view, but I don't know if for certain if someone able to look around, no.
Q. Now, you have Contractual Team B toward the back with a question mark, and there's like a little dotted path that leads from her to another Contractual Team B in the execution room, do you see that?
A. It's not a path. It's a dotted line.
Q. Okay. You're not implying that she sort of goes through the wall, are you?
A. Absolutely not. When I drew that out for the person who

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was going to create the actual slide, I said this is to show that they occupied two separate places, but I was drawing that line, because I wanted a viewer to easily see that's in fact the same person.
Obviously, no person can be in two locations at the

same time.
Q. And the arrows, looking at her red dot in the execution room, there are two arrows pointing in different ways around the gurney.
Is there any reason why you stopped the arrows after just a few feet into the gurney?
A. I was merely trying to convey that she moves on both sides, that she could -- in theory, I should have put a question mark there, because there's not been any testimony as to exactly how and where she would move.
But that my general sense is she would be surveying or checking IV's. And if she were to be remotely conscious about that, that would require some moving around. But it's meant to be very vague. It's not meant to in any way precisely delineate exactly what she does, because I don't know.
Q. Okay. And you have no reason to believe that she cannot move entirely around that gurney, if she's careful, about where she steps, because there's a line, or two lines, she's -- you saw the room. There's no reason why she couldn't move

around?
A. There's no hindrance to that at all.
Q. Okay.
A. And I didn't -- if you read the arrows as implying that, then I didn't mean to imply that at all.
Q. Okay.
A. I could have also sort of drawn a cloud where I thought the person might be, but I think I felt that would be too busy of a visual depiction.
Q. All right. Have you read the deposition of Dr. Richard Dutton, a fellow anesthesiologist, who was an expert in this case?
A. Yes.
Q. Deposed as an exert?
A. I believe I have, yes.
Q. Okay. And did you read that Dr. Dutton opine that it would be extremely unlikely that the administration of thiopental would be unsuccessful yet the administration of Pavulon would be successful, did you read that?
A. If you could refresh me show me the section you're talking about, that would be helpful to the discussion.
Q. Page 72. Line 21. Starting at line 21, the question is can you think of a scenario where -- can you --
A. I think I can read it now.
Q. Because it really my question really starts there.

A. Do you want me to read it or turn the page?
Q. Just read that sentence. And then turn the page.
(Pause.)
A. Read where.
Q. Yeah, starting here. It's actually starting on the line 21 on the previous page.
(Pause.)
A. Go how far down?
Q. Just say to here.
A. Okay.
Q. All right. Now, you had read this prior to coming to court today?
A. I'd read the deposition, but I can't remember focusing on that part.
Q. And correct me if I'm wrong, but does Dr. Dutton say that it would be extremely unlikely that if the thiopental administration were unsuccessful that subsequent administration of the Pavulon would be successful, do you agree with that?
A. I think he's maybe talking in very narrow terms, that in general that's not right, but certainly can happen that you can successfully administer the pancuronium and potassium or clinically effective doses of those drugs without getting all the thiopental in.
Q. His answer because the vein is either working or it's

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not, and your IV is either in or it's not, and it shouldn't change and certainly shouldn't change in that direction, do you disagree with that?
A. I -- to the extent that the IV can also, let's not talk about where the IV is, but the results of where the IV is in the vein can lead to some of the drug going into the vein and some of him the drug not going into the vein. So --
Q. Can't that happen with all three drugs?
A. Yes. It could happen with all three drugs, or partially delivered in the vein and partially delivered outside of the. Vein, and I don't think he's thinking about that, or he's not discussing that in his paragraph there, but that's definitely something that we all know happens.
Q. Dr. Heath, now, I think it's probably been well-established, in fact, the Court wanted me to move on from this, three grams of thiopental in any human being is a lethal overdose?
A. Virtually if it's successfully delivered into the circulation, and if -- and if no resuscitative or supportive efforts are undertaken, if you just give that dose successfully, and then don't anything to the person, that would be fatal.
Q. And I think that a clinical dose is about 110?
A. Of three grams which would be approximately 250 to 300 milligrams?

A. It depends what we're trying to achieve. We sometimes do give three grams.
Q. Only in a certain type of surgery and at that time you also support the circulation to keep the heart from stopping; am I correct?
A. We're always supporting the circulation.
Q. Okay. But if I realize that thiopental has been replaced by other drugs, but let's say we're using old fashioned drugs, if were you to anesthetize a human being, you would look at a dose in the range of 250 to 300 milligrams?
A. As my initial dosing induction for a standard size adult, and putting aside a bunch of circumstances that where there wouldn't be a number, that would be the dose.
Q. We're talking about a scenario where some of it gets into the circulation and some of it doesn't?
A. Correct.
Q. But the actual amount of thiopental that's needed to anesthetize a person is really a very small portion of the entire dose that Maryland gives its inmates?
A. It's important to you understand that that dose would, if it anesthetized the person, which it likely would, would only anesthetize him for a very, very brief period of time.
In fact, that's why we give such a low dose, because were when we're inducing anesthesia, we want them to be able to wake back up very quickly if we're unable to

secure their any way and breathe for them.
Q. What if you gave them that low dose, you induced anesthesia, and you wanted to continue using that drug, you'd give him a little more, wouldn't you?
A. It's a totology. If I wanted to continue using the drug, yes, I would continue using the drug, which means giving more.
Q. I guess my question is, isn't it true that the scenario you suggested where some of the drug reaches a circulation and some of drug doesn't -- well, the actual amount that one needs to be made unconscious is pretty small, compared to Maryland's entire dose, isn't it?
A. It's -- for most people, the amount that would be required to transiently bring them to unconsciousness is indeed approximately in the ballpark order of at 10th of the intended full dose.
Q. All right.
THE COURT: If I could ask, doctor, what would a better drug if you took three drugs, you discarded number two and number three, for the reasons you've testified, you

recognized that, you know, thiopental is a good drug for knocking you out, but it doesn't last very long, so we're going remove that and have a one drug protocol, what drug would you use and why?
THE WITNESS: I'm not -- I'm not comfortable

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specifying for purposes of an execution what drugs should be used. That would be applying my medical knowledge for that purpose.
But I will say that in trying to help, and I'm not being evasive, the euthanasia of animals using much longer acting barbiturates, and there are many kinds of those, and they're used for therapeutic purposes in humans.
THE COURT: So there's a longer acting -- there are longer acting barbiturates that would successfully, that would reduce the risk of waking up premature, but also, or are lethal in these higher dosages?
THE WITNESS: They work very well in the veterinary circumstance.
THE COURT: Good. Thank you.
BY MS. MULLALLY:
Q. Dr. Heath, didn't you in fact refuse to answer the same question in your deposition on August 29, 2006, about what the better drug were?
A. I'm not sure if I exactly what the question was that you asked, but I wasn't comfortable in specifically proactively designing the protocol, that would be used to execute a person.
Q. And didn't you decline to answer that question because you believe that it is unethical for a physician to assist in a lethal injection in any way?

A. It's against my view of what is ethical for a physician.
Q. Okay.
A. Yes.
Q. Are you familiar with, is this on? There we go. With the American Medical Association's position on capital punishment?
A. I've read it before a number of times, yes.
Q. Okay. And I believe I asked you, I think it's right there on the screen, part of it.
THE COURT: Is that your 16 or their 16?
MS. MULLALLY: Actually, Your Honor, that was 16 for the purposes of the deposition, so it is not my 16.

THE COURT: All right.
MS. MULLALLY: But --
THE COURT: You might as well put it in.
MS. MULLALLY: Okay. All right. It's actually two pages, then perhaps I can approach the witness with it. Well, let me ask you this --
THE COURT: You can put it in later just give it a number, but I would like, I've been interested in seeing this document, so I would like to have a copy of it in the record. So I'll admit it.
And then you can give you and Mr. Thompson can work out a number. You can also show it to the witness on the screen.

BY MS. MULLALLY:
Q. Dr. Heath, do you agree that your participation as a physician in an -- do you agree that you would not agree to -- that's a bad question.
Dr. Heath, you would not agree to prescribing or administering tranquillizers or other psychotropic agents and medication that are part of the execution procedure; is that correct do you see that?
A. I think you're reading. Do you have a hard copy of this?
Q. Yes, I do.
A. That would be a good thing.
Q. I'm sorry.
(Pause)
Q. I thought maybe I could learn a new technological trick. I was wrong.
I'm sorry. Just take a look at that.
A. What second do you want he to look at.
Q. Why don't you take a minute to read the whole thing?
A. I know it's two pages.
(Pause.)
THE CLERK: Counsel, is this going to be number 3?
MS. MULLALLY: Yes. You can mark it, Mr. Thompson.
Q. And correct me if I'm wrong, but I showed this to you when you were being deposed on August 29th?
A. I recall that, yes.

Q. If I ask, summarizing the medical American Medical Association says physician are healers and that physicians

should not be involved in any aspects of lethal injection which include setting IV's add administering drugs, prescribing drugs, pronouncing death, is there anything else they say?

Have I missed anything?

A. Oh. That's pretty, you covered the broad elements of it.

Q. And you're a member of the American Medical Society; are you not, sir?

A. I am, yes.

Q. I think you were also a member of the American Society of Anesthesiologists?

A. Yes.

Q. And what is the American Society of Anesthesiologists?

A. it's a society of anesthesiologists based in the United States.

Q. Okay. And were you familiar with their position on lethal injection?

A. Would -- the ASA, American Society of Anesthesiologists basically follows the American Medical Association's position.

Q. Okay. So and I think this is a little shorter, but it says physicians should not participate in executions either by direct act or by performing ancillary functions. This

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includes making recommendations about drugs to be used.

And that's why you don't want, you're not comfortable making a recommendation about what work a better drug for Maryland to use, one of the reasons?

A. That bolsters my personal views about this. I think many, like many physicians, I didn't need to be told by the AMA that I was uncomfortable with it.

Q. And Dr. Heath, I know that you testified earlier in the day that you are opposed to the death penalty, correct?

A. Yes.

Q. Okay. And I think you've served as an expert for a number of plaintiffs in the same type of lawsuit that we're trying actually today?

A. That's correct.

Q. Throughout the United States and including the federal government.

And have you ever seen a procedure or a practice in any state or with the federal government that contained an acceptable form of lethal injection, anything currently in practice, now?

A. Well, again, for animals, it's being done routinely in a way that's acceptable.

Q. Okay. What about humans?

A. If you put aside the issue of assisted suicide, euthanasia, just put that topic aside, there are protocols

that I've seen that where I do not know the qualifications of the -- of the physicians or medical personnel who are supervising the protocols, if there are indeed such a personnel. And so I can't comment on whether or not they're acceptable.

If the qualifications were -- were proper and the people were making use of those qualifications to ensure the execution were humane, then on principle that would be a humane execution.

So I don't know in all cases who is present, and supervising.

Q. All right. Dr. Heath, I believe --

THE COURT: If I can just follow up. Is there states that have better protocols?

THE WITNESS: Sorry. There are some -- some states have many particularly egregious or concerning features of what they are doing, and other states don't have as many problems.

There's some -- in the ones where I do know a lot about what's going on, apart from in California where they were going to have anesthesiologists, I'm not knowledgeable of an attempt to execute with folks who are directly charged with assessing anesthetic depth.

THE COURT: Good. Thank you.

THE WITNESS: It varies.

BY MS. MULLALLY:

Q. All right. I just have two more questions.

Dr. Heath, do you recall being questioned during your deposition about whether or not you knew Dr. Jonathan Bronner, who is the individual that wrote the letter that appeared before your letter in the Lancet, and do you recall my asking whether or not you agreed with Dr. Bronner?

A. Agree with him about what?

Q. I guess about --

A. Many things that I might differ about.

Q. His views of physician involvement in capital punishment?

A. I don't specifically recall your asking that question.

Q. Okay.

A. But I remember the general conversation.

Q. Let me show you your deposition to refresh your recollection.

A. Thanks.

MR. HUT: Do you have a page?

MS. MULLALLY: Yes, I'm sorry. Page 32, starting line 20.

And on to page 33.

Q. Okay. Starting at line 6, question, now is it fair to say that he is a strong opponent of capital punishment and your answer was?
A. I said "I'm not sure about that. I said I think just to

clarify, I think he's a very strong opponent of physician involvement in capital punishment, would be a better description."
Q. And my question was "do you agree with him?"
And your answer was?
A. My answer was "it's a little bit complicated. I think he would be better to have methods of execution that don't require physician involvement. I'm not sure that's exactly where he's coming from, so I'm not sure I would say I agree with him. He's made a number of statements, so I don't want to broadly agree with him with everything he says."
Q. Okay. Are you stating here it's better to have methods of execution that do not require physician involvement?
A. I think that would address -- none of us would have to be here today. That would address all of these concerns, if the state used a humane method that physician didn't have to participate in. All of this wrangling wouldn't be going on. And that would be good.
Q. Dr. Heath, you stated earlier that you had corresponded with I guess what we would call the grandfather of the -- or the god father of the lethal injection, the Oklahoma medical examiner, and I think you said that you expected that there would be -- that there was no review process by doctors and that you had expected that a panel of experts would have been consulted?

A. If I said that, what I was trying to say is that when in a lethal injection was not something that I thought about at all until about five years ago after I saw information about the McVeigh execution. To any extent that I thought about it I assumed it was being done in a very careful and considered way, and that the folks who were doing it were properly advised by people who, you know, by experts, that they thought it through about all the different implications, justice has been done, for like as has been done for veterinary, they have panels of experts, think hard about doing this, and found ways of doing it I assumed at least that standard was being held for execution of humans.
Q. Well, aren't -- if a panel of experts convened and were consulted, wouldn't that -- if they were physicians, wouldn't that be under the Maryland Medical Association and American Society of Anesthesiologists, wouldn't that be a type of

involvement in a lethal injection to be consulted and to give opinions?
A. It would. Again. Many physicians are clearly willing do that. So if you're going do this undertake this endeavor of using lethal injection, I think it's when you go to get advice from the pool of physicians for whom it doesn't compromise their own ethical principles, I think each of us as people have to decide our own ethical principles. AMA can render advice about it, but it doesn't control anybody's

ethics.
Q. All right. I have one more, one last question.
Let me start here. Do you recall stating in your deposition and I -- well, you're asking my opinion as a physician about whether physicians should participate in executions, I personally don't think that they should. Do you remember saying that?
A. I don't specifically remember stating that, perhaps if you show me the transcript again.
Q. Yes.
(Pause.)
MR. HUT: Again, Miss Mullally, page?
MS. MULLALLY: Oh, I'm sorry, 156. Line 4.
(Pause.)
A. The first sentence there?
Q. It starts here.
(Pause.)
A. This is asking me about the Morales case in California, was this the case in which the Judge ultimately required the presence of two board certified anesthesiologists executions in California. My answer is yes. Your question "Do you agree, do you support the Judge's decision in this matter?"
And my answer was it's a complex situation. I think from the point of, and there are very different view points to approach it, but from the viewpoint of trying to

carry out both the law and also sort of a decent societal expectation that the execution be done in a humane and dignified way, that that was an act of wisdom on his part to require that. At the same time he's acting as a judge.
You're asking my opinion as a physician about whether physician should participate in executions, and I personally don't think they should.
So I have, it depends on what perspective one takes on the judge's decision or his order.
MS. MULLALLY:. Thank you. I have no further

questions.
THE COURT: Doctor, if I could, I know it's getting late, just a few more questions about the prohibitions from the American Medical Association, American Society of Anesthesiologists, and you may not know the answers to these at all.
If a physician were to participate in a an execution, does that mean that the AMA, or ASA kicks them out of the organization?
A. A number of physician are publicly known to have participated in executions, including very deep participation, not just making suggestions but actually being present, starting central lines in a case, in cases where they couldn't have executed the prisoner without the central line. It's a very I think intimate involvement. The AMA is

aware of physicians who have done that and has not to my knowledge done anything about that.
I don't know, I know the ASA is also aware of physicians and one only has to do a Google search to find the names of physicians who have participated, there was a New England Journal of Medicine article where a physician gave his name and talked about his participation. I'm not aware of any of these people having any, anything happen to their medical license or anything like that.
THE COURT: Because as you pointed out, there's a sophisticated analytical argument here, and that is, if the society's gone to lethal injection because it appears to be more humane, than after another alternatives, such as firing squad or the gas chamber or hanging or the guillotine or any number of methods that have been used, but it is a procedure that it's a medical type procedure, whether it's a medical procedure and if the physician won't be involved in it, if they won't involve themselves in it, then there's nobody to build the best possible mousetrap.
So there's nobody to design the best protocol, plus there's nobody to carry out the protocol, all of which increases the risk that the inmate who's being executed will suffer, will suffer.
So but these organizations that they're not governmental bodies, if you violate their norm, all they can

do is kick you out. They can't take your license away, correct?
THE WITNESS: (The witness nodded affirmatively.)

THE COURT: And just for the record you're nodding, but certainly it's clear that these prohibitions have a chilling effect?

THE WITNESS: I think the main effect they have is making so that most physicians who are participating don't want it to be known, as I think these folks who were involved in the executions, and I think we should be very respectful of their -- I don't think they should come to any harm of a any kind as a result of the decisions that they have made. Some physician are, their names are now known because they voluntarily release them, or it's been found out by the press through investigation and stuff like that.

And I'm not aware of anything negative happening to those folks. I think it is sort of unfortunate for them they didn't want their names to come out they made a decision that it was a private decision.

But the ASA specifically I talk about, the American Board of Anesthesiologists which is the group that could remove board certification, they could take away my board certification if they felt I'd done something that warranted that. I was told they specifically discussed whether to take action against a board certified

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anesthesiologist who participated, and they decided not to do that. I guess it's a known individual, but as a general proposition, if they found out a board certified anesthesiologist participated, what would they do about that, the decision was they would not do anything about it.

THE COURT: I think it's -- I think you'd agree if you are just a board certified anesthesiologist with a mortgage to pay, you'd have to think long and hard about whether you wanted to embroil yourself in this case, because there's a large potential downside, if you violate these standards, you know, you may be left alone, and then you may end up having some sanction imposed against you, and you just don't know what's going to happen.

THE WITNESS: So far it doesn't look that way. Many physicians have participated, no one knows about it, and the ones where people do know about it, nothing's happened to them, that I'm aware of, I think I will have seen that if something had happened to them, so in the past at least.

From what I can tell in the future, I think again these are recommendations from these organizations, but they have no clout. And it's an individual can decide to participate and nothing is going to happen to them, and we know that many physicians are willing to participate both from surveys and physicians are found to do this including here in Maryland.

THE COURT: Good. Thank you. Any more question?

REDIRECT EXAMINATION

BY MR. HUT:

Q. Your Honor, I have nothing following up on Miss Mullally's question. I have one question following up on Your Honor's colloquy with Dr. Heath.

Dr. Heath, in your opinion, if Maryland were to offer a significant sum of money to a physician or physicians or certified registered nurse anesthetists to participate in lethal injections, do you think that the State could find some number of physicians or CRNA's to participate?

A. I've had conversations with colleagues about this matter, and thus my sense is, yes, if they were well reimbursed for this, there are people who would do it.

MR. HUT: Thank you. I have no further questions of the witnesses, Your Honor.

THE COURT: Thank you.

Doctor, thank so much for coming. And Mr. Hut do you anticipate that the doctor might be coming back in the future?

MR. HUT: I think it is quite possible that he may for rebuttal purposes.

I don't, I know that he has taken a lot of time on this and other litigation matters does not have a whole lot of vacation time, so I don't think he's going to be coming to

sit in the courtroom. Or we're going try to figure out how he might be able to monitor the proceedings. It's possible that we may want to have him back live in our rebuttal case if we have one.

THE COURT: Well, two things.

One, if you want Dr. Heath to monitor, and we're not you know we have the technological problem where Mr. Thompson would attempt to solve it.

And, second, because I've had an opportunity to see Dr. Heath, I might entertain I'd have to hear from both sides, whether he might testify in rebuttal if it were short, you know, via telephone. So I'd have to think about that. And of course if we operated under that rule, that would apply to their experts as well, because there's a significant cost in flying people here. Good. Look forward to seeing everyone tomorrow at 9:30.

(Proceedings concluded)

I, Jacqueline Sovich, RPR, CM, do hereby certify that the foregoing is a correct transcript from the stenographic record of proceedings in the above-entitled matter.

_____

Jacqueline Sovich DATE
Official Court Reporter

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MARYLAND/NORTHERN DIVISION
VERNON EVANS,
Plaintiff
CIVIL NO. 06-149
Vs.
Mary Anne Saar, et al,
September 20, 2006
Defendants
_____/
DAY THREE (UNREDACTED - PORTIONS OF PROCEEDINGS ARE UNDER SEAL INCLUDING BENCH CONFERENCES AND ARE NOT TO BE RELEASED WITHOUT COURT ORDER)
TRANSCRIPT OF BENCH TRIAL
BEFORE THE HONORABLE BENSON E. LEGG,
UNITED STATES DISTRICT CHIEF JUDGE
APPEARANCES:
On behalf of the Plaintiff:
Stephen Hut, Jr, Esquire
Todd Zubler, Esquire
Kalea Clark, Esquire
Anne Harden Tindall, Esquire
Stephanie Katherine Wood, Esquire
On behalf of the Defendant:
Laura Mullally, Esquire
Philip Pickus, Esquire

REPORTED BY:
Jacqueline Sovich, RPR, RMR, FOCRR
Official Court Reporter

(PROCEEDINGS)
THE COURT: Good morning. Please be seated. This is a continuation; namely, the third day of the trial of Evans versus the State.
The first day, Monday, was taken up with opening statement in the afternoon.
Day two, Tuesday, included the testimony of Drs. Heath and Scalea, both called by the plaintiff, Mr. Evans.
The witnesses today, and tomorrow, are either employees or agents of the State, whose identities will remain confidential. In order that their identities may be protected, they will testify in a courtroom that has been closed and sealed so that they will be seen only by individuals who are involved in the handling the case and who are covered by the protective order that has been signed between the plaintiff's attorneys and the plaintiff and the attorneys for the State.
This trial is, of course, a public proceeding, and so that the public aspects of the trial may be preserved, there is a live audio feed that has been established between

this courtroom, 7 A in the Garmatz building, the U.S. Courthouse in Baltimore, and another courtroom in the building; namely, courtroom 3 D.

In 3 D, there is a courtroom deputy to supervise things and also a member of the IT staff to make sure that

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the feed is working properly.

A couple of questions have been asked of court personnel. The first is and can we record the proceedings? Reporters, members of the public have tape recorders, so the question is can we record what's going on in the feed?

And, second, could we broadcast the feed using our cell telephones? And the answer is no. The feed may not be recorded, and the feed may not be rebroadcast.

The second question is can we obtain a tape recording of the proceedings at the end of the day? And the answer is, again, no. But you can obtain a transcript of the proceedings by contacting the Court Reporter, Jackie Sovich, who will be happy to provide one, within whatever time parameter is consistent with the fact that she's spending, you know, eight hours a day in court taking down the proceedings.

So you can't rebroadcast, can't record, can't take pictures, won't get a tape. But you can get a transcript by contacting Ms. Sovich.

Good. Mr. Hut, whenever you're ready, sir.

MR. PICKUS: Your Honor, I have a preliminary matter I need to discuss with the Court.

THE COURT: Yes, sir.

MR. PICKUS: May I ask the feed to the reporters be turned off for this matter?

(SEALED)

(UNSEALED)
THE COURT: Good. This ends the sealed portion of the hearing. We are about to begin with the direct examination of a gentleman identified as injection team E. Beginning with the direct examination by Mr. Evans' lead attorney, Mr. Hut.
Mr. Hut, whenever you're ready.
DIRECT EXAMINATION
BY MR. HUT:

Q. Good morning, sir.
A. Good morning.
Q. My name, as the Court indicated is Steven Hut. I am one of counsel for the plaintiff in this action. We've not met before; is that correct?
A. No.
Q. I want to reiterate the Court's words about the confidentiality with which we want to treat your identity. If at any time during this examination you believe that I am trenching close to information that would disclose for people to understand your identity, please say so, and we will go into a more closed mode.
We still may want to pursue those questions, but we'll do it without the audio feed that's taking place.
Do you understand that?
A. Yes.
Q. Now, we may actually start with something, I think these are permissible questions, and that do not disclose confidential information.
For the record, sir, by whom are you employed?
A. State of Maryland.
Q. And any particular department or division for the state of Maryland for which you work?
A. Division of Correction.
Q. And what is your function or are your duties for the

Division of Correction?
A. Correctional officer.
Q. Are you a member of the execution team, sir?
A. Yes.
Q. And are you a member of the portion of the execution team that is sometimes identified as the Injection Team?
A. Yes.
Q. For how long have you been an employee of the Maryland Division of Corrections?
A. Approximately 14 and a half years.
Q. And what were your duties, perhaps if you can take them

over time. What were your first duties at the division?
A. Originally, I was hired as a correctional dietary officer back in '92. '97, early '97, I switched over to a correctional out at the Maryland House of Corrections Annex.
And in '99, I was transferred to the Maryland State Penitentiary, known as MTC then.
And that's where I currently work.
Q. As a correctional dietary officer, was that -- did that involve responsibilities in the prison kitchen?
A. Yes, sir.
Q. And that was at the House of Detention Annex?
A. Yes.
Q. Were you involved in the execution of Steven Oken?
A. Yes.

Q. Were you involved in the execution of Wesley Baker?
A. Yes.
Q. Let me see if I can understand what your duties are, or were in connection with both of those executions. Could you describe those generally for us, please?
A. Describe them? Up until the moment of the execution, I really did not have contact with those two individuals.
Q. Let me see if I can help you out.
Did you operate in connection with both of those executions the flow clamp on the IV apparatus?
A. Yes.
Q. And let me show you what we have marked as Plaintiff's Exhibit 15.
May I approach, Your Honor?
THE COURT: You may.
Q. This is a piece of tubing, exhibit 15, still in its glassine case, that was produced to us this morning pursuant to subpoena.
And I want to sort of be clear for the benefit of the court reporter who's taking this down in words, but if you could look at this and describe or tell me if you see the flow clamp and describe what it looks like with this exhibit?
A. Yes. This is an administration set. The flow clamp is the piece, it's got a balloon, a wheel, this piece here (indicating).

Q. And it's the light blue with the clear plastic wheel?
A. Yes, yes.
Q. Okay. Thank you very much.
THE CLERK: Counsel, the feed can't hear the witness. If you could move a little closer to the mike? There you go.

BY MR. HUT:
Q. Now, I have placed on the easel in the courtroom, sir, a schematic diagram of the execution area. This was a diagram that the state produced to the plaintiff in the discovery process here.

Does that look approximately the way the execution area looks as a schematic rendering?
A. Yes.
Q. And during the execution of Mr. Oken and Mr. Baker, were you in the preparation room portion of the execution area?
A. Yes.
Q. And that is where you operated the flow clamp; is that right?
A. Yes.
Q. Now, did you have any other responsibilities in connection with the Oken and Baker executions?
A. I set up the room, the two tables.
Q. The room you referred to is, again, the preparation room?
A. Preparation room.

Q. Did you mix the drugs?
A. On Oken, I assisted.
Q. And whom did you assist?
A. I don't know.
Q. That's a fair comment.

We have, let me give you two pieces of paper that will assist in identifying some of your, the team members.

The first that I want to hand to you, and I'm also going to hand a copy to the Court's law clerk, for the Court's convenience, is what has been marked as plaintiff's exhibit 87.

This is a list of what we've called the generic identifiers, and they're two parts of the list. The first part has individual names with the identifier. And then I think the second page has the identifier that translates to the names.

So, for example, I think if you go down to your name, you'll see that we've got it designated as Injection Team E. And then, for example, on the next page, if you went to Injection Team A, you will see the name of the individual whom I understand is the one who you may have assisted in mixing drugs for the Oken execution.

Do you see that?
A. Yes. Injection Team A.
Q. Is that right, it was Injection Team A?

A. Yes.

THE COURT: And so the record is clear, this plaintiff's exhibit 87 is subject to the protective order, and is to be maintained under seal. So that these names are not disclosed to the public.
Q. The other document that may assist you, and will be available to do that, throughout your testimony, sir, is what we've identified as PDX 1, which is a chart that was prepared under the supervision of one of the plaintiff's witnesses, that contains photos of the individuals, if we could can have PDX 1 up? And this, too, has been designated confidential, and will not be disclosed to any members of the public.
MS. MULLALLY: Objection.
THE COURT: I'll overrule the objection.
Q. So if you'd like, if you need to see pictures to help identify somebody, that's the purpose of this chart.
And is injection team A accurately depicted as the up top individual in the middle column?
A. Yes.
Q. All right. During the execution of Steven Oken, did you insert the syringe or syringes containing the drugs used in the lethal injection into the Y port on the IV apparatus?
A. Yes.
Q. And did you do that as well in the execution of Wesley Baker?

A. Yes.
Q. Did you actually press the plunger on any of these syringes?
A. No.
Q. The individual who did that is called whom, as a generic identifier, either consult plaintiff's exhibit 87, the list, or the set of pictures on the chart?
A. Contractual Team A.
Q. Did you also monitor the IV bag and the drip chamber in connection with the execution of Mr. Oken?
A. Yes.
Q. Did you also do that in connection with the execution of Mr. Baker?
A. Yes.
Q. And during the inserting of the syringe and the monitoring of the bag and the drip chamber, was that all conducted from the preparation room?
A. Yes.
Q. Do you ever go to the execution room during an execution?
A. No.
Q. And from the preparation room, did you also monitor the IV lines that extend to sites on the inmate?
A. Yes.
Q. Did you do that for both executions?
A. Yes.

Q. Now, by reference to the chart in front of you on the easel in the courtroom that depicts the execution area, can you tell me approximately where you stood?
Well, let me do it this way. If we could get PDX 16 up on the screen, and do you see, you're looking at the screen next to you in the -- or on the computer right in front of you, sir?
A. Yes.
Q. All right. This is a blow-up of a portion of the execution area including the preparation room.
We put this together based on what we understood to be the testimony given in depositions, by members of the team.
Do you see the pink circle in the preparation room in the upper right-hand corner of that room?
A. Yes.
Q. And we have put the label ITE in there, which the witness who created the diagram understood to stand for Injection Team E, which is your identifier.
Is that the approximate position in the preparation room at which you stood for the execution of Steven Oken?
A. Yes.
Q. And for the execution of Wesley Baker?
A. Yes.
Q. And this is depicted in front of what I believe has been

identified as a window. Do you stand right in front of the window?
A. Yes.
Q. And to your right is a small gray rectangle. Does that small gray rectangle represent the IV stands, or stand, excuse me.
A. Yes, it would be in there.
Q. I'm sorry, I didn't hear.
A. Yes, it would be in that area, yes.
Q. Now, to your immediate left on this diagram, we have placed -- I'm sorry. To the immediate left of the pink circle, we've placed a tan circle that says Contractual Team
A. I'm sorry, CTA, which the witness who created this understood, stood for Contractual Team A. And is that the position in which Contractual Team A stood during the execution of Steven Oken?
A. He would be to the right of me on this layout. Not to the left, to the right.
Q. Contractual Team A stands closest to the IV apparatus?
A. Or side by side, both standing right next to it. He would be to my right.
Q. Contractual Team A does not stand in front of the window?

A. Yes, he does.
Q. He does stand in front of the window?
A. Yes. We're staggered.

Q. You -- the indication of the circle where you stand is correct; is that right?
A. Yes.
Q. Contractual Team A stands to your right between you and the IV apparatus?
A. Beside me.
Q. But in front of the window?
A. In front of the window, but we are staggered.
Q. All right. Sir, let me show you what's been marked as plaintiff's exhibit 74. I've corrected, it's deposition exhibit -- I'm sorry, it's not deposition exhibit, it's plaintiff's trial exhibit 73.
May I approach, Your Honor?
THE COURT: You may.
BY MR.HUT:
Q. Do you recall, sir, that you were deposed in this proceeding on or about June second of this year?
A. Yes.
Q. Were you asked during that deposition to place marks on a schematic of the execution area similar to the one that is before you on the computer screen?
A. Yes.
Q. And do you see the E in approximately the middle of the what's diagramed as the window in plaintiff's exhibit 73?
A. Yes.

Q. Did you affix the E to plaintiff's exhibit 73 during your deposition to indicate where you stood?
A. I don't recall. I know I marked something. That does not look like my writing, but I did mark something equivalent to this.
Q. In any event, on plaintiff's exhibit 73, there is an A written immediately to the right of E both standing before the window; is that correct?
A. Yes.
Q. And immediately to the right, there's a designation IV; is there not?
A. Yes.
Q. Which is consistent with the depiction of the small gray rectangle that you thought was the IV apparatus on the chart that we had up or the diagram that we had up on the screen a moment ago, PDX 16, correct?
A. Repeat that?

Q. Sure. PDX 16?
A. Down in the corner you got the legend, drug tray and IV set up.
Q. Precisely.
A. Yes.
Q. And the circle is the IV set up, and the rectangle is the drug tray?
A. Correct. And as I stated, the drug tray is in front of

the window, and we are at an angle to one another. He's roughly 12 inches behind me at an angle to that tray, standing in front of the window.
Q. To your right?
A. Correct.
Q. But what does that tell us about where the pink circle has been placed on this particular demonstrative, would seem to me that if you're both standing in front of the window, the pink circle ought to be drawn a bit further to the left, wouldn't it?
A. Well, if you ask me, the pink circle's a little bit bigger than this diagram here. Like I said, we're at an angle from one another, directly in front of the window. I am directly beside the drug tray, is at an angle to the drug tray.
Q. And you two are the two people that stand in front of the window in the preparation room during an execution, right?
A. And others, yes.
Q. Others stand in front of the window?
A. The commander, also.
Q. The commander stands in front of the window, and that would be the execution team commander?
A. Yes.
Q. Now, Contractual Team F, who is the physician, does she also stand in front of the window or near her window?

A. I don't know where she's standing in the room at the time.
Q. Is if she states that she stands quite close to the window, perhaps slightly to the left of it, with the EKG in front of her, you don't have any reason to dispute that, do you?
A. No.
Q. Okay. Now, did you, sir, plan to -- or was it your understanding that you were to participate in the execution of Vernon Evans that had been scheduled for last February?
A. Yes.
Q. Is it your understanding that if and when the state has

authority to execute Vernon Evans and that execution take place, that you would participate in that execution?
A. Yes.
Q. Is it your understanding that you would participate by performing the same goals and functions that you performed in connection with the deposition of Steven Oken?
A. That's possible.
Q. Did you say that's possible?
A. That's possible.
Q. Are the other possibilities?
A. I could have another detail that evening, yes.
Q. By another detail, you mean a detail off of the execution team?

A. No. On the execution team, another detail in the room.
Q. What other detail might you have?
A. I could be keeping the times, recording times. I could be asked to do that. There's several other things that could be done that I would be asked to do.
Q. Have you ever kept the recording times during the previous execution?
A. No when.
Q. Have you ever practiced keeping the recording times?
A. It's simply writing the time down on a piece of paper.
Q. But you've never practiced it, have you?
A. No.
Q. The individual who kept the recording times in the execution of Mr. Oken and Mr. Baker is designated Injection Team C; isn't that correct?
A. Yes.
Q. And she's called the injection recorder, correct?
A. That I don't know. I don't know her title.
Q. That's not your title, is it?
A. Excuse me.
Q. That's not your title, is it?
A. No, no.
Q. And have you ever practiced the recording?
A. No.
Q. Is it safe to assume, Mr. E, that if you were to

participate in any scheduled execution of Mr. Evans, that you would be located at approximately the same place as you are depicted in, or on the chart that's up on the screen, PDX 1?
A. Yes.
Q. As a member of the execution team, do you favor capital punishment?
A. Are you asking do I agree with it?

Q. Yes.
A. Yes.
Q. Have you taken basic first aid courses offered by the Division of Correction?
A. Yes.
Q. How many of those?
A. We get them yearly, about 15, 16.
Q. And in those courses, the C column is basic CPR and rescue breathing; isn't that right?
A. Yes.
Q. Other than that, you've never received any medical training, have you, sir?
A. No.
Q. And you'd never been trained in IV insertion; is that right?
A. No.
Q. And you've never been trained in phlebotomy, have you?
A. No.

Q. Nor in pharmacology?
A. No.
Q. Or in anesthesiology?
A. No.
Q. Besides these first aid courses that take up CPR and rescue breathing, you have no other medical experience at all, do you?
A. No.
Q. Can you tell the Court the purpose of the flow clamp that you identified a moment ago as part of plaintiff's exhibit 108?
A. It's to control the flow of the IV.
Q. Does it control the amount of the saline solution that goes through the lung?
A. Yes, it does.
Q. Do you sometimes refer to the flow clamp as the open and close valve?
A. Yes.
Q. Let's see if I can understand what happens with a flow clamp from beginning the execution by lethal injection to the end of it.
There comes a time when one of the members of the execution team hooks IV lines to the inmate; is that right?
A. Contractual, yes.
Q. We don't need to know the individual's name or identifier

for now.
After that occurs, are the IV bags passed through a

passage, a small passage between the preparation and the execution room?
A. Yes.
Q. Are they passed to you at that point?
A. Yes.
Q. You put them on the metal IV stand; is that correct?
A. Yes.
Q. Do you then start a slow drip?
A. That's already started.
Q. That's already been started?
A. Yes.
Q. The slow drip is done with what you call sugar water; is that right?
A. Saline, sugar water, yes.
Q. Is one of your responsibilities to ensure that the flow of the IV fluid is continuous?
A. Yes.
Q. Now --
THE COURT: If I could just, interrupt and ask a question.
Mr. E, so that the drip has started, let me get my terminology here, that Contractual Team B inserts the IV, and starts the drip so that the drip is already started before

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the IV bag is passed through the portal that separates the two rooms; is that correct?
THE WITNESS: Yes.
THE COURT: Good, thank you.
BY MR. HUT:
Q. Now, you said in response to my question and to the Court's, that the drug are started at a slow drip. But you actually don't know what it means to run the IV line in a slow drip, do you?
A. In medical terms, no.
Q. And you don't know where the phrase slow drip came from, do you?
A. No.
Q. And you would not be able to tell, would you, Mr. E, if the saline were running too fast, would you?
A. Other than looking on the administration set's window, no.
Q. Now, while the drugs are being administered, through the mechanism of Mr. Contractual Team A depressing the plunger on the syringes, you watch the clock, don't you?
A. That's one of the things I do, yes.
Q. And you watch the number of cc's, that's cubic centimeters of the drug, that are flowing out of the syringe, correct?
A. From time to time, yes.

Q. And based on how many cc's are flowing, you may have to open up or close the flow clamp a little, right?
A. We have never run into that problem on the last two executions, so, no, I don't. It could be a possibility.
THE COURT: If I could ask another question, so I can visualize this.
When the IV drip is started, you can monitor the flow by seeing how much of the saline solution flows from the bag into is it called the drip chamber?
THE WITNESS: Drip chamber.
THE COURT: Drip chamber. Good.
And my understanding is that the level of the drip chamber will always be constant?
THE WITNESS: Correct.
THE COURT: So what you're really looking at is to see how many drops are coming into the drip chamber?
THE WITNESS: Yes.
THE COURT: When the plunger is pushed not by you but by CTA, the how do you go about visualizing the flow of the drugs from the syringe into the IV system?
THE WITNESS: When the syringe is hooked into the line, we have a digital clock up on the wall, I will give them the time I need, anywhere from a minute to a minute and a half on the first syringe.
And I will occasionally look up at the clock and

let him know whether it's on time, whether he needs to pick you it up, pick up the pace or slow it down.
THE COURT: So you can see the syringe that he's pushing?
THE WITNESS: Yes, sir.
THE COURT: And by you know how much time he has to inject the contents of that first syringe, and you can see the progress that he's making by monitoring the progress of the plunger from one side of the syringe to the other?
THE WITNESS: Yes.
THE COURT: Good. Thank you.
BY MR. HUT:
Q. And depending on what needle size was used, whether it was larger needle or a smaller needle, you might have to slow the drip down, or you might have to speed the drip up, correct?
A. That's a possibility, yes.
Q. And you've said that; have you not?
A. Yes.
Q. But if there are no problems, you don't do anything at all with the flow clamp while the drugs are administered, correct?
A. No.

Q. You don't do anything?
A. If it's flowing properly, and there's no problems, no.

Q. Now, you do use the flow clamp, though, if the drugs prove to be easy or hard to administer when Contractual Team A pushes on the plunger?
A. On Oken and Baker, we have not had to modify that at all.
Q. But if it's hard for him to push, you open it a little more, don't you?
A. If he said it's really hard to push, it's proper we could do that.
Q. And if it's too easy, you would close the clamp a little bit, wouldn't you?
A. You would slow it down, yes.
Q. Now, at the end of the administration of each drug, the lethal injection checklist instructs you to open the flow clamp to wide open.
Let me ask this question before I ask that one. You know what the lethal injection checklist is, don't you?
A. Yes.
Q. And you've read it?
A. Yes.
Q. Not all members of the team do read it, don't they?
A. I can't answer for them.
Q. You don't know whether Contractual Team A has read it, do you?
A. I do not know.
Q. That check -- according to that checklist, at the end of

the administration of each drug, you're supposed to open the flow clamp to wide open, right?
A. Correct.
Q. And it's your guess that what that means, open to wide open, is that you move the valve so that it is all way open?
A. I guess, yes. Yes.
Q. And to do that, you move the flow clamp only about the length of a pencil lead, an 8th of an inch?
A. Roughly, yes.
Q. And then you slow it back down for the preparation of the next drug, correct?
A. Correct.
Q. But you don't know what determines the rate at which the saline or sugar water is flowing, do you?
A. Just consistent drip.
Q. So you don't know, Mr. E, whether the rate of flow is determine by the drugs being pushed through the IV or the saline or both, do you?

A. No.
Q. And you don't know whether it's possible for an IV to go bad if fluids are injected at a high rate, do you?
A. I do not know.
Q. And when you monitor the IV lines connected to the inmate, which I think you indicated was one of your responsibilities, you look for drippage, correct?

A. Yes.
Q. And you look to see that the line is not backing up, right?
A. Yes.
Q. You monitor for fluid backing up, by making sure that it isn't running on the floor, correct?
A. It's one of the ways, yes.
Q. So dripping and backing up are pretty much the same thing?
A. I wouldn't know if they were the same thing, but I look for both of those, yes.
THE COURT: So that if I can interrupt, you're looking, one of the things you're looking for is to see if there are any leaks in the IV line by looking to see if it's -- if anything is dripping from the IV line, correct?
THE WITNESS: Yes.
THE COURT: And the other thing that you're monitoring visually is what?
THE WITNESS: The syringe.
THE COURT: The syringe just to see what?
THE WITNESS: To see if it's flowing properly, if it's a smooth flow. If it was backing up, he wouldn't be able to push it.
THE COURT: Right. Good. So what you're looking for is you're looking at the travel of the plunger from left

to right?
THE WITNESS: We're from the back to forward, yes.
THE COURT: Back and forward?
THE WITNESS: Yes.
THE COURT: Good. Thank you sir.
THE WITNESS: Yes.
BY MR. HUT:
Q. But you really don't monitor the lines, do you, Mr. E, to see if there's a twist in them?
A. Physically looking at the lines.
Q. You say you're not looking at the lines?
A. No. I'm physically looking at the lines, if there was a twist or kink, obviously, it wouldn't flow.

Q. But you glance at the lines, that's about what you do, right?
A. No, I look at them.
Q. Do you recall that you were deposed under oath in this proceeding, correct?
A. Yes.
Q. Do you recall that took place on about June second?
A. Roughly, yes.
Q. You were under oath during the deposition, correct?
A. Yes.
Q. You raised your right arm and swore to tell the truth?
A. Yes.

