IN THE SUPREME COURT OF BRITISH COLUMBIA

Citation: *Anderson v. Pieters,*
2016 BCSC 889

Date: 20160519
Docket: M160840
Registry: New Westminster

Between:

Teresa Anderson

Plaintiff

And

**Glen Pieters, Gold Key Sales and Lease Ltd.,
and Acrotech Cleaning Systems Inc.**

Defendants

Before: The Honourable Mr. Justice A. Saunders

Corrected Judgment: The Appendix attached to the Judgment was corrected on May 24, 2016

Ruling on Admissibility of Report #2 of Dr. Leslie Sank

Counsel for the Plaintiff:	G.A. Smith D. Smith
Counsel for the Defendant McCaffrey:	T. Pettit
Place and Dates of Trial:	New Westminster, B.C. April 25-29; May 2-6; May 9-13; May 16 and 17, 2016
Date of Ruling given to Parties with Reasons to follow:	May 3, 2016
Place and Date of Judgment:	New Westminster, B.C. May 19, 2016

[1] In this trial, a damages assessment by way of jury trial in respect of injuries sustained in a May 2012 motor vehicle accident, the defence objects to the admissibility of the second of two expert opinion reports (the "April Report") of the plaintiff's family physician, Dr. Leslie Sank.

[2] The contents of the April Report give rise to concerns as to qualifications, as to bias and independence, and as to reliability. Its admissibility was also objected to on the basis of late delivery.

[3] The concerns with respect to bias, independence and reliability stem from two issues: first, as to the report having been premised on an expert opinion report of a chiropractor, Dr. Blascovich, that was ruled inadmissible following Voir Dire #1; and second, from content of the report having been plagiarized, that is, substantially copied without attribution.

[4] In a brief oral ruling given on the morning of the seventh day of trial, I excluded the April Report from being admitted into evidence, with written reasons to follow. These are those reasons.

Facts

Background – Dr. Sank's January Report

[5] Dr. Sank's first report, dated January 31, 2016 (the "January Report"), is stated to be based on facts provided to Dr. Sank by the plaintiff during office visits, on his examination of her, and on her electronic medical records. The report had been requested in a letter of instruction sent to Dr. Sank by the plaintiff's counsel, dated September 24, 2015. That letter of instruction enclosed copies of reports authored by Dr. William Craig, a physiatrist; Dr. Neil Longridge, an otologist; and Dr. Darren Sass, an optometrist.

[6] The text of the January Report sets out several diagnoses, including a diagnosis of vestibular dysfunction made by Dr. Longridge; and, three diagnoses concerning the plaintiff's visual system – accommodative dysfunction, oculomotor dysfunction, and visual perceptive dysfunction – made by the optometrist, Dr. Sass.

[7] Dr. Longridge's reports were objected to by the defence. At trial, at the time of making the present ruling on the admissibility of Dr. Sank's April Report, Dr. Longridge's reports had been ruled admissible following Voir Dire #3; Dr. Longridge had undergone direct examination in the trial proper, and was scheduled to be cross-examined.

[8] The diagnoses and opinion evidence of the optometrist, Dr. Sass, had proven more problematic. Dr. Sass had stated in his report dated August 30, 2015 – the report that had been forwarded to Dr. Sank – that the plaintiff is likely suffering the three aforementioned visual problems due to having sustained a brain injury in the subject accident. Dr. Sass subsequently provided the plaintiff's counsel with a number of supplemental reports, which were all served in turn.

[9] The admissibility of all of these reports of Dr. Sass was the subject of Voir Dire #2. In response to Dr. Sass' opinion, the defence tendered the report of Dr. Briar Sexton, an ophthalmologist who holds a fellowship in neuro-ophthalmology. Dr. Sexton stated that "occulomotor dysfunction" and "visual perceptual dysfunction" are not medical diagnoses, and that those terms are not used by ophthalmologists, neuro-ophthalmologists, neurologists or neurosurgeons. The defence further tendered reports of a neurologist, Dr. Rehan Dost, who refuted Dr. Sass's contention of there having been a brain injury. The reports of Dr. Sass were ruled inadmissible.

[10] On the present voir dire, Voir Dire #4, the defence sought redaction of portions of Dr. Sank's January Report, to remove reference to the inadmissible opinions of Dr. Sass. That application was granted.

[11] The January Report of Dr. Sank also sets out other diagnoses, that apparently were made by Dr. Sank himself:

- Lower Lumbar myofascial strain injury of moderate degree. In addition, she has facet joint arthropathy in the lower lumbar vertebrae, now radiologically visible.
- Myofascial neck strain injury of moderate degree with accompanying cervical facet joint degenerative changes.

[12] The January Report also sets out the following comments of Dr. Sank as to the plaintiff's prognosis:

> She has been laid off, from her employment as an accountant at the school board and, as a result of her injuries sustained in the motor vehicle accident of 7 May 2012, she has only been able to maintain part time employment with a construction company. During the rest period, between jobs, she was able to recover a great deal of energy and sleep and this served her greatly, but upon starting the new employment, she realized the taxing effect that office work has on her body. Her myofascial symptoms worsened, her vestibular and visual symptoms flared and she is physically exhausted by the end of each work day. The feeling of being "non athletic" is a very disturbing realization for her. She is a high performer and now her disabilities have reduced her out put and abilities severely.
>
> Both the neck and back findings are of concern for her future physical abilities. Both areas of facet joint changes, the lumbar and cervical regions, will make her more susceptible to early arthritic degeneration of the spine. These changes have the ability to shorten her professional hockey refereeing career as well as impact her future employability.
>
> She will require long term support and pain management from physiotherapy, massage therapy, chiropractic therapy and a psychologist.

