

UNITED STATES DISTRICT COURT
DISTRICT OF NEW HAMPSHIRE

Kurt West

v.

Civil No. 10-cv-214-JL
Opinion No. 2013 DNH 118P

Bell Helicopter
Textron, Inc. et al.

MEMORANDUM ORDER

In December 2008, a helicopter piloted by the plaintiff, Kurt West, crashed to the ground in Bow, New Hampshire. West survived the crash, but suffered injuries. He then brought this products liability action against the manufacturer of the helicopter, defendant Bell Helicopter Textron, Inc.; the manufacturer of its engine, defendant Rolls Royce Corporation; and the successor-in-interest to the manufacturer of the helicopter's electronic control unit ("ECU"), defendant Goodrich Pump & Engine Control Systems, Inc. This court has subject-matter jurisdiction over this action between West, a Massachusetts citizen, and the defendants, citizens of other states, under 28 U.S.C. § 1332(a)(1) (diversity).

Though many of the underlying facts of this case remain sharply disputed as trial nears, the parties more or less agree to the following. Since obtaining his license in the late 1990s, West has worked as a helicopter pilot. In late December 2008, a few days before Christmas, West took off from an airfield in

Connecticut, piloting a Bell 407 helicopter equipped with a Rolls Royce engine, which was in turn equipped with a "Full Authority Digital Engine Control" or "FADEC" system, including an ECU, manufactured by a successor-in-interest to Goodrich. The purpose of West's solo flight was to move the helicopter to a hangar in Pembroke, New Hampshire, owned by West's employer, JBI Helicopters. Before West's flight, the helicopter had been kept outside in wintry conditions at the airfield in Connecticut.

About 45 minutes into the flight, the helicopter's engine lost power, requiring West to attempt to land through a technique known as "autorotation." West succeeded in putting the helicopter down on a residential street, but the force of the landing caused him injuries, including, he claims, a worsening of his pre-existing gastrointestinal syndrome. West also suffers from post-traumatic stress disorder ("PTSD") as a result of the crash, though the parties dispute the severity of that condition.

The parties also dispute what caused the engine in West's helicopter to lose power, or "flame out." West alleges that the flame-out resulted from a defect in the FADEC that caused the closure of a valve supplying fuel to the engine--specifically, that the ECU mistakenly registered an errant electric signal from the circuit board as an "overspeed" event necessitating that the fuel supply be cut. This is known as a "false overspeed solenoid

activation," or "FOSSA," event. The defendants attack this theory on several grounds. They argue that the engine lost power because it ingested ice or snow left on the helicopter as a result of its improper cleaning by West and a co-worker before West took off from the airfield in Connecticut. The defendants also say that West improperly executed the autorotation procedure, adding to the impact of the landing.

The parties have filed several motions seeking to exclude proffered expert testimony and other evidence from the upcoming jury trial. The court heard oral argument on these motions on the record following the final pre-trial conference in this matter. The court's rulings on those motions follow.

I. Expert challenge motions

West and the defendants challenge much of each other's anticipated expert testimony. "The touchstone for the admission of expert testimony in federal court litigation is [Federal Rule of Evidence 702](#)." [Crowe v. Marchand](#), 506 F.3d 13, 17 (1st Cir. 2007). Under that rule,

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and

(3) the witness has applied the principles and methods reliably to the facts of the case.

Fed. R. Evid. 702. As the structure of this rule suggests, before the factfinder in a case can consider expert testimony over the adverse party's objection, the trial judge, serving as "gatekeeper," must determine whether the testimony satisfies the relevant foundational requirements. See [Daubert v. Merrell Dow Pharms., Inc.](#), 509 U.S. 579, 597 (1993).

While the party seeking to introduce the testimony bears the burden of proving its admissibility, [id.](#) at 592, the burden is not especially onerous, because "Rule 702 has been interpreted liberally in favor of the admission of expert testimony." [Levin v. Dalva Bros., Inc.](#), 459 F.3d 68, 78 (1st Cir. 2006). Like all evidence, expert testimony is admissible only if it relevant, i.e., if it has any tendency to make a fact of consequence to the action more or less probable than it would be without the testimony, Fed. R. Evid. 401. See, e.g., [United States v. Pena](#), 586 F.3d 105, 110 (1st Cir. 2009). Applying these standards, the court makes the following rulings on the parties' motions challenging each others' experts.

A. Defendants' motions to limit Chen's testimony (doc. nos. 158, 160, 163)

The defendants move to exclude several anticipated opinions from Peter Chen, a mechanical engineer West has retained to

testify as to the cause of the accident. The defendants' objections to these opinions go largely to their weight, rather than their admissibility. The one exception is Chen's proffered opinion that the revised version of the FADEC (released at the time of West's accident but not installed in his helicopter) would have prevented the crash. This opinion appears to be based on the theory that the revised FADEC would have warned West of the FOSSA event but, even if that is so, there is no reason to believe that the warning would have enabled West to avoid the crash or to lessen its impact. So that opinion is excluded as irrelevant. See Fed. R. Evid. 401, 402. But these motions are otherwise denied insofar as they seek to limit Chen's testimony.

B. Defendants' motions to limit Bloomfield's testimony
(doc nos. 158, 159)

The defendants move to exclude several anticipated opinions from John Bloomfield, a systems engineer West has retained to testify as to the cause of the accident. Many of the defendants' objections to Bloomfield's expected testimony depend either on their view of the anticipated trial evidence, which West disputes, or their characterization of Bloomfield's deposition testimony, which the court does not entirely share. The exceptions are Bloomfield's opinions that (1) ice and snow did not cause the crash, since he acknowledged at his deposition

that, given his lack of expertise with aircraft engines, he has no opinion on that subject; in any event, this opinion is also cumulative to Chen's, (2) a planned upgrade to the capacitors in the ECU would have prevented the crash, an opinion that West does not defend in his objection to the motion, and (3) the revised FADEC would have prevented the crash, which is inadmissible for the reason set forth at Part I.A, supra. Accordingly, the motions are granted as to those opinions, but otherwise denied.

C. Defendants' motion to limit Dr. Agarwal's testimony
(document no. 170)

West has long suffered from gastrointestinal ("GI") problems, including, for at least seven years prior to the crash, intermittent abdominal pain and loose stools, and, for about 19 months or so before the crash, constipation. West reported, in fact, that prior to the accident he was having only one bowel movement each week and that "every once in a while" he would experience constipation, accompanied by nausea and vomiting, that was relieved only by an enema. About six months prior to the accident, West was diagnosed with pelvic floor dysmotility, a progressive weakening of the muscles surrounding the anus that work to expel stool, resulting in chronic constipation.

West has retained Dr. Suresh Agarwal to testify as to whether the helicopter crash caused West's pre-existing GI

problems to worsen. Dr. Agarwal, now the chief of trauma, acute care surgery, and burn and surgical care at the University of Wisconsin Hospital, previously held a similar position at Boston University Medical Center, where he practiced for nearly ten years. He has also held academic appointments at both institutions. Dr. Agarwal practices both trauma surgery (treating patients suffering from injuries caused by external forces) and acute care surgery (treating patients suffering from emergent conditions like gall bladder disease, obstructed hernias, and a variety of colonic diseases). While at Boston University, Dr. Agarwal also maintained a "fairly busy elective practice in which [he] took care of basically anything that was in the abdomen."

1. Causation opinion

Based on reviewing West's medical records, and speaking with him for an hour or so by telephone, Dr. Agarwal has formed the opinion that the helicopter crash "caused, or significantly contributed to causing, [an] exacerbation" in West's GI condition so that he "has virtually lost all ability to pass solid waste on his own," i.e., without assistance from an enema. Dr. Agarwal opines that "[i]t is well-established in [his] own experience and in the medical literature that local impact to the abdomen, as

well as the body's systemic response to trauma generally, can worsen functional gastrointestinal disorders" (emphasis added).

West maintains that, in reaching the opinion that the crash contributed to an exacerbation of West's GI condition, Dr. Agarwal simply employed the "standard scientific technique, widely used in medicine, of identifying a medical 'cause' by narrowing the more likely causes until the most likely culprit is isolated." [Baker v. Dalkon Shield Claimants Trust](#), 156 F.3d 251, 252-53 (1st Cir. 1998). This technique is known as "differential diagnosis," [id.](#), and the defendants do not challenge its validity in general. Nor do they seek to exclude Dr. Agarwal's opinion that trauma to the abdomen is a recognized cause of the worsening of a GI disorder like West's. Instead, the defendants argue that Dr. Agarwal did not reliably rule out another potential cause of the alleged exacerbation in West's GI condition, namely, the natural progression of the disease.

At his deposition, Dr. Agarwal explained that, while pelvic floor dysmotility is indeed "a progressive disease," it "usually . . . takes decades to get to the point where you require colonic decompression with enemas," as West did after the accident. Dr. Agarwal described that level of the disease, in fact, as "usually something that you see in 80-year-olds, not 40-year-olds." At

the time of the crash, West was in only in his early 40s, and had been suffering from chronic constipation for less than two years.

