2020 PA Super 172

ELIZABETH H. LAGEMAN, BY AND THROUGH HER POWER OF ATTORNEY AND DAUGHTER, ADRIENNE LAGEMAN Appellant v. JOHN ZEPP, IV, D.O.; ANESTHESIA ASSOCIATES OF YORK, PA, INC.; YORK HOSPITAL; AND WELLSPAN HEALTH, T/D/B/A YORK HOSPITAL Appellee	IN THE SUPERIOR COURT OF PENNSYLVANIA No. 756 MDA 2018

Appeal from the Judgment Entered May 10, 2018
In the Court of Common Pleas of York County
Civil Division at No: 2014-SU-000846-82

BEFORE: BOWES, OLSON, and STABILE, JJ.

DISSENTING OPINION BY STABILE, J.: **FILED JULY 20, 2020**

The Majority concludes that a new trial is warranted because the trial court abused its discretion by refusing to deliver a *res ipsa loquitur* instruction and by permitting the defense to use a demonstrative mannequin during trial. A *res ipsa loquitur* instruction properly was denied where Appellant presented direct evidence of negligence thereby obviating the need to rely upon the aid of an inference of negligence provided by a *res ipsa loquitur* instruction. The instruction was also properly denied where the record does not support a finding that any expert unequivocally testified Appellant's harm does not ordinarily occur in the absence of negligence. I further believe the trial court did not abuse its discretion by permitting the defense use of a demonstrative

mannequin where it was the trial court's judgment such use aided the jury in understanding the medical issue in this case. I respectfully dissent.

As this Court explained in ***D'Ardenne v. Strawbridge & Clothier, Inc.***, 712 A.2d 318 (Pa. Super. 1998), "**Where there is no direct evidence** to show cause of the injury, and the circumstantial evidence indicates that the negligence of the defendant is the most plausible explanation for the injury, the [*res ipsa loquitur*] doctrine applies." ***Id.*** at 321 (quoting Prosser & Keeton on the Law of Torts § 40, at 257 (5th ed. 1984) (emphasis added, additional citation omitted)). Because this was a case with direct evidence of Dr. Zepp's negligence, I find this case did not warrant a *res ipsa loquitur* instruction.

In ***Toogood v. Rogal***, 824 A.2d 1140 (Pa. 2003) (plurality), Justice Newman explained:

> *Res ipsa loquitur* is neither a doctrine of substantive law nor a theory of recovery; rather, **it is a rule of circumstantial evidence**. Nor is this doctrine to be employed simply because the treatment caused injury or failed to yield the expected result. Courts have continually stated that an injury alone is insufficient to prove negligence in medical malpractice cases.
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> The doctrine of *res ipsa loquitur* allows plaintiffs, **without direct evidence of the elements of negligence**, to present their case to the jury based on an inference of negligence. The key to the doctrine is that a sufficient fund of common knowledge exists within a jury of laypersons to justify raising the inference. **Instead of directly proving the elements of ordinary negligence**, **the plaintiff provides evidence of facts and circumstances surrounding his injury that make the inference of the defendant's negligence reasonable**. "The gist of res ipsa loquitur . . . is the inference, or process of reasoning by which the conclusion is reached. This must be based upon the evidence given, together with a sufficient background of human experience to justify the conclusion. **It is not enough**

> **that plaintiff's counsel can suggest a possibility of negligence**." Prosser & Keeton, *The Law of Torts* § 39, p. 243 (5th ed. 1995). **This theory relieves the plaintiff of having to prove causation directly.**

Id. at 1146 (emphasis added).

Justice Newman also provided historical perspective on the application of *res ipsa loquitur* in Pennsylvania, noting § 328D of the Restatement (Second) of Torts first was adopted in ***Gilbert v. Korvette, Inc.***, 327 A.2d 94 (Pa. 1974), and extended to medical malpractice cases in ***Jones v. Harrisburg Polyclinic Hosp.***, 437 A.2d 1134 (Pa. 1981), where both parties presented expert testimony, but the plaintiff's expert causation testimony was deficient. ***Toogood***, 824 A.2d at 1147-48. Concluding that expert medical testimony should no longer be a requirement in all medical malpractice cases, the ***Jones*** Court announced:

> Section 328D is fashioned to reach all instances where negligence may properly be inferred and its applicability is not necessarily precluded because the negligence relates to a medical procedure. The section establishes criteria for determining circumstances wherein the evidentiary rule of *res ipsa loquitur* may become operative in providing the inference of negligence. It is premised upon a recognition that certain factual situations demand such an inference.
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> [S]ection 328D provides two avenues **to avoid the production of direct medical evidence of the facts establishing liability**: one being the reliance upon **common lay knowledge** that the event would not have occurred without negligence, and the second, the reliance upon [**expert**] **medical knowledge** that the event would not have occurred without negligence.

Jones, 437 A.2d at 1138 (emphasis added).

The evidentiary rule of *res ipsa loquitur*, which permits an inference of negligence where direct evidence is not capable of being produced, is justified upon the rationale that certain cases demand such an inference because some events simply do not occur in the absence of negligence. Where, however, a plaintiff is capable of introducing direct evidence of negligence and resulting harm, there is no need to invoke an inference to bridge the gap between the harm suffered and the antecedent negligent act. To do so allows a plaintiff to present direct evidence of negligence and then have the court instruct a jury that the direct evidence is entitled to an inference of negligence. Doing so impermissibly bolsters a plaintiff's direct proof and imparts an imprimatur of liability by the court to a direct case of proof. It also is inconsistent in my view to both instruct a jury to weigh a plaintiff's direct proof of negligence **and** instruct them negligence may be inferred because the event ordinarily does not occur in the absence of negligence. In essence, on the one hand, a jury is told to consider the direct evidence, but then on the other hand, is told that because there is no direct evidence of negligence they may employ an inference of negligence that may be rebutted by the defense. Simply stated, the aid offered by a *res ipsa loquitur* instruction to infer negligence when direct proof is not available—but when the circumstances of a case compel such an inference, is simply not necessary when a plaintiff is capable of identifying and producing direct evidence of negligence, such as in the instant case. Moreover, expanding *res ipsa loquitur* to cases like that presently before us

would virtually guarantee precedent that the charge may be given in every malpractice case despite direct proof of negligence. The purpose of the rule would be completely lost in translation.

