PROVING CAUSATION IN WORKERS' COMPENSATION CASES

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I. THE STARTING POINT: THE GENERAL PRINCIPLE

Ordinarily, "[t]he plaintiff in a workers' compensation case bears the burden of initially proving each and every element of compensability, including causation." *See Whitfield v. Laboratory Corp. of America*, 158 N.C. App. 341, 350, 581 S.E.2d 778, 784 (2003).[1] In a workers' compensation case, "[t]he injury by accident must be the proximate cause, that is, an operating and efficient cause, without which [the disability] would not have occurred." *See Gilmore v. Hoke County Bd. of Educ.*, 222 N.C. 358, 365, 23 S.E.2d 292, 296 (1942). The evidence of causation "must be such as to take the case out of the realm of conjecture and remote possibility." *Id.* at 365, 23 S.E.2d at 296. As the Court of Appeals has stressed, "the 'mere possibility of causation,' as opposed to the 'probability' of causation is insufficient to support a finding of compensability." *Whitfield*, 158 N.C. App. at 351, 581 S.E.2d at 785. Accordingly, evidence of causation is not sufficient if it only indicates that an injury "could have been related to" work. *Hodgin v. Hodgin*, 159 N.C. App. 635, 641, 583 S.E.2d 362, 366 (2003).

Likewise, in an occupational disease case, the plaintiff must establish a "causal relationship between the disease and the claimant's employment." *Hardin v. Motor Panels, Inc.*, 136 N.C. App. 351, 354, 524 S.E.2d 368, 371 (2000). This requirement "is satisfied if the employment 'significantly contributed to, or was a significant causal factor in, the disease's development.'"*Id.* (quoting *Rutledge v. Tultex Corp.*, 308 N.C. 85, 101, 301 S.E.2d 359, 369-70 (1983)). This test is broader than traditional tort "direct cause" analysis: "We agree that the Commission erred in requiring plaintiff to show that her [condition] was a direct result of her employment . . . . The Commission's use of the phrase 'direct cause' in its conclusion of law, as opposed to 'significant contributing or causal factor,' suggests that the Commission did not apply the correct standard with respect to the causation element." *James v. Perdue Farms, Inc.*, 160 N.C. App. 560, 561-62, 586 S.E.2d 557, 559-60 (2003). Instead, to prove that his or her employment was a "significant contributing" factor, the employee must show that, in the absence of the employment, the disease would not have resulted in such a degree of disability that the employee would suffer an incapacity for work. *Hardin*, 136 N.C. App. at 354, 524 S.E.2d at 371; *accord Matthews v. City of Raleigh*, 160 N.C. App. 597, 601, 586 S.E.2d 829, 834 (2003).

As is true in most areas of the law, however, these general principles are merely the starting point for any analysis of causation. Although these principles appear straight forward on their face, they come with a number of exceptions, caveats, and conditions.

II. WHEN THE WORKPLACE ACCIDENT/DISEASE IS NOT THE SOLE CAUSE OF DISABILITY

As indicated above, workers' compensation causation is not identical with that employed in tort cases. In *Vandiford v. Stewart Equipment Co.*, 98 N.C. App. 458, 462, 391 S.E.2d 193, 196 (1990), the Court of Appeals explained: "There is a distinction between the proximate cause doctrine in Workers' Compensation cases and that applied in cases of tort. . . . While there must

[1] The burden of proof on causation is discussed in detail in Section V, *infra*.

be some causal connection between the employment and the injury, it is not necessary that the original injury be the sole cause of the second injury." *See also Hoyle v. Carolina Associated Mills*, 122 N.C. App. 462, 466, 470 S.E.2d 357, 359 (1996) ("The work-related injury need not be the sole cause of the problems to render an injury compensable."). This distinction becomes important when multiple events or conditions, with only some work-related, combine to cause disability and when a work-related accident or condition aggravates a pre-existing condition.

A. Multiple Events/Conditions Joining to Cause Disability

In some instances, a work-related accident or condition may combine with an entirely separate non-work-related disease or injury to result in disability. When that situation has occurred, compensation may be awarded if the employee shows that the work-related accident or condition "significantly contributed" to the employee's disability. Thus, in *Weaver v. Swedish Imports Maintenance, Inc.*, 319 N.C. 243, 354 S.E.2d 477 (1987), the Supreme Court held than an employee was totally disabled when a compensable heart attack combined with three subsequent heart attacks (not caused, accelerated, or aggravated by the initial heart attack) to result in a total incapacity to work. *See also Madison v. International Paper Co.*, 165 N.C. App. 144, 151, 598 S.E.2d 196, 200-01 (2004) (even though there was testimony that plaintiff was at risk for a heart attack at any time, additional expert testimony that heat in the workplace was a significant contributing factor to the heart attack and resulting death was sufficient to support the award).

It does not matter that other non-work-related factors may have contributed more substantially to the worker's ultimate condition so long as the work-related factor was a significant contributor. *See*, *e.g.*, *Counts v. Black & Decker Corp.*, 121 N.C. App. 387, 465 S.E.2d 343 (1996) (employee entitled to total disability when a combination of non-compensable illnesses and a work-related shoulder injury rendered her incapable of working); *Perry v. Burlington Industries, Inc.*, 80 N.C. App. 650, 654, 343 S.E.2d 215, 218 (1986) (even though plaintiff's smoking was "probably a more significant contributing factor than his occupation" to his chronic obstructive pulmonary disease, doctor's testimony that the plaintiff's occupation did contribute significantly to the plaintiff's lung disease supported award); *Swink v. Cone Mills, Inc.*, 65 N.C. App. 397, 400, 309 S.E.2d 271, 272-73 (1983) (reversing Commission's refusal to award benefits when plaintiff's evidence demonstrated that exposure to cotton dust together with a history of cigarette smoking and tuberculosis contributed to his chronic obstructive pulmonary disease). If, however, the Commission concludes that the workplace was not a "significant causative factor," then compensation is improper. *Goodman v. Cone Mills Corp.*, 75 N.C. App. 493, 497-98, 331 S.E.2d 261, 264 (1985) (affirming decision of Commission that chronic obstructive lung disease was caused by cigarette smoking and not cotton dust).

The Supreme Court has held that, in these cases, there must be an apportionment of the award between the work-related injury or condition and the non-compensable conditions: "We therefore hold that the award must be apportioned to reflect the extent to which claimant's permanent total disability was caused by the compensable heart attack." *Weaver*, 319 N.C. at 353-54, 354 S.E.2d at 484. *See also Hansel v. Sherman Textiles*, 304 N.C. 44, 54, 283 S.E.2d 101, 107 (1981) ("Because of the presence of these other [non-compensable] infirmities and because this is a case of partial disability as opposed to one of total disability, it must be determined what percentage of claimant's disability is due to her occupational disease."). Nevertheless, the Court of Appeals has recognized the difficulty—and often times impossibility—of apportioning the disability. It has, therefore, held that an employee may receive "full compensation for total disability without apportionment when the nature of the employee's total disability makes any attempt at apportionment between work-related and non-work-related causes speculative."

Errante v. Cumberland County Solid Waste Management, 106 N.C. App. 114, 119, 415 S.E.2d 583, 586 (1992). In *Errante*, the court found apportionment inappropriate when the doctor testified that "there is no way anybody can honestly say" what percentage of plaintiff's total disability was caused by his compensable injuries and what percentage was caused by non-compensable medical problems. *Id.* at 120, 415 S.E.2d at 587; *see also Rawls v. Yellow Roadway Corp.*, 219 N.C. App. 191, 198, 723 S.E.2d 573, 578 (2012) (finding apportionment speculative where physician testified that "there's really no scientific basis to apportion" employee's disability). The Commission also may refuse to apportion when the record lacks evidence attributing a percentage of the claimant's total incapacity to her compensable injury. *Counts*, 121 N.C. App. at 390-91, 465 S.E.2d at 346. *See also Konrady v. United States Airways, Inc.*, 165 N.C. App. 620, 629, 599 S.E.2d 593, 598 (2004) ("The Commission may also decline to apportion when the record lacks evidence attributing a percentage of the employee's total incapacity to her compensable injury."); *Harris v. S. Commercial Glass*, __ N.C. App. __, 789 S.E.2d 735, 743 (2016) (affirming Commission's lack of apportionment where only possible basis was a physician's answer to a hypothetical question that did not match the Commission's findings).

B. Aggravation or Acceleration of Pre-Existing Conditions

1. General Principles

Our courts have also allowed claims based on a work-related aggravation or acceleration of a pre-existing non-work-related condition. As the Supreme Court stated in *Morrison v. Burlington Industries*, 304 N.C. 1, 18, 282 S.E.2d 458, 470 (1981), "[w]hen a pre-existing, nondisabling, non-job-related condition is aggravated or accelerated by an accidental injury arising out of and in the course of employment . . . so that disability results, then the employer must compensate the employee for the entire resulting disability even though it would not have disabled a normal person to that extent." *See also Wilder v. Barbour Boat Works*, 84 N.C. App. 188, 196, 352 S.E.2d 690, 694 (1987) ("When a pre-existing, nondisabling, non-job-related condition is aggravated or accelerated by an accidental injury arising out of and in the course of employment . . . so that disability results, then the employer must compensate the employee for the entire resulting disability. . . ."); *Smith v. Champion International*, 134 N.C. App. 180, 182, 517 S.E.2d 164, 166 (1999) ("Clearly, aggravation of a pre-existing condition which results in loss of wage earning capacity is compensable under the workers' compensation laws in our state.").