In challenging Dr. Agarwal's resulting opinion that the trauma of the crash, rather than the natural progression of West's disease, is likely responsible for the state of his GI condition at present, the defendants object that Dr. Agarwal's view of the "usual" progression of pelvic floor dysmotility is unsupported by "sufficient facts or data," as required by [Rule 702](#). Specifically, the defendants argue that Dr. Agarwal based his view solely "on the symptom-progression timeline of nine patients" he has seen "who allegedly had the same GI condition as [] West," but whose "symptoms did not progress as quickly as" his. The defendants maintain that Dr. Agarwal's experience with such a small group of patients cannot serve as a "reliable barometer" for the typical progression of pelvic floor dysmotility--particularly when, as Dr. Agarwal acknowledged, he referred those patients on to subspecialists, and therefore did not personally observe the progress of their condition. (Dr. Agarwal also acknowledged that, in forming his opinion, he did not review those patients' charts, but relied on his "anecdotal memory of what they told [him] about their symptoms and the progression of their symptoms.")

But the universe of evidence that Dr. Agarwal has identified as support for his view of the usual progression of pelvic floor dysmotility syndrome is not so limited. The defendants emphasize Dr. Agarwal's testimony that, during the nine years or so he has practiced, "[a]pproximately one patient per year or so comes to [him] with problems related to pelvic dysmotility" (which works out to around nine patients) and he did "not treat those patients" but usually referred them to the colorectal surgeons in his practice. Yet Dr. Agarwal also testified that, in his experience, he had "seen people over a ten-year period, and [] never seen them go from a mild to a severe form" of the condition during that time.

Moreover, Dr. Agarwal also testified that he had relied on medical articles and textbooks, explaining at one point that he had "examined the timeline of disease for most of these patients from the works of other people . . . and found that this is a slow progressing problem" so that "most patients don't automatically go from mild disease to severe disease." Later in his deposition, in fact, Dr. Agarwal identified two specific articles that "refer to the evolution of the disease process" or to "how people's disease pattern progresses."¹

¹For reasons that are unclear to the court, West did not submit, or otherwise refer to, these articles in his objection to the defendants' motion challenging Dr. Agarwal's opinions.

This testimony suffices to show, at least at the pre-trial stage, that Dr. Agarwal's opinion ruling out the natural progression of West's pelvic floor dysmotility as the cause of his post-accident symptoms is based on sufficient facts and data—namely, his personal experience in treating patients with that condition on a long-term basis, as well as the articles describing the typical evolution of the disease. While, as just outlined in part, Dr. Agarwal's deposition testimony on that subject is arguably self-contradictory on some points and vague on others, the Court of Appeals has cautioned that “[w]hen the factual underpinning of an expert's opinion is weak, it is a matter affecting the weight and credibility of the testimony,” not its admissibility. [Milward v. Acuity Specialty Prods. Grp., Inc.](#), 639 F.3d 11, 22 (1st Cir. 2011) (quoting [United States v. Vargas](#), 471 F.3d 255, 264 (1st Cir. 2006) (further quotation marks omitted)).

This court nevertheless recognizes that the defendants' cross-examination of Dr. Agarwal in the trial setting might serve to clarify some of his earlier testimony in a way that undermines his clinical experience and academic research as support for his view of the typical progression of pelvic floor dysmotility. Accordingly, the court will provide the defendants with the opportunity to conduct a voir dire examination of Dr. Agarwal

outside the presence of the jury, if they wish, and to renew their motion to exclude Dr. Agarwal's causation opinion at that point. In the meantime, however, the defendants' motion is denied insofar as it seeks to exclude that opinion. The defendants' motion is granted insofar as it seeks to prevent Dr. Agarwal from offering opinions on a number of subjects that, at his deposition, Dr. Agarwal admitted he is not qualified to or does not intend to offer. West has not argued that any such opinions are nevertheless admissible.

2. Supplemental report

At his deposition, Dr. Agarwal testified that West's GI problems did not begin worsening until July or August 2009, some seven months after the crash. While Dr. Agarwal acknowledged that a worsening of GI symptoms would typically occur with "a couple months" of the trauma that produced them, he attributed the delay in the exacerbation of West's symptoms to intestinal surgery he underwent several weeks after the crash, in February 2009 (but which had been scheduled before the crash as an attempt to ameliorate West's then-existing GI problems).

Following Dr. Agarwal's deposition, however--and the disclosure of a report from one of the defendants' medical experts opining that, if the December 2008 crash had in fact caused West's GI problems to get worse, the worsening would

likely have presented itself before the February 2009 surgery-- Dr. Agarwal issued a supplemental report opining that, in fact, such a worsening had appeared. Specifically, Dr. Agarwal stated that, in contrast to his condition before the crash, West was not "experiencing unassisted bowel movements in that five and half week period" between the crash and the surgery, but that his "bowel movements were accomplished with the use of colonic cleansing irrigations."

The defendants argue that Dr. Agarwal should not be permitted to testify to these "new opinions" at trial because they contradict Dr. Agarwal's testimony at his deposition. Through the supplemental report, however, Dr. Agarwal was not trying to correct his deposition testimony, but his original expert report. And, as West points out, the Federal Rules of Civil Procedure contemplate that a party may supplement a disclosure, including an expert report, "in a timely manner if the party learns that in some material respect the disclosure . . . is incomplete or incorrect." [Fed. R. Civ. P. 26\(e\) \(1\) \(A\)](#) (emphasis added). So the court could prevent Dr. Agarwal from testifying to his changed understanding of West's post-accident GI symptoms only if, first, the report was not supplemented in a timely manner and, second, the delay in supplementation was neither substantially justified or harmless, [see Fed. R. Civ.](#)

37(c) (1). The supplementation was in fact timely under the applicable deadline for supplemental expert reports set forth in this court's scheduling order and, in any event, the court can discern no harm to the defendants from learning of Dr. Agarwal's changed understanding of West's post-accident medical condition in the supplemental report instead of in the initial report. Again, Dr. Agarwal's opinions did not change.

So the defendants' request to prevent Dr. Agarwal from testifying as to that changed understanding as a basis for his opinion that the accident caused West's GI condition to worsen is denied. The defendants, of course, are free to cross-examine Dr. Agarwal on his changed understanding.

D. Defendants' motion to limit Ford's testimony (document no. 168)

The parties agree that West suffers from post-traumatic stress disorder ("PTSD") as a result of the crash, though they disagree as to its severity. West has retained Charles Ford, a psychiatrist, to testify as to the severity of West's PTSD. The defendants object to Ford's opinion that, as a result of the PTSD, West faces the risk of a shorter life expectancy. While, in their motion and supporting papers, the defendants challenged this opinion as unreliable under Rule 702, Bell made an additional point at oral argument: that, "[i]n accordance with

the holdings in other jurisdictions, New Hampshire does not recognize a right to recovery of compensation, as a separate element of damages, for the shortening of a person's life expectancy as a result of an injury." Richard B. McNamara, Tort & Insurance Practice, in 8 New Hampshire Practice § 11.13, at 11-14 (3d ed. 2003).

As support for this view, Judge McNamara's treatise relies on a New Hampshire case, Ham v. Maine-New Hampshire Interstate Bridge Authority, 92 N.H. 268, 275-76 (1943), which, though decided some 70 years ago, remains good law, so far as this court can tell, cf. Nichols v. Estabrook, 741 F. Supp. 325, 329 (D.N.H. 1989) (quoting Ham for the proposition that New Hampshire does not recognize "hedonic" damages, i.e., damages for the value of life itself). Other authorities agree that "reduction of life expectancy is not itself a compensable element of damages." Restatement (Second) Torts § 924 cmt. e, at 526 (1979); see also, e.g., Downie v. U.S. Lines Co., 359 F.2d 344, 346-47 (3d Cir. 1966) (applying federal maritime law); Farrington v. Stoddard, 115 F.2d 96, 101 (1st Cir. 1940) (applying Maine law); In re Joint E. & S. Dist. Asbestos Litig., 726 F. Supp. 426, 430 (E.D.N.Y. 1989) (applying New York law); 22 Am. Jur. 2d Damages § 235, at 221 (2003). While there is authority to the contrary, see, e.g., Otani ex rel. Shigaki v. Broudy, 92 P.3d 192, 200

(Wash. 2004) (Sanders, J., dissenting and collecting cases), this court has no reason to believe that the New Hampshire Supreme Court would adopt that position, in light of its holding to the contrary in Ham.

So West cannot recover for his allegedly shortened life expectancy under New Hampshire law. Nor is West's life expectancy relevant to any other issue in the case: he makes no claim for lost future earnings, and cannot present a claim for future medical expenses in light of his lack of sufficient evidence discounting those expenses to net present value, see infra Part II.C.1. Because Ford's opinion as to West's risk of a shortened life expectancy is irrelevant, see Fed. R. Evid. 401, the defendants' motion to exclude it is granted.

