

The Permanent Disability Evaluation Schedule (PDES)

A Legal Fiction

Submission by the British Columbia Nurses' Union (BCNU)

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**In response to Workers' Compensation Board Discussion Paper on Proposed Amendments
to the Permanent Disability Evaluation Schedule (PDES)**

The PDES - A Legal Fiction

SUBMISSION BY THE BRITISH COLUMBIA NURSES' UNION (BCNU)

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Contents

EXECUTIVE SUMMARY

1	INTRODUCTION	1
2.	HISTORICAL DEVELOPMENT: THE PDES AS AN INSTRUMENT TO MEASURE PERMANENT DISABILITY	3
2.1	IMPAIRMENT OF EARNING CAPACITY VS. FUNCTIONAL IMPAIRMENT	3
2.2	HISTORIC PRINCIPLE: AMOUNT OF COMPENSATION SHOULD BE RELATED TO LOSS OF EARNING POWER.....	4
2.3	DEVELOPMENT OF THE "LOSS OF FUNCTION" METHOD OF ASSESSING PPD AND THE PDES.....	5
2.4	CRITIQUE OF THE PDES - DECISION NO. 8.....	7
2.4.1	<i>Absence of Content Validity</i>	8
2.4.2	<i>Injustice in "Averaged Impairment"</i>	9
2.4.3	<i>Compensation for Impairment other than Earning Capacity</i>	9
2.5	DECISION NO. 8 - CONCERNS REGARDING THE PDES LEADS TO THE DUAL SYSTEM.....	9
2.6	2002 - RESURRECTION OF THE PDES AS PRIMARY METHOD OF ASSESSING PPD.....	10
3.	ECONOMIC IMPACT OF PDES AFTER 2002	13
3.1	<i>Financial Wind-Fall to the Accident Fund</i>	13
3.2	<i>PDES and its negative financial impact on permanently injured workers</i>	14
3.3	<i>Negative Psychological Impact of PDES Awards</i>	15
3.4	ADDITIONAL CALCULATION ISSUES IN PDES AWARDS	17
3.4.1	LUMP SUM PAYMENTS OF DISABILITY AWARDS	17
3.4.2	TERM OF PAYMENT	18
4.	THE PDES AND THE AMERICAN MEDICAL ASSOCIATION (AMA) GUIDES TO THE EVALUATION OF PERMANENT IMPAIRMENT	19
5.	INTER-JURISDICTIONAL COMPARISON	21
6.	SPECIFIC CONDITIONS LISTED IN THE PDES	23
6.1	THE SPINE	23
6.2	THE LIMBS.....	26
6.3	PSYCHOLOGICAL DISABILITY	27
6.4	RESPIRATORY CONDITIONS	28
6.5	NON-SCHEDULED AWARDS	28
6.6	ADDITIONAL FACTORS OUTLINE	28
7.	ONGOING REVIEW	29
8.	CONCLUSIONS & RECOMMENDATIONS	31
	LIST OF APPENDICES	39
	REFERENCES	41

Executive Summary

The PDES has two possible purposes as a schedule. The first purpose is the one required of it under the *Workers Compensation Act* (Act) of estimating impairment of earning capacity. The second purpose is as a rating schedule for functional impairment.

In this paper we examine the principle developed by Justice Meredith that permanent disability should be compensated on the basis of impairment of earning capacity. That has been the explicit requirement of the BC Act since inception and continues today.

The PDES is based on the reports of Dr. D.E. Bell from 1960 to 1966. Dr. Bell's reports examined the use of schedules. He noted that schedules were mostly arbitrary guess work when applied to functional impairment with no empirical data and no relationship to earning capacity. He attempted to create a schedule that would approximate the impairment of earning capacity of an average unskilled workman. In doing so he identified the need to apply judgment assessing the circumstances of the individual worker. That caution has certainly fallen on deaf ears in the application of the PDES.

In their landmark Decision No. 8, only seven years after the adoption of Dr. Bell's schedules as the PDES, the Commissioners of the BC Workmen's Compensation Board concluded that the PDES failed as a schedule of impairment of earning capacity. Under the Dual System, the PDES was effectively confined to the purpose of assessing functional impairment with any additional loss of earning capacity for permanent partial disability (PPD) awarded under Section 23(3). However, since June 30, 2002, the Act and the policy of WorkSafeBC ensured that the functional method embodied in the PDES became the required method of compensating for PPD. With this change, the fiction inherent in the PDES now disenfranchises workers that suffer a permanent impairment of earning capacity and does so in contravention of a foundational principle of the compensation system and the specific language of the Workers' Compensation Act.

It has been widely recognized that functional impairment should attract compensation. The PDES has a purpose in this task but it is hopelessly outdated, unreliable, and invalid as a tool for measuring functional impairment. An eminent expert in the assessment of functional impairment, Dr. Robert Rondinelli, has produced a report on the PDES method for assessing the spine for this submission. His conclusion is that the PDES lacks reliability and validity as a measure of spine function. We have examined other sections of the PDES and reached similar conclusions. The PDES in its current form cannot be reliably used even as a measure of functional impairment.

Our conclusion is that there is no rational or legal basis for relying on the functional method in the PDES to assess impairment of earning capacity. The only method that can assess impairment of earning capacity with any reliability is on an individual basis under section 23(3). In any claim where there is an impairment of earning capacity greater than the functional award, the worker should receive an award under section 23(3).

Given these concerns, there must be comprehensive independent reviews of the Law and Policy of PPD awards and expert analysis of the science and economics. We call on the Provincial Government to appoint a Law and Policy Panel and an Expert Panel to conduct these reviews and provide recommendations on compensation for PPD.

1 INTRODUCTION

This report is a response to the Policy Consultation paper released in December 2012 by the Workers Compensation Board (Board) regarding proposed changes to the *Permanent Disability Evaluation Schedule* (PDES).

This report is written from the perspective of all workers who depend on the Workers' Compensation System when they are injured as well as workers who are permanently disabled. We will discuss the principles of permanent disability compensation and the origins of the PDES as the Schedule authorized under the *Workers Compensation Act* (*Act*). We will then outline the deficits of the PDES and demonstrate why functional impairment, also known as "Whole Body Impairment" (WBI), alone, is neither a valid nor fair way to estimate impairment of earning capacity as required by the *Act*. We will also address how the current and proposed PDES does not measure functional impairment by a scientifically valid method, and we provide an expert report by Dr. Robert Rondinelli on the lack of validity of the PDES as it applies to the spine. We also address certain proposed changes to individual items on the PDES. Finally, we will make a number of recommendations as to how the Board should move forward with updating the PDES policy so that the defects in the current system are properly rectified.