In applying the aggravation rule, there is no requirement that the claimant have experienced symptoms that are new or different from those of the pre-existing condition. *Brafford v. Brafford's Constr. Co.*, 125 N.C. App. 643, 646-47, 482 S.E.2d 34 (1997) (work-related accident aggravated pre-existing brain damage). Nor does a claimant have to show that the aggravation was a "natural consequence" of the compensable injury, the customary causation standard. *Toler v. Black & Decker*, 134 N.C. App. 695, 701, 470 S.E.2d 547, 550-51 (1999). The cause of the preexisting condition "is immaterial." *Blalock v. Se. Material*, 209 N.C. App. 228, 233, 703 S.E.2d 896, 900 (2011) (concluding that it was irrelevant that preexisting lung condition was caused by plaintiff's smoking two packs of cigarettes a day for thirty years). The key question is solely whether the work-related accident "contributed in 'some reasonable degree' to plaintiff's disability." *Hoyle*, 122 N.C. App. at 466, 470 S.E.2d at 359 (reversing Commission for failing to consider whether the work-related accident aggravated a pre-existing condition).

For example, in *Kendrick v. City of Greensboro*, 80 N.C. App. 183, 341 S.E.2d 122 (1986), the court addressed defendant's contention that plaintiff's third lumbar laminectomy was not solely caused by the work-related accident, but was the result of a pre-existing back condition and two prior lumbar laminectomies. The court pointed out, however, that "[w]hen industrial

injury precipitates disability from a latent prior condition, such as heart disease, cancer, back weakness and the like, the entire disability is compensable." *Id.* at 187, 341 S.E.2d at 124 (quoting *Pruitt v. Knight Publishing Co.*, 27 N.C. App. 254, 258, 218 S.E.2d 876, 879 (1975), *rev'd on other grounds*, 289 N.C. 254, 221 S.E.2d 355 (1976)). Because (1) the Kendrick plaintiff's expert witness testified that the employee's pain was related to all three laminectomies and (2) prior to the work-related accident (resulting in the third laminectomy), the employee's capacity to work had not been impaired, the court concluded that the Commission could properly "determine that plaintiff's work-related injury and the surgery which followed contributed to his disability in a reasonable degree and that, as a result, plaintiff is entitled to compensation." *Id.* at 188, 341 S.E.2d at 124. *See also Wilder*, 84 N.C. App. at 196, 352 S.E.2d at 695 (that work-related injury materially aggravated plaintiff's pre-existing condition is shown by fact that plaintiff's job performance was unaffected by prior condition).

Based on these principles, in *Doggett v. South Atlantic Warehouse Co.*, 212 N.C. 599, 194 S.E. 111 (1937), the Court held that an employee's death was compensable when caused by a pre-existing nephritis that was aggravated by the injured employee's falling and breaking his leg, an accident that caused him to lie on the ground exposed to the cold weather for thirty minutes. The testimony indicated that the accident and exposure probably accelerated the employee's death.

In *Self v. Starr-Davis Co.*, 13 N.C. App. 694, 187 S.E.2d 466 (1972), the Court of Appeals recognized that a death primarily from non-occupational factors is nevertheless compensable when the death itself is accelerated by and contributed to a compensable injury or disease. The injured employee's death benefits were payable based on the Commission's finding that although the immediate and primary cause of death was a non-occupational malignant brain tumor, his unrelated compensable asbestosis accelerated and contributed to the death. The Commission's decision was supported by the testimony of the decedent's neurosurgeon that the "deceased's asbestosis made him more susceptible to pneumonia" and "that had it not been for the asbestosis and the lung complications [he] would have recovered from the surgery, would have been discharged from the hospital, and would have lived for a period of perhaps three to six months before death would have resulted from the tumor." *Id.* at 696, 187 S.E.2d at 468. *See also Raper v. Mansfield Systems, Inc.*, 189 N.C. App. 277, 657 S.E.2d 899, 905 (2008) (holding that carpal tunnel syndrome was compensable, even if pre-existing condition, when aggravated by work-related injury); *Legette v. Scotland Mem. Hosp.*, 181 N.C. App. 437, 456, 640 S.E.2d 744, 757 (2007) (affirming Commission's determination that plaintiff's lifting of patient caused or aggravated nurse's lymphedema in her arm, even though some medical testimony indicated history of breast cancer placed her at increased chance of contracting lymphedema); *Lewis v. N.C. Dep't of Corr.*, 167 N.C. App. 560, 566-67, 606 S.E.2d 199, 203 (2004) (upholding award based on compensable post-traumatic stress disorder's exacerbation of plaintiff's diabetes); *Cox v. City of Winston-Salem*, 157 N.C. App. 228, 233, 578 S.E.2d 669, 674 (2003) (work-related injury sustained in fall accelerated disease process of pre-existing tumor, causing it to become more aggressive and spread into adjacent tissues); *Ruffin v. Compass Group USA*, 150 N.C. App. 480, 484, 563 S.E.2d 633, 637 (2002) (plaintiff entitled to compensation when she lifted a 40-pound box at work and aggravated pre-existing back conditions).

The aggravation rule applies equally to physical and emotional conditions: "If compensation is available for physical injuries caused by an accident, physical injuries exacerbated by an accident, and psychiatric problems caused by an accident, we know of no compelling reason for the Commission not to award compensation for psychiatric problems exacerbated by an accident." *Toler*, 134 N.C. App. at 701, 470 S.E.2d at 550 (affirming award of compensation for aggravation of psychiatric problems). *See also Calloway v. Memorial Mission*

Hosp., 137 N.C. App. 480, 485, 528 S.E.2d 397, 401 (2000) ("We have previously held that the aggravation of pre-existing psychiatric problems is compensable if that aggravation is caused by a work-related physical injury.").

2. Occupational Diseases

Attorneys must be cautious in applying the aggravation rule in the context of occupational diseases. In *Chambers v. Transit Management*, 360 N.C. 609, 636 S.E.2d 553 (2006), the Supreme Court held that, in an occupational disease case, "evidence tending to show that the employment simply aggravated or contributed to the employee's condition goes only to the issue of causation, the third element of the *Rutledge* test." *Id.* at. 613, 636 S.E.2d at 556. Regardless of the causation prong, the employee must still show that his or her employment placed him at greater risk of contracting the condition than the general public. *Id.*

The Court of Appeals applied *Chambers* in *Thomas v. McLaurin Parking Co.*, 181 N.C. App. 545, 550, 640 S.E.2d 779, 783 (2007). The plaintiff in *Thomas* contended that sitting on a stool at work aggravated his degenerative arthritis. The Court explained, based on *Chambers*, that "when a claimant asserts an occupational disease claim predicating causation upon the issue of aggravation, the claimant must further show that his employment placed him at a greater risk for contracting the condition." *Id.* at 551, 640 S.E.2d at 783. Because no evidence was presented that the plaintiff's employment placed him at greater risk for contracting degenerative arthritis, the Court upheld the Commission's denial of benefits. *Id.*

In *Lanier v. Romanelle's*, 192 N.C. App. 166, 174-75, 664 S.E.2d 609, 614 (2008), the plaintiff argued that his because he suffered from synovitis, a listed occupational disease, the Commission erred in not concluding that the condition was compensable. The Court of Appeals pointed out that the plaintiff was still required to establish that the synovitis was caused by his work. *Id.* at 174, 664 S.E.2d at 614. The plaintiff had suffered a scapholunate ligament tear, and an expert testified that the plaintiff's synovitis was probably the result of that tear. The expert, however, further testified that this type of tear was normally caused by an acute injury and not a repetitive process. The Court upheld the Commission's conclusion of no causation because the plaintiff had failed to show that the tear—which resulted in the synovitis—was caused by the plaintiff's employment. *Id.* at 175, 664 S.E.2d at 614.

3. Apportionment

Apportionment is never appropriate when applying the aggravation rule. As the Court of Appeals wrote in *Konrady*, 165 N.C. App. at 629, 599 S.E.2d at 599, "[A]pportionment is not appropriate when a work-related condition aggravates or accelerates a non-work-related condition." *See also Cox*, 157 N.C. App. at 234, 578 S.E.2d at 674 (Commission properly refused to apportion award based on acceleration); *Counts*, 121 N.C. App. at 390, 465 S.E.2d at 345-46 (apportionment possible only when the non-work-related infirmity "is neither accelerated nor aggravated by the compensable injury"); *Errante*, 106 N.C. App. at 119, 415 S.E.2d at 586 ("[A]pportionment is not permitted when an employee becomes totally and permanently disabled due to a compensable injury's aggravation or acceleration of the employee's nondisabling, pre-existing disease or infirmity.").

