

Practice Notes

Selected Issues in Medical Malpractice

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A. Junk Science Masquerading as Novel Scientific Evidence?

Expert scientific evidence introduced at trial to assist judges has been present in the courtroom at least as early as 1678, where in a murder trial it was reported that “some of the most eminent physicians in England appeared as defence expert witnesses”.¹ However, *Folkes v. Chadd*² in 1782 is usually cited as the precedent for the acceptance of expert opinion in English courts. Following *Folkes v. Chadd*, the use of scientific experts in the courtroom expanded considerably, requiring judges to set standards for the admission of such evidence and guidelines for its use. As the development of the law lagged behind that of science in this respect, it often led to severe criticism of the use of experts (including the “hired gun” syndrome), the almost mystical influence that scientific experts had on juries, and the ability of experts to influence the ultimate issue. The development of rules and procedures to control the use of expert evidence continues to this day. While problems of hearsay, qualification and even ultimate issue have been largely resolved, only recently have courts more clearly defined the rules dealing with “novel” scientific evidence.

Novel science describes those scientific theories or techniques that have yet to gain general acceptance within the relevant scientific community. If the proposed evidence is novel scientific evidence, the question to be determined is whether it is considered otherwise reliable so that it is admissible.

Eight years have passed since the Supreme Court of Canada laid out the criteria for the admissibility of expert evidence in *R. v. Mohan*.³ Sopinka J., for the Court, emphasized the Court’s concern that novel scientific evidence be subject to “special scrutiny”:

In summary, therefore, it appears from the foregoing that expert evidence which advances a novel scientific theory or technique is subjected to **special scrutiny to determine whether it meets a basic threshold of reliability** and whether it is essential in the sense that the

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¹ Carol Jones, *Expert Witnesses: Science, Medicine, and the Practice of Law* (Oxford: Clarendon Press, 1994).

² (1782), 99 E.R. 58 (H.L.).

³ [1994] 2 S.C.R. 9, [1994] S.C.J. 36 (QL) [*Mohan* cited to S.C.J.].

trier of fact will be unable to come to a satisfactory conclusion without the assistance of the expert.⁴

The criteria to be satisfied for the admission of expert opinion evidence were spelled out in *Mohan*. In that case, a physician was accused of sexually assaulting four of his female patients. The defence psychiatrist offered an opinion that the perpetrator of the offences would be part of a group of individuals with distinct abnormal characteristics, not possessed by the accused. In holding that this evidence had been properly excluded by the trial judge, the Supreme Court of Canada set out the test for determining the admissibility of expert testimony. To be admissible, such evidence must meet the following four criteria:

1. relevance;
2. necessity in assisting the trier of fact;
3. the absence of an exclusionary rule; and
4. a properly qualified expert.

Relevance, of course, means that the evidence must be logically probative of a fact in issue, i.e. the evidence must be so closely related to the fact in issue that it tends to establish it. Additionally, Sopinka J. added that a cost benefit analysis must also be done in the sense of the impact of the evidence on the trial process. Evidence otherwise relevant may be excluded if its probative value is overborne by its prejudicial effect, if it involves an inordinate amount of time or is misleading in the sense that its effect on the trier of fact is out of proportion to its reliability, particularly in the case of juries.

To meet the requirement of necessity, the opinion must provide information likely to be outside the experience and knowledge of the judge or jury; therefore, the previous test of helpfulness of expert opinion was elevated to one of necessity.

Third, opinion evidence is subject to the ordinary rules governing the admissibility of testimony, i.e. it may be excluded if it offends a specific exclusionary rule.

The fourth branch of the analysis is that the witness be demonstrated to have acquired special knowledge through study or experience in respect of the matters about which he undertakes to testify. This is a significant criterion as proposed experts' qualifications are subject to careful scrutiny.

The U.S. Supreme Court established the American approach to the assessment of novel scientific evidence in *Daubert v. Merrell Dow Pharmaceuticals Inc.*⁵, which is that such evidence may be admitted so long as it is relevant and rests on

⁴ *Ibid.* at 25 [emphasis added].