The defendants also challenge Ford's opinion that, if West's GI problems have worsened since the crash, his PTSD contributed to that worsening. But the defendants do not challenge the notion that PTSD can exacerbate a patient's pre-existing GI problems, or Ford's qualifications to give that opinion in light of his extensive experience in treating PTSD. Instead, the defendants argue principally that, because Ford is not a gastroenterologist, he cannot opine that West's GI symptoms in fact worsened after the crash, or that other factors were not responsible for that worsening. Ford can, however, rely on Dr.

Agarwal's opinions on those subjects, and "such reliance goes to the weight, not to the admissibility of the expert's opinion." [Ferrara & DiMercurio v. St. Paul Mercury Ins. Co.](#), 240 F.3d 1, 9 (1st Cir. 2001). The defendants' motion is denied insofar as it seeks to prevent Ford from testifying that West's PTSD contributed to a worsening of his GI symptoms.

E. West's motions to limit Albert's and Stimpson's testimony and to exclude evidence of cellphone use
(document nos. 203, 243)

1. Cellphone use

Bell intends to offer expert opinion testimony from Vernon Albert, a flight instructor, that West's flight pattern was consistent with the pilot's use of a cellphone, and that, by using his phone during flight, West carelessly distracted himself from piloting. In objecting to these opinions, West argues that "neither Albert nor any other witness should be permitted to testify about [West's] cellphone use at all," given the lack of evidence that his use of a cellphone during flight contributed to the crash, or caused West's injuries from the crash to be worse than they otherwise would have been. As West points out, while he made or received several calls during the flight, his last call concluded more than 10 minutes before the flameout in his engine occurred. Moreover, the defendants have proffered no evidence that, prior to the flameout, West could have done

anything in flight that would have prevented the helicopter from flaming out, from crashing as a result of the flameout, or from causing the injuries he claims to have suffered in the crash.

Instead, the defendants argue that, based on West's use of his phone to make and receive calls earlier in the flight, the jury can draw the inference that West was using his cellphone later in the flight (and thus closer in time to the flameout) for purposes other than making or receiving calls, such as texting or browsing the Internet. In the court's view, that would be impermissible speculation, rather than a permissible inference.² And, even assuming that the jury could rationally infer that West was making some use of his phone at the time of the flameout, the defendants have proffered no evidence that, but for that conduct, West could have prevented the helicopter from crashing, or lessened the impact of the crash. So the fact of West's cellphone use--or Albert's opinion that it distracted West from his piloting duties--simply has no relevance to the issues of fault or causation in this case.³ See Fed. R. Evid. 401. West's

²The defendants acknowledge that they have no direct evidence that West was using his cellphone to text or browse the Internet during that time. Nor do they dispute West's assertion that his cellphone records show that his last call concluded more than 10 minutes prior to the flameout.

³Despite their suggestion at oral argument, the defendants also cannot introduce evidence of West's cellphone use to show his character for carelessness, see Fed. R. Evid. 404(a)--unless, of course, West opens the door to that subject.

motion to exclude Albert's anticipated opinions as to West's cellphone use is granted.

West's cellphone use during flight, however, is relevant to a different issue: his ability to observe the behavior of the helicopter during the portion of the flight preceding the flameout. West himself says that, during that time, he flew "without incident or problem"--a statement on which Chen has expressly relied in opining that the flameout was not caused by an ingestion of snow or ice. So West's account of no "incident or problem" prior to the flameout appears to be relevant to the cause of the crash, a pivotal issue in the case. In deciding whether to credit that account, the jury can consider West's ability to observe any such "incident or problem," including whether that ability was impaired by his use of his cellphone.

Yet the court acknowledges that the record is not fully developed on this point (it may be, for example, that the "problem" resulting from an ingestion of ice or snow would be so obvious that West would have noticed it regardless of his cellphone use), so the relevance of West's cellphone use may need to be re-evaluated during trial. Based on the present record, though, the court rules that West's cellphone use is admissible for the limited purpose of assessing his ability to observe the behavior of the helicopter up until the ten minutes or so prior to the flameout. If that ruling stands, West may request a

limiting instruction to that effect. See Fed. R. Evid. 105. West's motion to exclude evidence that he used his cellphone during the flight is denied.

2. Albert's other opinions

West also challenges two of Albert's other opinions: that West inadequately de-iced the helicopter before taking off, and improperly executed the autorotation procedure in landing.⁴ West's objection to the second of these opinions goes to its weight, not its admissibility. As to the first of the opinions, Albert can testify that, in de-icing the helicopter, West used non-standard products, and that a reasonable pilot in West's position should have known that his procedures in preparing the helicopter for flight were insufficient to ensure its safety. But, as Bell acknowledges, Albert cannot testify as to the efficacy of the de-icing products that West actually used, because he is not an expert in such matters, see Fed. R. Evid. 702, nor can Albert testify as to what West actually knew, see, e.g., Philbrick v. eNom, Inc., 593 F. Supp. 2d 352, 365 n.18 (D.N.H. 2009) ("one witness may not testify to what was in the head of another"). West's motion to exclude Albert's non-

⁴At oral argument, West suggested that this opinion was irrelevant because, as a matter of law, any deficiency in West's execution of the autorotation procedure neither bars nor limits his recovery. The court will take up that argument, which has yet to be briefed by either party, at the appropriate time.

cellphone opinions is granted in part and denied in part.

3. Stimpson's opinions

Bell has designated Douglas Stimpson, an accident reconstructionist, to testify as to the defendants' theory that West's engine flamed out due to an ingestion of ice or snow rather than a FOSSA event. West challenges two of Stimpson's subsidiary opinions: that regulations promulgated by the Federal Aviation Administration ("FAA") require the de-icing of an aircraft in accordance with its manufacturer's instructions, and that West did not comply with those instructions in de-icing the helicopter prior to his flight.

As West points out, "[e]xpert testimony proffered solely to establish the meaning of a law is presumptively improper," [United States v. Mikutowicz](#), 365 F.3d 65, 73 (1st Cir. 2004), so an expert cannot opine as to the meaning of federal regulations, [Bartlett v. Mut. Pharm. Co.](#), 742 F. Supp. 2d 182, 188 (D.N.H. 2010). Stimpson cannot testify as to what the FAA regulations require. He can, however, testify that West's de-icing efforts did not comply with the manufacturer's instructions. West argues that Stimpson's criticisms of those efforts are irrelevant or unfairly prejudicial because they focus on the cleaning of the helicopter's exterior, even though Stimpson believes the ice that caused the flameout originated from the inside of the engine cover. There is evidence, however, that the ice could have

originated from outside of the engine cover as well. Stimpson's testimony as to West's efforts in de-icing the craft's exterior, then, is relevant, and its probative value outweighs any prejudicial effect. See Fed. R. Evid. 403.

Finally, West challenges Stimpson's opinion that West was medically unqualified to fly at the time of his accident. That opinion is irrelevant, for the reasons explained in the next section. See infra Part I.F. West's motion to limit Stimpson's opinions is granted in part and denied in part.

F. West's motion to exclude Parmet's testimony (document no. 204)

Bell has designated a physician, Alan Parmet, to testify that, had West disclosed his pre-existing GI problems to the examiner who medically cleared him to fly on behalf of the FAA, West would not, in fact, have received his medical clearance to fly prior to his fateful trip in late December 2008. As West points out, this opinion (leaving aside his other objections to it) is irrelevant. There is no evidence that West's pre-existing GI problems caused or contributed to the crash, and the defendants cannot avoid liability for their own actions (if any) in causing the crash on the theory that, had West disclosed those problems to the medical examiner and lost his flight certification as a result, he never would have been in the helicopter in the first place. As this court has explained, such

a theory establishes but-for causation, but not proximate causation, and both are necessary to prove causation in a tort case, [Elmo v. Callahan](#), 2012 DNH 144, 20-22--here, specifically, to prove a comparative negligence defense.

At oral argument, Bell essentially disclaimed that it intended to use Parmet's opinion to support any such defense. Instead, Bell argued that it should be able to use Parmet's opinion to rebut West's anticipated efforts to cast himself as a careful pilot who, in essence, always followed the rules.⁵ As already noted, if West in fact affirmatively puts his character for carefulness at issue, he may open the door to such evidence. See note 3, supra. But unless and until that happens--and the defendants receive a ruling from the court confirming that development--Parmet's opinion is irrelevant. West's motion to exclude it is granted.