4. Pre-Existing Job-Related Condition

The Court of Appeals has also addressed "aggravation" in the context of a prior employment-related condition that was disabling. *See Ard v. Owens-Illinois*, 182 N.C. App. 493, 498, 642 S.E.2d 257, 261 (2007). In *Ard*, the plaintiff suffered three potentially compensable back injuries over a year's time. He missed no time from work after the first specific traumatic incident

and missed only a couple of months after the second specific traumatic injury, returning to work feeling "strong." After a third specific traumatic incident, the plaintiff underwent surgery and was not able to obtain employment with the defendant or elsewhere. In arguing that the plaintiff was not entitled to disability compensation for the third incident, the defendants relied upon *Morrison*'s reference to "a pre-existing, *nondisabling*, non-job-related condition," 304 N.C. at 18, 282 S.E.2d at 470 (emphasis added), and argued that if a pre-existing condition is aggravated during employment, leading to disability, the disability could only be compensable if the pre-existing condition was not disabling. *Ard*, 182 N.C. App. at 498, 642 S.E.2d at 261. The Court of Appeals rejected the argument, holding that a compensable (job-related) pre-existing condition that is disabling can be aggravated to cause a subsequent compensable disability. *Id.* (citing *Poe v. Raleigh/Durham Airport Auth.*, 121 N.C. 117, 119-20, 464 S.E.2d 689, 690-91 (1995) (plaintiff had compensable injury to lower back, succeeded by four separate compensable re-injuries)).

III. UNKNOWN CAUSES

Our courts have recognized that in certain special situations, such as unexplained deaths and falls, a strict application of the causation burden of proof is problematic. Without some adjustment of the burden of proof, the plaintiff in such cases would rarely be able to recover.

A. The Pickrell Presumption in Unexplained Deaths

In *Pickrell v. Motor Convoy, Inc.*, 322 N.C. 363, 368 S.E.2d 582 (1988), the North Carolina Supreme Court held that a "true presumption" of compensability exists where a worker dies in the course of his or her employment and it is uncertain whether or not the death was work-related. *Id.* at 371, 368 S.E.2d at 586. The claimant is "able to rely on a presumption that death was work-related, and therefore compensable, whether the medical reason for death is known or unknown." *Id.* at 370, 368 S.E.2d at 586.

In justifying the presumption, the *Pickrell* Court observed that "those in the best position to speak to this question are the employee, whom death has silenced, and the employer." *Id.* According to the Court, in "such circumstances, a presumption of compensability is theoretically and practically justified." As a result, where either the cause of death or the circumstances of the death is unknown, the employer "must come forward with some evidence that death occurred as the result of a non-compensable cause; otherwise, the claimant prevails." *Id.* at 371, 368 S.E.2d at 586.[2] If the employer produces evidence that the death was not compensable, "the presumption disappears." *Id.* In that event, the burden of persuasion remains with the injured employee and the Commission must find the facts based on all of the evidence presented. *Id.* In *Pickrell*, the decedent was found lying dead on the pavement behind a van that he had been assigned to load and transport. The decedent's left leg was extended under the van's rear bumper and a scuff mark resembling a shoe print was on the bumper. The Court concluded first that the claimant was entitled to rely on the presumption of compensability within the course and scope of his employment and second that there was no evidence indicating that the employee had died other than by a compensable accident. *Id.*, 368 S.E.2d at 587.

The employer can rebut the presumption with evidence the employee died of non-work-related causes. *See Bason v. Kraft Food Serv., Inc.*, 140 N.C. App. 124, 128-29, 535 S.E.2d 606, 609-10 (2000) (defendant rebutted presumption with evidence that the employee died of cardiac

[2] *Pickrell* does not require that the medical cause of death be unknown, but rather it applies whenever the circumstances establishing the work-relatedness of the death are unknown. *Shaw v. Smith & Jennings, Inc.*, 130 N.C. App. 442, 447-48, 503 S.E.2d 113, 118 (1998)

arrhythmia, he had severe heart disease, he had done nothing unusual during his day, and the autopsy revealed no evidence of trauma); *Gilbert v. Entenmann's, Inc.*, 113 N.C. App. 619, 440 S.E.2d 115 (1994) (presumption not applicable where evidence indicated the cause of death was a subarachnoid hemorrhage, which was not a compensable cause); *Strickland v. Central Service Motor Co.*, 94 N.C. App. 79, 84, 379 S.E.2d 645, 648 (presumption did not apply when there was evidence that the employee died of a ruptured aneurysm), *disc. review denied*, 325 N.C. 276, 384 S.E.2d 530 (1989). *See also Horton v. Powell Plumbing & Heating of N.C.*, 135 N.C. App. 211, 216, 519 S.E.2d 550, 553 (1999) (evidence of suicide would rebut the presumption, but Commission was free to conclude that employee did not commit suicide).

The Court of Appeals applied the *Pickrell* presumption in *Wooten v. Newcon Transportation, Inc.*, 178 N.C. App. 698, 632 S.E.2d 525 (2006). In *Wooten*, the deceased was in an accident while driving a truck. It was later determined that the employee had died from heart arrhythmia resulting in a heart attack. The defendants argued that the presumption did not apply because there was evidence that the employee had died other than by a compensable cause, pointing to the employee's pre-existing heart disease. In rejecting this argument, the Court pointed out that a heart attack may be compensable under certain conditions and that the Commission had concluded that "'[t]he evidence fails to show whether decedent had a heart attack that caused the motor vehicle accident or whether the circumstances of the accident caused decedent's heart arrhythmia.'" *Id.* at 702-03, 632 S.E.2d at 528. The Court also upheld the Commission's determination that the defendants had failed to rebut the *Pickrell* presumption because "it is undisputed that decedent was involved in an accident. . . ." *Id.* at 703, 632 S.E.2d at 529.

The *Pickrell* presumption was well addressed in *Reaves v. Industrial Pump Service* ("*Reaves I*"), 205 N.C. App. 417, 696 S.E.2d 548 (2010), and *Reaves v. Industrial Pump Service* ("*Reaves I*"), 195 N.C. App. 31, 35, 671 S.E.2d 14, 18 (2009). In *Reaves I*, the Court of Appeals remanded for further findings of fact because the Commission had not addressed the plaintiff's argument that the *Pickrell* presumption should apply. The deceased had worked with another employee for most of the day—the parties disputed whether the conditions were unusually hot. Although the second employee walked the deceased to their truck, that employee then left for a significant period of time. When he returned he found that the deceased had died. The parties' experts agreed that the deceased had suffered a cardiac arrhythmia and agreed that exposure to heat can precipitate a cardiac arrhythmia, but disagreed whether it had in that case. The Court of Appeals held in the *Reaves I* opinion that these circumstances were sufficient to raise the issue of the applicability of the *Pickrell* presumption, thereby requiring the Commission to address the issue. *Id.* The Court concluded that the fact that the other employee presented testimony about what he observed did not negate the possible applicability of *Pickrell* because the decedent was not able to testify as to what he actually experienced. *Id.* In *Reaves II*, following the remand, the Court upheld that the Commission's decision concluding that the *Pickrell* presumption applied and that defendants had failed to rebut that presumption. *Reaves II*, 205 N.C. App. at 423-25, 696 S.E.2d at 552-53. *Compare Gray v. United Parcel Services, Inc.,* 212 N.C. App. 674, 678, 713 S.E.2d 126, 129 (2011) (holding that while Commission correctly found *Pickrell* presumption was applicable, it erred in finding that presumption was not rebutted by expert testimony conclusively stating that plaintiff's employment was not significant contributing factor to his death).

The Court of Appeals has ruled that *Pickrell* does not apply outside of a claim for death benefits. *Janney v. J.W. Jones Lumber Co.*, 145 N.C. App. 402, 550 S.E.2d 543 (2001). In *Janney*, the plaintiff, a lumber grader, was waiting for a board when he woke up on the floor. He had no memory of anything happening to him and had no history of falling. The Court reversed the Commission's conclusion that the *Pickrell* presumption should apply, concluding that when

the employee lives, the *Pickrell* concern about an unequal access to information no longer exists: "[T]here is no reason to believe that defendant employer could have known any more about the circumstances of plaintiff's fall than did plaintiff himself. Because we see no potential inequality of information, we decline to adopt the *Pickrell* presumption in this workers' compensation case not resulting in death." *Id.* at 406, 550 S.E.2d at 546. *See also Holloway v. Tyson Foods, Inc.*, 193 N.C. App. 542, 549, 668 S.E.2d 72, 77 (2008) (holding, based on *Janney*, that *Pickrell* presumption did not apply when employee did not die but could not remember what happened to him).