Board's Proposed changes to the PDES - 2012

The PDES in its current form has been largely unchanged since 1966, with the following exceptions:

- 1990: a section on the spine was included;
- 1991: the style and format of the PDES was revised;
- 1993: the hand charts were revised;
- 2001: a section on psychological disability was included;
- 2003: the PDES was reviewed to reflect current medical/scientific knowledge and current practices regarding the assessment of certain permanent partial disabilities. Specifically, changes were made to percentages of disability involving amputation of digits of the hand, loss of range of motion in the thoracic spine, and pronation and supination of the elbow; and
- 2007: a section on asthma and dermatitis was included.

In 2002, a Core Review of the B.C. Workers' Compensation System (Core Review) was conducted by Alan Winter. The Core Review called for many changes, including a substantial review of the PDES to ensure that it was reflective of current medical/scientific knowledge and readily understood by decision makers. The Core Review stated that the percentages set out in the PDES must reflect the estimated impairment of the worker's earning capacity and not simply the percentage of medical impairment which the injury represents vis-à-vis the total disability of the person.¹

We endorse the view that the PDES should measure "impairment of earning capacity", as required by section 23(1) of the *Act*, and not merely medical impairment or WBI. Like the Core Review, we regard the revision of the PDES with respect to this matter as critical in light of the

¹ *Cores Services Review of the Workers' Compensation Board*, Alan Winter, WCB Core Reviewer, March 11, 2002, p. 202.

2002 amendments to the *Act* which effectively made section 23(1) and the PDES the default system for assessing permanent disability.

While other aspects of the Core Review were implemented immediately, the PDES review was deferred for ten years. Now, in its 2012 Consultation Paper, the Board has recommended the following:

- Incorporate the Additional Factors Outline (AFO) into the PDES;
- Maintain the use of loss of ROM (functional assessment) as the primary method of assessing impairment for the spine and limbs;
- Limit the ability of the assessor to apply judgment to depart from the Schedule when considered appropriate;
- Make minor adjustments regarding the techniques for measuring upper extremity ROM;
- Not adopt methods of assessments used in the American Medical Association (AMA) Guides; and
- Develop a process for ongoing review that relies almost exclusively on advice and recommendation from Disability Awards Medical Advisors (DAMA).

In our view, the Board's proposed changes do not address the fundamental deficits of the PDES and we are concerned about the following issues:

The PDES, in its structure and history, is not an estimate of impairment of earning capacity and does not meet the requirements of the *Act*. The Board's proposed changes to the PDES confirm and entrench the substitution of WBI for 'loss of earning capacity', contrary to the *Act* and recommendations of the Core Review.

The PDES is also outdated and invalid for assessing functional impairment (WBI). The most obvious defect of the current and proposed method for measuring permanent functional impairment, the "gold standard" of ROM, is not a scientifically valid method of assessing this type of impairment for the reasons set out by Dr. Rondinelli in Appendix A.

Particular proposed changes to the PDES depend almost exclusively on advice and recommendations from DAMAs and entrench rather than alleviate these and other fundamental deficiencies in the current PDES schedule.

In addition to this submission and our recommendations, we attach the listed Appendices as reference and supporting material. While some of this material is original, including Dr. Rondinelli's report, some of it is historical but not widely available, such as Dr. Bell's reports and the Commissioner's Decision No. 8. We attach these reports for ease of reference.

2. HISTORICAL DEVELOPMENT: THE PDES AS AN INSTRUMENT TO MEASURE PERMANENT DISABILITY

2.1 Impairment of Earning Capacity vs. Functional Impairment

Section 23(1) of the *Act* requires that a worker be compensated for the estimated **impairment of earning capacity** associated with the nature and degree of the injury. Section 23(2) of the *Act* provides:

The Board may compile a rating schedule of percentages of impairment of earning capacity for specified injuries or mutilations which may be used as a guide in determining the compensation payable in permanent disability cases.
(emphasis added)

The PDES is the Board's Schedule which purports to meet the requirements of these statutory provisions.

The current PDES² explains that the Schedule attributes a percentage of total disability to the impairment of various body parts. When a worker has a permanent injury, the Board measures that worker's functional impairment in the injured body part by some method (such as ROM) and locates the result on the PDES chart to generate a percentage rating. This PDES percentage becomes the Board's estimate of the worker's Partial Permanent Disability (PPD) from that injury. This method as a whole is known as the functional impairment or "Whole Body Impairment" (WBI) assessment of disability.

Under current Board policy, the functional impairment method of assessing PPD is strictly applied. In applying the Schedule, the Board may consider a worker's medical variables, including physical and psychological impairment, but may not consider variables relating to social or economic factors and may not consider any variable related to a worker's actual or projected loss of earnings because of the disability.³ The Board's current proposal for the PDES defends and entrenches this strict WBI approach as the appropriate basis for the Schedule authorized under the *Act*.

However, a review of the history of the PDES shows that a myth or legal fiction developed that a schedule could estimate impairment of earning capacity. The Schedule is not constructed on any reliable, valid or demonstrable relationship between functional impairment ratings and ratings of impaired earning capacity. The current PDES is not consistent with the *Act* as an authorized Schedule to estimate impairment of earning capacity and it systematically and significantly undercompensates workers who have suffered these impairments.

The current PDES policy review does not attempt to discuss or address how the Schedule may fairly rate impairment of earning capacity; instead, it focuses on refining the PDES's ability to assess medical impairment (a matter addressed by Dr. Rondinelli and in our later sections). Thus

² Appendix 4 – Permanent Disability Evaluation Schedule #39.10 *Rehabilitation Services and Claims Manual, Volume II* (RSCM II)

³ Policy #39.10 RSCM II

the policy review confines its discussions around the PDES to the narrow and inappropriate grounds now entrenched in Board policy – strict functional impairment.

The PDES, as the Schedule authorized under the *Act*, is a creature of statute and is still required to estimate a worker’s impairment of earning capacity arising from an injury. This submission seeks to re-focus the PDES discussion onto how the composition of such a rating Schedule may be fairly done with current resources and in the B.C. context.

Both a summary and a detailed account of the historical underpinnings of the PDES are attached to this submission as Appendixes B and C, and an overview is provided below. This history is important in that it examines the principle of compensating injured workers for impairment of earning capacity versus the use of schedules to estimate compensation based on functional loss.