G. West's motion to limit Gores's and Winn's testimony
(document no. 205)

Goodrich has designated Mark Gores, a "component failure analyst," and Robert Winn, a consulting engineer, to opine as to the cause of the crash. In relevant part, Goodrich expects Gores

⁵Bell also suggests that West's alleged failure to disclose his GI problems to the medical examiner bears on his credibility as a witness. But Bell cannot use extrinsic evidence of West's conduct--like Parmet's opinion that West must have misled the examiner--for that purpose. See Fed. R. Evid. 608(b).

to opine that, if the FOSSA event identified by West's experts in fact occurred, evidence of it would have shown up in post-accident testing of the ECU, and expects Winn to testify that West inadequately de-iced the helicopter prior to takeoff. West's objections to Gores's opinions go to their weight, not their admissibility. Goodrich explains that Winn will not testify as to the adequacy of the de-icing efforts, but simply as to his understanding of them insofar as that informs his opinion that an ingestion of ice or snow caused the flameout (an opinion West has not sought to exclude). That is permissible. See Fed. R. Evid. 703. West's motion to limit the opinions of Gore and Winn is denied.

H. West's motion to limit Atherton's, Souza's, and Piercy's opinions (document no. 206)

West moves to limit the anticipated testimony of Malvern Atherton, Gary Souza, and Thomas Piercy, Rolls Royce employees (or, in Piercy's case, an outside consultant) whom the company has designated to give certain expert opinions. West's objection to Atherton's disclosed opinion--that data from the incident recorder from West's helicopter is consistent with the ingestion of ice and inconsistent with a FOSSA event--goes to the weight of that opinion, not its admissibility.

As he does with respect to Stimpson, see Part I.E.3, supra, West argues that Piercy cannot testify that West improperly de-

iced the helicopter. Rolls Royce explains that Piercy will not give that opinion, but simply state his understanding of the de-icing efforts insofar as that informs the opinion he will give, i.e., that the engine flamed out due to ice ingestion. Again, that is permissible under [Rule 703](#). See Part I.G, supra. The court also disagrees with West that testimony about his efforts to de-ice the exterior of the plane is unfairly prejudicial. See Part I.E.3, supra. Piercy opined, in fact, that ice from the exterior of the aircraft could have broken off and entered the engine chamber during flight. West's motion to limit Atherton's and Piercy's opinion testimony is denied.

But West's motion to limit Souza's opinion testimony is granted, at least in part. First, West challenges Souza's opinion that, based on West's cellphone records from the day of the crash, he spent no more than three hours preparing the helicopter for flight. The court agrees with West that the amount of time a person could have spent on one task in the face of evidence that he was doing other tasks at or around the same time is in no way a proper subject for expert testimony. See [Fed. R. Evid. 702](#). Second, West challenges Souza's anticipated opinion that the de-icing was insufficient--an opinion which Rolls Royce does not appear to defend in its objection. So West's motion to exclude those opinions is granted (though, like Piercy, Souza can testify as to his understanding of the de-icing

efforts insofar as it forms the basis for some other opinion which is itself admissible).

West also objects to Souza's anticipated opinion that Rolls Royce acted reasonably in investigating another helicopter crash, at Fort Rucker, Alabama. In response, Rolls Royce seems to agree that Souza will not testify that its investigation was "reasonable" but only that it followed the same procedures that the company generally follows in investigating crashes of helicopters equipped with its engines. That would not appear to constitute expert testimony, since it relies on Souza's personal knowledge of how Rolls Royce conducts accident investigations rather than any "specialized" knowledge. See Fed. R. Evid. 702. So West's motion is granted insofar as it seeks to prevent Souza from characterizing Rolls Royce's investigation of the Fort Rucker crash as "reasonable" but is otherwise denied.

I. Motions in limine

A. Other accidents, pre-accident remedial measures, and post-accident remedial measures (document no. 239)

1. Other accidents

In products liability cases, "[e]vidence of prior accidents is admissible only if the proponent of the evidence shows that the accidents occurred under circumstances substantially similar to those at issue in the case at bar." Moulton v. Rival Co., 116

F.3d 22, 26-27 (1st Cir. 1997) (quotation marks and ellipse omitted). Invoking this rule, Rolls Royce seeks to exclude evidence of several other crashes involving the same model helicopter that was involved in his crash. These crashes occurred in, or over, Rhein Ruhr, Germany (1998), Padova, Italy (1999), Fort Irwin, Calif. (2002), the Gulf of Mexico (2003), Fort Rucker, Alabama (2007), and Loma Bonita, Mexico (2012).⁶ In urging that West has failed to show that any of these helicopter accidents was "substantially similar" to his, Rolls Royce makes several arguments. The court does not find them persuasive.

First, Rolls Royce argues that, because West "cannot first establish what caused his accident, it is impossible for him to show that any other accidents were substantially similar," (emphasis omitted), so evidence of those other accidents must be excluded. Not surprisingly, this court has previously rejected this kind of circular argument, i.e., "seeking to prevent [a party] from even arguing [his] theory on the ground that it lacks

⁶In his objection, West refers to other accidents, including in Iraq, India, Maryland, and at some unnamed location, further stating that he "does not agree that this is the complete universe of relevant, substantially similar other accidents." Before West attempts to introduce evidence of any accident not discussed in the body of this order, he shall notify the court and adverse counsel at least 24 hours in advance so that a proceeding for him to establish the relevance of that accident outside the presence of the jury may be scheduled before or after regular court hours (in order to avoid interruption and delay of the proceedings before the jury).

evidentiary support, but also seeking to prevent [that party] from adducing the very evidentiary support that [his adversary] claims is lacking." [Masello v. Stanley Works, Inc.](#), 825 F. Supp. 2d 308, 314 n.5 (D.N.H. 2011).

To demonstrate the relevance of other accidents, West need not "establish" what caused his accident in the sense that he must prove it, but must simply articulate a supportable theory of why his helicopter was defective and how that caused it to crash. See [Herbst v. L.B.O. Holding, Inc.](#), 783 F. Supp. 2d 262, 269 (D.N.H. 2011). In other words, "[s]ubstantial similarity' is a function of the theory of the case." [Moulton](#), 116 F.3d at 27. West's theory is that the ECU in his helicopter was defective because it registered an errant signal from the circuit board as an overspeed event necessitating the closure of one of the valves supplying fuel to the engine--even though no overspeed event was in fact occurring. As noted at the outset, this phenomenon is known as false overspeed solenoid activation, or "FOSSA."

That Rolls Royce understands this to be West's theory is revealed (among other places) in its argument that the crashes in Germany, Italy, and Fort Irwin did not occur under circumstances substantially similar to West's because they involved helicopters with ECUs that "did not contain hardware updates made in 2000 to address, in part, alleged FOSSA events." Part of West's theory, however, is that those upgrades did not, in fact, remedy the

defect in the ECU. Indeed, Chen states in his report that the defendants implemented these hardware updates--which he identifies as upgrading "the capacitors that had failed" in the ECU's main power supply, causing the crashes in Germany and Italy--but "without addressing software at all."

Chen also opines that, although the defendants introduced the upgrades to the capacitors in the main power supply in 2000, they had yet to be implemented in the ECUs in the helicopters involved in two of the post-2000 crashes (Fort Irwin and the Gulf of Mexico). Chen likewise opines that, while the 2009 crash at Fort Rucker and the 2012 crash at Loma Bonita involved helicopters with the upgraded version of the ECU, even that version failed to prevent an errant electrical impulse from registering as an overspeed event triggering the automatic closure of the fuel valve. The result, Chen explains, is that the alleged defect, i.e., that "the ECU was not programmed to prevent FOSSA," persisted after the hardware upgrades to the ECU introduced in 2000.

This anticipated testimony suffices to show that these crashes, although they involved helicopters with the pre-upgrade capacitors, occurred under circumstances substantially similar to West's, i.e., they involved helicopters with ECUs which, like the one in West's helicopter, cut off fuel to the engine even in the absence of an overspeed event. Indeed, to present substantially

similar circumstances, the version of the product involved in a different accident need not have all the same features of the version involved in the plaintiff's accident, so long as the plaintiff can make some showing that the alleged defect was the same. See Moulton, 116 F.3d at 27 (affirming admission of evidence of accidents involving potpourri pots without lids, even though plaintiff was injured by a pot that had a lid, because they showed "the product as designed allowed the rapid escape of a significant amount of extremely hot liquid and was thus defective") (footnote omitted).

Second, Rolls Royce argues that none of these other accidents occurred under substantially similar circumstances to West's because data was retrieved from the incident recorder in his helicopter but did not indicate a FOSSA event, while the data from the incident recorders in the other helicopters was either never retrieved or, if it was, indicated a FOSSA event. But West's theory is that, even though a FOSSA event occurred in his helicopter, the incident recorder failed to note any data to that effect, either because the event was too short in duration or because the event caused the recorder to malfunction. Both of these theories are supported by proffered expert testimony. West has also proffered evidence tending to show that, although no incident recorder data was retrieved from the helicopters with the pre-upgrade ECUs (the Germany, Italy, Fort Irwin, and Gulf of

Mexico crashes), those crashes were nevertheless identified as FOSSA events by one or more of the defendants (or, in the case of the Gulf of Mexico crash, suspected as such) during post-accident investigations. So the absence of incident recorder data, or the presence of incident recorder data showing a FOSSA event, does not render any of the crashes so dissimilar to West's that evidence of them is inadmissible.