B. The Unexplained Fall Rule

North Carolina has adopted the "unexplained fall" rule. Under the "unexplained fall" rule, if the cause of a fall while performing work-related duties is unknown, then courts will allow the inference of an accident arising out of the employment without requiring further proof. If "an employee was within his orbit of duty on the business premises of the employer, [and] was engaged in the duties of his employment or some activity incident thereto, was exposed to the risks inherent in his work environment and related to his employment, and the only active force involved was the employee's exertions in the performance of his duties, an inference that the fall had its origin in the employment is permitted." *Hodges v. Equity Group*, 164 N.C. App. 339, 344, 596 S.E.2d 31, 35 (2004) (internal quotation marks omitted) (even though plaintiff could not explain what caused him to fall, an inference that the fall had its origin in employment was permitted because plaintiff fell while walking to install a guard in a machine). *See also Robbins v. Bossong Hosiery Mills, Inc.*, 220 N.C. 246, 17 S.E.2d 20 (1941) (employee reached up toward a rack for an unexplained reason, lost her balance, and fell); *Calhoun v. Kimbrell's, Inc.*, 6 N.C. App. 386, 390, 170 S.E.2d 177, 179-80 (1969) (employee found lying at foot of stairs); *Hedges v. Wake County Pub. Sch. Sys.*, 206 N.C. App. 732, 736, 699 S.E.2d 124, 127 (2010) (employee was carrying paper work when she stumbled and fell for an unexplained reason).

The "unexplained fall" rule does not apply if the fall is the result of an idiopathic condition. In that event, the fall is deemed explained and compensation should be denied, unless the idiopathic condition combined with a risk from employment to cause the injury. *See Janney v. J.W. Jones Lumber Co.*, 145 N.C. App. 402, 404, 550 S.E.2d 543, 546 (2001) ("The injury does arise out of the employment if the idiopathic condition of the employee combines with risks attributable to the employment to cause the injury."). The problem has been in determining when the Commission or the courts will attribute a fall to an idiopathic condition.[3] In *Cole v. Guilford County & Hartford Accident & Indem. Co.*, 259 N.C. 724, 131 S.E.2d 308 (1963), a juror fell as she was leaving the courthouse. Nothing appeared to cause the fall; her leg "just gave way," causing her to fracture her hip. *Id.* at 725, 131 S.E.2d at 310. The fall was the first time that she had ever experienced problems with her leg. After surgery on her hip, the plaintiff died from a pulmonary embolism arising out of the fracture. Although there was no evidence of any pre-existing leg condition, the Supreme Court held that "the cause of Mrs. Cole's unfortunate fall is known—her leg simply gave way because of a physical infirmity, the nature of which we do not know." *Id.* at 727, 131 S.E.2d at 311. Because the fact that she was serving on a jury had nothing to do with either the fall or its consequences and "[t]here is nothing to suggest that she would not have fallen had she been leaving the courthouse after having listed her taxes or having attended to any other business there," the Court concluded that plaintiff's fall was "idiopathic—that is, one due to the mental or physical condition of the particular employee." *Id.* at 727-28, 131 S.E.2d at 311. *See also Norris v. Kivettco, Inc.*, 58 N.C. App. 376, 293 S.E.2d 594 (1982) (rule did not apply

[3] An idiopathic condition is "one arising spontaneously from the mental or physical condition of the particular employee." *Calhoun*, 6 N.C. App. at 391, 170 S.E.2d at 180.

when plaintiff testified that her ankle gave way although no evidence as to why it gave way); *Hollar v. Montclair Furniture Co.*, 48 N.C. App. 489, 269 S.E.2d 667 (1980) (in case when plaintiff fell as a result of fainting for unexplained reasons, court remanded for findings regarding cause of fainting); *Watkins v. Trogdon Masonry, Inc.*, 203 N.C. App. 289, 692 S.E.2d 112 (2010) (upholding Commission's finding that rule did not apply when plaintiff claimed his leg "just gave away").

IV. CHAIN OF CAUSATION AND INTERVENING CAUSES

All consequences in the "chain of causation" from the initial compensable injury or disease must be compensated. Thus, an award of compensation must encompass both the initial injury and any resulting complications. *Roper v. J.P. Stevens & Co.*, 65 N.C. App. 69, 74-75, 308 S.E.2d 485, 489 (1983) ("The Commission's award at present is not proper as it does not take into account all the complications of her injury."). These complications may include depression arising out of the work-related physical injury. *See*, *e.g.*, *Fayne v. Fieldcrest Mills, Inc.*, 54 N.C. App. 144, 282 S.E.2d 539 (1981) (depression following back injury is compensable).

If the initial injury leaves the employee in a weakened state, resulting in further injury, that subsequent injury is compensable. *See Heatherly v. Montgomery Components, Inc.*, 71 N.C. App. 377, 323 S.E.2d 29 (1984) (refracture of leg weakened by first injury held compensable). In *English v. J.P. Stevens & Co.*, 98 N.C. App. 466, 391 S.E.2d 499 (1990), the Court concluded that cesarean surgery was compensable when it was necessary because the employee's back was weakened by a compensable injury. Similarly, if a compensable injury to one part of the employee's body results in overuse of another part, the employee may receive compensation for disability arising from the overuse. *Bostick v. Kinston-Neuse Corp.*, 145 N.C. App. 102, 549 S.E.2d 558 (2001).

Starr v. Charlotte Paper Co., 8 N.C. App. 604, 175 S.E.2d 342 (1970), provides an excellent example of the "chain of causation." The employee, who had been rendered paraplegic by an admittedly compensable accident, left a cigarette burning, which ultimately caused his bed to catch fire. Because of the lack of feeling in his legs, the employee continued sleeping even while his legs were burning. The court held that "there was ample evidence for the Commission to find that the plaintiff suffered second and third degree burns on portions of his body because of a loss of feeling and sensitivity therein as a result of the original accident." *Id.* at 609, 175 S.E.2d at 346. *See also Shoemaker v. Creative Builders*, 150 N.C. App. 523, 529, 563 S.E.2d 622, 625 (2002) (injuries from a non-work-related car accident were compensable because the accident resulted from cognitive disabilities caused by compensable encephalitis).

In *Shaw v. U.S. Airways, Inc.*, 217 N.C. App. 539, 720 S.E.2d 688 (2011), the employee was prescribed methadone to treat pain resulting from his compensable injury. The employee's insidious development of fatty liver disease gradually impaired his liver's metabolic efficiency so that his regular ingestion of methadone caused his death by methadone toxicity, even though he was taking therapeutic levels of methadone as prescribed. *Id.* at 545-46. 720 S.E.2d at 692. Because medication for a compensable injury "to a reasonable degree contributed" to his death, the court held there was causation to award death benefits. *Id.* at 547, 720 S.E.2d at 693.

In *Everett v. Well Care & Nursing Servs.*, 180 N.C. App. 314, 319, 636 S.E.2d 824, 828 (2006), the Court of Appeals applied *Starr* to allow compensation for a left ankle fracture when the plaintiff fell on her own back steps. The plaintiff had previously suffered a compensable injury to her right wrist in a job-related car accident, and the Commission found that the compensable wrist injury prevented the plaintiff from breaking her fall and avoiding the ankle fracture. *Id.* The Court upheld the Commission's decision because it had further found that the

plaintiff "likely would not have fractured her left ankle," if she had not injured her wrist. *Id. But see Cooper v. Cooper Ents., Inc.*, 168 N.C. App. 562, 566, 608 S.E.2d 104, 107 (2005) (upholding Commission's decision that evidence was insufficient to find that a subsequent car accident was a natural and direct result of prior compensable injury to plaintiff's arm even though plaintiff argued that had he had full use of his arm, he would have had more control over his vehicle).

Suicide may be considered within the chain of causation when the injury deprives the employee of normal judgment. *Petty v. Associated Transport, Inc.*, 276 N.C. 417, 173 S.E.2d 321 (1970) (fractured cheek and jawbone cause agitated psychotic depression and suicide). An "employee who becomes mentally deranged and deprived of normal judgment as the result of a compensable accident and commits suicide in consequence does not act willfully within the meaning of §97-12." *Id.* at 428, 173 S.E.2d at 329. *Accord Painter v. Mead Corp.*, 258 N.C. 741, 129 S.E.2d 482 (1963) (head injury caused headaches, change of personality, brain surgery, and then suicide); *Thompson v. Lenoir Transfer Co.*, 48 N.C. App. 47, 268 S.E.2d 534 (leg injury caused pain and depression resulting in suicide).

In considering the "chain of causation," the question is simply whether "the original injury [is] one of the direct and natural causes of the subsequent injury." *Starr*, 8 N.C. App. at 610, 175 S.E.2d at 347. The disputed injury or subsequent treatment must be "a direct and natural result of the compensable injury." *English*, 98 N.C. App. at 471, 391 S.E.2d at 502.

Our Supreme Court has held that when the Commission found, based on the evidence, that a second surgery was necessitated by degenerative changes and scar tissue resulting from the original injury and first surgery, then the Commission properly found causation as to the second surgery. *Davis v. Harrah's Cherokee Casino*, 362 N.C. 133, 141-42, 655 S.E.2d 392, 397 (2008) ("Here, the evidence supports the Commission's findings that the first surgery was necessitated by the work-related injury of May 2001 and that the second surgery and ongoing disability resulted directly from the original injury and first surgery. These findings, in turn, support the Commission's conclusions that defendants are responsible for payment for all 'such reasonably necessary medical treatment incurred by plaintiff for the lower back injury, including said surgeries, and follow-up to those surgeries.'").