Q. You were told that if you had trouble understanding the question that you should ask for some further explanation, right?
A. Yes.
Q. And then after the deposition was concluded, you got a transcribed copy of it, didn't you?
A. Yes.
Q. And you read it, make sure accurate?
A. Yes.
Q. You signed it, even, didn't you?
A. Yes.
Q. In fact, if I may approach, Your Honor?
THE COURT: You may.
Q. Is that your signature on the last page of what I believe to be the certified transcription of the deposition at page 195?
A. Yes.
Q. And you actually signed it with your real name, didn't you?
A. Yes.
MS. MULLALLY: Your Honor, if I could object right here. I'm not objecting to anything that Mr. Hut is doing. since Injection Teams E's signature of his given name is on that deposition, if for some reason it goes into evidence, or is even marked and kept by the clerk, I would ask that

somehow that deposition that the signature line be redacted so that it doesn't show his name.
MR. HUT: I was not intending to offer, this is something by way of impeachment, was just going to show the videotape of the testimony.
THE COURT: Good. Now, the purpose for showing or for referring to the deposition is for the purpose of demonstrating a prior inconsistent statement, correct?

MR. HUT: That's correct.
THE COURT: Good. If you would simply inform Miss Mullally, do you know what section?
MR. HUT: No, I don't.
THE COURT: If you would tell Miss Mullally to look at what section that you're going to access, in the world of prior inconsistent statements, I sometimes or what I usually do is to have counsel asserting that there's an inconsistency, show the section to counsel representing the witness, to see if there is general agreement that there might be an inconsistency. If there's a dispute, then I'll take it here up at the bench.
MR. HUT: This is page 122 line 21 to 123 line 4.
(Pause.)
MS. MULLALLY: I've read it, Your Honor, I don't believe there's any inconsistency.
THE COURT: Good. Why don't I look at it up here

at the bench.
MS. MULLALLY: Do you want counsel at the bench?
THE COURT: Yes, please.
(At the bench)
MR. HUT: 122, line 23, Your Honor.
THE COURT: Good. Thank you.
(Pause.)
THE COURT: 122 or 22?
MR. HUT: 122.
THE COURT: Line?
MR. HUT: Line 21.
THE COURT: 21. The question is "You mentioned before that you monitor the IV lines for leaking, do you monitor for anything else?"
Answer, "Just the leaking:
"Do you look to see if there is a twist in them at all? "
Answer, "I mean I glance at the line. I don't, I glance at the line. That's about it. And I haven't had any problems."
Well, good. So once you've done that, in my view, this is arguably inconsistent because of the definition of glance. Once you -- well, the thing to do first is to ask him at your deposition didn't you testify that you just glanced at the line? If he says no, I can't remember, then

you can show him, you can even read it into the record.
MR. HUT: I was just going to ask him whether he was asked the following question and gave the following

answer and let it go at that way. Okay. Thank you.
(Open court)
THE COURT: Mr. Hut, you may continue.
BY MR. HUT:
Q. Thank you, Your Honor.
At your deposition on June second under oath, Mr. E, on the subject of what you do to monitor the lines, were you asked the following questions and did you give the following answers: 122, line 21.
THE COURT: Now, does Mr. E have a copy?
MR. HUT: He does not, but I'm happy to supply him one, Your Honor. Mr. E, we're about to play the videotaped portion of the deposition on the computer screen in front of you. You may follow along, if you wish, and the computer also shows text underneath the picture.
But I'm handing you a copy of the transcript, you may follow along at page 122, line 21.
THE COURT: Just for the modification, just for a prior inconsistent statement, I'm not sure we need the playing of the tape.
You can simply show him and ask him here's, didn't I ask you this question, and didn't you give me this answer,

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and then that's -- that speeds things up.
Q. May I read the question, Your Honor?
THE COURT: You may.
Q. Question, "You mentioned before that you monitored the IV lines for leaking, do you monitor them for anything else?"
Answer, "Just the leaking."
Question, "Do you look to see if there's a twist in them at all?"
Answer, "I mean I glance at the line. I don't -- I glance at the line. That's about it. I haven't had any problems."
Did you give that testimony, Mr. E?
A. Yes, I did.
Q. Okay. You don't have responsibility for insuring that the inmate is adequately anesthetized, do you? It's -- we're right to the next question, sir.
A. Somewhat, yes.
Q. Well, then let me ask you, since you have the deposition in front of you, if you turn to page 123, line 9.
THE COURT: Well, I think, let's find out first what the witness assumes his responsibility to be. So you may answer that question.
A. Well, my responsibility is just I monitor the lines, make sure that the syringe is flowing smoothly, and you know look at the clock. It's very hard to explain sitting here. It's

a very small room. It's -- I mean, I basically I look at the lines, the lines are right in front of me, I look at the syringe, I look at the clock.

THE COURT: But I take it you're not responsible for making a physical examination of the inmate, such as checking his pulse, you know, looking into the pupils of his eyes.

THE WITNESS: No, sir.

THE COURT: Checking his respiration or anything else?

THE WITNESS: No, I'm not responsible for that.

THE COURT: But you do have a responsibility for part of the delivery system by which the drug are delivered to the inmate?

THE WITNESS: Yes, part of the process, yes.

THE COURT: Good. Thank you.

BY MR. HUT:

Q. But you don't look at the inmate to determine whether you think just visually he looks sedated or anesthetized, do you?

A. I mean, in glancing at the lines, looking at the lines, I'm going in a -- he's right in front of me, he's five feet away I'm going to see him.

So but I do not, you know, monitor what he is doing as far as his you know movements, stuff like that. You can see it, it's light in front of me. But I'm not there

specifically to monitor that.

Q. I would like to show the witness a statement I believe to be in variance at deposition, 123, 9 to 123, 12.

THE COURT: Thank you. Miss Mullally, why don't you take a look at it?

(Pause.)

MS. MULLALLY: Your Honor, I object.

THE COURT: Do you want me to take a look at it?

MS. MULLALLY: Yes.

THE COURT: I'd be happy to.

(At the Bench)

MR. HUT: This is at page 123 line 9 to 123, 12. I'm sorry, to -- yeah, 123 line 12.

THE COURT: The testimony in the transcript is "Are you at all responsible for making sure that the inmate is adequately anesthetized?"

Answer, "I just monitor the line and monitor his arm, so, no."

Question, "What do you look for when you monitor the line and monitor his arm?"

"Just make sure there is no leakage, dripping, whatever you want to call it. "

In my view, that testimony is not inconsistent with the testimony that the witness has given here today, which I

understand to be that he monitors the delivery system, but

that the inmate is right in front of him, so in if he noticed something, he will notice it. But because his responsibility was the delivery system. So I don't see that this is inconsistent.

(Open court)

BY MR. HUT:

Q. And you don't monitor, either, to make sure that the inmate is not in pain, do you?

A. I wouldn't know whether he was in pain, you know.

Q. In fact, whether he was in pain wouldn't concern you, would it?

A. I would not be able to tell that, whether he was in pain or not.

Q. And if you saw that the inmate was in pain or agony you wouldn't even do anything about it, would you?

A. If I seen the person strapped to the table sit up or do something out of the ordinary the commander's standing next to me, I would notify him, let him know he's also looking at the inmate, but I would let him know.

Q. But you can't make the judgment whether he -- whether he was in agony, can you?

A. No.

Q. So you don't know if he's in agony, you can't make that judgment?

A. No.

Q. And you don't know whether it's anyone else's job to make that judgment?

A. No, I do not.

Q. You just know that it's not yours, right?

A. Correct.

Q. Now, is it your position, Mr. E, that you're able to see every inch of the IV tubing from where you stand in the preparation room?

A. For the most part, yes. What is underneath the sheet, yes.

Q. Miss Mullally, page 119 lines 21 to 25.

(Pause.)

Q. Actually, Mr. E, I'd like you to look at it, but put it down for now, please.

(Pause.)

MS. MULLALLY: I don't object.

Q. At your deposition, Mr. E, were you asked the following questions, at page 119, line 21, and did you give the following answers?

Question, "Are you able to see all of the IV tubing from where you stand?"
Answer, "Yes."
Question: Every inch of it?"
Answer, "Yes."
Were you asked those questions and did you give

those answers?
A. Can I look?
Q. Absolutely.
A. 119.
Q. Page 119, line 21. Through line 25.
A. Yes, that's how I answered the question.
Q. And you say that you can see both sites equally well from where you stand in the preparation room, right?
A. Yes.
Q. Even though one of them is farther away from you?
A. Yes.
Q. And you reaffirm that testimony here today under oath, right?
A. Yes.
Q. You don't know, Mr. E, do you, whether there is anything on the IV setup that prevents the drug from moving backwards up the line, do you?
A. No, I do not know.
Q. You never heard of such a thing, have you?
A. I do not know.
Q. You have heard of a lure lock, though, right?
A. Correct.
Q. But you don't know what one does, right?
A. No.
Q. Now, let me ask you some questions about your

responsibilities in connection with mixing the drugs in preparation for an actual execution.
If I understood your earlier testimony, assisting in mixing the drugs in preparation for an execution is one of your responsibilities; is that so?
A. It could be, yes.
Q. And it was for Mr. Oken?
A. Yes.
Q. It was not for Mr. Baker?
A. No.
Q. You practice that, do you?
A. Yes, we do.
Q. And when you practice, though, you don't practice mixing the real drugs before an execution, do you?

A. No.
Q. And that's because, as you understand it, it's too expensive?
A. I don't know the reason.
Q. Page 147, line 17 through 24, Miss Mullally.
(Pause.)
MS. MULLALLY: No objection.
BY MR. HUT:
Q. When you were deposed, Mr. E, were you asked the following questions, and did you give the following answers? This is at page 147, line 17, sir.

Question, "The one that is a mixture, what do you mix together?"
Answer, "A powder and a liquid."
Question, "Do you do that yourself?"
Answer, "I have."
Question, "During practices?"
"No, you don't mix them during practices. It's too expensive."
Were you asked those questions, and did you give those answers?
A. Yes.
Q. Now, you state that you have done the mixing yourself, right, in that testimony?
A. With someone else, yes.
Q. Well, when you were asked do you do that yourself, you said "I have."
You didn't say there that you did it with someone else, did you?
A. No. There's a gray area there, but I do it with someone else, yes.
Q. So you've never done it by yourself; is that right?
A. No.
Q. Do you think that one of the responsibilities you may have with any execution that may be scheduled with Mr. Evans, that you might do it yourself?

A. No.
Q. Now, you label the syringes in preparation for an execution, right?
A. I have, yes.
Q. And you do that with colored tape and a marker?
A. Correct.
Q. And you practice drawing liquid into a syringe prior to the execution, correct?
A. Yes.

Q. And practice, you're doing that with colored water, correct?
A. Yes.
Q. Colored water simulates the drugs which are too expensive to use in practice, right?
A. Yes.
Q. Colored water corresponds to the identifying name that you give the drugs, for example, sodium thiopental, in practice, is substituted for by water colored red, correct?
A. Each is clearly marked. I don't know the specifics on the names of the drug, but each one's clearly marked. It's checked and double-checked.
Q. Okay. So each drug has its own unique color that identifies it in practice?
A. Yes, it.
Q. What are the three colors?

A. Red, green, and a blue.
Q. And do you know what, without necessarily the regard for the names of the drug, do you know what those colors correspond to in terms of the order in which the drugs are administered?
A. Red, green, and blue, one, two, three.
Q. Okay. Can you tell us the names of the drugs?
A. Offhand, no.
Q. Okay. And you don't know what the drugs do, do you?
A. No, I do not.
Q. Now, although, in practice, you use colored water coded the way you just described. The actual drugs that are used during execution aren't colored at all, are they?
A. No, they're not.
Q. They're clear, right?
A. Correct.
Q. And so at the execution is the only time that you perform with clear liquids, correct?
A. Yes.
Q. And I think you also testified earlier, when I asked you to describe your responsibilities in connection with lethal injection executions, that one of those is putting the syringes containing the drugs into the Y port for administration, right?
A. Yes.

Q. And as part of that process, you prepare a backup syringe for each drug, right?
A. Yes.
Q. And you prepare three syringes for the first drug, right?

A. Yes.
Q. Two syringes for the next drug?
A. Yes.
Q. And two syringes for the last drug, correct?
A. Yes.
Q. And there are only three, correct?
A. Correct.
Q. That you might use a backup syringe if it dropped on the floor; is that correct, Mr. E?
A. I've not run into that problem yet.
Q. But except for that, you don't know of any other reason why a backup syringe might be used, do you?
A. There could be several reasons.
Q. Can you think of any?
A. Not offhand, no.
Q. And none has been mentioned to you, have they?
A. No.
Q. And you've never used a backup syringe during training, have you?
A. I can't recall.
Q. You can't recall one way or the other, or you don't

recall that you ever did?
A. I mean, going back several years, it's a possibility.
Q. But you don't recall that you ever did so, did you?
A. No.
Q. And you don't know whether a backup syringe would be used if there was a leak in the IV tubing, do you?
A. That's not my decision.
Q. You don't know?
A. It's not my decision.
Q. Miss Mullally, page 75, line 5 through 6.
(Pause.)
MS. MULLALLY: Your Honor, the defendants object.
THE COURT: Good. If I could see the transcript, please?
Mr. E, would you like some water?
THE WITNESS: I've got some, thank you.
(At the bench)
MR. HUT: 75 lines 5 through 6, Your Honor.
THE COURT: Thank you.
(Pause.)
THE COURT: Well, I think isn't this consistent with what Mr. E testified, that he doesn't, wouldn't know what the backup would be used for; therefore, if the question is would you use if an IV leaked, said I don't know
MR. HUT: He just said in response to that exact

question, it's not his decision, and I asked him again you don't know, you know, he said it's not my decision. I'd like the admission that he doesn't know, which I think is accurate testimony.

THE COURT: Well, he said here in court today they didn't know.

MR. HUT: But in response to the narrower question, Your Honor, whether he would use one if it leaks, he now says it's not his decision. He's just not testifying consistently with what you just observed, is his testimony earlier in this very courtroom today.

THE COURT: Well, my view it is consistent, because he doesn't know, because it's not his decision. So --

MR. HUT: All right.

THE COURT: -- my view is it's not inconsistent.

(Open court)

THE COURT: Let me ask this, sir, just to make sure I understand it adequately.

Let's assume we're at an execution and you prepared the backup syringes, and for some reason, the IV line sprung a leak, so that -- and there's a puddle of fluid on the wall or on the floor.

Is it correct that you would not be the person who would decide whether the line would be fixed and one of the backup syringes would be used, somebody else would make that

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decision; is that correct?

THE WITNESS: That's correct.

THE COURT: And would who make that decision?

THE WITNESS: The commander.

THE COURT: Good. And you would do whatever you were instructed to do, correct?

THE WITNESS: Correct.

THE COURT: Good. Thank you.

Mr. Hut, go ahead.

BY MR. HUT:

Q. Now, you don't know the name of the first drug used, do you, Mr. E?

A. Offhand, no.

Q. And you don't know what that first drug does in a lethal injection aside from that it puts you to sleep, do you?

A. No.

Q. But you don't really know what it means to be put asleep in that context, do you?

A. No.

Q. And you don't know whether the second and third drugs used are painful, do you?

A. No, I do not.

Q. Now, I'd like to show you, if I may, a document that has been marked and previously used labeled plaintiff's exhibit 4.

You have seen plaintiff's exhibit 4, Mr. E?
A. Yes, I have.
Q. But you've never actually read it before, correct?
A. I've briefed through it. I didn't -- I perused through it, yes.
Q. You've never read it front to back, have you?
A. No.
Q. And you haven't even sort of reviewed it before, have you?
A. Yes, I've reviewed it before.
Q. Miss Mullally, page 68, lines 1 and 2.
(Pause.)
Q. And 3 and 4.
THE COURT: I'm sorry, pages 6.
MR. HUT: Page 68, lines 1 through 4.
(Pause.)
THE COURT: I'm not sure we have a page 68.
MR. HUT: I have a copy.
MS. MULLALLY: Your Honor, I object.
THE COURT: Is this the Bates stamp number?
MR. HUT: No, I'm in the deposition.
THE COURT: Oh.
MR. HUT: I'm sorry.
THE COURT: Good. Okay.
(At the bench)

MR. HUT: This is on the subject whether he's reviewed it, which he says he has.
MS. MULLALLY: Well, he did review it when it was showed to him.
MR. HUT: All right. I'll withdraw, I take the point.
(Pause.)
THE COURT: I think he's testified that, well, it's arguably inconsistent, so you can read it. I think it's arguably inconsistent.
(Open court)
BY MR. HUT:
Q. Mr. E, is it your testimony that, prior to your deposition, you had reviewed plaintiff's exhibit 4?
A. Let me clarify that. I assumed when they were questioning me, when they were referring to the manual that they were referring to the instructional sheet, we go off of at our meetings.
Q. So let me clarify. That's useful.
What's the instruction sheet that you go on at your

meetings? Is that the material in the back that begins with Bates stamp Evans 0 0 0 3 5 9 2, it's a numeric code at the bottom?
A. 0 0 3 5 9 0.
Q. All right. So from 3 5 9 0 to the end, of plaintiff's

exhibit 4, that you had reviewed before?
A. Yes.
Q. And you had reviewed it before your deposition?
A. Not immediately before the deposition, but I have gone over it.
Q. Right. But the rest of it, you'd never actually read it before, right?
A. The first section?
Q. Yes.
A. No.
Q. Okay. Now, let me ask you to turn to the part on the back that you say you have reviewed before. Do you see the number at the bottom of Evans 0 0 3 5 9 5?
A. Yes.
Q. And if you look up the page, just slightly under halfway down the page, do you see line 11 A, Mr. E?
A. Yes.
Q. And that line says "slow the IV line to KVO," correct?
A. Yes.
Q. And I read that correctly, didn't I?
A. Yes, you did.
Q. Now, you believe that the person responsible for doing that is Contractual Team B, right?
A. Yes.
Q. And, in fact, you don't even know what it means to slow

the line to KVO, do you?
A. Just keep vein open, that's all I know. I don't know the medical terms.
Q. I didn't catch the answer, I apologize.
A. Keep the vein open, but I don't know the medical terms, no.
Q. Well, have you -- have you learned more about what that means since your deposition?
A. Excuse me?
Q. Have you learned more about what that means since your deposition?
A. No more than I knew before, that it was a slow drip, that's all I know.
Q. Did you ask anybody what KVO stood for after your deposition?

A. No.
Q. You testified at your deposition you didn't know what it means?
A. In medical terms, no, I don't.
Q. You said what does it mean to slow the line to KVO, that I don't know, didn't you?
A. Yes.
Q. Now, if you would turn to the next page 5 of 7 that's Bates stamped Evans 0 3 5 9 6, toward the bottom of the page, I think it's the fourth entry from the bottom, do you see one

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that says quote "60 cc syringe coded number one, (color code red is inserted and locked into Y port, flow clamp opened, and the medication administered at the rate of approximately 1 to 1.5 ML per second, syringe is removed.) " Did I read that entry accurately?
A. Yes, you did.
Q. Now, you testified earlier, I believe, that you don't do anything with the flow clamp unless there is a problem encountered with pushing the drug, correct?
A. On the two prior, I have not had to, no.
Q. So even though the checklist here says flow clamp opened, you don't do anything with the flow clamp at this point, right?
A. It's already opened.
Q. So it's already opened, and you therefore don't need to open it?
A. Correct.
Q. Now, on page 6 of 7, Bates stamp Evans 0 0 3 5 9 7, the 8th line down from the top reads quote "Number 3 color coded blue syringe removed, and the IV continued to run wide open for 10 seconds and reduced to KVO."
To complete this task, you do exactly the same thing with the flow clamp as you did the other two drugs, which is to slow the flow down to a drip, right?
A. Yes.

Q. Do you notice that this line has slightly different language than is used to describe the step after administration of the other two drugs. This line doesn't contain, or that is -- I'm sorry.
The other two lines that we just looked at don't contain the words and reduce to KVO; isn't that right?
A. No, it's not worded that way.
Q. I'm sorry?
A. No. It's not -- it's not worded that way, you're correct.

Q. But you don't know what the inclusion of that language means, do you?
A. No.
Q. And you don't know if the inclusion of that different language means that you're actually supposed to do something different to account for the different language, do you?
A. No.
Q. And turning, if you would, Mr. E, to page 2 of 7, that's Evans 0 0 3 5 9 3.
(Pause.)
Q. Well, let me withdraw that question.
(Pause.)
Q. In fact, let me ask you to look -- the reason I couldn't find it, it is not on that page, two pages ahead to a page that's Bates stamp numbered Evans 0 0 3 5 9 1.

The top of the page says "lethal injection checklist contents of syringes," do you see that?
A. Yes.
Q. Under the drug number 2, do you see that, it's called Pavulon or pancuronium bromide?
A. Yes.
Q. By the way, does that in any way refresh your recollection as to the name of that drug?
A. Yes.
Q. Okay. And do you see the quantity listed?
A. Yes, I do.
Q. Can you read the quantity for me?
A. Two syringes, 50 cc per syringe.
Q. No. Actually the parenthesis under Pavulon?
A. Five 10 cc's?
Q. Yes. Continue. Keep going, five 10 cc?
A. Right.
Q. And then?
A. And there's a 10 EM, MEQ, or G? In each syringe.
Q. And the amount of potassium chloride in the next three lines says, one 50 ccs, one 50 cc ampule of 50 MEQ?
A. Yes.
Q. Do you don't know what it stand for?
A. No, I didn't.
Q. If I told you it stands for milliequivalents, it doesn't

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refresh your recollection?
A. No.
Q. You don't know why the quantities are specified there, do you?
A. No, I do not.

Q. Let me, and now, show you, I want go back for a moment, Mr. E, if I may, to the floor plan, and one that was shown you at your deposition, and that you fixed some letters to.
And so let me for that purpose --
MS. MULLALLY: Is there a number on that?
MR. HUT: Plaintiff's exhibit 74.
MS. MULLALLY: Okay. Thank you.
THE CLERK: This is 48.
MR. HUT: Exhibit 48 I'm advised is the correct number.
Can we put up 48 on the screen, then?
BY MR. HUT:
Q. I ask you now, Mr. E, to look at the computer screen in front of you, and we'll try to blow up that area a bit. Does that look more like your handwriting, marks in front of the window?
A. It could be, yes.
Q. And do you recall that you were asked at your deposition to place an "X" at the place where you stood?
A. Yes.

Q. And you then were asked to place an A at the point where Contractual Team A stood?
A. Yes.
Q. You placed an A slightly to your right and a step or so in back of you; is that right?
A. Yes.
Q. And that's consistent, isn't it, with the description that you gave me earlier?
A. Yes.
Q. You placed an indication immediately to your left, EKG, does that stand for EKG machine?
A. Yes.
Q. And that's the place where, as you will recall, the EKG machine is placed, correct?
A. Yes. It's on that wall near the window, yes.
Q. Now, doesn't Contractual Team F, the physician, stand in front of the EKG machine throughout the administration of the injection?
A. I'm not paying attention to where she's standing.
Q. So you know where the machine is, you're just not sure where the doctor stands, right?
A. Yes.
Q. And immediately to the left to the machine, you've placed the designation CTR, which by which you mean Execution Team Commander; is that correct?

A. Yes.
Q. Okay. Thank you.
(Pause.)
Q. Now, at the same time as you were asked to indicate where you stood and where Contractual Team A stood, and indicated where the commander stood during lethal injections, you were also asked to mark the place where Contractual Team B stood; isn't that so?
A. Yes.
Q. And you marked the placement of team B in plaintiff's 48 with the capital letter B, didn't you?
A. Yes.
Q. And the B on plaintiff's trial exhibit 48 is the B that you placed at your deposition to indicate where Contractual Team B stood, correct?
A. That's where I placed it, yes.
Q. And that's where you believe she stands, right?
A. Once again, there's a gray area in that room. It's hard for me to explain how that's all set up. Very hard.
Once the execution was completed, yes, that's where I noticed she was standing after it was over. Where she is during the execution, I do not know.
MR. HUT: Page 116, Miss Mullally.
THE COURT: If I could interrupt and ask a question, Mr. E?

I take it that during the actual execution itself, and let's define execution to mean the beginning of the injection of the first drug.
THE WITNESS: Okay.
THE COURT: She is not in the execution room, but she is in the preparation room, correct?
THE WITNESS: On the prior two, yes.
THE COURT: I'm sorry?
THE WITNESS: On the last two executions yes, yes, she is.
THE COURT: But I'm just stating what my assumption is so you can tell me if I'm wrong. I assume that she's not told during the execution you have to stand, you know, right here on this spot. She's perfectly free to be anywhere she wants to in that room, and look through the window or not look through the window if she chooses, correct?
THE WITNESS: She could stand where she chooses to stand, yes.
THE COURT: Good. Thank you.
BY MR. HUT:
Q. You would agree, Mr. E, that while there's no set area for those people, you remember her standing generally back by the wall, right?
A. Once it was over and I turned around, that's where I seen her standing, yes.

Q. You didn't see her standing at the window, did you?
A. During the execution, I'm focused on one thing, and it is nobody else in that room. I'm doing what I'm doing.
Q. Do you remember testifying -- do you remember, of course, since we have this marking that you made on plaintiff's exhibit 48, that you were asked to indicate where she stood, right?
A. Once again, there was a gray area and all that questioning about that. That's --
Q. Well, did you ever, did you testify that there was a gray area --
A. Yeah.
Q. -- at your deposition?
A. I don't believe so, no.
Q. No, you didn't. And you knew if you didn't understand a question, or you thought there was a gray area, you could ask for clarification, didn't you?
A. Yes, I did.
Q. You didn't say where you were placing the designation for Contractual Team B was only after the execution was completed, did you?
A. No.
Q. In fact, you were asked where she stood while the drugs were being administered, weren't you?
A. I don't recall.

MR. HUT: All right. May I refresh the witness's recollection, Your Honor?
THE COURT: You may.
MR. HUT: May I do so with the videotape clip, or would you prefer that I do it with the transcript?
THE COURT: Just the transcript.
Q. Could you turn, please, Mr. E, to page 116 and line 25.
A. Okay.
Q. Would you read lines 125 -- sorry. Line 25 on page 116 through line 11, sorry, 12, on page 117?
A. Question, do you know where --
Q. You don't have to read it aloud. Why don't you just read it to yourself?
A. Oh, okay.
(Pause.)
A. Okay.
Q. Now, you were asked, does that refresh your recollection, Mr. E --
A. Yes.
Q. -- that you were in fact asked -- let me finish the

question.
You were asked where she was standing while the drugs were being administered, correct? That's what it says on line 16 and page 117?
A. Yes.

Q. And you said back in this area indicating, and you were asked then to place a Mark, capital letter B, where you had indicated, right?
A. Yes.
Q. And you were asked, or you said there's no set area for these people, and you were asked do you remember her standing generally by the back wall, and you said, yes, in that area?
A. Yes.
Q. And that was your best recollection on June second, 2006, wasn't it?
A. Yes.
Q. And is there any reason why your recollection today is any better than your recollection on June second, 2006?
A. No.
Q. And have you had discussion with anybody, including counsel, about where it was that Contractual Team B stood since your deposition?
A. No.
Q. So this is your best recollection?
A. Yes.
Q. All things considered, isn't it?
A. Yes.
Q. And by this, I mean the testimony that you gave at deposition, right?
A. Yes.

Q. Okay. Now, I would like to show the witness, if I may approach, Your Honor, plaintiff's exhibit 47.
Your Honor, and Mr. E, and Chief Judge Legg, I'm about to get into some aspects of Mr. E's background to some extent personal history.
I don't -- I don't believe that this is unduly identifying material, but I caution Mr. E, that if you believe it is, so indicate, or your counsel should indicate, and you may request His Honor to further close the courtroom and take us off the speaker.
MS. MULLALLY: Counsel, we don't have a 47. We go from 46 to 48.
(Pause.)
MR. HUT: I'm getting one for the witness.
THE COURT: Good. Now, you're going to ask about

the information on the CV, correct, Mr. Hut?
MR. HUT: I'm going to begin there, Your Honor, and then I'm going to get into other arguably personal information.
THE COURT: What you should do is not state the names of the educational institutions which are listed in the CV, as a starter.
MR. HUT: Very well, Your Honor.
THE COURT: Or the year of matriculation or graduation.

MR. HUT: All right. I think I can do it on those ground rules. If I can't, I hope I have the presence of mind to signal before I tread. But I will obviously do my best to abide by the Court's ground rules.
BY MR. HUT:
Q. Mr. E, can you tell us just to confirm for the record what plaintiff's exhibit 47 is?
A. It looks like a brief resume.
Q. And did you prepare it for use in this case?
A. Yes. I gave the information to someone, yes.
Q. You gave the information to Injection Team A, I believe?
A. Yes.
Q. And he typed it up?
A. That's correct.
Q. Correct?
And you were asked about it at your deposition, correct?
A. Yes.
THE COURT: Now, this is not going to come into the public record, correct?
MR. HUT: I see no reason why it need to, Your Honor. I'm happy to have the Court treat it as under seal.
THE COURT: Good. It is under seal because, for one thing, you have some corrections in there with initials. So this, plaintiff's exhibit 47, is to be received into the

record under seal.
BY MR. HUT:
Q. Now, on the subject of the corrections that were made, were those handwritten corrections made at your deposition, Mr. E --
A. Yes.
Q. -- if you recall?
A. Yes.
Q. You noticed that a change needed to be made to the date of your high school graduation, correct?

A. Yes.
Q. And so you made that change, right?
A. Correct.
Q. And then after you noticed that, you were asked at your deposition whether you had any further changes that you wanted to make, right?
A. Yes.
Q. And you replied that you had no further changes, correct?
A. I don't recall. But obviously I made another change.
Q. You anticipated my next question. So and a few minutes later, you were asked about the listing in your resume that said AA certificate under the listed college, right?
A. Yes.
Q. And when you were asked about the AA certificate, you then indicated that you didn't know anything about an AA

certificate, right?
A. Correct.
Q. And because the fact is, you never received an AA certificate, correct?
A. That is correct.
Q. And you didn't even know what an AA certificate stood for, right?
A. That is correct.
Q. Now, you had given Injection Team A the information that he typed up in your resume, hadn't you?
A. Verbally, yes.
Q. And you allowed at your deposition that you didn't know really what an AA certificate was, that you might have said AA when talking to Injection Team A?
A. It's possible that he had brought it up.
Q. You didn't really know whether you had said AA or whether he had just assumed that you'd gotten an AA because it was sort of the lowest ranking certificate on the totem pole; is that right?
A. That's possible.
Q. Is that what happened?
A. That's possible.
Q. Well, let me see if I can refresh your recollection, Mr. E. Why don't you turn to page 20 of your deposition, which is out where this line of examination starts, and look at

line 4 through 9.
Don't read it aloud, just have a look at it.
(Pause.)
Q. And see if that refreshes your recollection.
Essentially, you testified that Injection Team A

assumed that it was the lowest certificate on the totem poll, and they came up with AA.
Does that refresh your recollection that's what you said?
A. Yes.
Q. Okay. Now, right to the right of the entry AA certificate, which you then crossed out, appears a date, September of a year that we won't mention, right?
A. Yes.
Q. But, in fact, the date September, the year we're not going to mention, has no relevance at all, does it?
A. No.
Q. All right. Now, you've been fired from jobs before haven't you?
A. I believe so, yes.
Q. You've been -- that's happened to you more than once?
A. That I do not. I mean, you're talking years ago. I'm sure I've been fired before, yes.
Q. You just didn't remember whether it was one or two, right?

A. Don't recall.
Q. You don't remember one way or the other, right?
A. No.
Q. Okay. The only job that you specifically remembered being fired from is a -- let me do this generically, if I can, so let's not mention it, but it is a supplier and service provider of automotive parts and supplies of national renown; is that fair?
A. Correct.
Q. And you were fired from there because the owner had accused you of a lot of things, right?
A. I indicated in my deposition that I didn't know why I was fired. I was never given an explanation on why.
Q. Okay. In the course of your employment at that employer, though, the owner accused you of doing lots of things, didn't he?
A. Not to me, no.
Q. Did he make those accusations to somebody else and you found out about them?
A. Not that I know of, no.
THE COURT: Well, if I could see counsel, please?
(At the bench)
THE COURT: Good. Now, we are in the federal rules of, we're blocked from --
In the Federal Rules of Evidence, the 600 rules

that govern the circumstance under which a witness can be impeached by, for example, specific instances of conduct, evidence of conviction of a crime, and if I could have a proffer as to what we're getting into now?

MR. HUT: Sure. I believe the relevant rule, Your Honor, is 608(b).

THE COURT: I have it.

MR. HUT: There are two issues here. One is the principle one that I propose to get into and I need not spend much time on this previous employment incident.

There are disciplinary incidents. One at least one of which, two of which I believe were described as quite serious. One of which involved mistreatment, seriously unprofessional treatment of a witness.

MS. MULLALLY: A witness?

MR. HUT: Sorry, of an inmate.

These are relevant, I believe, highly so, in two respects.

The first respect is that I believe in and of itself it is material to his propensity for future ability to perform a job of great sensitivity, in much the same way as sort of the future propensity of a parent to provide adequate care is relevant to a custody proceeding.

But the more grill, the more material Your Honor I think is we have testimony from past team commander, I'm

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sorry, Past Team Member Z, who was the team execution commander at prior executions, we have testimony also from execution commander both to the effect that the information about at least one of these disciplinary incidents was in his view material, and he would have wanted to know it prior to selecting Mr. E for the team.

THE COURT: Well, let's go through the first. The first incident that you're putting forward under Rule 608(b) is involves the conduct he may have committed and led him to be terminated by a prior employer, correct?

MR. HUT: Yes. 608(b), no, this is -- 608, the information in 608(b) I think only goes to his truth telling or not at his deposition. The prior employer conduct is simply -- is simply firing and seems to me it was material to -- that should have been known by the person who selected him for the team. It was a prior employer.

I think the very way that the evidence will show that he was extremely unforthcoming about things that had to do with this incident.

And that reflects I think his general unforthcomingness in the way he probably treated his supervisors, who may or may not have made appropriate inquiries about his past.

THE COURT: Well, when? Can you tell me the date on which that he was dismissed from the prior employment?

MR. HUT: I don't know it. I don't think he knew it.
MS. MULLALLY: I think what we do know it was long before he even became an employee of the department of correct, and he's been at DOC for 16 years
MR. HUT: It certainly was before. I don't know that we have any idea that it was long before, unless you know.
MS. MULLALLY: I think it was.
THE COURT: But whatever it was, the general principle behind Rule 608 is that you can ask, but you're bound by the answer of the witness, so you have asked why I was dismissed from the prior employment, he's answered that he wasn't told why he was dismissed, so that ends it.
MR. HUT: I think I should.
THE COURT: That has to do with the with 608(b), which has to do with specific instances of conduct to impeach.
Let's move onto the second one.
MR. HUT: If I could just address that for a minute, though, Your Honor, I would have thought, and do think that I'm entitled to impeach him not with anything collateral except his prior sworn testimony in the proceedings in which he said he was accused of a lot of things. So he knows to that extent.

THE COURT: Well, the --
MR. HUT: I can't call a witness, and I can't use another document.
THE COURT: The thing is, you only get to get into it if he was dismissed for some wrongdoing that entrenches on his truthfulness as a witness.
And you're bound by the witness's answer.
So that if he was dismissed for, let's say, forging a check, that would be a crimin falsity, so if he were dismissed for forging a check. If the answer is no, then you're bound by that answer.
Now, even if he says I was, and we're only on 608(b) now, even if he says that I was accused of a lot of things, or I don't really know, that's not necessary to say I was accused of a lot of things, that's irrelevant unless he's willing to admit that he was accused of and actually did commit an act of crimin falsity.
And from what I've heard the witness, you know, I think that you can -- what we'll do is we'll ask him in a minute, I'll ask him were you dismissed for fraud or some

kind of failure to tell the truth? If he says no, then that's the end of it under Rule 608(b).

We then move on to the second issue, and that is whether or not the protocol and the procedures of the Department of Corrections are inadequate because the

supervisors failed to smoke out, as it were, and learn the circumstances under which he was terminated from his employment before he joined the Department of Corrections.

In my view, with respect to that is that it's simply too old. So I don't believe that it's sufficiently probative to be part of this case, because, by definition, it would have occurred, you know, over ten years ago.

MR. HUT: I agree with that. I was not proffering the prior employment incident on that theory of relevance.

THE COURT: Good. So let me then complete, if I could, talk to the witness. You can ask the witness to come around here.

MR. HUT: All right. Just so that I -- there's no misimpression about what's coming, I do want to get into four incidents of discipline --

THE COURT: All right.

MR. HUT: -- that were admitted.

THE COURT: I haven't -- we're just going to close the door on them.

MR. HUT: In the past decade?

THE COURT: We're going to just close the door on prior employment.

Mr. E, if you could come around here so I can ask you a question, please?

MR. HUT: This is outside the audibility of the

people outside the room.

THE COURT: Nice to see you.

THE WITNESS: Nice to see you.

THE COURT: Here's the issue. In connection with your termination from this employer, I take it that the termination was over ten years ago, would that be correct?

THE WITNESS: Much longer than that, yes.

THE COURT: Much longer?

THE WITNESS: Yes.

THE COURT: And in connection with your termination, do you admit that you were guilty of conduct involving not telling the truth, such as fraud or falsehoods?

THE WITNESS: No.

THE COURT: Good. So you deny that?

THE WITNESS: Oh, absolutely.

THE COURT: Good. Thank you.
(Open court)
THE COURT: Good. It is a little bit afternoon. We're now back on the record.
We'll now take a recess until 12:15 and then come back, if I could, counsel would remain in the courtroom, and you may take a breather, sir.
(Witness excused)
(UNDER SEAL)

(END SEALING)
MR. HUT: Thank you, Your Honor.
BY MR. HUT:
Q. Sir, I have only one more.
THE COURT: Just if I could say, for the record, apologize for the delay to those who are in courtroom 3D, t we were discussing evidentiary matters, and we're now ready to resume live.

BY MR. HUT:
Q. Thank you, Your Honor.
Sir, I have one or two questions further.
Mr. E, in your mind, you actually don't report to anyone on the execution team, do you?
(Pause.)
A. No.
Q. And that's because the injection room is really a room without a rank, right?
A. Correct.
MR. HUT: I have no further question of the witness, Your Honor.
THE COURT: Thank you.
Miss Mullally?
MS. MULLALLY: Yes, Your Honor.
CROSS-EXAMINATION
BY MS. MULLALLY:
Q. Now, Injection Team E, I'd like to ask you some questions about the syringes that are used to administer the lethal drugs.
I think you testified that there were three different colors, the red syringes for the first drug, the green syringes are for the second drug, and the blue syringes are for the third drug?
A. Correct.

Q. And that there are three syringes prepared for the red drug, two for the green drugs, and two for the blue drugs?
A. Correct.
Q. And that when the red drug, the first drug is administered, two of those syringes are administered?
A. Correct.
Q. And that when the green drug is administered, one of the syringes is administered?
A. Correct.
Q. When the blue drug is administered, one of the syringes is administered?
A. Correct.
Q. And that leaves a backup of one syringe for each drug?
A. Correct.
Q. Now, one of the things that you do during set up is that you actually label the syringes?
A. Correct.
Q. And that would be during a practice and during the previous two executions of Steven Oken and Wesley Baker?
A. Correct.
Q. Now, when you are labeling a drug, and whether it's a practice or an execution, do you do them all at once? Or do you do them in order, the red one first, followed by the green one, followed by the blue one?
A. In order.

Q. Is there -- are you doing this on your own, or are there people in the vicinity who are watching what you were doing, checking to see that you were doing it accurately, and then checking again to make sure that everything is done according to the checklist?
A. That is correct.
Q. And one of the people that actually helps mix the drugs and helps also to set up the drugs up is someone called the OIC, the officer in charge?
A. Correct.
Q. And do you know that person to be by his identifier to be Injection Team A?
A. Yes.
Q. And you've worked with Injection Team A to set up the syringes to mix the thiopental and to put the syringes on the table?
A. Yes.
Q. And isn't it true that when the syringes are put on the table, they are put on in the order in which they will be used?
A. That's correct.
Q. In other words, red is closest, followed by green, followed by blue?
A. Correct.
Q. And the reason that they're put in order is because you

don't want to make a mistake, you want to use them of course in the correct manner, correct?
MR. HUT: Objection, Miss Mullally's leading. I don't think she should.
THE COURT: I'll permit her to lead. Although the witness is identified with the execution team, this is cross-examination, and it will speed things up.
Q. Now, the team meets regularly to practice, I take it, the whole group of you?
A. Yes.
Q. And every person on the team has at least one backup, some people have more than one backup?
A. Yes.
Q. And the practice is when there is not a pending warrant of execution, a practice occurs, practices occur approximately one time per month?
A. Yes.
Q. And when an execution, a warrant execution is imminent, you begin to practice once per week?
A. Yes.
Q. And once an execution has received a date, you practice every day; do you not?
A. Correct.
Q. Now, what would you do if a syringe of a drug were dropped on the floor?

A. Notify the commander.
Q. Okay. Is that the execution team commander?
A. Yes.
Q. And he's in the room with you?
A. Yes.
Q. In fact, he's close by to you?
A. To my immediate left. Yes.
Q. Now, you and Contractual Team A are at the window, you're side by side, you're staggered, but you're inches apart; is that correct?
A. Correct.
Q. Now, I know -- well, given the sizes of the two of you, are you -- would you happen to know whether or not you're blocking anyone's view out of that window who might also be in the room?
A. No, I can't answer.
Q. Okay. Are you taking up the whole area of the window?
A. No.
MS. MULLALLY: Nothing further, Your Honor.
THE COURT: Thank you.

Mr. Hut, anything else?

REDIRECT EXAMINATION

BY MR. HUT:

Q. Mr. E, when was the last time you had a practice?

THE COURT: I'm sorry, had what?

Q. Had a practice?

A. The 11th of this month. 11th or 12th of this month.

Q. This is September?

A. Yes, sir.

Q. Before that?

A. I want to say June.

Q. So you skipped the months of July and August, took the summer off, right?

A. Due to this case, yes.

Q. The window in front of which you stand, you'd agree that that's approximately three by three?

A. Give or take, yes.

MR. HUT: No more questions, Your Honor.

THE COURT: Thank you. Mr. E, before you go, I just had a couple questions to ask you, and you may not have thought about it, so you're entirely free not to answer them if you can't give a meaningful answer.

As I understand it, the middle drug, the second drug, is given to paralyze the inmate so that he does not move, doesn't have any spasms, twitching, convulsion during the administration of the lethal injection.

I was looking to see, my understanding is that this is desirable because it cuts down on the emotional impact of the execution on the witnesses and also on the members of the execution team.

And so I was looking to see what kind of whether that middle drug is necessary, so I was looking to see what kind of impact you think that it would have on the members of the execution team and/or the witnesses if the person being executed were to move, twitch during the actual administration of the lethal drugs. Apparently, that's a natural reaction when a person is dying.

Would that be hard to take, or not hard to take, or you not prepared to answer that at this time?

THE WITNESS: I'm prepared to answer it. I -- I don't know what each drug, each individual drug is specifically for.

I mean, I've never run into a problem on the two that I've been involved with, that, you know, once the inmate is strapped down, I did not foresee any problems whatsoever

as far as movement, twitching, I didn't notice anything.
And, like I said, I'm probably five feet from the inmate.
THE COURT: But if that were to occur, if there were movement and twitching, would that have a bad psychological effect on the members of the execution team? Do you think?
THE WITNESS: I can only speak on my behalf. I mean, obviously, if he's going into convulsions or something of that nature, obviously, that would be of concern.

But that would be totally up to the team commander, you know, what's to be done next.
THE COURT: Good. Thank you very much, sir, for coming. You are excused. And I think that there may be a lunch waiting for you.
Mr. Thompson says there is.
Good. Why don't we do this, why don't we excuse the witness. I'd like to talk to counsel about an evidentiary ruling briefly, and then we'll recess for lunch.
THE COURT: Thank you for coming, sir.
THE WITNESS: Thank you.
(Witness excused)
(UNDER SEAL)

(UNDER SEAL)

(END SEAL)
THE COURT: Thank you. The next witness, who has been called by the plaintiff, is Contractual A, and he has been sworn in.
If you would, please?