I believe my review of cases comports with the application of *res ispa loquitur* in this Commonwealth as applied in medical malpractice cases.

The ***Jones*** Court recognized two such instances where the inference allowed by *res ipsa loquitur* is permitted. This first "avenue" is traveled in cases that rely on common lay knowledge. For example, ***Fessenden v. Robert Packer Hosp.***, 97 A.3d 1225 (Pa. Super. 2014), a "proverbial 'sponge left behind' case," reflects the prototypical application of *res ipsa loquitur*. ***Id.*** at 1233 (citing ***Jones***, 437 A.2d at 1138 n. 11) ("[T]here are other kinds of medical malpractice, as where a sponge is left in the plaintiff's abdomen after an operation, where no expert is needed to tell the jury that such events do not usually occur in the absence of negligence."); ***Robinson v. Wirts***, 127 A.2d 706, 710 (Pa. 1956) (stating that no expert testimony is necessary in "cases where . . . a gauze pad is left in the body of a patient following an operation")). As we explained in ***Fessenden***:

> A narrow exception to the requirement that medical malpractice claims be supported by expert testimony applies in instances of obvious negligence, *i.e.*, circumstances in which the medical and factual issues presented are such that a lay juror could recognize negligence just as well as any expert. ***Jones***[, 437 A.2d at 1137]. In such instances, the doctrine of *res ipsa loquitur* allows a fact-finder to infer from the circumstances surrounding the injury that the harm suffered was caused by the negligence of the defendant.

Fessenden, 97 A.3d at 1230.

Although there was no item left behind in ***Quinby v. Plumsteadville Family Practice, Inc.***, 907 A.2d 1061 (Pa. 2006), a *res ipsa* instruction was similarly warranted. In ***Quinby***, a paraplegic was left unaccompanied and unrestrained on an examination table in a medical office following removal of a lesion from his left temple. He fell from the table and sustained injuries that purportedly resulted in his death. There was no explanation for Quinby's fall beyond the medical practice's negligence. Because "the fall is not the type of event that occurs in the absence of negligence, and [] there is no explanation other than [the practice's] negligence for the fall," the trial court should have charged the jury on the doctrine of *res ipsa loquitur.* ***Quinby***, 907 A.2d at 1073.

As the Court observed in ***Quinby***,

> Upon close analysis, it is apparent that *res ipsa loquitur* provides no assistance to a plaintiff's obligation to demonstrate a defendant's duty, that a breach of that duty was a substantial factor in causing plaintiff harm, or that such harm resulted in actual damages. **However, *res ipsa loquitur* does aid a plaintiff in proving a breach of duty**. While *res ipsa loquitur* is useful in this limited regard, case law universally refers to *res ipsa loquitur* as raising an inference of "negligence" rather than an inference of "breach of duty."

Id. at 1071 n.15 (emphasis added). While the Court indicated it would "abide by this typical nomenclature and refer to *res ipsa loquitur* as 'raising an inference of negligence[,]'" its comment is instructive in recognizing which element of a *prima facie* case of negligence is at issue when examining application of the doctrine.

With respect to the second "avenue" referenced in ***Jones***, that avenue is available in certain cases that involve more complex factual scenarios and require expert testimony. Again, absent direct evidence of negligence, *res ipsa* permits an inference of negligence if the evidence, coupled with "sufficient background of experience," justifies the conclusion. ***See*** Prosser & Keeton, *The Law of Torts* § 39, p. 243 (5th ed. 1995). The sponge left in the abdomen is the prototypical example. However, in a case involving complex medical issues that are not within the jury's common fund of knowledge, the plaintiff can attempt to establish a *res ipsa* case through expert testimony indicating, *inter alia*, that the event at issue would not ordinarily occur in the absence of negligence. Stated differently, if a plaintiff does not have expert testimony to establish a *prima facie* case of negligence based on direct evidence, then—and only then—does the question arise as to whether *res ipsa* should apply. In the absence of direct evidence of negligence, the jury can then weigh the plaintiff's "indirect," *i.e.*, circumstantial, evidence of negligence in conjunction with the expert's opinion that the event would not occur in the absence of negligence. The jury would then be in a position to use the *res ipsa* inference of negligence when deciding whether the plaintiff has proven a case by a preponderance of the evidence, assuming the remaining two elements of § 328D(1) are similarly satisfied. However, that inference should be available only in cases where there is no direct evidence of negligence. Allowing it in instances when the plaintiff has established a *prima facie* case of negligence

supported by direct evidence would, as noted above, virtually guarantee precedent that the charge may be given in every malpractice case despite direct proof of negligence.

Our Supreme Court has considered the application of *res ipsa loquitur* in complex medical cases that are outside a jury's common fund of knowledge. For example, in ***Jones***, the plaintiff experienced suprascapular nerve palsy, *i.e.*, intense pain in her neck, shoulder and arm, following a gynecological procedure. Jones filed suit claiming negligence and a jury found her surgeon negligent based on r*es ipsa loquitur*. The trial court denied the surgeon's post-trial motions. On appeal, this Court determined the case warranted a *res ipsa loquitur* analysis, despite plaintiff's inability to "aver the precise conduct of the named defendants because she was unconscious during treatment, although the circumstantial evidence points toward the negligence of one of more of the parties sued." ***Jones v. Harrisburg Polyclinic Hosp.***, 410 A.2d 303, 306 (Pa. Super. 1979), *rev'd*, ***Jones***, 437 A.2d 1134 (Pa. 1981). This Court nevertheless reversed and granted the surgeon a new trial, finding a *res ipsa loquitur* instruction was not warranted because the plaintiff had not eliminated other responsible causes as required under § 328D(1)(b).