In arguing that an injury or disability is not within the chain of causation, defendants will often point to non-work-related events occurring after a compensable injury. Compensation is, however, precluded only in the event of "an independent intervening cause attributable to claimant's own intentional conduct." *Horne v. Universal Leaf Tobacco Processors*, 119 N.C. App. 682, 685, 459 S.E.2d 797, 799 (1995). This standard has two elements: (1) the intervening event must be wholly independent of the work-related accident; and (2) the event must have been an intentional act of the employee. *Baker v. City of Sanford*, 120 N.C. App. 783, 789, 463 S.E.2d 559, 563-64 (1995) ("In the context of the Workers' Compensation Act, an 'intervening cause' is 'an occurrence entirely independent of a prior cause. . .. The application of an intervening cause standard has been limited to consideration of those intervening events that are the result of a claimant's own intentional conduct.").

In *Horne*, the employee had sustained a compensable injury to his back and was making progress until he was involved in a car accident. After the accident, his condition worsened and he ultimately had to have a fusion of his back. *Id.* at 686, 459 S.E.2d at 800. The doctor was unable to determine definitively whether the recurrent disc rupture, discovered after the accident, was caused by the work-related accident or the car accident, but believed that it had originated with the work injury. *Id.* When asked whether the subsequent fusion surgery was required by the work-related accident, the doctor explained that "the pathology all stems back to the work-

related accident"—although the symptoms worsened, the employee had not been asymptomatic prior to the car accident. *Id.* at 687, 459 S.E.2d at 800. Since no "other physician or medical expert offered a different opinion as to whether plaintiff's automobile accident aggravated his prior injury," the Court of Appeals held that the Commission erred in finding that the automobile accident was an independent intervening cause. *Id. See also Heatherly v. Montgomery Components, Inc.*, 71 N.C. App. 377, 323 S.E.2d 29 (1984) (plaintiff entitled to compensation despite non-work-related second fracture of his leg); *Mayo v. City of Washington*, 51 N.C. App. 402, 276 S.E.2d 747 (1981) (statement in medical record that plaintiff reinjured leg was sufficient to establish aggravation and so no intervening event occurred).

Additionally, the car accident in *Horne* could not have qualified as an intervening cause because it constituted only a negligent act. To bar compensation the subsequent act must be an intentional act by the employee. Thus, in *Baker*, the Court of Appeals reversed the Commission's refusal to award an employee compensation for disabling depression when his brother had subsequently died, substantially increasing his depression. The court held: "In this case, the death of plaintiff's brother was not attributable to plaintiff's own intentional conduct, and the Commission's analysis and denial of recovery based on the characterization of that event as 'intervening' was erroneous." 120 N.C. App. at 789, 463 S.E.2d at 564. Even when the employee has acted, no intervening cause may be found if the employee's conduct was merely negligent. *See, e.g.*, *Cannon v. Goodyear Tire & Rubber Co.*, 171 N.C. App. 254, 261, 614 S.E.2d 440, 445 (2005) (when employee suffered injury be specific traumatic incident while lifting drum hoist, subsequent automobile accident was not intervening cause); *English*, 98 N.C. App. at 471, 391 S.E.2d at 502 (voluntary act of intercourse resulting in pregnancy was not an intervening cause when a condom failed); *Starr*, 8 N.C. App. at 611, 175 S.E.2d at 347 (injured employee entitled to compensation when burned while smoking in bed).

V. BURDEN OF PROOF AND THE *PARSONS* PRESUMPTION

In *Parsons v. Pantry, Inc.*, 126 N.C. App. 540, 541, 485 S.E.2d 867, 869 (1997), the Court of Appeals addressed as a matter of first impression the question of which party has the burden of proof on the issue of causation. *Id.* at 541, 485 S.E.2d at 869. At the initial hearing in that case, the plaintiff sought medical compensation for treatment for headaches, which she alleged was a result of her April 1991 accident. *Id.* at 540-41, 485 S.E.2d at 868. In that hearing, the plaintiff properly had the burden of proof to demonstrate causation of her headaches. *Id.* at 542, 485 S.E.2d at 869. The Commission found that the headaches were causally related to her accident and awarded medical compensation. *Id.* at 541, 485 S.E.2d at 868. Subsequently, the plaintiff sought medical compensation for additional treatment for headaches, which the defendants denied, and the case went to hearing again. *Id.*

The Court of Appeals held that because the plaintiff had previously satisfied her causation burden, the "defendants now have the responsibility to prove the original finding of compensable injury is unrelated to her present discomfort." *Id.* at 542, 485 S.E.2d at 869. "To require plaintiff to re-prove causation each time she seeks treatment for the very injury that the Commission has previously determined to be the result of a compensable accident is unjust and violates our duty to interpret the Act in favor of injured employees." *Id.* Thus, the "*Parsons* presumption" shifts the burden of proof for causation of a medical condition from the plaintiff to the defendants after an initial award finding causation.

The Court of Appeals subsequently held that the *Parsons* presumption applies both to Form 21 agreements to pay compensation and Form 60 admissions of compensability. *See Reinninger v. Prestige Fabricators, Inc.*, 136 N.C. App. 255, 259-60, 523 S.E.2d 720, 723-24

(1999); *Perez v. Am. Airlines/AMR Corp.*, 174 N.C. App. 128, 135-37, 620 S.E.2d 288, 292-94 (2005). Along the way, the Court of Appeals' decisions were somewhat inconsistent about whether the subsequent medical condition had to be the same as the initial medical condition found compensable. *See Perez*, 174 N.C. App. at 136 n.1, 620 S.E.2d at 293 n.1 (even if latter condition is not identical, "[t]he presumption of compensability applies to future symptoms allegedly related to the original compensable injury"); *but see Clark v. Sanger Clinic, P.A.*, 175 N.C. App. 76, 79, 623 S.E.2d 293, 296 (2005) (rejecting use of presumption where initial condition was a knee injury due to falls and the latter condition was degenerative arthritis). *See also Bell v. Goodyear Tire & Rubber Co.*, __ N.C. App. __, 798 S.E.2d 143, 148 (2017) (holding that presumption applied where initial injury was to right shoulder and subsequent condition was with the bicep tendon, part of the shoulder complex); *Patillo v. Goodyear Tire & Rubber Co.*, __ N.C. App. __, 794 S.E.2d 906, 916 (2016) (holding that presumption applied where initial injury was back contusion and subsequent condition was lower back pain).

In *Wilkes v. City of Greenville*, __ N.C. App. __, 777 S.E.2d 282 (2015), the employer accepted plaintiff's claim via a Form 60, in which it described plaintiff's injuries as "multiple injuries to ribs, neck, legs, and entire left side" from a motor vehicle accident. The question arose whether the *Parsons* presumption applied to plaintiff's subsequent depression and anxiety, allegedly the result of the compensable injuries. The Court of Appeals held that it did, concluding that "the *Parsons* presumption applies even where the injury or symptoms for which additional medical treatment is being sought is not the precise injury originally deemed compensable." *Id.* at 287. On appeal, the Supreme Court affirmed, holding that even though the subsequent condition was not listed on the Form 60, "plaintiff here is entitled to a presumption that additional medical treatment is related to his compensable conditions." *Wilkes v. City of Greenville*, __ N.C. __, 799 S.E.2d 838, 846 (2017).

The Supreme Court's decision was abrogated soon thereafter. The General Assembly amended N.C. Gen. Stat. § 97-82 to specify that a Form 60 or Form 63 "shall not create a presumption that medical treatment for an injury or condition not identified in the form . . . is causally related to the compensable injury." N.C. Sess. Law 2017-124 § 1.(a). The Court of Appeals has held that this amendment applies retroactively. *Pine v. Wal-Mart Assocs., Inc.*, __ N.C. App. __, 804 S.E.2d 769, 775 (2017) (appeal to Supreme Court pending).

VI. ISSUES REGARDING PROOF OF CAUSATION

Seventy-five years ago, the North Carolina Supreme Court held that evidence regarding causation "must be such as to take the case out of the realm of conjecture and remote possibility. . . ." *Gilmore v. Hoke County Bd. of Educ.*, 222 N.C. 358, 365, 23 S.E.2d 292, 296 (1942). What evidence is competent and sufficient to prove causation has become a frequently litigated question on appeal. Indeed, it may be the most commonly raised causation issue. This development undoubtedly arises from the appellate standard of review pursuant to which the Commission's findings of fact are binding so long as they are supported by competent evidence. In order to obtain a reversal in the face of adverse testimony, the appellant is left to argue that the evidence was not "competent."