[13] No objection was taken to those opinions being admitted into evidence.

Dr. Sank's April Report

[14] After delivery of Dr. Sank's January Report, and after the 84-day deadline for the delivery of expert reports had passed, the plaintiff's counsel had the plaintiff examined by a chiropractor, Dr. Blascovich.

[15] Dr. Blascovich's report setting out his findings, dated March 2, 2016, was forwarded to Dr. Sank on March 3. Dr. Blascovich purported to diagnose an injury to the plaintiff's alar/accessory ligaments at the C1/C2 level, based on his interpretation of non-standard radiological studies. He stated that this type of injury would result in "upper cervical instability at the brain stem region", causing injuries of the type the plaintiff complains of. The plaintiff's counsel asked Dr. Sank to provide a supplementary report outlining any material changes in his opinion resulting from the Blascovich report.

[16] To jump ahead in the narrative, at trial the report of Dr. Blascovich was ruled inadmissible, on Voir Dire #1.

[17] After receiving Dr. Blascovich's report, Dr. Sank provided the report under challenge, dated April 11, 2016.

[18] The April Report sets out the following reasons for Dr. Sank providing a new opinion:

> In reaching the following conclusions I have assumed the x-ray findings as reported by Dr. Blaskovich are accurate. In addition, Teresa Anderson has reported to me she is presently working approximately two days per week and is experiencing significant ongoing exacerbations of her symptoms such that she is unable to work additional days. In preparing this report, I accept she is experiencing these difficulties.
>
> Based on the above additional information I note the following material changes in my opinion.

[19] Dr. Sank then proceeds to set out a new diagnosis: that the plaintiff is suffering "cervical instability" in the upper cervical spine, leading to intermittent compression of the vertebral arteries which in turn causes symptoms associated with impairment of the brain stem – a diagnosis of Vertebrobasilar Insufficiency ("VBI"). Dr. Sank states that it is "highly probable" that she:

> … is suffering intermittent vertebral artery compression, resulting in dizziness, vertigo, migraines, ocular symptoms, balance difficulties and gait instability.

He further states that the risk of degenerative arthritis may result in her needing to undergo spinal fusion surgery to prevent dislocation or spinal cord trauma.

[20] All of this was new opinion – "new" in the sense of, not having previously been disclosed.

Evidence on Voir Dire #4

[21] Dr. Sank testified on this voir dire.

[22] In his direct examination on the voir dire, Dr. Sank sought to distance himself from the Blascovich report. He had difficulty, however, presenting a coherent explanation as to how and when he could have arrived at his diagnosis

independently. Stitching together various statements he made in his direct examination and on cross-examination, his evidence can be summarized as follows:

a) On his direct examination, he reviewed having provided the defendant's insurer ICBC with a CL-19 report on December 13, 2013, in which he reported on the plaintiff having myofascial neck strain. He was then aware that the plaintiff was having balance and vision symptoms and cognitive issues. He testified that he was not then considering VBI; his understanding at that time, as he recalls it, was that there could be irritation of the nerves secondary to cervical facet joint destabilization that could account for her balance issues, or that her visual symptoms could be due to a coup/contrecoup brain injury affecting the occipital lobe;

b) On cross-examination, he at first said that he first associated the plaintiff's injuries with VBI sometime between writing his January Report and his April Report. He said that he couldn't say exactly when, "categorically", he first drew this association, without reviewing his notes;

c) Given the opportunity to review his notes, he referred to the occasion of the plaintiff seeing him on June 26, 2012; she had then complained of persistent visual focus issues, and that when driving through intersections she would experience brief "mental resets". He testified that he now remembers that this was when he would have started thinking that her symptoms might be due to VBI. He did not record that concern in his notes;

d) Dr. Sank was asked why he did not then record his concern with VBI. Initially he responded that "when you put down those words, you're starting to commit your mind to that process", but then said that he did not know why he had not recorded his concern. He agreed with the proposition that he had an ethical duty to make such a record, particularly given the nature of his practice, in which his patients could be seen by any one of his associates. He explained that he would not have had the

technical details down as to the anatomy, with enough assurance to record it as a concern. He noted that there are potential "implications for insurance companies" if he records as a diagnosis things that are "just a thought", and so for many years it has been his practice not to make a note of possible diagnoses;

e) He explained that he did not then refer the plaintiff out to a specialist for further investigation, because the "gold standard" for assessing VBI, a dynamic cervical angiogram, is highly invasive. Therefore in 95% of cases where VBI is suspected, it simply remains as a suspicion;

f) Dr. Sank testified on his direct examination that he had understood that the plaintiff's ocular symptoms might be related to some interruption of blood supply to her occipital lobe. He did not have diagnostic tests available to him to confirm this, and her symptoms were not such that he judged it necessary to refer her to a specialist. Once he saw Dr. Sass' reports, he read up on the anatomy issues to understand how the plaintiff's visual symptoms could have been affected by the impact to her neck and spine. As a result he is now "comfortable" that Dr. Sass' diagnoses were connected with issues in the plaintiff's neck, that they are relevant, and that they "fit together" with the plaintiff's symptoms as she has reported them;