The Supreme Court reversed our decision, concluding the plaintiff was entitled to an inference of negligence in light of uncontradicted expert testimony that surprascapular nerve palsy does not ordinarily occur during gynecological procedures in the absence of negligence. ***Jones***, 437 A.2d at

1139. The Supreme Court also rejected this Court's analysis of § 328D(1)(b), stating the subsection does not preclude joint responsibility. Therefore, it is not necessary for a plaintiff to "eliminate the 'responsible cause' of one in order for the requirements of section 328D(1)(b) to be met as to the other." ***Jones***, 437 A.2d at 1140.

As reflected in the above-quoted language from this Court's opinion, there is no suggestion Jones presented any direct, rather than circumstantial, evidence of negligence on the part of the surgeon. The lack of direct evidence is further corroborated by the Supreme Court's statement that "[t]he theories of liability asserted against [the surgeon] were those of lack of informed consent and negligence, through the application of the rule of *res ipsa loquitur*. The jury rejected the lack of informed consent theory in reaching its verdict against [the surgeon]." ***Id.*** at 1136.

In ***Hightower-Warren v. Silk***, 698 A.2d 52 (Pa. 1997), the plaintiffs' decedent underwent total removal of her thyroid. She subsequently experienced hoarseness that was attributed to paralysis of her vocal cord. The trial court initially entered a nonsuit, finding she could not proceed to the jury on the basis of *res ipsa loquitur* because her expert's testimony "was too speculative to establish a causal connection between [defendant's] surgical treatment and [decedent's] vocal cord paralysis." ***Id.*** at 53. Plaintiffs requested a new trial, contending their expert's testimony was sufficient to proceed under a theory of *res ipsa loquitur*. The trial court denied plaintiffs'

motion, ruling that the expert's testimony failed to satisfy either of the first two elements of § 328D. We affirmed the trial court's ruling. The Supreme Court reversed, finding that this Court erred in failing to follow the non-suit standard[1] and that plaintiffs satisfied all three elements of § 328D. Therefore, plaintiffs were entitled to proceed to the jury under the *res ipsa* doctrine. While it is not clear whether plaintiffs initially pursued any claims based on direct evidence of negligence, it is clear that the case was sent back to the trial court to proceed on a *res ipsa loquitur* theory only.

A common thread between ***Jones*** and ***Hightower-Warren*** is the fact the claimed injury involved a part of the body that was not directly involved in the patient's surgical procedure. In each case, the plaintiff introduced some evidence suggesting, but not directly proving, causation. In ***D'Ardenne***, this Court characterized such evidence as falling into a "grey zone," noting "Pennsylvania courts have thus concluded that where the evidence in the case falls within the grey zone, a factual realm in which a plaintiff presents as

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[1] Unlike the case before us, which involves an abuse of discretion standard of review, ***Hightower-Warren*** was an appeal from the entry of non-suit.

> It is well-established that a compulsory non-suit may be entered only when the plaintiff cannot recover under any view of the evidence, with every doubt resolved against its entry and all inferences drawn most favorably to the plaintiff. Moreover, a plaintiff must be given the benefit of all favorable testimony and all reasonable inferences drawn therefrom.

Hightower-Warren, 698 A.2d at 54 (quotation and citation omitted).

specific a case of negligence as possible, yet is unable to demonstrate the **exact** cause of the accident, plaintiff is entitled to a *res ipsa loquitur* charge." ***D'Ardenne***, 712 A.2d 324-25 (emphasis in original, internal citations and quotations omitted).

This Court discussed evidence falling in the "grey zone" in ***Smith v. City of Chester***, 515 A.2d 303, 306 (Pa. Super. 1986), noting:

> While it is true that a *res ipsa loquitur* instruction is not warranted in the face of clear and indubitable proof of negligence, it is also true that a *res ipsa loquitur* charge is appropriate where the facts of a case lie somewhere in a grey zone "between the case in which the plaintiff brings in **no** evidence of specific acts of negligence, and therefore must rely on the *res ipsa loquitur* inference alone, and the case in which the defendant's negligence 'can be clearly and indubitably ascertained' from the plaintiff's evidence, ***Farley v. Philadelphia Traction Company,*** 132 Pa. 58, 18 A. 1090 (1890), and therefore the plaintiff need not rely on the *res ipsa loquitur* inference at all." ***Hollywood Shop, Inc. v. Pa. Gas & Water Co.,*** 270 Pa. Super. 245, 252–53, 411 A.2d 509, 513 (1979).

Id. at 306 (Pa. Super. 1986) (emphasis in original). Here, the evidence can be clearly and indubitably ascertained through Dr. Pepple's expert testimony that Dr. Zepp negligently inserted a central venous pressure ("CVP") line causing Mrs. Lageman's arterial cannulation, in turn causing her stroke. Therefore, this is not a case where the evidence falls into the grey zone. Mrs.

Lageman did not need to rely on, and was not entitled to, a *res ipsa loquitur* inference and charge.[2]

In ***MacNutt v. Temple University Hospital, Inc.***, 932 A.2d 980, 986 (Pa. Super. 2007) (*en banc*), the plaintiff claimed he suffered a chemical burn to his shoulder during surgery to treat his thoracic outlet syndrome. The defense presented testimony suggesting plaintiff had shingles, not a chemical burn. The trial court precluded plaintiffs from proceeding on the theory of *res ipsa loquitur* because plaintiffs "had produced adequate evidence to support a cause of action based on a standard theory of negligence without relying on a theory of *res ipsa loquitur*." ***Id.*** at 984 (quoting Trial Court Opinion, 6/24/15, at 1-2). On appeal, we affirmed, holding that the trial court "properly precluded [plaintiffs] from presenting their case at trial under the *res ipsa loquitur* doctrine." ***Id.*** at 983.