DIRECT EXAMINATION

BY MS. TINDALL:
Q. Good afternoon.
I want to reiterate what Judge Legg said, we're very concern with preserving anonymity during these proceedings, when necessary for me to refer to you, I will be using your generic identifier Contractual Team A.
And to facilitate our discussion, if you'll look at the notebook that is just to your left, there is a document first toward the back behind a tab number 87. And this is a list of generic identifiers.
The first page has various members of the execution team, listed by name, with their generic identifier after it.
The second page contains the same people, is that the order's reversed. Here they're listed alphabetical and the name follows.
And so to the extent that during our discussion you

need to refer to a member of the execution team, please take your time to glance at this list and make sure that we don't use their names in our discussion, either?
A. Yes, ma'am.
Q. Sir, the Maryland Division of Corrections has hired to you perform a particular job during lethal injections; is that right?
A. Yes, ma'am.
Q. And what is that job?
A. I'm with the execution team, and my job to let the liquids escape from the needle, syringe, in a line.
Q. And do you believe the title of your position to be inspection specialist?
A. Yes, ma'am.
Q. And were you the injection specialist for the Baker execution?
A. Yes, ma'am.
Q. And also for the Oken execution?
A. Yes, ma'am.
Q. And were you planning to be the injection specialist for the execution of Vernon Evans had it gone forward in February of this year?
A. Yes, ma'am.
Q. As you understand them, are your duties as the injection specialist to push the drugs through the syringe in 60

seconds; would that be a fair statement?
A. For the first shoot, yes.
Q. And then for the? Excuse me, for the first?
A. The first push.
Q. And for the second push, it would be 50 seconds?
A. 50 seconds, yes, ma'am.
Q. And the third would also be 50 seconds?
A. Yes, ma'am.
Q. During the time that you're pushing the drugs, is your focus on getting the liquid out of the syringe in those desegregated times?
A. Yes, ma'am.
Q. Do you know why the rate at which the drugs are injected matters?
A. I don't.
Q. When you're injecting the drugs, do you monitor the inmate at all?
A. He's with -- excuse me. He's within my view.
Q. But do you monitor him?
A. Monitor? Do I have him hooked up to a machine? Do I look at him? What is the question?
Q. Are you -- in doing the job that you've been assigned, is it your understanding that part of that job is to look at the inmate at all?
A. My job is to let the liquids in that needle escape within

60 seconds, 50, and 50. That's my job.
Q. And that's the full extent of your job?
A. That's what I do.
Q. Do you look at the IV tubing at all?
A. I've seen it.
Q. But that's not part of your job?
A. It's not my job.
Q. The syringes that you push into the tubing, you don't actually screw them into the line, do you?
A. I do not.
Q. And if you could look at the list of generic identifiers behind tab 87, please?
(Pause.)
Q. And on the first page, at number 12, the gentleman listed is Injection Team E, is he the one who hooks the syringes into the line?
A. Exhibit 87?
Q. Uh-huh.
A. And the question again?
Q. If you'll look down, you know, on the first page here, there are names listed in alphabetical order. If you'll look down at the 12th name listed, there's a person's name, who I won't read, and then the generic identifier follows Injection Team E.

Is he the person who twists the syringe into the

line?
A. He is.
Q. And he stands next to you during the injection?
A. Yes, he does.
Q. And if you'll look, there's a diagram here of the execution area. Does that represent, or does that look like the area in which you conducted executions?
A. Yes, ma'am.
Q. And do you --
MS. MULLALLY: We're not getting the document. Okay. I'm sorry.
Q. And do you see the area labeled the "preparing room"?
A. Yes, ma'am.
Q. And is that where you -- where you're standing when you're injecting the drug?
A. Yes, ma'am.
Q. And there's a window in that room that looks onto the execution room; is that right?
A. Yes, ma'am.
Q. And you stand at that window while you're pushing the drugs?
A. I do.
Q. Do you know what Injection Team E is doing while you're pushing the drug through the syringe?
(Pause.)

Q. Could you give a verbal answer?
A. I'm thinking. I just know that I ask him for a time where he wants me go to the secondhand on the clock, be it 5, 10, 20, and we agree and confirm that that would be the time that I'm pushing forward.
Q. But while you're actually pushing, you don't know what he's doing with the line?
A. I have no clue.
Q. And I may have asked this, I apologize if I'm repeating myself, you stand next to Injection Team E at the window; is that correct?
A. Yes. He's to the left and front of me.
Q. When you inject the drugs, you get different levels of resistance on the syringe, correct?
A. I have.
Q. And I believe you testified at your deposition that you got more resistance on the syringe during the Baker execution than you did during the Oken execution?
A. I did.

Q. But regardless of that resistance, you always try to empty the first syringe in 60 seconds; is that right?
A. Still go for the goal of 60 seconds.
Q. And if you're getting more resistance, you have to push harder to do that, correct?
A. Yes.

Q. And Injection Team E trained you in pushing the drugs; is that right?
A. Yes.
Q. Did he -- he showed you how to sort of get in a zone where you sort of push those drugs in 60 seconds making sure the fluid is out of the syringe; is that accurate?
A. He showed me along with a team how to form my job.
Q. And he showed you how to get a smooth flow on the syringe?
A. Has occurred with the monthly practices that we have.
Q. And would you say that Injection Team E has really shown you a lot?
A. It's pretty -- it's pretty easy to do. He showed me a lot. He showed me how to do it. And, with practice, that's what I do.
Q. Do you ever prepare the syringes?
A. Never.
Q. And you don't know who does?
A. I have no idea.
Q. When you walk in the room, the syringes are already laid out for you?
A. Everything's prepared.
Q. While you're administering the drugs, focusing on the clock, you don't know who was in the room with the inmate, do you?

A. I -- I don't.
Q. I believe you testified that you stand right at the window in the preparation room, correct?
A. Yes, ma'am.
Q. And as you administer the drugs, you block a fair bit of that window, don't you?
A. I stand in front of that window. What I block, I don't know, because it would be behind me. I have a good view.
Q. And is it your understanding that, to do your job, you have to stay at that window?
A. I don't have to stand at that window to do my job.
Q. Have you ever stood anywhere else?
A. No.
Q. And the man we referred to earlier as Injection Team E,

he stands immediately to your left; is that right?
A. To my left and just a little ahead of me.
Q. And if you could look back at the list of generic identifiers?
On that first page, if you will look down to the number 19, there's a name and then the generic identifier Contractual Team B?
A. Yes, ma'am.
Q. And Contractual Team B, she inserts the IV's during an execution; is that right?
A. Yes, ma'am.

Q. And then she comes into the preparation room where you're standing; is that right?
A. She's in that same room.
Q. And while you're pushing the drug, she's somewhere behind you?
A. Somewhere behind me.
Q. If you could look in that notebook behind the tab exhibits, there's a number 4. And this has already been marked as plaintiff's exhibit 4.
A. Where are we looking again, please?
Q. Pardon?
A. Where am I looking again for this?
Q. There's a tab that reads "exhibits," and then tab number, 4 and then there's a document behind that.
A. Okay.
Q. Please glance through this document and tell me if you recognize it.
A. Go ahead, ma'am.
Q. Have you -- you might need to turn a couple pages.
Have you seen this document before?
A. I don't have a copy of it. I don't recall seeing it.
Q. Do you recall possibly having seen it for the first time at your deposition?
A. Yes, ma'am, could be.
Q. And if you could turn toward the back of the document, if

you'll look at the bottom right, there are a series of numbers, Evans 0 0, I'm looking at the page marked Evans 0 0 3 5 9 1.
(Pause.)
A. Yes, ma'am.
Q. Do you see the very top line where it reads "lethal injection checklist"?
A. Yes, ma'am.
Q. And right below that contents of syringes?

A. Go ahead, ma'am.
Q. A couple items down, do you see where the document reads sodium pentothal 4.5 grams, under contents?
(Pause.)
A. 4.5 grams, yes, ma'am.
Q. Do you know what sodium pentothal is?
A. I do not.
Q. Sodium thiopental, do you know what that means?
A. I do not.
Q. Just below that section, do you see the words Pavulon and then in par then recess pancuronium bromide?
A. I see it.
Q. Do you know what Pavulon is?
A. I do not.
Q. Pancuronium bromide?
A. I have no idea.

Q. And just below that language, the words potassium chloride, do you see that?
A. I do.
Q. Do you know what potassium chloride is?
A. I do not know.
Q. Do you know if any of the drugs used in lethal injections paralyze the inmate?
A. I do not know.
Q. Does the second drug numb the body?
A. That's my understanding.
Q. By that do you mean no pain and --
A. I don't know that. I know what I was told, and they say that it numbs the body. I don't know that.
Q. I'd like to talk about some of the equipment used during executions.
If you'll turn five pages in that document to the page that reads at the bottom Evans 0 0 3 5 9 6?
(Pause.)
A. Yes, ma'am.
Q. And four steps up from the bottom, do you see the step that reads 60 cc syringe coded number 1, color coded red is inserted and locked into the Y port, flow clamp opened, and the medication administered at the rate of approximately 1 to 1.5 milliliters per second, syringe is removed.
Do you see that?

A. Yes, ma'am, I do.
Q. And did I read that correctly?
A. I wasn't reading along with you.
Q. Okay. Do you see that language?

A. I see that language.
Q. Do you know what Y port is?
A. I'm learning. I think it's a Y that ports into a line, but I have no training of it.
Q. And you did not know what that was at your deposition in May, did you?
A. Right.
Q. And you don't know what the flow clamp mentioned here is, either, correct?
A. I'm learning. With practice, we're learning.
Q. But you didn't know that at your deposition in May, either?
A. I do not know those things.
Q. And so you did not know those things for the past two executions; is that correct?
A. It wasn't my job.
Q. This step that I just read, you've heard someone read this language during executions, right?
A. Yes, ma'am.
Q. But you don't pay a lot of attention to it?
A. It means nothing to me.

Q. If you'll turn the page, and at the very top of that page, do you see the step that reads the execution team commander shall light the green light in the execution room indicating number 2 color coded green is being administered?
A. I see that.
Q. Does this have anything to do with your job during lethal injections?
A. It has nothing to do with what I do when the needle is -- when I have my hand on the needle. I have nothing to do with that. I push when I'm told to push.
Q. So you don't watch for the green light?
A. I've seen it on occasion in the past three years.
Q. But you don't watch for it, during executions?
A. It's not my job.
Q. You're not sure who does watch that green light, are you?
A. That's not my job.
Q. You don't know what a pressure infusion bag is, do you?
A. Only that I've learned what it is in the past three years.
Q. Did you know what a pressure infusion bag was at your deposition in May?
A. No.
Q. So you've learned that in the past few months?
A. A lot of questions came up since the deposition.
Q. Back to this page that we were looking at before, do you

see this step, about a third of the way down the page, that reads number 3 color coded blue, syringe removed, and the IV continued to run open, wide open for 10 seconds and reduced to KVO, do you see that step?
A. I do see that.
Q. Do you know what KVO means?
A. I do not know.
Q. And you've never heard it mentioned?
A. I might have.
Q. You testified at your deposition, however, that you'd never heard that phrase?
A. KVO?
Q. KVO?
A. I'm not sure what that means.
Q. And you'd never heard it where your deposition in this case; is that right?
A. I don't think that I've heard it before. I hear a lot of things in the last three years. I don't recall that specifically.
Q. During lethal injections, you push the medications or the drugs from the syringe and that goes into the IV tubing, which in turn goes into the inmate, correct?
A. That's my job.
Q. You don't know if there are one or two lines of IV tubing, do you?

A. I do not.
Q. And you've never heard anyone on the execution team discuss switching from one line to another?
A. I don't know that.
Q. You've never heard that?
You've never heard anyone discuss that before?
A. Changing a line? I don't know that -- that they change the line or not.
Q. Am I right that there is one extra syringe made of each drug?
A. Yes, ma'am, that's what I see on the table.
Q. But you've never seen an extra syringe used in practice, have you?
A. I never have.
Q. And you don't know what the extra syringe is for?
A. I don't.
Q. And you don't know what a reason for using one would be?
A. I just never happened.
Q. You had an interview before you joined the execution team, correct?
A. I did.
Q. And you interviewed with the execution team commander and some other folks; is that right?
A. I did.
THE CLERK: Counsel, if I could interrupt you just

a second? Judge, 3 D hung their phone up. I need to reconnect with them.
(Pause.)
THE CLERK: Go right ahead.
BY MS. TINDALL:
Q. At the interview we were just talking about, you were basically asked if you were up for the job; is that about right?
A. That's correct.
Q. And it was short and sweet?
A. It was.
Q. And your current business is septic services?
MS. MULLALLY: Objection.
THE COURT: Well, it's not medically related.
MS. MULLALLY: I'm sorry. My objection has to do with what her question and his response. It's not objectionable, but I want to bring it to the Court's attention.
THE COURT: Good. What I was trying to do is just find out, seems to me what would be relevant is that his current position is not medically related at all.
MS. TINDALL: Yes, that's right. I do not have to name the business, no.
THE COURT: That's correct; is it not?
That what you're doing, your regular job, is not

medically related?
THE WITNESS: Has nothing to do, right. No, sir.
THE COURT: Great.
BY MS. TINDALL:
Q. And you were employed in your current non medically related job when you were interviewed to be a member of the execution team, correct?
A. That's correct.
MS. TINDALL: And, Your Honor, I believe now I have some questions here that we may want to discuss without the live feed.
THE COURT: Good. So what we will do, then, we will, since we're going to discuss an evidentiary point, is to have the witness return back to the witness room, and to discontinue the feed.
THE CLERK: 3D, don't hang up, we're just putting you on mute.
(Pause.)
(UNDER SEAL)

(SEAL ENDED)
(Witness resumed the stand.)
THE COURT: Welcome back, sir.
THE WITNESS: Yes, sir.
THE COURT: I just wanted to establish, let's go back on the feed.
Good. And this is Judge Legg. I've ruled on the evidentiary point. We're now back with Contractual Team A.

And sir, I want to just simply make sure that the fact that I just know this is on the record, and that is you not an employee of the State of Maryland including the Department of

Corrections; is that correct?
THE WITNESS: That's correct.
THE COURT: So that you are a private business person, who is under contract with the State, to perform a service or services in connection with the execution, correct?
THE WITNESS: That's correct.
THE COURT: The service or services that you have been retained to perform are those that you have described this afternoon?
THE WITNESS: Yes, sir.
THE COURT: Good. Thank you.
BY MS. TINDALL:
Q. Sir, we were talking about the interview you had before becoming a member of the execution team.
As a part of that interview, you were not asked for any -- to provide any professional or educational references, were you?
A. No, ma'am.
Q. And you were not asked if you'd ever been fired or asked to resign?
A. Can I have that question again, please?

Q. During the interview, did any member of the interview panel ask you if you had ever been fired from a job or asked to resign from a job?
A. I was not asked that.
Q. And when you became a member of the execution team, prior to that, you didn't have any experience administering fluids through a syringe, did you?
A. I did not.
MS. TINDALL: I have no further questions.
THE COURT: Thank you.
Miss Mullally, your witness.
MS. MULLALLY: No questions.
THE COURT: Thank you. Thank you very much for coming, sir. You are free to go.
THE CLERK: Do you want to cut the feed while I bring in the other witness?
THE COURT: Yes. The feed will be cut temporarily while the next witness is brought in, and we'll will review the ground rules for confidentiality.
MR. HUT: Actually, Your Honor, we were intending to call now yet another member of the execution team. But prior to the luncheon break, Miss Mullally requested that, if we could, we would put one of our experts, Mr. Benjamin Laughton, on as early in the afternoon as we could, so that she could attend to some necessary business later in the day.

He is here, and we're prepared do that.
THE COURT: Good. Let's have him, then.
MR. HUT: The witness will be presented by my colleague, Miss Clark.
THE COURT: Good. And he's not sequestered, correct?
MR. HUT: Correct.
THE COURT: Good. So what we'll do is let's go back on the feed, Mr. Thompson. This is Judge Legg. The counsel have agreed that the next witness, who will testify, is Benjamin a Laughton, Mr. Laughton is here in court. He is not sequestered, which means that anyone who would like to rejoin us in courtroom 7 A is free to do so for Mr. Laughton's testimony.
Good. Mr. Laughton, if would you come forward, please?
(Witness is sworn)
THE CLERK: Please be seated. Sir, if you would, I need you to state your name and then spell your name for the record.
THE WITNESS: My name is Benjamin Kendall Laughton, B E N J A M I N, middle name Kendall, K E N D A L L, last name, L A U G H T O N.
THE CLERK: Thank you.
THE COURT: Miss Clark, whenever you're ready.

DIRECT EXAMINATION
BY MS. CLARK:
Q. Good afternoon.
Mr. Laughton, what is your occupation?
A. I'm a nurse practioner.
Q. And did you go to college?
A. Yeah. I went to college several times. I initially attended Earlham, E A R L H A M in Richmond, Indiana, where I received a Master of Arts in human relations and social relations.
In 1995, I attend Johns Hopkins University School of Nursing, where I got a Bachelor's in Nursing, and in finishing in 1999.
I attended Johns Hopkins University where I got a Master's in Nursing.
Q. Backing up to your Bachelor's in nursing, what does a Bachelor's nursing qualify you to do?
A. Nursing. And there's kind of a echelon of what nurses, qualifications of nurses.
They commonly refer to a term as registered nurse, and that refers to someone who's passed the nursing state boards.
Historically, that doesn't mean that you've finished a bachelor's program or even an associates degree.

It simply means that you've attended a program that prepared

you for nursing.
Currently, to the best of my knowledge, in order to become a nurse, you need to obtain either an Associate's Degree in nursing or a Bachelor's in nursing, both of which give you the RN certification after you pass your certifying exam, which allow to you function as a bedside nurse.
THE COURT: Can I ask, to be a registered nurse, one must achieve either an Associate's Degree or a Bachelor's Degree in nursing and pass a test from the state?
THE WITNESS: That's correct. Actually, the requirement of an Associate's Degree or Bachelor Degree is a relatively new requirement.
Historically, there were programs in the State of Maryland called diploma programs where people would basically work at a hospital, receive some additional training, be a nurse trainee, and then when they're finished with that program, they will become an RN, but they wouldn't have a degree associated with it.
THE COURT: So to be an RN, one must have this educational component plus obtain a license from the state?
THE WITNESS: That's correct.
THE COURT: Does one attain the license by passing a test or simply demonstrating your qualifications?
THE WITNESS: That's an licensing exam called NCLEX, if I remember correctly.

THE COURT: Good. And what's the difference between a registered nurse and a certified nursing assistant?
THE WITNESS: A certified nursing assistant is essentially someone who has taken a short training program, and this is actually pretty recently that the board has substituted a certified nursing assistant. I believe it's a certification test.
To be honest, I'm not an expert in what it takes for a certified nursing assistant to become certified.
THE COURT: Good. But is it fair to say that the at least the credentialing process is less stringent for a certified nurse assistant than it is for a registered nurse?
THE WITNESS: Oh, that would be generous to say. Certified nursing assistant essentially takes a short course and it encompasses a lot of -- to the best of my knowledge, a lot of patient care, responsibilities, turning the patient, bathing a patient.
To my understanding, there is not a procedural component to that. And there's not a -- there certainly is

no, for example, nursing administer medicine. Very commonly, nursing assistants finishing their certification cannot do that.

THE COURT: Cannot administer medicine?

THE WITNESS: They cannot, correct.

THE COURT: And administer medicine means?

THE WITNESS: Give a patient medication either by oral route or by any other route.

THE COURT: Good. Thank you.

Miss Clark?

BY MS. CLARK:

Q. Mr. Laughton, I believe you testified your Bachelor's in nursing qualified you as a bedside nurse in addition to as an RN; is that correct?

A. That's correct.

Q. And what's the difference between a registered nurse and a bedside nurse?

A. I use the terms interchangeably. Perhaps it's not completely correct. When I -- any registered nurse is able to perform nursing care at the bedside.

And by that I mean follow doctor's orders regarding medication administration, perform routine care for a patient.

Registered nurses also, though, perform a lot of other functions. They're registered nurses are who are in public health, there are registered nurses who do research.

Q. And as an RN and bedside nurse, were you able to administer drugs for IV's?

A. Yes.

Q. Were you able to establish intravenous access?

A. Yes.

Q. And I believe you testified that you also received your master's degree in critical care advanced program; is that correct?

A. Yes, that's right.

Q. And what does your Master's degree qualify you to do?

A. A Master's in nursing alone is just an indication of advanced education. The Master's degree that I pursued prepared you to take a certifying exam, a licensure exam, that's administered by, and in my case, the American Nurses Credentialing Center, which allows you, once you pass this exam, you can function as a nurse practitioner.

Q. And so after receiving your Master's degree, you became what's known as a certified registered nurse practioner?

A. I finished my Master's degree. I took the certifying

exam, and then I became, that's correct.
Q. Are you trained in using an ultrasound?
A. Yes.
Q. And what type of training in ultrasound have you received?
A. My training in the use of a two-dimensional ultrasound, I initially received training in, if I remember correct, the year 2000, before I was employed at the Shock Trauma Center, I went there to take a course in the use of ultrasound to assess trauma patients. That was my first introduction.
And in that, I learned a little bit about the

functioning of the machine, as well as how to evaluate a patient who's just undergone trauma for hidden blood somewhere inside their body.
After that, I was employed at Johns Hopkins Bayview Medical Center. And a component of my job there was on the team that put in central lines for the hospital. One of the tools we use to put in central lines, and really the tools we use for our clinical practice, was a two-dimensional ultrasound machine.
So I received some training there from the attending physicians there, and from the other nurse practioner, who worked there, and used the ultrasound in daily practices for a number of years.
Toward the end of my employment there, I went to the Gulf Coast Ultrasound Institute in St. Petersburg, Florida. I took a course there on two-dimensional echocardiography, and that essentially is using the same ultrasound machine, but it uses it to look at the heart. And because of where the heart is positioned in the chest, you can get images of heart function in real time using that.
Q. And so in your practice at Johns Hopkins Bayview, did you actually use an ultrasound to assist with assessing venous access in patients?
A. Yes, many times.
Q. And what is your current job?

A. I'm the clinical program manager for a group of nurse practitioners at RM Kelly Shock Trauma Center.
Q. And how long have you held that position?
A. I think I got a job there in November of 2004.
Q. And what are your responsibilities in that job?
A. When I first was employed there, I -- the majority of my job was in clinical care.
I worked with a group of residents, fellows, and an attending surgeon caring for patients after they're admitted

to the trauma center.
Over the nearly two years that I've been there, my own role has evolved. We increased the number of nurse practitioners, and I started performing more administrative functions.
I currently am involved with clinical care patients about 20 percent of my time there. The rest of the time is doing administrative things.
Q. Do you have any responsibilities related to peripheral IV insertion?
A. I don't have any direct responsibilities relating to that. The bedside nurses are initially responsible for placing peripheral IV's.
The nurse practioner as a whole and me included as one of them are a resource to go to should they have problems placing peripheral IVs. And so we then assess a patient and

either place an IV or choose some other course of action.
Q. So if one of the nurses had difficulty establishing peripheral IV access in a patient, you would be one of the resources that they would use?
A. Yes, that's correct. And I would say, also, I'm one of the resources that the nurse practitioners use as a group should they have problems with vascular access.
Q. And do you have any responsibilities related to the insertion of central lines?
A. At present on my clinical days, should a patient need a central line, it certainly would be -- it's not uncommon that I would perform that procedure.
But having said that, given the number of now that I'm only doing about 20 percent clinical, the total number of central lines that I'm inserting isn't terribly high.
I guess, in the past two years, I've had to place numerous central lines, a number of which I can't really guess at.
But I've also acted as resource for other staff members there and teaching them how to do it.
Q. And do you have any responsibilities related to the assessment of the suitability of an IV for administration of drugs?
A. Again, inserting a central line, that's something that bedside nurses have primary responsibility for. We, meaning

nurse practitioners, are called if there's questions regarding the suitability of a peripheral IV.
Q. Do you know Dr. Thomas Scalea?
A. Yes.

Q. Who is he?
A. He's the director and physician in chief of the Shock Trauma Center.
Q. Would you consider him to be your boss?
A. In that he's the director of the trauma center, he's my boss. I don't believe there's any direct line reporting.
Q. And do you have something called a nurse practitioner agreement with Dr. Scalea?
A. Yes, I do.
Q. What does that mean?
A. Essential to the practice of a nurse practioner in the State of Maryland is an agreement they make with the physician. It's typically a physician that they work with. It basically identifies them as a resource that you can use should you have questions in your practice.
Q. Would you feel comfortable disagreeing with Dr. Scalea at the hospital?
A. I disagree with him regularly, yeah.
Q. And would your relationship with him affect your ability to give truthful testimony here under oath?
A. It would not.

Q. What was your job prior to the current one?
A. Prior to my employment at the RM Kelly Shock Trauma Center, I was employed at Johns Hopkins Bayview Medical Center.
Q. And during what time period approximately did you hold that job?
A. I want to say I started in -- I guess as I started there in March of 2001.
Q. And you held that job until some time in 2004?
A. Until November, 2004.
Q. What were your primary job responsibilities?
A. I was hired by the physician group there to work with the critical care faculty Paul Freeswick, and Dr. Freeswick was the intensivist for the surgical intensive care unit.
So I was hired to assist him in providing critical care. My responsibilities included providing critical care for the surgical intensive care unit.
There is a burn intensive care unit that I cross-covered, meaning if they needed help with caring for a patient, they would call me.
Also, I while I was there, I would assist with patients on the regular surgical floor, who became ill and needed critical care services.
And then finally myself and another nurse practioner developed a central line venous access service,

whereby patients in the hospital who needed elective central lines placed, they would consult our service and we would place them.
Q. With respect to your responsibilities in the critical --
THE COURT: If I could ask, is this at Shock Trauma, or were you talking about your earlier experience at Bayview?
THE WITNESS: This is at Bayview we're discussing.
THE COURT: Thank you. I assume that at Bayview you were putting in central lines all the time?
THE WITNESS: That would be correct.
THE COURT: Good. Thank you.
BY MS. CLARK:
Q. With respect to your responsibilities in the critical care unit, did you have any responsibilities relating to intravenous access and IV insertion?
A. Yeah. Again, placing peripheral IVs was like at Shock Trauma in the domain of the bedside nurse.
However, in the intensive care unit, should there be difficulty of placing peripheral IV, I will be the initial resource for the nurses.
And given that the intensive care unit was -- had really permanent staffing of myself and one other physician, it was something I was called on to do quite a bit.
Q. And you mentioned that you developed a central venous

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access service at Bayview. Did you have any responsibilities related to intravenous peripheral intravenous access with respect to that service that you developed?
A. It was not uncommon that we would be consulted to place a central line, and upon interviewing the care providers and the patients, we would determine that peripheral access is really the best thing for the patient. And so in those cases, I would assist with placement of the peripheral venous access, yeah.
I guess I should also go back and complete my answer to your earlier question. While in the critical care unit during the day, which is when I was typically there, should the patients need central venous access, which is a relatively common occurrence in an intensive care unit, I was the first call provider to place those.
Q. Is it fair to say that, when you were at Bayview, you inserted central lines on a regular basis?
A. Yeah. Well, at Bayview, I would insert central lines nearly every day, sometimes as many as nine day.
Q. Is it also fair to say, when you were the Bayview, you inserted peripheral IVs on a fairly regular basis?
A. Yes, that's the case.
Q. Does your practice also involve making determinations whether peripheral venous access could be obtained or whether a central line was necessary?

A. Yeah. Typically, that we would with work in the critical care unit, a bedside nurse would ask me, would tell me they couldn't find peripheral access in a patient. And depending on the patient needs, I would evaluate them for peripheral venous access. And if that wasn't available, then I would put the central line in.
Q. And did you use an ultrasound to aid you in making those determinations?
A. Yes.
Q. All of the time, or sometimes?
A. Sometimes. It's actually -- an ultrasound is useful in patients that have difficult peripheral venous access and that you can't see or feel their veins. And for surgeon types of central venous access, it's very useful.
Q. And generally, since becoming a nurse in 1996 --
THE COURT: If I could stop you to make sure I understand that?
I take it that period during which you were establishing central lines on a regular basis was when you were at Bayview, correct?
THE WITNESS: That's right.
THE COURT: That was from when to when?
THE WITNESS: 2002 to 2004. I worked there for three years total.
THE COURT: And during that time, you established a

central line service, meaning that you basically were a resource to other nurses and doctors at Bayview on the establishing central lines?
THE WITNESS: That's right.
THE COURT: Is it in the protocol for establishing intravenous access, does one first try the peripheral veins?
THE WITNESS: It's not quite as cut and dry as that. There are times when patients need the central lines despite already having ample peripheral venous access. And there are also sometimes when patients have both.
An example would be if you were getting an especially caustic medication or medication that is essential to sustaining life, it's common practice that you would get that delivered via central line.
So in those cases, I guess, it wouldn't follow that algorithm.
THE COURT: Good. So that if the medicine were caustic, meaning that it would do harm to the veins, or cause pain, then a central line would be used to avoid those problems, correct?

THE WITNESS: Right. Go ahead. I'm sorry.
THE COURT: And if the medicine was central to or necessary to preserve life, and you absolutely positively had to make sure that you had a good hook up, it's good to go direct to the central line?

THE WITNESS: That's correct.
THE COURT: But for a something that falls outside of those two, is the normal methodology to try first with the peripheral veins?
THE WITNESS: Yeah, I think you could say that.
There are some other instances where you might need a central line where a peripheral IV wouldn't be usable.
Oftentimes, patients who are sent home and need home antibiotics will get some sort of central line placed, because it's impractical for them to get a new IV every time they need a medication.
There are times when patients need high volumes of fluid that are greater so than what you can get through a peripheral IV. In those cases, they would get a central line.
THE COURT: Good. And does the ultrasound, I want to ask this, you said you went to the Gulf Coast Ultrasound institute, was that while you were at Bayview?
THE WITNESS: While I was at Bayview, I went there.
THE COURT: And you mentioned something about something two dimensional, does that mean that you don't have a picture associated with it?
THE WITNESS: There are -- so ultrasound is a technology where sound is projected toward something and bounces off, and then is interpreted by -- historically,

there's a crystal. I'm not a physicist, so I can't give you the details of that.
The first type of ultrasound used was Doppler, which projected sound waves at basically in the case of blood vessels, moving particles, moving red blood cells, and that's reflected back.
So the speed by which those red blood cells are passing the probe gives you a different sound.
So a vein would have kind of a slow hollow sound, whereas an artery, because it's moving quickly with the heart rate, you'd get a sound that corresponds with the heart rate and be a faster harsher sound.
Two dimensional ultrasound takes it a step farther. It takes the sound waves and interprets them such that it can tell density of material. I can give you a picture of the

density of that material.
So when I say two-dimensional, it comes up like a picture. So if I'm holding a probe and put it on the skin, it gives me a slice basically right through the tissue that I'm looking at in two dimensions of the density of that probe.
Does that make sense?
THE COURT: It does. Now, the Doppler effect, that's the effect that makes a train whistle sound different when it's coming toward you and when it's receding?

THE WITNESS: Correct.
THE COURT: And, apparently, they use this Doppler effect in some way to provide the pictures?
THE WITNESS: Right.
THE COURT: Now, so that the two-dimensional sonogram that you've talked about, the sound is obviously useful because you can hear whether things are flowing, correct?
THE WITNESS: In the two-dimensional ultrasound that I'm talking about, you don't use -- you have the option of using Doppler technology where you hear the sound.
But, for the most part, I will say most people who use it for finding veins don't use that component. They mostly just use the visual component.
THE COURT: And what does the visual show you?
THE WITNESS: A nice ultra sounds shows you differences in tissue densities through the arm. I will use an arm for example.
So if there is a fluid-filled object, it will appear as black. So a vein or an artery would both appear very dark black.
Other tissue have different kind of densities, so you get kind of a scattered appearance, and sometimes there's fat which on first glance looks like it might be fluid-filled.

The true test is when you take the ultrasound probe and compress these structures, veins, because they're relatively low pressure, compress very easily. Arteries, because they're under higher pressure, take more force to compress. And other structures simply don't compress at all.
THE COURT: Now, what tells you when you look at the ultrasound whether blood is moving at a good rate through the vein?
THE WITNESS: When using an ultrasound, you can basically tell the size of the vein and how easily it is

compressed.
You could use a Doppler component to analyze the flow of blood through the vessel, although that is -- that's not something I typically did in my practice.
THE COURT: I assume that, particularly at Bayview, you saw lots of veins that have been compromised by heroin use?
THE WITNESS: That's correct.
THE COURT: Correct?
What do they look like when you look at them through your Doppler ultrasound?
THE WITNESS: When you say compromised, I would say the majority of veins that are compromised by heroin use, essentially, when you stick a needle in a vein, repeatedly, over time, it becomes -- the walls become thicker. And often

after injecting caustic substance, the vein actually becomes thrombosed and is no longer visible.
THE COURT: Thrombosed means what?
THE WITNESS: Thrombosed means clotted off. So folded, it could mean there's a blood clot there, but when I was using, it I meant it could be, it's no longer.
THE COURT: So it closes up?
THE WITNESS: Correct.
THE COURT: And heroin, I take it, is a caustic substance?
THE WITNESS: Yes. I guess I should say as it's mixed, as does most people on the street
THE COURT: So it essentially destroys the vein?
THE WITNESS: That's correct.
THE COURT: Now, is it possible to have a vein, if I think of a vein going up my arm, is it possible to have part of the vein look good, but then to have a blockage where it had been thrombosed, or will that thing just look bad throughout?
THE WITNESS: No. So I guess your question is, if one part further down your arm toward your fingers, you would able to see the vein.
But then the vein would be thrombosed further up.
THE COURT: Right. Let's say I destroyed the vein farther up, would the lower extremity look good?

THE WITNESS: It's possible, yeah, it's common.
THE COURT: That's common?
THE WITNESS: Yeah.
THE COURT: But the blood wouldn't be flowing normally through the vein because it was a kink in the garden

hose?
THE WITNESS: Right. There are a -- the body is amazing in its ability to adapt. And typically, as people injure their veins, the body creates other tributaries for the blood to flow through around the normal path the way it would go.
So it's possible to have a patent or open vein distal or further down away from the body and then have it -- rather than go its normal course, have it branch out into kind of these tributaries.
THE COURT: Now, there are two models, at least I could visualize for such a vein that has a kink in it further up. One is that it has blood in it, but the blood isn't moving away.
And the second would be it has blood in it, and the blood is actually moving, because when it gets up to the obstruction, it moves out into the smaller vessels around the blockage and then on its way through the rest of the vascular system.
Is that what happens?

THE WITNESS: Yeah. It's all based on pressure. So if you have a blockage, then the pressure created by the blockage would the back pressure would force the blood into these smaller veins. It's a different animal altogether if blood isn't flowing, and that happens very rarely.
THE COURT: So from what we've been talking about, the blood, because of the obstruction, is flowing, it's probably flowing at a slower rate than it would be if the vein was good throughout?
THE WITNESS: Well, if you can imagine blood flowing up the arm, normally would flow up a major river, but instead the river got dammed, and all these tributaries are branching out from it, the speed of the blood through the tributaries is kind of an independent thing.
It really has -- in fact, probably if you know you have a number of smaller vessels, the blood may actually be moving slightly quicker through them. But I'm not really sure, quick or slower, but either way, it -- I guess the speed of the blood moving through the vessel is not such a critical thing in this case.
THE COURT: Because the number of smaller tributaries may have taken up the slack and allowed the blood to flow as fast as it would --
THE WITNESS: That's correct.
THE COURT: -- had the vein not been compromised?

THE WITNESS: That's correct.
THE COURT: Now, good. I think I'm on the right track. Thank you.
Miss Clark?
BY MS. CLARK:
Q. Mr. Laughton, you've discuss the insertion of central lines. Are you permitted to do that procedure by yourself?
A. Yes, I am.
Q. And what sort of training or education did you need to get in order to be able to do that?
A. There's two components to that. The board of nursing requires that you submit an addendum to your written agreement with the physician stating that you received special training in placement of a central line, and that you've had a number of them observed by someone who is willing to testify or willing to state that you're competent at them.
And then there's a separate component involving hospital credentialing. And hospital credentialing is typically, typically if the director of a department is willing to sign off and say you're able to do a procedure, you're allowed to perform them.
Q. And apart from the two jobs that we've discussed since becoming a nurse in 1996, have you held any other jobs in which you inserted peripheral IV's on a regular basis?

A. I -- since I became a nurse in 1996, I officially was employed at Johns Hopkins Bayview Medical Center in the emergency department as a bedside nurse.
I worked there until I guess it was in March of 2000 when I got a job as a nurse practioner. It was a busy emergency department.
And so we -- it was essentially me responsible to place peripheral IVs in the patient you care for so, I put in thousands of IV's.
Q. Would you also monitor the patency of the IVs?
A. Yes, that is part of my responsibility.
Q. What exactly does that mean?
A. If after you've inserted an IV into someone's vein, monitoring the patency means ensuring or monitoring the IV and the fluids or medicine flowing through the IV are going into a vein that's open essentially and unrestricted.
Q. In those jobs since 1996, have you also regularly administered drugs through IV's?
A. That was a core component of what I did as a bedside nurse.
Q. And since becoming a nurse 1996, have you held any jobs in which you've drawn blood for patients?
A. Also in -- actually, in all of my jobs. I've drawn blood from patients.
Q. Is there a difference between drawing blood and inserting

a peripheral IV?
A. There's a big difference. In inserting an IV, essentially, you have to get not only the tip of a needle, but the plastic catheter surrounding the tip of the needle inside a blood vessel, and then you have to advance this plastic catheter into the blood vessel, not through the blood vessel wall.
The phlebotomy, or drawing blood, essentially is taking a needle and inserting it into a blood vessel such that blood comes back and you can draw blood.
So I would say, as a rule, drawing blood from someone is much easier than placing an IV.
Q. So is it possible that you'd be able to draw blood from a patient even if you could not insert a peripheral IV into them?
A. Yes, it's very common.
Q. Have you ever been disciplined at a job?
A. While I was a bedside nurse at Johns Hopkins Bayview, shortly after my employment there, I had received additional training to provide advanced cardiac life support, and a component of that training was inserting artificial airways or endotracheal intubating of patients.
I was a bedside nurse in the resuscitation room at Bayview. A patient came in and needed to be endotracheally intubated. The attending or chief physician on call at the

time, knowing that I had just recently finished my certification, turned to me and asked if I'd like do the procedure. I agreed, said, sure I'd love to. I attempted to perform the procedure. The attending physician assisted me with it.
After all was said and done, my nursing supervisor informed me that that was beyond my scope of practice as a bedside nurse.
I essentially agreed that it was, and that was the extent of that.
Q. And were there any professional ramifications to that episode?
A. No. I think it got put in my sealed permanent record, and that disappeared after a year. But I've never, no.
MS. CLARK: May I approach?
THE COURT: You may.
(Pause.)
BY MS. CLARK:
Q. Mr. Laughton, I'd like to direct your attention to a document that I just have handed to you and that has been

marked as plaintiff's trial exhibit 70?
A. Okay.
Q. Do you recognize this document?
A. It's my resume.
Q. And does it accurately reflect your training and

qualifications?
A. Yes.
MS. CLARK:. Your Honor, we would like to offer Mr. Benjamin Laughton as an expert in venous access and intravenous administration of drugs.
THE COURT: Thank you.
Miss Mullally, any questions?
MS. MULLALLY: No, Your Honor.
THE COURT: Thank you. Then I'm happy to accept Mr. Laughton as an expert in those two subjects.
BY MS. CLARK:
Q. Mr. Laughton, have you ever testified as an expert before?
A. No, I haven't.
Q. Do you have a position on the death penalty?
A. I think, like most people, my position is complicated, and it changes depending on -- it's evolved as my thinking evolves.
I would to further explain, I have no -- in principle, the death penalty, I have no problem with the death penalty.
I think it's tragic that we should need it, and I guess I am troubled that minorities -- that who the death penalty is administered to seems to be not a representational sample of people.

Q. Are you being compensated for your testimony today?
A. No, I'm not.
Q. So you're doing this without a fee?
A. That's correct.
Q. And why did you agree do this without a fee?
A. When I was approached to testify, I -- my thought it was that I guess I believed that people should get the best representation possible, regardless of their ability to compensate people.
So if I was asked to represent someone who was -- that is unable to compensate me, then I would be happy to do so.
And I also thought it was -- would be a great opportunity for me to kind of introduce me to the role of the expert witness and the Court system.

Q. And how did you get involved in this case?
A. I was initially contacted by one of the defense attorneys whose name, I'm sorry, I don't remember.
Who initially asked me if I'd be willing to testify in this case. He conferenced called in another attorney from your firm, I believe, and that's how it started.
Q. Based on your experience, how do you make the determination of whether to place a peripheral IV or a central line?
A. That is a relatively complex decision tree.

If a patient needed a medicine only intermittently, that wasn't terribly important to them, and peripheral IV would be the choice.
If a patient needed quick IV access, it's much, it's much easier to place a peripheral IV.
So, for example, most of the patients who come into trauma because they need to -- to Shock Trauma because they need IV access, quickly often peripheral venous access is the initial choice.
Again, if the IV wasn't going to require, or wasn't required for life-sustaining medication, that would be another choice.
If a patient needed a venous access to administer caustic medication, or it was a life-sustaining medication, or they needed high volumes of this, those would all be things directly toward placing in the central line.
Q. So there are different considerations for establishing a peripheral IV for the purpose of administration a saline drip versus administering a drug or fluid?
A. Yes. There are definitely differences.
Q. You mentioned before in some of your jobs, all of your jobs, you have at times monitored patency of IV's; is that correct?
A. Yes. That's correct.
Q. In your experience, what are the signs that an IV is

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patent?
A. That, again, is somewhat -- there's no, you know, red light that comes on if an IV is not patent. So there's a variety of factors you feed to take into consideration.
I guess flow against gravity of fluids through the IV.
There's back pressure on the syringe while injecting into the IV.
There's the appearance of the arm.
There's, you know, oftentimes you can get blood to

flow backwards through an IV indicating that it is in fact in the vein. Although you know each of these things, I've seen them be true in patients that have IV's that have been infiltrated.

So, for example, flow with gravity of a drip. I've seen patients who have had IV's infiltrated but nevertheless there a good flow into basically their body, despite the fact that the IV wasn't in the vein. I would say that's true for all of the individual warning signs.

Q. So you mentioned sometimes that you see swelling and that can be a sign that an IV is not patent; is that correct?

A. Yes, it's one of the many things. I wouldn't say that that is something that you always see, but yes.

Q. So is it possible that an IV would not be patent, but there would be no visible signs?

A. That's happened frequently -- I would say I wouldn't say frequently, but not infrequently in my practice.

Q. Have you reviewed some documents produced by the defendants in this case?

A. Yes.

Q. Did you review Maryland's lethal injection procedure?

A. I did.

Q. Did you also review the August changes to the procedure?

A. I did.

Q. And did you review the two depositions taken of Contractual Team B?

A. I did.

Q. And did you also review the affidavit of Contractual Team B?

A. Yes.

Q. Did you review the expert report of Contractual Team B?

A. Yes.

Q. Based on your review of all these documents, do you have an understanding about how Maryland's lethal injection procedure works?

A. I have a basic understanding, yes.

Q. And what's your basic understanding?

A. My basic understanding is that a prisoner is brought into the execution chamber. Peripheral venous access is established in the left and right arm.

This -- somehow this venous access is connected to an IV bag, which is kept in a separate room.

Drugs are then administered through this in a separate room through this IV bag into the prisoner.