Third, Rolls Royce argues that none of the other accidents happened in substantially similar circumstances because "[n]one involved flights made after the helicopter had been left outside uncovered and exposed to blizzard-like conditions for three days." Chen, however, has opined that the ice and snow from the storm did not cause the engine in West's helicopter to flame out. It follows that, on Chen's theory at least, the absence of ice and snow from the conditions of the other accidents does not distinguish them from West's since, in both cases, those conditions did not cause the crash. Of course, the defendants disagree that snow and ice played no role in West's crash--just as they disagree that an errant electric impulse in the ECU caused West's engine to flame out, and they disagree that a FOSSA event occurred in West's helicopter without the incident recorder's documenting it. That a defendant disagrees with a plaintiff's theory of the case, however--and intends to introduce evidence to the contrary--has no bearing on whether, under that

theory, other accidents occurred under substantially similar circumstances. The point is that West's theory, which is supported by disclosed expert testimony, accounts for the distinctions the defendants have drawn between his crash and the others, so that "[a]ny differences in the circumstances surrounding [the different] occurrences go merely to the weight to be given the evidence." [Jackson v. Firestone Tire & Rubber Co.](#), 788 F.2d 1070, 1083 (5th Cir. 1986).

Fourth and finally, Rolls Royce argues that, even if these other accidents occurred under substantially similar circumstances, evidence of them should be excluded as unfairly prejudicial. [See Fed. R. Evid. 403](#). But the other crashes have probative value, as already discussed, and Rolls Royce does not identify anything about any particular accident suggesting that it will improperly inflame the passions of the jury. Instead, Rolls Royce argues that "the jury is likely to infer from evidence of other accidents alone that defective conditions existed and caused [West's] accident." The court has little concern that evidence of 6 other accidents over a 14 year period presents such a risk. In any event, the defendants can guard against any such prejudice through the testimony of their own witnesses, cross-examination of West's witnesses, and argument to the jury, making the very same points to distinguish those other accidents from West's that they make in their motion. Rolls

Royce also argues that this approach will entail an “undue expenditure of time,” which, though a legitimate concern, can be handled by the court in imposing appropriate limits on the scope of inquiry into each of those other accidents at trial. For now, though, Rolls Royce’s motion to exclude evidence of the other accidents discussed in this motion (Germany, Italy, Fort Irwin, the Gulf of Mexico, Fort Rucker, and Loma Bonita) is denied.

2. Post-accident remedial measures

Noting that “at some point after [West’s] accident but not because of it,” the defendants implemented further upgrades to the ECU, Rolls Royce argues that any evidence of those upgrades should be excluded as evidence of a subsequent remedial measure. See Fed. R. Evid. 407. The court agrees, and West offers no argument to the contrary.⁷ Rolls Royce’s motion to exclude that evidence is granted.

3. Pre-accident remedial measures

Rolls Royce also seeks to exclude evidence of what it calls “post-manufacture, pre-accident remedial measures.” While acknowledging that Rule 407 does not apply to that evidence, see

⁷West does argue, however, that evidence that the defendants were contemplating upgrades to the ECU prior to his accident, even if they did not implement those upgrades until after his accident, is admissible notwithstanding Rule 407. The court agrees as to Rule 407, but reserves judgment at this point as to whether evidence of those upgrades (which are not addressed by Rolls Royce’s motion) is otherwise admissible.

Bogosian v. Mercedes-Benz of N. Am., Inc., 104 F.3d 472, 481 (1st Cir. 1997), Rolls Royce argues that evidence of such measures should be excluded here as unfairly prejudicial, see Fed. R. Evid. 403. The only such measure that Rolls Royce identifies in its motion, however, is a “reversionary governor update” it introduced in 2007, but which had yet to be installed in West’s helicopter prior to his accident in 2008. (The reversionary governor limits the situations in which the helicopter reverts from an automatic setting to manual mode.) As Rolls Royce points out, West had initially alleged that this update would have prevented his accident, but appears to have abandoned that theory; his liability experts, in fact, have said they hold no opinion on whether the update would have prevented West’s crash. Because evidence of the reversionary governor update is irrelevant, Rolls Royce’s motion to exclude it is granted.⁸ See Fed. R. Evid. 402. At the moment, the court expresses no opinion on the admissibility of evidence of any other “post-manufacture, pre-accident” remedial measures.

⁸In his objection, West states that he “intends to offer evidence of the reversionary governor for the limited purpose of establishing that [d]efendants intended to, but did not implement software changes related to FOSSA as part of the reversionary governor campaign.” Even assuming this is true, however, West proffers no evidence that those software changes would have prevented his crash, so this theory does not demonstrate the relevance of the reversionary governor upgrade.

B. Rolls Royce's motions in limine (document no. [240](#))

Rolls Royce also moves, through a single motion, to exclude a variety of other evidence. As explained below, that motion is granted in part and denied in part, as are certain motions that West has filed addressing some of the same evidence.

1. Other pending litigation

Rolls Royce objects to evidence of other pending litigation against the defendants as irrelevant or unfairly prejudicial. But Rolls Royce does not identify any particular litigation and, as West points out (though also without identifying any particular litigation), lawsuits against a defendant alleging a defect in its product can show, among other things, notice. As this court has previously ruled, in fact, "information regarding whether other purchasers experienced similar problems with the product" potentially has relevance in a products liability action. [West v. Bell Helicopter Textron, Inc.](#), 2011 DNH 217, 5 (bracketing and quotation marks omitted). Rolls Royce's objection to evidence of other litigation, then, is denied

without prejudice to renewal at trial if and when West tries to introduce such evidence.⁹

2. Military personnel

The United States military makes widespread use of a version of the Bell 407, known as the Kiowa, which was involved in two of the accidents discussed in the preceding section (Fort Irwin and Fort Rucker). Fearing the prejudicial impact of the suggestion, at trial, that the defendants' allegedly defective products have put American military personnel in harm's way, Rolls Royce objects to any evidence or argument referring to military personnel. The court agrees that this would be unfairly prejudicial. See Fed. R. Evid. 403. The parties shall ensure that, in referring to other accidents, their witnesses and exhibits make no reference to the fact that they involved military personnel (avoiding the use of the names of the military installations), or the fact that a version of the 407 is used for military applications.¹⁰

⁹Before West attempts to introduce evidence of any other litigation, he shall notify the court and adverse counsel at least 24 hours in advance so that a proceeding for him to establish the relevance of that litigation outside the presence of the jury may be scheduled before or after regular court hours (in order to avoid interruption and delay of the proceedings before the jury).

¹⁰Specifically, there shall be no references to place names by "Fort" or "Base".

3. Testing (see also document no. 244)

Since West's accident, the ECU from his helicopter has been tested twice: once in June 2009 and again in August 2012. During the second test, the metering valve failed. Rolls Royce argues that the results of the second test should be excluded as unreliable because, in essence, it occurred longer after the crash than the first test so that the condition of the ECU could have deteriorated in the meantime, causing the valve to fail. This objection goes to the weight, not the admissibility, of the test result, and can be adequately explored at trial.¹¹ Rolls Royce's motion to exclude the August 2012 test results is denied.

Following the August 2012 test, the parties attempted to agree on a protocol for testing specific components from the ECU. They were unable to do so. Eventually, in March 2013, after all of the expert discovery and challenge deadlines had already expired, West and the defendants separately moved to extend those deadlines (and, in the case of the defendants, the trial) to accommodate the further testing. The court denied these motions because they failed to show good cause to extend the deadlines. [Order](#) of Apr. 11, 2013, at 2-3 (citing [Fed. R. Civ. P. 16\(b\)\(4\)](#)).

¹¹At oral argument, Goodrich argued that the August 2012 test results should be excluded because none of West's experts relied on them. But neither Goodrich nor any other defendant made this argument in its motions in limine, so the court declines to consider it at this time. The defendants should renew this objection at the appropriate time during trial.

Rolls Royce also seeks to prevent West from suggesting that the defendants bear any responsibility for the fact that the further testing did not occur. In the court's view, Rolls Royce (together with the other defendants) and West share equal responsibility for that fact, see id. at 1-2, but, in any event, West agrees not to try to place the blame on the defendants, so long as they do not try to place the blame on him. In fact, West has filed his own motion seeking to prevent the defendants from doing just that. Surprisingly, then, the parties are in agreement. No party shall, through evidence or argument, suggest that any other party bears responsibility for the fact that no further testing of the ECU occurred after August 2012.