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[2] The Majority suggests our Supreme Court sanctioned giving a *res ipsa* charge in ***Quinby*** despite "sufficient **direct** evidence of negligence from plaintiff's expert to make out a *prima facie* case[.]" Majority Opinion at 28 (emphasis added). However, that Court recognized that *res ipsa* is a "simple matter of circumstantial evidence." ***Quinby***, 907 A.2d at 1071 (quoting WILLIAM L. PROSSER, LAW OF TORTS §§ 39, 40 (4th ed.1971). I submit the evidence of negligence in ***Quinby*** was circumstantial, not direct. A quadriplegic was left unattended on an examination table—either on his side or on his back—and fell to the floor. No one observed the fall and no one could explain how or why he fell from the table. Dissimilarly here, Dr. Zepp admitted that he inserted the CVP line through its intended destination—the jugular vein—and into the carotid artery. The question was simply whether he was negligent for doing so. Despite direct evidence of the errant location of the catheter, the jury concluded he was not negligent.

This Court once again recognized, "The doctrine of *res ipsa loquitur* is a rule of circumstantial evidence which allows plaintiffs, **without direct evidence of the elements of negligence**, to present their case to the jury based on an inference of negligence." ***Id.*** at 986 (emphasis added). Not only was there direct evidence of negligence, but also there was a "difference of opinion on the nature of [plaintiff's] injury as well as the competent evidence of another possible cause for the injury." ***Id.*** at 991. These factors "created a factual dispute regarding whether [plaintiff's] injury was outside the scope of [defendants'] duty to appellant." ***Id.*** (citation omitted). Consequently,

> [Plaintiffs] did not satisfy the necessary factors under the Restatement to proceed under the doctrine of *res ipsa loquitur.* Accordingly, we hold this case was not in reality a *res ipsa loquitur* case, and the court's decision to deny [plaintiffs] a new trial on this ground must stand. . . . [W]e hold the court properly precluded [plaintiffs] from presenting their medical malpractice case at trial based on a *res ipsa loquitur* theory of negligence.

Id. at 991-92 (citations omitted).[3]

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[3] On appeal, the plaintiffs argued (1) trial court error for not allowing them to prove negligence through *res ipsa loquitur* and (2) trial court error for refusing to instruct the jury on *res ipsa loquitur*. This Court considered the two issues together, devoting much of its analysis to whether the plaintiffs satisfied the elements of § 328D, and concluding they did not satisfy either § 328D(1)(a) or (b). ***MacNutt***, 932 A.2d at 990-91. While the Court did not devote significant separate analysis to the plaintiffs' entitlement to prove negligence through *res ipsa loquitur*, the Court—as reflected above—ultimately determined that the trial court properly precluded plaintiffs from presenting their case on a *res ipsa loquitur* theory of negligence. ***Id.*** at 991-92.

My review of the case before us leads me to conclude that this case, just as ***MacNutt***, is one in which the plaintiff produced direct evidence to support a negligence cause of action without the need to rely on *res ipsa loquitur*. As in ***MacNutt***, the case before us is a case with expert testimony demonstrating the exact cause of the incident rather than circumstantial evidence of negligence. As such, it is not a *res ipsa loquitur* case.

I offer the following factual summary in support of my conclusion. Mrs. Lageman filed suit alleging that Dr. Zepp, the anesthesiologist assigned to her surgery, negligently inserted a CVP line, also known as a catheter, into her carotid artery resulting in a stroke that left her partially paralyzed. At trial, she first called Dr. Zepp as a witness as on cross-examination. Dr. Zepp explained the procedure he employed for insertion of a CVP line. Notes of Testimony, Trial ("N.T.") at 166-80. He admitted that in the course of inserting the CVP line, the catheter went through the walls of its intended destination (the jugular vein) and into Mrs. Lageman's carotid artery. ***Id.*** at 181.[4] He acknowledged that placing a CVP line into the artery can increase the risk of stroke and that Mrs. Lageman did suffer a stroke. ***Id.*** at 185-86, 189. When asked if "operator error" was the only explanation for what happened, he replied that the steps he took to confirm the catheter was in the

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[4] In his opening statement, Dr. Zepp's counsel explained to the jury that the technical term for "when a catheter is placed in an artery rather than a vein" is "arterial cannulation." ***Id.*** at 138.

proper location were the same steps he takes in the placement of every CVP line and stated, "I've searched my heart as to why this happened and whether there is any steps that I could have changed when I placed the line, and there's nothing that I would have done differently." ***Id.*** at 194-95.

Mrs. Lageman's counsel asked Dr. Zepp if he was wrong in thinking the catheter was in the jugular vein. Dr. Zepp answered, "I was wrong." ***Id.*** at 195. When asked if he was also wrong when he performed the manometry tests in the course of inserting the line, he said he was not wrong, commenting, "The manometry is a very sensitive test to determine whether or not you are arterial or venous, and the manometry passed the venous confirmation." ***Id.***

Dr. Zepp's own counsel later asked, "Dr. Zepp, you did not intend for this arterial cannulation to occur in connection with Mrs. Lageman's line placement, correct?" Dr. Zepp answered, "That's correct." Counsel then asked, if "ultimately being wrong in that respect, is that the same thing as being negligent?" Dr. Zepp responded, without objection, "No." ***Id.*** at 196. Mrs. Lageman presented the expert testimony of anesthesiologist Dr. Pepple. Dr. Pepple explained that he reviewed the transcript of Dr. Zepp's 2015 deposition. Dr. Pepple was asked, "In your area of expertise as an anesthesiologist, did you form an opinion as to whether [Dr.] Zepp in his placing the CVP line in Mrs. Lageman acted below the standard of care required under the circumstances of an anesthesiology specialist; in other

words, was he negligent?" ***Id.*** at 220. He answered, "My opinion was that he was negligent." ***Id.*** Dr. Pepple went on to explain that placing the CVP line into the carotid artery can result in a total occlusion or an "embolic phenomenon or obstructive phenomenon which can cause a stroke." ***Id.*** at 222.