Q. And based on your review of the documents that I

mentioned, do you have an understanding about what Contractual Team B's role is on the execution team?
A. My understanding is that she is the lead person to place venous access in these patients.
Q. Does she do any sort of examination of the inmate prior to the execution?
A. I've read a document where she examined him or where she described examining him prior to execution, yes.
Q. What do you understand to be the purpose of that examination?
A. My understanding is that she examines him to assure that the patient has veins, or has veins which can be accessed for lethal injection.
Q. And has contractual team B, based on your review of these documents, has she conducted an examination of plaintiff Vernon Evans?
A. Yes, she has.
Q. And do you have an understanding about her examination of Mr. Evans in January, 2006?
A. I understand that she went and put a constricting or a

tourniquet, what she called a constricting band on Mr. Evans' arms, and examined him for obvious peripheral access sites in his arms.
Q. Do you know if she used any other equipment?
A. The only other equipment, I can't recall whether she actually used an alcohol pad to wipe the patient's arm, but it's my understanding she did.
Other than that, she didn't.
Q. And which portions of his body did she examine?
A. To the best of my recollection, she examined his upper extremities.
Q. Meaning?
A. Left and right arm.
Q. And what's your understanding of her findings?
A. I understand that she found I want to say five sites for venous access in one arm and more than five sites in the other.
Q. Would it refresh your recollection to take a look at her exert report?
A. Yes, that would be great.
Q. If you refer to the binder that I handed up to you, the expert statement of Contractual Team B is marked for identification only as plaintiff's exhibit 105.
May I approach?
THE COURT: You may.

(Pause.)?
A. I'm sorry, Miss Clark. Are you referring to her -- not her deposition, but her expert report, right?
Q. Yes. Behind the tab in the binder, it's the second tab to the back.
A. All right.
Q. Contractual Team B expert report?
A. Yes.
THE COURT: And, Miss Clark, this is marked as what, please?
MS. CLARK: It's marked for identification as plaintiff's exhibit 105.
THE COURT: Thank you.
BY MS. CLARK:
Q. And Mr. Laughton, if you, -- if I could direct you about six paragraphs down, I believe in that paragraph Contractual Team B describes her examination of Mr. Evans?
A. Yes.
Q. And based on your review of that paragraph, how many IV sites did she locate in the right arm?
A. It appears to be seven.
Q. And how many IV sites did she locate in the left arm?
A. Eight.
Q. Did there come a time when you examined the veins in Mr. Evans' upper extremities?

A. Yes. I did examine the veins of Mr. Evans.
Q. And what was the purpose of your examination?
A. I was asked to examine Mr. Evans' upper extremities to verify the findings of Contractual Team B.
Q. And did you examine both his right and left upper extremities?
A. That's correct.
THE COURT: If I could interrupt, since we're going into that area, why don't we take just a brief recess until 4:00?
(Recess.)
THE COURT: Please be seated. Miss Clark, whenever you're ready.
BY MS. CLARK:
Q. Mr. Laughton, I believe we were talking about your examination of Mr. Evans.
Did you examine both Mr. Evans' right and left upper extremities?
A. I did.
Q. And approximately how long did your total examination last?
A. Estimate should be 30 minutes.
Q. Did you use any medical equipment to examine Mr. Evans?
A. I brought a portable two-dimensional ultrasound with me to examine his arms.

Q. Did you also use a constricting band?
A. I did, yes.
Q. And what is the purpose of the constricting band?
A. Again, this is the artery and veins and human body are all about pressure. So if you want to distend a vein, you need to occlude its flow at a higher level so it will back up and kind of fill out the veins.
Q. So does a constricting band often aid at the identification of veins for the insertion of a peripheral IV?
A. Yeah, it's an essential component.
Q. And you also mentioned that you used a portable two-dimensional ultrasound machine?
A. That's right.
Q. And what is the purpose of the ultrasound machine?
A. An ultrasound machine will give you a visual representation of the densities of the structure within the arm.

So as related to obtaining peripheral venous access, a ultrasound machine will let you look at a structure that you think is a vein and determine whether it's a vein or not.

And it will also let you look at the extremity, in this case, an arm, in general, and find veins that you wouldn't be able to find just through inspection or palpation.

Q. So it's possible that an ultrasound could reveal veins that could not be visualized or palpated?
A. Yes, that's commonly the case.
Q. And it's also possible that ultrasound could disclose non viability of a vein that might look viable when simply visually and palpated?
A. Yes. It's actually very common in day-to-day in patients, when you examine someone's arm, you'll find something that feels like a vein, but upon closer inspection or after putting a needle in there, you find that it's a tendon or a piece of fat or it's something else entirely.

And ultrasound will allow you to, without actually sticking a needle in someone, determine whether that is a vein.
Q. And could you describe briefly the process that you use when you use an ultrasound to locate veins?
A. Typically, I will examine, apply a constricting band and examine the patient without the ultrasound to see if anything is obvious.

I'll use my hand to feel for veins in the body, in

the arm.
After that, I'll take an ultrasound probe, and I'll begin to examine. I normally start a couple of inches above the what's called the antecubital fascia, but it's the pit on the other side of the elbow.

You use the ultrasound, then, as another kind of screen to look into the arm, and then you take the probe as you're looking and you press on it.
And so essentially you look for the black structures, which are fluid filled, and then you attempt to compress them to see if they're arteries, veins, or neither. So you start, I normally start a couple inches above antecubital fascia, and I examine the full arm, both in the ventral and dorsal aspects, top and bottom of it.
Q. And does the ultrasound that you use to examine Mr. Evans, does that record an image?
A. The one that I use does not record images, no.
Q. But it does have a screen that you can view an image while you were examining the patient, correct?
A. That's right. It's -- it kind of projects the findings in real time on what essentially is a tiny black and white monitor.
Q. Starting with Mr. Evans' right arm, could you describe generally how you examined it?
A. In his right arm, I placed a constricting band around it. I visually inspected and palpated his arm. I inspected and palpated his hand, and then I took the ultrasound machine and examined his arm.
Q. Starting first with your examination, using only the constricting band on the right arm, did you examine the

antecubital fascia area on Mr. Evans' right arm?
A. I did.
Q. Could you describe again what exactly the antecubital fascia is?
A. Opposite side of the elbow. You can call it the elbow pit, if you want.
Q. With respect to the antecubital fascia area, what are your findings using only constricting band?
A. I could visualize no veins.
Q. Did you find any of the veins mentioned by Contractual Team B in her affidavit or expert report?
A. I did not find any in the patient's antecubital fascia.
Q. Did you -- using own the constricting band, did you find any veins at all in the right antecubital fascia area?
A. No.

Q. Did you examine Mr. Evans' right for arm?
A. I did.
Q. And using only the constricting band, what were your findings with respect to Mr. Evans' right forearm?
A. Mr. Evans didn't have any visible superficial veins. He didn't have any visible veins with the exception of -- he had a network of very small skin veins, which were spider webbed in appearance, which were over the surface of his hand.
Q. And could those, the spider web of veins that you just mentioned, could those be canulated?

A. No. Those are, as we were discussing earlier, when you have a major blood vessel occluded collateral or tributary vessels take over the blood flow. So they're small blood vessels that everybody has running through their skin. Sometimes will increase in size to the point that you could see them to accommodate this flow back up in the arm.
Q. And for the edification of all of us lay people, what exactly does canulate mean?
A. I'm sorry. Canulate means to put a tube inside, in this case putting an IV catheter inside a vein.
Q. So with respect to Mr. Evans' right forearm, using only constricting ban, did you find any of them mentioned by Contractual Team B in her affidavit or expert report?
A. I did not.
Q. Did you find any veins at all?
A. Other than these very small veins, I did not.
Q. Did you also examine Mr. Evans' right hand?
A. I did.
Q. And with respect to Mr. Evans' right hand, what were your findings?
A. Mr. Evans had a number of metacarpal veins, which were easily identifiable.
Q. Do you think it would be difficult to canulate these veins?
A. I think that it would be difficult to canulate those

veins. I mean, it's not as easy putting an IV in someone like me, who, you know, is relatively healthy.
Q. Are you aware that Dr. Scalea's expert report said it would be possible to canulate these veins?
A. I read that, yeah.
Q. Is that statement recognizable, in your opinion, that it would be difficult to canulate these veins?
A. No. It's clearly possible to canulate those veins.
Q. So your opinion and Dr. Scalea's statement in his expert report are not inconsistent?

A. That's correct.
Q. In your opinion, could these metacarpal veins that you identified in the right hand be used for the administration of a lethal injection?
A. I -- no. They do not.
Q. Why not?
A. Metacarpal veins, or the veins in this gentleman's hand, or most people's hands, they're relatively thin walled. They're tortuous, meaning they're very wiggly, or they follow irregular course. They have a number of valves in them. And valves are structures which exist inside a blood vessel, which stops blood from flowing backwards.
All these things make canulating them difficult. But, beyond that, they make them less reliable for in -- for tolerating injections of important medications or fluids.

Q. And after examining Mr. Evans right upper extremity, using only the constricting band, did you then apply the ultrasound?
A. I did.
Q. In which portions of Mr. Evans right upper extremity did you examine with the ultrasound?
A. I examined his antecubital fascia and portions of his forearm.
Q. What was the purpose of examining Mr. Evans' right arm with the ultrasound?
A. I guess the purpose was to evaluate for veins which weren't immediately visible.
Q. And did your ultrasound examination of Mr. Evans' right arm and forearm reveal any veins that could be used for a lethal injection?
A. I'm sorry. Because, you know, memory, sometimes I get the right and left side confused. But I -- I don't recall any, no. The answer to that would be no.
Q. Would it assist you to look at a copy of your expert report?
A. That would be great, just to jog my memory, but I --
Q. Believe behind tab 71 in your binder is plaintiff's exhibit 71, which is a copy of your expert report?
A. Thank you. Thank you. Yeah, I can.
Q. So --

A. After reading this -- thank you for providing it -- I'm reminded that there were no veins in his right upper extremity that could be canulated.
Q. Did you find any veins at all?
A. Yeah. With an ultrasound, you can see relatively deep

into the tissue. So I found a vein that was beneath the brachial artery in the antecubital fascia.
Q. And did you see or feel this vein when you were only using the constricting band?
A. No. It would be impossible to identify this vein using only the constricting band because it's beneath the artery.
Q. Could you canulate this vein?
A. You do not canulate this vein. In order to get to it, you'd have to -- it's underneath an artery.
So in order to get a needle inside the vein, you'd have go through an artery, and that would cause extensive damage.
Q. And when you, turning now to Mr. Evans' left upper extremity, did you use the same general examination process that you did on the right arm?
A. Yes, I did.
Q. So you began using only the constricting band?
A. That's correct.
Q. Is that right?
With your examination of his left upper extremity

using only the constricting band, did you examine the antecubital fascia area?
A. Yes, I did.
Q. What your findings?
A. I found no -- on visualization, I found no veins which identified no veins.
Q. And in addition to visualization, did you also feel the area?
A. Yes. I'm sorry, also I couldn't -- I could feel or palpate no veins after putting the stand, look at the antecubital, there was no evidence of veins that could be canulated for venous access.
Q. What does palpate mean?
A. Touch, apply pressure to. So sometimes in some people, a vein will be under the surface so that you can't immediately visualize it. But upon feeling their arm, you can feel the give of the vein, and indicate to you that it's there.
Q. And with respect to the left antecubital fascia, did you find any of the veins mentioned why contractual team B in her affidavit or expert report?
A. I didn't find any, no.
Q. Did you find any veins at all in the left antecubital fascia?
A. Upon inspection and palpation, I did not, no.
Q. Turning your examination of Mr. Evans' left forearm using

only the constricting band, what were your findings?
A. My findings were again I found no veins.
Q. Did you find any of the veins mentioned by Contractual Team B in her affidavit or expert report?
A. No, I didn't. There again the spider web network of extremely small venules, or whatever you'd like to call them but there were no surface, no veins that could be canulated.
Q. So the venules could not be canulated, in your opinion?
A. Right. Similar to the other arm, they're microscopic.
Q. So you did not find any veins at all in the left forearm using only the constricting band?
A. That's right.
Q. Did you examine Mr. Evans' left hand using only the constricting band?
A. Yes, I did.
Q. And what were your findings?
A. Mr. Evans had a number of metacarpal veins evidenced in right and left hand.
Q. And, in your opinion, could these metacarpal veins be used for administration of a lethal injection?
A. Very similar to what I said about the other side, that they wouldn't be appropriate for administration of lethal injection.
Q. Similar to the right hand, would it be in your opinion somewhat difficult to canulate these veins?

A. Again, very similar situation, it would be difficult, but not impossible to canulate these veins.
Q. After examining Mr. Evans' left upper extreme using only the constricting band, did you then examine him using the ultrasound?
A. I did.
Q. And what portions of Mr. Evans left upper extremity did you examine using the ultrasound?
A. I examined his antecubital fascia and the part of the forearm.
Q. And did you find any veins at all using the ultrasound?
A. Using the ultrasound, I found a cephalic vein, which runs up, if your hand is facing up, it runs up the outside of your arm. This was underneath subcutaneous tissue, and there's some evidence of skin scarring throughout.
Q. And did you visualize or palpate this vein using only the constricting band?
A. No, it was not visible. And the vein was -- when examined with an ultrasound, machine the vein was full and clearly distended.
So if it were ever going to be visible, I would have been able to -- I'm confident I would have been able to visualize it using just the constricting band.
But because I couldn't, I'm confident to say that it would never been visible.

Q. You mentioned that you could not visualize it using only the constricting band, could you palpate it?
A. I could not, no.
Q. And why couldn't you see or palpate this vein?
A. Mr. Evans has a fair amount of subcutaneous tissue, and that's fat, and fascia, and skin and -- I'm sorry.
Skin isn't subcutaneous tissue, but over to the point that it makes it impossible to see.
Q. And in your opinion could this vein be canulated?
A. There are -- in my 10-year career as a nurse, there have been -- there have been times that you could -- that you will attempt to blindly put an IV in shun.
So if someone comes to the emergency room, and they're in extremis while someone's obtaining central venous access, it's possible, you can take a needle on blindly insert it in places where you know a vein would be. It is conceivable you could put an IV into this vein through blind canulation or with the use of an ultrasound machine.
Q. And what would happen if you tried to canulate this vein and were unsuccessful, could you keep trying until you accessed it?
A. The ones you put a needle inside a vein and are unsuccessful in canulating it, there is -- there's a hole on the side. And since this is all about pressure blood will leak out of the vein and make it impossible for use for

further attempts.
So essentially, if you attempted to place an IV in this vein, if you weren't successful, you wouldn't be able to make further attempts at that time.
Q. Would you be able to access it higher up on the vein?
A. In a hypothetical, you could.
In a hypothetical vein, you could access the vein higher up, where this vein was in Mr. Evans, the vein dove underneath his subcutaneous tissue and fascia to the point that it couldn't be accessed higher up.
Q. In your opinion was this the only vein in the right and left arms that could possibly be canulated?
A. That's correct. I'm sorry. I should clarify that.
That's the only vein you -- you could canulate the veins in the hand, but, however, I don't think that, for reasons that we've already discussed, they're suitable for this purpose.
Q. And you mentioned that, aside from blind canulation of this vein, it's possible that one might be able access it with aid of an ultrasound?

A. Sure, that's possible.
Q. And would someone need training in accessing a vein deep in the tissue with aid of ultrasound in order to do that?
A. Yeah. You need training in use of ultrasound, which is a technical machine that you need to learn how to use. But

also you'd need experience in using, in coordinating your motion with the ultrasound machine to get something inside.
Q. Are you aware that Dr. Scalea examined Mr. Evans' veins in connection with this case?
A. I am.
Q. Are you aware that in January Dr. Scalea filed a declaration in this case regarding his examination of Mr. Evans?
A. Yes.
Q. Have you reviewed that declaration?
A. I have.
Q. Did you review it prior to your examination of Mr. Evans?
A. No, I didn't.
Q. Did you review it prior to reaching your opinions regarding your examination much Mr. Evans?
A. No, I reviewed it well after.
Q. Did you review it prior to finalizing and submitting your expert report in this case?
A. No.
Q. Are you aware that Dr. Scalea also submitted an expert report in this case?
A. I am.
Q. Did you review that expert report at any time prior to performing your examination of Mr. Evans?
A. No.

Q. Did you review that report at any point prior to forming your opinions and finalizing and signing your report in this case?
A. No.
Q. Have you since reviewed that expert report?
A. I have.
Q. Were you aware of any of Dr. Scalea's findings with respect to Mr. Evans before you examined Mr. Evans?
A. Not before I examined him, no.
Q. Did you talk with Dr. Scalea about Mr. Evans or this case prior to your examination of Mr. Evans?
A. No, I did not.
Q. Did you talk with Dr. Scalea about Mr. Evans or this case prior to the submission of your report?
A. No, I did not.

Q. At any time before you formed your opinions, did you know what conclusion Dr. Scalea had reached?
A. No, I did not.
Q. Have you ever discussed your findings with Dr. Scalea?
A. I have not.
Q. Have you ever discussed Dr. Scalea's findings with Dr. Scalea?
A. No.
Q. Have you discussed this case with Dr. Scalea?
A. Either at one time when I was in his office and I said

thank you for referring me to, or referring the defense team to me, and he reply (mumbling), that was the end of it.
Q. Did Dr. Scalea's findings in any way influence your findings?
A. No, they did not.
Q. Do your findings and opinions with respect to Mr. Evans' veins comport with the findings of Contractual Team B?
A. No, they're very different.
Q. Can you think of any reason why you and Contractual Team B would have such contrary findings?
A. I truly cannot.
Q. Can there be variability in one's ability to find veins in a patient depending on conditions such as heat or cold or relative hydration of the patient?
A. Sure.
Q. And is that a possible explanation for the difference between your findings and Contractual Team B's findings?
A. I would argue that it's not. Because upon examination of Mr. Evans, I guess the -- yeah, upon examination of Mr. Evans, the veins that I could locate, for example, in his hand were fully distended and were easy to find.
The veins that I located under ultrasound were fully distended and full, and there's no evidence in any of that, any of either my visual and a palpitation -- a palpation, or examination of the ultrasound that he was

dehydrated or.
Q. Based on your review of the Contractual Team B's two depositions, her report and her affidavit, did you see anything that caused you concern about her ability to assess intravenous access?
A. I guess I was a little -- I was taken aback at the bravado in which she represented herself and the -- her reported success rate, and her reported experience.
All those things I think made me question against her testimony.

Q. Do you recall Contractual Team B's deposition testimony that she had inserted IV's in the breast hundreds of times?
A. I do recall that.
Q. What is your professional opinion of this testimony?
A. I -- you know, in the years that I've been a nurse, I've seen an IV in the breast, perhaps once, and so it -- I don't -- I don't see how that could be true.
Q. Do you recall Contractual Team B's testimony that she had personally inserted IVs in the external jugular all by herself?
A. I do recall her testimony that she inserted IV's in the external jugular.
Q. And what is your professional opinion of this representation?
A. It is outside the scope of practice for an RN to insert

IVs in the external jugular.
It is, therefore, clearly outside the scope of practice of a certified nurse's assistant to insert an IV in the external jugular.
That's -- I won't say that -- yeah, I won't say that it's never ever been done by a, nurse but I will say that it's clearly against standards of practice.
Q. Do you recall Contractual Team B's testimony that infiltration is always visible?
A. I do recall that.
Q. What is your professional opinion of this testimony?
A. I know that not to be true.
Q. So, in your experience, infiltration is not always accompanied by visible manifestation?
A. That's correct.
Q. Do you recall Contractual Team B's testimony that she could visualize and palpate the radial and ulnar veins in each of Mr. Evans' right and left arms?
A. I do recall that.
Q. What is your professional opinion of this testimony?
A. The radial and ulnar veins are veins that are deep within the tissue that run along the radius and ulna, which are two bones in the arm.
It's impossible to visualize or palpate these vessels.

Q. And do you recall contractual team B's testimony that she uses the radial and ulnar veins for peripheral IV insertion all of the time?
A. I do recall that, yes.
Q. And what is your professional opinion?

THE COURT: I'm sorry, if you could just - -I'm about two behind you, if you could give me a minute?
Q. Sure.
(Pause.)
THE COURT: Good. The last point is what, Miss Clark? Disagrees with? I'm up to the ulnar and radial veins.
MS. CLARK: You say you have two questions with respect to radially and ulnar?
THE COURT: I have done there.
MS. CLARK: All right. So you've done both of them?
BY MS. CLARK:
Q. Mr. Laughton, just to clarify one aspect of your testimony relating to your examination of Mr. Evans' right arm and forearm using only the constricting band --
A. Yes.
Q. -- did you both visualize and palpate those areas?
A. Yes, I did.
Q. Do you recall contractual team B's statement that she and

two other individuals completed their examination of Mr. Evans in about 10 minutes?
A. I do recall that, yeah.
Q. In your professional opinion, do you think an exam could have been responsibly and professionally performed by three individuals in a total of 10 minutes, each of whom visualized and palpated a total of 15 veins?
A. Not in Mr. Evans, no.
MS. CLARK: I have no further questions.
THE COURT: Thank you.
Miss Mullally, your witness.
MS. MULLALLY: Thank you, Your Honor.
CROSS-EXAMINATION
BY MS. MULLALLY:
Q. Mr. Thompson, will this thing work if I need it?
THE CLERK: Yes, it will.
Q. Mr. Laughton, did you get a medical history from Vernon Evans at the time that you examined him?
A. I did not.
Q. Did anyone give you any information about Mr. Evans' medical condition prior to your examination of him?
A. One of the attorneys had mentioned that he was an injection drug user historically.
Q. Okay. Do you know how the attorney -- do you know, did the attorney examine him to see if there were signs that he'd

been an IV drug user?
A. No. I'm sorry. I don't know the answer to that.
Q. Okay. Do you know, did you know that Vernon Evans has been incarcerated since 1984?
A. No, I did not.
Q. Did you find it interesting that, well, let me ask you this, did you ever wonder about how he could regularly use drugs, illegal drugs, in a prison, with a needle since 1984?
A. Yes. I guess when I was told that Mr. Evans had a history of injection drug use, I wasn't told when he had used it.

And I guess, in further answer to your question, I'm not the terribly surprised to hear that, no.
Q. You're not terribly surprised to hear that he's used drugs consistently in prison since 1984?
A. Well, I don't know the factuality of that, but I know that people do have access to injection drugs even when they're incarcerated.
Q. Okay. Do you know how someone who is incarcerated could have access on a daily basis?
A. No.
Q. To IV drugs?
A. I really don't.
Q. And to the equipment?
A. No, I don't.

Q. Don't you need a needle to use an IV drug?
A. Yes.
Q. Okay. And did you ask him about his drug abuse?
A. I did not.
Q. But you could have asked?
A. I suppose I could have, yes.
Q. And you look at his arms, and you looked at areas where healthy people have veins?
A. Sure.
Q. Okay. And I take it you didn't see any needle marks or tracks of Vernon Evans' arms, did you?
A. I don't recall any, but to be honest. Yeah, I don't recall seeing any.
Q. Well, wouldn't this be something significant if you had seen it before you had been told by an attorney that he had a history of drug abuse?
A. I suppose I -- it would have been significant, sure.
Q. Okay. But you didn't see it, and you don't recall seeing it, and your report, I believe, doesn't have any reference to that?
A. My report does not have any reference to that.
Q. Okay. On either his arms or his hands?
A. That's correct.
Q. But you've been a nurse practioner and a nurse at a pretty busy trauma center, Johns Hopkins, Bayview?

A. Yes, that's right.
Q. And you work at Shock Trauma now. And is it fair to say that patients at both of those places, you probably had a significant portion of intravenous drug users that would come in as patients?
A. Intravenous drug users came to both Bayview and Shock Trauma.
Q. Okay. So certainly you're familiar with what a needle mark looks like?
A. Yes.
Q. Did you ask him any questions about any previous say medical treatment that would compromise his veins?
A. I did not.
Q. If he were your patient, wouldn't you, and you needed to get IV access, wouldn't you ask someone a question about have you had any medical treatment, have you, do you have any chronic diseases, that as a result of which you had a number of IVs?
A. I was asked to validate Contractual Team B's testimony. That was the extent of my exam.
Q. Well, let me ask you this, when you went to visit him and you examined him, did you treat him differently from the way you would treat a patient?
A. When I went to examine him, I went to examine him for the purpose of assessing him for peripheral veins for IV access.

When I examine a patient, I examine them for the purpose of getting them better, so there is a difference in my exams, yes.
Q. All right.
Would you agree with Dr. Scalea that it's always best to start with the peripheral IV?
A. No. I wouldn't agree with that.
Q. You don't agree with that at all?
A. I don't agree that it is always best to start with a peripheral IV.
Q. Well, do you agree that that's the easier and quicker way to gain venous access in a patient?
A. Yes. As I testified, in patients where time is an issue, then its oftentimes the fastest way, but that would really depend on whether they had available peripheral veins. There Certainly are patients where it's faster to obtain central venous access because they have no peripheral venous access.
Q. Okay. Now, on some of your patients, do you recall being asked in your deposition if you've ever asked a patient to

point out a usable vein?
A. I'm sorry, can you say that again?
Q. Do you recall being asked when you were deposed on August 16, 2006, do you recall being asked if you've ever asked a patient to point out a usable vein?

A. I recall you asking me that, yes.
Q. And do you recall your response?
A. I have asked patients to point out usable veins to me, yes.
Q. And you have asked patients to point out a usable vein because sometimes in those patients you were concerned about gaining venous access, and this patient could help, in other words?
A. Yes.
Q. Now, you wrote a report in anticipation of this trial, didn't you?
A. Yes, ma'am.
Q. And you signed your report?
A. Yes, ma'am.
Q. And I believe you state in your report that it is your opinion, based upon your examination of Mr. Evans, that his veins are extremely damaged.
Do you want to know what paragraph that is?
A. I found it, thank you.
Q. Okay.
A. That is in my report.
Q. Okay. But your physical examination of Vernon Evans was only of his arms and hands; was it not?
A. That's correct.
Q. And, in fact, you didn't examine his neck or his feet, or

his ankles, or his lower extremities at all, his head or his neck, correct?
A. I did not examine him for central venous access or peripheral access in anything other than his arms.
Q. Okay. But your report says that his veins are extremely damaged.
Does your report encompass all of his veins or just the ones that you examined?
A. My report only encompasses the veins which I examined.
Q. Would you like to correct your report?
A. I suppose I just did. I just said that it's referring to the veins in his extremities --
Q. All right.
A. -- where I examined him.
Q. Now, you didn't use an ultrasound device to examine the

veins in the back of Vernon Evans' hand, correct?
A. That's correct.
Q. And is that because they were visible to sight and you could touch them?
A. That's correct.
Q. And you believe that they'll be difficult to canulate. Does that mean that it would be impossible to canulate those veins?
A. No, it doesn't mean that.
Q. And how ever attempted a procedure that you believed to

be problematic, but you attempted it nonetheless?
A. Sure.
Q. About how many times?
A. It's happened many, many times.
Q. Okay. And did you do that because that was the best course you decided that that was the best course to go to, best path to take?
A. Yes.
Q. When you were a nurse in the trauma center and now that you're at Shock Trauma, I take it that many of your patients arrived either by helicopter or by ambulance?
A. That's correct.
Q. And didn't you -- do you recall being asked how many of them already had an IV established at the time that they arrived?
A. I recall you asking me that, yes.
Q. Do you recall testifying that 75 to 85 percent of those people already had an IV established?
A. I believe I testified 75 to 85 percent of the people for whom obtaining IV access was indicated by the paramedic protocols had IV access established.
Q. So, in other words, those paramedics out in the field were establishing IV's?
A. That's correct.
Q. Now, do you recall testifying the different locations

that you've actually placed IV's?
A. I recall that testimony in my deposition, yes.
Q. Do you recall testifying that you had placed IV's, of course, in the antecubital fascia, but also in the forearms, the hands, the external jugular, the lower extremities, and you mentioned the medial malleolus of the ankle?
A. Yes, I remember that.
Q. So you personally have placed IV's in all of those unorthodox locations in what ten years, in the past ten years?

A. Yes. As a bedside nurse, I was limited to the number of places I could place a peripheral IV.

But as a nurse practioner, my latitude is a little bit greater, so I could place them in some more unorthodox locations.

THE COURT: Miss Mullally, if you could say these other places?

MS. MULLALLY: Antecubital region, forearms, hands, external jugular, and --

THE COURT: Slow down, please.

MS. MULLALLY: External jugular.

THE COURT: I'm sorry. Antecubital. Next one is what?

MS. MULLALLY: External jugular. Lower extremities. Including the medial malleolus of the ankle.

THE COURT: All right. Any others?

BY MS. MULLALLY:

Q. Well, you mentioned today that you've placed an IV in a breast, is that a woman's breast?

A. No, I never testified to that.

Q. You've seen an IV placed in a woman's breast?

A. Probably once in my career. I should clarify, also, the testimony, the medial malleolus is a bony prominence in the ankle. The vein is above, so it would be a misstatement to say I put an IV in the bone.

Q. Thank you for correcting me.

Now, when you place a central line, I believe you have -- your curriculum vitae says you've placed over a thousand --

THE COURT: If I could just go back to one thing? These -- we talk about the antecubital and I believe it was your opinion that Mr. Evans had no veins that could be accessed in the antecubital region, correct?

THE WITNESS: Well, none that could be accessed without blind attempts or ultrasound, that's correct.

THE COURT: Well, I think it was the cephalic vein could only be accessed through blind canulation through use of an ultrasound?

THE WITNESS: That's my opinion, yeah.

THE COURT: And a certified nursing assistant would

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not have the training requisite to do that, correct?

THE WITNESS: They would not have the training, right.

THE COURT: Now, let's go, then, to the external jugular.

THE WITNESS: Allow me to clarify. I'm sure certified nursing assistants have attempted to blindly canulate blood vessels before, and that is that necessarily outside the scope of practice.

You take an arm, put an needle in it where you think the vein is. If you're lucky and blood comes back, then you've canulated. That's something a certified nursing assistant would be allowed to do.

THE COURT: Were believe you said only in an emergency situation?

THE WITNESS: That's true.

THE COURT: External jugular, I believe that you said a certified nursing assistant could not, within the parameters of what they're allowed to do, access an external jugular.

Is that true?

THE WITNESS: Witness that's outside the scope of practice of nursing, so certified nurse's assistants have to operate within the parameters of the nurses who are supervising them, so it would be therefore out of their scope

of practice, also.

THE COURT: What about the lower extremities?

THE WITNESS: No. I think that most likely falls to institution or hospital policy. The problem with lower extremities is that they are so distant from the central circulation that -- and so that when you -- they're less optimal for IV access. Because really when you give a drug, what you want it to do is go up the peripheral veins and to the central veins, go through the heart and then be distributed through the rest of the body.

So it takes a much longer time for that to happen from the lower extremities.

THE COURT: Good. Now, somebody who's a certified nursing assistant would not have the training, would not be qualified to do a central line; is that correct?

THE WITNESS: That's correct.

THE COURT: But somebody with your training could do a central line?

THE WITNESS: A nurse practioner, who has been approved by the board and credentialed by a facility, could place a central line.

THE COURT: Good. Thank you.

Miss Mullally?

BY MS. MULLALLY:

Q. Yes. Now, in the central lines that you've placed, isn't

it painful for a patient to have a central line placed?
A. Central lines can be very easily and painlessly inserted, or can be quite an ordeal. And it's often difficult to predict before you start out how it will play out.
Q. Well, because it's difficult to predict, you want your patient to be as comfortable as possible?
A. You typically use a local anesthetic prior to placing a central line.
Q. Have you ever used a general anesthetic?
A. I've never used a general anesthesia for the sole purpose of putting in a central, a traditional central line.
I've assisted surgeons in placing tunneled, more permanent central lines and for those cases, because there's a lot of incision and dividing of tissue. You do normally use a general anesthetic.
Q. And is that general anesthetic in a situation like that induced through peripheral IV?
A. It really depends on whether the patient has a peripheral IV or not. Sometimes they'll -- there have been cases where patients have -- have problematic or difficult peripheral IV access that inhaled gases can be used to make the patient not induce general anesthesia, but certainly make the patient drowsy to the point that they would tolerate intravenous access.
Q. Now, you have clinical days every so often, but you do a

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fair amount of administrative work in your current position?
A. That's correct.
Q. And when was your last clinical day?
A. It was last week, I believe, it was.
Q. Can you give me a date?
A. I believe it was last Tuesday.
Q. Did you place any peripheral IV's last Tuesday?
A. No.
Q. And what about the clinical, the clinical day before then?
A. Yeah. I would say that I typically will place peripheral IV at Shock Trauma once a month, once every other month.
Q. All right. So have you placed one at all in September?
A. In the month of September, I have not, no.
Q. Okay. So today's September 19th.
Do you recall stating in your deposition that Maryland's rate of administration of its lethal drugs of 1 to 1.5 milliliters per second is not a high rate of administration?
A. I do recall that, yes.
Q. And do you agree with that? Do you still agree with that?
A. I would say that's not a terribly rapid rate of administration.
Q. You have some, I suppose, it's fair to say some concerns

about how the death penalty is meted out in this country?
A. I think that's fair to say.
Q. Do you have any ethical concerns as a nurse practioner about how -- about the death penalty --
MS. CLARK: Objection, beyond the scope of direct examination.
THE COURT: I'll overrule the objection.
A. Can you say that question again, please?
Q. Do you have any ethical concerns as a nurse practioner about lethal injection?
A. You mean outside of my personal feelings, but as a professional?
Q. Yes.
A. No.
THE COURT: I'm sorry, no?
THE WITNESS: No, I don't.
Q. Would you be willing to participate in a lethal injection as a nurse practioner?
A. Perhaps I didn't understand your earlier question. I guess my -- no, I would not.
And that is because I as a nurse practioner feel my primary duty is to support life.
Q. Okay. So then you don't disagree with the -- have you ever seen this statement from the American Nurse's Association?

MS. CLARK: Objection. This exhibit was not designated on defendant's exhibit list.
THE COURT: Well, I think I'll permit it. I've received these exhibits from the American Medical Association and from the Anesthesiologists Association, so I'm content to have one from the American Nurse's Association, too.
BY MS. MULLALLY:
Q. Were you familiar at all with the position of the American Nursing Association?
A. No, I was not.
Q. On lethal injection?
A. No, I was not.
Q. Would you be surprised that the American Nursing Association States that it is unethical for nurses to participate at all in any part of a lethal injection?
A. You're asking me if I'm surprised that they have that?
Q. Yes, are you surprised?
A. I suppose not.
Q. Well, essentially you agree with it?
A. I'm sorry, say that again?

Q. Essentially, you agree with the American Nurses Association's position?
A. My position is that I wouldn't participate.
Q. All right. And my question is, do you agree with their position?

A. I don't agree with the position that any nurse shouldn't participate. But, to be honest, I really haven't given it a lot of thought.
Q. Okay. And are you a member of the American Nurse's Association?
A. No, I'm not.
Q. Do you believe that nurses should be reasonably be guided by important issues, their position on important issues such as this one?
A. My feeling is that death penalty, lethal injection, is something that is very personal and people's beliefs, and so I guess I wouldn't advocate someone be guided by an organization regarding this.
Q. But you don't disagree with it, do you?
A. I'm sorry? I don't disagree with what?
Q. With the American Nurse's Association's position?
A. No, I suppose not.
Q. Okay.
THE COURT: Could you give this a number, please?
MS. MULLALLY: Yes. I think it's been marked by Mr. Clerk as defendant's number 5.
THE CLERK: Yes.
MS. MULLALLY: Okay.
THE COURT: Thank you.
MS. MULLALLY: I have no more questions of this

witness.
THE COURT: Good. Thank you. If I could ask you, Mr. Laughton, are you a member of the American Nurse's Association?
THE WITNESS: No, I'm not.
THE COURT: Do you know if a nurse were to violate this stricture, the nurse would be sanctioned by or thrown out of the organization?
THE WITNESS: Well, the American Nurse's -- I'm sorry, the American Nurse's Association is a professional body, but it doesn't actually regulate certification or licensure in a state.
So they would not be able to say us to that we could not practice as nurse in the State of Maryland.
They could, they would recommend that someone

wouldn't -- in this case they would recommend that someone wouldn't participate in lethal injection, but they -- it would be up to the State Board of Nursing to censure them.

THE COURT: Good. Thank you.

Miss Clark?

MS. CLARK: We have no further questions.

THE COURT: Thank you. Thank very much for coming, I appreciate your willingness to come and share your expertise on gratis as it were.

I appreciate your willingness to participate in

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this case, and I know counsel for both sides do as well. You are excused, sir.

THE WITNESS: Thank you.

THE COURT: Good. I believe that is the our last witness for today. Tomorrow we'll begin again at 9:30.

(Proceedings concluded)

to make, then he has to subject himself to being called as a witness and being examined on it.

So it's something to think about. I haven't solved it. And I look forward to seeing you all tomorrow at 9:30. Thank you.

(Proceedings concluded)

I, Jacqueline Sovich, RPR, CM, do hereby certify that the foregoing is a correct transcript from the stenographic record of proceedings in the above-entitled matter.

_____

Jacqueline Sovich DATE

Official Court Reporter

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MARYLAND/NORTHERN DIVISION
VERNON EVANS,
Plaintiff
CIVIL NO. 06-149
Vs.
Mary Anne Saar, et al,
September 21, 2006
Defendants
_____/
DAY FOUR (UNREDACTED - PORTIONS OF PROCEEDINGS ARE UNDER SEAL INCLUDING BENCH CONFERENCES AND ARE NOT TO BE RELEASED WITHOUT COURT ORDER)
TRANSCRIPT OF BENCH TRIAL
BEFORE THE HONORABLE BENSON E. LEGG,
UNITED STATES DISTRICT CHIEF JUDGE
APPEARANCES:
On behalf of the Plaintiff:
Stephen Hut, Jr, Esquire
Todd Zubler, Esquire
Kalea Clark, Esquire
Anne Harden Tindall, Esquire
Stephanie Katherine Wood, Esquire
On behalf of the Defendant:
Laura Mullally, Esquire
Philip Pickus, Esquire

REPORTED BY:
Jacqueline Sovich, RPR, RMR, FOCRR
Official Court Reporter

(PROCEEDINGS)
THE COURT: Please be seated. Is there any preliminary business that we need to take care of before the first witness is called?
MR. HUT: Not from the plaintiff, Your Honor.
THE COURT: Good. We're a little bit delayed this morning because of the need to make sure that the hookup worked properly, and it now does.
So we need to get the witness.
MS. MULLALLY: Not our witness. Who are we calling?
MS. WOOD: Your Honor, we call the person known as Contractual Team F.
THE COURT: Good. Thank you.
(UNDER SEAL)

(END SEAL)
THE COURT: This is Judge Legg. I apologize for the delay, but some time was needed this morning to make sure we had a proper hookup between this courtroom and courtroom 3 D.
The preliminaries have now taken care of, and seated in the witness box is contractual team F, who will now be examined by plaintiff's counsel. If you would, please.

DIRECT EXAMINATION

BY MS. WOOD:
Q. Good morning. I'm Stephanie Wood, counsel for the plaintiff.
What I've placed beside you is a binder of

documents that at certain points I will ask you to refer to them. There's no need to look at them at the moment.
Did we swear in the witness?
THE COURT: We need to do that.
THE CLERK: Please stand and raise your right hand.
(The Witness is sworn.)
THE CLERK: Would you state your generic name?
THE WITNESS: Contractual Team member F.
THE CLERK: Thank you.
BY MS. WOOD:
Q. As the Court has already discussed, I don't plan to get into details that might identify you, but if you feel concerned, please of course let us know, and we'll proceed as the Court has indicated.
To begin with, can you please look at document behind the tab 87? This is a generic identifier where we have listed individual's names and their generic identifier?
A. (The witness nodded affirmatively.)
Q. Can you please look at line 74? Does that correctly identify you?
A. Yes.
Q. Okay. Are you an internal medicine doctor?
A. Yes.
Q. Have you discussed this case with any of the other members of the execution team?

A. No.

Q. Are you -- do you current have a role in executions by the Lethal Injection Team of Maryland?
A. Yes.
Q. Are you the physician who pronounces death?
A. Yes.
Q. Did you pronounce death at the executions of Steven Oken and Wesley Baker?
A. Yes.
Q. Do you plan to participate in the next execution in Maryland?
A. Not at this time.
Q. Have you been asked to participate in the next execution of Maryland?
A. No.
THE COURT: If we could stop for a minute, are we having technical problems? We're good?
THE CLERK: We're good.
Q. Is it customary for you to be asked in advance if you'll participate in an upcoming execution?
A. Yes.
Q. Is pronouncing death the only duty you perform in executions?
A. I look at a heart monitor while the procedure is being carried out.

Q. And it is that in relation to your role in pronouncing death?
A. Yes.
Q. Other than looking at the heart monitor and pronouncing death, are those the only two functions you play in the execution?
A. Yes.
Q. Okay. If you can look for a moment in the binder, there is a document that's been marked as plaintiff's exhibit 10. It's a floor plan of the execution here that has been produced to us by the state.
Do you recognize this document?
A. Yes.
Q. To the best of your knowledge, is this an accurate depiction of the execution area?
A. Yes.
Q. Okay. Can you please look at the second page marked Evans 7 7 0? Do you see the separation between the execution room and the preparation room?
A. Yes.
Q. Actually, I directed you to the wrong page. Could you please turn to the first page? Okay.
So between the execution room and the preparation room, is that shade area, is that a window?
A. Shaded areas, oh, right here, yes, it is.

Q. Do you stand near the left-hand corner of that window during executions?
A. Near there, yes.
Q. Your understanding is that the woman who inserts IV's is a certified registered nurse anesthetist, right?
A. Well, it was clarified during my deposition --
Q. How was --
A. -- that that was not her title.
Q. Was that clarified after the deposition?
A. No, during the deposition with you.
Q. Did the woman who inserts the IV, did she originally tell you she was a certified registered nurse anesthetist?
A. I thought she said that. I later feel I misunderstood what she said to me.
Q. Does this woman who inserts the IVs, she does not monitor the anesthesia of the inmate, does she?
A. Not that I'm aware of.
Q. Okay. If you could turn to the document behind tab 87. I'm sorry, 86?
This is the new exhibit, which I'll hand to the courtroom deputy, after my examination.
This document is titled "Maryland Division of Correction Policy for the Execution Team Members," dated July, 2004.
And to give some context, I'm going to read, and if

you could follow along, item one under purpose, it says "To establish policy and procedures for the recruitment, selection, training, readiness, and performance evaluation of the members performing the various execution-related duties."
Did I read that correctly?
A. Yes.
Q. Okay. Have you seen this document before?
A. No. Only during the deposition.
Q. And at the deposition, was this the first time you'd seen this document?
A. Yes.
Q. And you participated in the Baker execution, as you previously testified, correct?
A. Yes.
Q. Was the Baker execution in December, 2005?
A. I don't remember the date.
Q. Does that sound about right?
A. It could be.
MS. MULLALLY: Objection. Your Honor, I think at this point this is the plaintiff's witness, and she's being led, and there's been no request nor a ruling by the Court that it is appropriate in this case.

THE COURT: Well, I'll overrule the objection. We'll operate under the same rules that we did with the previous witnesses, who are members of the execution team.

Q. Thank you, Your Honor.
So this document is dated 2000 -- July, 2004; is that correct?
A. Yes.
Q. So if the Baker execution occurred in December, 2005, this document was created prior to the Baker execution, does that seem logical?
A. It seems logical.
Q. Okay. I'm going to direct you three pages into the document to the section describing the role of the physician. And it's on page marked Evans 3 1 0 8.
Could you please read the line under 3 A?
A. "We will develop a pool of two physicians to make the pronouncement of death and, if needed, assist the IV lines team member in establishing the IV lines including a cut-down procedure, if necessary."
Q. Do you assist with the IV lines during executions?
A. No.
Q. Have you ever been told to assist with the IV lines during executions?
A. No.
Q. Is it your understanding that you're currently the only doctor on the execution team?
A. Yes.
Q. Can you perform a cut-down procedure, if necessary?

A. No.
Q. Have you ever been told to perform a cut-down procedure?
A. No.
Q. Were you ever told you might perform a cut-down procedure for Vernon Evans?
A. No.
Q. If you were asked to perform one, would you feel comfortable performing a cut-down procedure?
Q. No?
A. No.
Q. If you received sufficient fresher training on the cut-down procedure, would you be willing to do it?
A. No.
Q. Can you establish a central line during an execution, if one proved necessary?
A. I haven't done a central line in years, so I would say no.

