Chronic pain & partial disability using the PALS statistics

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by

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This paper *outlines an approach based in economics and statistics to evaluating the loss of future earning capacity due to permanent partial disability when you don't know how the disability will affect work and earnings over a working life. You know the physical impairment, ie, but perhaps not the economic impairment. This concludes with some judgments that have adopted the statistical approach,*

The problem

An injured plaintiff, even after treatment and recovery, retains a permanent but partial disability, which is to be compensated. You've shown that the client meets the classic four-fold test:

i. The plaintiff has been rendered less capable overall from earning income from all types of employment;

ii. the plaintiff is less marketable or attractive as an employee to potential employers;

iii. the plaintiff has lost the ability to take advantage of all job opportunities which might otherwise have been open to him, had he not been injured; and

iv. the plaintiff is less valuable to himself as a person capable of earning income in a competitive labour market.

If the loss hasn't yet begun, you've also met the fifth test, that the triggering of a loss is probable.

It's straightforward, using survival and labour-market statistics, to quantify the loss of future earning capacity ***if*** you know the preinjury earnings and how the disability will affect work and earnings. You might know the average annual loss, to which you apply the contingency-adjusted multiplier. Some other common patterns:

Early retirement — An ironworker foreman whose earnings increased after his injury has kept up his full-time job but will have to retire early [*Millar* v *Waring*, 2009 ONSC 22799 ¶364, eg]. He loses the contingency-adjusted present value of the lost years' earnings, valued at his recent wages.

Reduced wages and hours — A nurse might have to drop from a 36-hour week plus overtime to a 24-hour week and no overtime. She loses the contingency-adjusted present value of the overtime, the 12 regular hours, and part of the employer's pension and insurance contributions.

Retraining, then reduced wages — A tradesman might have to retrain in order to qualify for a lower-paying but less physically demanding job. He loses the contingency-adjusted present value of his wages (at his recent or expected earnings level) during the training period and then of the shortfall of his new wages from his old wages.

The problem is to quantify a plaintiff's loss of earnings due to permanent partial disability when she or he has an earnings track record but the future losses of work and earnings are unclear. Knowing the injury or physical impairment doesn't imply knowing the *economic* impairment.

Brown *v* Golaiy

In the often-cited *Brown* v *Golaiy* [1985 BCSC 149], the then Mr Justice Finch considered a man with an injured knee that limited the man's work and would cause future losses. He assessed one year's preaccident earnings:

> Counsel agreed that when the plaintiff was employed as a truck driver he earned about $20,000 a year. In my view the equivalent of one year's income as a truck driver is an appropriate allowance to make for his loss of capacity to earn income in the future. It is unlikely that he would miss that much time from work all at once. It is uncertain when, or if, he will miss time from work at all. He has, however, been diminished in his ability to find employment, to work, and to pursue certain kinds of employment. The award on this account must be a rather rough and ready estimate. I fix $20,000 as the amount of the plaintiff's loss for impaired capacity to earn income in the future.

This approach has obvious advantages, among them simplicity, expressing the lost earnings in terms of lost work, and plausibly adapting the client's own earnings record to the uncertain future effects of a mild impairment.

The one-year standard, however, can be difficult to extend to some other cases. It omits other information, including the plaintiff's potential remaining working life, his or her commitment to the labour market evidenced by education and qualifications, and the experience of comparable Canadians except through other Court awards. Nor does the one year for deferred, mild effects obviously extend to more immediate effects or more severe injuries.[1]

Participation and Activity Limitation Survey [PALS]

If and when the evidence fits, Statistics Canada's Participation and Activity Limitation Survey [PALS] can physical disability affects real Canadian' work and earnings, considering education and qualifications as well as the severity of the disability. It reflects a large sample and comprehensive survey. My custom tabulation is "custom" in relating employment and earnings to education and disability. I expect to have the results of the 2006 Census early next year.

Statistics Canada conducted the first of its three predecessor Health and Activity Limitation Surveys [HALS] in 1984 and then followed up the 1986 and 1991 Censuses. This formed part of an international study of the kinds and effects of disability.