g) When the Blascovich report was presented to Dr. Sank, he was at first reluctant to accept the x-ray studies of Dr. Blascovich as being up to his own standards. However, he was assured by the plaintiff's counsel that he could rely on them. Assuming that Dr. Blascovich's opinion would be accepted as relevant, he felt he needed to be as fully educated as possible about the anatomical issues; it triggered the need for him to have a deeper understanding. This was confirmed by a colleague from Calgary whom he spoke with, who told him that if he wanted to understand how the facet joint injuries were linked to the neurological symptoms, he would

have to review the neuro-vascular anatomy, and the orthopaedics, and then it might become more clear to him how certain symptoms may occur;

h) Dr. Sank then read, he said, approximately 15 to 20 papers that he located on-line. He agreed, on cross-examination, that before doing so he was not in a position to opine on VBI. After reading the papers, he felt that, presuming Dr. Blascovich's measurements were accurate and his findings legitimate, and assuming they were relevant, they matched his own clinical diagnostic judgment as to what was happening in the plaintiff's facet joints; and

i) Dr. Sank agreed that segmental vertebral instabilities are not uncommon – that some of the population has some degree of dislocation. However, he said, if Dr. Blascovich's report is accepted, the plaintiff's dislocations have been shown to be "just beyond the acceptable norm". At the same time, he maintained that if Dr. Blascovich's findings are ignored, his opinion would not change, because a diagnosis of VBI is based on an angiogram, not on x-rays.

[23] Dr. Sank, in his 25 years of practice as a family physician in British Columbia, has no experience in diagnosing VBI. He has only very limited experience in even referring patients to a specialist for investigation of VBI – 5 or 6 patients only over 25 years in family medicine practice, only two of whom were ultimately confirmed as suffering from VBI. One of the 5 or 6 patients was referred to a vascular surgeon; another was referred to a vascular surgeon, who redirected the patient to a neurosurgeon; two were referred to an orthopaedic neck specialist. Of those 5 or 6 patients, none involved VBI suspected to have been caused by cervical instability brought about by a motor vehicle accident; one involved cervical instability brought about by a neck fracture.

[24] One of the 15 or 20 papers relied upon by Dr. Sank was an article authored by Steilen *et al* entitled, "Chronic Neck Pain: Making the Connection Between Capsular Ligament Laxity and Cervical Instability", as published in *The Open*

Orthopaedics Journal (2014, Vol. 8 pp. 326-345) (the "Steilen Article"). Dr. Sank acknowledged in his direct testimony that he had lifted passages from the Steilen Article, copying them into his report without attribution. He said that he felt he needed to put down a technical description, and the Steilen Article presented the information logically. He understood the article to be a comprehensive review of the diagnostic and treatment modalities associated with cervical instability. He believed the journal the article came from to be reputable. He believed the content of what he copied from the article to be "acceptable to mainstream medicine".

[25] Dr. Sank acknowledged that he only advised the plaintiff's counsel that portions of the Steilen Article had been copied by him, after defence counsel raised a concern as to plagiarism. He testified that he had not intended to "claim ownership" of what the authors had written. He did cite other articles in the April Report, but neglected to include a citation for this one. He said this was pure inadvertence on his part.

[26] A copy of the Steilen Article was put into evidence on the voir dire. The authors do not state their credentials, but describe themselves as being in practice at a chronic pain clinic. Dr. Sank acknowledged in cross-examination on the voir dire that he has no information as to the authors' credentials. He said he believes they are chiropractors.

[27] The extent to which Dr. Sass copied from the Steilen Article is illustrated in the Appendix to these Reasons, which reproduces some of the passages lifted from the article – in the column to the left – with the comparable passages from the April Report set out alongside for comparison, to the right. Original wording inserted by Dr. Sank is indicated in bold face.

[28] The Steilen Article begins, in its Introduction, with a general description of the prevalence of recurring neck pain. The authors "propose" that many cases of neck pain "may be related to capsular ligament laxity and subsequent joint instability of the cervical spine". They suggest that a "new treatment approach may be

warranted". The treatment they propose is "comprehensive dextrose prolotherapy", which the authors acknowledge is an alternative medicine treatment.

[29] The Steilen Article then goes on to describe, in some detail, the anatomy of the cervical spine, and various conditions and dysfunctions associated with it, including instability; radiculopathy; spondylosis; whiplash and whiplash-associated-disorder ("WAD"); concussion and post-concussion syndrome ("PCS"); and VBI. It concludes with a description of prolotherapy and a proposal that prolotherapy be utilized as a treatment for laxity of the ligaments of the cervical spine.

[30] The Steilen Article appears, at one point, to assert that instability of cervical vertebrae is the cause of concussion victims experiencing persistent symptoms. It states:

> While most individuals recover from a single concussion, up to one-third of those will continue to suffer from residual effects such as headache, neck pain, dizziness and memory problems one year after injury. Such symptoms characterize a disorder known as post-concussion syndrome (PCS) and are much like those of WAD; both disorders are likely due to cervical instability.
>
> [Citation omitted; emphasis added]

Although the latter statement is presented as an accepted medical view, on reading further into the Steinlen Article one can see that in fact the authors' views as to there being a causal link between cervical instability and symptoms of the type they describe are acknowledged by them to be matters of supposition or conjecture only.

[31] For example, under the section of the article dealing with PCS, the authors state:

> PCS-associated symptoms also overlap with many symptoms common to WAD. This overlap in symptomology may be due to a common etiology of underlying cervical instability that affects the cervical spine near the neck. … Thus, one may conjecture that concussion involves a whiplash-type injury to the neck.
>
> [Emphasis added.]

