Claims CANADA

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Addressing Different Viewpoints

Working together to identify all aspects of a complex claim

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As any professional can attest, it is a full-time job to be on top of the changes in your area of specialization, particularly with recent advancements in research and technology. Insurers are feeling the effects of these changes as the claims they see continue to grow in complexity. It is becoming even more necessary for insurers to seek experts capable of identifying and addressing issues related to a claim.

Case study

An elderly female driver left the roadway while negotiating a curve on a winter day, striking a utility pole in the center median. The roadway ran through a new suburban area which had recently been constructed. As a result of the impact, the driver sustained a fractured left thigh, and died from her injuries. It was later discovered she may have been the sole caregiver to her disabled adult son. Her insurer, who believed that she was not at fault, pursued the Municipality for not adequately maintaining the roadway, claiming their negligence led to this incident.

The statement of defence from the Municipality claimed the roadway was adequately maintained, the driver had been driving too fast for the conditions, and the lack of seatbelt use by the driver had contributed to the fatal outcome.

In the past, an insurer may have hired one individual to investigate all aspects of the incident. This "Jack-of-all-trades" approach is quickly disappearing from the field of forensics as insurers, lawyers and judges realize it is not possible for one person to maintain the necessary depth of expertise in all areas. An additional risk is the individual hired does not properly identify all the issues worthy of investigation, because their expertise is focused in one area, or the firm does not have a multi-disciplinary approach.

Indeed, the successful completion of this investigation required experts in the fields of road safety, accident reconstruction, biomechanics and accounting. Each expert was devoted to their respective area of specialization, allowing for a proper and comprehensive assessment of all pertinent aspects of the incident.

Expert qualifications

A reputable road safety expert will have a full complement of experience in transportation planning, traffic engineering, road user safety, road design, traffic control devices, traffic signal operations and road maintenance. While the majority of forensic engineering experts have the ability to determine "nominal safety," which is a measure of a roadway's compliance with prevailing design standards, guidelines and jurisdiction-specific policies and procedures, there are two important drawbacks of focusing solely on nominal safety. First, designing to a guideline or meeting an operational procedure does not guarantee a safe roadway. There is no such thing as a 'safe' roadway! There is an inherent degree of risk in the design and operation of all roadway facilities. Properly applied standards will assist in reducing the risk, but engineering judgment is frequently drawn upon to venture outside the 'minimum typicals' of our documented practices. Second, not meeting the standards does not necessarily mean you can add a third party road authority to your claim. Road users do not read the standards. It is necessary for a road safety expert to identify whether a given deficiency actually played a role in contributing to the collision in question. The skills to measure the relative safety performance of all components of the roadway, along with a firm understanding of human factors and driver expectations is also required.

Historically, an accident reconstruction expert possessed training in mechanical engineering and physics. However, rapid changes in technology have demanded they constantly continue their education. Specifically, computer programs used to analyze vehicle behaviour are becoming increasingly sophisticated, making them more powerful, but also easier to abuse. This can lead to inaccurate opinions being provided by poorly trained experts. Similarly, while 'black box' technology is becoming more complex and detailed, the collection, interpretation, and nature of the data is not currently standardized across vehicles or their manufacturers. Specialized training is needed to be able to download data from each currently- accessible vehicle, ensure that the integrity of the data is not jeopardized, and also to interpret the myriad of different formats and data types that exist.

This training is going to become increasingly important in the coming years as 'black box' data becomes more and more prevalent. Indeed, government lawmakers have already rewritten vehicle safety standards that will soon require manufacturers to equip their vehicles with black boxes that collect accurate and reliable data, and to make that data publicly available. It is clear that in the next few years, the field of accident reconstruction will begin to change dramatically as more and more vehicles come equipped with readily accessible information about driver behaviour in the moments before a collision.

To possess the qualifications to comment on injury, a biomechanical expert should have an understanding of the relationship between the amount of force a tissue is exposed to and the ability of that tissue to tolerate such forces. Such an understanding is brought about through training in anatomy, physiology, mechanics, physics, and biomechanics, which allows the biomechanical expert to understand the various factors that can alter the likelihood of injury, including such things as age, disease, loading pattern and fatigue.