The following exchange subsequently took place between Mrs. Lageman's counsel and Dr. Pepple:

> Q. Now, Dr. Zepp would say he followed all the proper procedures, he did test with a tube called manometry, and he did everything right, but it turned out to be wrong in the artery. In your opinion, is that possible under the appropriate standard of care?
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> A. It doesn't seem possible because the facts that we do know are that the catheter was in an artery, okay, so if it was in an artery, then if you worked backwards, you'd have to say, well, how did it get there?
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> If you transduced it, in other words, if you have a needle and you hook in this case a piece of plastic tubing to it and let the blood go up into it, if it's in an artery, it usually will go up quite high.
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> At his deposition, he said he did that. He didn't record that in the anesthesia record.

Id. at 226.

Dr. Pepple acknowledged that Mrs. Lageman's jugular vein was located directly above her carotid artery. That positioning occurs in approximately 8% of people, whereas in approximately 70% of people, the jugular vein is to the lateral side. ***Id.*** at 227-28. While the location of her vein in relation to her carotid artery would not be an excuse for putting the catheter into the

artery, "It's an explanation. It's not an excuse. This was a more difficult placement than normal." ***Id.*** at 230. As for transducing to locate the tip of the needle on the CVP line, Dr. Pepple indicated you would have to move the transducer up and down but the medical records do not reflect that was done. ***Id.*** at 229-30.

Dr. Pepple expounded on the harm resulting from placing a catheter in the carotid artery. When asked if placing a catheter in the carotid artery increases the risk of a stroke, he replied that it "increases it exponentially." ***Id.*** at 232. Further, if Dr. Zepp put the catheter into the artery before realizing it was in the artery, "[t]hat is below the standard of care. I mean, that's what we are trying to avoid entirely." ***Id.*** at 233. To a reasonable degree of medical certainty, it was Dr. Pepple's opinion that Mrs. Lageman's stroke was "caused by this catheter being down 18 centimeters [approximately seven inches] into the arterial area." ***Id.*** at 237. If the standard of care had been properly observed, all the steps were taken correctly, and things were seen and evaluated correctly, it would not be possible for the carotid artery to be cannulated "**to that degree**." ***Id.*** at 238 (emphasis added).

At the conclusion of the testimony from Dr. Pepple, whose testimony was taken out of order to accommodate his schedule, Dr. Zepp returned to the stand. When asked if he agreed with Dr. Pepple's opinion that he performed Mrs. Lageman's procedure in a negligent fashion, Dr. Zepp replied,

"No, I do not." ***Id.*** at 296-97. He then proceeded, over objection from Mrs. Lageman's counsel, to demonstrate and describe insertion of a CVP line using a mannequin. ***Id.*** at 297-311.

In addition to Dr. Zepp's own testimony, the defense offered the expert testimony of anesthesiologist Dr. Hudson. Based on his review of the anesthesia records from Mrs. Lageman's surgery and Dr. Zepp's deposition, Dr. Hudson formed opinions, to a reasonable degree of medical certainty, that Dr. Zepp's conduct met the applicable standard of care, that Dr. Zepp was not negligent, and that Dr. Zepp did not commit malpractice. ***Id.*** at 502. Dr. Hudson noted his awareness of the arterial cannulation that occurred in the placement of Mrs. Lageman's CVP line and expressed his opinion that Dr. Zepp "followed the standard of care and the guidelines that are developed based on the medical evidence in the steps that he took in the placement of the - - the attempted placement of the central line." ***Id.*** at 502-03. He stated that Dr. Zepp used ultrasound first to identify the location of the jugular vein in relation to the carotid artery; however, the use of ultrasound does not eliminate the risk of arterial cannulation. ***Id.*** at 503-04. He also discussed manometry, the "gold standard" confirmatory test for location of the catheter, and explained that in the course of conducting that final step of measuring the pressure in the line, Dr. Zepp recognized that the line was in the carotid artery. ***Id.*** at 509-10.

Dr. Hudson was asked to articulate the major reasons why he disagreed with Dr. Pepple's opinions and criticism of Dr. Zepp's actions. Dr. Hudson explained that Dr. Pepple extensively discussed the usefulness of "a long axis with an in-plane view of ultrasound versus a short axis view ultrasound." ***Id.*** at 511. Dr. Zepp had testified that he used the short axis view ultrasound. ***Id.*** at 167-68. Dr. Hudson noted that "there's really no compelling medical evidence that suggests the one is better than the other to prevent posterior wall puncture of the internal jugular vein or prevent[] carotid artery cannulation. The vast majority of anesthesiology and critical care medicine practitioners use a short axis view, they do not use a long axis view[.]" ***Id.*** at 511. He also took issue with Dr. Pepple's lack of discussion concerning the importance of manometry, which in his estimation "is such a vital part of the confirmatory process in assuring that that initial catheter is in the vein and not the artery." ***Id.*** at 512.

Dr. Hudson testified that he has been involved in quality assurance within institutions where he has practiced. ***Id.*** He acknowledged that he has experienced arterial cannulation in connection with CVP line placement in the course of his practice, as have experienced colleagues in his department. ***Id.*** In his opinion, "Dr. Zepp's description of his techniques for placement of central venous catheters, he took the recommended steps to limit the risk of inadvertent arterial cannulation, and his technique is consistent with the standard of care." ***Id.*** at 512-13.

Again,

> [b]ecause medical malpractice is a form of negligence, to state a *prima facie* cause of action, a plaintiff must demonstrate the elements of negligence: a duty owed by the physician to the patient, a breach of that duty by the physician, that the breach was the proximate cause of the harm suffered, and the damages suffered were a direct result of harm. With all but the most self-evident medical malpractice actions there is also the added requirement that the plaintiff must provide a medical expert who will testify as to the elements of duty, breach, and causation.