⁵ 509 U.S. 579 (1993) [*Daubert*].

a “reliable foundation.” The *Daubert* case set out four factors to consider in evaluating novel scientific evidence:

1. Whether the theory or technique can be and has been tested:

Scientific methodology today is based on generating hypotheses and testing them to see if they can be falsified; indeed, this methodology is what distinguishes science from other fields of human inquiry.⁶

2. Whether the theory or technique has been subjected to peer review and publication:

[S]ubmission to the scrutiny of the scientific community is a component of ‘good science’, in part because it increases the likelihood that substantive flaws in methodology will be detected.⁷

3. The known or potential rate of error or the existence of standards; and

4. Whether the theory or technique used has been generally accepted:

(a) A reliability assessment does not require, although it does permit, explicit identification of a relevant scientific community and an express determination of a particular degree of acceptance within that community.

(b) Wide spread acceptance can be an important factor in ruling particular evidence admissible, and a known technique which has been able to attract only minimal support within the community may properly be viewed with skepticism.

These factors, or a combination of them in conjunction with *Mohan*, are used by Canadian trial judges in their gate-keeping role when parties seek to introduce expert evidence that appears to be novel.

More recently, the Supreme Court of Canada revisited *Mohan* in *R. v. J.-L.J.*⁸. In this case, a father was accused of sexually assaulting his two children, and the defence attempted to introduce a psychiatrist who would give the opinion that the accused did not possess the deviant personality traits that were most likely required in order to perpetrate such assaults. The psychiatrist’s opinion was based on the use of a penile plethysmograph, a device used to monitor the results of treatment of sexual deviants. The trial judge excluded the evidence on the basis that no standard profile of an offender in these circumstances had been established, and the relevance

⁶ *Ibid.* at 593.

⁷ *Ibid.*

⁸ [2000] 2 S.C.R. 600, 2000 SCC 51.

criteria had not been met. The Supreme Court of Canada upheld the decision at trial and concluded that the evidence was properly excluded on the basis of lack of necessity as well as lack of relevance. In doing so, the Court affirmed the *Mohan* requirement that novel science be subject to special scrutiny.

The Court found that the psychiatrist's technique was generally recognized by the scientific community as a therapeutic tool but that this was the first attempt to use the technique as a forensic tool and thus was a novel scientific technique as it was being used for a novel purpose. The closeness of the psychiatrist's opinion to the ultimate issue was another reason for special scrutiny. If the psychiatrist's evidence had been accepted, it would have excluded the accused from the group of potential offenders. The Court also examined whether the evidence was relevant and necessary. It was found that the tests administered were neither reliable nor applicable, as the success rate of less than 50% that a sexual deviant would be detected rendered the test so prone to error that it could not be considered useful. The Court also engaged in a cost benefit analysis, concluding the evidence offered as many problems as it did solutions.

Case Studies

Two recent Alberta medical negligence cases raised the issue of novel scientific evidence with respect to evidence proposed through the defendant's expert witness on causation: *Rhine v. Millan*⁹ and *Allen v. Mueller*¹⁰. In *Rhine*, the plaintiff sued her physician in negligence arguing that he had over-prescribed corticosteroid medication for her Crohn's disease, which resulted in the development of avascular necrosis (AVN), among other allegations. A significant issue at trial was whether AVN is caused by excessive dosages of corticosteroids, the defence expert being of the opinion that corticosteroid use did not cause AVN in Crohn's disease patients. The plaintiff's expert was of the opposing view that corticosteroid treatment can cause AVN in Crohn's patients. The latter's views were based on peer-reviewed articles and a general consensus in the medical community, particularly gastroenterologists. Various studies and articles entered into evidence supported the plaintiff's expert opinion of causation.

While the Court in *Rhine* did not ultimately accept the defence expert's view of causation, the Court did not agree with the plaintiff that the defendant's evidence was novel scientific evidence. It was found that the evidence was within a field that the defence expert had been researching for a considerable period of time. However, the Court was clearly influenced by the fact that the data consisted of one event only, and that the expert's findings had not yet been published in a peer-reviewed journal and subjected to criticism by other researchers or practising specialists. On the civil balance of probabilities, it was held to be more likely than not that the

⁹[2000] 7 W.W.R. 136 (Alta. Q.B.) [*Rhine*].

¹⁰(2000), 268 A.R. 201 (Q.B.); aff'd 2002 ABCA 195 [*Allen*].

plaintiff's AVN was caused, or materially contributed to, by the levels of corticosteroid treatments.