This specific training is being recognized in the courts as being distinct from the mechanical training received by an accident reconstruction engineer and the medical training possessed by physicians. In contrast to medical doctors who are trained to diagnose and treat injury, biomechanical experts have practical knowledge of how injuries occur, obtained through mechanical testing of various tissues, such as bones and ligaments, in a research setting.

A qualified forensic accountant specializing in insurance claims quantification will have extensive experience reviewing financial records, and have a thorough knowledge and understanding of the *Insurance Act,* Statutory Accidents Benefits Schedule (SABS), arbitration decisions impacting the industry, as well as a working knowledge of quantification methodology. In addition to practical experience, many forensic accountants working in the insurance industry will have attained specialist professional designations including: CA•IFA (chartered accountant recognized as a specialist in investigative and forensic accounting), CBV (chartered business valuator), CFE (certified fraud examiner) and CIP (chartered insurance professional).

Case study resolution

With regard to the collision described, the road safety expert conducted an extensive review of the weather forecasts and reports, as well as the winter maintenance records relevant to the time of the collision. It was determined that the Municipality had acted appropriately and met the minimum standard in maintaining the roadway on the incident date. However, past collision history revealed this particular location had several collisions involving cars that had left the roadway and struck poles in the median island. The expert was able to determine the Municipality did not provide an adequate safe travel distance for errant vehicles between the roadway and the poles (referred to as the 'clear zone'), and that this contributed to an increase in collision potential and severity.

Furthermore, the incident vehicle was equipped with a 'black box' that allowed the accident reconstruction expert to download five seconds of pre-crash data. Examination of the data revealed that as the driver had entered the curve, they were driving 10 km/h slower than the posted speed limit, likely a reflection of the snowy conditions. Furthermore, analysis of braking behaviour indicated the driver had responded to the vehicle's loss of control within a reasonable amount of time, providing evidence that the operator was attentive. There was no indication the vehicle was being operated at an excessive speed or in an inappropriate manner.

The biomechanical expert, upon reviewing the accident reconstruction and medical history of the driver, was able to comment on three aspects of the driver's injuries relevant to this claim. First, a review of the medical records revealed this elderly female suffered from osteoporosis, a condition where the bones lose mineral content, and subsequently strength. This made the driver more susceptible to fractures. As a result, the impact created a fracture to the bone of her thigh with the destruction of the blood vessels in the region, which may not have been observed in a healthy young female. This increased fragility also made it less likely that in her condition she was able to act as the primary caregiver to her disabled adult son. Finally, given that the pole contacted the side of the vehicle and resulted in a significant amount of vehicle intrusion, it was determined that the use of a seatbelt would not have reduced the amount of force experienced by the driver's thigh and therefore would not have been effective in mitigating this injury.

Given that the biomechanical expert determined the driver would not likely be able to care for an adult, a forensic accounting review was warranted to determine dependency of the son. A review of the financial records revealed payments made by the driver to a third party service provider for caregiving. However, in light of the driver's death, a dependency calculation was performed, confirming the son was in fact financially dependent on the driver. As such, and in accordance with the SABS, it was determined that the son was eligible for the death benefit, as a dependent to the estate.

Summary

Given the rapid development of forensics, each area of expertise now requires full-time dedication -- it is becoming clear that a single individual cannot possibly maintain a competency in multiple areas.

It is important for insurers to have the right firm and proper expertise supporting them while managing a file, so that important decisions to be made with confidence. In cases where a file manager is not sure of their expert's qualifications, they should never hesitate to ask for a CV. If the file manager is not convinced, then it is unlikely the other side will be convinced, let alone the judge or jury.

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Russell Brownlee, B. Sc., M. A. Sc., FITE, P. Eng., is the head of the road assessment team and is a transportation safety engineer at Giffin Koerth Forensic Engineering and Science.

Edward Nagel, CA•IFA, CBV heads up Giffin Koerth's forensic accounting group, which specializes in claims quantification, forensic investigations and computer forensics.

Photos

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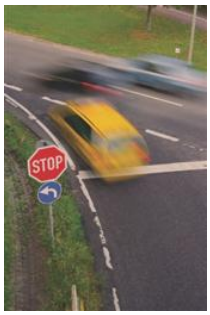

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Caption: Identify whether a given deficiency actually played a r...