Tillery v. Children's Hospital of Philadelphia, 156 A.3d 1233, 1240 (Pa. Super. 2017) (quoting ***Fessenden***, 97 A.3d at 1229). Further, "[a]n expert witness proffered by a plaintiff in a medical malpractice action is required to testify to a reasonable degree of medical certainty, that the acts of the physician deviated from good and acceptable medical standards, and that such deviation was the proximate cause of the harm suffered." ***Id.*** (quoting ***Stimmler v. Chestnut Hill Hosp.***, 981 A.2d 145, 155 (Pa. 2009)).

There is no dispute that Dr. Zepp owed a duty of care to his patient, Mrs. Lageman. Based on my review of Dr. Pepple's testimony, an abridged version of which I have provided above, I conclude that Mrs. Lageman presented sufficient direct evidence to demonstrate that Dr. Zepp's actions fell below the standard of care and therefore breached his duty of care to Mrs. Lageman. Through Dr. Pepple's testimony, she also established that Dr. Zepp's breach of duty caused her stroke, which left her paralyzed. Testimony from various witnesses, including an actuary, Jonathan Cramer, N.T. at 351-81, Mrs. Lageman's daughter, Adrienne Marie Lageman, ***id.*** at 392-404, and

Mrs. Lageman herself, Lageman Deposition, 4/14/15, at 1-16, showed that Mrs. Lageman suffered damages as a direct result of the harm. Therefore, even though Dr. Zepp contested the evidence, Mrs. Lageman established a *prima facie* case of negligence against Dr. Zepp.[5] The Majority recognized that fact. Majority Opinion at 5 ("Thus, [Mrs. Lageman] established a *prima facie* case of negligence: a duty to use reasonable care, breach of that duty, and evidence that breach increased the risk of harm actually suffered by Mrs. Lageman.").

Following closing arguments, the trial court properly charged the jury on the elements of negligence and, in particular, medical negligence with respect to a doctor's performance of duties that stem from his professional relationship with a patient. The jury was instructed to determine if Dr. Zepp's care or treatment fell below the standard of care, whether his negligence was a factual cause of Mrs. Lageman's injuries, and the amount of damages she sustained as a result of Dr. Zepp's negligence. N.T. at 628-37. The jury was advised that a bad or unforeseen result that occurs as a result of a physician's conduct is not necessarily proof of negligence, that a doctor does not guarantee a particular result, and that the jury may not infer the doctor was negligent solely because the treatment ended with an unfortunate result. ***Id.***

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[5] I note that the trial court denied Dr. Zepp's motion for nonsuit. N.T., at 407-08. Both parties requested, and were denied, directed verdicts at the close of testimony. ***Id.*** at 563-64.

at 629. Following deliberations, the jury concluded Dr. Zepp was not negligent. ***Id.*** at 649.

The fact the jury determined Dr. Zepp was not negligent is not an indication Mrs. Lageman failed to establish a *prima facie* case of negligence. To the contrary, she presented expert testimony that provided direct evidence of Dr. Zepp's negligence. In this instance, the evidence was contested by Dr. Zepp through his own testimony and that of his expert, Dr. Hudson. It was up to the jury to weigh that evidence and apply the law as instructed by the trial court. It is presumed that jurors follow the court's instructions. ***Farese v. Robinson***, 222 A.3d 1173, 1184 (Pa. Super. 2019).

Because Mrs. Lageman presented direct evidence of causation, and therefore direct evidence of negligence, she was not entitled to a *res ipsa loquitur* instruction. I would find, as the *en banc* panel of this Court did in ***MacNutt***, that the trial court "properly precluded [plaintiffs] from presenting their medical malpractice case at trial based on a *res ipsa loquitur* theory of negligence." ***MacNutt***, 932 A.2d at 992. Therefore, the trial court did not err or abuse its discretion in denying a *res ipsa* instruction and Mrs. Lageman should not be granted a new trial.

Although I conclude the Majority incorrectly determined Mrs. Lageman was entitled to a *res ipsa* instruction and, therefore, a new trial, I write further to express my disagreement with the Majority's analysis of the first element of § 328D. In my estimation, Mrs. Lageman simply did not establish that the

event at issue here—arterial cannulation—does not ordinarily occur in the absence of negligence.

To warrant a *res ipsa* instruction, a plaintiff must satisfy all three elements of § 328D. ***MacNutt,*** 932 A.2d at 987.

In accordance with § 328D,

> (1) It may be inferred that **harm** suffered by the plaintiff is caused by negligence of the defendant when
>
> (a) The **event** is of a kind which ordinarily does not occur in the absence of negligence;
> (b) Other responsible causes, including the conduct of the plaintiff and third persons, are sufficiently eliminated by the evidence; **and**
> (c) The indicated negligence is within the scope of the defendant's duty to the plaintiff.

Restatement (Second) of Torts, § 328D(1) (1964) (emphasis added).

As the trial court recognized:

> On March 13, 2014, Plaintiff filed a complaint in medical malpractice and negligence against the above-named Defendants. Plaintiff alleged that Defendant Zepp was negligent for breaching the standard of care as a result of placing the catheter through the vein and into Plaintiff's artery[, *i.e.*, arterial cannulation] causing her to suffer a stroke in her right middle cerebral artery that resulted in left-sided paralysis.

Trial Court Opinion, 8/2/18, at 3. In the context of this case, and assuming for the sake of argument that a *res ipsa* instruction was warranted, I submit that § 328D appropriately would be read as follows:

(1) It may be inferred that **the stroke**[6] suffered by the Mrs. Lageman is caused by negligence of Dr. Zepp if

(a) **Arterial cannulation** is an event of the kind that ordinarily does not occur in the absence of negligence;
(b) Other responsible causes of the **stroke** are eliminated; and
(c) The indicated negligence is within the scope of Dr. Zepp's duty to Mrs. Lageman.[7]

As outlined above, Mrs. Lageman's expert, Dr. Pepple, concluded Dr. Zepp was negligent in his placement of the central line. In particular, Dr. Pepple was critical of the technique employed by Dr. Zepp in the insertion of the central line, and concluded his placement of the catheter into the carotid artery fell below the standard of care. However, he also acknowledged that following all of the applicable guidelines established by the American Society of Anesthesiologists "cannot guarantee any specific outcome." N.T. at 282. ***See also id.*** at 293 (following the recommended steps cannot guarantee any specific outcome for a patient).