So Rolls Royce's motion as to the absence of further testing is granted by agreement. West's motion on that subject, however, appears to reach farther, seeking to prevent the defendants from arguing that West cannot prove his claims without such testing, because he need not show that any particular component in the ECU failed. That argument, which the defendants contest, is more appropriately resolved in arriving at the appropriate jury instructions in this case, or deciding the defendants' motion for judgment as a matter of law, see Fed. R. Civ. P. 50. West's motion is denied to the extent it seeks to resolve that argument in his favor now. Furthermore, the court's rulings on the further testing are not intended to prevent any party from making

use of the mere fact that such testing did not occur (i.e., without regard to why), as the basis for its own expert's testimony, the cross-examination of another expert, or in any other way (indeed, West's motion does not seek any such relief).¹²

4. West's marital status (see also document no. 248)

At the time of West's accident, he had yet to marry his present wife and was still married to his ex-wife. West says that, while they were living in the same house, they were estranged and, in fact, West was carrying on a romantic relationship with his now-present wife. So West moves to exclude evidence of his marital status at the time of the accident as irrelevant and unfairly prejudicial. In the court's view, that request is too broad. The court will exclude, as irrelevant and unfairly prejudicial, evidence that West was involved in a relationship with his present wife at the time he was married to his ex-wife wife. But evidence that, at the time of the accident, West was still married to his ex-wife, but has since been divorced from her and married his present wife, carries no appreciable risk of unfair prejudice. So West's motion to

¹²West also moves (document no. 252) to prevent evidence of any further testing on the ECU that the defendants have conducted on their own. The defendants say that they have done no such testing, however, so this motion is denied as moot.

exclude evidence of his marital status is granted in part and denied in part.

Rolls Royce, for its part, seeks a jury instruction that, because West's present wife was not married to him at the time of the crash, she cannot recover damages for loss of consortium. But West's wife has made no claim for loss of consortium, and has not been named as a party here. Unlike Rolls Royce, the court sees little if any risk that the jury will become confused over whether they can award damages for a claim that has not been made to a person who is not a party. If developments at trial suggest otherwise, Rolls Royce may renew its request, but for now it is denied.

B. Federal regulations (document no. 245)

West moves to exclude the defendants' experts from testifying as to FAA regulations, or opining that West violated them. As an initial matter, this relief has largely been granted as a result of the rulings preventing Bell's experts from testifying that (1) West used his cellphone during flight in alleged violation of FAA regulations, see Part I.E.1, supra, and (2) West failed to properly disclose his pre-existing GI condition to the medical examiner, also in alleged violation of FAA regulations, see Part I.F, supra. As discussed in explaining those rulings, West's violation of those regulations (if any) had

no effect on the crash, so both the regulations and any opinion that he violated them are irrelevant. As also already discussed, the defendants' experts cannot testify as to the meaning of any other federal regulation either, including by opining that West violated it. See Part I.E.3, supra. If some FAA regulation is relevant in some respect, the defendants may ask the court to take judicial notice of it, see Fed. R. Evid. 201, or to give a jury instruction on it, see Bartlett, 742 F. Supp. 2d at 188. West's motion to prevent the defendants' experts from testifying as to federal regulations is granted.

C. Goodrich's omnibus motion in limine (document no. 246)

Like Rolls Royce, Goodrich has filed a single motion seeking to exclude various kinds of evidence. That motion is granted in part and denied in part as set forth below.

1. Special damages

Rule 26(a) (1) (A) (iii) of the Federal Rules of Civil Procedure requires a party to include, as part of its initial disclosures, "a computation of each category of damages claimed." Goodrich complains that, despite this command, West did not provide any such computation until he filed his final pre-trial statement, which includes a list of various medical expenses that West claims to have incurred as a result of the accident. (He makes no claim for lost wages.) Goodrich argues that, for his

delay in providing this list, West should be precluded from seeking to recover any of these medical expenses at trial. The court disagrees.

As already noted, see Part I.C.2, a party's delay in disclosing information required by Rule 26(a) prevents it from using that information at trial only if, among other considerations, the delay was neither substantially justified or harmless. Fed. R. Civ. P. 37(c)(1). Here, West attributes his delay in disclosing the medical expenses he claims to the "ongoing" nature of the treatment he says the crash has necessitated, and further states that he has "produced, on a rolling basis, all available bills and invoices" to the defendants. The defendants have not disagreed with this account, which suffices to show that West's belated disclosure was both substantially justified and harmless. Indeed, the defendants can hardly claim to have been surprised by the list of medical expenses in West's final pretrial statement if they had already received those bills in discovery. (It is also worth noting, of course, that the defendants have taken the depositions of West's experts and designated their own experts on the issue of whether the crash produced the symptoms that West now reports, so the nature and extent of the medical attention he has received since the crash was extensively discussed throughout the expert discovery phase of the litigation, which concluded nearly a year

prior to trial.) So Goodrich's motion is denied to the extent it seeks to sanction West for his belated disclosure of his medical expenses by preventing him from recovering them at trial.

Goodrich's motion is also denied insofar as it argues that West cannot recover the expenses (including, significantly, experimental sacral nerve implantation procedures that he traveled to Australia to receive) because he lacks evidence that they were reasonably necessitated by the injuries West sustained in the accident. In response to the motion, West has proffered the testimony of one of West's treating gastroenterologists that, as he advised West during the course of treatment, the experimental procedures were his "best bet" for trying to relieve the worsened GI symptoms he was suffering after the crash. And Dr. Agarwal, as already discussed at length, will testify that it was the crash that caused those symptoms to worsen. See Part I.C.1, supra. So far as the court can tell at the moment, this testimony--though sharply disputed by the defendants--suffices to show that those procedures were reasonably necessitated by the injuries West sustained in the crash.

Goodrich's motion is granted, however, insofar as it seeks to prevent West from seeking to recover his future medical expenses, i.e., those expenses he has yet to incur. A plaintiff cannot recover future economic damages without expert testimony or other competent evidence discounting those damages to net

present value. See Reed v. Nat'l Council of Boy Scouts of Am., Inc., 706 F. Supp. 2d 180, 194-95 (D.N.H. 2010) (quoting Hutton v. Essex Group, Inc., 885 F. Supp. 331, 334-35 (D.N.H. 1994)).

Without such evidence, which West acknowledges he does not have, the jury cannot be left to calculate the discounting based "upon personal knowledge [they] may or may not possess" as to how to perform such a calculation. Hutton, 885 F. Supp. at 334.

Goodrich's motion to preclude West's recovery of future medical expenses is granted.

2. NTSB reports

Goodrich seeks to prevent West from using at trial, in any way, what it calls the "Probable Cause" report of his accident issued by the National Transportation Safety Board ("NTSB"). By "Probable Cause" report, Goodrich means (as it clarified at the final pre-trial conference) the NTSB's "Board accident report," which the NTSB defines as "the report containing [its] determinations, including the cause of an accident, issued either as a narrative report or in computer format." 49 C.F.R. § 835.2. By statute, "[n]o part of a report of the [NTSB], related to an accident or an investigation of an accident, may be admitted into evidence or used in a civil action for damages resulting from the matter mentioned in the report." 49 U.S.C. § 1154(b). Despite the potential breadth of this language, the NTSB's regulations state that it "does not object to, and there is no statutory bar

to, admission in litigation of factual accident reports," defined as "the report containing the results of the investigator's investigation of the accident." 49 C.F.R. § 835.2. So Goodrich does not object--at least on the basis of § 1154(b)--to the admission of the factual accident report. But that is a separate document from the "Board accident report," to which Goodrich does object, on the basis of both § 1154(b) and the NTSB regulation, which, tracking the language of that statute, states that "no part of a Board accident report may be admitted as evidence or used in any suit or action for damages growing out of any matter mentioned in such reports." 49 C.F.R. § 835.2.

In response, West makes several unpersuasive arguments as to why the Board accident report is nevertheless admissible. First, he relies on what one court has identified as the "legislative intent" of § 1154(b) "to keep the [NTSB] from becoming embroiled in civil litigation and to prevent the usurpation of the factfinder's role." [Daniels v. Tew Mac Aero Servs., Inc.](#), 675 A.2d 984, 988 (Me. 1996). West maintains that this case does not give rise to those concerns but, even if that is accurate, this court is not free to disregard the statutory language of § 1154(b) in favor of what courts in other jurisdictions have identified as its underlying legislative intent. See, e.g., United States v. Jimenez, 507 F.3d 13, 20 (1st Cir. 2007).