2.2 Historic Principle: Amount of Compensation Should Be Related to Loss of Earning Power

The principles and legislation underlying the modern compensation system emerged in Europe and the United States in the 19th century. In Canada, the Ontario government appointed Mr. Justice Meredith to a Royal Commission on Workers’ Compensation. His 1913 Report, known as the “Meredith Report”, set out the basic principles of workers’ compensation which are the foundation of the modern compensation system including: no-fault compensation; an independent Board; and security of payment.⁴ These principles have withstood the test of time and remain relevant today.

The Meredith Report set out another important principle which is particularly relevant to the PDES review - that compensation for permanent disability should be based on the impairment of the worker’s earning capacity.

According to Justice Meredith, the duration and amount of compensation had to be related to the earning power of the injured worker in order to meet the goal of a “just compensation law”. He states:

*A just compensation law based upon a division between the employer and the workman of the loss occasioned by industrial accidents ought to provide that the compensation should continue to be paid as long as the disability caused by the accident lasts, and **the amount of compensation should have relation to the earning power of the injured workman.***

To limit the period during which the compensation is to be paid regardless of the duration of the disability, as is done by the laws of some countries, is, in my opinion, not only inconsistent with the principle upon which a true compensation law is based, but unjust to the injured workman for the reason that if the disability continues beyond the prescribed period he will be left with his impaired earning power or, if he is totally disabled without any earning power at a time when his need of receiving compensation will presumably be greater than at the time he was injured, to become a burden upon his relatives or friends or upon the community.

(emphasis added)

⁴ Meredith Report (1913) – Appendix D

This principle was adopted into the original BC *Act* and was examined by each subsequent BC Royal Commission.⁵ The principle of compensating for impairment of earning capacity has remained in the *Act* unchanged.

2.3 Development of the “Loss of Function” method of assessing PPD and the PDES

After the Meredith Report was issued, different provinces developed various impairment schedules using the “loss of function” or WBI method of compensating permanent disability. There was a gap or disconnect that occurred in the system at this point that resulted in the misuse of schedules to compensate for earning capacity with no clear rationale or legislative authority. However, the legislation and the principles of Justice Meredith remained intact that PPD must be compensated for based on impairment of earning capacity.

In 1960, the Association of Workmen's Compensation Boards (Canada) tasked a single physician, Dr. D.E. Bell, with surveying the permanent disability rating schedules in each of the ten provinces and presenting recommendations for changes. Dr. Bell then undertook extensive consultation, study and survey and set out his results and comprehensive recommendations, including a proposed schedule, in a series of reports in the 1960's. Dr. Bell's reports of 1960, 1964 and 1966 are attached as Appendices E, F and G to this submission.

Dr. Bell proposed a schedule to set out percentage values to estimate the impairment of earning capacity for an average unskilled workman due to particular injuries and recommended a method of measuring a worker's physical impairment, usually through ROM, as a method for placing that worker on this Schedule.

In his Report of August 22, 1960, Dr. Bell provided his recommendation and comments on how such a Schedule should be used and understood. He stated:

*The schedule presented here is considered to be an improvement on existing schedules but should in no sense be considered to represent the ultimate. Usage will no doubt bring to light inconsistencies not immediately evident which will lead to further revision from time to time. Indeed an on-going study of this important concept of compensation work would be highly desirable.*⁶

The schedule which is to be applied is to be used solely as a guide, is designed to show in percentage, the approximate impairment in earning capacity of an average unskilled workman.⁷

⁵ Report of the Commissioner-The Honourable Mr. Justice Gordon McG. Sloan; relating to The Workmen's Compensation Board September 1942

Report of the Commissioner-The Honourable Mr. Justice Gordon McC. Sloan; relating to The Workmen's Compensation Board February 1952

Report of the Commissioner-The Honourable Mr. Justice Charles W. Tysoe; Commission of Inquiry Workmen's Compensation Act November 26, 1965

For the Common Good Final Report to the Royal Commission on Workers' Compensation in British Columbia, Gurmail S. Gill, Oksana Exell, Gerry Stoney, January 20, 1999

⁶ Bell, D.E., Report of D.E. Bell to The Association of Workmen's Compensation Boards of Canada, Subject: Permanent Disability Evaluation: Toronto, Ontario, August 22, 1960 at page 3.

⁷ Ibid, p 4

In applying the schedule regard should always be had to whether the award adequately compensates the workman for his loss of earning capacity failing for which upward revision may be considered.⁸

*In off-schedule or judgment ratings awards should be proportionate to listed items.*⁹

(emphasis added)

It was Dr. Bell's view that regard should always be had to whether the resulting percentage adequately compensated the individual worker for loss of earning capacity. To underscore this point he also stated that the schedule should be the servant and never the master¹⁰ and that judgment should be applied as to the circumstances of each worker.

In compiling the Schedule, Dr. Bell understood that inherent in the Schedule itself was the hope, expectation or fiction that a measured degree of physical impairment was sufficiently correlated with an averaged degree of impairment of earning capacity – at least sufficiently well and sufficiently often - that one could be used to roughly estimate the other. He stated that this correlation could not and should not be assumed, but assessed in each case.

In later reports Dr. Bell described the origins of the schedules that he had previously recommended and was extremely clear that they were based on guess work and no specific research. In fact, in his third report in 1966 Dr. Bell noted that the schedules he was using were:

... shrouded in mystery. One was no doubt copied from another. ...

*The probability is, however, that it was based purely on guesswork, for no scientific data was available at that time as to the physical handicap on ability to earn. ...*¹¹

*Little data is presently available and a great deal of research work requires to be done before it would be possible to determine the extent to which various kinds of physical handicap affect the earnings capability of different kinds of people. Present rating schedules are assumed to show the average percentage of disability for each condition listed, but if such is the case 50 per cent. are receiving more and 50 per cent. are less than enough to meet their needs. In all fairness, especially to the latter group, an effort to correct this disparity would be worthwhile.*¹²

(emphasis added and punctuation reproduced as written)

In spite of the lack of scientific foundation for the original schedules or Dr. Bell's compiled schedule, the PDES has remained in place, largely unchanged since its inception in the 1960's.

⁸ Ibid, p 4

⁹ Ibid, p 4

¹⁰ Ibid, p 15

¹¹ Permanent Disability Evaluation Under Workmen's Compensation, D.E. Bell M.D. March 1966 p. 2

¹² Ibid, p 53

2.4 Critique of the PDES - Decision No. 8

Actual claims were brought to the Commissioners for review and by 1973, there was deep concern about the justice and validity of the loss of function method and the PDES as a single system for compensating permanent disability. In October of that year the Commissioners issued a very important decision – Decision No. 8 – which outlined the problem with applying the PDES for spinal injuries in particular.