[32] Again, under the same heading, the authors state:

> Debate over the veracity of PCS or WAD symptomology has persisted; however, there is no single explanation for the etiology of these disorders,

> especially since the onset and duration of symptoms can vary greatly among individuals. …In light of this, we propose that the best scientific anatomical explanation is cervical instability in the upper cervical spine, resulting from ligament injury (laxity).
>
> [Emphasis added.]

[33] Under the heading "Vertebrobasilar Insufficiency", the authors point to studies in which whiplash injury itself is purportedly shown to reduce blood flow and elicit symptoms of VBI. They cite other articles in which researchers:

> … have surmised that excessive cervical instability, especially of the upper cervical spine, can cause obstruction of the vertebral artery during neck rotation, thus compromising blood flow and triggering symptoms.
>
> [Emphasis added.]

[34] The authors also provide a full-page chart demonstrating that some of the disorders they discuss produce similar symptoms. Again, they speculate:

> There is considerable overlap in symptoms amongst these conditions, possibly because they all appear to be due to cervical instability.
>
> [Emphasis added.]

[35] Dr. Sank acknowledged in cross-examination that he chose to include in his report those portions of the Steilen Article that he felt were relevant. None of these portions of the article indicating the conjectural nature of the authors' views were copied by Dr. Sank.

[36] Dr. Sank acknowledged that the Steilen Article only indicated that other researchers have "surmised" a connection between cervical instability and VBI. In the case of Ms. Anderson, a connection between cervical instability and VBI is a "possibility". Asked to account for why his report does not refer to it as a possibility, but as "highly probable", he appeared to be very embarrassed, and explained that he used the stronger language because he could not think of another explanation for her symptoms. He further attempted to justify his choice of words on the basis of his own understanding that the legal system sometimes,

> … requires there to be a 'black or white picture' to make a decision, but in medicine there are grey areas; it isn't a definite science.

Law

[37] The admissibility of expert opinion evidence is subject to a number of requirements. The rationale for these requirements was summarized recently in a judgment of the Supreme Court of Canada delivered by Justice Cromwell, in *White Burgess Langille Inman v. Abbott and Haliburton Co.*, 2015 SCC 23:

> 18. The point is to preserve trial by judge and jury, not devolve to trial by expert. There is a risk that the jury "will be unable to make an effective and critical assessment of the evidence": *R. v. Abbey*, 97 O.R. (3d) 330, at para. 90, leave to appeal refused, [2010] 2 S.C.R. v. The trier of fact must be able to use its "informed judgment", not simply decide on the basis of an "act of faith" in the expert's opinion: [*R. v. J.-L.J.*, 2000 SCC 51], at para. 56. The risk of "attornment to the opinion of the expert" is also exacerbated by the fact that expert evidence is resistant to effective cross-examination by counsel who are not experts in that field: [*R. v. D.D.*, 2000 SCC 43], at para. 54. The cases address a number of other related concerns: the potential prejudice created by the expert's reliance on unproven material not subject to cross-examination (*D.D.*, at para. 55); the risk of admitting "junk science" (*J.-L.J.*, at para. 25); and the risk that a "contest of experts" distracts rather than assists the trier of fact ([*R. v. Mohan*, [1994] 2 SCR 9] at p. 24). Another well-known danger associated with the admissibility of expert evidence is that it may lead to an inordinate expenditure of time and money: *Mohan*, at p. 21; *D.D.*, at para. 56; *Masterpiece Inc. v. Alavida Lifestyles Inc.*, 2011 SCC 27, [2011] 2 S.C.R. 387, at para. 76.

[38] In its previous decision in *R. v. Mohan*, [1994] 2 S.C.R. 9, the Supreme Court of Canada had applied a four-point test for the admission of expert opinion evidence:

> Admission of expert evidence depends on the application of the following criteria:
>
> (a) relevance;
>
> (b) necessity in assisting the trier of fact;
>
> (c) the absence of any exclusionary rule;
>
> (d) a properly qualified expert.
>
> [*Mohan*, at 20]

[39] The first of these four criteria, relevance, was stated as being a threshold requirement, to be decided by a judge as a matter of law. Justice Sopinka noted that opinion evidence that meets the relevance test, in that it is logically relevant, may still be excluded; as is the case with all types of evidence, concerns as to reliability may weaken the probative value of the evidence, in which case the value must be

weighed against any potentially prejudicial effect. This was said to be "more properly regarded as a general exclusionary rule", falling under the third of the four criteria, although there are examples in the case law of it being treated as an aspect of relevance. Justice Sopinka also endorsed the subjecting of new or emerging scientific theories to "special scrutiny to determine whether it meets a threshold test of reliability" (*Mohan*, at 25).