In *Allen*, the infant plaintiff was born with severe neurological deficits following a difficult birth. The defendants' theory was that her injuries were due to a genetic condition, probably autism. The plaintiffs' theory was that the defendants had provided negligent care which resulted in intermittent hypoxic ischemic episodes causing neurological damage. The plaintiffs called an American expert whose theory was that despite the lack of objective criteria to prove the child's injuries were due to perinatal asphyxia, an intermittent lack of oxygen could also cause the neurological damage. This evidence was contrary to the evidence of the defence experts and contrary to the U.S. and Canadian governing bodies of obstetricians/gynecologists, yet was accepted at trial. Cross-examination of the plaintiffs' expert revealed there was no general acceptance of his theory in the medical community nor was his theory based on peer-reviewed research, although it was argued that it was supported by other published research. Various grounds were relied upon on appeal, however the Court of Appeal was uninterested in the argument that the plaintiff's theory was based on novel scientific evidence, applying the high standard of review for a trial judge's preference for experts.

Other courts have applied "special scrutiny" to novel scientific evidence in non-medical negligence actions. In *S.F.P. v. MacDonald*¹¹, the Court considered the *Mohan* criteria for novel scientific evidence where the plaintiff sought to have a psychiatrist qualified as an expert in the quantitative analysis of EEG and brain mapping. The defendants objected on the basis that the expert's technique of quantitative EEG analysis was novel scientific technique which had not yet been established as reliable. In ruling that the proposed evidence was not admissible as not meeting the threshold test of reliability, the *Mohan* criteria were applied. It was acknowledged that the expert psychiatrist had an international reputation and had published articles about his approach to quantitative analysis of EEGs for decades in scholarly journals. The expert's opinion, including his reliance on brain mapping, had previously been accepted by another Alberta trial judge in 1998. The evidence appeared to be on its way to admissibility.

However, during cross-examination on qualifications, the expert acknowledged several significant points, including the fact that he did not know if any other establishment in Canada used quantitative analysis of EEGs. His laboratory did not exchange information with any such establishment. No scientific standard existed with respect to this type of analysis. The American Psychiatric Association, American Neurological Association, and the American Electroencephalological Association had issued public policy statements warning of the dangers of quantitative analysis of EEGs. His laboratory did not use the same "normal" or the same computer programs as other laboratories. Finally, his laboratory used techniques

¹¹ 1998 ABQB 855.

which are not used clinically because they are expensive, require specially trained personnel and deal in an esoteric domain.

In rejecting the evidence, Veit J. found that the technique of quantitative EEG analysis was novel, and that the methodology used by the expert had not become a standard clinical tool although it had been reported to the scientific community by the expert for several decades. Thus, in the absence of general acceptance of this approach in the scientific community, the Court applied the reliability factor to the evidence.

Veit J. was troubled by the fact that in this case there was no other laboratory using the same methods, same computer programs or same normals as the expert's laboratory and thus it was impossible for any other lab to replicate the results he had achieved. This reflects one of the *Daubert* factors: whether the theory or technique can be and has been tested.

It was also significant that the expert did not agree with a passage in an article authored by another physician, which he had relied upon in his own evidence to the court. The author was an individual the expert considered to be otherwise reliable. That passage disputed the reliability of quantitative EEG analysis. (Similar evidence from the defendant expert was subsequently rejected by a Saskatchewan Court in *McGuire v. Risling*¹², applying *Mohan* and *R. v. J.-L.J.*)

*Wolfen v. Shaw*¹³ is another example of the application of the *Mohan* and *Daubert* principles as they pertain to the admissibility of novel scientific evidence. The plaintiff was claiming damages for personal injury arising from a motor vehicle accident in a civil jury trial. The plaintiff had been sent to the University of California for a PET (positron emission tomography) scan as all other diagnostic investigations were within normal limits. The plaintiff's expert, a psychiatrist, reported that the PET scan showed abnormalities compatible with traumatic brain injury. One of the defence experts, a professor of radiology and clinical pharmacy, viewed the raw data from the scan and considered the results normal. His evidence was that the use of PET for the diagnosis of mild traumatic brain injury had not gained general acceptance in the literature.

A *voir dire* was held to determine the admissibility of the result of the PET scan of the plaintiff for the purposes of confirming a diagnosis of mild traumatic brain injury. In conducting the *voir dire*, Justice Dillon heard from the plaintiff's expert, as well as other experts, who gave evidence as to the acceptability of PET scans for the purposes for which it was proposed.