A disability due to injury most often impairs mobility or agility. Using international definitions, HALS classifying activities for a mobility or agility disability included such "activities of daily living" as standing, walking, climbing up or down stairs, reaching in any direction, and lifting and carrying. A mild mobility or agility disability resulted from a persistent degree of difficulty with one or more of those activities.

As you know, chronic pain disables. The 2001 Participation and Activity Limitation Survey [PALS] followed up the 2001 Census that fall to analyze adults and children whose everyday activities are limited because of a condition or health problem. Approximately 35,000 adults and

8,000 children across the country who answered "Yes" to the 2001 Census disability filter questions were included in the PALS survey population. For adults, the most common limiting conditions were chronic pain and mobility or HALS mobility or agility limitations.

Losses arise because affected persons are less likely than those unaffected to participate in the labour force (to work or seek to work), to be employed, to work fulltime, and to advance their positions and incomes. [Statistics Canada: G. L. Cohen, "Disabled workers," *Perspectives on Labour and Income*, Winter 1989, p. 36; A. Shain, "Employment of persons with disabilities," *Canadian Social Trends*, Autumn 1995, p 10].

At my request, the agency prepared a special tabulation of the adult responses in the 2001 PALS to measure the association among employment, earnings, disability, and the usual demographic factors (gender and education). This tabulation provided the capacity-loss statistics cited here.

Effects of a mild~moderate mobility, agility, or pain partial disability on employment and earnings

Education	Male	Female
Complete secondary	17.2%	29.8%
Complete PSNU or trades	8.2%	22.9%
Complete university	23.6%	9.7%

The overall effect of reduced employment and reduced earnings if employed typically ranges 18% ~ 30% of uninjured earning capacity.

Lesser education, which limits the opportunities of even nondisabled persons, tends to intensify the effect — a guy who made his living with a strong back now has a weak one. More severe disability also increases the loss.

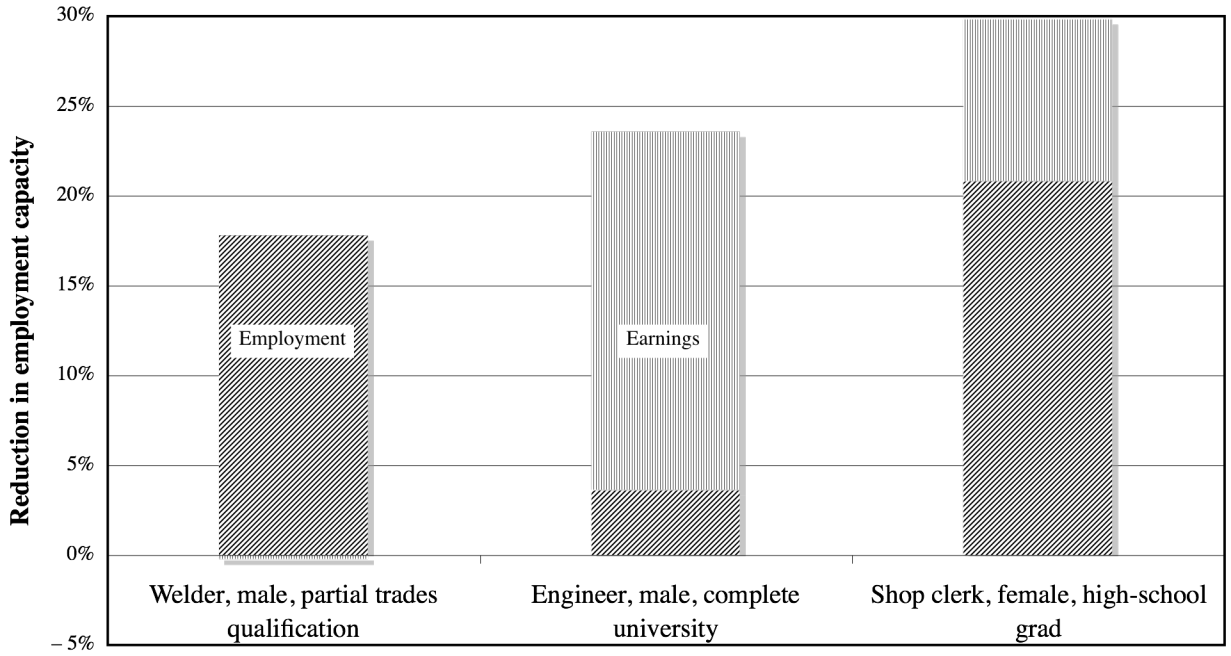
Using education to compensate for injury tends to mitigate the disability, however, so that women with university degrees or men with complete trades qualifications or college diplomas suffer only some 9%. Persons who undertake further education to return to work are both equipped and motivated.

