

Great Expectations



Midway upon the journey of our life,
I found myself within a forest dark,
For the straightforward path had been lost.

— *The Inferno*, Dante Alighieri

Commonly after motor-vehicle accidents (MVA), most people are physically fine. Of course, many are reasonably shaken by the prospect of thousands of pounds of metal colliding around their bodies and souls; still, in the absence of fractures, joint disruption, or serious visceral injury, most people walk or drive away, down life's straightforward path, and the events have little lasting influence. But there are exceptions.

The phenomenon of persistent and disabling neck pain after MVA — without serious demonstrable structural injury — has been extensively studied but remains a mysterious process. The incidence of compensation claims and emergency department visits for reported whiplash associated disorders (WAD) has inexorably risen over the past 30 years, despite apparent improvements in motor vehicle safety design. Similarly, despite the apparent better health and resilience in young people, there is evidence that younger people are up to 4 times as likely to file insurance claims or seek treatment after whiplash exposure. Further, the presence of degenerative changes in the cervical spine has, counter-intuitively, not been shown to predispose to increased problems after WAD exposure¹.

Remarkably, the “usual suspects” that determine most musculoskeletal injury after trauma (force of impact, ligamentous and osseous loads, stabilizing mechanisms, etc.) do not appear to strongly predict eventual WAD problems. Specifically, head restraints, direction of impact, position of the head, awareness of impending impact, the presence of tow bars on bumpers, and so on, all have little if any proven effect on developing WAD problems. And most astonishingly, the severity of collision forces has not been shown to affect the prognosis after whiplash exposure in the absence of neurological injury, fracture, or dislocation^{1,2}.

Conversely, several nonmechanical and nonphysiological factors are important. The availability of compensation through a tort system (i.e., proving fault by another party) seems to have a large and negative effect on reporting a WAD event and subsequent prognosis³. Similarly, persons who make a whiplash compensation claim and have a benign clinical evaluation, no signs on imaging studies of serious injury, and no neurological loss, but report high pain-intensity and psychological distress, do appear to have poorer outcomes. The same poorer outcomes are seen in those who adopt a passive approach to their injury. In addition, when early and frequent medical interventions are applied in the absence of serious structural injury, recovery appears poorer than with less aggressive strategies². Despite the failure to find serious organic disease, more than 50% of persons who pursued a WAD compensation claim continue to report significant symptoms, and 20%–40% report emotional distress a year later. These poorer outcomes are most likely in patients who adopt a passive attitude toward recovery efforts^{2,4}.

In this issue of *The Journal*, Carroll and colleagues⁵ report on a survey taken of Saskatchewan residents who made a claim for compensation due to injuries referred to a MVA in the late 1990s. Excluded from this survey were subjects with supposed “serious injuries” as reflected in admission to hospital for more than 2 days. Subjects were contacted by telephone interview at intervals after the accident. An interesting and previously unexplored assessment was performed, which included asking subjects if they expected to get better quickly, or slowly, or not at all. The authors compared this initial assessment by the claimant against the later reports of recovery.

What they found is interesting. The minority of subjects who, soon after the collision, reported they did not believe or were unsure if they would recover simply did worse in all dimensions. They were less likely to report neck pain resolution at followup and took longer to recover if they eventually did. Which begs the question: why would someone

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who escapes a MVA without serious injury suppose they would have longterm problems when most do not? Where does this belief come from, and why?

The data from this study give some interesting clues. First, subjects who expected a poorer outcome were simply different from their more optimistic counterparts. The data indicate they were twice as likely to have not finished high school and twice as likely to have an income < \$20,000. This group was also half as likely to be married or living with a partner. This group also reported being in generally poorer health even before the accident. Whereas 75% of subjects who expected to recover were in self-described "very good" or "excellent" health, this was so in only about half who believed they would not recover.

One may wonder how accurate the report of prior health in this claimants group is: of 1600 subjects claiming an injury (mean age about 40 years), only 6% retrospectively reported poor or even fair health before the accident. The same authors reported that a random survey of the Saskatchewan population (median age about 45 years) was much less well: 25% reported high-intensity back pain or disability, 15% high-intensity neck pain or disability, nearly 20% had moderate or severe headache symptoms, 20% were depressed in the last week, 10% had moderate or severe digestive disorders, and so on⁶. Even accounting for minor age differences between the current MVA claimant group and the population survey, the whiplash claimants as a whole seem to report remarkably — or some may say, incredibly — good health. This disparity is even more glaring when one considers that persons in serious MVA tend to have much higher rates of drug and alcohol abuse when screened in emergency departments⁷⁻⁹. In California, in an audit of 350 subjects claiming injury after an MVA, the self-reported preexisting conditions (back pain, neck pain, psychological problems, drug and alcohol abuse) compared to the actual retrieved medical records demonstrated widespread and systematic underreporting of these conditions. Preexisting psychological problems were underreported at one-eighth the documented prevalence, back and neck pain at less than half⁹.

It is easy to consider self-reported data of current and past health in persons pursuing a compensation claim with a jaundiced eye. However, intentional manipulation of the claims process is, in my opinion, unlikely the main problem here, and certainly does not explain the effect of poorer expectations.

Which returns us to the question: why would a significantly large proportion of this relatively young group not automatically suppose that common musculoskeletal discomfort following this accident should quickly pass? The answer implied in the data is clear: experience. Life has dealt us all a hand of varying opportunities and advantages, some good and some poor. However, consider the individual who midway upon the journey of life finds himself within a

forest dark: poor, inadequately educated, in marginal health, in a lousy job, and without close family. Why should he suppose this accident should turn out differently? On the contrary, the straight path is lost, he is on the merry-go-round of poorly effective medical care.

Can expectations be modified? One would expect so. Military experience has shown that elite combat units expect to do well and usually do, whereas dispirited soldiers even if in superior positions often collapse. The expectation of success, in this case, can be a result of training and shared tradition of overcoming adversity. In fact, raw recruits from exactly the poor prognosis profile in this study (disadvantaged socioeconomic backgrounds) are often molded into the best soldiers. The key appears to be both a positive expectation and a willingness to persevere in adverse conditions. To paraphrase Simonides, "Go ask the Spartans."

It is perhaps not "unexpected" then, that after a best-evidence review of all the nonsurgical treatments of whiplash, Hurwitz and colleagues found that possibly the most effective intervention in acute WAD was immediate viewing of an educational video. This video emphasized a good prognosis and the great expectations of an aggressive return to usual activities¹¹. That is, the straight path was best found through wise guidance and perseverance: a latter-day Virgil to lead us out of a dark wood.

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