[40] In *R. v. J.-L.J.*, 2000 SCC 51, the Court reinforced *Mohan*'s object of excluding expert evidence which might "distort the fact-finding process" (*Mohan*,at 21), emphasizing the need for the presiding trial judge to play the role of "gatekeeper" to ensure that expert evidence is appropriately scrutinized,

> … at the time it is proffered, and not allowed too easy an entry on the basis that all of the frailties could go at the end of the day to weight rather than admissibility.
>
> [*J.-L.J.*, at para. 28]

[41] Testing the relevance and reliability of opinion evidence were explicitly stated in *J.-L.J.* to be essential to this gatekeeper function. Justice Binnie said:

> 47. Evidence is relevant "where it has some tendency as a matter of logic and human experience to make the proposition for which it is advanced more likely than that proposition would appear to be in the absence of that evidence". Because the concept of relevance provides a low threshold ("some tendency"), *Mohan* built into the relevance requirement a cost-benefit analysis to determine "whether its value is worth what it costs" in terms of its impact on the trial process. Thus the criteria for reception are relevance, reliability and necessity measured against the counterweights of consumption of time, prejudice and confusion …
>
> [Citations omitted]

[42] Finally, in *White Burgess*, *supra*, the Court advanced the law governing admissibility of expert opinion in two respects. First, the Court articulated a new initial threshold test, aimed at ensuring an expert's independence and impartiality. An expert's attestation in a written report to having understood their duty to the court, or their testifying on oath to that effect, will shift to the opposing party the burden of demonstrating realistic concern that the opinion should not be admitted because the expert witness is unable or unwilling to comply with that duty. If the opposing party

does so, the burden of establishing independence and impartiality will remain on the party proposing to tender the opinion evidence. Exclusion at this threshold stage, however, will only occur:

> … in very clear cases in which the proposed expert is unable or unwilling to provide the court with fair, objective and non-partisan evidence.
>
> (*White Burgess* at para. 49).

[43] If the opinion passes this initial threshold test, the trial judge is then to determine admissibility under a reformulated analytical framework, in which the gatekeeper function has two steps. The first step is the application of the four *Mohan* criteria of relevance – relevance, necessity, the absence of any exclusionary rule, and a properly qualified expert – supplemented by a fifth criterion, applied in the case of novel or contested science, of reliability of the underlying science.

[44] The second step entails the balancing exercise or cost-benefit analysis. Justice Cromwell endorsed the description of the process formulated by Doherty J.A. in *R. v. Abbey*, 2009 ONCA 624, at para. 76:

> … the trial judge must decide whether expert evidence that meets the preconditions to admissibility is sufficiently beneficial to the trial process to warrant its admission despite the potential harm to the trial process that may flow from the admission of the expert evidence.

[45] Justice Cromwell described the weighing of evidence at this stage in the following terms:

> … relevance, necessity, reliability and absence of bias can helpfully be seen as part of a sliding scale where a basic level must first be achieved in order to meet the admissibility threshold and thereafter continue to play a role in weighing the overall competing considerations in admitting the evidence.

It is at this second stage of the gatekeeper function that any residual concerns as to independence and impartiality – those which have arisen out of anything less than clear unwillingness or inability – are to be addressed (*White Burgess* at paras. 49, 54).

[46] Although not explicitly endorsed by Cromwell J. in *White Burgess,* I also have regard to the following passages from *Abbey.* In the first of these, Doherty J.A. provides a description of the second phase of the gatekeeper process:

> 79. The "gatekeeper" inquiry does not involve the application of bright line rules, but instead requires an exercise of judicial discretion. The trial judge must identify and weigh competing considerations to decide whether on balance those considerations favour the admissibility of the evidence. This cost-benefit analysis is case-specific and, unlike the first phase of the admissibility inquiry, often does not admit of a straightforward "yes" or "no" answer. Different trial judges, properly applying the relevant principles in the exercise of their discretion, could in some situations come to different conclusions on admissibility.

[47] Next, Doherty J.A. affirms the trial judge's responsibility to evaluate the opinion evidence, in order to determine its potential benefit to the jury:

> 89. In assessing the potential benefit to the trial process flowing from the admission of the evidence, the trial judge must intrude into territory customarily the exclusive domain of the jury in a criminal jury trial. The trial judge's evaluation is not, however, the same as the jury's ultimate assessment. The trial judge is deciding only whether the evidence is worthy of being heard by the jury and not the ultimate question of whether the evidence should be accepted and acted upon.

[48] Finally, a passage in which Doherty J.A. elaborates on the nature of the cost-benefit analysis:

> 95. In many cases, the proffered opinion evidence will fall somewhere between the essential and the unhelpful. In those cases, the trial judge's assessment of the extent to which the evidence could assist the jury will be one of the factors to be weighed in deciding whether the benefits flowing from admission are sufficiently strong to overcome the costs associated with admission. In addressing the extent to which the opinion evidence is necessary, the trial judge will have regard to other facets of the trial process --such as the jury instruction -- that may provide the jury with the tools necessary to adjudicate properly on the fact in issue without the assistance of expert evidence: D. (D.), at para. 33; R. v. Bonisteel, 2008 BCCA 344 (CanLII), [2008] B.C.J. No. 1705, 236 C.C.C. (3d) 170 (C.A.), at para. 69.

[49] To summarize, the first step of the gatekeeping analysis involves consideration of four factors - relevance, necessity, the absence of any exclusionary rule, and a properly qualified expert – and a fifth factor applied to opinions relying upon novel or contested science, reliability. An expert opinion that raises sufficiently

strong concerns with respect to any one of those factors – e.g. that the opinion is clearly not relevant, or that it is clearly not necessary in order for the jurors, equipped with their own experience, to draw appropriate inferences from the evidence – is to be excluded. The second step then involves consideration of not only all of those factors, but also any other concerns with respect to the weight of the evidence that potentially put at risk the ability of the jury to discharge its function in a proper manner, when consideration is given to the potential costs or prejudicial effects. These other concerns include matters such as reliability, qualifications, independence and bias. The point of the analysis is not to usurp the jury's function of weighing the evidence, but to assist the jury by ensuring, to the greatest possible extent, that the evidence that comes before them may be properly weighed in the course of the jury appropriately and efficiently discharging its duty.