By contrast, Dr. Zepp testified that he was not negligent and that arterial cannulation can occur, even in the absence of negligence. ***Id.*** at 314. He explained that there is an algorithm for managing the complications of arterial cannulation because

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[6] There is no suggestion there was any damage to Mrs. Lageman's carotid artery or her jugular vein as a result of the arterial cannulation. The stroke is the "harm" she alleged resulted from the arterial cannulation.

[7] The trial court determined that Mrs. Lageman established the third element, *i.e.*, that the indicated negligence is within the scope of Dr. Zepp's duty to Mrs. Lageman. Trial Court Opinion, 8/2/18, at 8.

> [i]t's necessary for the care of the patient. If this type of issue never arose, there wouldn't be an algorithm for its use. There would be no reason to create an algorithm for this type of an issue.
>
> It's something that's happened to my partners, it's something that's obviously happened to me, so, you know, we have these best practice guidelines to guide us through placing this line, but **even in the absence of negligence**, we can still have these arterial cannulations, and we need to have a way to be able to manage them. And the literature supports the use of getting another body and getting a vascular surgeon in to, you know, further investigate that rather than pulling that catheter out and just holding pressure.

Id. at 314-15 (emphasis added).

In addition, Dr. Zepp's expert, Dr. Hudson, offered his opinion that Dr. Zepp was not negligent, that his conduct met the applicable standard of care, and that Dr. Zepp followed proper guidelines in the attempted placement of the central line. ***Id.*** at 502-03. Dr. Hudson also acknowledged that arterial cannulation has occurred in connection with his placement of a central line and has happened with experienced colleagues in his department. ***Id.*** at 512. "[E]ven following the guidelines, you cannot guarantee that you are going to prevent injury." ***Id.*** at 546.[8]

In deciding the first element of § 328D was satisfied, the Majority contends that Mrs. Lageman "produced testimony that cannulation of the

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[8] Because Dr. Hudson's report did not specifically state that arterial cannulation does not happen in the absence of negligence, the trial court precluded Dr. Zepp's counsel from eliciting that opinion at trial. ***See*** Majority Opinion at 25 n.8.

artery did not usually occur in the absence of negligence when the procedure was performed with manometry as maintained by [Dr.] Zepp." Majority Opinion at 14. The Majority also indicated, without citation to the trial transcript, "Dr. Pepple testified unequivocally herein that, to a reasonable degree of medical certainly, arterial cannulation would not have occurred in the absence of negligence in the performance of the central line placement." ***Id.*** at 20. *However, my review of the transcript fails to unearth any unequivocal statement by Dr. Pepple that arterial cannulation does not ordinarily occur in the absence of negligence*. Rather, he offered his opinion that Dr. Zepp was negligent in his insertion of the central line and that his conduct fell below the standard of care. N.T. at 220, 233. He also was asked, "And if one is approaching a patient like this within the standard of care that is done negligently, should this cannulation of the artery occur?" ***Id.*** at 240. Dr. Pepple responded, "It should not occur." ***Id.***[9] In essence, the expert testimony of Dr. Pepple did nothing more than satisfy the elements necessary to establish a *prima facie* case of a medical negligence case. ***See Quinby***, 907 A.2d at 1070 ("Because medical malpractice is a form of negligence, to state a *prima facie* cause of action, a plaintiff must demonstrate the elements of negligence: a duty owed by the physician to the patient, a breach of that

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[9] While I am not quite certain of the meaning of counsel's question, the question clearly did not ask if arterial cannulation ordinarily does not occur in the absence of negligence.

duty by the physician, that the breach was the proximate cause of the harm suffered, and the damages suffered were a direct result of harm.") (quotation and citation omitted).

It further appears the Majority rejected the testimony of Dr. Zepp that arterial cannulation can occur even in the absence of negligence and similarly discounted Dr. Hudson's opinion that Dr. Zepp met the applicable standard of care. Regardless, Dr. Pepple's conclusion that Dr. Zepp was negligent does not equate to a conclusion that arterial cannulation does not ordinarily occur in the absence of negligence. Again, it was enough to satisfy the requirements necessary to establish a *prima facie* of negligence. The case appropriately went to the jury on that basis and the jury determined that Dr. Zepp was not negligent.

With respect to *res ipsa loquitur*, the trial court concluded:

> We find that the evidence in this case did not establish that more likely than not that [Mrs. Lageman's] injuries were caused by [Dr.] Zepp's negligence. We find that the experts shared different views on the use of ultrasound to find the vein and artery. Based on these conclusions, we found that the possibilities were evenly divided between negligence and its absence. **As a result, we found that** [**Mrs. Lageman**] **did not meet her burden of proof of drawing a permissible conclusion that an arterial cannulation does not ordinarily happen unless someone is negligent.** We suggest that conclusion is not erroneous.

Trial Court Opinion, 8/2/18, at 19 (emphasis added).

Again, "[b]efore a plaintiff can invoke the doctrine of *res ipsa loquitur,* all three of the elements of Section 328D(1) must be established; only then does the injurious event give rise to an inference of negligence." ***MacNutt***,

932 A.2d at 987 (citations omitted). Mrs. Lageman failed to establish the first element and I believe the Majority's conclusion to the contrary is incorrect. Therefore, even assuming Mrs. Lageman was entitled to proceed on a *res ipsa loquitur* theory, she did not satisfy the first element of § 328D and would not have been entitled to a *res ipsa loquitur* jury instruction.