In Decision No. 8, the Commissioners reviewed claims of workers experiencing severe impairment of earning capacity but who were only given small ratings under the PDES method of assessment for spine injury, primarily based on ROM measurements. The Commissioners identified the discrepancy between the percentage awarded by this loss of function method and the impact of that injury on the worker's earning capacity. They said:

In the course of adjudication on a recent appeal involving a spinal column injury, we were disturbed to find that a permanent partial disability based on 7.5% of total disability had been awarded notwithstanding that the loss of earning capacity, on any view of the case, seemed to be at least 50%. We were assured that the award was in line with other pension awards in back injury cases. We felt, therefore, that the matter could not be approached simply by changing the particular award, but that we should consider the principles being applied to the measurement of partial disability. We are concerned now, therefore, with the practice being followed in other cases.¹³

The Commissioners also noted that there is a natural and great variability in the impact of a spinal injury on the earning capacity of those in different occupations. In Decision No. 8, the Commissioners gave the example of a stone mason and a salesman. If both workers experience a spinal injury that limits their lifting to no more than 25 pounds, this functional impairment would leave the stone mason entirely unable to perform the pre-injury occupation while it would have little effect if any on the earning capacity of the salesman.

The example may seem dated but the principle is not and a current example from our membership shows exactly the same point.

An orthopedic unit nurse and a nurse case manager both suffer a spine injury that limits their lifting to no more than 25 pounds. The impact on each of these nurses would be significantly different. The orthopedic nurse would be unable to perform her pre-injury occupation because her work demands are very physical in nature including heavy lifting related to patient handling. On the other hand, the Case Manager work is sedentary in terms of physical demands so likely she would be able to perform her pre-injury occupation.

The Commissioners specified their concerns with the PDES as concerns about its absence of content validity, the injustice of its version of “average impairment” and only compensating for non-economic loss in some cases. Each are discussed below.

¹³ Decision No. 8, (1973) 1 WCR 27, dated October 2, 1973, p 27

2.4.1 Absence of Content Validity

Decision No. 8 concluded that the theoretical construct of the PDES had no “content validity”. That is, there is no discernible theoretical or empirical basis for correlating a particular level of physical impairment to a particular impairment of earning capacity. In the words of the Commissioners:

*It has long been recognized and objected that, except by coincidence that this method bears no relation to the real loss of earning power. **What less often recognized is that this method does not, except again by coincidence, bear any relation to the average loss of earning capacity.** So far as we can discover from other Canadian Boards, it does not appear that the percentages rates currently used for the measurement of physical impairment are based on any statistical research done within living memory, and there is really nothing to connect the percentage rates of physical impairment currently used with the impairment of earning capacity either in the individual case, or even on an average.*¹⁴

(emphasis added)

Decision No. 8 discussed in theoretical terms how a valid method could be developed by way of introducing an occupational variable.¹⁵ This approach was rejected at this time as it was concluded:

The total permutations involved in matching all occupational categories to stipulate in advance what percentage rate would be payable for each disability in each occupational category would be a tremendous task, the more so because the injury experience of this province would not be large enough to provide sufficient data for that purpose. ...

It is therefore our feeling that if an occupational variable is to be applied to the percentage rate derived from the medical examination, it must be done by reference to the particular case rather than attaching a pre-determined significance to an occupational classification.

The Commissioners nominally considered updating the PDES by researching what percentage rates would reflect loss of earning capacity but quickly reached the following conclusion:

*Suggestions are made from time to time that the permanent disability evaluation schedule should be brought up-to-date and extended. If the percentage rates are to be based, however, on the averages of actual earning capacity a major research project would be required. **We are skeptical about devoting such resources to improving the detail of this system when the use of this method at all is of doubtful validity.***¹⁶

(emphasis added)

¹⁴ Ibid, p 32

¹⁵ Ibid, p 33

¹⁶ Ibid, p 32

2.4.2 Injustice in “Averaged Impairment”

Another problem with Schedules is that the estimated impairment of earning capacity was based on a theory of mass averages. Even assuming that there was some correlation between this and functional impairment, the Commissioners found the argument for mass averages estimates unconvincing stating:

*If one claimant is being grossly under-compensated in comparison with the actual loss of earning capacity, and if another claimant is being grossly over-compensated to the same extent, should we really take any comfort in the thought that the average claimant is being fairly treated, or that the right amount is being paid out in total? **There is no such thing as justice on average.***

(emphasis added)

2.4.3 Compensation for Impairment other than Earning Capacity

The Commissioners also noted that at the same time that some workers were severely undercompensated for their loss of earning capacity, a larger number of workers were “overcompensated” by a small amount in terms of a strict “economic loss” approach. That is, a worker may seem “overcompensated” where that the worker has sustained permanent functional impairment but suffers no loss of earnings.

In reviewing this issue, the Commissioners concluded that compensation for PPD should not only apply when there has been an impairment of earning capacity. This concept is based on a recognition that the worker suffers an inherent loss by physical impairment itself, as illustrated by the following example:

There seems to be a generally accepted feeling that if a man has suffered say the loss of an arm at work, he ought to receive compensation whether or not there is any actual impairment of earning capacity; and this view seems to have prevailed under most systems no matter what the wording of the particular legislation.¹⁷

We agree that this is still the advantage of the schedules and the functional impairment approach; they allow for permanent partial disability benefits based on the general justice in that a permanent disability should not go uncompensated even when it does not result in impairment of earning capacity. This is the primary purpose of the functional method in other jurisdictions (discussed below) and is another reason that the PDES should be updated and scientifically valid in its assessment of WBI. This concern is in addition to the concerns we have about the use of the PDES to measure impairment of earning capacity.

2.5 Decision No. 8 - Concerns regarding the PDES leads to the Dual System

Decision No. 8 concluded that schedules based on functional impairment alone cannot estimate impairment of earning capacity as required by the Act. The Decision also clearly articulated the problems with universal application of the PDES where each worker with the same injury receives the same award, regardless of occupation or the effect of the injury on earning capacity.

¹⁷ Ibid, p 29

Decision No. 8 looked at this result and concluded that at its core, the PDES approach alone necessarily resulted in injustice.

It is remarkable that only seven years after Dr. Bell researched and compiled his tables, the Commissioners found such significant problems with the PDES as an estimate of the impairment of earning capacity that they introduced a dual system to rectify its deficits.

Board policy was then amended to include a dual system of paying the higher of a functional impairment and a Loss of Earnings (LOE) for spinal injuries.¹⁸ The dual system was extended to injuries not involving the spinal column as of October 1, 1977 by Decision No. 297 dated March 30, 1977. The dual system remained in effect until the legislative amendments in 2002.