Discussion

Substantive Issues as to Admissibility

[50] The April Report of Dr. Sank raises very serious concerns, at both the first and second stages of the gatekeeping process.

[51] The first concern is as to Dr. Sank's qualifications. Clearly he has sufficient expertise as a medical doctor to provide opinion evidence as to basic issues of human anatomy and physiology, as encountered by a specialist in family medicine. However the diagnosis he offers, of an injury to the cervical spine leading to cervical instability sufficient to cause VBI, is much more esoteric. By his own admission he has never made a diagnosis of VBI – from any cause – but rather relies on specialists. His experience with VBI is exceptionally limited. He has no knowledge or training that would equip him to opine as to the likelihood of a motor vehicle accident of the type the plaintiff was involved in producing cervical instability sufficient to cause transient VBI symptoms. In short, the only conclusion I can draw from the evidence is that as a family physician he is in no position to do any more than suggest a possible or tentative diagnosis, one that would have to be confirmed or invalidated by someone with specialized training. He cannot claim to have sufficient

expertise to offer – as he does in the April Report – the opinion that his theory is "highly probable". Further, Dr. Sank is not a neuro-surgeon. He is in no position to opine on the likelihood that the plaintiff's purported condition will eventually require her to undergo spinal fusion surgery.

[52] I would not qualify Dr. Sank as an expert capable of offering the opinion evidence tendered in the April Report. The report does not satisfy the fourth of the *Mohan* criteria, and is inadmissible on that ground alone.

[53] If it were the case that a medical doctor with Dr. Sank's limited experience in this field is sufficiently qualified, I would assess his relative lack of qualifications at the second stage of determining admissibility as creating little benefit, and at a substantial cost of confusing the jury and prolonging the trial.

[54] This second-stage analysis of the admissibility would also have to consider Dr. Sank's substantial reliance on the excluded opinions of Dr. Blascovich and Dr. Sass. His claim to having arrived independently at the cervical instability/VBI diagnosis rests in part on his contention that he gave consideration to VBI as a possible diagnosis as far back as June 2012. I did not believe that claim. Dr. Sank has approximately 2,500 patients, and also see patients of his associates; it beggars belief to imagine that he would have a distinct recollection of what his unrecorded thoughts and impressions were, during one visit that took place four years previously. Dr. Sass testified in direct that he was not considering VBI when he wrote the CL-19 report in December 2013. That seems by far to have been the more probable state of Dr. Sank's thinking at any time up until he received the report of Dr. Blascovich.

[55] Further, in my view it is likely that Dr. Sank's thought process, once he began to research the possibility of VBI following receipt of the Blascovich opinion, would inevitably have been tainted by his having received the inadmissible opinion of the optometrist Dr. Sass, at least influencing and possibly predisposing him to conclude the plaintiff's symptoms are related to the central nervous system. Furthermore, without Dr. Blascovich's inadmissible opinion, there was simply no reason for

Dr. Sank to assume that the plaintiff was suffering any significant degree of cervical instability.

[56] There are also serious concerns as to the reliability of Dr. Sank's opinion. He cites no medical literature that even supports the plausibility of injuries such as those alleged by the plaintiff being caused VBI induced through cervical instability resulting from a whiplash-type injury. The Steilen Article that he so extensively relies upon clearly describes the issue as being a matter of surmise.

[57] Lastly, Dr. Sank's use of the Steilen Article raises very serious concerns as to bias and as to whether Dr. Sank has in fact fulfilled his duty to the court to provide an independent opinion. The concerns arise out of the failure to acknowledge his source material, and out of what he chose to copy, and what he chose to leave out.

[58] Regarding the copying of the Steilen Article, I would say first that I do not accept Dr. Sank's explanation as to his failure to credit the article having been through pure inadvertence. As can be seen from the excerpts in the Appendix to these Reasons, not only did he add a few words to the passages he copied, he included two of the citations in the Steilen Article and renumbered them (renumbering notes 110 and 111 as his own notes 1 and 2), effectively representing those citations as the product of his own research. It is inconceivable that he was not conscious of the fact that his April Report was lacking necessary citation of the Steilen Article, and the fact that he was misrepresenting large portions of the narrative as his own work product. This was plagiarism, pure and simple. The plagiarism, and Dr. Sank's failure to acknowledge it as such, were dishonest, and severely impact his credibility.

[59] The offence is not mitigated by the fact that the segments copied by Dr. Sank might be viewed as uncontroversial descriptions of basic human anatomy. The issue here is not whether the science is accurately stated. The issue is that Dr. Sank, who in fact had so little understanding of the neuro-vascular anatomy that he had to undertake research, is purporting to speak about the issues with authority, through almost entirely utilizing words, phrases, and a manner of expression that are not his

own, without disclosure. He is misrepresenting his grasp of the material, and is thereby substantially exaggerating his expertise.

[60] The final concern is Dr. Sank's failure to acknowledge the fundamentally speculative nature of his proposed diagnosis. Given the tentative nature of the propositions put forward in the Steilen Article, there is clearly no basis for him offering his opinion as being "highly probable". In this regard his report stands in contrast to the expert opinion evidence of the otologist Dr. Longridge, who, in his August 19, 2015 report, explicitly acknowledges the lack of support for his opinion in the medical literature. In failing to express his opinion in the guarded, careful manner used by the authors of the Steilen Article, Dr. Sank was not forthright. He in fact substantially exaggerated the strength of his opinion, apparently at least in part on the basis of a misapprehension as to the need to present a "black or white" opinion. Given his relationship to the plaintiff as her treating physician, this exaggeration of his opinion's strength gives rise to significant concern as to bias.