The Majority also concludes that the trial court committed an error of law by permitting Dr. Zepp to conduct a live demonstration using a mannequin to illustrate the process of inserting a central line. Majority Opinion at 28-34. It is well settled that "the admission of evidence rests within the sound discretion of the trial court and will only be reversed upon a showing that it abused its discretion." ***Quinby***, 907 A.2d at 1078. Additionally, "for a ruling on evidence to constitute reversible error, it must have been harmful or prejudicial to the complaining party." ***Stumpf v. Nye***, 950 A.2d 1032, 1036 (Pa. Super. 2008) (citation omitted).

> As this Court has explained:
>
> > Demonstrative evidence is "tendered for the purpose of rendering other evidence more comprehensible for the trier of fact." 2 MCCORMICK ON EVIDENCE § 212 (5th ed. 1999). "As in the admission of other evidence, a trial court may admit demonstrative evidence whose relevance outweighs any potential prejudicial effect." ***Commonwealth v. Serge***, 586 Pa. 671, 896 A.2d 1170, 1177 (2006) (citation omitted). "Demonstrative evidence may be authenticated by testimony from a witness who has knowledge 'that a matter is what it claimed to be.'" ***Id.*** (citing Pa.R.E. 901(b)(1)).
>
> ***Kopytin v. Aschinger***, 947 A.2d 739, 747 (Pa. Super. 2008).

Here, the trial court concluded:

> We find the demonstration was relevant to help the jury understand what this procedure involved and the steps that are undertaken to accomplish the procedure. We also find that the testimony throughout this portion of the trial made it clear to the jury that this demonstration was not illustrative of the circumstances in [Mrs. Lageman's] case. The demonstration was only used for the purpose of showing the steps for placing a central venous line. [Mrs. Lageman] had plenty of opportunity to clarify this fact to the jury and to cross-examine [Dr.] Zepp while the mannequin was in the room during the trial. Therefore, we find that we did not abuse our discretion in allowing the demonstrative exhibit to be presented before the jury in this case.
>
> Additionally, the demonstration tended to show clearly to the jury how the initial position of the needle was plainly visible through the ultrasound, and thus, how its placement in an artery could have been avoided. We fail to see how the demonstration prejudiced [Mrs. Lageman].

Trial Court Opinion, 8/2/18, at 21-22.

My review of the transcript supports the trial court's findings. The demonstration enabled the jury to better understand the procedure Dr. Zepp performed on Mrs. Lageman and the technique he employed. The fact that Dr. Zepp was demonstrating the procedure on a mannequin and not recreating the actual procedure performed on Mrs. Lageman was driven home several times in the course of his testimony. ***See*** N.T at 297 ("obviously, we have a mannequin here" . . . "This is a mannequin. This is a mannequin specifically designed in our simulation lab in York Hospital to allow you to practice this technique"); at 297-98 ("You can't go through all the steps, so there's going to be a point [] where I kind of stop, and I'll talk you through the rest. The reason that is, is, again, you don't want to put the dilators into the mannequin"); at 298 ("I mean, again, it's just a model, a mannequin, so it's

not as realistic as it is in real life"); at 301 ("I'm not going to do that again. It's a mannequin,"); and at 305 ("I can't really replicate that with the mannequin, but that's kind of standard practice when you place the line").

Further, as the trial court determined, "We fail to see how the demonstration prejudiced [Mrs. Lageman]." Trial Court Opinion, 8/21/18, at 22. In fact, before Dr. Zepp concluded the demonstration, Mrs. Lageman's counsel asked, "[C]ould we have the doctor show what it actually looks like when it is in the artery like it was with Mrs. Lageman" because he "showed us what it looks like when it's in the vein[.]" N.T. at 305-06. Dr. Zepp proceeded to put the needle into the artery, explaining "when you have a real patient, this column of tubing goes up fast because it's a higher pressure system, and you will be able to see that pulsation." ***Id.*** at 308. He explained that the orientation was the same as before and stated, "See the pulsations? The manometry corresponds to the pulsations, . . . the column of fluid doesn't fall back down into the patient." ***Id.***

In his closing argument, Mrs. Lageman's counsel actually used the demonstration to support his claim of Dr. Zepp's negligence, stating:

> Well, what about this manometry? That's a procedure that's supposed to be done before you put the large bore catheter in to verify that you are not in the artery, in the vein.
>
> You had a demonstration here with a mannequin, and – a practice mannequin, and Dr. Zepp was showing what he says that he did or he always does and probably believes that he did. But I interrupted him. I stood up. I interrupted. I said, could we see what it would look like if you actually put that catheter in the artery where nobody disagrees that it was? Nobody disagrees

> with that. What would it look like if you put it in the artery? And he held up the tube, and there was some necessity to try to mimic the heartbeat by squeezing that bulb, and you could see that it was red and it went up and down with the heart.
>
> Then Dr. Zepp went over and showed you the heartbeat, the peak of the mountain, after he had sewed everything in and after he checked the pressure, and then he learned, you know, it's too late, that he was in the artery.
>
> So that – I asked him, does that top of the wave there, does that correspond to the heart beating? And he said, yes, that's when the heart contracts and beats, and that's when the column rises if you are doing the manometry correct, that gold standard that Dr. Hudson talked about.
>
> So how – if your manometry was done, if it was done properly, if it was interpreted properly, how do you miss that? How do you miss seeing that the blood is red and it's going up and down?
>
> The blood is a different color in the veins than in the arteries. I used these, and I asked, is that – I asked in the question, is that pretty much the difference? Yeah.
>
> So was the manometry done? Was it done properly? Was it interpreted properly? Even Dr. Hudson agreed, their expert, that if it was not, that is below the standard of care.

N.T. at 602-04.

I believe the trial court properly exercised its discretion in permitting the demonstration. Moreover, Mrs. Lageman has failed to demonstrate how she was prejudiced by the court's ruling. Finding no abuse of discretion in that evidentiary ruling, I would not disturb it.