A. The Requirement of Expert Testimony

In *Click v. Pilot Freight Carriers, Inc.*, 300 N.C. 164, 167, 265 S.E.2d 389, 391 (1980), the Court noted that "[t]he quantum and quality of the evidence required to establish *prima facie* the causal relationship will of course vary with the complexity of the injury itself." The Court acknowledged that, in "many instances," the evidence will be such that a layman can assess

causation. *Id.* When, however, "the exact nature and probable genesis of a particular type of injury involves complicated medical questions far removed from the ordinary experience and knowledge of laymen, *only an expert* can give competent opinion evidence as to the cause of the injury." *Id.* (emphasis added). *See also Poe v. Raleigh/Durham Airport Auth.*, 121 N.C. App. 117, 125, 464 S.E.2d 689, 694 (1995) (emphasis added) ("*Click* stands for the proposition that expert medical testimony will be required to establish causation in the more complicated cases involving disc injuries.").

In *Cannizzaro v. Food Lion*, 198 N.C. App. 660, 666, 680 S.E.2d 265, 269 (2009) (quoting *Maloney v. Wake Hospital Systems, Inc.*, 45 N.C. App. 172, 178, 262 S.E.2d 680, 683 (1980)), the Court of Appeals emphasized that even when expert testimony is necessary regarding a medical question, "'[t]he common law does not require that the expert witness on a medical subject shall be a person duly licensed to practice medicine.'" The Court proceeded—not surprisingly—to find that a licensed psychologist with a doctorate in neurological and cognitive psychology who had served as the director of a brain injury rehabilitation center was qualified to give expert medical testimony as to whether a work-related traumatic brain injury caused the plaintiff's condition.

In *Norris v. Kivettco, Inc.*, 58 N.C. App. 376, 380, 293 S.E.2d 594, 596 (1982), the Court of Appeals applied *Click* in finding "a total lack of proof of causation." Although a doctor diagnosed the plaintiff as suffering a lumbosacral strain, the court found that "[t]here was no medical evidence indicating how the strain might have been sustained. . . . [and] without the guidance of expert opinion as to whether the accident could or might have resulted in her injury, there is no proper foundation for a finding by the Commission regarding the origin of plaintiff's back injury." *Id.* *See also Richardson v. Maxim Healthcare/Allegis Group*, 362 N.C. 657, 664-65, 669 S.E.2d 582, 587 (2008) (holding that Commission erred in concluding that because breast implant replacements should be symmetrical, replacement of left breast implant was compensable when only right implant was damaged); *cf. Blalock*, 209 N.C. App. at 233, 703 S.E.2d at 900 (finding attorney's fees warranted under N.C. Gen. Stat. §97–88.1 when defendant's only response to plaintiff's expert testimony was based on "common sense").

By way of contrast, the court in *Slizewski v. International Seafood, Inc.*, 46 N.C. App. 228, 234, 264 S.E.2d 810, 814 (1980), found that the circumstances of that case fell into the category of cases not requiring an expert witness to establish causation: an uncomplicated situation, the immediate appearance of symptoms, the prompt reporting of the occurrence, and prior good health. The *Slizewski* plaintiff was healthy prior to his fall with no history of seizures, paralysis, or visual disability; he fell landing on his head and immediately began having convulsions; he was unconscious following the accident; and when he woke up, he was paralyzed on his left side and unable to speak or see well. The court concluded that "[u]nder these circumstances, the fact that the accident caused the injuries can reasonably be inferred." *Id.* at 235, 264 S.E.2d at 814. *See also Everett v. Well Care & Nursing Servs.*, 180 N.C. App. 314, 319, 636 S.E.2d 824, 828 (2006) (whether plaintiff would have broken her ankle had her wrist not been injured did "not involve a complicated medical question" and, therefore, plaintiff's testimony alone was sufficient); *McCrary v. King Bio, Inc.*, 225 N.C. App. 378, 387-88, 737 S.E.2d 761, 767 (2013) (holding similarly for wrist pain that occurred immediately after accident where wrist "popped").

This principle regarding the need for expert testimony also means that a Commission's finding of fact based on expert testimony is not insufficient as a matter of law based solely on the testimony of the plaintiff regarding his beliefs about his injury when he "is not a medical doctor, was not competent to diagnose himself, and his statements cannot render [the expert's] testimony incompetent.. . ." *Erickson v. Siegler*, 195 N.C. App. 513, 524, 672 S.E.2d 772, 779 (2009)

(holding that plaintiff's testimony that he felt a pop in his back rather than a pop in his neck was not sufficient to negate expert testimony that neck injury was causally related to compensable back injury).

In the context of occupational diseases, our courts have held that the proof of a causal connection between the disease and the employee's occupation is "not restricted to consideration of expert medical testimony," *Matthews*, 160 N.C. App. at 610, 586 S.E.2d at 839, but may also be accomplished using circumstantial evidence, including evidence as to the following factors: "(1) the extent of exposure to the disease or disease-causing agents during employment, (2) the extent of exposure outside employment, and (3) absence of the disease prior to the work-related exposure as shown by the employee's medical history." *Booker v. Duke Medical Center*, 297 N.C. 458, 476, 256 S.E.2d 189, 200 (1979).

B. Competency of Expert Testimony

Perhaps the most actively litigated issue in the causation area is whether an expert's testimony is competent—not based on speculation—and whether it is sufficient to prove causation. The Supreme Court first evaluated what type of expert testimony is sufficient to establish causation in *Young v. Hickory Bus. Furniture*, 353 N.C. 227, 230, 538 S.E.2d 912, 915 (2000), in which the Court stressed that when "expert opinion testimony is based merely upon speculation and conjecture, it can be of no more value than that of a layman's opinion. As such, it is not sufficiently reliable to qualify as competent evidence on issues of medical causation." In *Young*, a case involving fibromyalgia following a lumbosacral sprain, the Court found the expert testimony inadequate based on the fact (1) that fibromyalgia is a controversial condition, (2) that it cannot be objectively studied, (3) that it occurs "[f]ar and away" for unknown reasons, and (4) that, although the doctor testified that there were several potential causes of the plaintiff's fibromyalgia requiring additional studies, he had not conducted the necessary testing to exclude those potential causes. *Id.* at 231, 538 S.E.2d at 915-16. The doctor ultimately testified that he could not assign a cause for fibromyalgia other than by *post hoc ergo propter hoc*, an insufficient basis "where the threshold question is the cause of a *controversial* medical condition." *Id.* at 232, 538 S.E.2d at 916 (emphasis added). *Young* addressed, but did not resolve, the question of the phrasing of the expert's opinion. The Court expressly acknowledged the admissibility of "could" or "might" expert testimony, but cautioned that it may not be sufficient if the evidence establishes that this testimony was actually a "guess." *Id.* at 233, 538 S.E.2d at 916.

The Supreme Court answered the question of the sufficiency of "could" or "might" testimony in *Holley v. ACTS, Inc.*, 357 N.C. 228, 581 S.E.2d 750 (2003). The Court first acknowledged that parties, prior to the amendment of the Rules of Evidence, were required—in order to avoid invading the province of the jury—to ask the expert whether a particular event "could" or "might" have produced a particular result; they could not ask whether it did in fact produce the result. *Id.* at 232, 581 S.E.2d at 753. The Court observed that "[w]hile the 'could' or 'might' question format circumvented the admissibility problem, it led to confusion that such testimony was sufficient to prove causation." *Id.* at 233, 581 S.E.2d at 753. The Court held: "Although expert testimony as to the *possible* cause of a medical condition is admissible if helpful to the jury, it is insufficient to prove causation, particularly when there is additional evidence or testimony showing the expert's opinion to be a guess or mere speculation." *Id.* (internal citations and quotation marks omitted). The Court explained that "[d]octors are trained not to rule out medical possibilities no matter how remote; however, mere possibility has never been legally competent to prove causation." *Id.* at 234, 581 S.E.2d at 754. The Court added that "[a]lthough medical certainty is not required," the failure of an expert to express an opinion "to any degree of medical certainty" is insufficient to prove causation. *Id.*

Since *Holley*, the Court of Appeals has issued numerous decisions discussing the competency of expert witness testimony. Although the arguments of counsel and the opinions do not necessarily reflect the distinction between *Young* and *Holley*, those opinions actually address two different concepts. In *Young*, the question was whether the doctor's testimony amounted to speculation, while in *Holley*, the Court was focusing more on testimony as it relates to the standard of proof.

In *Billings v. General Parts, Inc.*, 187 N.C. App. 580, 591-92, 654 S.E.2d 254, 261-62 (2007), the defendants argued, relying upon *Young*, that the record did not contain competent evidence regarding the cause of the plaintiff's subdural hematomas when that cause could not be definitively established. The Court of Appeals concluded that *Young* was not analogous because "[u]nlike fibromyalgia, there are physical tests which can be performed to indicate whether a person has subdural hematomas, and one of those tests was performed in the present case." *Id.* at 591, 654 S.E.2d at 262. The Court noted that the record contained an MRI following the accident that showed the hematomas, and the plaintiff had presented testimony that a common cause of subdural hematoma is head trauma of the type suffered by the plaintiff. Although the defendants argued that the subdural hematomas could have developed from pre-existing undiagnosed small strokes, from spontaneous hemorrhaging due to a medication, or from an intervening fall between the accident and the MRI, the Court held that "based on plaintiff's medical records and the testimony of treating physicians, we hold there is sufficient evidence to support the Commission's findings that plaintiff's initial head injury and later subdural hematoma were the result of the 2 June 2003 motor vehicle accident." *Id.* at 592, 654 S.E.2d at 262.