2.6 2002 - Resurrection of the PDES as Primary Method of Assessing PPD

In 2002, the *Act* was amended to make LOE awards under section 23(3) payable only if the combined effect of the worker's occupation and the worker's disability was "so exceptional" that the functional award under subsection (1) failed to appropriately compensate the worker for the injury. The Board interpreted this legislative provision in a highly restrictive process under Policy #40.00. As a result, the policy and the Board's legislative interpretation have been the subject of repeated challenges and policy amendments.

With these changes in legislation and policy, section 23(1) effectively became the sole mandatory method of assessing a worker's PPD, and under section 23(2) the PDES and the functional impairment method became central to compensating permanently disabled workers. As noted by the Commissioners, in almost every case the functional award represents only a fraction of this impairment. The ameliorating effects of the dual system on the injustice inherent in WBI ratings now occur only in exceptional cases.

The legislative changes were not consistent with the concerns expressed in the Core Review, in which Mr. Winter recommended that section 23(3) of the *Act* remain unchanged and that the Board retain discretion to apply the dual System and LOE pensions when appropriate given the concerns with the PDES and the WBI method of assessing PPD. He also strongly recommended that the WCB conduct a review of the PDES to ensure that it accurately reflected current medical/scientific knowledge¹⁹ and that it be expanded from a rating scale for a strictly functional impairment to a scale rating impairment of earning capacity.

¹⁸ At this time, decisions of the Commissioners constituted Board Policy and even though they are no longer policy, these decisions are instructive on the reasoning behind basic policy concepts. As the Commissioner's decisions are no longer readily available, we have appended selected Commissioners decisions in Appendix H for reference of the readers.)

¹⁹ Core Services Review of the Workers' Compensation Board, Alan Winter, WCB Core Reviewer, March 11, 2002

To reiterate Mr. Winter's primary considerations for a PDES review:

*Pursuant to Section 23(1) of the Act, **the percentages set out in the PDES must reflect the estimated impairment of the worker's earning capacity arising from the nature and degree of his/her injury. The specified percentage should not simply reflect the percentage of medical impairment which the injury represents vis-à-vis the total disability of the person.***²⁰

(emphasis added)

Despite these recommendations, Section 23(3) of the Act was amended while the PDES was not.

The current PDES has now operated for over 10 years to impose functional impairment as the primary method of assessing workers' impairment of earning capacity. The Board's current policy proposal recommends entrenching the same PDES with only a few modifications. The reasons for not doing so, according to the Commissioners and even the Core Reviewer, are compelling and discussed further below.

²⁰ Ibid, p 202

3. ECONOMIC IMPACT OF PDES AFTER 2002

3.1 Financial Wind-Fall to the Accident Fund

There can be no discussion about the role of the PDES in workers compensation without an understanding of the economic issues behind this debate.

In the 2002 Core Review Alan Winter acknowledged the limitations associated with the use of the PDES, but highlighted its administrative efficiency. He stated:

The primary advantage of the loss of function method is that it is administratively efficient to apply. The WCB is not required to re-adjudicate the worker's entitlement whenever there is a fluctuation in his/her employment situation, since the impact of the worker's disability on his/her earning capacity as a result of the fluctuation had already been contemplated in the initial pension award. The obvious disadvantage is that the loss of function award is based on the nature and degree of the disability, which may have no relationship to the actual loss suffered by the worker.²¹

(emphasis added)

However, administrative efficiency is not the only, or even the primary advantage which was considered in these historical events. The key impact of the PDES in its current form, aside from its administrative efficiency, relates to its financial impact on the Accident Fund. With the virtual elimination of the Dual System, and the reliance on the PDES and WBI alone as an assessment of loss of earning capacity, there has been a reduction in permanent disability claims cost to the Accident Fund of almost **\$3 billion between 2004 and 2012**.

In brief, we have used the Consolidated balance sheets published by the Board²² and looked at that cost of Long-Term Disability claims ("LTD claims") reported by the Board under Schedule A. It is clear from these reports that the Board's LTD costs have been dramatically reduced since the Bill 49 changes in 2002 and the ensuing changes to Board policy. Details of the estimates and assumptions used in coming to this conclusion are set out in Appendix I.

We have assumed it likely that a very significant portion of these reductions in costs are due to the Board's compensating PPD by means of functional impairment alone and by not estimating an LOE impairment except in exceptional circumstances. This view is supported both by Board policy and practice and by the dramatic decline in the number of LOE awards under section 23(2) in the same period. Clearly, there are a very large number of post 2002 PPD awards made on the basis of functional impairment that previously would have received an LOE award based on assessment of the individual worker's actual circumstances under section 23(3) of the *Act*.

Between 2001 and 2003 the cost of LTD claims to the Board were reported as \$742,605,000, \$738,273,000 and \$691,555,000 respectively or an average of \$724,144,330 per year. There is lag time for the effects of claims costs to appear in disability awards and each of these three consecutive years likely represent a pre-Bill 49 profile of LTD claims costs. The three years also fall within a fairly close range and so it is reasonable to use these three years (2001-2003) as a

²¹ Ibid, p 195

²² http://www.worksafefbc.com/publications/reports/annual_reports/assets/pdf/2012/10YrSummary.pdf and http://www.worksafefbc.com/publications/reports/annual_reports/assets/pdf/2010/10YrSummary.pdf

pre-bill 49 baseline for permanent disability costs. In order to be very conservative we have reduced that average \$724M/year baseline cost to an even estimate of \$700M per year.

Using this baseline LTD cost estimate of \$700M, we set out the Board’s LTD costs after Bill 49 (2004-2012) and the difference between the pre- and post-Bill 49 costs for each year.

Table 1 Reduction in Permanent Disability Awards post Bill 49

Year	Baseline	LTD Cost	Difference
2004	\$ 700,000	\$ 459,094	\$ 240,906
2005	\$ 700,000	\$ 504,081	\$ 195,919
2006	\$ 700,000	\$ 376,384	\$ 323,616
2007	\$ 700,000	\$ 294,622	\$ 405,378
2008	\$ 700,000	\$ 306,354	\$ 393,646
2009	\$ 700,000	\$ 235,283	\$ 464,717
2010	\$ 700,000	\$ 220,785	\$ 479,215
2011	\$ 700,000	\$ 418,571	\$ 281,429
2012	\$ 700,000	\$ 547,588	\$ 152,412
Total	\$ 6,300,000	\$ 3,362,762	\$ 2,937,238

Between 2004-2012, the difference between LTD claims cost to the Board and a base line cost of \$700,000,000 (based on pre-Bill 49 figures) is estimated to be \$2,937,238,000. This demonstrates that there is a clear and dramatic financial benefit to the Accident Fund when permanently injured workers who experience a loss of earning capacity are provided a functional award under the PDES instead of being compensated for their true impairment in earning capacity. Of course, more refined assessment could and should be made with more complete information.