Second, West repairs to other extrajurisdictional cases in support of an argument that “the factual portions of a [*sic*] NTSB report are admissible into evidence” but the “conclusions on the probable cause of the accident are not.” [Major v. CSX Transp.](#), 278 F. Supp. 2d 597, 604 (D. Md. 2003) (quotation marks omitted) (citing like cases). But this argument, like West’s “legislative intent” argument, flies in the face of the statute, which provides that “[n]o part of a report of the [NTSB], related to an accident or an investigation of an accident, may be admitted into evidence” (emphasis added). The caselaw cited by West does not persuasively explain how to read “no part” to mean “portions.” To the contrary, as one federal court of appeals has observed, this caselaw appears to reflect a lingering misunderstanding of the difference between “Board accident reports” (which, as just discussed, are subject to the statute) and “factual accident reports” (which, again, are not subject to the statute and are therefore admissible). [Chiron Corp. v. NTSB](#), 198 F.3d 935, 940-41 (D.C. Cir. 1999). While this distinction serves to distinguish these types of reports from each other, as set forth in the NTSB’s regulations, it does not serve to distinguish the factual findings from the probable cause conclusions within the Board accident report itself in the manner West suggests. [See id.](#) So this court is persuaded by the decision in [Chiron](#), and the decisions on which it relies--including decisions from three

other federal courts of appeals¹³--that "the statute means what it says: No part of the Board's actual report is admissible as evidence in a civil suit." Id. at 941.

Third, West argues that, even if he cannot introduce the Board accident report, or any part of it, into evidence, his expert witnesses can nevertheless rely on it in their testimony. This argument also runs headlong into the statute itself, which says that no part of the Board accident report "may be admitted into evidence or used in a civil action" (emphasis added). This court, of course, must "give effect, if possible, to every clause and word of a statute." Duncan v. Walker, 533 U.S. 167, 174 (2001) (quotation marks omitted). If, as West suggests, the statute prevents the report only from being "admitted into evidence," then the word "used" is deprived of any effect. Rather than construing the statute in this disfavored way, the court reads § 1154(b) to prevent the Board accident report from being either admitted into evidence or used, including as the stated basis for expert testimony.

Fourth, and finally, West complains that it is unfair to prevent him from using the Board accident report because the defendants "may well seek to rely on the NTSB's factual determinations in accidents that allegedly relate to snow and ice

¹³The Court of Appeals for the First Circuit has never considered this issue.

ingestion.” Again, though, the defendants--and West, for that matter--are entitled to use factual accident reports at trial without running afoul of the statute. 49 C.F.R. § 835.2. If West is accusing the defendants of potentially trying to use the factual portions of Board accident reports of other crashes, that would violate the statute (and open the door to West’s use of the Board accident report of his crash), but West’s charge is not well-supported. He says that the defendants may try to use photographs or other data from crashes that the NTSB investigated, but the court is at a loss to see how that amounts to using the resulting Board accident reports. Nor does the court agree that the defendants would open the door to the Board accident report of West’s crash by introducing statements or photographs that his colleague who helped him de-ice the helicopter provided to the NTSB during its investigation. Subject to what the court sees as the extraordinarily unlikely development that the defendants open the door to the Board accident report, Goodrich’s motion to prevent West from using that report in any way at trial is granted.

3. Capacitors in overspeed power supply

Goodrich seeks to exclude evidence of its decision, in September 2009, to call for the upgrade of the capacitors in the overspeed power supply of the ECU by that point. While this decision predated West’s accident, the capacitors in the ECU in

his helicopter had yet to be replaced. Earlier in the litigation, West had identified the failure of the non-upgraded capacitors as the cause of his crash. But Goodrich argues that West's expert witnesses have since admitted that they do not know whether the errant electrical signal they have identified as the trigger for the alleged FOSSA event in his helicopter in fact originated in the capacitors, in some other component in the ECU, or in a short in the wiring of the ECU. West does not disagree with this characterization of his expert's deposition testimony and, as already discussed, his theory is that the ECU was defective not because any of its components (including the capacitors) were prone to creating errant signals, but because it recognized such signals as FOSSA events necessitating closure of a fuel valve when in fact no such event was occurring. See Part II.A.1, supra.

It follows, as Goodrich argues, that West cannot show that the absence of the upgraded capacitors in his ECU had any causal connection to his crash. As Goodrich points out, "[a]ny alleged design defect which had nothing to do with plaintiff's injury is irrelevant." [Weir v. Crown Equip. Corp.](#), 217 F.3d 453, 461 (7th Cir. 2000). Goodrich, however, seeks to exclude evidence of not only that alleged defect, but of its decision, which it reached prior to West's crash, to upgrade the capacitors. Part of West's theory is that, instead of upgrading the capacitors in the ECU so

they would not create errant electrical impulses, Goodrich should have reprogrammed the software in the ECU so that it would not treat an errant electrical impulse as a FOSSA event. As this court has previously observed, evidence that Goodrich "revised the ECU, but did so in a way that failed to remove the defect" that West alleges, is relevant to the issue of Goodrich's negligence, including as to its notice of the alleged defect. See [West](#), 2011 DNH 217, at 10-11.

So West can introduce evidence of Goodrich's September 2009 decision to upgrade the capacitors rather than the software,¹⁴ but cannot introduce evidence that his helicopter lacked the upgraded capacitors. West also cannot introduce evidence of Goodrich's decision, in December 2012, to tell all of its customers that it should upgrade the capacitors by a date certain. That is inadmissible both because it is irrelevant--again, West has no evidence that the absence of the upgraded capacitors caused his crash--and because it is evidence of a subsequent remedial measure. See [Fed. R. Evid. 407](#).

4. West's expert opinions

Goodrich seeks to exclude any opinions from West's liability experts, Chen and Bloomfield, as to the duration of the alleged

¹⁴Goodrich, of course, can request a limiting instruction to the effect that there is no evidence the lack of upgraded capacitors contributed to West's accident.

FOSSA event in West's helicopter, but without invoking any particular basis (e.g., relevance, unfair prejudice). As already discussed, this court has rejected Goodrich's challenges to those experts' proffered opinions on the ground that they do not satisfy Rule 702. See Part I.A.1, supra. So this aspect of Goodrich's motion in limine is denied without prejudice to the presentation of a more focused objection at trial.

Goodrich also seeks to exclude Chen's opinion that the company's quality control standards are deficient, suggesting that he has failed to opine as to a link between those standards and the accident. The court disagrees. Chen states that, in investigating suspected FOSSA incidents, Goodrich "stopped [its] analysis . . . at a preliminary level instead of continuing to ask 'why' . . . to get to the true root cause" (which, in Chen's view, is the ECU's defect in recognizing errant electric impulses as FOSSA events). Insofar as Goodrich challenges the reliability of that opinion, the challenge goes to weight, not admissibility.

5. Undisclosed opinion testimony

Goodrich also seeks to exclude any expert testimony from two witnesses who have experience in flying or maintaining helicopters: Ray Newcomb, who owns JBI, and Roger Sharkey, who owns another helicopter company. Goodrich argues that, even though West failed to disclose either Newcomb or Sharkey as an expert witness under Rule 26(a)(2), West intends to present

expert testimony from them at trial, including, in particular, opinions as to whether ice and snow caused West's engine to flame out. West's objection confirms this suspicion and then some, arguing that not only Newcomb and Sharkey, but several other witnesses who have not been designated as experts (Doug MacIver, Carl Svenson, Warren Rooks, and Jack Goeman) should be allowed to give opinion testimony on "topics including (without limitation) how they clean ice and snow from helicopters, how to perform an autorotation, what fuel spatter looks like after an engine flameout, or the qualities of a good pilot." West maintains that this is simply lay opinion testimony under [Rule 701](#), rather than expert opinion testimony under [Rule 702](#).

Insofar as West is urging that these witnesses can testify to their personal knowledge of these subjects--for example, a witness who has worked maintaining aircraft could testify as to how he has personally gone about removing ice and snow from helicopters, or a witness who is a pilot could testify as to how he has personally performed an autorotation--he is correct that this testimony does not amount to expert opinion testimony under [Rule 702](#).¹⁵ In fact, it is not "opinion" testimony at all. The problem arises when testimony of this sort begins to stray from testimony about how the witness has personally done these things

¹⁵This is not to say, of course, that such testimony would be otherwise admissible here.

into testimony about how these things are usually done, or how they should be done. That is opinion testimony, and, if it draws upon the witness's "scientific, technical, or other specialized knowledge," it is expert opinion testimony under [Rule 702](#) of the Rules of Evidence. Despite West's suggestion to the contrary, a pilot's testimony about how ice or snow should be removed from a helicopter, or how an autorotation should be performed, is plainly expert testimony under that rule.

Indeed, West dedicates a substantial portion of his argument in response to Goodrich's motion to demonstrating that all of his claimed lay witnesses "have significant personal experience in their respective fields, including piloting, helicopter maintenance, helicopter operation, training, and other related areas." Though West suggests otherwise, "[t]he dividing line between lay opinion testimony under [Rule 701](#) and expert opinion testimony under [Rule 702](#) . . . is marked by whether the opinion is based on the expert's 'specialized' knowledge, rather than . . . whether the witness came by that knowledge 'through experience' as opposed to training, education, or the other ways that a witness can qualify to give expert testimony." [United States v. Tanguay](#), 895 F. Supp. 2d 284, 289 (D.N.H. 2012).¹⁶

¹⁶In [Tanguay](#), 895 F. Supp. 2d at 289, this court distinguished some of the circuit cases on which West relies in characterizing his witness's testimony as lay opinions, including [United States v. Paiva](#), 892 F.2d 148, 157 (1st Cir. 1989).