Q. If someone asked you to perform a central line for the execution team, would you feel comfortable?
A. No.
Q. You don't monitor the inmate's anesthesia, do you?
A. No.
Q. It's just not part of your duties, is it?
A. No.
Q. And as we talked about earlier, you stand in the window

of the preparation room, right?
A. I don't stand in the window.
Q. Or you stand near the window, excuse me.
A. Right.
Q. So you're not in the execution room?
A. No.
Q. Correct?
A. No.
Q. Do you agree that you personally would not undergo surgery in a hospital if the anesthesiologist were monitoring you from the location where you stand with the view that you have during the execution?
A. I'm going ask to have you repeat that.
Q. Would you personally not undergo surgery -- I'm sorry. I'll simplify the question.
Would you undergo surgery in a hospital if the anesthesiologist were monitoring you from the location where you stand during the executions with the view that you have during the executions?
A. No.
Q. If you were asked to participate in the next execution, would you?
A. No.
Q. And why is that?
A. I feel my identity is compromised now, I would not

participate.
MS. WOOD: Thank you, Your Honor.
THE COURT: Good.
MS. WOOD: I'm sorry, Your Honor.
THE COURT: The document that you've been examining, what is it?
MS. WOOD: It's a document produced by the state, behind tab 87, it's in a binder I handed to your clerk, and I plan to give it to the courtroom deputy after my examination.
THE COURT: Do I have it here in the list of exhibits?
MS. WOOD: It's plaintiff's exhibit 86, Your Honor.

THE COURT: Good. Thank you. If I could review it for a moment?
(Pause.)
THE COURT: Good. Thank you.
BY MS. WOOD:
Q. I'm sorry, Your Honor, I have one last question.
So at this time, there is no one to pronounce death at the next execution?
A. I don't know that.
MS. WOOD: Thank you, Your Honor.
THE COURT: Thank you. Miss Mullally, your witness.
MS. MULLALLY: Thank you, Your Honor.

CROSS-EXAMINATION
BY MS. MULLALLY:
Q. Now, I believe you were asked by Miss Wood if you pronounced death in the Oken and Baker executions, and you did; did you not?
A. Yes.
Q. When you pronounce death, you started with a heart monitor, you watched its tracings, and then when you believed that the inmate was deceased, you went out and actually looked at the body and signed some papers?
A. Right.
Q. So you looked at Steven Oken's body?
A. Yes.
Q. And you looked at Wesley Baker's body?
A. Yes.
Q. Did you see any signs of infiltration when you looked at their bodies?
A. Infiltration of IV?
Q. Yes. At the IV sites?
A. No. I can't say that I did.
Q. Did you see -- were you made aware of any problems with the IV lines, either in the preparation room where you were, or outside in the execution room?
A. During?
Q. During the execution of either Oken or Baker?

A. No.
Q. You didn't see any puddles or anything like that, any twisting or kinking?
A. I don't recall seeing that, no.
Q. Do you recall being asked in your deposition what sort of person would be qualified to assess the suitability of a patient's veins for IV's?

A. You mean during the deposition?
Q. Yes. I can show you your deposition --
A. Okay. That will help.
Q. -- to refresh your recollection?
A. That would help.
(Pause.)
MS. MULLALLY: Counsel, do you have her deposition?
MS. WOOD: Yes, thank you.
BY MS. MULLALLY:
Q. I'm handing you that. If you could turn to page 144? 144, line 8. The question from Miss Wood.
I believe the question was, in your opinion, who would be better qualified to assess the suitability of a patient's veins for intravenous injection, a certified nurse's assistant or a physician and chief of Shock Trauma?"
Do you recall being asked that question?
A. Yes.
Q. What was your answer?

MS. WOOD: Objection, lacks foundation, beyond the scope.
THE COURT: I'll overrule the objection.
Q. You can answer.
A. Okay. Do you want me to read what's here?
Q. Sure.
A. What I stated?
I said someone who has -- doesn't matter on the title, it's someone who has started IVs that has the experience in doing it.
Q. Thank you.
Now, the EKG machine is located in the preparation room to the left of the window, correct?
A. Yes.
Q. And you're watching the tracings on the EKG machine during the execution?
A. Yes.
Q. And what do the tracings means? For what purpose are you using that machine?
A. To determine when the heart rhythm is not compatible with life.
Q. And during the execution, I take it you're watching that machine very carefully?
A. Yes.
Q. Okay. Now, if you were made aware of a problem, any

problem, what, if anything, would you do about the problem, something that you felt was going wrong about an execution?

A. Notify the team leader or the person in the room near to notify the team leader.
Q. When you're watching the heart monitor, do you know where the woman who starts the IV's located?
A. It just depends during the timeframe. I'm not always aware of where she is the whole time.
Q. Let me ask you this, do you know, does she have an assigned space where she's supposed to stand in that room?
A. I'm not aware that she has an assigned place.
Q. Okay. Has anyone said there in your presence you're not standing where you're supposed to be standing?
A. No, I've not heard that.
Q. Is she free to move about the room, as far as you know?
A. As far as I know.
Q. Okay. If you wanted to look out the window during the execution, how would you do that?
A. I'd just lean over and look.
Q. Okay. Would there be anything obstructing your view?
A. No. I'd just have to lean in, and I look, and I often do that.
Q. Now, have you -- you're an internist, I take it you have inserted IV's?
A. Yes.

Q. Many times?
A. Yes.
Q. Is it difficult?
A. Depends on the patient's veins.
Q. Okay. And have you ever treated patients with a history of intravenous drug abuse?
A. Yes.
Q. And what would you do if you needed to start an IV for someone with a history of intravenous drug use, how would you go about it?
A. First, I would examine the patient and look at their arms and to see if they had any veins there I thought could be canulated with an IV without difficulty.
Q. Okay. And where on a patient's anatomy would you be looking for a vein?
A. Usually the forearms, sometimes the arm.
Q. Have you ever gone beyond the arm?
A. During certain emergent situations I've used a femoral vein.
Q. Have you ever seen an IV that's inserted anywhere other than the arms and the femoral vein just in your years?
A. Oh, yes, central lines, yes, central lines, yes.
Q. What about an IV, have you ever seen an IV in a jugular vein?
A. Yes.

MS. WOOD: Objection, Your Honor. They have not established this witness as an expert witness.
THE COURT: Well, I will permit it. Miss Mullally would be entitled to call contractual F in the defense case, and to avoid having to have Contractual Team F appear twice, I will permit it, although it's beyond the scope of the direct examination.
BY MS. MULLALLY:
Q. Okay. You can answer.
A. I'm sorry.
Q. The question was, have you ever seen an IV inserted by anyone else in a place other than the femoral vein or the arms?
A. Yes.
Q. And about how many times?
A. Many.
Q. Am I correct, is this correct that an EKG machine works, you can see the tracings because there are leads put on the intracostal spaces between the ribs on a human's body?
A. Yes, the EKG, yes.
Q. You don't, you didn't put those leads on Steven Oken or Wesley Baker, someone else did?
A. Yeah, someone else did.
Q. And did you have any indication that the leads weren't appropriately placed?

A. No.
Q. You were getting a tracing?
A. Yes.
Q. And if you were not getting a proper tracing, what would the machine do?
A. It just varies. Sometimes it will be artifact, interference. Sometimes it won't be any tracing, and you know something is wrong.
Q. All right. So if there were something wrong with the machine, you would know as a physician watching the tracings?
A. Right.
MS. MULLALLY: I have no further questions of this witness. Thank you, Your Honor.
THE COURT: Thank you. Miss Wood?
REDIRECT EXAMINATION
BY MS. WOOD:
Q. Thank you.
Were you asked to look for infiltrations during executions?
A. No.
Q. Were you ever asked to look at the IV lines during executions?
A. No.

Q. Were you ever asked to look for infiltration while pronouncing death?

A. No.
Q. And none of these duties are part of your job; is that correct?
A. Not that I'm aware of.
Q. Do you regularly attend the practice sessions of the execution team?
A. What do you mean by regularly?
Q. Do you attend the regularly held practice sessions for the execution team?
A. I don't. I've only been asked to go once for each -- each time. So I don't know about any others.
Q. Okay. So you've only gone once, to one dry run, although you've participated in two executions?
A. No, one dry run per execution.
Q. So two total dry runs?
A. That I can remember. It might have been a little more, but at least that many.
Q. Okay. You took a deposition on May 31, 2006, correct?
A. Yes.
Q. And were you sworn under oath at that deposition?
A. Yes.
Q. And did you understand you needed to give accurate testimony?
A. Yes.
Q. Was there any reason why you could not give accurate

testimony during that deposition?
A. No.
Q. And you had a chance to review the deposition; is that correct?
A. Yes.
Q. And did you sign the deposition?
A. Yes.
Q. I'd like to direct counsel to page 68, line 20. To 24.
MS. MULLALLY: Your Honor, I don't -- the defendants do not believe this is a prior inconsistent statement. We believe it's a consistent statement.
THE COURT: My understanding is it's consistent that the witness stated that she attended one dress rehearsal for each execution, and that's what she's saying here in the deposition. Unless I'm reading it wrong, she says one dry run.
MS. WOOD: Okay. I was directing the Court, well, trying to direct the Court'S attention to her statement that

there could have been more, she just didn't remember.
THE COURT: Well, that's not inconsistent. You could try to refresh her recollection with this statement, but it's not a prior inconsistent statement, in my mind.
MS. WOOD: Thank you, Your Honor.
One last question for the witness.
BY MS. WOOD:

Q. Are you an expert in monitoring IV sites, establishing IV sites, assessing IV sites?
A. No, I wouldn't call myself an expert.
MS. WOOD: Thank you. No further questions.
THE COURT: Ma'am, before you go, I had few questions to for you, if you don't mind.
My understanding is that your role in the lethal, on the Lethal Injection Team is a rather limited one, and that your duty was to monitor the EKG and then pronounce death when death had occurred, correct?
A. Correct.
Q. And that you did not have any assigned role in connection with administering the drugs, monitoring the IV line, making sure that a proper canulation had taken place, performing a cut-down procedure, accessing veins, performing a central line, or essentially any operator medical task; is that correct?
THE WITNESS: That's correct.
THE COURT: Now, now, I believe your testimony was also that you would not feel, you're an internist, rather than a surgeon, and that you would not feel comfortable either performing a cut-down procedure or accessing the central line, correct?
THE WITNESS: Correct.
THE COURT: So that if there was a problem during

an execution, in accessing a peripheral vein to administer the IV, then you would not be a resource to the team to perform either the cut-down or the central line, correct?
THE WITNESS: Correct.
THE COURT: Now, you were asked questions about other places in the body where a vein might be accessed other than the arms, and can -- in terms of medical standards, can all of them be accessed by a -- I'm trying to get the right terminology.
If you could help me, Contractual Team B is?
MS. MULLALLY: Certified nursing assistant.
THE COURT: Good. Certified nursing assistant. I think you mentioned the jugular vein and places in the groin.

Can a certified nursing technician or?
MS. MULLALLY: Assistant.
THE COURT: Assistant, the person with those qualifications able to do that?
THE WITNESS: No.
THE COURT: No?
You had mentioned in connection with, or one of your answers was that if something went wrong during the execution, the scope of your responsibility would be to notify the team leader, correct?
THE WITNESS: Yes.
THE COURT: But since you're the only medical

person on the execution team, if something went wrong of a medical nature, there's nobody who could really do anything about it; is that correct?
THE WITNESS: About establishing a central line or?
THE COURT: If there's a medical problem, nobody is -- really sort of a medical emergency medical problem, if things go wrong, you might notify the team leader of the problem, but there are no qualified medical personnel to solve the problem?
THE WITNESS: Depends on what the problem is. Certain things I can address. But I would feel it would not be in my role as the clinician to participate in the actual procedure other than my role as pronouncing death.
It's not that I could not respond. But my role would then, I think, will change, would have changed, if I was asked to do other than what I had anticipated doing.
THE COURT: Right. Good. Thank you.
The other thing I wanted to ask you about would be the accessing of the peripheral veins. If I -- I don't want to misinterpret your testimony, but you have established IVs many, many times as part of your training and practice, correct?
THE WITNESS: Yes.
THE COURT: That would include establishing IVs on someone who had a had history of intravenous drug abuse and

therefore had compromised veins; is that correct?
THE WITNESS: Yes.
THE COURT: So the fact that a person has been a heroin user and has compromised veins does not preclude in all cases the establishment of a properly flowing IV?
THE WITNESS: Right.
THE COURT: But I take it that the converse is true, that there are patients who, because of intravenous

drug abuse, do have drugs that simply don't work for canulating an IV?

THE WITNESS: Correct.

THE COURT: So part of the assessment that would have to be made in determining whether an inmate was a suitable candidate for lethal injection by a peripheral vein in the arms would be to assess those veins, correct?

THE WITNESS: Correct.

THE COURT: Now, for the person with the these credentials, I want to make sure I don't want to mischaracterize it, is it accurate to stay that the only place under medical standards that a person with those qualifications would be qualified to insert, or to canulate, an IV would be a peripheral vein in the arms or the hands?

THE WITNESS: Yes.

THE COURT: So if we're thinking about a lethal injection and the arms and the hands are the sole candidates

dates, the arms and hands would have to be evaluated before the lethal injection to see if there was a suitable vein, correct?

THE WITNESS: Correct.

THE COURT: Now, my understanding is that there are what I would think I was superficial veins in the arms and hands, and then there are deeper veins, correct?

THE WITNESS: Correct.

THE COURT: Would it be accurate to say that, for a person with these qualifications, the only set of veins that you could be reliably expected to canulate with her background and experience would be the superficial veins and not the deeper veins?

THE WITNESS: Okay. I want to say correct, but when you say deeper veins, there's a little difference when we say superficial. Some are right at the surface, and okay, we can call those superficial, and when you say deeper, I don't know if you mean going deeper below the skin surface or.

THE COURT: There's been some testimony about some deeper veins in the arms, that one can access using an ultrasound machine.

THE WITNESS: Oh, okay. Right. I understand what you mean. Okay.

THE COURT: So that the B would not be qualified to

canulate these deeper veins that would require an ultrasound machine to find, correct?

THE WITNESS: Correct, yes, sir.

THE COURT: And counsel, there was a name of a particular kind of vein we were talking about yesterday?
MS. MULLALLY: It's in my notes. I think it's began with the cephalic.
MS. WOOD: Cephalic.
THE COURT: Yes. Thank you.
Would B have the requisite qualifications and experience to access the cephalic vein?
THE WITNESS: She might.
THE COURT: She might? All right.
And is that a vein that can be canulated without using the ultrasound?
THE WITNESS: My understanding is yes.
THE COURT: And have you ever canulated a cephalic vein?
THE WITNESS: Not that I can remember. Not off the top.
THE COURT: Now, my understanding is also there are a number of tools that can be used to evaluate the veins in the patient's arms. And the first is by putting on a constricting band, and then taking a look, and also feeling the arm to feel the veins.

Then the second way is to utilize the first method but also to use an ultrasound?
THE WITNESS: Yes.
THE COURT: So the first question would be, have you ever used these ultrasound machines to assess the viability of veins?
THE WITNESS: No.
THE COURT: So you work, would you have any opinion on whether using the ultrasound gives a better picture of the suitability of the vein or not?
THE WITNESS: No. I just know that she's had at least one procedure, particular procedure for a certain type of line to actually be able to canulate it, canulate the deeper vein.
THE COURT: Good. And I did want to, just so the record's clear in fairness to you, you are an internist, not a surgeon or an anesthesiologist, correct?
THE WITNESS: Correct.
THE COURT: Good. Thank you. Any other questions, Miss Wood?
MS. WOOD: Yes, Your Honor.

REDIRECT EXAMINATION

BY MS. WOOD:
Q. As the Court just reiterated, you're an internal medicine doctor, correct?

A. Yes.
Q. Do you regularly establish IV's for anesthesia?
A. No.
Q. If you can't see the deep vein, the cephalic vein that's located deep, you can't visualize it, you can't palpate it, can a CNA try and access that vein?
A. Let me correct something. When I think about the cephalic vein, I might be incorrect where I'm thinking it's located at this point. So let me clarify what I've said regarding the CNA, and I'll just say I do not know if she can do that or not.
Thank you.
MS. WOOD: Thank you, Your Honor.
No further questions.
THE COURT: Thank you.
Miss Mullally, anything else?
MS. MULLALLY: No, Your Honor.
THE COURT: Ma'am, Thank you very much for coming. Or I should say, doctor, and you are excused, and thank you for participating.
And this gentleman here is going to make sure that you leave the building safe and sound. Thank you.
Good. Mr. Hut?
MR. HUT: The next witness would be Injection Team C, who would be examined by my colleague, Miss Geraghty.

THE COURT: Good morning, if you could come right this way, please, and take a seat. We need to be on private.
(UNDER SEAL)

(END SEAL)
THE COURT: good. We're now back to broadcasting. The witness on the stand is Injection Team C, who will be questioned first by Ms. Geraghty representing Mr. Evans.
We have to swear her in.
(The Witness is sworn.)
THE CLERK: And be seated. Speak directly into

toward the mike and state your generic identity for the

record, please.
THE WITNESS: Excuse me, can you repeat that?
Injection Team member C.
DIRECT EXAMINATION
BY MS. GERAGHTY:
Q. Thank you. Miss C, my name is Ms. Geraghty. We are going do our best to make sure we comply with the confidentiality order that's in place in this case.
And to do that, it might be helpful for you have a binder right next to you, and you night want to grab it.
Behind tab 87 in that binder is a list of people's names, and right next to the list is the generic identifier which we'll be using today.
You'll notice at the first page has the people's name in alphabetical order. Second page has generic identifiers in alphabetical order, and behind that I've included plaintiff's PDX 1 a cheat sheet for you to use. It's got pictures of people on it we may be discussing along with their generic names.
Miss C, where are you currently employed?
A. Maryland House of Correction Annex.
Q. What's your job title there?
A. Correctional officer 5, excuse me. Correctional officer 4.

Q. Are you at all involved in lethal injections in the State of Maryland?
A. Have I been involved?
Q. Yes, ma'am.
A. Yes.
Q. Are you a member of the execution team?
A. Yes.
Q. And were you a member of the execution team for the execution of Steven Oken?
A. Yes.
Q. And were you also a member of the execution team for the execution of Wesley Baker?
A. Yes.
Q. And were you planning on participating in the scheduled execution of Vernon Evans this February?
A. Yes.
Q. What role do you play during lethal injection?
A. Recorder.
Q. Can you explain to me what that means?
A. During the course of the procedure, you have a list of step-by-step procedures. And what I do record the time that each procedure is completed from the start to the end time going to the next step.
Q. Okay. So is it your job to observe what the team members are doing during the execution?

A. It's not my job, but it's something in comes to you that you naturally, do because you have to observe everyone, so you have to get a correct reporting time.
Q. Okay. Have you spoken with any of the team members who have testified in this case?
A. In reference to?
Q. In reference to your testimony or their testimony?
A. No, we just talked in general.
Q. Talked in general about this case?
A. Yeah, a little bit.
Q. In the future, until the conclusion of this case, we would advise you not to speak with any of the other execution team members until we're done here.
A. Okay.
Q. You'll know there's large board set up in the front of the courtroom today. That's plaintiff's demonstrative PDX 2.
Does that appear to be a fairly accurate rendering of the execution area?
A. Yes.
Q. And it should also be on your no screen now. Do you note on there there's a room labeled as the execution room?
A. Yes.
Q. And there's a room on there labeled the preparation room?
A. Yes.
Q. And while the chemicals are actually being injected into

the inmate during an execution, you stand in the preparation room; is that right?
A. Yes.
Q. And do you remember during your deposition in this case making some handwritten notations on a diagram that looks a lot like this one?
A. Yes.
Q. Okay. If you could turn in your binder to tab 78, please?
Are you there?
A. Yes.
Q. Does this appear to be the document on which you made the handwritten notations during your deposition?
A. Yes.
Q. You'll notice that in front of the area that is marked in this diagram as a window between the preparation room and the execution room, there's a big letter C right in front of the window.
Do you see that?
A. Yes.
Q. And do you remember that you had labeled that as where the clock is?

A. Yes.
Q. You also marked where Injection Team E stands with an E, and if you want to flip back, I'm not sure if you recall who

he is, but if you want to flip back to the generic identifiers, feel free.
A. Yes.
Q. Do you recall that's where you placed where Injection Team E stands?
A. Yes.
Q. And you marked also where Contractual Team A stands during an execution?
A. Yes.
Q. So if you're facing the window, E is just to the left of A?
A. Yes.
Q. And apparently I forgot to mention, this has been marked as plaintiff's exhibit 78 for the record.
So this diagram shows Injection Team E and Contractual Team A just slightly to the right of the window but really during an execution they're standing right in front of the window; is that right?
A. No.
Q. Where do they stand?
A. Slightly to the right where they're all on the diagram.
Q. Do you recall giving a deposition in this case?
A. Yes.
Q. Were you under oath during the deposition?
A. Yes.

Q. You were sworn in by a court reporter like you were today?
A. Yes.
Q. You were asked to say so if you couldn't understand a question?
A. Yes.
Q. You were asked if there was any reason why you could not give truthful testimony?
A. Yes.
Q. Did you have a chance to review the deposition after you were finished?
A. Yes, I did.
Q. And did you sign it?
A. Yes.
Q. I just asked you whether or not they stood slightly to the right of the window or in front Miss Mullally. I would refer you to page 53, lines 18 to 21. I'm sorry. Mr.

Pickus.
(Pause.)
MS. GERAGHTY: Does the Court need a copy?
THE CLERK: Did you put it in the binder?
MS. GERAGHTY: No, I have one.
(Pause.)
MR. PICKUS: Your Honor, this is my witness. The state does not believe this is an inconsistent statement.

THE COURT: If I could be directed to the line, please, and page?
MS. GERAGHTY: Of course. Page 53, lines 18 through 21.
THE COURT: My view is it's not inconsistent, either, so I'll sustain the objection.
BY MS. GERAGHTY:
Q. Now, Injection Team E and Contractual Team A are the only two people who stand right in front of the room during the execution?
A. The doctor stands on the other side.
Q. Does she stand -- you've marked her on the exhibit with the DR?
A. Yeah, but I marked her to the left of the window.
Q. And she's really not right in front of the window, she's just slightly to the left; is that correct?
A. Yes.
Q. And if you remember, during your deposition, you marked your exhibit with the letter Z, where you stand while the drugs are being injected; is that correct?
A. Yes.
Q. So you stand right behind E and A, or slightly to the center?
A. Slightly to the center between the doctor and E and A, where I have a visual.

Q. Now, I know things have changed a bit recently, but during the last two executions that you attended, Contractual Team B also stood in the room with you while you -- during the injection of the drug?
A. Yes.
Q. And she stood at the back wall of the room?
A. Yes.
Q. Directly next to the door?
A. No. That -- yeah, right next to the phone and the door up against the wall.
Q. And you've marked on plaintiff's exhibit 78 with a B where she stands during an execution?

A. Yes.
Q. And she probably would not have a very clear view of the window there, would she?
A. No.
Q. And that's because Injection Team E and Contractual Team A, the doctor and you are standing in front of the window?
A. In view of the window, yes.
Q. So would she have walked up to the window at any time during the executions?
A. No.
Q. Once Contractual Team B inserted the IV through the Baker and Oken executions, she moved from the execution room to the preparation room, correct?

A. Yes.
Q. And then once she had done that, she's pretty much finished?
A. Yes.
Q. Does she have any other jobs to do?
A. Stand by in for observation, if there's a leak.
Q. Has someone told you that?
A. No.
Q. That's just your assumption?
A. Yes.
Q. Is there any movement at all in the preparation room while the drugs are being injected?
A. Any movement?
Q. Do people move around at all?
A. No.
Q. You attend execution practices, don't you?
A. Yes.
Q. And during an execution practice, you'd never witnessed an IV line leaking, have you?
A. No, I have not.
Q. Now, you know that lethal injections are carried out using three drugs?
A. Yes.
Q. And has it been explained to you before the second drug that's used is used to paralyze the inmate?

A. I have been told that, yes.
Q. Taking just hypothetically the situation where the Department of Corrections or the supervisors in charge of that execution took away that drug so the inmate wasn't paralyzed, if someone told you that the inmate might move around or jerk during an execution, but that it wouldn't hurt the inmate in any way, do you think you would still be able

to do your job without getting too upset?
A. I mean, say that again?
Q. If the inmate wasn't paralyzed during the execution, but they had told you during your practices that you might be prepared, you might have to be prepared to see the inmate moving around a bit while he's being executed, do you think you could still do your job?
A. I don't know. That would be something you'd have to think about.
Q. Why is that?
A. Because that's -- I mean, I'd never seen nobody move, so I couldn't say whether I would or whether I wouldn't.
Q. Do you think if you were prepared at every practice for that possibility, you'd be ready do it on the execution day?
A. I'd have to be prepared for anything.
MS. GERAGHTY: Thank you. I have no further questions.
THE COURT: Thank you. Mr. Pickus, your witness,

sir.
MR. PICKUS: Just very brief question, Your Honor.
CROSS-EXAMINATION
BY MR. PICKUS:
Q. Miss C, you've been involved in two executions?
A. Yes.
Q. And that was for Mr. Baker and Mr. Oken?
A. Yes.
Q. How often does the execution team practice?
A. Quarter.
Q. Quarterly?
A. Yes.
Q. And it's not monthly?
A. It's not monthly. It depends on whether or not there's a pending execution on that dictates the practices.
Q. What happens when there's a pending execution?
A. Pending execution, we move it up to month, and then as the timeline comes closer, it will be a daily thing.
Q. And during the course of the two executions you've participated in, do you make preparation in advance of the execution?
A. Advanced as in?
Q. Three, three to four hours before the execution?
A. Yes.
Q. Are the drugs prepared prior to the execution?

A. Yes.
Q. Are they placed in the syringe prior to the execution?

A. Yes.
Q. And are the syringes color coded?
A. Yes, they are.
Q. And is it red, green, and blue?
A. Yes.
Q. Are the syringes placed in the proper order?
A. Yes.
Q. And that order is red, green, and blue?
A. Yes.
Q. To your knowledge, is there a backup syringe for each drug?
A. Yes, it is.
Q. How many, is there one backup?
A. One backup for each drug.
Q. Are you able to observe what's happening in the injection room during the course of an execution?
A. Yes.
Q. And if you saw something going wrong or somebody in the execution team doing the wrong thing, what would you do?
A. I would stop the team member and at the same time with the commander being there, he would get the same information.
Q. Are you referring to the execution team commander?
A. Yes.

Q. So you would notify both the person who was making the mistake and the execution team commander?
A. Yes.
Q. Now, based on the testimony of where people stand in the room, are you able to see out of the window?
A. Yes.
Q. The two executions that you participated in, Mr. Baker and Mr. Oken, did you see anything go wrong?
A. No.
MR. PICKUS: That's all I have, Your Honor.
THE COURT: Thank you. Are there other questions?
MS. GERAGHTY: No other questions, Your Honor. Thank you.
THE COURT: Thank you very much for coming.
Ma'am, you are excused, and this young lady will make sure that you leave the building safe and sound.
THE CLERK: The next witness.
MR. HUT: The plaintiff's next witness is Injection Team A to be presented by Miss Clark.
THE COURT: Good. Thank you.
(UNDER SEAL)

(END SEAL)
(The Witness is sworn.)
THE CLERK: Be seated. Would you speak directly toward the mike and state your generic identity for the record, please?
THE WITNESS: I am Injection Team A.
DIRECT EXAMINATION
BY MS. CLARK:
Q. Good morning, Mr. A. I'm not sure if you remember me, but I'm Kalea Clark. I'm one of the attorneys for the plaintiff in this case. I echo the concerns raised by the Court. We want to protect your identity consistent with the protective order. And to assist in doing that, I would direction your attention to what has been marked as

plaintiff's exhibit 87. There's a binder right next to you on the witness stand.
If you look behind tab 87, you will see a list of generic identifiers similar to the ones you used at your deposition. I'd ask that you refer to that, to the extent that you need to mention any current or former member of the execution team.
A. Okay.
Q. A number of execution team members testified yesterday or today. Have you talked with any of them about their testimony?
A. No.
Q. Where are you employed?
MS. MULLALLY: Objection. Could we use a generic here?
MS. CLARK: Certainly.
MS. MULLALLY: If I could have a second with Miss Clark.
THE COURT: Perhaps you can lead on this issue.
(Pause.)
BY MS. CLARK:
Q. Mr. A, are you a correctional officer?
A. Yes.
Q. And do you currently have a role in Maryland executions?
A. Yes.

Q. And what is that role?
A. I am the OIC.

Q. And does OIC stand for officer in charge?
A. Yes.
Q. What are your responsibilities as the officer in charge?
A. My responsibility is to make sure that each member of the team knows their roles during the execution.
One of my other responsibilities is to make sure that we have all the necessary equipment needed to carry out an execution.
Q. And do you assist in setting up the equipment?
A. Yes.
Q. And do you assist in preparing or mixing the drugs for executions?
A. Yes.
A. Yes.
Q. Do you assist with the IV insertion on the inmate?
A. Yes.
Q. And did you participate in the Oken execution?
A. Yes.
Q. And did you participate in the Baker execution?
A. Yes.
Q. Were you the lethal injection officer in charge for both of those executions?
A. Excuse me?

Q. Did you serve as the lethal injection officer in charge for both the Oken and Baker executions?
A. Yes.
Q. Were you planning to participate in the execution of Vernon Evans scheduled for this past February?
A. Yes.
Q. And would that have been as the lethal injection officer in charge?
A. Yes.
Q. I'd like to direct you to the diagrams up on the easel, which we've marked as PDX 2.
Is this an accurate diagram of the execution area?
(Pause.)
A. Yes.
Q. And there are two rooms designated on this diagram, the execution room and the preparation room. In which room were you located during the administration of the lethal injection?
A. In the preparation room.
Q. Mr. A, you have no training in anesthesiology; is that correct?
A. That's correct.
Q. And you have no training in pharmacology?
A. That's correct.
Q. Is one of your jobs during an execution to monitor the

inmate during the administration of the lethal injection?
A. Yes.
Q. Did you do that during the Oken execution?
A. Yes.
Q. Did you do that during the Baker execution?
A. Yes.
Q. During entire administration of the lethal drugs?
A. Yes.
Q. But weren't you in and out of the preparation room during the execution of Wesley Baker?
A. No.
Q. You had your deposition taken in this case on May 16th why Mr. Hut, correct?
A. Yes.
Q. And you were told to state if you didn't understand a question, correct?
A. Correct.
Q. And Mr. Hut asked you question about your role in the execution team, correct?
A. Correct.
Q. And before you answered those questions, you raised your right hand and were sworn by the court reporter to tell the truth, correct?
A. Correct.
Q. At some point after your deposition, you had a chance to

review the deposition, correct?
A. Yes.
Q. And you signed it?
A. Correct.
Q. Miss Mullally, I direct your attention to page 47, lines 1 through 14.
MS. MULLALLY: Your Honor, I feel a little foolish, but I am unable to remember what the witness said last. Perhaps the Court could take a look at it and make a determination.
THE COURT: My understanding was the issue was whether -- well, let me ask, during the execution itself, sir, are you in the preparation room or the execution room?
THE WITNESS: During the execution?
THE COURT: Yes, sir.
THE WITNESS: I'm in the preparation room.
THE COURT: Good. And I think, so, Miss Clark, the point that you want to make is?
MS. CLARK: I asked, he testified that one of his duties was to monitor the inmate during the administration of the lethal drugs. And he testified I believe that he did so during the Oken execution.
THE COURT: Yes.

MS. CLARK: Again for the Baker execution, and I asked whether it did it for the entire, and he said yes, and

I said weren't you in and out of the room during the execution, and he said no.

THE COURT: Good. That's what I thought. Let's see. So during. It says on Baker's I was in and out the room the whole time during the execution. In and out of which room? The lethal injection room. So some of the time during the administration in the injection you were in the lethal injection room, and sometime you were outside it? Correct.

And was that your testimony and what does that mean?

THE WITNESS: What that mean is during the administration of the drugs, I was inside the preparation room. Before then I was in and out of the preparation room.

Q. Didn't you testify that some of the time during the administration of the injection you were in the lethal injection room, and sometimes you were outside it?

A. I'm not sure. I have to read exactly what that says.

THE COURT: Good. You can show A the deposition.

Q. Is this your signature?

A. Yes, it is.

(Pause.)

Q. Have you had an opportunity to review your testimony?

A. Yes, I have.

Q. And did you -- during your deposition, were you asked

that question and give that answer?

A. Yes, I did.

Q. Turning your attention back to the binder that I handed to you earlier, behind tab 87, plaintiff's exhibit 87, are you familiar with Contractual Team A and Injection Team E?

(Pause.)

THE COURT: Now, is this the pictures or just the words?

MS. CLARK: I just want to verify that he knows Contractual Team A and Injection Team E.

THE COURT: So you might want to show the pictures.

(Pause.)

A. Yes.

Q. And contractual team A and Injection Team E are the two members of the team who are stationed in and front of the window between the execution room and the preparation room, correct?

A. That is correct.

Q. And Injection Tea, E and Contractual Team A stood at the window at the executions of Steven Oken and Wesley Baker, correct?
A. That is correct.
Q. Referring back to the -- are you familiar with the individual identified as Contractual Team B?
A. Yes.

Q. What is her role during executions?
A. Her role is she administers the IV, and she also stays inside the execution room after the IV has been administered and during the execution.
Q. And the designation of her as staying in the execution room after the placement of the IV and during the administration of the drug, that's a new development since August, correct?
A. That is correct.
Q. And contractual team B told you that she's a registered nurse, correct?
A. No, that is not correct.
Q. Miss Mullally, I direct your attention to page 76, lines 1 through 7 of Injection Team A's deposition.
MS. MULLALLY: No objection.
BY MS. CLARK:
Q. Your Honor, can we play the clip, or were you rather I read it?
THE COURT: If you could read it or just it to Mr. A.
BY MS. CLARK:
Q. Mr. A, if you could turn to page 76 of your deposition transcript, and I will read lines 1 through 11.
Question "Is Contractual Team B a registered nurse or a certified nurse's assistant?"

Answer, "From my understanding she's a registered nurse."
Question, "What's the basis of that understanding?"
Answer, "From my understanding, she works at a hospital."
Question, "Did she ever tell you personally that she was a registered nurse?"
Answer, "Well, I don't get into her personal life. She just tells me she's a nurse."
During your deposition, were you asked those questions and gave those answers?
A. Yes.
Q. During an execution, Contractual Team B establishes two

IV lines in the condemned inmate, correct?
A. That is correct.
Q. But only one line is used to administer the lethal drugs?
A. That is correct.
Q. If a problem is discovered with the first line, such as a leak, the execution team would switch to the second line; is that correct?
A. That's correct.
Q. And once the switch to the second line was effected, Injection Team E would continue to administer the same syringe that he had personally pushed into the first line, correct?

A. That is not correct.
Q. Miss Mullally, I direct you to page 85, lines 1 through 13.
(Pause.)
MS. MULLALLY: No objection.
BY MS. CLARK:
Q. Mr. A, if you could turn to page 85 of the transcript?
And I'll read starting on line 1.
Question, "And exactly how did you turn the IV off or shut the line off?"
Answer, "On the IV line, there's a little clip right there, some with a clamp you just push, and some just has one you roll down. On this certain one, you roll it down. So you roll it on, you shut it off, you stop the flow from flowing into that arm. You unhook the medicine, you hook it into the next line, and you continue from there."
Question "So you hook up the medicine that had begun to be administered into the failed line into the new line; is that correct?"
Answer, "That's exactly."
Mr. A, did you answer those questions and give those answers during your deposition?
A. Yes, I did.
Q. You practice for lethal injections, correct?
A. Excuse me?

Q. You practice for lethal injections, correct?
A. Correct.
Q. And you know that the lethal injection is carried out using three drugs?
A. Correct.
Q. And has it been explained to you that the inmate is paralyzed as a result of one of the drugs that are used?
A. Correct.

Q. If the Division of Corrections decided not to use that drug that paralyzes the inmate and someone explained to you that because that drug was no longer being used, the inmate might jerk or move during the execution, would you still be able to do your job?
(Pause.)
A. I can't answer that question.
Q. Why not?
A. For the simple reason why, because I'm not trained in that field to answer that particular type of question.
Q. But if the inmate was moving or jerking a bit during the execution and you were -- and you knew that might happen, do you think you would still be able to carry out your duties on the execution team?
A. But I don't know that might happen.
Q. But if it were to happen, would you still be able to carry out your job, do you think?

A. I can't answer that.
Q. If you were able to practice for that, would you still be able to do your job?
A. But we don't practice for that.
Q. But if were you to practice for that, could you still do your job?
MS. MULLALLY: Objection. We've been over this, Your Honor. He doesn't know.
THE COURT: All right. I'll sustain the objection. I think the issue is this, if you take a look at these, this is, you know, I'm not a doctor so I'm going to give you my understanding.
If you take a look at the three drugs, the first of the drugs is intended to knock, the inmate out, to put him to place. It's an anesthetic.
The second of the drugs is intended to paralyze the inmates, so they can't move.
And a third of the drugs is intended to stop the inmate's heart and actually to accomplish the death.
The reason for the second drug is to spare the members of the execution team and the witnesses the site of an inmate who may twitch, jerk, or even convulse during the execution.
One of the medically -- apparently one of the problems with the second drug is that if the inmate is

paralyzed, he can't make any sign or cry out if in fact he's experiencing pain.
So one of the things that the State might do would

be to dispense with the second drug. That way, if the inmate were experiencing pain, he could let everybody know, and then the execution could be halted until the problem was fixed.

In weighing whether to do that, the State would have to take into consideration the effect on the execution team and also on the witness's psychological effect of the inmate moving during the administration of the drugs themselves.

So I think what Miss Clark was attempting to get at was not sort of a medical question, or procedural question, but really asking you if you can answer it as a human being, would it be hard on you emotionally if you were to see the inmate twitch, jerk, or even convulse?

You don't even have to answer that question if you're not prepared to answer it, but I think that's what the question was aiming at.

THE WITNESS: Okay.

THE COURT: Can you answer the question?

THE WITNESS: If she asks me my own personal feelings about that?

THE COURT: That's right.

THE WITNESS: Okay. I can't say how I would react

about that if I'd seen it.

THE COURT: Good. Thank you.

MS. CLARK: Thank you, Your Honor. I have no further questions.

THE COURT: Good. Thank you.

Miss Mullally, your witness.

CROSS-EXAMINATION

BY MS. MULLALLY:

Q. Thank you, Your Honor.

Now, Mr. A, as the officer in charge, it's important to you that the execution is set up properly and according to the checklist; isn't it?

A. That's correct.

Q. And you're familiar with when the times when things should be put together and set up, and when things should be prepared, essentially you're aware of the whole continuum of the execution?

A. That's correct.

Q. You confirmed that all the equipment, the proper equipment is present, that the drugs are present, and that I think that the drugs you confirm that the drug are not past their expiration date?

A. That's correct.

Q. And if the drugs are past their expiration date, they're discarded, aren't they?

A. That's correct.
Q. And I believe you have a key to the drug box, or you're -- you're given a key to the drug box prior to an execution?
A. That is correct.
Q. And you take the controlled drugs out of the drug box because they're locked in the box?
A. That is correct.
Q. Now, I believe that you have some experience in the military?
A. That is correct.
Q. And when you were in the military, you did in fact have the opportunity to place some IVs?
A. That is correct.
Q. And in the last two executions, and indeed during the practices, don't you go with Contractual Team B into the execution room while she places the IVs, either in the practice arm during practice, or in the bodies of Oken and Baker during their last two executions?
A. That is correct.
Q. And you've observed her placing IVs in the arms, in the practice arm and in the actual arms of Oken and Baker?
A. That is correct.
Q. Okay. Did she have any problem placing IV's in Steven Oken or Wesley Baker, while you were there?
Did you see her have any problems whatsoever?

A. No.
Q. Do you know why there's a practice arm, why the execution team uses a practice arm?
A. The institution uses a practice arm to make sure that everybody knows, understands how to properly to do an IV.
Q. Okay. So this practice arm, is it the size of a real arm, approximately?
A. Approximately, yes.
Q. And is it in fact placed on the gurney during the practices?
A. Yes.
Q. And does it in fact have some sort of -- it has channels to approximate veins?
A. Yes.
Q. So when you place an IV into that practice arm, you're actually placing it into the arms approximation of a real vein?
A. Yes.
Q. And is there some type of blood that goes through that arm, it's not blood but something that looks like blood so that you can see the flashback when you place the IV in?
A. Yes.
Q. And you've observed Contractual Team B and others during practice do this with the arm?

A. Yes.

Q. And it's you know, you don't, during practices, you don't use a use a real human, and because you don't, the arm is the next best thing to use?
A. Yes.
Q. Now, there's a person, I'll call her the checklist keeper, do you know who I'm referring to? She's the person who calls out the checklist?
A. Yes.
Q. And isn't it true that when an execution occurs and indeed during practices, the team acts according to the checklist?
A. Yes.
Q. And the checklist is a series of steps. There are quite a few of them, that the team goes through to make sure that everything is done at the proper time and in the proper order?
A. Yes.
Q. What does this expression mean to you, if anything? Check, recheck, and check again?
A. That's what we do once we check everything, lay everything out, we check, make sure we have everything out there, and we go back and check, and then we recheck again.
Q. Did you ever, do you ever recall having a drill where there was a problem with an IV site during the drill?
A. Yes.

Q. And what -- was that intentionally or was there actually a problem with the practice arm?
A. Intentional.
Q. Okay. And why would you have an intentional problem like that? Why does the team need that?
A. Well, during the execution, just in case something goes wrong with the vein they are pushing the drug through, they have to move to the second line.
Q. All right. And was that -- that was the purpose of having a problem with the line?
A. Yes.
Q. And what was the problem that was -- that was raised during the practice intentionally, do you recall what it was?
A. Not right offhand.
Q. Okay. What was the result of the problem, did you -- did the team switch to the other arm?
A. Yes.
Q. And does the team -- actually, aren't there two arms that can be practiced on?

A. Yes, there are two arms, but we only use one.
Q. Okay. Now, I take it you have mixed the first drug, the thiopental?
A. Excuse me?
Q. You've mixed thiopental before, the actual drug?
A. Yes.

Q. Was it difficult?
A. No.
Q. Were there directions that you followed, written directions?
A. Yes.
Q. Were they packaged directions?
A. No, they're on the box.
Q. Okay. So they're on the book. Was it difficult?
A. No.
Q. Now, the other two drugs, the second drug and the third drug, do you have to mix anything?
A. No.
Q. Before you put them in the syringes?
A. No.
Q. Each drug is placed in a syringe and a number and a color code is written on each syringe?
A. Yes.
Q. And then aren't those drugs placed in order on the table?
A. Yes.
Q. With the first drug first, red, second drug second, third drug third?
A. Yes.
Q. And has there ever been any problem with someone switching the order of the drugs and their placement on the table?

A. No.
Q. As far as you know, has the red drug ever mistakenly been placed in the green syringe or the blue drug placed in the red syringe, or anything like that?
A. No.
Q. Do you allow anyone who's not authorized to pick up any one of those syringes during practice or during an actual execution?
A. No.
Q. Do you watch the syringe once they're mixed and laid in place?
A. Yes.
Q. If you perceived a problem, any problem with the execution, what would you do?

A. First thing I would do is notify the execution team commander.
Q. Is he in the room, the room where the drug are pushed, the preparation room during the practices and during an execution?
A. Yes.
Q. And you notify him because he actually controls a set of lights that can be a red and a green light that can be flicked on in other room to stop an execution, correct?
A. Correct.
Q. And in addition to your being the officer in charge in

practices and in an actual execution, you've attended something I think you call it a pre-execution meeting, prior to an actual execution?
A. That is correct.
Q. And you attended this meeting for Baker and Oken prior to their execution, and I believe you actually attended a meeting for Evans even though his execution in fact did not occur in February?
A. That is correct.
Q. And the purpose of the pre-execution meeting is to discuss what will happen and how it will happen so that everybody is prepared?
A. That is correct.
Q. During the practice -- you attend practices for executions?
A. Yes.
Q. Don't they last approximately two hours or so, depending on who's running the practice?
A. Yes.
MS. MULLALLY: Thank you. Nothing further, Your Honor.
THE COURT: Thank you.
Miss Clark, anything else?
REDIRECT EXAMINATION
BY MS. CLARK:

Q. Is there any sort of rank among the team members in the preparation room during an execution?
A. No.
Q. Do you report to anyone in the preparation room?
A. Yes.
Q. So there is someone in charge?
A. Yes, the execution team and commander.
Q. In your role as officer in charge, do any of the other team members report to you?