The sample sizes needed for statistical validity limit the level of detail, so one can't get, say, the effects of one lost eye on long-haul truck-drivers' work and earnings. For this same reason, and because most impairments are in the mild ~ moderate bracket, I use only the mild ~ moderate and severe ~ very severe brackets. Some greater detail is possible, though, including broad age brackets rather than entire working lives.

You might have seen this illustration:

> Your lady client has a dud knee or spinal disc or wrist, but she still works at Safeway and hasn't missed much time, or Joe's been stove up but might go back to welding, or a keen young male engineer has a painful shoulder that impedes desk work and driving — I can help assess these all-too-common cases of indeterminate future loss.
>
> Statistics Canada has tabulated the 2001 Participation and Activity Limitation Survey [PALS] for me to show how partial disability affects the likelihood of working and income if the subject does work. The figures classify subjects by gender and level of education — the statistical factors that determine labour-market contingencies and typical earnings — and by severity of disability.

Effects of partial disability



[StatsCan PALS 2001, Special tabulation]

> Female secondary graduates show a typical pattern of employment and earnings effects. Male university graduates similarly are likely to continue working despite injury, but to earn less than otherwise. In the case of men like Joe the welder, with a partial trades or other postsecondary qualification, many retrain and the higher-paid ones tend to return to work while the lower-paid stay home on disability pensions, so these figures show an *in*crease in expected earnings of 0.3%.

Disability statistics in Court

Most cases of partial disability include known effects, and no general statistic survives conflict with a specific fact — a specific pattern of known preinjury earnings and postinjury effects will trump disability statistics. Any statistics also need to be tied to the plaintiff and case.[2]

Given that connection, this approach has been adopted in reported cases like these:

Mahe v *Boulianne*, 2008 ABQB 680, concerned a badly-injured industrial electrician who needed to retrain before undertaking any residual work. The Court reduced his potential earnings after retraining by the average percentage. "I accept the Health and Activity Limitation Survey and Participation and Activity Limitation Survey ["HALS-PALS"] approach to ascertaining the effect of disability on earnings." [¶93]

Messmer (Guardian of) v. Daley, 1991 BCSC 1170, presented an infant plaintiff with delayed work-force entry and, when working, reduced earnings and higher unemployment risk. The HALS figure, which measured those effects, was found to be appropriate.

Ralston v Rose, 2003 BCSC 647 demonstrated real but variable and uncertain effects. I applied the PALS factor to Ms Ralston's expected earning capacity to arrive at an estimated loss of $103,000. The Court cited my estimate and assessed the loss at $100,000.

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[1] ***Physical capacity*** — One would like to know the specific effect of a particular injury — say a lost eye or a damaged shoulder — on lifetime work and earnings. Courts have sometimes heard experts apply just such a percentage of lost physical capacity to the expected earning capacity. I've not found the approach adopted.

> In *Narayan* v *Djurickovic* [2003 BCSC 1133], the Court admitted an opinion that the amputation of two fingers equated to an 8% loss of whole-body physical capacity, applying the American Medical Association's "Guides to the Evaluation of Permanent Impairment" (5th edition). In the decision [2003 BCSC 1144], the Court made its award without reference to that percentage.
>
> In *Jahangiri-Bojani* v *Brudderer*, I applied the 3.2% indicated by the Workers' Compensation Board document, "Permanent Disability Evaluation Schedule — #39.10," June 1991. In this case, the Court rejected the WCB approach in making its own assessment.

This approach considers the injury and similarly affected other persons but neither the kind of work nor the commitment to the labour market evidenced by education and qualifications. It might also lack statistical validity.

[2] ***Statistics and other facts*** — *Sacilotto* v ICBC [1990 BCSC 1440] confirmed that statistical projections can be introduced and considered when appropriate and informative, unlike the case considered in *Earnshaw* v *Despins* [1990 BCCA 596].