3.2 PDES and its negative financial impact on permanently injured workers

Worker representatives often see the effects of a small “loss of function” award on individual workers with a significant loss of earning capacity. Any worker representative who has assisted workers with compensation claims before and after the 2002 changes regularly sees such undercompensated workers. The example of the worker provided in the first paragraph of Decision No. 8 is still representative of this group:

In the course of adjudication on a recent appeal involving a spinal column injury, we were disturbed to find that a permanent partial disability pension based on 7.5% of total disability had been awarded notwithstanding that the loss of earning capacity, on any view of the case, seemed to be at least 50%.

Under the current legislation, it is not uncommon to see this same worker denied assessment for a LOE award under the Board’s policy #40.00 (RSCM II) and section 23(3) of the *Act*. For such workers, who are in very significant numbers, the use of the PDES and its functional impairment method results in their not being compensated for their impaired earning capacity and receiving small fractional awards which have no relationship to this loss of capacity.

In effect, in this post-2002 context, the PDES has become a vehicle for abandoning the Board's responsibility to assess a worker's loss of earning capacity as a result of injury. This abandonment has a wide-spread and negative financial impact on a worker suffering such a loss and in our experience it commonly leads to impoverishment of these workers and their families, especially over time. In a very real way, the PDES shifts the costs of permanent injuries from the Accident Fund to the injured workers. At an immediate level, this abandonment also shifts the costs of permanent work injuries to other benefit areas such as Long Term Disability plans and to other social insurance benefits and programs funded by taxpayers.

To date there has been a lack of factual information on the financial impact of the PDES and the WBI method of assessing PPD on injured workers suffering a real impairment of earning capacity.

Given the events of the last ten years a comprehensive review of all workers awarded a PPD from June 30, 2002 to the present should be conducted. Such a review would provide an insight into the real costs, and transfer of costs, of the current and proposed PDES. This information is essential to determine if it is possible to create a schedule that estimates impairment of earning capacity based on type of injury and to improve values for ratings for WBI.

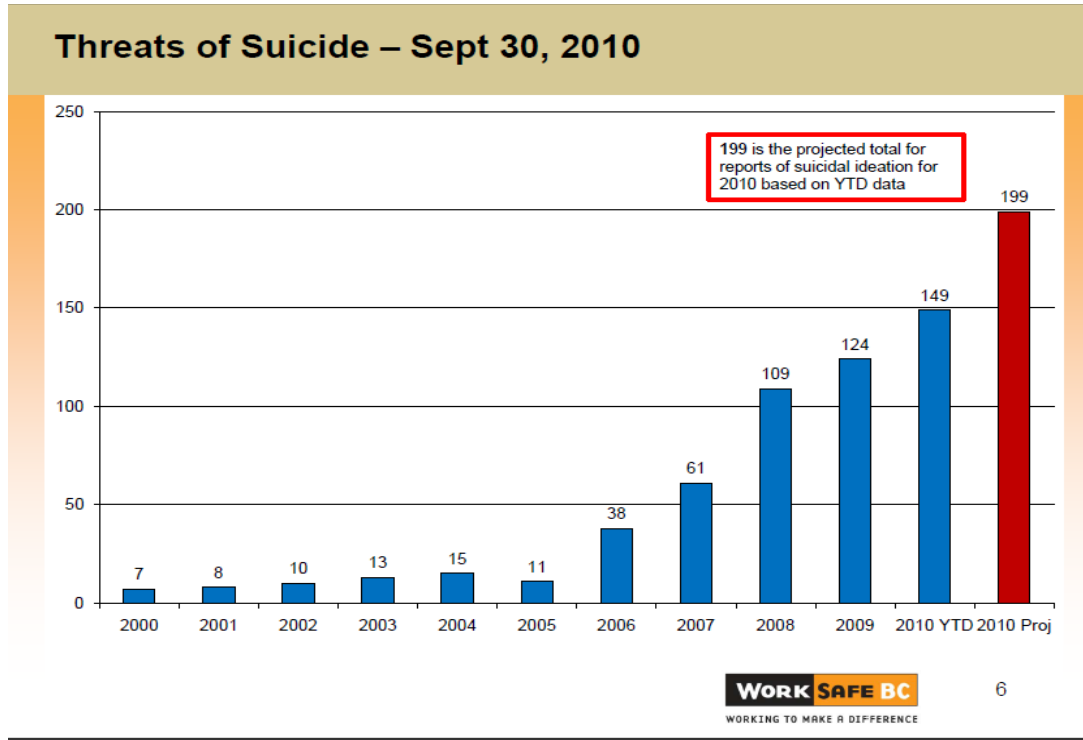
Finally, we ask that this review consider in detail the transfer in costs for work-related PPD to other parts of society which would include Long Term Disability Plans and publicly funded benefits including Canada Pension Plan disability benefits and social assistance.

3.3 Negative Psychological Impact of PDES Awards

There is also a human cost to the PDES, for those workers who experience a deep and true loss of earning capacity. For these workers, this loss affects all aspects of their life and as the nature, severity and permanence of this loss is becoming manifest, the worker is told that this loss may be measured by a ROM and compensated in a small percentage of their claim wage rate. In our view, there is a documented increase in worker distress and much of it stems in part from the Board's use of the PDES to trivialize and undercompensate real loss.

The negative message of a functional award in light of a real loss of earning capacity is amplified by the Board's practices regarding return to work (RTW) outcomes. We have seen many, many claims in which the Board has deemed that the worker was able to return to the same employment full time, full duties when that was not the case. Often the Board "deems" a successful RTW on the basis of a PDES-type assessment which gives weight to a narrow band of medical restrictions and limitations and ignores many other factors which affect earning capacity, including endurance, tolerance and the impact of disability on competitive employment. And while the RTW "deeming" decision makes the VR plans consistent with the PDES functional award (and denial of loss of earnings awards), the combined "functional impairment" approach resolutely refuses to acknowledge or accept or help or compensate the seriously injured worker with their impaired earning capacity. Rather, the approach sends the message that any impairment of earning capacity will not be acknowledged or compensated and may even be the result of some deficiency in the worker. This is an extremely negative message at a critical time for seriously injured workers and is often experienced as an absolute betrayal at a time of need.

The negative psychological impact of the 2002 amendments on workers has not gone unnoticed or undocumented. Jennifer Leyen, Director of Special Care Services for WSBC presented the following statistics on suicide threats in October 2010.²³



It is clear from the Board’s statistics that the dramatic increase in suicide threats began around the time that the impact of the 2002 amendments to the Act started affecting workers with PPD awards. Statistically, the 20 fold increase in suicide threats is proportional to the 20 fold decrease in LOE awards.