The plaintiff had argued that the PET scan was not novel scientific evidence because PET had been around for many years and was well recognized in the

¹²(2001), 212 Sask. R. 149 (Q.B.).

¹³(1998), 43 B.C.L.R. (3d) 190 (S.C.) [*Wolfen*].

management of patients. The judge applied the definition of “novel scientific evidence” as that which had not gained general acceptance for the purpose of determining whether a stricter scrutiny of evidence through a threshold test of reliability should apply. Dillon J. reviewed the principles in *Mohan*, *Daubert* and numerous other criminal and civil cases regarding admissibility of novel scientific evidence. He was influenced by several factors in considering whether the PET scan was novel so as to require a threshold inquiry into reliability. The scan had not been accepted generally for application in the clinical diagnosis of mild brain trauma and was not used in Canada at all for this purpose. Its efficacy for this purpose had not been determined through peer-reviewed publications. Further, the fact that the scan was not requested by the plaintiff’s treating physicians and was not requested prior to litigation raised questions about its scientific validity. Therefore, the evidence was subjected to the “reliability” test.

In finding that the PET scan did not meet the basic threshold of reliability, the Court queried the degree of uncertainty in the evidence. The degree of uncertainty was to be assessed by consideration of the strengths of the scientific process using the following factors: conceptual, measurement, sampling, mathematical modeling, causal, testing, and communicative and cognitive. Uncertainties in the evidence in *Wolfen* included the failure to adequately assess differential diagnoses through an MRI scan, which was the common protocol; the methodology employed did not meet the recommended guidelines; and there had been no statistical verification of absolute numbers, nor independent verification of how comparative the normative group was.

Dillon J. also found that the PET scan results were not logically relevant to a fact in issue, as the scan was not intended for the purpose of ruling out other differential diagnoses which could account for the plaintiff’s condition, but only for the purpose of identifying that the plaintiff had suffered a brain injury.

Practical Considerations

Timing of the Challenge

Counsel should be alert to the possibility of opposing counsel introducing what is, in effect, novel scientific evidence. Challenges to this evidence should be made at trial at the same time as the qualifications of the proposed expert are being considered and may need to be dealt with in a *voir dire*. However, where no objection is made to the evidence at the time, at least one trial judge has applied the *Mohan* factors in assessing its weight once admitted.¹⁴ The Supreme Court of Canada cases, *Mohan* and *R. v. J.-L.J.*, both emphasized the gatekeeper function performed by trial judges, and in the latter case, emphasized that the admissibility of the evidence should be scrutinized at the time it is offered and “not allowed too easy an entry on the basis that all of the frailties could go at the end of the day to

¹⁴ *S.F.P. v. MacDonald*, (1999), 234 A.R. 273 (Q.B.).

weight rather than admissibility.”¹⁵ The purpose of the *voir dire* is to prevent the trial from becoming a “medical or scientific convention with an exchange of highly speculative points of view.”¹⁶

American Jurisprudence

The Supreme Court of Canada has referred to and applied many of the factors from the U.S. Supreme Court’s decision of *Daubert*. Thus, reference to the American cases applying the *Daubert* factors will be of assistance here, particularly where there are few Canadian civil cases applying the test.

Eight “Gates”

We suggest that expert testimony must now pass through eight “gates” in order for the trial judge as gatekeeper to rule on its admissibility, applying factors outlined in *Mohan, R. v. J.-L.J.* and *Daubert*. The following is a quick checklist to test proposed expert evidence for admissibility:

1. Necessity

The expert’s testimony must assist the trier of fact to appreciate matters in issue due to their technical nature, and not be merely helpful: *Mohan; Taylor v. Sawh*.¹⁷

2. Qualified Expert

There must exist a body of expertise in a field of inquiry in order for an “expert” to be qualified: *Walker Estate v. York-Finch General Hospital*.¹⁸ Additionally, the expert needs to have special knowledge through study or experience: *Robb v. St. Joseph’s Health Centre*.¹⁹

3. Relevancy

The evidence must have a valid connection to the inquiry; relevant evidence is evidence that “has some tendency as a matter of logic and human experience to make the proposition for which it is advanced more likely than... in the absence of that evidence”²⁰: *R. v. J.-L.J.; Wolfen*.

¹⁵ *R. v. J.-L.J.*, supra note 6 at para. 28.

¹⁶ *R. v. J.E.T.*, [1994] O.J. No. 3067 (Gen. Div.) (QL).