A. Yes.
Q. And referring to PDX 1, which is up on your screen, which team members report to you?
A. Injection Team E and Injection Team C.
Q. Would you be surprised to know that Injection Team E testified there's no rank in the room, and he doesn't report to anyone?
A. No.
MS. CLARK: Thank you. I have no further questions.
THE COURT: Miss Mullally, anything.
MS. MULLALLY: No, Your Honor.
THE COURT: Good. Sir, thank you very much for coming. You are excused. This young lady is going to make sure you get out of the building safe and sound.
Is there any other witnesses to be called who will

testify under the sequestration order?
MR. HUT: No, Your Honor.
THE COURT: Good. Now, what's next?
MR. HUT: Next is the videotaped deposition of Past Team Member M.
THE COURT: Good. So this videotaped deposition is under the sequestration order, correct? I forget what we decided do.
MR. HUT: It is, but what I thought the Court decided do yesterday was to play it in the courtroom, we will turn off the monitors here, Your Honor can look at the monitor, the Court and deputy clerk's law clerk can but the video will not be broadcast to the back, only the audio.
THE COURT: Good. It is 11:25. It's about 11:27. Let's take a recess until a quarter of. And that way the people who are in courtroom 3 D can come up here, if they wish to do so, and we can terminate the feed down to 3 D. Good. Thank you.
(Recess.)
THE COURT: Please be seated, Mr. Hut, whenever you're ready, sir.
MS. CLARK: Your Honor, plaintiff will now be presenting the video deposition clips of past team member M, the who drafted the Maryland's first lethal injection protocol based on Delaware.

For ease of the reference during the deposition, two exhibits will be referred to, the numbers are 96 and 97.
And these exhibits have now been marked as trial exhibits. 96 is trial exhibit 46, and 97 is trial exhibit

43. And they're contained in the binder that was handed up.
THE COURT: Thank you.
Just so that the record is clear, that the courtroom has been set up so that I can see the video and I'll be able to hear the audio. But that none of the monitors that are facing toward the public gallery will have the video, although everyone will be able to hear the audio.
MS. CLARK: Your Honor, it's our intent to give the court reporter a list of the designations that we played at the conclusion of the clips, if that's agreeable to the court reporter and the Court.
THE COURT: Certainly.
MS. CLARK: we'll now be playing video deposition of the execution commander, and I don't believe there are any deposition exhibits referred to during this deposition.
THE COURT: Thank you.
(Tape played)
MS. TINDALL: The next claims will be August 24, 2006 of Execution Team Commander. There will be one exhibit mentioned, it's deposition exhibit 101, which corresponds to trial exhibit 5.

THE COURT: The Execution Team Commander is a different person from the Execution Commander?
MS. TINDALL: Yes.
THE COURT: So the record's clear about that.
The exhibit that you're, the exhibit number is what please?
MS. TINDALL: Trial exhibit 5.
THE COURT: Good, thank you. Let me get it.
(Pause)
THE COURT: Good. Thank you.
(Tape played)
THE COURT: I'm sorry, who will stay now?
MS. TINDALL: He testified that it would be Contractual Team B or Contractual Team D or Contractual Team E.
THE COURT: So B, who else?
MS. TINDALL: Or D or E on the Contractual Team?
THE COURT: Or D. And who's D?
MS. TINDALL: If you'll look at exhibit, trial exhibit 87, there will be a name associated with his generic identifier.
THE COURT: If you'll hold on.
(Pause.)
THE COURT: So that's Contractual Team B, I know who she is. Let's let me find D. Is that Doctor D?

MS. TINDALL: No, Contractual Team D and Contractual Team E.

On the second page the numbers of the team are listed alphabetically by their generic identifier which might make it easier to find these individuals.

THE COURT: And what are the background of Contractual Team D, is that what kind of he medical personnel?

MS. TINDALL: I believe both of these individuals are EMT's.

THE COURT: So Contractual Team B, Contractual Team D, and the third person is.

MS. TINDALL: Contractual Team E.

THE COURT: And E is a what, please?

MS. TINDALL: I believe contractual E is an EMT.

MS. MULLALLY: They're both emergency medical technicians.

THE COURT: Good. Thank you.

(Tape played)

THE COURT: I'm sorry, if you could explain the lighting to me now? I'm confused.

MS. TINDALL: Yes, Your Honor. There was an additional light added to the preparation room, the testimony was that it was a 24-inch florescent tube mounted 4 feet from the floor.

Previously, there was a light bulb in that room, and this testimony is that it would be an addition of the florescent light, the light bulb that had been in the lethal injection room will be removed.

THE COURT: So there's going to be an additional light in the prep room, and the witness testified that the additional of the light in the prep room eliminates the need to have a light in the execution room?

MS. TINDALL: No. He testified that it eliminated the need -- previously to the addition of this light, there had been a light bulb in the preparing room, also called the lethal injection room, that remained on during executions, during administration of drugs.

With the addition of this florescent light, he testified that the light bulb that had previously been left on would be no longer necessary.

THE COURT: Good. Thank you.

(Tape played)

(The preceding deposition excerpts played are as follows: Past Team Member M July 18, 2006

29: 12-14

30: 14-17

38: 9-12

38: 16-22

39: 3-8

42: 22-43: 1
46: 23-25
47: 3-12
47: 18-48: 3
56: 10-24
57: 10-24
58: 20-59: 3
59: 8-12
60: 9-14
66: 21-23
67: 4-21
68: 10-24
73: 20-25
74: 9-22
75: 17-76: 3
76: 7-19
76: 23-88: 8
78: 23-77: 8
78: 14-21
79: 2-5
79: 17-19
88: 10-89: 3
90: 9-1
Execution Commander 6-9-06:
25: 1-12

52: 17-25
53: 1-3
53: 7-12
Execution Team Commander 5-30-06:
19: 7-20
82: 5-21
124: 9-16
127: 8-10
128: 25-129: 6
139: 24-140: 6
140: 13-16
150: 10-20
151: 4-8
163: 7-12
175: 17-176: 4
177: 23-178: 8
Execution Team Commander 8-24-06
10: 2-26
16: 4-15
30: 16-21

32: 3-33: 6
36: 11-17
40: 15-42: 4
43: 6-44: 7
47: 1-14

51: 9-20
53: 12-16
58: 21-59: 1)

MS. CLARK: The final deposition designation we'll be offering are another deposition of Execution Team Commander May 30 of this year. We do not have a video for that, so we'll be reading them into the record.

Is there any particular manner you'd like for us to follow?

THE COURT: No. Just have somebody, I'm not sure they even have to be at the witness stand, it's just whoever's asking question and answering each need to have a microphone.

MS. CLARK: So if I will be doing the questioning can I do it from counsel table.

THE COURT: Certainly.

MS. CLARK: We are now reading deposition designations from the May 30, 2006 deposition of execution team commander.

THE COURT: So this is the same individual who just testified on the screen?

MS. CLARK: Correct.

THE COURT: Good. Thank you.

MS. CLARK: Starting page 19, line 7.

Q. "Have you ever received any sort of medical training

formal or informal?"
A. "Other than what I got in the military and the first aid CPR classes that the department gives."
Q. "What type of training did you receive in the military?"
A. "Just the standard first aid CPR."
Q. "Did that involve any sort of IV insertion training?"
A. "No.
Q. "What about pharmacology?"
A. "No."
Q. "Anesthesiology?"
A. "No."
Q. I'm now reading from page 82, line 5.

"You mentioned that one of your duties as execution team commander is to monitor the IV, correct?"

A. "Observe and monitor, but it is more observing than

monitoring."
Q. "What's the difference between observing and monitoring?"
A. "I am only observing it being put in. Is it my job to say that it's put in properly? No. It's whoever the individual is who is putting it in."
Q. "But you don't continue to observe it after it's initially inserted?"
A. "You mean from the injection room?"
Q. "Correct."
A. "No. Because my back is to the wall and I am facing all

---

of the team members and what they are doing. I am not looking out the window."
Q. I'm now reading page 124 starting line 9.
"Would you be concerned if after the second drug was administered the inmate was still moving?"
A. "Moving, yes no. Because I'm a hunter and even when I shoot an animal, I know it's dead. It will, it will escape all the air from its lungs so it will make one big heave and that's it. That's not -- that's not an unusual movement. That is a normal part of dying."
Q. I'm now reading from page 127, starting on line 8. Turning to the next page of plaintiff's exhibit 15, which is Evans 0 0 3 5 9 1.
A. Okay.
Q. And just for the Court, deposition exhibit 15 is plaintiff's trial exhibit number 4.
Now, beginning on page 128, line 25.
On line 7 A on Evans 0 0 3 5 9 4 it says "place the pressure infuser over the IV bag and inflate to the green line. Do you see that?"
A. "Uh-huh, right."
Q. "Why are pressure infusion bags used during an execution?"
A. "I am not sure."
Q. Turning now to page 139, starting on line 24.

"What if the execution needed to be stopped after the administration of multiple of the drugs, or one of the drugs, what would you do?"
A.
Well, I'd been told it wouldn't matter, so I would stop, and then we would see what the results would be."
Q. "You've been told it wouldn't matter?"
A. "Correct."
Q. Starting now page 140, line 13.
THE COURT: I'm sorry, told what wouldn't matter?

MS. CLARK: The original question was "what if the execution needed to be stopped after the administration of multiple of the drugs or one of the drugs, what would you do?"
A. "Well, I'd been told it wouldn't matter, so I would stop and then we would see what the results would be."
Q. "You've been told it wouldn't matter?"
A. "Correct."
Q. "Now, turning to page 140 line 13, why wouldn't it matter?"
A. "Because at some point you reach a point of no return. I'd been told that the -- that the amount of sodium pentothal doesn't make that possible."
Q. Turning now to paper 150, line 10.
"Does the doctor perform a cut-down, if necessary?"

A. "No."
Q. "Would the execution team use a cut-down procedure if it was difficult to find a vein?"
A. "None of them are trained in that process so that would not be an option."
Q. "So what would happen if it was difficult or impossible to find an adequate vein on an inmate?"
A. "I don't know. We have never, we have never got to that point."
THE COURT: If you could stop for a minute, let me write this down.
(Pause)
THE COURT: Please continue.
BY MS. CLARK:
Q. We're now on page 151, starting at line 4.
"So Maryland would never perform a cut-down procedure on an inmate?"
A. "I can't say that."
Q. "What are the circumstances that it would?"
A. "I don't know."
Q. Turning now to page 163, line 7.
"If you determined that Dr. Scalea deals with intravenous drug users and administers IVs on a fairly regular basis, would his examination of Mr. Evans cause you concern?"

A. "If I was convinced that he actually, he performed IV's, possibly."
Q. Turning now to page 175, line 17.
"Why is the paralytic agent administered to the inmate?"

A. "I don't know."
Q. "Is there any medical purpose for using it during the execution?"
A. "I'm not sure. That's just what -- those are the three drugs that are identified by law to be used for fast acting, barbiturate, paralytic agent, and a third one but in terms of how they establish those, I don't know."
Q. "You said in the use of these three drugs is established by law, correct?"
A. "Yes."
Q. And turning now to page 177, line 23.
"Do you know what happens if a person who is not under adequate anesthesia receives a dose of potassium chloride?"
A. "It burns."
Q. "Are you aware that there are other less painful drugs, which could be used to effect a lethal injection?"
A. "No."
Q. "If there are, would you want to use one of those drugs?"
A. "I think it should be considered."

MS. CLARK: That's all we have.
THE COURT: Good. Thank you.
MR. HUT: Your Honor, we have Dr. Pettifer, who plans to come in the afternoon, so permit me to suggest this might be a good time for the Court's luncheon recess.
THE COURT: Good. And what time will Dr. Pettifer be here.
MR. HUT: He can be here at 1:30, I believe, 1:45, 2, whatever, whatever is suitable for the Court.
THE COURT: We want to make sure we get him on and off, so if he can be here, why don't we say 1:30 would be good.
MR. HUT: That would be fine.
THE COURT: Good. Let's stand in recess, then, until 1:30.
(Luncheon recess.)
THE COURT: Please be seated. Mr. Hut, if you would call your next witness, please?
MS. WOOD: Plaintiff calls Dr. John Pettifer.
(The Witness is sworn.)
THE CLERK: You can be seated. If you can scoot up and speak directly toward the mike. State your name and spell it for the record, please.
THE WITNESS: My name is Glenn Robert Pettifer, Glen, two Ns, Robert, P E T T I F E R.

DIRECT EXAMINATION

BY MS. WOOD:

Q. Good afternoon, Dr. Pettifer.

A. Hi.

Q. Thank you for coming to court. What is your current occupation?

A. I'm currently a specialist in veterinary anesthesiology and pain management, and most my work involves providing clinical services in the realm of veterinary anesthesiology and pain management.

Q. Why are you here to testify in the plaintiff's case?

A. I was asked to provide some insight on the process of veterinary euthanasia.

Q. Before we get to your opinion on that matter, let's talk about the education and experience and training that gave you the ability to provide us with your opinion.

Are you currently a licensed veterinarian?

A. I am.

Q. And are you one of the 175 diplomats of the American College of Veterinary Anesthesiologists?

A. Yes, I am.

Q. Do you have any other positions with the American College of Veterinary Anesthesiologists?

A. I currently serve as the chair of the board of directors of the American College of Veterinary Anesthesiologists.

Q. Can you explain what the college does or is?

A. The main functions of the college are to supervise the training and certification of specialists in the field of veterinary anesthesiology.

Q. And does the American College of Veterinary Anesthesiologists have anything to do with the American Veterinary Medical Association?

A. The American Veterinary Medical Association is sort of the umbrella organization that oversees all of the specialty colleges that are associated with veterinary medicine.

Q. What does it mean to be a diplomat of the AVMA?

A. In order to obtain diplomat status, one has to undergo residency training of two to three years, do some research, which leads to publication, and then submit your credentials to the college, for approval, and if your credentials are approved, then you undergo an examination process.

Q. Do all the diplomats reside in the United States?

A. No. Actually, there are a number of diplomats that live outside of the United States, both in Canada and then in Europe as well.

Q. And you may have already stated this, but if not, can you please tell me a little bit more about the American Veterinary Medical Association does?

A. The American Veterinary Medical Association is a national body, which oversees -- my assumption is that it oversees the

development of policy as it relates to veterinary medicine in the United States.
Q. What does euthanasia mean, Dr. Pettifer?
A. In the veterinary context and in the strictest sense, it means a good death.
Q. What is the American Veterinary Medical Association Panel on Euthanasia?
A. To my understanding, this was a body of individuals that was convened by the American Veterinary Medical Association to consider all of the issues around the process of euthanasia for, you know, a wide variety of species, and following their deliberations, then they published their report that was a summary of some of the issues that they felt were of concern to those individuals that were carrying out veterinary euthanasia.
Q. In your opinion, do the guidelines from this organization reflect generally accepted standards in veterinary euthanasia procedures?
A. Yes, I think they do.
Q. And are the standards for veterinary medicine substantially similar between the United States and Canada?
A. Right, they are.
Q. How long have you been a practicing veterinarian?
A. I received my DVM in 1986, 20 years.
Q. And where did you receive your degree?

A. From the Ontario Veterinary College at the University of Guelf, in Ontario, Canada.
Q. How did you earn your specialty in veterinary anesthesiology?
A. I completed a residency, graduate degree, whatever you call it from the program at the Ontario Veterinary College. That lasted three years, and I am certified by the ACVA.
Q. Has your professional career including teaching veterinary anesthesiology?
A. Correct. Actually, up until my current position, all of my professional activity was related to working in veterinary teaching hospitals associated with various universities. And in that role, I was responsible for training and evaluating veterinary students, interns, residents, veterinarians who are completed specialty training. So I did a lot of teaching and evaluating.
Q. And did you teach in the United States?
A. I did. I taught at the University of Georgia in Athens, and then most recently taught at Louisiana State University in Baton Rouge.

Q. How do you stay informed in the recent advancements in generally practices and procedures in this field?
A. Reading, reading journals, attending at least one or two conferences a year, discussion with colleagues.
Q. Have you published any articles involving veterinary

anesthesiology?
A. I have.
Q. Were any of these articles published in peer-reviewed publications?
A. They were.
Q. Dr. Pettifer, how often do you administer anesthesia to animals in the clinical setting?
A. Currently, probably 10 to 15 times a day.
Q. And how often do you perform euthanasia on animals in a clinical setting?
A. Well, when we have a good week, we don't have to do anything. Probably in our worst, maybe two to three times a week.
MS. WOOD: Your Honor, I have offer Dr. Pettifer as an expert in the field of veterinary medicine, veterinary anesthesiology, and veterinary euthanasia.
THE COURT: Is there any voir dire?
MR. PICKUS: No voir dire, and no objection to his designation, Your Honor.
THE COURT: Thank you.
So Dr. Pettifer is accepted as an expert in veterinary medicine, veterinary anesthesiology, and veterinary euthanasia. Good. Thank you.
BY MS. WOOD:
Q. Dr. Pettifer, at what rate are you being compensated for

your work in this case?
A. $200 an hour.
Q. Do you have a view on the death penalty?
A. Yes, I do. It's not something that I generally support.
Q. In your mind, is there a legal and moral distinction to your views?
A. I'm not sure I understand your question.
Q. Oh. I was just asking you your views?
A. My view? I think that my hesitancy in supporting the death penalty comes from my impression that it's not always applied fairly, that it may actually be a greater burden to the government than incarcerating someone.
And then I generally have a view that I can't always reconcile killing as being a positive event.
Q. Have you previously provided any testimony in similar

cases?
A. Two years ago, I was asked to provide some insight into the process of veterinary euthanasia, in a case in Louisiana, the State of Louisiana.
Q. Do you belong to any anti-death penalty groups?
A. I do not.
Q. Okay. Now, we'll go over what you have relied on in informing your opinion in this matter.
A. Uh-huh.
Q. What types of things have you relied on?

A. Well, primarily, I rely on my own clinical and experience and knowledge of drugs and the process of euthanasia. And then in terms of materials, I've read the report of the AVMA panel on euthanasia.
I'm also somewhat familiar with the Maryland legislation as it applies to the euthanasia of animals. And then I've also have access to and have reviewed some of the depositions of the Contractual Team members.
I've also seen some diagrams and some photographs of the physical layout of the execution chamber and the room surrounding the chamber.
And then I've also have access to and have reviewed some of the expert reports that were provided by the anesthesiologists.
Q. Have these materials given you a general understanding of the drug used in the Maryland procedure?
A. I believe they have.
MS. WOOD: Okay. I'd like to offer plaintiff's exhibit 21, which is the 2000 report of the AVMA panel on euthanasia, and I'll hand it to the courtroom deputy at the end of my exam.
BY MS. WOOD:
Q. Dr. Pettifer, this is also in your binder should you need to look at it. It should be behind tab 21.
As a veterinarian, what is your objective when

performing a euthanasia procedure?
A. As a veterinarian, carrying out euthanasia in a clinical setting, our goal to effect the death of the animal with minimal pain and distress for the animal, and also for the family if they're present during the procedure.
Q. In your experience, when using an injectable drug in a euthanasia procedure, is there a preferred method?
A. I think generally veterinarians prefer to use an injectable drug called sodium pentobarbital.
Q. What is sodium pentobarbital?

A. It is a barbiturate, belongs to class of drugs known as barbiturates. And it is an injectable drug that, in the context of veterinary euthanasia, is used because of its relatively long duration of action.

That actually produces a depression of central nervous system functions. And as the dose of the pentobarbital increases, the degree of depression of CNS functioning increases to the point where even the respiratory center is completely depressed so that breathing stops. And then ultimately the heart will stop.

Q. Okay. So I think you just described for the Court how sodium pentobarbital causes a death in an animal --

A. Right.

Q. -- when you're using it to euthanize an animal?

A. Correct, right.

Q. And you mentioned it was long-acting? Is it a long-acting barbiturate?

A. It's not actually classed, if you look in the pharmacological textbooks, it's not actually classed as a long-acting barbiturate, but it has a longer course of action than some of the other barbiturates do.

THE COURT: So, doctor, is it sodium phenobarbital?

THE WITNESS: Pentobarbital.

THE COURT: Could you spell it?

A. Sure. P E N T O B A R B I T A L.

THE COURT: Thank you.

Q. So when you describing how the drug causes death, it eventually stops the animal from breathing; is that correct?

A. Yes. That's probably the first thing that will happen with an overdose.

Q. And then it stops the heart?

A. Right. So there are a couple processes that are taking place at the same time.

Once the animal stops breathing, then it stops oxygenating itself, stops delivering oxygen into the brain, and the brain doesn't tolerate lack of oxygen for very long. So that then really shuts down brain function and all of the systems that the brain controls, including the heart.

There's a direct effect of the drug as well on the heart muscle itself.

Q. When you're euthanizing an animal, Dr. Pettifer, in your experience from start to finish how long does the procedure take?

A. If you look at a timeline from the time that the drug is, we start to administer the drug till the animal dies,

probably in a matter of three to five minutes.
Q. So, in your clinical setting, it sounds like you had to euthanize pets if it's a bad week; is that correct?
A. Yes.
Q. In your experience, or in euthanasia, are there occasions when what is perceived as aesthetic and what is humane are in conflict?
For instance, I'm thinking if you have the animal's owners in the room or you have witnesses?
A. Right. There may be situations where the reaction of the animal's body to the administration of the drug and the lack of oxygen may produce some movement that may not be aesthetic for the animals.
So sometimes there are -- there's, you know, that's a conflict between aesthetic and the actual euthanasia itself.
Q. Does the AVMA report address guidelines about when euthanasia is aesthetically displaying to witnesses or to pet owners?
A. I think that there is brief mention in the report

regarding that, in that the direction of the panel is that really in those situations, probably the best thing that one can do that a veterinarian can do is to educate the people that may be affected by the process.
Q. So it sounds like just to keep them informed, explain what may or may not happen?
A. And then clinically, that's I mean that's at the type of process that I undertake, that prior to actually euthanizing a pet, I'll have a pet with the family members that are present and tell them what they can expect to see during the process.
MS. WOOD: Okay. I would -- I neglected to offer into evidence Dr. Pettifer's CV, which is previous exhibit 44.
THE COURT: It is received.
(Received in evidence.)
BY MS. WOOD:
Q. Thank you. Let's talk about the drugs that are used in Maryland's lethal injection protocol now.
You've reviewed the protocol, as you stated; is that correct?
A. Correct.
Q. Based on your review of the protocol, what drugs are used to put inmates to death?
A. It's my understanding that there are three drugs that are

used: One is thiopental, which is a barbiturate, and then a neuromuscular called pancuronium bromide is used, and then electrolyte solution of potassium chloride is also administered.
Q. Based on your review of the materials, is there any variation in the dosage based on the individual?
A. Not to my knowledge.
Q. Let's look -- let's turn to plaintiff's exhibit 21 for a moment.
If you turn to the last page, there's an introductory statement on the report.
A. Uh-huh.
Q. Does the AVMA report specifically mention the application of a barbiturate paralyzing agent and potassium chloride delivered in separate syringes or stages?
A. It does not.
Q. In your opinion, does this introductory statement change substance of the generally accepted practices for injectable drugs contained in the report?
A. No, I don't think that it does, because the report deals with a lot of issues around the process of euthanasia, so there still is a lot of information that is used in the report.
Q. Is sodium thiopental similar to sodium pentobarbital?
A. In the respect they're both barbiturates, yes.

Q. Is one shorter or longer acting?
A. It is sodium thiopental is more -- has a shorter duration of action than does sodium pentobarbital.
Q. What does potassium chloride do?
A. Potassium chloride in solution, well, as a solution of electrolytes, potassium and chloride, when they're administered to an animal, they will actually disrupt the electrical activity of the heart and will cause the electrical activity that's necessary for impulse generation in the beating of the heart. They will cause disruption of that, and it will cause the heart to stop beating.
Q. So it's the stopping of the heart that causes death?
A. Yes.
Q. In a clinical setting, are there any limitations on using potassium chloride in euthanasia procedure?
A. Well, the most obvious limitation is that it would be considered to be inhumane in an animal to administer potassium chloride to a conscious animal.
Q. And why is that?
A. Because, essentially, what you will be doing with the animal is -- you know, take the conscious animal and then administering a drug that potentially can cause pain and be irritating on injection, but more importantly, will provide the animal with the conscious experience of having its hard stop and then, you know, there's loss of blood flow to the

brain.
So it wouldn't be, I guess, unlike the experience of having a heart attack.
Q. You mentioned there's some limitations on using potassium chloride?
A. Yes. So if in the clinical setting, if someone feels the need to use potassium chloride, then it is most humanely used in a setting where the animal is already under anesthesia, is under a deep plane of anesthesia prior to the administration of the potassium chloride.
Q. Okay. Does the position in the AVMA report, is that consistent with what you just stated?
A. I think so. In the AVMA report, they talk about the need for a surgical plane of anesthesia prior to the administration of potassium chloride. And that the drug needs to be administered by an individual who is able to assess the level of anesthesia prior to initiating the injection of the potassium.
Q. Does that call for any type of training. I'm sorry. Go ahead?
A. Well, in our setting, a procedure like that would be carried out either by a veterinarian, myself, or trained technician, whose activities would be overseen by myself. But in 99 percent of the cases, I'm the one that's involved with that.

Q. And is anyone else involved, are they actually assessing the anesthetic depth, or is it the veterinarian?
A. It's the veterinarian.
Q. Can you please define what a surgical plane of anesthesia is? I think you discussed that earlier in your answer.
A. When we produce anesthesia in an animal, you know we take it from a fully conscious state to a level of depressed consciousness that allows us to carry out surgical procedures, or diagnostic procedures.
And so with increasing doses of drugs, we move them from that state of consciousness to a point where they're not able to, or where they don't respond to the surgical stimulation.
Q. Okay. In layman's terms, can you explain to me how that's different from merely falling asleep?
A. The difference between sleep and surgical anesthesia is that in a sleep state, if an animal's just asleep, it is easy aroused. It can be aroused by you know, a variety of stimulation, by touching, speaking to it, that sort of thing.
Whereas in a state of surgical anesthesia, you're

not able to actually awaken the animal, unless you turn the anesthesia off. And at a surgical plane of anesthesia, they're nonresponsive to surgical intervention, surgical stimulation.
Q. Okay. So it sounds like that the answer -- the loss of

consciousness is necessary so the animal doesn't feel the pain of the potassium chloride?
A. Correct.
Q. Can you walk me through how you would monitor whether an animal was sufficiently anesthetized during a euthanasia procedure? And just basic just layman terms would be great.
A. Sure. In the context of an animal that we're going to use potassium chloride for, is that what you're asking or just the process in general?
Q. The process in general. If your vet clinic if someone has brought in a pet?
A. Right. If an animal's presented for euthanasia, for whatever reason, there are a number of things that take place. The first thing that we do to prepare for the procedure is to place an intravenous catheter so we have reliable access to the vein. We'll have an intravenous catheter placed.
Then we calculate amount of euthanasia solution that is going to be required to produce euthanasia.
Q. Why do you calculate the dosage?
A. Well, we deal with, you know, a fairly wide range of size of animals. So that we make sure that, you know, the larger animals received an appropriate amount of the drug to actually effect the euthanasia.
Q. Is there anything else you consider other than weight or

size?
A. Certainly, I think that the health status of the animal, the sort of the mental state of the animal. An animal that's more anxious may require more drug. If the animal is quite sick and depressed, it may require less drug. So there are a number of factors that sort of go into determining what dose range you would employ.
Q. Okay. So before I interrupted you, I think we have the pet, we have the IV established, and then what do you do you do next?
A. Well, then verify that the IV catheter is actually in the vein so that we have reliable access to the vein before we go ahead and start administering the drug.
And then the drug administration will start. And throughout the drug administration, then, you know, one

monitors the animal's response to the drug to determine whether or not you're getting the desired or the intended effect. So you're looking at changes in consciousness. You're looking at changes in breathing. Changes in pulse. Changes in things like muscle tone, those sort of things.
And then we also make sure that we have continued intravenous access while we're administering the drug.
Q. And before you get to that step, when you administer the drug through the IV, are you paying attention to the amount of force that's required?

A. I mean, I think generally, that we do that when we were administering any IV solution, that the force that's required to depress the plunger on the syringe provides you feedback with whether or not you have unobstructed access to the vein.
So if there's a problem with access to the vein, then you're going to encounter some resistance to depressing the plunger.
Q. So when you you're pressing the plunger, do you also look at the IV site in the animal?
A. Yeah, yeah. Because sometimes these drugs can cause swelling around the -- around the catheter site, around the IV site if there's leakage.
Q. So swelling means that all the fluid is not going into the vein; is that correct?
A. Correct. Right.
Q. And how close are you to the animal during this procedure?
A. If I'm carrying out the procedure, I'm right there. I mean, so that I have my hands on the animal throughout the drug administration.
Q. So you said you were right there; is that within reaching distance, you could touch the animal if you wanted to?
A. Well, I usually have -- you know, I'll have the animal's paw in my hand or something like that. So I maintain contact with the animal throughout the procedure.

Q. Earlier you stated a couple things you look at to see if loss of consciousness has been achieved. Would it be sufficient to just check one of those things to see if loss of consciousness has been achieved?
A. No. You know, the body's a very complex thing, so we like to use an aggregate of all the information presented to us by different systems, respiratory system, cardiovascular system, all the information that comes from each of the systems sort of put together.
Q. Okay. Why is it important, in layman's terms, to monitor

the anesthetic depth when you're putting an a animal to death?
A. Oh. To ultimately determine that you've actually achieved, you know, your intended effect, which is to completely depress all nervous system functioning.
Q. Okay. You said the intended effect, but part of that is painless death; is that correct?
A. Correct. Right.
Q. Let's move onto pancuronium bromide.
A. Okay.
Q. Do you know what that?
A. Pancuronium bromide is a neuromuscular blocking agent that is administered to produce muscle paralysis.
Q. Is that also sometimes called a uroform drug?
A. Uroform life drug, yes.

Q. In a clinical setting, is pancuronium bromide a preferred drug in animal euthanasia?
A. No, no.
Q. Why not?
A. I think that in the clinical setting, I mean, I never had occasion to use a neuromuscular blocking drug in a euthanasia protocol, because the drug that we use, the sodium pentobarbital, is very reliable in producing the intended effect.
And the big concern that we have in using pancuronium is that it actually is not only superfluous, but it masks or removes our ability to assess the animal's reaction to the injection of the barbiturate.
Q. So would it be difficult to assess the animal's level of anesthesia if pancuronium bromide was used?
A. Yeah, it would be. I mean, because we use things like breathing, we look at changes in breathing as we administer the sodium.
Q. When you say changes in breathing, what actually are you looking at?
A. Well, as you produce anesthesia, and animals take it from a state of consciousness to be anesthetized, the breathing pattern changes.
So what happens is the rate of breathing slows down.

Q. And how do you tell that? Are you looking at the animal?
A. By observing how the animal's chest is moving.
Q. Okay.
A. Right. So that type of information, then, in a paralyzed animal isn't available to us. And we rely fairly heavily on

that type of information to determine the depth of anesthesia.
Q. And it sounds like you also look at eyelids and you looked at a couple other things; is that correct?
A. Correct. So we look at muscle tone, and more commonly we're looking at jaw tone, how easy it is to open and close the animal's mouth. As an animal becomes more deeply anesthetized, then the jaw tone becomes almost absent.
So in the presence neuromuscular blockade when all the muscles are paralyzed, then you're not able to assess muscle tone at all.
Q. Does the AVMA have a view on acceptable practices when using this drug in clinical settings?
A. I believe from the report of the panel, the position is that the use of neuromuscular block agents is not -- not and recommended by the AVMA.
Q. And if at any time you want to refer to the report, please feel to do so. I'm asking you a lot of questions about it.
A. Let me just check.

(Pause.)
A. Actually, within the report itself, they can talk about, or state that when used alone, the injectable agents listed in a particular appendix, which include neuromuscular blocking agents, are considered unacceptable and are absolutely condemned for euth, that is euthanasia agents.
Q. Do you know if the use of these drugs, when used alone, in animal euthanasia is regulated in any other way?
A. Certainly I believe with the State of Maryland, the legislation prohibits use of neuromuscular blocking drug for the euthanasia of animals.
Q. Of animals like dogs and cats?
A. Correct.
Q. Okay. Let's assume, Dr. Pettifer, that you're evaluating the Maryland protocol, the drugs that are used, in terms of using it to euthanize an animal, so you've reviewed the deposition transcripts of the execution team members; is that correct?
A. Right.
Q. So you're aware of their credentials?
A. As described in the deposition, yes.
Q. Like the AVMA guidelines for injectable drugs, does Maryland's lethal injection protocol require personnel performing the act to be trained and knowledgeable in anesthetic techniques?

MR. PICKUS: I'm going to object. I don't believe it's fair or relevant to apply AVMA standards to a lethal injection procedure.
THE COURT: I understand the point, but I'll overrule the objection.
Q. So can you go ahead, answer.
A. Can you repeat the question?
Q. Sure. Like the AVMA guidelines for injectable drugs, does Maryland's lethal injection protocol require personnel performing the act to be trained and knowledgeable in anesthetic techniques?
A. From the materials that I have reviewed, and to my knowledge of what the AVMA has talked about in their report, it doesn't appear that any of the individuals involved in the process are required to have any specific training in anesthesia.
Q. In your opinion, and in the context of your veterinary clinic, would the personnel on the execution team be competent in assessing anesthetic depth of an animal in your veterinary clinic?
A. No.
Q. How have you also reviewed some pictures and a diagram of Maryland's execution room, I think you have stated so?
A. Right.
Q. Based on your view, do you have a general understanding

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of where everyone is located when they administer the drugs?
A. Yes.
Q. And is it in a separate room?
A. Yes. My understanding is most of the people that are involved in the process, and the person who is specifically responsible for administering the drugs, are located in a room that's adjacent to the actual execution room.
Q. If you were using the State of Maryland execution facilities to euthanize an animal, do you feel you'd be in close enough physical contact to monitor the anesthesia of that animal?
A. No.
Q. In your opinion, could you perform a euthanasia procedure on an animal according to generally accepted practices in your field if you followed Maryland's execution protocol?
A. No.
MS. WOOD: One housekeeping matter, I think I earlier stated that Dr. Pettifer's CV was plaintiff's exhibit 44, and it's actually 81. And I'll hand those up later.
I have no further questions.
THE COURT: Thank you.
Mr. Pickus? Your witness, sir.
CROSS-EXAMINATION
BY MR. PICKUS:
Q. Can I get the override turned off so I can use this

machine, please?
There's some drawings on there already, I don't know how to erase that.
Good afternoon, doctor.
A. Hello.
Q. You are a doctor of veterinary science, correct?
A. Doctor of veterinary medicine, yes.
Q. And where are you currently licensed to practice medicine?
A. I'm currently licensed to practice veterinary medicine in the Province of Ontario, Canada.
Q. Do you currently have a license in the United States to practice veterinary medicine?
A. No. But I'm eligible.
Q. Do you currently have any kind of license that would allow to you practice medicine on a human being?
A. No.
Q. Have you ever had any training or experience in providing medical care to human beings?
A. I haven't.
Q. Have you ever done any pharmacological studies on anesthesia used for human beings?
A. On humans?
Q. Yes.
A. No.

Q. Are you trained in applying anesthesia to human beings?
A. No.
Q. Are you trained in assessing anesthetic death for human beings?
A. No.
Q. Do any of your publications have anything to do with the photograph medicine on human beings?
A. No, not at all.
Q. Are any of your affiliations regarding practice of medicine on human beings?
A. I am a member of the International Academy for the Study of Pain, which is a multidisciplinary group, and there are a number of MDs that are also a member of that group.
Q. Other than that affiliation --
A. No.
Q. -- any --
A. No.
Q. You are currently a member of the AVMA?
A. I am.
Q. Do you believe that the AVMA and their publications set

forth current standards of veterinary practice?
A. Yes.
Q. And you would say that's true of the AVMA report on euthanasia?
A. Yes.

Q. And it's your opinion here today that Maryland protocol, as it stands right now, would not be allowed to be used for euthanizing animals; is that correct?
A. Are you referring to the drug protocol or the physical layout?
Q. Both.
A. Both?
Q. Yes.
A. I think, given the physical layout and the drug protocol that has been outlined to me, it doesn't reflect the generally held approach to euthanasia in the veterinary clinical setting.
Q. And at least in part you relied on the 2000 report of the AVMA panel in euthanasia, correct?
A. Relied on it for?
Q. For that opinion?
A. Yes, I referred to it. But I relied largely on my own clinical experience.
Q. But their report would support your opinion, do you believe?
A. I think so, yes.
Q. In this report some of the methods of euthanasia allowed include decapitation; is that correct, in certain circumstances?
A. In some circumstances, yes.

Q. Is that decapitation done by a guillotine?
MS. WOOD: Objection, beyond the scope of direct.
THE COURT: I'll overrule. Decapitation of what?
Q. Is decapitation of smaller animals done with a guillotine?
A. In some settings, yes.
Q. Does the report allow for some animals be euthanized in certain setting by electrician?
A. Yes.
Q. Does the report allow for animals to be euthanized in settings by something called microwave irradiation?
A. Irradiation, yes, it's listed as a method.
Q. Is that heating up an animal's brain with microwaves?
A. It seems to be, yes. I don't have any particular experience with that.

Q. Does the report allow for animals to be euthanized by something called cervical dislocation?
A. Yes, it does.
Q. In layman's terms is that wringing an animal's neck?
A. I don't think that it's that crude a technique.
Q. Is it similar?
A. It's similar.
Q. And the report even allows some animals to be euthanized in certain situations by a, gunshot; is that correct?
A. It does.

Q. Now, you stated in your practice when you have to euthanize animals, you mainly deal with sodium pentobarbital?
A. Correct.
Q. And you do not regularly deal with sodium pentothal?
A. Not as a drug that we use to produce euthanasia, no. But I do use it on a daily basis as an anesthetic.
Q. And do you use it as a general anesthetic?
A. I use it as part of a protocol that to induce general anesthesia, but not to maintain general anesthesia.
Q. To your knowledge, is sodium pentothal a derivative of barbituric acid?
A. Yes.
Q. Do you have your AVMA report in front of you?
A. I do.
Q. If you could turn to page 680.
THE COURT: And what number is that, again, please, Mr. Pickus?
MR. PICKUS: It's plaintiff's 21, Your Honor.
THE COURT: Good. Thank you.
Q. If you look on the left-hand column first full paragraph, does it say all barbituric acids derivatives that are used for anesthesia are acceptable for euthanasia when administered intravenously?
A. Yes.
Q. Do you agree with that statement?

THE COURT: I'm sorry, what page again, please?
Q. Page 680 of the actual report, left-hand column, first and indented paragraph.
THE COURT: Thank you. Do you see that statement, doctor?
A. I do see it.
Q. Do you agree with that statement?
A. I do agree with it.
Q. Now, in layman's terms, is the purpose, well, actually not in layman's terms, I'm trying to get an animal to be

unconscious, is the technical result we're looking for to cease functions of the cerebral cortex and the subcortical structures?
A. Yes.
Q. Did I pronounce everything correct?
A. I think so.
Q. Could you turn to page 672 in the report right-hand column very last paragraph.
A. Correct.
Q. Are you with me?
A. Yes.
Q. It says, does it not, "For pain to be experienced, the cerebral cortex and subcortical structures must be functional. If the cerebral cortex is not functional because of hypoxia, depression by drugs, electric shock, or

concussion, pain is not experienced. Therefore, the choice of the euthanizing agent or method is less critical if it is to be used on animal that is anesthetized or unconscious."
A. Provided the animal does not regain consciousness prior to death.
Q. Do you agree with that statement?
A. Yes.
Q. And to your knowledge, can sodium pentothal cause the cerebral cortex and subcortical structures to cease functioning?
A. That's -- if an overdose is given, yes.
Q. Well, does it even need to be an overdose? You testified you use it for anesthesia?
A. Yes, but that, the purpose of anesthesia is not to remove all function of the cerebral cortex or the subcortical structures, because in doing that, then you're actually producing death, not anesthesia.
Q. Okay. But you agree if an overdose of sodium pentothal is given, then those functions would be ceased?
A. Right.
Q. And if that occurs, the animal, since we're talking about animals, will not experience any pain no matter what is done at that point; is that correct?
A. Once they're dead, no.
Q. No, once the -- are they dead when those functions have

stopped working?
A. I think that's, yeah, that's how we define it.
Q. Well, can there still be circulation or a heart beat?
A. No.
Q. So your testimony is once these cerebral functions stop,

there's no longer the possibility of circulation?
A. Once the brain has ceased functioning and then all the sort of the consequent depression of respiratory and cardiovascular functioning, yes.
Q. Well, why would the report say any method of euthanasia is then acceptable, if the animal would already be dead?
A. I don't know. I didn't write it. But my -- the way I interpret this is that it's true that, for pain to be experienced, the cerebral cortex and subcortical structures have to be functional. So there has to be some level of cortical activity for pain to be experienced.
Q. And if there is not, no matter what agent is then used, there would be no pain, correct?
A. That seems to be the case.
Q. Does that seem to be what the report's saying, or do you disagree with the report?
A. No, no, I agree.
Q. And the use of potassium chloride to euthanize animals is allowed in certain circumstances; is that correct?
A. It is.

Q. And when is that?
A. I'm not sure when people decide that they need to use potassium chloride. The AVMA report speaks to the situation where it's appropriate to use it in cases where an animal is already anesthetized.
Q. And in your practice, the way of anesthetizing the animal would be with the sodium pentobarbital, correct?
A. No. In my practice, so we're talking about anesthesia or euthanasia?
Q. Well, euthanasia.
A. In my practice, there are two ways in which euthanasia presents itself. It would either be an animal that is presented in a conscious state that is to be euthanized, or it may be an animal that is already under general anesthesia, and it's been decided while the animal's anesthetized that we need to go ahead and euthanize it.
Q. Would you agree that the report would say that an animal that has been anesthetized with potassium chloride can then be used as an euthanizing agent?
A. As long as the level of anesthesia is appropriate, yes.
Q. Now, you previously testified during questioning of Miss Wood, that you want to be right on top of the animal when you're euthanizing the animal or even for that matter gauging anesthetic depth?
A. Correct.