Young has given rise in particular to arguments that expert testimony was incompetent because it relied too heavily on a temporal relationship between the accident and the symptoms. In *Singletary v. N.C. Baptist Hosp.*, 174 N.C. App. 147, 619 S.E.2d 888 (2005), as in *Young*, the employee was suffering from fibromyalgia. The Court of Appeals upheld the Commission's finding of causation after distinguishing the testimony of the plaintiff's expert from that of the expert in *Young*: "Dr. Irwin's causation testimony was not mere speculation and was not entirely premised on the temporal relationship between [the plaintiff's] injury at work and her development of fibromyalgia. Rather, although this temporal relationship played a role in the diagnosis, Dr. Irwin also considered, tested for, and excluded other causes of her condition." *Id.* at 156-57, 619 S.E.2d at 894.

The Court of Appeals also rejected the argument that expert testimony was incompetent based on only a temporal relationship in *Jones v. Steve Jones Auto Group*, 200 N.C. App. 458, 684 S.E.2d 497 (2009), in which the plaintiff alleged that his asthma and other related symptoms were caused by exposure to mold at work. The Court found the expert testimony "competent evidence to support the Commission's findings of fact that Plaintiff's exposure to mold at his place of work caused his illness" when one expert testified that the combination of the plaintiff's symptoms, the time course of their onset, and the plaintiff's response to therapy strongly suggested that the illness was caused by mold, and the second expert testified that he did not know of another irritant or exposure, other than mold, that could have been the primary cause of the plaintiff's symptoms. *See also Kelly v. Duke University*, 190 N.C. App. 733, 740, 661 S.E.2d 745, 749 (2008) (holding that although expert testified that it was possible non-work related condition caused employee's death, evidence was sufficient when expert testified that it was "'more likely than not"' that decedent's compensable diabetes caused death and opinion was not based just on temporal sequence of events, but also on statistical information and expert's "knowledge of the history of decedent's condition"); *Pickett v. Advance Auto Parts*, __ N.C. App. __, 782 S.E.2d 66, 72 (2016) (rejecting challenge based on *Young*, in part because temporal proximity can be relevant, stating it is "obvious to this Court that temporal sequence or proximity is not only

relevant, but a necessary consideration in diagnosing psychological conditions such as *post*-traumatic stress disorder"); *Pine v. Wal-Mart Assocs., Inc.*, __ N.C. App. __, 804 S.E.2d 769, 778 (2017) (appeal based on dissent pending) (rejecting challenge based on *Young* because, besides temporal proximity, physician also relied on plaintiff's history, the medical records, his exam, diagnostic tests, his experience, and that there were no other potential causes).

The Court of Appeals has additionally rejected attempts to evade the standard of review by recharacterizing challenges to an expert's credibility as challenges to the expert's competence. *See Huffman v. Moore County*, 208 N.C. App. 471, 489, 704 S.E.2d 17, 30 (2010) (concluding that defense claim that plaintiff's expert was incompetent due to his testimony being both outside his area of expertise and based on incorrect versions of the fact was actually a challenge to expert's credibility and not properly reconsidered on appeal).

With respect to the *Holley* analysis regarding the degree of certainty of the expert's opinion, the Supreme Court has weighed in further through a series of per curiam opinions. In *Edmonds v. Fresenius Medical Care*, 359 N.C. 313, 608 S.E.2d 755 (2005), the Supreme Court reversed per curiam for the reasons in the dissenting opinion, 165 N.C. App. 811, 817, 600 S.E.2d 501, 505 (2004) (Steelman, J., dissenting). In *Edmonds*, the critical issue was the linking of the administration of non-steroidal anti-inflammatory drugs to the plaintiff's reduced renal function. The Commission had specifically found that the expert had testified only that the drugs possibly or could or might have caused the plaintiff's renal problems and could not give an opinion to a reasonable degree of medical certainty on causation. *Id.* at 818, 600 S.E.2d at 506. The Commission relied not only on this testimony, but also on testimony of other witnesses that a short exposure to non-steroidal anti-inflammatories can result in renal failure. The dissent, as adopted by the Supreme Court, stated, "[t]he Commission thus attempted to link together the testimony of several expert witnesses and render its own medical opinion that the medications 'more likely than not worsened or exacerbated her pre-existing kidney problems.'. . .It is not the role of the Commission to render expert opinions. In cases involving complex medical questions, only an expert can give opinion evidence as to the cause of an injury." *Id.* at 818-19, 600 S.E.2d at 506. The Commission was thus reversed on the issue of causation. *Id.* at 819, 600 S.E.2d at 506-07.

In *Adams v. Metals USA*, 360 N.C. 54, 619 S.E.2d 495 (2005), the Supreme Court affirmed the Court of Appeals opinion per curiam, 168 N.C. App. 469, 608 S.E.2d 357 (2005). In *Adams*, although the doctor had testified that he could not express an opinion to a reasonable degree of medical certainty whether a fall from a ladder had caused the plaintiff's back injury, the Court observed that "testimony attesting 'medical certainty is not required.'" *Id.* at 482, 608 S.E.2d at 365 (quoting *Holley*, 357 N.C. at 234, 581 S.E.2d at 754). The Court added: "The fact that the treating physician in this case could not state with reasonable medical certainty that plaintiff's accident caused his disability is not dispositive—the degree of the doctor's certainty goes to the weight of his testimony.'" *Id.* at 483, 608 S.E.2d at 365. The Court concluded that there was competent evidence of causation when the doctor testified (1) that if the plaintiff was asymptomatic before he fell off the ladder and developed symptoms after he fell, "then I would certainly believe that the falling off the ladder was the cause of his difficulty"; (2) that the development of the plaintiff's symptoms was consistent with the injury occurring from the fall; and (3) that, although a disc herniation can result from everyday activities, the doctor had no indication that everyday activities caused the herniation. *Id.* at 482, 608 S.E.2d at 365. The Court concluded: "This testimony, combined with the additional evidence in the case, including the history and medical testimony, provided competent record evidence which supports the Commission's finding with respect to causation." *Id.*

Cases following *Adams* have reaffirmed that testimony to "reasonably medical certainty" is not required. *See Erickson*, 195 N.C. App. at 525, 672 S.E.2d at 780 (holding that expert's inability to testify to reasonable degree of medical certainty did not render testimony incompetent and insufficient when he testified that he "'would have to say it is more likely'" that the accident caused plaintiff's neck injury); *Booker-Douglas v. J&S Truck Serv., Inc.*, 178 N.C. App. 174, 178-79, 630 S.E.2d 726, 730 ("However, medical certainty from the expert is not required, and even if an expert is unable to state with certainty that there is a nexus between an event and an injury, his testimony relating the two is at least some evidence of causation if there is additional evidence which establishes that the expert's testimony is more than conjecture."), *disc. review denied*, 360 N.C. 644, 636 S.E.2d 803 (2006); *Fontenot v. Ammons Springmoor Assocs.*, 176 N.C. App. 93, 102, 625 S.E.2d 862, 868 (2006) ("Even if an expert is unable to state with certainty that there is a nexus between an event and an injury, his testimony relating the two is at least some evidence of causation if there is additional evidence which establishes that the expert's testimony is more than conjecture."); *Wyatt v. Haldex Hydraulics*, 237 N.C. App. 599, 612, 768 S.E.2d 150, 158 (2014) (concluding that objections regarding physician's "inability to pinpoint the exact source of Plaintiff's [condition] go more to the weight of his opinion than its competence").

Summarizing the cases on degree of certainty, the Court of Appeals stated in *Cannon v. Goodyear Tire & Rubber Co.*, 171 N.C. App. 254, 264, 614 S.E.2d 440, 446-47 (2005), "it appears that our Supreme Court has created a spectrum by which to determine whether expert testimony is sufficient to establish causation in worker's compensation cases. Expert testimony that a work-related injury 'could' or 'might' have caused further injury is insufficient to prove causation when other evidence shows the testimony to be a 'guess or mere speculation.' However, when expert testimony establishes that a work-related injury 'likely' caused further injury, competent evidence exists to support a finding of causation." *See also Davis v. City of New Bern*, 189 N.C. App. 723, 728, 659 S.E.2d 53, 57 (2008) ("Plaintiff concedes that his evidence consists of 'could or might' expert testimony regarding the cause of plaintiff's injury. Plaintiff, however, argues that there is no evidence indicating that the testimony was guess work or mere speculation under *Edmonds*. Simply put, a plaintiff may not rely on 'could' or 'might' expert testimony to establish causation where there is some evidence that the testimony was speculative."); *Chaffins v. Tar Heel Capital Corp.*, 230 N.C. App. 156, 161, 750 S.E.2d 536, 540 (2013) (finding insufficient expert testimony that causation was "at least as likely as not," "possible," or "50/50").