It follows that any opinion testimony that these witnesses give based on their "significant experience" in their fields is expert testimony. West, however, did not disclose that any of these witnesses would be giving expert testimony, as he was required to do under [Rule 26\(a\)\(2\)](#), nor does he suggest that this failure was substantially justified or harmless under [Rule 37\(c\)\(1\)](#). Where a party fails to comply with his disclosure obligations under [Rule 26\(a\)](#), of course, "the baseline rule is that the required sanction in the ordinary case is mandatory preclusion." [Harriman v. Hancock County](#), 627 F.3d 22, 29 (1st Cir. 2010). The court can see no reason not to apply the baseline rule here to preclude West from offering expert testimony from any witness whom he did not disclose under [Rule 26\(a\)\(2\)](#). These include any opinions from Newcomb or Sharkey as to the cause of West's accident, including that the absence of fuel spatter indicates that ice and snow played no role. Those are clearly expert opinions--because, as West himself pointed out at oral argument, they are based on those witness's extensive experience with aircraft.

6. Worsened GI problems

Goodrich says that, late in the expert discovery phase of this case, West (through counsel) claimed for the first time to have "made numerous calls to his doctor" between his release from his post-accident hospitalization in December 2008 and his

surgery in February 2009 "about an aggravation of his [GI] condition." But West did not disclose any such calls in response to an interrogatory asking him to "identify and describe any all medical treatment [he] received that [he] claim related in any way to the crash," nor did he produce medical records reflecting them. Goodrich argues that, as a result, West should not be allowed to present evidence of those calls at trial.

At oral argument, however, West stated (through counsel) that he had made only one such call, to his primary care physician, complaining of constipation after his release from the hospital--and that the physician or his staff had advised West that the constipation was likely the result of pain medication he was taking at the time. Assuming that this statement is accurate, West's delay in disclosing that call, or the resulting advice, was harmless. See Fed. R. Civ. P. 37(c)(1). While the onset of West's constipation following the crash is an important issue in the case, see Part I.C, supra, his single call to his doctor complaining of that problem immediately after the accident has little if any probative value on that point. Goodrich's motion to prevent West from testifying as to that call as a sanction for failing to disclose it earlier is denied.

7. Other issues

Goodrich seeks to prevent West from presenting any evidence that the force of his landing was 10Gs, arguing that such

evidence must take the form of an expert opinion that West does not have. West, however, claims to have a document created by Goodrich stating that the force of his landing was 10Gs. The court will resolve any objection to the admissibility of that document at trial. Goodrich also seeks to prevent McIver, another pilot, from testifying about a dramatic landing that he accomplished through autorotation. Any probative value in that testimony is outweighed by its prejudicial effect. West himself can, and surely will, testify to his own experience in landing a helicopter through autorotation.

D. Paul Rice's statements (document no. 250)

West seeks to prevent the defendants' experts from testifying as to what Paul Rice, who witnessed West's efforts to de-ice the helicopter, told those experts, as well as what Rice told FAA personnel who investigated West's crash. West argues that these statements are hearsay. But an expert witness can base his opinion testimony on inadmissible evidence, provided that "experts in the particular field would reasonably rely on those kinds of facts or data in forming an opinion on the subject," and "the proponent of the opinion may disclose them to the jury" so long as "their probative value in helping the jury evaluate the opinion substantially outweighs their prejudicial effect." Fed. R. Evid. 703.

Here, West does not question that experts in aviation safety or accident reconstruction would reasonably rely on an eyewitness's accounts of how the aircraft involved in the accident was de-iced. Furthermore, the probative value of those accounts outweighs their prejudicial effect--particularly because, as the defendants indicate in their objection, they intend to call Rice as a witness at trial. West's motion to prevent the defendants' experts from testifying as to Rice's statements is denied.

E. Other FADEC incidents (document no. 251)

Bell seeks to exclude evidence of incidents, aside from West's accident, where he (or in one case Sharkey) claims to have experienced a failure of the FADEC in a Bell 407, arguing that this evidence is irrelevant. See Fed. R. Evid. 401. In response, West states that he does not intend to introduce such evidence--with the exception of a FADEC incident he claims to have experienced when he was piloting a Bell 407 after his accident. West explains that his testimony about this incident will show "the level and distress and discomfort that the incident caused, as contrasted with his pre-accident reactions to such events." West's account of his post-accident FADEC incident is therefore probative on the issue of his damages, and any potential prejudice to Bell can be cured by an appropriate

limiting instruction that the jury may consider that testimony solely for that purpose. See [Fed. R. Evid. 105](#). Bell's motion is denied as to that testimony, but is otherwise granted.

F. Bell's omnibus motion in limine (document no. [253](#))

Through this motion, Bell seeks an order preventing West's counsel from engaging in a variety of improper conduct, such as referring to evidence outside of the record, vouching for the credibility of witnesses, and the like. Bell has failed to demonstrate even the slightest basis for such an order at this point. In the event that counsel for West, or any party, engages in improper conduct during the trial, the court will handle it at that point. Bell's motion is denied.

G. Publishing deposition transcripts (document no. [254](#))

West seeks permission to publish to the jury portions of the deposition transcripts of two defense witnesses, together with the corresponding errata sheets. Use of a deposition at trial is governed by [Rule 32](#) of the Federal Rules of Civil Procedure, which does not contemplate anything of the sort. West's motion to publish deposition transcripts to the jury is denied.

H. Late-disclosed documents (document no. 172)

West seeks to prevent the defendants from using certain documents in cross-examining his liability experts on the grounds that Rolls Royce failed to produce those documents until a week before those experts were deposed. West suggests that, because his experts did not have access to those documents at the time they authored their reports, it would be unfair for the defendants to use the experts' failure to account for those documents in their reports to try to impeach their testimony. Whatever the merits of that suggestion, the defendants stated at oral argument that, not surprisingly, they had no intention of cross-examining the defendants' experts in that way. So this motion is granted insofar as it seeks to prevent the defendants from pursuing that line of cross-examination, but denied insofar as it seeks to prohibit the defendants from otherwise using the documents themselves, or the information they contain, in cross-examining West's liability experts.

III. Conclusion

For the foregoing reasons:

- the defendants' motions to exclude or limit Chen's and Bloomfield's testimony (document nos. 158-160, 163) are GRANTED in part and DENIED in part;

- Bell's motion to limit Ford's testimony (document no. 168) is GRANTED in part and DENIED in part;

- Bell's motion to exclude Dr. Agarwal's testimony (document no. 170) is DENIED;
- West's motion to prevent the use of Rolls Royce's late-disclosed documents (document no. 172) is GRANTED in part and DENIED in part;
- West's motion to limit Albert's and Stimpson's testimony (document no. 203) is GRANTED in part and DENIED in part;
- West's motion to exclude Parmet's testimony (document no. 204) is GRANTED;
- West's motion to limit Gores's and Winn's testimony (document no. 205) is DENIED;
- West's motion to limit Atherton's, Souza's, and Piercy's testimony (document no. 206) is GRANTED in part and DENIED in part;
- Rolls Royce's motion to exclude evidence of other accidents and remedial measures (document no. 239) is GRANTED in part and DENIED in part;
- Rolls Royce's omnibus motion to exclude evidence (document no. 240) is GRANTED in part and DENIED in part;
- West's motion to exclude evidence of cellphone use (document no. 243) is GRANTED in part and DENIED in part;
- West's motion in limine as to component testing (document no. 244) is GRANTED in part and DENIED in part;
- West's motion in limine to prevent the defendants' experts from testifying as to the meaning of federal regulations, or whether he violated them (document no. 245) is GRANTED;
- Goodrich's omnibus motion in limine (document no. 246) is GRANTED in part and DENIED in part;
- West's motion to exclude evidence of his marital status at the time of the accident (document no. 248) is GRANTED in part and DENIED in part;
- West's motion to exclude evidence of Rice's statements (document no. 250) is DENIED;

• Bell's motion to exclude evidence of other FADEC incidents (document no. 251) is GRANTED in part and DENIED in part;

• West's motion to exclude evidence of post-August 2012 testing of the ECU (document no. 252) is DENIED as moot;

• Bell's omnibus motion in limine (document no. 253) is DENIED;

• West's motion to publish deposition transcripts to the jury (document no. 254) is DENIED; and

• all of the defendants' motions to join in each others' motions (document nos. 162, 164, 165, 255, 259) are GRANTED.

SO ORDERED.



Joseph N. Laplante
United States District Judge

Dated: September 9, 2013

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