[61] In submissions on the voir dire, the plaintiff's counsel argued that Dr. Sank did exactly what we want an expert to do: equipped with information from his patient and from other specialists, he undertook research, and as a medical practitioner he reached a medical diagnosis. I find Dr. Sank's report markedly deficient, and I find him to have fallen short of the standard of independence that is required of an expert witness.

[62] On any second-stage assessment of the April Report, the foregoing issues would reveal the report to have no substantial benefit, weighing strongly against its admission. On the "costs" side of the ledger, the concerns canvassed in *White Burgess* are present. It is apparent that admitting even a sanitized version of the report deleting reference to the inadmissible opinions of the chiropractor would risk the jury potentially being exposed to inadmissible evidence through inadvertence in the course of his cross-examination, given the extent to which Dr. Sank relied upon it. The defence would be obliged to call experts of its own in reply to Dr. Sank, lengthening the trial and imposing a further burden on the jury. Though the defence

would now be relatively well-positioned to attempt to undermine Dr. Sank through cross-examination, there would remain the risk of the fact-finding process being distorted by evidence of little real value.

[63] These concerns as to admissibility are not of the sort ideally addressed through instructions to the jury. The concerns are so broad that the necessary instruction to the jury would be something tantamount to a direction that they give the April Report no, or at best, very little weight. There is, practically speaking, nothing to be gained by burdening the jury with it.

[64] Even absent my finding as to Dr. Sank not being sufficiently qualified under the first stage of the admissibility test, I would for these reasons rule against admission of the April Report.

Procedural Concern – Late Delivery

[65] Sub-rule 11-7(1) of the *Supreme Court Civil Rules* provides that unless the court otherwise orders, opinion evidence may not be tendered at trial unless it is in the form of a report prepared and served in accordance with Rule 11-6.
Sub rule 11 6(3) requires service at least 84 days before trial. Sub-rule 11-6(6) makes provision for the service of a supplementary report if an expert's opinion changes in a material way after the expert's report is served; the rule, however, makes no special provision for service of supplementary reports after the 84-day deadline. Instead, sub-rule 11-7(7) makes provision for the admission of late-delivered reports and supplementary reports, in certain specific circumstances:

> (6) At trial, the court may allow an expert to provide evidence, on terms and conditions, if any, even though one or more of the requirements of this Part have not been complied with, if
>
> > (a) facts have come to the knowledge of one or more of the parties and those facts could not, with due diligence, have been learned in time to be included in a report or supplementary report and served within the time required by this Part,
> >
> > (b) the non-compliance is unlikely to cause prejudice
> >
> > > (i) by reason of an inability to prepare for cross-examination, or

> (ii) by depriving the party against whom the evidence is tendered of a reasonable opportunity to tender evidence in response, or
>
> (c) the interests of justice require it.

[66] I am not persuaded that the April Report qualifies on any of these grounds. As to sub-rule (6)(a), Dr. Sank stated in the report that his new opinion was based on his assuming that Dr. Blascovich's x-ray findings were accurate, and the plaintiff's report that she was working two days a week and experiencing significant ongoing exacerbations. The latter was not new information; Ms. Anderson's part-time status and her inability to work longer hours due to her symptoms having flared-up upon returning to work are specifically mentioned in the January Report. There is no evidence of any new information having been conveyed to Dr. Sank by the plaintiff that could have materially altered his opinion. If the January Report was based on him having incomplete information as to the plaintiff's symptoms – and there is no evidence that was the case – there is no explanation given as to why the information could not have been communicated to him, with due diligence, prior to the January Report being written.

[67] The one new factor cited by Dr. Sank is the Blascovich report, which is inadmissible and which he maintained only served as a "trigger" to him undertaking a new line of investigation through research. It may not have occurred to Dr. Sank to investigate the possibility of VBI prior to the January Report being written, but that does not mean he could not have previously been led to that realization through the exercise of due diligence.

[68] As to prejudice, I find there is manifest prejudice to the defence through the April Report having been served only two weeks prior to the start of a jury trial. Such late notice of an entirely new theory would have diverted the attention and the resources of defence counsel away from other necessary aspects of preparation for a jury trial that was already overburdened by admissibility issues. Further, while the defence was able to obtain rebuttal reports, they were from the experts already retained to deal with other aspects of the case, and not from the types of specialists

– neurosurgeons, or vascular or neuro-vascular surgeons – who would ordinarily deal with the type of condition newly being alleged. And the defence had no opportunity to have the plaintiff undergo an independent medical examination focused on the new allegation.

[69] As to the final element of 11-7(7), I cannot see that it is in the interests of justice to allow the late service of an expert report that is so problematic in its content. We are not dealing with admitting a late report of a qualified specialist, presenting a mainstream medical opinion. Dr. Sank's April Report is not presented to bolster the opinion of a qualified specialist in fields related to vascular or neurological medicine; there will be no other evidence before the jury that the plaintiff's problems are due to VBI or that she faces any risk of having to undergo spinal surgery. The plaintiff does have the opinion of a vestibular specialist, who points to another cause of her symptoms, and that doctor's report has been admitted.

[70] I would therefore hold the April Report to also be excluded by reason of late service.

"A. Saunders J."