The Board cannot ignore the 742 suicide threats outlined in its own statistics. It is necessary to investigate and analyze the circumstances and factors that led them to this desperate situation with a focus on the Board’s practices around PPD. We recommend that a thorough investigation be done by a third party who is completely independent of the Board and on a confidential and compassionate basis.

Overall, we suggest that there is a close connection between the Board’s use of the PDES to evaluate and compensate seriously injured workers and these negative psychological outcomes. Typically the most emotionally devastating situation for workers we represent is when they realize that the physical and financial loss from their injury is permanent and life altering. By accident or by design, the PDES tells workers at this critical moment of Maximum Medical Recovery (MMR) that their disability consists only of a small percentage functional impairment and that this disability may be measured in something irrelevant to their disability experience, such as ROM. It is often accompanied by a false and/or arbitrary determination that they can

²³ Special Care Services, Building a Culture of Caring, Jennifer Leyen, Director October 21, 2010

return to work without significant impairment of their earning capacity. It is difficult to overstate the negative impact of this type of assessment on a worker struggling to come to terms with a life-altering event.

3.4 Additional Calculation Issues in PDES Awards

There are several additional matters in Board practice around PDES awards that have an economic impact on all parties and should be addressed in a comprehensive PDES Review.

3.4.1 Lump Sum Payments of Disability Awards

For the purpose of this discussion on lump sum payments, we will reference the Board's policy items #45.00, #45.10 and #45.60²⁴. Policy item #45.00 references section 35(2) of the *Act* that provides:

The Board may in its discretion

- a) commute all or part of the future amounts that are to be set aside for payment of a retirement benefit and the periodic payments due or payable to the worker to one or more lump sum payments, to be applied as directed by the Board; and*
- b) divide into periodic payments compensation payable in a lump sum.*

Policy item #45.60 allows the Board to apply a discount rate on the payment of a lump sum. The principle behind this is that the worker would be able to invest the lump sum and receive interest on that investment. The discount rate is intended to account for the interest the worker would be able to earn on the lump sum so that the total lump sum is sufficient to return the monthly payment amount to the worker including the interest.

The discount rate is currently set at 5% based on what the Board expects to earn from its investments. The rate will change according to economic and investment expectations on the Board's earnings. Regardless of what the rate is set at it will likely be much higher than what a worker may expect to earn on a typical lump sum in a low risk investment.

It appears that WorkSafeBC reaps a significant windfall by application of a discount rate that favours the Board and disadvantages the permanently disabled worker.

There should be an analysis by an independent expert on the impact of the discount rate on commuted lump sum awards. Using the information from that analysis an appropriate discount rate should be established; one that reflects the reality of the amount a worker would be expected to earn in a secure investment and that matches the total value of the PPD over the term it is to be paid.

²⁴ Rehabilitation Services & Claims Manual, Chapter 6- Permanent Disability Awards

3.4.2 Term of Payment

The ratings in Dr. Bell's tables were established on the basis of workers receiving compensation for life. Bill 49 amended this to allow for termination of benefits at age 65 unless there was substantive proof at the time of injury that the worker would work past age 65. By changing the period allowable for receipt of benefits from life to age 65, the value of the ratings has been significantly reduced. Although there is no empirical data on which the ratings are based if the payment is made to age 65 instead of life, there must be an adjustment to the ratings to account for this change.

4. THE PDES AND THE AMERICAN MEDICAL ASSOCIATION (AMA) GUIDES TO THE EVALUATION OF PERMANENT IMPAIRMENT

There is considerable discussion of the use of the AMA Guides and their use of relevant science associated with a Diagnosis Based Impairment model in assessing permanent partial disability.

The Board's Discussion Paper recommends against the use of the AMA Guides and references the testimony of Emily Spieler before the US Congress on the use of the AMA Guides.²⁵ In her testimony, Professor Spieler stated her concern with the trajectory of state workers' compensation programs to compensate on the basis of functional impairment rather than on impairment of earning capacity. At page 2 she stated:

Analyses of trends in workers' compensation suggest that the adequacy and availability of compensation are declining, perhaps significantly. States are erecting greater barriers to compensability. Increasing weight is being given to impairment ratings, and fewer and fewer jurisdictions offer wage replacement benefits without time limits.

Ironically, her summary is a good description of the BC experience since 2002.

The fundamental problem with the AMA Guides, like the current PDES, is that these schedules rate functional impairment and do not rate impairment of earning capacity. However, unlike the PDES, the AMA Guides do not purport to try to do so. The AMA Guides directly state the contrary:

*The Guides is not intended to be used for direct estimates of work participation restrictions. Impairment percentages derived according to the Guides' criteria do not directly measure work participation restrictions*²⁶

The Policy and Regulation Division's referencing of Professor Spieler's criticism of the AMA Guides to support the PDES is a misapplication of her concerns. Professor Spieler's detailed criticism of the AMA Guides in a compensation context would apply equally to the PDES with respect to their inability as a Schedule to estimate of loss of earning capacity. Nor does Professor Spieler suggest that this is an appropriate role for a Schedule based purely on a functional impairment method of assessment.

Professor Spieler made the following recommendations:

*We can improve the approach and increase by validity and reliability, but I doubt that we can turn to the AMA in this effort. As the Guides itself indicates in each edition, **physicians lack the necessary expertise to assess non-medical issues.***

²⁵ Written Statement of Emily A. Spieler, J.D. Dean and Edwin W. Hadley Professor of Law Northeastern University School of Law Boston, Massachusetts Before the Subcommittee on Workforce Protections Committee on Education and Labor U.S. House of Representatives November 17, 2010

²⁶ AMA Guides to the Evaluation of Permanent Impairment, Sixth Edition page 6

Moreover, they are driven by normative judgments of ‘what is right’ – thus making social policy in the guise of medical science.

Despite the availability of both recent studies and the historical information in workers’ compensation statutes, the AMA has continued to publish Guides with ratings that do not incorporate the available data.

*I urge that you ask the National Academies of Science / Institute of Medicine to conduct a review. **This review should include recommendations regarding the best way to develop a new system for rating workers’ injuries as measured by the impact of those injuries and diseases on the extent of permanent impairments, limitations in the activities of daily living, work disability and nonwork disability (or noneconomic losses).***²⁷

(emphasis added)

The recommendations of Professor Spieler are remarkably similar to Decision No. 8. Like the Commissioners, Professor Spieler cautions against relying on schedules that are based on degrees of loss of function from normative values rather than measurement of the actual impact on activities of daily living, work disability and non-work disability. And like those contemplated by the Commissioners, the rating system that she describes, would have to be empirically based and include non-medical factors, including vocational or occupational factors. For these reasons, we also do not advocate relying on the AMA Guides as a substitute for the PDES, especially since they were designed for a different purpose.