¹⁷ (2000) 129 O.A.C. 29 (C.A.).

¹⁸ (1996), 5 C.P.C. (4th) 240 (Ont. Gen. Div.).

¹⁹ [1999] O.J. No. 51 (Gen. Div.) (QL).

²⁰ *R. v. J.-L.J.*, supra note 6 at para. 47.

4. Reliability (Applied to Novel Scientific Evidence)

Whether the theory or technique can be and has been tested: *Green v. Lawrence*²¹; *S.F.P. v. MacDonald*; *R. v. J.-L.J.*

Whether there is documented data: without data, peer review and verifiable repeatability using the exact methodology is impossible: *Green*.

Has the theory been the subject of peer review and publication? This factor is relevant but not dispositive, however peer review increases the likelihood that flaws in the methodology will be detected: *R. v. J.-L.J.*; *Daubert*.

Known or potential rate of error, or the existence of standards: *R. v. J.-L.J.*

General acceptance of the technique or theory: *R. v. J.-L.J.*

Is the methodology unique or novel? *R. v. Terciera*²²; *Green*.

Is the accepted technique used for a novel purpose? *R. v. J.-L.J.*

5. Foundational Facts

As held in earlier case law²³ and reiterated in *R. v. J.-L.J.*, facts upon which an expert opinion is based must be found to exist in order for the opinion to carry any weight; the onus is on the party advancing the opinion to tender evidence proving the facts.²⁴

6. Absence of Exclusionary Rule

If there is an exclusionary rule that applies to the evidence, it cannot be admissible solely on the basis of passing the other gates. Examples of proscribed evidence include attacks on character or evidence tending to show general disposition.

7. Unfair Prejudice

The cases indicate the danger of scientific evidence creating an aura of infallibility and undue influence on juries; in some cases, the expert opinion may cause unfair prejudice to the other side. The Court in *Mohan* states: "Dressed up in scientific language which the jury does not easily understand and submitted through a witness of impressive antecedents, this evidence is apt to be accepted by the jury as being

²¹ (1997), 119 Man. R. (2d) 3 (Q.B.) [*Green*].

²² (1998), 38 O.R. (3d) 175 (C.A.), aff'd [1999] 3 S.C.R. 866.

²³ See e.g. *R. v. Lavallee*, [1990] 1 S.C.R. 852.

²⁴ See also *Marchand v. Public General Hospital Society of Chatham* (2000), 51 O.R. (3d) 97 (C.A.), leave to appeal to S.C.C. refused, [2001] S.C.C.A. No. 66 (QL).

virtually infallible and as having more weight than it deserves".²⁵ This factor involves a comparison of the probative value versus the prejudicial effect of the evidence.²⁶

8. *Ultimate Issue*

The closer the evidence approaches the ultimate issue, the greater the scrutiny: *Mohan*.

Conclusions

The law in Canada governing the admissibility of expert testimony, and specifically novel scientific evidence, is continuously evolving. The proper admission of such evidence requires the trial judge to consider multiple factors, as applied to often highly complex technical matters, evaluating scientific methodology and standards. The gate-keeping function has become more complicated and significant, opening the door for skilful counsel prepared for the issue to assist the trier of fact in evaluating the proposed evidence.

²⁵ *Mohan*, *supra* note 3 at para. 19.

²⁶ See also *Heath v. College of Physicians and Surgeons of Ontario* (1997), 102 O.A.C. 268 (Div. Ct.).

B. Causation: Causing More Uproar

Causation issues continue to plague lawyers and legal academics, and recent cases from Ontario have fuelled the fire with an issue not yet decided by any other appellate courts.

Traditional legal dogma tells us that in order to succeed in an action based on negligence, the plaintiff must prove four elements:

1. The defendant must owe the plaintiff a duty of care;
2. The defendant must breach the standard of care established by law;
3. The plaintiff must suffer an injury or loss; and
4. The defendant's conduct must have been the actual and legal cause of the plaintiff's injury.

Traditionally, courts and counsel have treated these requirements sequentially, the first inquiry being whether a duty of care was owed to the plaintiff and where there was no duty of care owed by the defendant, no further inquiry was required, and the action would be dismissed: *Ryan v. Victoria (City)*.¹ If the defendant owed a duty of care to the plaintiff, the second inquiry would proceed to what the standard of care was and whether there had been a breach of the standard. Again, if there was no breach of the standard of care, judges often did not make inquiry into causation or damages.²

However, trial judges often made provisional findings on causation and damages in the event that they were wrong on earlier findings. It has been generally understood to be a matter of a trial judge's discretion as to whether they would conduct an inquiry into causation where there was no breach of the standard of care.