Q. And one of the reasons you're looking for symptoms of something going wrong, basically, for lack of a better term?
A. Not always. I mean, you're looking for the response of the animal to the drug. So it can either be a positive thing, or you're also looking to see whether there are things that are happening that you hadn't intended.
Q. So it's your testimony it's better to be right next to the patient, and in your case the patient is an animal, in giving both anesthesia and euthanasia; is that correct?
A. Yes.
Q. And are you aware under the Maryland protocol that Contractual Team B now stays in the execution room and stays right next to the inmate during the administration of the chemicals?
A. I think, yes, Miss Wood informed me of that.
Q. So, therefore, she would be in the proper view to gauge, with any amount of training, of course, to gauge what's going on with the patient, in this case not really a patient, the inmate?
A. Yes. And depending on her training.
Q. And you also said that if an IV is leaking, there will be swelling?
A. Yes, in most cases, there would be.
Q. When you administer sodium pentothal for the purpose of animal euthanasia, what kind of doses do you use? I realize

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in veterinary medicine you deal with a wide range of animals?
A. Right.
Q. What would be the kind of doses that you would give, would it be helpful to narrow it to a breed?
A. Well, I mean, we can go anywhere from given a volume of say five milliliters to a small dog to giving one 120 milliliter to a large horse or even on up to you know 300, 400 milliliters to an elephant.
Q. So when you want to anesthetize an elephant, you're giving 3 to 400 milliliters of sodium?
A. Not in anesthetizing. Euthanizing it.
Q. So 300 milliliters sodium pentothal would kill an elephant?
A. In the one situation where I've been involved in doing that, the elephant was already anesthetized.
Q. And can you give me the weight range of the elephants that you might euthanize?
A. Oh, gosh. 3,000 kilograms, maybe.
Q. Okay. You're going to have help me, because kilograms don't mean a whole lot to me. Can you give --
THE COURT: 2.2. If you --
A. No, I can't.
THE COURT: If you're in a court that has heavy drug docket, you know what it is.
(Laughter)

Q. Is it fair to say that, in your experience, the average elephant would weigh a whole lot more than the average human being?
A. Yes.
Q. And your testimony is 300 milligrams of sodium pentothal would kill an elephant?
A. And I am drawing on, you know, memory of a procedure that I undertook probably ten years ago with an elephant, so I wouldn't want to commit myself.
Q. That's fair. Are you wear the dose of sodium pentothal given in the Maryland protocol?
A. So we're talking pentothal now, not pentobarbital?
Q. What were you talking about?
A. I was talking about pentobarbital. That's what we used to carry out euthanasia. We don't use pentothal.
Q. Okay. Well, what is your experience, then, with sodium pentothal?
A. As a -- I use it on a daily basis to induce general anesthesia in animals, take them to a level of consciousness or unconscious this that allows me to place a tube in their trachea, in their windpipe, and then they're connected to a gas anesthesia machine. So I use pentothal solely to induce general anesthesia.
Q. Okay. I believe you stated in your direct examination that you believed sodium pentobarbital had a longer lasting

effect than sodium pentothal, am I fair phrasing you correctly?
A. Yes.
Q. Are you aware of the dose of sodium pentothal given by Maryland's protocol?
A. According to the materials I reviewed, I believe it's three grams.
Q. And just so I'm clear, how many milliliters is three grams?
A. It depends on the concentration of the solution, so I don't know.
Q. Do you have any idea what effect three grams of sodium pentothal would have on a human being?
A. I have no idea. It is outside of my area of expertise.
Q. You don't know if it would kill a human being?
A. I have no idea.
Q. You don't know in what percentage of people it would render someone unconscious?
A. No at all.
Q. You don't know how long a human being would be

unconscious under that dose?
A. I do no.
Q. Now, I believe if I could show you an exhibit, this was the back page of the exhibit that, just for clarity, I'd like to mark this as defendant's 6.

Have you seen this before?
A. I have.
Q. In what context?
A. When I was reviewing the report itself.
Q. And do you believe this is, in fact, the statement from the AVMA?
A. Yes.
Q. Do you have any reason to doubt that it's not from the AVMA?
A. No.
Q. And the first line says "The 2000 report has been widely misinterpreted."Is that correct?
A. That's what's what it says.
Q. If I could skip to the next paragraph, it says "Before referring to 2000 report of the AVMA Panel on Euthanasia, please contact the AVMA to ensure the association's position is stated correctly."
Is that correct?
A. Yes.
Q. And you have referred to this report; have you not?
A. I have.
Q. Have you contacted the AVMA?
A. I have them -- I'm not stating the association's position. I think it's also worthwhile noting that in the report, they go on to say that the report is intended for use

by members of the veterinary profession who carry out or oversee the euthanasia of animals.
Q. And it's used for purposes of guidelines for euthanizing animals?
A. Correct.
Q. And this document seems to be saying that it has been misinterpreted in its application to lethal injection, for human being, correct?
A. That's what the AVMA is saying.
Q. Number one, in fact, says the guidelines in this respect are in no way intended to be used for human lethal injection?
A. Right.
Q. But that is exactly what you have done; is it not?
A. No. I don't believe that's what I am doing here at all. I believe that I'm here talking about the process of

veterinary euthanasia.
Q. Okay. You were asked questions directly comparing what's in this report to that the Maryland lethal injection protocol; ere you not?
A. Yes.
Q. So how are you not using that for human lethal injection?
A. Well, I guess it depends on how you interpret the first caveat in this page. Because it says the guidelines in the report are in no way intended to be used for human lethal injection, which I'm sure, and I certainly agree with the

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notion that the information in the AVMA report shouldn't be used to direct the process of human lethal injection. That's not what it exists for. I'm merely here drawing, you know, I've been asked to make comment about the Maryland process as it compares to the information that's presented in this report.
THE COURT: Could if I could ask, Mr. Pickus, the exhibit that's on the screen is what number, please?
MR. PICKUS: Well, Your Honor, it's actually last page of plaintiff's 21, but I redid it as defendant's number 6.
BY MR. PICKUS:
Q. Are you suggesting that, despite this caveat, the AVMA did not intend for this particular warning to be applied for the commenting on lethal injection protocol?
A. I can't speak for the AVMA. I'm not here represent the AVMA.
Q. Would you agree that the AVMA a says this is been misinterpreted and it should not be applied to lethal injection, correct?
A. That's what it says.
Q. So, other than using the report as a basis of commenting on Maryland's lethal injection protocol, you were also using your own experience?
A. Correct.

Q. And you have no experience treating human beings?
A. No. But I have lots of experience carrying out euthanasia.
Q. And you have no experience providing anesthesia to human beings?
A. Right.
MR. PICKUS: That's all I have, Your Honor.
THE COURT: Thank you. Is there any redirect?
MS. WOOD: Yes, it will be short.
REDIRECT EXAMINATION

BY MS. WOOD:
Q. Dr. Pettifer, I believe there were some physical methods of euthanasia mentioned, cervical dislocation, decapitation. Can you please turn to page 681 in the report?
A. Uh-huh.
Q. Under the second that's titled "physical methods"?
A. Right.
Q. That's where I see what counsel was referring to earlier. Cervical dislocation, decapitation, et cetera.
A. Right.
Q. Can you please read the sentence that starts with when --
A. Oh. When properly used?
Q. Yes.
A. "When properly used by a skilled personnel with well-maintained equipment, physical methods of euthanasia may

result in less fear and anxiety and be more rapid, painless, and humane and practical than other forms of euthanasia, exsanguination, stunning, and pithing are not recommended as sole means of euthanasia, but should be considered adjuncts to other methods."
Q. Thank you. Do you agree with what you just read?
A. Yes. I agree in some of these physical methods, if they're carried out are appropriately, can lead to relatively rapid death that's pain-free and stress-free.
Q. Okay. And I believe on the same page just a little bit higher in the section titled "Recommendations," it talks about the training that is necessary for people who are knowledgeable in anesthetic techniques.
Do you see that in relation to potassium chloride?
Q. Yes.
A. Correct.
Q. Can you read that sentence, just the one sentence, and tell me if you agree?
A. "It is of utmost importance that personnel performing this technique are trained and knowledgeable in anesthetic techniques and are competent in assessing anesthetic depth appropriate for administration of potassium chloride intravenously."
Do I agree? Yes.
MS. WOOD: Thank you. No further questions.

THE COURT: Thank you, doctor. Before you go, I did have a few questions.
Earlier in your testimony, you were discussing two drugs; sodium pentobarbital, which you helpfully spelled for me, and thiopental and the difference between these two drugs

is what, sir?
THE WITNESS: Thiopental is the same as sodium pentothal. Just a different term. And then pentobarbital is the drug that we use for euthanasia of animals.
THE COURT: Now, are these both drugs that induce unconsciousness, are they used for --
THE WITNESS: Yes.
THE COURT: -- anesthesia?
THE WITNESS: Well, certainly thiopental or pentothal is in my clinical practice is used to induce unconsciousness.
Pentobarbital, two decades ago may, have been used to induce unconsciousness, but now it's used solely in my clinical setting to produce death. So it's not actually used to provide, you know, for clinical anesthesia.
THE COURT: In looking at the report, and I'm on page 680, it says "All barbituric acid derivatives used for anesthesia --" and I believe that in response to Mr. Pickus's cross-examination, you said that thiopental is a barbituric acid derivative; is that correct?

THE WITNESS: Yes, that's correct.
THE COURT: And is sodium pentobarbital also a barbituric acid derivative?
THE WITNESS: Right, right.
THE COURT: Now, when administered intravenously, there's a rapid onset of action and loss of unconsciousness, induced by barbiturates, results in minimal or transient pain associated with venipuncture.
THE WITNESS: Right.
THE COURT: So desirable barbiturates are those that are potent, and I take it you would agree both of these are potent?
THE WITNESS: I think -- I think that pentobarbital is more potent than thiopental, and that's largely because of the concentration of the solution. So the solution of pentobarbital we use to produce euthanasia is high concentrated so that makes it more potent.
THE COURT: And the next is a long-acting, and that's really what I was most interested in, my understanding is that thiopental is a short, ultra short-acting barbiturate?
A. Right, right.
THE COURT: And what does that mean?
THE WITNESS: It really refers to the fact that after the administration of a single dose of the drug, that

it is redistributed in the body and cleared relatively quickly. So that following the administration of a single dose, an animal would wake up relatively quickly from that.

THE COURT: Does it have an advantage in putting someone, or an animal to sleep quicker than a long-lasting barbiturate?

THE WITNESS: Right. In terms of the production of unconsciousness, not that I am able to ascertain in the clinical setting.

THE COURT: And you've used both?

THE WITNESS: Yes, I have.

THE COURT: In my own personal experience, they ask you to count backwards by 10, and you usually get to about 6 or 6?

THE WITNESS: Right. And now currently some of the drugs that they use they don't even care if you count backwards, because you won't even get 10 uttered.

THE COURT: So that the sodium pentothal and the sodium, let's say thiopental, and is there an acronym we use for sodium pentobarbital something shorter we can call it by?

THE WITNESS: Actually, in the context, we refer to it as euthanol. That's the trade name. Euthanol.

THE COURT: So euthanol and thiopental, to your experience, induce unconsciousness equally quickly?

THE WITNESS: Yes.

THE COURT: Do you know whether they are relatively the same in terms of the pain of injection, there's a -- it says here loss of consciousness results in minimal or transient pain associated with vena puncture.

When I read that, I thought that meant these drugs knock you out quickly so is it having your vein punctured hurts for only a short time, or having the drug put in your system hurts for only a short time?

Because, of course, when you get the injection, lethal injection, either in animal euthanasia or under the protocol, your vein is punctured well before the drugs are administered. So I was looking to see what that was talking about.

THE WITNESS: My sense is that they're talking about the situation where you would have either of those drugs in a syringe with a needle on it, and that rather than having an intravenous catheter in place trying to administering the drug, you would just actually put the needle in the vein. The needle's attached to the syringe, and you just go ahead and inject directly through the needle.

THE COURT: So what they're really talking about in that sentence applies when the lethal injection is given by a needle rather than a catheter?

THE WITNESS: Right, right.

THE COURT: Good. The third point is that, if you

have a long-lasting barbiturate, that means that if you're put under, in the plane of anesthesia, if you have the long acting, you'll stay under longer --

THE WITNESS: Correct.

THE COURT: -- than you will than if it's a short acting.

THE WITNESS: Correct.

THE COURT: Is there any difference in the two, thiopental and euthanol in the dose that it takes to achieve of the surgical plane of anesthesia?

THE WITNESS: Well --

THE COURT: What I'm essentially interested in is this. It's clear from the Maryland protocol that if the full dose of the thiopental is administered, that it's a massive dose, the person will not only be put under, but will die from it?

So that if the dose is administered successfully --

THE WITNESS: Right.

THE COURT: -- the fact that the results are short-acting is immaterial, because it will achieve quick and painless death, agreed? In a mass dose? Successfully administered in the vein travels through the blood system?

THE WITNESS: I don't know that I comment on that because I'm not -- I'm not aware of the dose that's required to produce anesthesia in people.

THE COURT: Fair enough.

So what I was looking for is this, if you have a-- maybe we ought go back to your specialty, if you have an animal that -- well, let me see how I can frame it.

If you have an IV that's only working partly --

THE WITNESS: Right.

THE COURT: -- so that not all of the drug is flowing through the veins --

THE WITNESS: Right.

THE COURT: -- and you want to achieve sedation or the plane of anesthesia --

THE WITNESS: Surgical anesthesia, yeah.

THE COURT: -- is it better to have one as opposed to the one, the one being thiopental as opposed to euthanol?

THE WITNESS: If I was presented with a situation in my practice, where I had to make a choice, and I mean we use pentobarbital routinely, I think that because the pentobarbital is produced in such a high concentration, so it's very potent compared to what I would use the concentration of the thiopental that I would use, so that the

amount of pentobarbital that you have to give to achieve the desired effect would probably less than the volume of the amount of thiopental that you will have to give.

But, I mean in clinical practice generally, thiopental is in a concentration of two and a half percent.

So you have to give a fair amount of that to actually, you know, achieve an overdose.

So I think because the euthanol is intended for euthanasia and is marketed or produced at a relatively high concentration, in the scenario that you described, you're more likely to achieve the desired effect of use of a highly concentrated solution.

THE COURT: And by highly concentrated solution, you mean what?

THE WITNESS: I mean that in for every milliliter of pentobarbital, there's more active ingredient than for every milliliter of say a two and a half solution of the thiopental.

You could -- you know, you could take the thiopental and make it more concentrated so that you're able to give more drug over the same period of time with a more highly concentrated solution. The problem becomes that when you start to make it much more highly concentrated, it becomes much more irritating. So then you increase the risk of pain on injection or that the veins themselves may start to suffer some damage.

THE COURT: You mean, if you highly concentrate the thiopental?

THE WITNESS: Correct.

THE COURT: The concentration itself makes it more

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irritating to the vein?

THE WITNESS: Exactly right.

THE COURT: So let's go back to pentobarbital, your testimony is that is very highly concentrated?

THE WITNESS: It is.

THE COURT: Does the concentration of that drug mean that it's irritating the vein or have they found some way to circumvent?

THE WITNESS: I think they must -- my sense is they must either include something in the solution or it just doesn't have that physical property of irritation.

Because, in my clinical practice, I don't see a lot of reaction to the administration of the euthanol.

Now, part of that, too, is that in our setting, we will often sedate -- excuse me, we'll give a sedative, some

type of, you know, relaxing drug, like Valium or something like that, just to reduce anxiety level of the animal prior to administration the actual euthanol itself.

THE COURT: Is the Valium administered by injection?

THE WITNESS: Oh, right, right.

THE COURT: Now, when a animal receives a lethal dose of the euthanol, and dies as a result, what is the - if you can generalize the usual degree of movement, spasm, jerking, et cetera, of the animal as it's dying?

THE WITNESS: There are a lot of factors that might contribute to that. You know, the health status of the animal, whether or not they've received any additional drug, like a sedative prior to the administration of the euthanol. But, typically, there isn't a lot of movement at all.

The only thing that we might see occasionally is what's called an agonal gasp. Once you actually stop circulation and you stop the flow of oxygenated blood to the brain, when the brain senses it's not getting oxygen, then it sort of, the reaction of the body is to try and you know, take a double of breath, so you'll see this sort of the mouth may open widely. But it's purely a reflex reaction to the hypoxemia, and those are the situation where you really have to counsel the owners about, you know, what's going to happen and what this actually means, that the animal isn't experience any pain. It's purely a physical reaction.

So what you know you may see that occasionally, but certainly not all, beyond that, that's it.

THE COURT: I know that we're talking about two different situations, but if properly counseled, the owners of the pet, are they normally able to tolerate that pretty well?

THE WITNESS: Well, it really depends on the owner, you know. And so a lot of what you do when we're involved in euthanizing pets is, you know, dealing with the psychology of

their relationship of the animal to the owner and trying to engage what their response would be like.

So in some situations, we'll recommend that the owners not be present. And in other situations, you know, we figure that with appropriate education, that they'll be able to -- they'll find that the experience will actually ultimately be a positive one for them.

THE COURT: Now, the reason, is this accurate, that the reason that you closely monitor the animal, just to -- there are two situations that in contemplation, the first is

administering anesthesia with a medical procedure, like an operation in helping the animal, there I understand that you are, and that's something you do regularly in your practice, correct?
THE WITNESS: Correct.
THE COURT: And the reason for doing it is to make sure that the animal is deep enough but not too deep?
THE WITNESS: Right.
THE COURT: When you're euthanizing an animal, you're not worried about too deep, you're only worried about too light, correct?
THE WITNESS: That's correct.
THE COURT: So why is it that you have to monitor the animal so closely, is that -- is it because the physical signs tell you, help tell you whether enough medicine is

reaching the blood system to achieve death?
THE WITNESS: Certainly the sort of intensity of the monitoring that we undertake is more aggressive in situation where we want the animals to wake up. Right?
So we want to be able to very closely monitor the body's response to the administration of the anesthetics. And that's -- it's the same with people, we look at blood pressure, oxygenation, all of those sort of things.
We're not that aggressive, or we're not aggressive in that way when we were undertaking euthanasia. Like you say, we're really just monitoring to make sure that we've actually achieved the desired effect. So you know, when we do euthanasia, we don't have a lot of equipment hooked up to the animal. We rely on our physical senses, changes in breathing pattern, that sort of thing.
So you can tell whether you're, you know, getting the desired depression of consciousness. Sometimes you'll be able to detect it, the animal's actually going to start become excited during the procedure, and then you can vary the rate of administration of the drug so you can get them through that excitation faster.
THE COURT: So that here you don't have, the animals, you're not hooked up to let's say an EKG?
THE WITNESS: Not necessarily, no.
THE COURT: The disclaimer that Mr. Pickus showed

you --
THE WITNESS: Yes.
THE COURT: -- do you know what the debate was within the organization that led to the disclaimer?
THE WITNESS: No, I don't. I'm not privy to that.

THE COURT: Because there are two ways that it might be taken. One is that the physical process differ between humans and other animals, or other mammals, and the second way of looking at it is that we've gotten unintentionally gotten ourselves dragged into this death penalty fight, and this isn't our fight, and we don't want to be here so don't involve us.

Do you know which it was?

THE WITNESS: I don't know from the AVMA point of view which one it was. I suspect it's the latter, not the former.

I think, actually, if you look at that disclaimer again, the third point that they list there, the report never mentions pancuronium bromide or Pavulon. It's true, they don't. But they talk about the broad class of neuromuscular blocking drugs. So my sense is they're uncomfortable with the organization being seen to be associated with the issue of lethal injection to humans.

THE COURT: So their report in 2000 really was aimed at this is proper, the best procedures for euthanizing

non human animals?

THE WITNESS: Right.

THE COURT: And it's not, you're not aware of any intended use of that document is sort of a stalking horse in the great death penalty debate?

THE WITNESS: used as what?

THE COURT: The stalking horse as to the great death penalty debate.

THE WITNESS: I don't know what it means.

THE COURT: The people who wrote it didn't sit down to think we're going to write something for veterinary science that they can then use in the death penalty wars.

THE WITNESS: Oh, gosh no. I mean, I'm sure that they don't have that intent at all. It's such a complex issue.

THE COURT: Good. Thank you.

Any other questions from Mr. Evans' side?

MS. WOOD: Yes.

REDIRECT EXAMINATION

BY MS. WOOD:

Q. Dr. Pettifer, in answering the Court's question, you said that you don't monitor depth as closely during euthanasia than anesthesia procedures, were you referring to euthanasia involving potassium chloride?

A. No.

Q. Would that or another painful agent affect how closely you monitor death during euthanasia?
A. Yes, I guess it would. And I didn't mention it, because it's not something that I'm routinely involved in, the administration of potassium chloride for euthanasia.
MS. WOOD: Thank you.
THE COURT: Mr. Pickus, anything else, sir?
MR. PICKUS: No, sir.
THE COURT: Good. Thank you. Doctor, thank you very much for coming. You are excused.
And have a pleasant trip back to?
THE WITNESS: Canada. Toronto. Thank you.
THE COURT: Why don't we take just a recess until 15 minutes after. And then where are we going next?
MR. HUT: If I could sort of preview what I think the schedule is before the recess. After the break, we would propose and intend to offer in evidence a number of admissions by the defendants.
I have at the conclusion one scheduling matter, one administrative to raise with the Court. But after the admissions that we would like to have in evidence, we would propose to adjourn for the day.
Then tomorrow we will have the testimony of Miss Hall, a witness to the Joe Clark execution in Ohio that I made reference to in opening statement.

We will have some housekeeping matters relating to the admission in evidence of various exhibits that may not have been used with witnesses.
And that will conclude the plaintiff's case-in-chief, we will have rested.
THE COURT: Good. Thank you. Then let's come back at 15 minutes after.
(Recess.)
THE COURT: Please be seated. I have just a few preliminary questions.
And I'm looking to a fact, and that is, that Mr. Evans was an intravenous drug user, either primarily or exclusively heroin.
And I believe this is accurate, that the State is willing to sort of operate on the agreed assumption that Evans was an intravenous drug user before 1984; is that essentially correct?
MS. MULLALLY: Yes, Your Honor.
THE COURT: Good. Thank you. Obviously, the state doesn't have any direct evidence of that, but the state, I think it's accurate to say, has, is willing for the purpose of this case to make that agreed upon -- it's not a stipulated fact, but you're not opposing that assertion?
MS. MULLALLY: No. What the State knows is that Evans committed these murders for the money because he was an

IV user in 1984.
THE COURT: good. So that fact is then established.
Then we come into the issue whether he was an IV drug user and to what extent post 1984, and the State is not conceding, or agreeing to that fact. So I think that's accurate, is it not?
Miss Mullally is nodding.
MS. MULLALLY: Yes, Your Honor.
THE COURT: So either you can stand on the record as it exists with the agreement of chronic persistent drug use before 1994, or let's see. You can either stand on that, or you can seek to amend the record if you need to with evidence post evidence of 1984.
But, in my view, there isn't sufficient evidence of post 1984 drug use. Well, there may be some but there's not much.
So what you want to do is decide whether you want to try to attempt, whether you want to establish post 1984 drug use, and there may be a couple of avenues for you to do it.
One, you'll have to decide on whether you think the game is worth the gamble.
MR. HUT: May I address that question, Your Honor? Actually, it was my intention to do so.

As a first order of business this afternoon, we offer in evidence, move in evidence, plaintiff's exhibit, will be mark 106. Plaintiff's 106 is a verified, it's a copy of a verified set of interrogatory answers.
Mr. Evans has sworn to the accuracy of those answers, those facts set forth in the answer within his personal knowledge. And that includes the answer to interrogatory number 8, which said --
MR. PICKUS: Your Honor, before he reads this, we object to this document.
THE COURT: Good. So that the interrogatory answers are marked for identification, but they have not been received into evidence yet. And what Mr. Hut now is doing is telling me what's in the interrogatory answer.
MR. HUT: Yes. And the proffer here, they are in effect, effectively they're in the record of the litigation, they're not in evidence.
MR. PICKUS: I hate to keep interrupting. I apologize. Before we do a proffer of evidence that may not come in, I ask that the courtroom be closed.

MR. HUT: This is a public document, Mr. Pickus, these are answers to interrogatories.
THE COURT: Well, it doesn't name any names, does it?
MR. HUT: It certainly does.

THE COURT: It does? Why don't you do this, can I see a copy of it, first? Give it to my law clerk, yes, please.
(Pause.)
MR. HUT: I have the original, Your Honor, should the Court wish to see it. But it the original verification.
THE COURT: Good. Let me then read it.
MS. MULLALLY: What number, sir?
MR. HUT: It's the answer to interrogatory number 8.
MS. MULLALLY: Thank you.
THE COURT: So I've read the answer to interrogatory number 8. Interrogatory number 8 does not identify anybody on the Maryland execution team.
In fact, doesn't identify anyone within the Maryland Department of Corrections, but does chronicle what he claims is his IV drug use. So I don't see any problem with having it referred to on the record in court.
Good. So what you should do is have this interrogatory answer number 8, let's just have it marked for identification as so it will be somewhere in the record, easy to find, just give it a plaintiff's number marked for identification.
MR. HUT: We've marked the entire set as 106.
THE COURT: 0 6?

MR. HUT: 106.
THE COURT: Then the whole thing's in, 106, and we're referring simply to interrogatory number 8.
MR. HUT: Which begins at page 8.
THE COURT: Yes.
MR. HUT: Of the set. Continuing to page 9.
THE COURT: And, essentially, what Mr. Evans says is that he was addicted to heroin from 1964 through 2002, and that he injected heroin using IV needles with varying frequency during that 38-year period.
With respect to his post incarceration use, he says the only periods during these 38 years in which Evans was not a frequent IV heroin user was from 1971 to 1973, when he was in the Maryland Correctional Institution Hagerstown where heroin was difficult to obtain.

And from 1985 through 1992, when he was in federal prison in Marion, Illinois where control of IV drug use was also very tight.

I think that my recollection is that in Marion the inmates are locked down like 23 hours a day. It says when Evans was incarcerated in Hagerstown a second time from 1974 till 1977, heroin use had become widespread there. And Evans was a frequent user during that period.

And he was -- as he was in every other place he has been incarcerated until 2002, when he became a resident in

Maryland's death row.

So that he says that his heroin use stopped when he was put on Maryland's death row, but he says that except for the period that's indicated while he was in prison, that he received drugs from inmates, who received heroin from their visitors, and he received heroin from his girl friend, who would bring drugs in the prison in a balloon in her mouth and transfer drugs to Evans during a kiss.

And he says that with the exception of Hagerstown, from '71 to '73, and the federal prison in Marion, IV needles in prison hospitals were easy for incarcerated IV drug users to obtain.

So this is an interrogatory answer. But what is the basis under the federal rules under which it could be received in evidence in this case?

MR. HUT: Let me suggest, first, I think it is a declaration against interest, against penal interest in reading Rule 804(3), which includes a statement which at the time of its making so far tended to subject the declarant to civil or criminal liability, that a reasonable person in declarant's position would not have made this statement unless believing it to be true.

THE COURT: And --

MR. HUT: A statement tending to expose the declarant to criminal liability and exculpate, which this is

not. So I think the second sentence is not material.

So that's one ground, I would suggest to the Court.

A second, I would suggest, is the residual exception in Rule 807, because I think here that the level of detail, frankly, including the fingering of individuals, including one I think known to be extremely dangerous and potentially dangerous to the declarant, is sufficient indicia of reliability.

Third, if those grounds were not sufficient, then it seems to me, and if the state were to care about this, and

I'll get in a moment to our assertion, that this is just not relevant for reasons alluded to the Court yesterday, the state can cross-examine.

If the state wants to bring Mr. Evans into the courtroom and subject him to cross-examination as to his continued post 1984 drug use while incarcerated, we think it's completely not necessary, certainly if the Court admits this under the first of the exceptions that I suggested.

But if those do not suffice and the state wishes to cross-examine, we would not object to limited cross-examination for that purpose.

There is corroboration, of course, here in the record for the suggestion of long-term essentially continue the drug use in the statements made by Mr. Evans to the diagnosing expert, Dr. Scalea, about which Dr. Scalea

testified.

Those statements, I suggest, which were testified to by Dr. Scalea are admissible to prove their truth under Rule 803(4), statements for purposes of medical diagnosis or treatment.

There is Fourth Circuit precedent, including cases like Morgan versus Fortage, and others, that make clear that the scope of this exception goes beyond a treating physician to a physician who assesses a condition of a patient for purposes of providing expert testimony in litigation.

THE COURT: Well, let me ask Miss Mullally or Mr. Pickus, are you content to have this affidavit in evidence as direct evidence of Mr. Evans' alleged drug use during or post 1984?

MR. PICKUS: No, sir.

THE COURT: Good. And thank you.

MR. PICKUS: May I point out to the Court that this document is dated September 21, 2006, which is yesterday. I don't know why.

MR. HUT: It's today. It was stated, I so stated.

THE COURT: Yes, April 26th.

MR. HUT: No, April 26th is the answers were set out in text script. It's verified today.

THE COURT: Well, my view is that it's not accept -- it's not admissible under any of those exceptions. The

first is that it is -- it is technically a declaration against penal interest, because he is admitting to heroin use, which is itself illegal. Because in order to use, he must possess. Possession is illegal.

And, second, he has admitted before the year 2002

that he violated the prison regulations, which also would subject himself to discipline.

But the reason under the Federal Rules of Evidence for accepting declarations against penal interest is that it is the potential punishment that vouches for the credibility of the statement, because normally people do not subject themselves to penal interest unless they're telling the truth.

But here there are a number of factors that under cut the reason for the rule.

The first is that he's only admitting to use of heroin while imprisoned pre- 2002, which is remote.

Second, for a reason who is under the sanction of a death penalty being prosecuted for, and who is on death row and is likely to remain on death row, the prospect of being punished for, you know, of incarceration for possession within the prison system is not much of a punishment.

And there's been no evidence, I think we can all agree that the likelihood of prosecution of Mr. Evans for this pre-2002 drug use while in prison is pretty remote.

So I don't view this as a kind of declaration against penal interest that would warrant receiving the interrogatory in evidence.

Second aspect has to do with the residual hearsay reception. There is a substantial, there is some detail in here, but there are also many of the details that are lacking. Mr.

Evans says that, while in prison, he received drugs from inmates whose names he does not recall. I would imagine that the state would like to cross-examine on that.

Although it's clear that in prison often people do not use their real names, you only know people by their street names, but there are a lot of details here they are lacking.

So given the fact he is a plaintiff in this case and is available to testify, I see no reason for invoking the residual hearsay exception.

So that gets us to the third proffered argument, and that is 803(4), and I haven't studied the case, the cases in any detail, but we looked at them briefly yesterday, and I believe that you're correct, that when a physician examines someone for purposes of an IME, for purposes of litigation, statements for -- that that the statements made by the person who's being examined fall within the not the treatment prong but under -- they do fall under the diagnosis prong.

So that I think the lay of the land is that Evans' statements themselves don't come in, but Dr. Scalea, the statements that he made to Dr. Scalea might. But I don't recall what he said to Dr. Scalea with respect to frequency.

Do you recall?

MR. HUT: I think, not with -- not perfectly, Your Honor, no. I have to admit, though, I think he gave indication to Dr. Scalea about the duration, and it's 30 years is what sticks in my mind, of the habit, without the detail of the interruption. But a basic 30-year span.

THE COURT: Good. So I think.

MR. PICKUS: That's my recollection as well.

THE COURT: Thank, Mr. Pickus. So I think the evidentiary framework now you've established persistent chronic long-term drug use before 1984.

Some evidence of drug use after 1984, but there's no way for me as the fact finder to gauge frequency after 1984.

So whether you wish to improve the record is up to you. And you may want to talk to Mr. Evans about it before deciding.

You know, we do have time in this case.

MR. HUT: We will obviously consider it further, subject to the Court's observations. But my last submission to the Court today, and we'll see whether it's my last on the

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subject altogether, is that it is really irrelevant. It does not matter whether Mr. Evans' veins have disappeared in places have been substantially compromised in other manners because he ingested too much oatmeal.

The fact is, according to two professionals that had testified in this court, that he cannot sustain an IV insertion necessary to convey or effect delivery of the requisite anesthesia.

So my surmise is that will be our position, and we'll stand on the state of the record. But we will obviously take it under advisement and think carefully about conferring about it with the client.

THE COURT: I wanted to avoid in closing argument if you said persistent chronic drug use after 1984 to have an evidentiary objection at that point. So I thought it best to sort out that issue now when it could be, when the door is still open.

But I'll believe you now know what the state of the record is, and whether you wish to try to improve it is a matter of trial tactics and strategy.

The next point has to do with the -- I need my recollection refreshed about certain aspects of the protocol.

And I'm looking for some light on the extent to which the Department of Corrections can change the protocol without having to go to the legislature.

We see that the Department of Corrections in August did change the protocol in some respects with respect to the lighting and also having one of the contract persons either an EMT or a nurse, nurse I keep forgetting --

MR. HUT: Nursing assistant.

THE COURT: Nursing assistant actually be present with the inmate during the administration of the IV.

And I take it that the Department of Corrections could make those changes without having to seek approval from the legislative.

So what I was looking to see what portions of the protocol are imbedded in the statute so that you would have go back to the legislature if you wanted to change them, and is the three-drug cocktail part of the statutory requirement?

MS. MULLALLY: If you look at -- I know the number's 3-905, hang on, Your Honor. It's in the pretrial order.

It's correctional services volume section 3-905 and 3-906.

I believe it's 3-905 states that a short-acting barbiturate should be used along with a paralytic. It doesn't specify the paralytic or which type of short-acting barbiturate.

And if you look at Oken versus State, 381 Maryland 580, 2004, if I'm not mistaken, that issue is addressed as to

whether or not three drugs violates the statute that references two drugs.

THE COURT: Right.

MS. MULLALLY: It is the defendant's position that the protocol itself is not subject to the State Administrative Procedures Act, and that under those circumstances, it can be changed at any time by the Department of Corrections.

THE COURT: So that let's assume that, just in a hypothetically, that the Department of Corrections decided that to dispense with the Pavulon and to dispense with the third drug, which is potassium chloride.

MS. MULLALLY: Both of those drug are paralytics.

THE COURT: So that the Department of Corrections could decide, if it wanted to do so, to use a one-drug formulation?

MS. MULLALLY: No, unfortunately, not. If you look at 3-905, it states a short-acting barbiturate, in combination with a paralytic. Now, both of those drugs are paralytics.

THE COURT: So you could use number one and number three?
MS. MULLALLY: Correct, but you couldn't use two and three.
THE COURT: Two and three?

MS. MULLALLY: Yes, or just one. That's right.
THE COURT: And is there any -- anything in the statute or legislative history as to the reason for the paralytic?
I think we're all operating under the assumption that the paralytic is used to spare the feelings of the witnesses and those on the execution team who will be carrying out the execution.
But is there anything in the statutory history that says that's why it's used? Or anything from the genesis protocol in Oklahoma?
MS. MULLALLY: Well, Your Honor, I don't know about the Oklahoma protocol. I am familiar with the legislative history and Maryland statute. And, unfortunately, I didn't bring it with me. I can bring it to the next court session.
We did draw it, we did study it at some point. I think it may have been part of an answer in one of the pleadings in this case, although I might be wrong.
And if the Court would like defendants to do that, I can do that.
THE COURT: Why don't need it by tomorrow. And we're going to be off next week, so at some point, that is to consider, because I will like to test sort of the proposition that the reason for the paralytic is to spare -- feelings may be too weak a word, but of the people who have to watch, and

have to administer.
The other issue in looking at the protocol, obviously, if you are -- and I haven't thought this through, or articulated it, so I may stumble through this, so if you are looking to see what are the differences between the administration of anesthesia, anesthesia in a human setting or the administration of euthanasia that an animal setting, you see a number of differences, real practical differences if you're extrapolating those procedures to a lethal injection of a condemned inmate.
The first is in anesthesia in a human subject, the human subject has to be closely monitored because you don't want to go too deep, and you don't want to go too light. So you have --
MS. MULLALLY: Right. It's a constant monitoring.

THE COURT: Constant monitors to keep the patient within that narrow band.

The second is that there is no social reluctance on the part of an anesthesiologist to sit next to the person who is receiving the anesthesia.

MS. MULLALLY: Correct.

THE COURT: And there's no shortage of trained anesthesiologists who are willing to administer anesthesia?

MS. MULLALLY: Actually, there's a Time Magazine article that came out two weeks that states that I believe

there is a shortage of anesthesiologists, that nurse anesthetists are used. I don't have any hard numbers. Mr. Pickus and I read that article.

THE COURT: With that caveat, that's their job.

MS. MULLALLY: Yes.

THE COURT: But here in administering the protocol, and that is subject, the subject on which there has been no evidence.

And that is, the relative difficulty in obtaining an anesthesiologist or a nurse anesthetist who would be willing to participate in the procedure.

And I'm not sure it matters under the Section 1983 test, if you're looking just at the bill of rights, but it is something that I would be interested in, if you all are willing to, or have an interest in building the record on that point.

I think in an ultimate -- well, the next difference is that if you're looking at the anesthesia of an animal, that's an accepted thing within veterinary medicine. There's probably no shortage of veterinarians willing to anesthetize animals and are capable of doing it.

The next point is that -- and I think this is probably the case, but you may have more information on this, if you're developing a protocol for a lethal injection, it probably is best to spread the responsibility for

administering the lethal injection. So that here we have somebody who puts the drug, takes, who mixes the drugs, but has no further responsibility in terms of delivery.

Then we have somebody who takes the syringe that was mixed by someone else and screws it into the lock in the IV.

And then that person has no further involvement.

And then we have a third person, who actually pushes the plunger, that administers the drugs, into the IV line.

And we have an entirely separate person who has placed the IV into the inmate.

And then we have another person who is watching the EKG and pronounces death.

And if you were anesthetizing a patient as part of a medical procedure, and you want to maintain a narrow band, you probably wouldn't do that, because you know the more cooks there are, the more opportunity there is to spoil the broth.

And plus you probably want somebody whose watching everything.

MS. MULLALLY: I think an anesthesiologist is there. He is responsible for the patient's life. He's supporting the airway, and --

THE COURT: But you wouldn't divide up the

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responsibility. There's no reason to do it.

But if lethal injection, there is a reason to divide up the responsibility, because it, in a human emotional way, it lessens the burden of responsibility for killing someone.

MS. MULLALLY: You can analogize that in a certain way to a firing squad where you have X number of people with the gun, dummy bullets in most guns, a bullet in one, and therefore no one who pulls that trigger is certain that he or she bears that ultimate responsibility.

THE COURT: So you know there are reasons for some of what you might call inefficiencies in the system or division of responsibility.

One of the issues we'll have to take up when we'll get to legal argument is what effect, if any, that has on the section 19 -- on the bill of rights analysis for cruel and unusual punishment.

But it seems to me, as a practical matter, that the state is not required to build the best mousetrap that potentially can be constructed by the thought of human beings. There is a line above the line is okay. Anywhere above the line is okay. Below the line is unacceptable.

MS. MULLALLY: Well, you know, Your Honor, if you look at the two Maryland statutes I referenced one 3-905, but other is 3-906, each of them addresses that issue that.

One says that an execution is not the practice of medicine. And the other one says that people performing an execution need not receive the certifications under health general, the book that has the statutes which qualify people to be involved in the practice of medicine or the treatment

of patients.
THE COURT: The other thing that's sort of worth discussing, just to think about it, because we'll be all getting together in a couple weeks, is the idea that you know not all people have the same height, weight, and venous structure.
MS. MULLALLY: Titration of the drugs.
THE COURT: So that you could say we looked at the Maryland history, except I think it's an agreed, it seems to be an establish fact, although I don't want to speak for Mr. Hut, but if you look at the blood levels postmortem the Maryland execution for which they're available, it appears that all of the who received the lethal injections had a sufficient level of the drug number one, except with the possible exception of Mr. Baker, I believe, or Oken? Oken. I think it was 20. I forget the dosage, but it was 20 something or, 10 or 20.
MR. HUT: 10.
MS. MULLALLY: It was 10.
THE COURT: And so that that's within the debatable

area. But with respect to the others, they're well above that.
From that, you may, you know, I haven't heard all the evidence, but one might say that the system that's presently in place, particularly has improved by the changes to the August protocol is capable of delivering the drugs to someone who's veins have not been compromised.
So you could be in a situation where you have in an atypical inmate because of his age, prior drug use, or some other problem with his veins. So that the answer for that individual person might be that you might be able to say that the present protocol doesn't pose an acceptable risk for the average inmate than it does for this one inmate because of whatever medical factors that exist.
So what I'm looking for is some guidance to the extent to which you would or could change the protocol to meet the needs of that one inmate.
And in saying that, I haven't decided that Mr. Evans is that inmate, and I haven't decided that the protocol is acceptable for everyone, but it's certainly an issue.
I think that you've told me that you can't -- you have to use the two drug, but there may be other ways to conform or work, tweak is a word I don't like to use, but to alter the protocol to meet an individual person. So that's something you might want to be thinking about over the next

week.
And in saying that, you know, the state's not required, the state can take whatever litigation position it wants to, our protocol is great, rule on it up or down, or the state can say we're willing to alter the protocol in some respect, that's entirely up to you.
I'm looking for some guidance as to what you might be willing to do and the extent you can do it within the statutory framework.
So that's pretty long-winded, but I think that if we had to distill that, the first would be to what extent can we agree or disagree that the composition of the Maryland execution team reflects the realities of obtaining more qualified or better qualified, is not a good phraseology, but I think probably higher credentialed medical professionals to participate in lethal injection executions.
The second point would be is any proof on this issue relevant under Section 1983?
And the third point would be does either side wish to put on any evidence on this issue?
The second point would be can we assume that, for purposes of this case, that the divided responsibilities of the execution team are purposefully designed into the system to lessen the emotional impact on the team members?
And then the same two second points, does it make

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any difference under Section 1983?
And then finally is there any evidence needed?
And the third would be the ability of the Department of Corrections without resorting to the legislature to change the protocol to fit the particular medical profile of an individual subject to an execution warrant.
And then the corollary of that would be the DOC's willingness or unwillingness in the case of Mr. Evans to vary the protocol. And if so, how?
The other point that I gave some thought to has to do with the conversation that Dr. Heath had with the gentleman whose name I can't remember, who created the protocol in Oklahoma.
MR. HUT: Dr. Chapman.
THE COURT: Dr. Chapman. I think it's correct that -- and you can tell me if I'm wrong -- the Maryland protocol was generated initially by Past Team Member M, who is not a doctor, and who's had no medical training other than first aid.
And in doing so, he consulted certain people in Delaware. But if you trace the protocol back from Delaware, you reach the Alpha female if you're thinking about anthropology terms or maybe that's not the right term, but to Oklahoma.

Now, Dr. Chapman is a doctor. But I have no basis on which to assess his medical qualifications. So I think all I can say is that the person who invented the protocol was I believe the state medical examiner, but beyond that I don't know much about him.

And I think it's probably the case what Dr. Heath said about Dr. Chapman, that Dr. Chapman's thinking about the three-drug protocol, and Dr. Chapman's present misgivings about how the protocol is being administered is all hearsay.

So I think that if Mr. Hut, so I think probably, that means, Miss Mullally, if you were to get up in closing argument and say this protocol was developed by a doctor of certain statute and having certain qualifications, that's probably not in the record, because I don't know much about him at this point.

And I think, conversely, if Mr. Hut were to get up in closing argument and say the inventor of the protocol now you know has distanced himself from it, because he believes that the three-drug, because he assumed that the three-drug protocol would be administered by highly credentialed medical personnel, and he, Dr. Chapman, would deem it to be unsuitable to have the protocol administered by lesser credentialed folks, and especially including the people on the Maryland execution team.

So I think that would not be -- so that's not in

the record sufficiently to have that argued. I could be wrong. I haven't thought through these evidentiary points, but that's my gut instinct so far.

So, again, the door, you know, I'm simply pointing this out because you all may decide those are doors that need not be gone through, but that's my present thinking, and you can govern yourself accordingly.

Mr. Hut?

MR. HUT: Well, with respect to Dr. Chapman, I take the Court's point, I do also point out that the testimony came in unobjected to. But if the Court is saying that he would not accord it much weight --

THE COURT: We don't know a lot about him, what he was thinking of, or when he developed the protocols.

It's now, I think the original - I don't mean to be too long-winded. The original protocol was developed by a doctor who was a state medical examiner, but the rest of it is pretty much a focal and it hasn't been tested. He's still alive, he's out there.

MR. HUT: Nepal.

THE COURT: Oh, he's in Nepal? We could dispatch you on an expedition, so as has he written anything about this? Does he have a scholarly article that we could look at?

MR. HUT: That I don't know. We -- we know about

his views also in part, but it doesn't improve the hearsay nature, but it was reported in the newspaper quoting him, I think, that is his present view.

THE COURT: In a sense it's irrelevant because the three-drug protocol is what it is, and what the father of it thinks is more atmospheric than anything else.

But I think that you can't -- the record is it is what it is, because his disavowal isn't much of a form I can take cognizance of and the fact that it's reported in a newspaper doesn't mean too much.

MR. HUT: I could speak to some of the Court's observations in its colloquy with Miss Mullally, reserving the right to supplement these as I'm able to think about it with the assistance of my colleagues more fully, on the subject of to what extent the team could be supplemented, or augmented why higher credentialed folks without undue difficulty.

