Management of Whiplash-Associated Disorders — Revisiting Quebec

In this issue of The Journal, Suissa, et al\(^1\) revisit whiplash outcomes in Quebec, reporting on the evaluation of a clinical management model for whiplash-associated disorders to be implemented province-wide. Using a cohort-controlled, parallel-design study, they assessed the effect of a standardized treatment model based on early intervention and access to care, reassessment at 3 weeks posttreatment to determine progress, early (7 week) assessment for those who appeared not to be doing well despite physical therapy, and multidisciplinary team intervention for these latter patients with whiplash, based on therapist, physician, and psychologist assessments. As well, in this treatment model, the initial physical therapy (9 visits in the first 3 weeks), and up to 20 more visits over the next 4 weeks if needed, was based on a sports medicine approach with an emphasis on tailored, functional exercises. It would seem to be an expensive program, but as Suissa, et al\(^1\) show, compared to usual care this standardized approach led to, on average, a total reduction in costs per whiplash patient of nearly $1000 CDN. Suissa’s data indicate that the rate of file closure and end of compensation was significantly higher in whiplash patients who completed the new management model compared to the controls (in usual care).

**RECOVERY RATES IN QUEBEC — 1987 VERSUS 2001**

Not only is the study important because these system-wide management models should be evaluated (and often they are not), but it appears the management model was much needed. Quebec used to be hallowed ground, where whiplash patients with chronic pain dared seldom tread. Historically, whiplash patients in Quebec seemed to recover more quickly than the rest of us in Canada were witnessing in our patient population. A cohort study conducted in Quebec in 1987, for example, under the same no-fault system, had shown that among whiplash patients who took at least one week to recover, 35% were still receiving compensation at 13 weeks post-injury\(^2\). In contrast, in this most recent evaluation by Suissa, et al\(^1\) some 15 years later, the control group (those who were not part of the new management model) had an outcome such that 75% of them were still receiving compensation at 13 weeks post-injury. Even among those who participated in the new management model, 60% were still receiving compensation at 13 weeks post-injury in 2002, compared to 35% in 1987. Small wonder there was a need to introduce a new management model in Quebec: If receiving ongoing compensation is a surrogate measure for lack of recovery in whiplash victims, Quebec is no longer hallowed ground, and chronic pain roams free.

**MANAGEMENT PROGRAMS FOR WHIPLASH**

The systematic, early clinical assessment of whiplash patients, and in particular the early medical and psychosocial assessment in those who are not doing well, makes sense. Assessment of the whiplash patient in the acute stages may lead to attention to the many physical, psychological, and social factors that ultimately create the systemic illness of whiplash. Whiplash has been reported in *The Journal* to be “an example of illness actually induced by society, in general, and by physicians in particular”\(^3\). That is, whiplash is not about the initial spinal injury; nor is the treatment about healing an injury. Data from population-based surveys indicate that beyond neck pain, symptoms such as low back pain, dizziness, nausea, both upper and lower limb numbness and tingling, tinnitus, and cognitive problems are common in the acute stage after a whiplash injury\(^4\). It is clear that individuals with acute whiplash present with a broad range of systemic physical and mental symptoms that cannot be explained by a single anatomic region of injury; neither can the high levels of emotional distress in the acute stages\(^4\).

The outcome from acute whiplash injury depends, not depend on collision-related factors, but rather on emotional or other psychosocial measures\(^5,6\). The physical damage, the pathology, underlying the pain of most whiplash patients is not demonstrable, as is the case for most cases of nonspecific spinal pain encountered in clinical practice. We do know that emotional distress and depressive symptomatology\(^7\), independent of pain, initial behavior choices (to stay active or not)\(^8\), as well as treatment choices (active exercise versus passive therapies\(^9\)) are important in determining outcomes. Coping style, as well, may be important in recovery from whiplash\(^10\). For acute neck and back pain in the general population, in fact, coping style is known to be an important determinant of outcome, irrespective of pain levels\(^11\).

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*See Assessing a whiplash management model: a population-based non-randomized intervention study, page 581*
RESEARCH DIRECTIONS FOR INSURANCE SYSTEMS

The study by Suissa, et al, and our increased understanding of the psychosocial predictors of chronic whiplash further emphasize the need, when examining insurance-system management models, to assess the prognostic factors and health outcomes of these patients as well as the insurance-system outcomes. While health outcomes are what is important to the patient and the practitioner, at the same time it is important to keep costs in check, as the economics affect not only everyone’s insurance rates, but also the monies available for necessary treatment and investigations, especially for more serious injuries. When insurance systems introduce management programs, it would be beneficial for the insurance industry to engage the assistance of medical and epidemiological researchers to develop claims initiation forms that contain health surveys and sufficient information for program evaluators to assess not only the economic impact, but also the health impact of the programs introduced. Age, sex, intensity of initial symptoms, radicular symptoms, and initial emotional distress are important prognostic factors. Insurance claims forms can be designed to gather this information, to contain quality of life measures such as the Medical Outcome Study Short Form-36 (or derivations of it such as the SF-12 or SF-6D), and to contain disability measures such as the Whiplash Disability Questionnaire. The baseline information may allow for the institution of management models where those whiplash patients with a “threshold” number of poor prognostic factors are immediately directed to multidisciplinary assessment and treatment (more research is needed to know where this threshold lies). Meanwhile, patients with less risk of a poor prognosis need not be placed in expensive and intensive programs, and thus not be over-treated. By mandating these elements in baseline claims forms, and equally mandating follow-up quality of life and disability questionnaires at intervals for all claimants, we can directly answer the question of how compensation-end and claim-closure correlate to health outcomes and disability, determining more directly how management models affect these health and economic outcomes.

CONCLUSIONS

Revisiting Quebec was wise. The Quebec Task Force on Whiplash-Associated Disorders changed the way researchers study these disorders, and continues to be a prevailing force in pressing the need to fill a massive void in our understanding of this medicolegal and social problem. Quebec has shown us that the problem is not static; that economics, treatment approaches, and outcomes change, and require ongoing study. For this reason, studies like that of Suissa, et al are critical. Varying and improving on this design, one can bring together the concerns of the many stakeholders, insisting on evaluation of both economic and health outcomes. I recall Dr. Suissa once saying at a conference that while the Quebec Task Force was not perfect, “before us there was nothing, no science, nothing.” Before then, indeed, patients and practitioners were for decades told by learned colleagues that whiplash was to be held in trust, to be understood as it was handed to us through the ages:

My observation is made from the hill of song, and not from that of science, and will, I trust, be found sufficiently accurate for the present purpose.

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REFERENCES