A series of Ontario cases has cast doubt on these time-honoured principles, at least with respect to medical negligence actions. In 1991, the Ontario Court of Appeal reversed the finding at trial that the defendant had not breached the standard of care: *Meringolo v. Oshawa General Hospital*.³ In *Meringolo*, the case turned on the fact that if the plaintiff's condition was caused by inadequate ventilation, the defendant must have breached the standard of care as he was solely responsible for ventilation during surgery. On the facts found by the trial judge, the only non-negligent event (cardiac arrest) could not have caused the plaintiff's brain damage and thus the only other possible cause was a negligent failure to monitor the plaintiff's ventilation. In the ten-year span between *Meringolo* and the next court decision to address the issue, no court had interpreted *Meringolo* to have set out a general proposition of law that factual causation must always be determined prior to determining whether there was a breach of the standard of care.

¹[1999] 1 S.C.R. 201.

²See e.g. *Keller v. Penkoske* (1999), 256 A.R. 1 (Q.B.); *Webster v. Chapman*, [1998] 4 W.W.R. 335 (Man. C.A.); leave to appeal dismissed (1998), 129 Man R (2d)158n (S.C.C.); *M.(M.) v. F.(R.)* (1997), 52 B.C.L.R. (3d) 127 (C.A.).

³(1991), 46 O.A.C. 260, leave to appeal dismissed [1991] 3 S.C.R. vii [*Meringolo*].

However, ten years later in *Grass (Litigation Guardian of) v. Women's College Hospital*,⁴ a different panel of the Ontario Court of Appeal interpreted *Meringolo* as requiring factual causation to be determined prior to findings on the standard of care, at least in certain circumstances.

In *Grass*, it was undisputed that the defendant doctor had used three different forceps during a difficult labour and delivery. If the infant plaintiff's injury was caused by a repeated and excessive use of force with the forceps, the standard of care was not met, and the defendant was negligent. Thus, a perinatal traction injury was necessarily negligent conduct, just as in *Meringolo* where inadequate ventilation was necessarily negligent conduct by the anaesthetist.

The Ontario Court of Appeal ordered a new trial in *Grass* on the basis that "the resolution of the question of causation might have led to different findings of fact with respect to what transpired in the labour room and to a different conclusion with respect to negligence."⁵ The Supreme Court of Canada denied leave to appeal in *Grass*, where leave had been sought on this very issue.

It appears that since the *Grass* decision, the Ontario Court of Appeal has partly resiled from this position. In *Liuni (Litigation Guardian of) v. Peters*,⁶ the Court declined to agree that causation must be addressed prior to findings on the standard of care, but conceded that it was "usually preferable, whenever possible, to determine causation explicitly in medical malpractice."⁷ Whether the failure to determine causation would constitute reversible legal error depended on the facts of each case, according to the panel in *Liuni*. The infant plaintiff was delivered by emergency C-section and suffered severe neurological defects. The trial judge did not make any findings as to causation, as he dismissed the action against the defendant on the basis of no breach of the standard of care; the Court of Appeal refused to overturn the trial decision.

The *Grass* and *Liuni* decisions were again the subject of comment at the Ontario Court of Appeal in *Locke v. Smith*.⁸ In *Locke*, the panel held that the trial judge had not been required to determine causation, as it would not have changed his conclusions that the defendant was not negligent, and thus distinguished *Meringolo* and *Grass*. The plaintiff in *Locke* had suffered injury after a routine colonoscopy and polypectomy and alleged the defendant was negligent in his use of an electrocautery machine. Both sides had accepted that the plaintiff's injury was caused by cauterization. Although the trial judge did not determine precisely how the cauterization process caused the plaintiff's injury, he did make findings of fact

⁴ (2001), 200 D.L.R. (4th) 242 (Ont. C.A.), leave to appeal dismissed [2001] S.C.C.A. No. 372 (QL) [*Grass*].

⁵ *Ibid.* at 247.

⁶ (2001), 151 O.A.C. 389, [2001] O.J. No. 4724 (QL) leave to appeal dismissed [2002] S.C.C.A. No. 43 (QL) [*Liuni* cited to O.J.].