Appendix

The following tables set out selected excerpts from the Steiner Article as copied by Dr. Sank, with Dr. Sank's own words set out in **bold face**:

Original Article	April Report of Dr. Leslie Sank
The capsular ligaments are the main stabilizing structures of the facet joints in the cervical spine and have been implicated as a major source of chronic neck pain. Such pain often reflects a state of instability in the cervical spine and is a symptom common to a number of conditions such as disc herniation, cervical spondylosis, whiplash injury and whiplash associated disorder, postconcussion syndrome, vertebrobasilar insufficiency, and Barré-Liéou syndrome.	The capsular ligaments are the main stabilizing structures of the facet joints in the cervical spine and have been implicated as a major source of chronic neck pain **in patients having had rear ending type injuries and the associated neck injuries. Chronic** pain often reflects a state of instability in the cervical spine and is a symptom common to whiplash injury and whiplash associated disorder**s**.
The occipito-atlano-axial complex has a unique anatomical relationship with the vertebral arteries. In the lower cervical spine, the vertebral arteries lie in a relatively straight-forward course as they travel through the transverse foramina from C3-C6. However, in the upper cervical spine the arteries assume a more serpentine-like course. The vertebral artery emerges from the transverse process of C2 and sweeps laterally to pass through the transverse foramen of C1 (atlas). From there it passes around the posterior border of the lateral mass of C1, at which point it is farthest from the midline plane at the level of C1.	The **vertebral** complex **between C1 and C2,** has a unique anatomical relationship with the vertebral arteries. In the lower cervical spine, the vertebral arteries **lay** in a relatively straight-forward course as they travel through the transverse foramina from C3-C6. However, in the upper cervical spine the arteries assume a more **tortuous (snake like) curly** course. The vertebral artery emerges from the transverse process of C2 and sweeps laterally to pass through the transverse foramen of C1. From there it passes around the posterior border of the lateral **aspect** of C1.
Considering the position of the vertebral arteries in the canals of the transverse processes in the cervical vertebrae, it is possible to see how head positioning can alter vertebral arterial flow. Even normal physiological neck movements (i.e. neck rotation) have been shown to cause partial occlusion of up to 20% or 30% in at least one vertebral artery [110]. Studies have shown that contralateral neck rotation is associated with vertebral artery blood flow changes, primarily between the atlas and axis; such changes can also occur when osteophytes are present in the cervical spine.	Considering the position of the vertebral arteries in the canals of the transverse processes in the cervical vertebrae [3], it is possible to see how head positioning can alter vertebral arterial flow. Even normal physiological neck movements (i.e. neck rotation) have been shown to cause partial occlusion of up to 20% or 30% in at least one vertebral artery **[1]**. Studies have shown that contralateral neck rotation is associated with vertebral artery blood flow changes, primarily between the **first and second neck vertebrae**.

Proper blood flow in the vertebral arteries is crucial because these arteries travel up to form the basilar artery at the brainstem, and provide circulation to the posterior half of the brain. When this blood supply is insufficient, vertebrobasilar insufficiency (VBI) can develop and cause symptoms, such as neck pain, headaches/migraines, dizziness, drop attacks, vertigo, difficulty swallowing and/or speaking, and auditory and visual disturbances. Studies have shown that contralateral neck rotation is associated with vertebral artery blood flow changes, primarily between the atlas and axes; such changes can also occur when osteophytes are present in the cervical spine [111.112].	When this blood supply **to the posterior aspect of the brain** is insufficient, vertebrobasilar insufficiency (VBI) can develop and cause symptoms such as neck pain, headaches/migraines, dizziness, drop attacks, vertigo, difficulty swallowing and/or speaking, and auditory and visual disturbances **[2]. Prolonged compression of the vertebral artery may result in transient strokes or possibly permanent strokes in the posterior aspect of the brain.**
Ligament laxity across the C0-C1-C2 complex is primarily caused by rotational movements, especially those involving lateral bending and axial rotation	Ligament laxity across the **Skull-C1-C2** complex is primarily caused by rotational movements, especially those involving lateral bending and axial rotation.
When the capsular ligaments are injured, they become elongated and exhibit laxity, which causes excessive movement of the cervical vertebrae. In the upper cervical spine (C0-C2), this can cause symptoms such as nerve irritation and vertebrobasilar insufficiency with associated vertigo, tinnitus, dizziness, facial pain, arm pain, and migraine headaches. In the lower cervical spine (C3-C7), this can cause muscle spasms, crepitation, and /or paresthesia in addition to chronic neck pain. In either case, the presence of excessive motion between two adjacent cervical vertebrae and these associated symptoms is described as cervical instability.	When the capsular ligaments are injured, they become elongated and exhibit laxity, which causes excessive movement of the cervical vertebrae. In the upper cervical spine **specifically C1 and C2 (as in Ms. Anderson's case)**, **it may** cause **a number of other** symptoms **including** nerve irritation and vertebrobasilar insufficiency with associated **brain stem region symptoms of** vertigo, tinnitus, dizziness, facial pain, arm pain, **hearing issues, lack of concentration ability** and migraine headaches. In the lower cervical spine (C3-C7), this can cause muscle spasms, and /or paresthesia **(numbness)** in addition to chronic neck pain. In either case, the presence of excessive motion between two adjacent cervical vertebrae and these associated symptoms **reflects** cervical instability. **In Ms. Anderson's case, the instability is demonstrated in the motion X-rays taken by Dr. Blaskovich.**