There is, I remind, Your Honor, evidence perhaps it got lost somewhere in the transmission from Dr. Heath because he said a great deal. But he did say that he believes that there are articles that chronicle the participation of one or more physicians in the lethal injection process that a number of states including, if my memory serves, North Carolina and Missouri and possibly Kentucky, do employ physicians in the process to among other things and place a central line. That

he has talked to people who he believes would be willing to serve, and that he believes, this was the report of a question I asked him on redirect, that sufficient payment would augment the pool of available professionals.

There is that evidence. Whether it's as fulsome as the Court would wish, that I don't know.

On the question of the materiality of the inquiry to section 1983, I guess I should --

THE COURT: I don't we do this. I didn't mean to argue all these today. I thought you might want to be thinking of it. We're going to have an entire week while we're off, plus the Court of Appeals hasn't done anything, so we do have some time here.

And I just wanted to let you know what I was sort of --

MR. HUT: Then I will just wait and address it at later time.

May I, Your Honor, I want to come back to the frequency of drug use question.

My colleagues remind me there is evidence here actually in the record, because it is contained in the January declaration of Dr. Scalea. We have marked premarked that declaration as an exhibit. It's plaintiff's exhibit 36.

I believe there is an objection to its admissibility on hearsay grounds. But Dr. Scalea, in

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paragraph 5, does address the frequency question as well as the duration question.

I would suggest, and I move the admission of plaintiff's 36, because I think that also comes within the 803(4) exception.

I can hand the document, it's a two-line paragraph.

THE COURT: Why don't you show it to my law clerk and Miss Mullally?

MR. PICKUS: We have it. We wouldn't object to it coming in as data that Dr. Scalea received for purposes what he believed in his mind, but we do object to it coming for truth of the matter asserted.

MR. HUT: We're offering it under Rule 803(4).

(Pause.)

THE COURT: I don't think there's -- Mr. Pickus, there's no objection?

MR. PICKUS: No objection to it coming in for the purposes of what Dr. Scalea believes in his mind.

THE COURT: Well, I think that, under the hearsay exception, statements that the person being examined makes to the doctor diagnosis for treatment come into to prove the truth of the matter asserted.

MR. PICKUS: May I be heard on that?

THE COURT: Why don't we do this, it's getting late. Why don't we you all can take a look at the Federal

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Rule of Evidence and the cases, and we can talk about it. We're not going to have to talk about it tomorrow, because I don't want you to do a lot of work tonight, but we can talk about it a week from now.

The other thing I don't understand from his -- from here is Dr. Scalea says the extent of his previous drug habit has ravaged his peripheral veins. Is that Dr. Scalea stating his opinion based upon his examination? Or is he saying that's what Mr. Evans has told me? And Mr. Evans said I'm a long-term drug user and my drug habit has ravaged my veins?

MR. HUT: Oh. I think it's the first.
THE COURT: The former?
MR. HUT: Yes.
THE COURT: So good.
(Pause.)
THE COURT: So tomorrow we do what again, that's right we still have something do today.
MR. HUT: We can postpone that till tomorrow, because I think we can comfortably fit in everything we need do tomorrow including the examination of Miss Hall.
I do want to take up one housekeeping matter with Your Honor if I may. Before I forget, since I've forgotten every day this week.
I thought that the three days that Your Honor had identified as available court days that we will be using the

week of October, were Tuesday the 10th, Wednesday the 11th, and Thursday the 12th.
My colleagues believe that the Court also indicated its willingness and or interest to hold court on October 13th.
That present s for me the following difficulty, but possibly not insoluble problem, and that is I'm supposed to host on October 13th at our firm of a meeting about 80 people to discuss longrange planning of an organization on whose board I sit.
I believe I ought to be there, if I possible can. If I can't be, so be it. But I would hope that if we needed a fourth court day, and all other thing permitted, that we might be able to find a day the following week.
THE COURT: We'll find day. I don't want to interfere with that. Let's just take a recess for 10 minutes, I wanted to talk to my secretary about the week of the 16th, I think that she's been advised by that one of my two cases scheduled for that week, one of them maybe postponed.
And the other I think we been advised there's likely to be a guilty plea. But I didn't want to talk about and mention names in open court. So let's take a 10-minute recess, and we can nail down the scheduling at 4:30.
(Recess.)

THE COURT: Please seated. What we'll do is we'll take I believe the 13th off the table. nd pencil in the 18th, well, better day would probably be the 19th, because I have a trial Monday and Tuesday and sometimes they bleed over. So why don't we say the 19? I'm not positive it will be

available I'll know more as we get closer to the day, and there's a motions hearing that's coming up, so we'll just keep tabs on that date.

Plus we'll have to schedule closing arguments at some, so we still have that left to do. So we'll plan on deleting the 13th, penciling in the 19th.

And if it turns out we need both the 18th and 19th, they probably can be available.

Just as information, we took a look at the lethal injection statute the 9-305, and it says manner of inflicting the punishment of death shall be and be the units intravenous administration of a lethal quantity of an ultra short-acting barbiturate or other similar drug in combination with a chemical paralytic agent.

So the paralytic agent is given under the statute, but it looks like it can be a short-acting barbiturate or other similar drug.

And I don't know it would be up to the state to tell me how broadly they read the word other similar.

And 3 906 states that the execution shall be

performed by individuals who are selected by the commissioner and trained to administer the lethal injection.

And it also says that an individual who administers the paralytic agent and lethal injection need not be licensed or certified as any type of healthcare practitioner under the health occupations code.

Good. Mr. Hut, what else do we need do this afternoon?

MR. HUT: I think we can accommodate everything we need do before we rest tomorrow morning. We are certainly prepared to proceed with the admission if you'd like to get that done today.

THE COURT: Why don't we do that? We have like in Cinderella, the coaches turn back into a pumpkin at 1:00 tomorrow afternoon. So I'd like not to be pushing up against that deadline.

MR. HUT: Miss Wood will be offering the admissions.

THE COURT: Good. Thank you.

MS. WOOD: Plaintiff offers exhibit 7, which is the defendant's answer to the plaintiff's complaint.

And looking at page 4, paragraph 14, defendants admit that the procedures employed by the DOC in executing inmates -- I'm sorry. I'm on the wrong page.

Starting again on page 4, paragraph 14 defendants

admit that the first drug the DOC would inject in its execution of Evans would be sodium pentothal, which if administered in insufficient quantity, A, might not provide sedative effect throughout the entire execution procedure.

B, could cause Evans to regain consciousness and be sentient when the DOC injects the second and third drugs, pancuronium bromide and potassium chloride, which stop restoration and stop the heart respectively.

And, C, could cause Evans to awaken after the initial injection of sodium pentothal to experience suffocation, induced by the pancuronium bromide, and the painful sensation of potassium chloride before it causes cardiac arrests.

Defendants otherwise deny allegations of paragraph 19 of the complaint.

Next I'm reading on page 5, paragraph 18.

Defendants admit that the DOC procedures for lethal injection do not require the participation of anesthesiologists or CRNAs, personnel administering anesthesia would not necessarily be permitted to administers anesthesia during treatment at a prison hospital, and might not be allowed to administer anesthesia in any circumstance other than an execution.

Procedures for lethal injection employed by DOC do not require any person to monitor plane of anesthesia.

Defendants otherwise deny allegations of paragraph 23 of the complaint.

Next we're moving to paragraph 29 on page 7.

Defendants admit that the State of Evans' peripheral veins has been assessed, that Evans has multiple viable peripheral venous access sites on both arms, and that placement of a central line, if necessary, should be performed by an individual with appropriate licensure and experience.

And I'm not reading the rest of that paragraph, unless counsel would like me to.

THE COURT: Could you read the first paragraph again? I got lost in that sentence.

MS. WOOD: Sure.

Defendants admit that the State of Evans' peripheral veins has been assessed, that Evans has multiple viable peripheral venous access sites on both arms, and that placement of a central line, if necessary, should be performed by an individual with appropriate licensure and experience.

THE COURT: What the state is admitting that, yes, somebody has assessed his veins, and we believe that he has multiple peripheral veins that would be suitable, and they also admit that a central line would have to be administered by somebody qualified to administer it?

MS. WOOD: Yes.
Now we're moving to defendant's answers to plaintiff's first set of interrogatories, and I am at interrogatory number 14, page 13.
The interrogatory 14 asks set forth in any detail any problems, malfunctions, or abnormalities encountered in any previous lethal injection carried out by defendants including leakage of IV lines, respiration after administration of sodium pentothal, and/or low postmortem sodium pentothal levels.
There's an answer, can I just omit the second that defendant's object and read?
MR. PICKUS: Yes.
MS. WOOD: Following the Tyrone Gilliam execution on November 16th, 1988, Former Commissioner William Sondveran and/or Former Assistant Commissioner Lewis Stewart reported to Assistant Commissioner Randall Watson that the IV catheter that had been inserted Gilliam's left arm had partially or completely pulled out prior to the administration of the lethal drugs; that the lethal drugs were, therefore, administered through the IV catheter in Gilliam's right arm, and that the IV catheter that had been inserted, excuse me, in Gilliam's left arm continued to drip saline solution onto the floor creating a small puddle.
Next I'm looking at the answer to interrogatory 10,

that appears on page 12. And it states the window between the lethal injection room and the execution room is approximately 36 inches by 36 inches.
Next sentence states the distance from that window to the middle of the left arm extension of the execution table is approximately 51 inches. The distance from that window to the middle of the right arm extension of the execution table is approximately 85 inches.
And that is all I was planning to read, Your Honor.
THE COURT: Good. Thank you.
Mr. Hut, anything else for today?
MR. HUT: Nothing further for today, Your Honor.
THE COURT: Good, thank you.
Ms. Mullally?
MS. MULLALLY: Thank you, nothing, Your Honor.
THE COURT: Thank you. Tomorrow we will begin at 9:30 a.m. Thank you.
(PROCEEDINGS ADJOURNED)
I, Jacqueline Sovich, RPR, CM, do hereby certify that the foregoing is a correct transcript from the stenographic

record of proceedings in the above-entitled matter.

_____

Jacqueline Sovich DATE

Official Court Reporter

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MARYLAND/NORTHERN DIVISION
VERNON EVANS,
Plaintiff
CIVIL NO. 06-149
Vs.
Mary Anne Saar, et al,
September 22, 2006
Defendants
_____/
DAY FIVE
TRANSCRIPT OF BENCH TRIAL
BEFORE THE HONORABLE BENSON E. LEGG,
UNITED STATES DISTRICT CHIEF JUDGE
APPEARANCES:
On behalf of the Plaintiff:
Stephen Hut, Jr, Esquire
Todd Zubler, Esquire
Kalea Clark, Esquire
Anne Harden Tindall, Esquire
Stephanie Katherine Wood, Esquire
On behalf of the Defendant:
Laura Mullally, Esquire
Philip Pickus, Esquire

REPORTED BY:
Jacqueline Sovich, RPR, RMR, FOCRR
Official Court Reporter

(PROCEEDINGS)
THE COURT: Good morning. Please be seated. Mr. Hut, whenever you're ready, sir.
MS. GERAGHTY: Your Honor, we'd call Dorian Hall.
THE COURT: Good morning, if you'll come forward, please. Mr. Thompson the clerk will administer the oath.
(The Witness is sworn.)
THE CLERK: Please be seated. Ma'am. What I need to you do is adjust that microphone, state your name and spell your name for the record.
THE WITNESS: Dorian, D O R I A N, and last name is H A L L.
DIRECT EXAMINATION
BY MS. GERAGHTY:
Q. Good morning, Miss Hall. My name is Anne Geraghty. I'm one of the counsel for the plaintiff.
What is your occupation?
A. I supervise the litigation specialists and criminal investigators at the office of the Ohio Public Defender.
Q. And can you tell us a little about what you do in that position?

A. As a supervisor, I assign cases and supervise the criminal investigations and mitigation investigations on the cases that are handled by our office.
And I also do work in the field so I still continue

to conduct mitigation investigations on cases.
Q. And how long have you been with the Office of The Public Defender?
A. It was 18 years this August.
Q. And where did you work before that?
A. I worked, I was hired by the Franklin County Sheriff's Department out of Columbus, Ohio to work in their correction center, the main jail. I was a social worker and a mental health liaison working with the mentally ill at the facility.
Q. Where did you go to college?
A. I have an undergraduate degree from Miami University and Master's degree from Ohio State University.
THE COURT: I'm sorry, I missed the college.
THE WITNESS: Miami University.
THE COURT: In Ohio?
THE WITNESS: In Ohio, yes.
THE COURT: Thank you.
BY MS.GERAGHTY:
Q. And your master'S degree is in what?
A. Sociology.
Q. Are you a licensed social worker?
A. Yes, I am, since 1992.
Q. What are your views on the death penalty?
A. Personally, I'm opposed to the death penalty.
Q. Do your views affect your ability at all to give truthful

testimony today?
A. Not at all.
Q. During your career, have you had an opportunity to witness an execution?
A. Yes, I have. Once.
Q. One time?
And what state did this execution take place?
A. Ohio.
MS. MULLALLY: Objection. Relevance, Your Honor.
THE COURT: I will overrule the objection, but the objection's noted. Thank you.
Q. Do you remember the date on which the execution took place?
A. It was in May of 2006, it was early May, I believe, something like that.
Q. Approximately what time the during the day?

A. It was in the morning. In Ohio, our executions are scheduled to occur around 10:00 in the morning.
Q. And what was the name of the person who was executed?
A. Joseph Lewis Clark.
Q. And had you ever met Joe Clark prior to the execution?
A. Yes. And like in '89 or '90, I worked on his post conviction case, our office handled the appeal. And I conducted the mitigation investigation at that time.
Q. And have you had an opportunity to work with him since

that time?
A. Yes. I mean we had sporadic contact throughout the years, and his case went outside our office for federal habeas, but when it came to clemency time, his federal attorney contacted our office and requested assistance.
This was his first case that went to clemency and potential execution, so I was involved in the group of people who are helping him. And, given my history with Joe and his family, I was assigned the task to contact the family, and to meet with Joe and also to kind of help the attorney with the practical considerations.
Q. Did you have any information about Joe's history in drug abuse?
A. Yes. At the post conviction phase, we learned that he was a long-time IV drug user.
Q. And did you have personal knowledge of that?
A. Yes. When we -- talked to him at post conviction level, we had checked, and he had some scarring and track marks on his arms from the IV use, and we did a pretty detailed history at that point on his drug use. And it was clear, he's not -- he was not an animated person, and he became very animated and agitated when talking about substances he used.
Q. After the post conviction proceedings, did you have any personal knowledge about his drug abuse?
A. Not at all.

Q. How did you come to witness Mr. Clark's execution?
A. Well, Joe didn't want -- his mother was older. He didn't want his family to witness the execution or be down at Lucasville, and so I had told Joe I would do whatever he wanted or needed me to do. He requested that I be down there.
So I had gone -- because the execution occurs at 10 in the morning, the day before's a contact visit. So I had gone down Monday and had a contact visit with him, and then ended up trying to try to see him had the next morning, and he requested that I be one of the witnesses.

Q. Let's walk through what happened the day of Joe Clark's execution. What time approximately did you arrive at the facility?
A. The attorney and I arrived around 7:30, maybe 8, I'm just not clear. There's an opportunity to have a visit, a self front visit with the inmate the morning of the execution. And we arrived to do that. We learned that he was kind of in a zone and didn't want to see anybody at that time. So we sat at the prison facility until the execution time.
Q. And at the execution time, where did you go then?
A. The inmate's witnesses are the last to be taken into the witness area, so we probably arrived there around a little after 10, a minute or two after.
Q. And were you in a special witness area?

A. Yeah. We were in the execution chamber or the witness area for the execution, yes.
Q. And is that separated by a piece of glass from where the inmate is executed?
A. Yes, it's a big glass window.
Q. Where was Mr. Clark when you first walked into that witness room?
A. He was in the anteroom, the room right next to the execution chamber.
Q. Were you able to see him?
A. Yes. They have a live via -- video coverage of the prison staff inserting the catheter in the inmate's arm.
Q. So you were able to watch the process by which the catheters were inserted; is that right?
A. Yes, I was.
Q. And you mentioned they were prison staff. Do you know what the qualifications were of the people who were doing this?
A. In Ohio we don't use medical doctors or anything. They were emergency trained technicians or paramedics.
Q. You said that they were working on getting IV catheters in. Can you describe what you saw during that time?
A. There were two individuals who were working on Joe. It took approximately, I'd say 20 to 30 minutes, trying to find a location in his arms to insert the catheter.

They were able to insert one into his left arm, but the right arm they were having a great deal of difficulty with, they even checked his leg, and his feet, and other areas to try and find a spot for him. And the individual who was working on the left arm went over to and tried to assist the person who was working on his right arm.

Q. Did they eventually find another IV site?
A. No.
Q. It your understanding Ohio's protocol calls for the insertion of two IV catheters?
A. Yes, they do.
Q. Did they go ahead with just one?
A. Yes, they did.
Q. And you saw all of this on the video; is that correct?
A. Yes.
Q. Did they attempt to stick an IV into any of the sites, any other places in the body that you mentioned?
A. They tried to stick in the arm. I did not see them stick anything in the legs or the feet.
Q. Once they found one IV site, what happened after that?
A. We saw Joe getting up off the table, and walking and then that's when the curtain was -- was open, and he working, he had walked to the next room in the execution chamber and had leaned down, and then the prison staff there attached the IV lines to him.

Q. So the catheter was in, and then they hooked it to the IV tubing?
A. Yes. Because the IV comes through the other room. It comes through a window, so no one sees who starts the IV lines.
Q. So once he was hooked up and laying down, what happened after that?
A. He's strapped down, and then excuse me, one of the prison staff pulled the microphone off of the wall and turned it on and gave it to Joe, or held it in front of Joe, actually, so that he could make his last statement, which lasted approximately 10 minutes or so. It was pretty lengthy.
Q. And the microphone was on?
A. The microphone was on for that, yes.
Q. And then once his last statement was finished?
A. They turned off the microphone, attached it to the wall, and he laid back down and waited for the drugs to start.
Q. And was the execution completed at this point?
A. No, it was not. He laid back down for a couple minutes, and, you know, I mean I could tell he was breathing, and his legs were moving, his arms were strapped down, so he raised his upper shoulders and his head and turned, or looked up at the prison personnel and said "it's not working, it's not working."
He laid back down and for another minute or tow,

and he raised up again, and he looked at us in the witness

area, just said "it's not working, it's not working."
And when he laid back down at that point, there's two prison staff in the execution chamber with him, one of them pulled the curtain.
Q. Okay. At that point you mentioned that they had turned the microphone off?
A. Yes, they did.
Q. Once they closed the curtain, were you able to see anything --
A. Nothing at all.
Q. -- on the other side of the room?
Now, even thought the microphone was off, were you able to hear anything?
A. Yes, I was.
Q. Can you tell me what you heard at that point?
A. Initially, we heard these really loud intense guttural moans and groans. You know, as if someone was in agony. I equate it with child birth, one of the most painful experiences I had. And that lasted for about five or ten minutes. It was really pretty intense.
And we're all just kind of real quiet. And, you know, we were kind of shocked and horrified of what was going on.
Q. And how long, you said there was five to ten minutes of

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intense agony?
A. Yes.
Q. After the ten minutes, did everything just stop?
A. No, it didn't. It tapered down. It kept continuing to taper down until you couldn't hear anything, and then we could hear -- actually, I heard a noise, and I wasn't sure where it was coming from. And I tried to listen intently and finally figured out it was Joe snoring. And that whole process from which they closed the curtain till when they opened the curtain probably lasted a half hour or so.
Q. You said everyone in the room was quiet. Can you describe a little bit more about what the witness's reactions were in the room where you were ?
MS. MULLALLY: Objection.
THE COURT: Overruled. You may answer.
A. Okay. Thank you. Yeah, we were very -- I mean quiet and shocked. We weren't sure what was going on.
Joe's attorney had his hand, his head in his hands, and that was kind of our reaction. We just were really unsure of what was going on.
Q. Did you at any point try to do anything to stop things?
A. I talked to his attorney, and this was his attorney's first clemency and execution, and he was not a member of our office. I tried to talk to him. I suggested that we see if we could stop the execution at this point. That you know, we

could call someone in our office to see if they have any recommendations, since they're more experienced at this kind of thing, that, you know, they could call a judge, maybe get a stay of execution, if possible. And the attorney said in he wasn't sure what Joe would want.

And I suggested that we, you know, demand to see Joe, and find out what he would want us to do at that point.

The attorney ended up not doing anything. He seemed to be struggling with the decision.

Q. You mentioned the snoring was difficult for you to hear once his sounds died down?

A. Yes.

Q. Was it difficult for you to hear the moaning at the beginning when they first closed the curtain?

A. No, that was clearly loud. That was -- I thought it was in the same room.

Q. Once he began snoring, and he quieted down a bit, what happened?

A. Then they opened the curtain, and he was asleep. We could see he was asleep strapped to the gurney, and they had the one IV in.

Q. And was it your understanding that at that point they began the injection again?

A. Yes. They started everything from the beginning, the whole process was resumed.

And yet, you know, that may have taken five, maybe ten minutes at that point.

The drugs were flowing and he was -- he was clearly asleep. During that process, he would kind of reflexively lift his upper shoulders and his head was lifting up. He did that probably like 9 to 13 times while we were watching.

Q. And was it your understanding, were you given a description before this all happened about the types of drugs used in Ohio?

A. Yes. They told us about the drugs that were being used, and that was pretty much it.

Q. Did they mention that one of the drugs was a paralyzing agent?

A. Yes, they did.

Q. And was it your understanding that his movements made during the execution were at all normal or abnormal?

MS. MULLALLY: Objection.

THE COURT: Overruled.

A. They did not tell us anything about what movements to expect from Joe. It did learn that typically they might do that once or twice, but not the number of times that Joe did. That was unusual.

Q. Would you have appreciated it if someone had explained to you what to expect when you were witnessing the execution in terms of those movements?

A. Definitely. I would have been able to prepare myself and know what was normal and expected and have been able to ask questions about some of the explanations as well.
Q. And did anyone prepare you for witnessing the placement of the IV sites prior to the execution?
A. No. I was not aware we would see that video.
Q. Would that have made a difference to you?
A. Yes. That would have been helpful to have known that that was going to be coming as well.
Q. Did you just leave the execution facility once the execution had been carried out?
A. No. We were taken back to a room in the prison where we would be sitting and waiting for the execution.
They were prison staff who sit with the victim's families, as well as the inmate's witnesses, so we were taken back there with that personnel and sat around discussing the situation.
The attorney and I had asked if we could leave, and they told us that we were not allowed to leave, that we had to wait for Reverend Simms who is in charge of the prison ministries. He's there for all executions. And we'd had contact with him before. He's indicated that he wanted to talk to us before he left.
Q. And when he -- when he came, what did he say?
A. Well, we prayed, and excuse me. He asked how we were

doing, and if we wanted to discuss anything. He asked -- the prison has what they call a critical incident stress debriefing program, where the people involved in the execution gather around and do kind of peer counseling with each other and discuss the events, and sharing experiences so you know you're not the only one. This is typically used in trauma situations.
Q. And is it normal for the people who were there from the inmate side to be invited to this event?
A. No, it's not. No, it's not.
Q. And in your understanding, is this the first time that's happened in Ohio?
A. Yes.
Q. Did you accept that counseling?
A. I did not. I basically wanted to just get out of there and get back to my office, though I could, you know, talk to other co-workers who also witnesses to other executions and

who would kind of understand my perspective.
I was not interested in being involved with the prison staff. I figured we would be coming from a different perspective.
Q. And as a witness, how has your experience of witnessing Mr. Clark's execution affected you?
A. Well, you know, obviously, I think about it a lot. I was extremely sad and horrified that Joe had to experience that.

And, you know, I'm concerned about other clients of mine personally having to experience that, as well as anybody else going through that process. It just looked to be painful.
MS. GERAGHTY: Thank you, Your Honor. I have no further questions.
THE COURT: Thank you.
Miss Mullally, your witness.

CROSS-EXAMINATION

BY MS. MULLALLY:
Q. Now, you just testified, I believe, that you don't want anyone else to experience that sort of pain that you witnessed and experienced?
A. I would hope no one would.
Q. Now, the pain that you witnessed, that you actually witnessed, that is when the people were inserting the IVs and you could see it on the video?
A. That I witnessed through my eyes, yes.
Q. Okay. Do you have anything, any records, or anything that says that Mr. Clark was not deeply anesthetized at the time that he died?
A. I don't have any records on that.
Q. And how does the Ohio protocol compare to Maryland's protocol?
A. I'm not real familiar with Maryland's protocol, so I don't know.

Q. Do you know -- so you don't know anything about Maryland at all?
A. No, I don't.
Q. Now, you state that these people who were inserting the IVs were paramedics?
A. Paramedics or emergency technical people, yes. We don't use doctors.
Q. Were they prison employees?
A. I believe so.
Q. Were they prison correctional officers?
A. They do not have uniforms on.
Q. What were they wearing?

A. They were wearing, you know, like dress khaki pants, and it looked like dress shirts, it was like one had a red shirt on, and I think one had a white shirt.
Q. Do you have any evidence that at the time the curtains were closed and you could hear the sounds that prison officials were doing anything other than starting an IV on him?
A. And I couldn't see. I could just hear his groaning and moaning.
Q. But do you have any evidence that they say were torturing or hurting him?
A. No, I did not. I did not see anything.
Q. And, eventually, where was the IV located?

A. It was in the arm.
Q. Was this the one in the left arm?
A. Yes.
Q. Okay. So the execution was delayed because of problems with the IV in the left arm, but the execution actually was completed with that same IV in that location?
A. Yes. It had blown out during the first attempt, and they had to re --
Q. How do you know that?
A. We were told by the prison staff.
Q. Okay. So they got it back into the vein, and they completed the execution?
A. Yes.
Q. And you have -- do you have any reason to believe that he experienced excruciating pain by being awake during the administration of a drug like potassium chloride?
A. I have no idea. No.
MS. MULLALLY: Thank you. Nothing further, Your Honor.
THE COURT: Thank you.
MS. GERAGHTY: We have no further questions, Your Honor.
THE COURT: Thank you very much for coming. You are excused. Oh, I did, I did write down a couple of questions, if I could.

The reason for the having witnesses in an execution is what, if you know?
THE WITNESS: I don't know. I assume to make sure that, I don't know, that the event occurred, I don't know.
THE COURT: And part of it is -- did you watch the pertinent parts of the execution on a VCR hook up, or did you look through a window?

THE WITNESS: And I actually sat through the feed, the witness' statement, or his last statement, and administration of the drug, I saw through the window.
THE COURT: And after the catheter had been inserted, did he stand up and then move from one place to another and lie down on the execution gurney?
THE WITNESS: Yes, he did.
THE COURT: Was he uncooperative at any time that you saw?
THE WITNESS: Not at all.
THE COURT: Good. Thank you. Thank you very much for coming.
Mr. Hut?
MR. HUT: Thank you, Your Honor. We now would like to move into evidence some additional exhibits, in addition to those that were used without objection over the course of the past couple days.
There are a dozen or so, I would estimate, many

unobjected to.
The first document is a newly marked exhibit, as plaintiff's exhibit 107. This is by way of follow-up. Let me, if I may approach the Court's law clerk?
THE COURT: You may.
MR. HUT: Plaintiff's exhibit 107 is by way of follow-up to the colloquy yesterday, toward the end of the Court session on the subject of Mr. Evans' IV drug use.
This is a document that was obtained from the State Division of Correction. It is a medical record compiled by the state relating to Mr. Evans' health.
And the pertinent section of the document is under social history about two-thirds of the way down the first page of plaintiff's exhibit 107, where it states "There is a history of heroin use last year" being two years ago. The document is dated June second, 2004.
This is by way of corroboration for and perhaps an extension of the same observation or the substantially same observation by Dr. Scalea described in his testimony and described in the declaration that was the subject of a motion for admission yesterday.
It doesn't speak to the Court's question about frequency, but it does -- it does further corroborate through the state's own records duration of use.
THE COURT: Good. Thank you. Let me ask Miss

Mullally, is there any objection to the admission of 107?
MS. MULLALLY: Your Honor, there's no objection to

the admission of it.
THE COURT: Good. Thank you. Then 107 is admitted.
(Received in evidence.)
MR. HUT: Thank you, Your Honor.
The next exhibit we'd move in evidence is plaintiff's exhibit 13. This is a letter to my colleague Mr. Zubler from Miss Mullally, dated July 3, 2006.
There is an objection based on hearsay.
MR. PICKUS: Your Honor, Miss Mullally wrote the letter, so she'd prefer not to argue this particular point. We do believe this letter is hearsay.
THE COURT: Good. Let me take a look at it, Mr. Pickus. Thank you.
(Pause.)
THE COURT: This is a letter of July 3, 2006 from Laura Mullally, Assistant Attorney General, to Todd C. Zubler, Esquire of Wilmer Hale, re Evans versus Saar, dated July 3, 2006.
If I'm reading this correct, it says "I'm responding to the June 19, 2006 notice to take the deposition of a designee of the department of public safety and correctional services regarding issues listed in the

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plaintiff's attachment A schedule of topics. Below is the particular information, under attachment A."
And then there's statements of fact.
And then the second to the last paragraph of the letter states "I hope that this information sufficiently answers the questions raised by attachment A, and that a deposition of an official the Department of Corrections is no longer necessary."
Unless I've misperceived the letter, there was a deposition notice to the Department of Public Safety and Correctional Services requesting a witness to testify on certain subjects, those subjects being those listed in attachment that in the letter Miss Mullally was providing factual information to Mr. Evans' attorney, and offering a suggestion or taking a position that the information makes the deposition unnecessary because the state has now prepared the information.
If that is a correct reading of the letter, then plaintiff, plaintiff's counsel, are entitled to accept the facts in the letter as given.
Am I correctly reading the letter?
MR. HUT: I believe you are, yes, Your Honor.
THE COURT: Mr. Pickus, am I correctly reading the letter?
MR. PICKUS: Your interpretation is correct, Your

Honor.
THE COURT: Thank you. Then I will overrule the objection and accept the letter into evidence.
MR. HUT: The next document we move to admit in evidence is plaintiff's exhibit 22. This is the Delaware protocol, about which there has been some testimony through Past Team Member M and Dr. Heath. The only objection is relevance.
THE COURT: Now, is the protocol the one that is in effect now or the one that was in effect when the past execution team member consulted the Delaware protocol with a view toward writing the Maryland protocol?
MR. HUT: This is the protocol that was received from Delaware on the basis of which the testimony said modeled the Maryland protocol.
THE COURT: Good. So I see that there is an effective date stated on page 1 of February 26, 1993, approved by the warden. So it appears that the warden approved the document on 2-26-93; and, therefore, it became effective on that date.
Let me ask Mr. Pickus and Miss Mullally, do you need more time to study this document?
MR. PICKUS: We don't contest its authenticity, Your Honor. We still contest that it is not relevant.
THE COURT: What I will do is, based upon the

admission of authenticity, I'll receive it into evidence, because it does bear upon the testimony of the past execution team member, and it shows where the derivation of the Maryland procedure.
So I will receive it subject to the objection.
(Received in evidence.)
THE COURT: Mr. Hut?
MR. HUT: Thank you, Your Honor.
Next document we'd move in evidence is plaintiff's exhibit 32. Plaintiff's exhibit 32, I think is acknowledged to be authentic. It's an e-mail from Scott Oakley, dated June 16, 2004, to Mark Dershwitz.
The objection from the State is relevance.
THE COURT: Good. If I could see it, please? Thank you.
(Pause.)
MR. HUT: I'm sorry, if I said relevance, I misspoke. The objection is hearsay.
THE COURT: Good. The factual setup essentially is this. The first page in plaintiff's exhibit 32 is an e-mail from Scott Oakley, who was the predecessor counsel to Miss Mullally and Mr. Pickus in this case, to Mark Dershwitz, Dr. Dershwitz, who is an expert who will be testifying on behalf

of the state.
Dr. Dershwitz testified at the hearing in January

and will be testifying the week after next.
Mr. Oakley attaches Dr. Dershwitz's supplemental affidavit describing Dershwitz's understanding of the IV setup, then describes the IV setup, and then states that at the end that "Mr. Oken's attorneys are claiming that the use of the pressure infusion device will blow out Oken's vein. I solicit your views on this."
And then Dr. Dershwitz then responded on June 16, 2004, in an e-mail to Mr. Oakley, stating that I'll work on this later and get back to you. And then -- and I think --
MR. HUT: If I may, Your Honor, the document is offered principally, if not solely, for the passage on the first page, which is yet another version from a knowledgeable state agent about the operation of a flow clamp.
The Court has heard three versions effectively from Injection Team E. The Court heard another version, heard another version that was described in the testimony of Dr. Heath from Past Team Member Z.
This is yet another version.
THE COURT: Let me ask. I was trying to figure out what was on the second page. Sometimes when you get an e-mail, you get all the other e-mails, and I forget the technical term, it's a trail or something, a thread. That's it.
And I take it that the page 2 is a message from Dr.

Dershwitz to Mr. Oakley saying I'll work on this later today and get back to you, and what comes after that is the thread? A thread?
MR. HUT: Yes, I think so.
THE COURT: Good. Well, here are my views on the document.
If an expert witness is retained not as a testifying expert, but simply a consulting expert, and is not expected to testify, and will not testify, then the expert's identity need not be disclosed to the other side.
And the information provided by the party, or the party's counsel, to the expert need not be disclosed.
Now, the second type of expert is not the consulting expert, but a testifying expert. If an expert is suspected to testify, as is the case with Dr. Dershwitz, then anything and everything that he receives from the party who hired him, or the party's attorneys, bearing upon the case is discovery.

So this is a discoverable document. It also can be used in cross-examination of Dr. Dershwitz.

Now, the question then is whether the statements by Mr. Oakley concerning the IV setup are admissible as substantive evidence of how the IV was set up, or the proper IV setup, and my answer is that the answer is no, because the expert testifies his opinions are evidence, but what he --

the information that he rounds up from that go to form his opinion do not become evidence simply because he said these are facts that I relied upon.

Now, so the fact that even if Dr. Dershwitz relied upon these statements in formulating his opinion, wouldn't mean that this document would be admitted to prove how the IV setup was actually set up.

Now, the next issue is whether the statements might come in as some admission of the State.

MR. HUT: That's what they're offered as.

THE COURT: Now, the letter from Miss Mullally to Mr. Zubler falls into the admission category, because it was intended to supply information in discovery, and there's an offer you can rely upon this in discovery. But the same does not hold true for Mr. Oakley's statements to Dr. Dershwitz.

Because it's simply -- because Mr. Oakley, it's not to counsel and opposing parties saying you can rely upon this. It's simply a statement by the attorney for the state to the expert, and it could be right, or it could be wrong.

MR. HUT: But it is an admission. It's an admission of someone in a representative capacity with knowledge, representing a party opponent.

THE COURT: Well --

MR. HUT: I don't think there's a requirement that there be a demonstrable reliance by the adverse party, Your

Honor.

THE COURT: Well, my view is it's not an admission. What's the best evidence of how the IV protocol works is what it says in the protocol, what the witnesses who administer it say, and so I don't take it as an admission. So I'm not going to offer it for the truth of the matter asserted, but you can certainly use it to cross-examine Dr. Dershwitz.

MR. HUT: Will you accept it for the fact that it was said as yet another proffer of an interpretation, this is about the fifth one in the record, of how the flow clamp wheel is supposed to operate? That's what it's offered for, not the correctness of the view, but the confusion among state representatives as to the attended operation of a vital

component of the apparatus.
THE COURT: Well, you can use it in cross-examination, but Mr. Oakley was not a member of the execution team. He's not a doctor. He's just a lawyer. I won't received it as an admission.
So it's received in evidence, but for the limited purpose of showing a communication from the state to the expert, but the state is not bound by the factual assertions in the statement.
MR. HUT: Thank you, Your Honor.
The next set of exhibits are ones as to which I believe there are no -- is no objection. The first of those

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is plaintiff's exhibit 76. Plaintiff's exhibit 76 is the lethal injection checklist as it was held forth by Injection Team C for the Baker execution.
THE COURT: And C is the witness who's the witness who testified yesterday?
MR. HUT: Yes. The injection recorder.
MR. PICKUS: There is no objection, Your Honor.
THE COURT: It is received.
MR. HUT: Thank you, Your Honor.
(Received in evidence.)
MR. HUT: Next exhibit is plaintiff's exhibit 88, which is a report, a scene investigation report, by the Office of the Medical Examiner, again, as I understand it, there is no objection.
MR. PICKUS: That is correct.
THE COURT: Good. Thank you, Mr. Pickus. It is received.
This is for Baker?
MR. HUT: Yes, sir.
THE COURT: Okay. Thank you.
MR. HUT: Thank you, Your Honor.
The next exhibit, plaintiff's exhibit 89, a supplemental report from the Office of the Medical Examiner, this one in connection with the Oken execution, which places the time of the commencement of the postmortem examination at

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approximately 40 minutes after death was pronounced. Again, no objection.
MR. PICKUS: No objection.
THE COURT: It is received.
(Received in evidence.)
MR. HUT: Thank you, Your Honor.
The next exhibit is plaintiff's exhibit and 90. This is a report of the Office of the Chief Medical Examiner

in respect to the execution of Flint Hunt. Again, I don't believe there's an objection.

THE COURT: Good. Thank you.

Mr. Pickus, what we'll do, just to save you some effort, if I'll give you a beat to look at it, and if there is an objection, you can say so. But I'll assume that silence is acquiescence.

MR. PICKUS: Very good, Your Honor.

THE COURT: Thank you.

MR. HUT: Next, Your Honor, is plaintiff's exhibit 91, another report of the office of the Chief Medical Examiner. This one in connection with the execution of Tyron Gilliam. No objection was noted in the pretrial report.

THE COURT: Good. It is received.

(Received in evidence.)

MR. HUT: Finally, Your Honor, following up on the testimony that the Court heard this morning about the Ohio

execution of Joe Clark, plaintiffs move in a evidence plaintiff's exhibit 108, which is a copy of the Ohio protocol.

THE COURT: In effect during the execution of Mr. Clark?

MR. HUT: That's our understanding, the effective date on the document is January 8, 2004.

THE COURT: Good. Thank you.

Mr. Pickus?

MR. PICKUS: Your Honor, I don't believe we were notified of this exhibit in advance. We would object to this exhibit on authenticity grounds, relevancy grounds, and hearsay grounds.

THE COURT: What I will do is -- let's do this, it seems to me that the first issue is late notice, because I presume that it was not listed in the pretrial order, and Mr. Pickus is nodding.

Were we not taking the week off, I would agree with you and exclude it on that basis. Excuse me. But because we will have some time off, this gives you an opportunity consult with the people in Ohio and verify its authenticity.

So essentially the late notice is secured by the time. Plus if there were a wholesale group of documents that were being introduced into evidence after the pretrial order, then I would exclude all of them on the grounds of there are

just too many. But I think that we have a relatively limited number. So that it's not overly burdensome for you to check it out.

As to the relevance, we'll have to see what the protocol says. Because if the protocol is dissimilar to the Maryland protocol, then the document is not -- may not be relevant, and the entire execution of Mr. Clark may be of dubious relevance.

But if the protocol is similar to the Maryland protocol, then my view would be that the document has enough relevance to be admitted, and I would have to study it, and consider the testimony of the witness concerning the Clark execution to determine how much relevance it has.

So what I will do is, with respect to 108, it will be marked for identification. And when we resume, Mr. Pickus and Miss Mullally can tell me whether they object to the document on the grounds of authenticity, and we can have a discussion from both sides on the relevance, and you can point out to me the dissimilarities or dissimilarities with the Maryland protocol.

So mark it for identification and table it so its admission. Thank you.

Mr. Hut?

MR. HUT: That concludes the set of exhibits that were the subject of our motions to have received in evidence.

And with that, Your Honor, plaintiff rests.

THE COURT: Good. Thank you.

(Pause.)

THE COURT: Good. For scheduling, we will not sit next week. We will resume on the 10th with the defense case, proceed as necessary through the 11th and the 12th, not sit on the 13th. And presumptively resume on the 18th and if necessary the 19th.

The availability of the 18th and the 19th depends upon whether or not a criminal trial goes forward. And I will know a lot more during the week of the second.

So I'll make a note that chambers will contact everyone during the week of the second to let you know how the 18th and 19th look.

Good. Miss Mullally and Mr. Pickus, what do you have on tap for the 10th, 11th , and 12th?

MR. PICKUS: Well, without pinning us down to an exact schedule we, do know Dr. Dershwitz would have to be on the 11th.

I also need to tell the Court the defense case will certainly include members of the execution team, that the members of the team can testify this week, while not thrilled with was going on, did leave with the impression His Honor was concerned about their situation, and I would thank the Court. And I would ask the same precautions be taken with

the defense case.

As we get closer, I can give you the exact details as far as the schedule.

THE COURT: Good. Dr. Dershwitz on the 11th, and you would contemplate we would have members of the execution team on the 10th?

MR. PICKUS: Yes, sir.

THE COURT: Good. What you should do is -- Mr. Thompson will you be the courtroom deputy?

THE CLERK: I believe I will.

THE COURT: Do you have Mr. Thompson's number?

MR. PICKUS: I will not leave without it.

THE COURT: Good. Feel free to call him at time day or night, you know, weekends, and we'll do the same procedures. Presumptively the feed room will be 3 D. And the witnesses, Mr. Thompson will make arrangements for the witnesses to come in underneath the building, come up through the secure elevator. And if they're here over lunch, to make sure that they are fed.

Good. I think we've also solved the technological problems so that we won't cut off those listening in 3 D from any portion of the proceeding, as we did this week.

Plus, we'll make sure for the open sessions they are given, anyone in the courtroom 3 D is given an opportunity to come up here and be in the courtroom.

, it looks like, let me ask, Mr. Pickus, who after Dr. Dershwitz, what do you think is going to happen on the 12th, then?

MR. PICKUS: That really depends on how much we get done on the 10th. Without holding us to this, I seriously believe we will be able to rest on the 12th. I doubt we will be able to rest on the 11th.

THE COURT: Well, all three days are open and available for you. If you have any scheduling problems that require us to truncate the day or go late, then I'm happy to do it.

Mr. Hut, without nailing you down, do you have any present thinking about whether you would have a rebuttal case?

MR. HUT: I think the honest answer is nothing definitive enough to give the Court any confidence that anything I say would be right, but I think there's some possibility that we could recall Dr. Heath, some possibility that we might want to ask the Court to hear from Dr. Dutton, who was originally scheduled, has been, was scheduled as an expert in the pretrial order. As to him we may yet decide we want to call him in rebuttal, depending on what the state's case shows.

THE COURT: Then presumptively we will do that on

the 18th and 19th, provided they can be here.

Now, if Dr. Heath is going to come back briefly in rebuttal, if that's your decision, I would ask you to discuss it with Miss Mullally and Mr. Pickus to see whether they would be amenable to have him appear by telephone, since we've all have had an opportunity to see him. But that would depend upon what he's going testify about, how long he's going to be.

MR. HUT: He might, Your Honor, be able to work in our rebuttal case on the 12th, depending on the length of the State's evidence, on the 12th.

MR. PICKUS: It's possible.

MR. HUT: We may be in a position do that. Whatever it is, it is.

MR. PICKUS: It's possible, we can't promise that, but it's possible.

MR. HUT: I understand.

THE COURT: Good. Thank you. And if there's nothing else, I wish you a pleasant weekend.

THE CLERK: Judge, you didn't say what time on the 10th.

THE COURT: Oh.

THE CLERK: I believe it's 9:30.

THE COURT: 9:30. What we'll do is send out an order with the schedule.

Good. Have a pleasant weekend. Thank you.

(PROCEEDINGS ADJOURNED)

I, Jacqueline Sovich, RPR, CM, do hereby certify that the foregoing is a correct transcript from the stenographic record of proceedings in the above-entitled matter.

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Jacqueline Sovich DATE

Official Court Reporter