⁷ *Ibid.* at para. 13.

⁸ [2002] O.J. No. 2173 (C.A.) (QL) [*Locke*].

that were inconsistent with the appellant's theory of causation and, on that basis, further causation inquiry would not have changed the trial judge's conclusions. He found that any injury was the result of a risk inherent in the cauterization procedure itself, not in the risk associated with any failure on the part of the defendant.

Nonetheless, at least one British Columbia and two Ontario trial judgments following *Grass* have accepted that the decision requires them to address the issue of causation before turning to standard of care issues.

The Supreme Court of Canada has not considered or endorsed the *Grass* approach to causation. Leading cases on causation by that Court appear to direct trial judges to apply traditional causation principles. For example, in *Snell v. Farrell*,⁹ Sopinka J. for the Court considered and rejected variations to traditional causation principles in order to ease the plaintiff's burden of proof.

While the Alberta Court of Appeal has not yet made a ruling on whether the *Grass* decision should be followed in Alberta, there is guidance in two decisions of that Court as to the proper approach to causation in negligence cases. In *MacCabe v. Westlock*,¹⁰ Wittmann J.A. for the Court, approved of the trial judge's analysis of a negligence action against a teacher and school board.

As the law required, the trial judge first determined whether a duty of care was owed by Romanuik to MacCabe; second, what standard of care was owed and whether that standard was met; third, if the standard of care was breached, whether that breach caused the harm suffered; and finally, whether MacCabe voluntarily accepted the risk or whether she was contributorily negligent.

Similarly, in *Tetterington v. Wiens*,¹¹ the Alberta Court of Appeal rejected the argument that the defendants had the burden of explaining how the plaintiff's condition arose in that medical negligence action where the plaintiff had not proven causation on a balance of probabilities. The Court held that it was sufficient to show that the defendants were not negligent and to show that "the plaintiff's condition could easily have arisen, indeed probably did arise, without any negligence on anyone's part".¹²

Most recently, the Manitoba Court of Appeal held that causation need not be determined if there was no breach of the standard of care in a medical negligence case: *Kovalik Estate v. Griffin*.¹³ The Court of Appeal did not, however, refer to the Ontario cases on that point.

⁹[1990] 2 S.C.R. 311.

¹⁰[2002] 1 W.W.R. 610 (Alta. C.A.), 2001 ABCA 257.

¹¹(1995), 165 A.R. 6 (C.A.), [1995] A.J. No. 163 (QL) leave to appeal dismissed [1995] S.C.C.A. No. 154 (QL) [cited to A.J.].

¹²*Ibid.* at para. 7.

¹³2002 MBCA 87.

There is a need for appellate courts to address this new body of case law that calls for findings on factual causation prior to examining standard of care in medical negligence actions. While the approach may be appropriate in the very few cases where causation would be determinative of standard of care, there are real dangers with such an approach in most cases. Not only does the approach conflict with traditional tort theory, but it would potentially prejudice the inquiry into whether the standard of care was breached and place undue weight on a bad result. It has the potential to reverse the burden of proof in a practical sense, as defendants would be obliged to bring evidence to explain how a plaintiff's injury arose. A reversal of the evidentiary burden of proof is not supported by leading causation cases, including *Snell v. Farrell*.

Until another appellate court has considered the application of *Grass*, there is a possibility, particularly in medical negligence cases, where different findings on the standard of care are likely if causation is first determined; it may be a reversible error for a trial judge to fail to address causation issues.

Postscript

Since the Health Law Institute's Fall 2002 Conference, the Alberta Court of Appeal released its decision in *McArdle v. Cox*,¹⁴ in which the central issue was whether the trial judge erred by not deciding on causation, given that he found no breach of the standard of care. For the unanimous Court of Appeal, Picard J.A. rejected the position that factual causation must be decided prior to addressing the standard of care. The Court stated:

It is a critical fault to reorder negligence analysis by placing the causation [issue] before that of the standard of care. How can a judge decide whether, but for the defendant's **substandard** action, the plaintiff would not have been injured, if the characterization and application of the standard of care decision depends on the causation decision? The suggestion that causation be analyzed before standard of care truly is putting the cart before the horse.¹⁵

¹⁴ 2003 ABCA 106.

¹⁵ *Ibid.* at para. 25 [emphasis in original].