Another area of litigation relating to *Young* competency may involve *Howerton v. Arai Helmet, Ltd.*, 358 N.C. 440, 597 S.E.2d 674 (2004), and *State v. Goode*, 341 N.C. 513, 461 S.E.2d 631 (1995), much as lawyers used to argue *Daubert*. In *Legette v. Scotland Mem. Hosp.*, 181 N.C. App. 437, 454, 640 S.E.2d 744, 755 (2007), defendants argued that the Commission erred in relying upon the testimony of a particular expert because his testimony was "not sufficiently reliable" under the standard in *Goode* and *Howerton*. The Court noted that "[i]t appears that our courts have not decided whether the standard for admissibility of expert testimony set forth in *Goode* and *Howerton* applies in workers' compensation cases," but held, even assuming that the standard did apply, the expert's testimony was sufficiently reliable. *Id.* at 454-55, 640 S.E.2d at 755-56. Note also that Rule of Evidence 702(a) was amended in 2011 to use the *Daubert* standard instead, which may eventually impact workers' compensation cases. *See State v. McGrady*, 368 N.C. 880, 886-893, 787 S.E.2d 1, 7-11 (2016).

The Court of Appeals' standard of review appears to be playing a role in application of the *Holley* rule. Thus, the Court of Appeals has held that the Commission could properly find testimony insufficient when an expert based his opinion on a "medical assumption" that a work-

related incident "should be implicated as the culprit" in the employee's condition. *Seay v. Wal-Mart Stores, Inc.*, 180 N.C. App. 432, 437, 637 S.E.2d 299, 303 (2006). The Court, however, based its ruling on the fact that "[t]he degree of a doctor's certainty goes to the weight of the testimony and the weight given expert evidence is a duty for the Commission and not this Court." *Id.* In *Avery v. Phelps Chevrolet*, 176 N.C. App. 347, 354-55, 626 S.E.2d 690, 695 (2006), the Court held although some of the medical experts testified that the plaintiff's injury "could" or "might" have been the result of the workplace accident, the Commission's finding of causation was conclusive on appeal because one expert testified that it was "likely" plaintiff's cervical disc herniation was related to the workplace accident. The Court reasoned: "Because our standard of review is to determine whether there is 'any competent evidence in the record' to support the Commission's findings, and because our Supreme Court has found expert testimony that an accident 'likely' caused a subsequent injury to be competent evidence to support a finding of causation, we must overrule defendants' first argument that the medical evidence was insufficient to establish a causal connection between plaintiff's workplace accident and his cervical spine injury." *Id.* at 355, 626 S.E.2d at 695. *See also Castaneda v. International Leg Wear Group*, 194 N.C. App. 27, 32, 668 S.E.2d 909, 913 (2008) (holding that expert's admission that "'you can't tell for sure'" what the cause of annular tear was did not amount to speculation when expert testified that it was "'quite possible''' and "'more likely than not'" that tear was caused by plaintiff's work-related injury); *Carr v. Dep't of Health & Human Services (Caswell Ctr.)*, 218 N.C. App. 151, 155, 720 S.E.2d 869, 873 (2012) (testimony that fall "theoretically could" have caused the spine injury not speculative when expert also testified causation was "more likely than not" and MRI scan supported the opinion); *Harris v. S. Commercial Glass*, __ N.C. App. __, 789 S.E.2d 735, 744 (2016) (finding competent physician testimony that "notwithstanding the degree of speculation inherent in any medical diagnosis, he believed to a reasonable degree of medical certainty that plaintiff's condition arose from" her injury by accident).

The question has arisen when a doctor's testimony on direct examination is arguably inconsistent with his testimony on cross-examination. The Supreme Court adopted the dissent on this point in *Alexander v. Wal-Mart Stores, Inc.*, 359 N.C. 403, 610 S.E.2d 374 (2005), *rev'g for the reasons in the dissent*, 166 N.C. App. 563, 603 S.E.2d 552 (2004). Although some of the doctor's testimony supported the Commission's finding of causation, in other places, the expert used language such as "my suspicion is" and "I suspect." The dissent, as adopted by the Supreme Court, concluded that reliance by the majority on this latter language violated the standard of review, holding it is not " the role of this Court to comb through the testimony and view it in the light most favorable to the defendant, when the Supreme Court has clearly instructed us to do the opposite. Although by doing so, it is possible to find a few excerpts that might be speculative, this Court's role is not to engage in such a weighing of the evidence." *Id.* at 573-74, 603 S.E.2d at 558. *See also Kashino v. Carolina Veterinary Specialists Med. Servs.*, 186 N.C. App. 418, 423, 650 S.E.2d 839, 842 (2007) (when Commission found that plaintiff had failed to prove causation, that finding was supported by competent evidence during the doctor's cross-examination, even though his testimony on direct examination would support a finding of causation).

On the other hand, in *Chambers*, 360 N.C. at 615, 636 S.E.2d at 557, the Supreme Court examined a doctor's testimony on cross-examination on the grounds that the "testimony on direct was clarified." During direct examination, the plaintiff's counsel had asked whether the plaintiff's work as a bus driver placed him at an increased risk of either aggravating or developing a left ulnar neuropathy. *Id.* The doctor testified that "[t]he statement of aggravation of the ulnar neuropathy I believe is very accurate," but expressed the view that whether repetitive motion "actually causes" entrapment neuropathy "isn't as clear cut as we would like it to be." *Id.*

When the attorney repeated the question—including both aggravation and development—the expert responded, "I would believe so, yes." The Court pointed out that "[f]rom this testimony alone, it is not clear whether Dr. Adamson believed that plaintiff's employment placed him at a greater risk of *contracting* his condition than the general population." *Id.* The Court then turned to the cross-examination as clarifying the direct testimony. On cross, the doctor was asked: "I want to make sure I'm clear on what you have indicated, am I correct in understanding that in your opinion, you're not able to say that the bus driving activities caused the ulnar neuropathy, but that it could have aggravated the ulnar neuropathy?" *Id.* The doctor answered: "I think that's correct." *Id.* The Court, therefore, held that "[c]onsidering Dr. Adamson's testimony on cross-examination, plaintiff produced no evidence that his employment exposed him to a greater risk of contracting an occupational disease relative to the general public." *Id.* at 616, 636 S.E.2d at 557.

In related areas, the Court of Appeals has stated that if a doctor testifies that he would defer to the opinion of a second doctor as to causation, then the Commission's finding giving greater weight to the first doctor on the issue of causation would not be supported by competent evidence. *Bostick v. Kinston-Neuse Corp.*, 145 N.C. App. 102, 109-10, 549 S.E.2d 558, 562-63 (2001). The Commission is not, however, required to give greater weight to a treating physician's opinion as to causation over that of an expert who has only reviewed material supplied by counsel. *Carroll v. Town of Ayden*, 160 N.C. App. 637, 643, 586 S.E.2d 822, 827 (2003). And, a physician is not required to review or consider the medical records of another physician in reaching an expert opinion. *Hutchens v. Lee*, 221 N.C. App. 622, 627-28, 729 S.E.2d 111, 114 (2012) (holding this to be an issue of weight of the evidence, not competence).

Physician opinions are often challenged as being based on subjective information provided by the patient. Rejecting such challenges, the Court of Appeals has held: "The opinion of a physician is not rendered incompetent merely because it is based wholly or in part on statements made to him by the patient in the course of treatment or examination." *Adams*, 168 N.C. App. at 476, 608 S.E.2d at 362; *see also Jenkins v. Pub. Serv. Co. of N.C.*, 134 N.C. App. 405, 410, 518 S.E.2d 6, 9 (1999) ("A physician's diagnosis often depends on the patient's subjective complaints, and this does not render the physician's opinion incompetent as a matter of law."), *rev'd in part on other grounds*, 351 N.C. 341, 524 S.E.2d 805 (2000). Even a doctor's acknowledgment that a plaintiff is not wholly believable or credible does not render his opinion, based on plaintiff's statements, speculative and incompetent. *Calloway*, 137 N.C. App. at 485, 528 S.E.2d at 401.

With respect to the question of "significant contribution" for occupational disease cases, the Court of Appeals has held that actual use of the phrase "significantly contributing" need not be used, but the doctor's testimony must include some indication of the degree of contribution. *Hardin v. Motor Panels, Inc.*, 136 N.C. App. 351, 355, 524 S.E.2d 368, 372, *disc. review denied*, 351 N.C. 473, 543 S.E.2d 488 (2000). Testimony that work was a contributing factor without any specification as to the degree of contribution is insufficient to prove causation. *Id.*

The moral of these decisions is that counsel must be much more precise in eliciting opinions from experts. Advance preparation of the expert, including discussion of the degree of certainty with which the doctor is comfortable, may be critical to the testimony's competency and sufficiency to prove causation. At a minimum, an expert should be prepared to testify regarding probabilities or likelihood. Counsel's hypothetical question must not use "could," "might," or "possible," and it should not be phrased in the disjunctive. The question and answer should be as free from ambiguity as possible.