However, the research and knowledge that has resulted in the evolution of the AMA Guides is necessarily relevant to any review of how to evaluate permanent impairment. The AMA Guides are the predominant forum for discussion and advancement of the science of the evaluation of permanent impairment and should not be ignored.

²⁷ Written Statement of Emily A. Spieler, J.D. Dean and Edwin W. Hadley Professor of Law Northeastern University School of Law Boston, Massachusetts Before the Subcommittee on Workforce Protections Committee on Education and Labor U.S. House of Representatives November 17, 2010, page 14

5. INTER-JURISDICTIONAL COMPARISON

After Dr. Bell's tables were first introduced every Canadian jurisdiction utilized a form of these tables as a schedule to compensate for impairment of earning capacity. All Canadian jurisdictions, including BC²⁸ ceased at some point to use the schedules to compensate for impairment of earning capacity. **Schedules were abandoned as a measure of impairment of earning capacity due to a conclusion that there was no connection between the schedule and impairment of earning capacity.**

The PDES is not truly comparable directly to other jurisdictions in Canada unless the other jurisdiction's schedule is used to compensate for economic loss. Every other schedule is used to award for non-economic loss due to loss of function of the whole person with the exception of the Northwest Territories (NWT)/Nunavut. The Schedule's use in the NWT/Nunavut will be compared to the PDES later in this section.

It is reasonable to compare the PDES with other schedules to demonstrate how arbitrary and senseless the values are. There is no rhyme or reason as to why a lumbar disc surgery in BC should be rated at 2% and the same condition rated at 10% in Alberta. There are many other incongruities between schedules. Where there are differences between the PDES and the schedules in other jurisdictions the PDES is almost always lower. In the example of spinal injury between Alberta and BC the difference is five-fold.

The NWT/Nunavut Permanent Impairment Guide is the only schedule in Canadian jurisdictions that is used in the same manner as the PDES is used in BC. As is the case with schedules in other Canadian jurisdictions that are used only for non-economic awards the ratings for many conditions start off much higher than the PDES. The ratings for spine conditions are typically five times the value of similar conditions in the PDES. However, the legislation in this jurisdiction is vastly different from that in BC. In addition to a scheduled value on the medical value of impairment of the whole person, allowances for additional compensation are made. In particular, a pension can be increased if:

- (a) The amount of the pension of the worker's earning capacity caused by the permanent disability is greater than the percentage of the worker's reduction in physical and mental disability; or
- (b) The worker's annual net remuneration before the personal injury or disease did not fairly represent the worker's probable earning capacity.²⁹

Permanently disabled workers in NWT/Nunavut receive an increase in their scheduled award in order to compensate for impaired earning capacity. Fifty percent (50%) of the Permanent Medical Impairment (PMI) rating is added to the PMI where the worker is unable to fully return to pre-injury or other comparable employment because of their PPD and one hundred percent (100%) of the PMI rating is added where a worker is not employable in any capacity. Thus, workers in this jurisdiction are receiving between 7.5 to 10 times the compensation as BC workers for the same conditions being assessed under the PDES, where both have suffered an economic loss.

²⁸ As per Decision No. 8, 22, 33, 160, 184, 202, 220, 287, 297 and 394 and the Dual System

²⁹ <http://www.wsccl.nt.ca/YourWSCC/Resources/Documents/Workers%20Compensation%20Act.pdf>

The extreme differences in values for particular conditions between jurisdictions draws into question the validity of the values assigned to particular conditions. The BC PDES values should not be in the low range, particularly given that current law and policy require the functional method to be used to assess impairment of earning capacity and the actual individual's impairment of earning capacity is used only in exceptional cases. The PDES then must be at the high end of the ratings given that in all other jurisdictions the schedules are simply supplemental to an economic loss award that compensates for the impairment of earning capacity on an individual basis.

The Association of Workers' Compensation Boards of Canada provides a table comparing Permanent Disability Awards and Benefits.³⁰ A review of this table and the linked information from other provinces indicate that very few other jurisdictions continue to use a schedule to compensate for permanent impairment other than for non-economic loss.

The review of the PPD process that we are calling for in our recommendations needs to include a full jurisdictional comparison.

³⁰ http://www.awcbc.org/common/assets/benefits/permanent_disability.pdf

6. SPECIFIC CONDITIONS LISTED IN THE PDES

In the section above, we describe the inadequacies of a WBI measurement to assess lost earning capacity. We question whether there is any direct connection, empirical or theoretical, between these two concepts in the current PDES.

In this section, we address the current PDES's scientific and policy criteria for assessing impairment of function for different conditions. While measurement of functional impairment is not sufficient as a sole factor in the assessment of the loss of earning capacity, it is still a key factor and as such ought to be based on scientifically sound criteria.

We will now address the Board's proposals with respect to the various body functions in the PDES.

6.1 The Spine

The assessment of the spine under the PDES has been essentially unchanged since 1966. Anatomical loss is rated by loss of ROM with the exception of cases where there is a compression fracture surgical procedure. In these cases, there are ratings per level and the higher of the two methods is used in rating impairment of the spine. The preamble to this section makes a telling comment on ROM to measure functional impairment of the spine. It states:

Range of movement of the spine is difficult to assess on a consistent basis because the joints of the spine are small, inaccessible and not externally visible.

Only movement of a region of the spine can be measured; it is not possible to measure mobility of a single vertebra. Spine movement also varies with an individual's body type, age and general health. Because of these, a judgment factor will continue to be necessary in spine assessment.³¹

An approach involving a "judgment factor" is not utilized in the Board assessment of the spine. Here again one of the fundamental principles of assessment of PPD established by Dr. Bell is not adhered to. This demonstrates another inconsistency in the substance and application of the PDES.

The Board's discussion paper recommends retaining this largely ROM system of measurement for the spine and limbs because it "is the gold standard" for measuring functional impairment. Proponents of the range of motion method take the view that:

- loss of motion is observable and quantitatively measurable in a valid fashion;
- functional factors like strength, endurance, and coordination allow for a more individualized assessment than diagnosis, which may be associated with wide variations of functional impairment;
- the range of motion method lacks reliability only insofar as it can be skewed by an examinee's suboptimal effort; and

³¹ Rehabilitation Services & Claims Manual Appendix 4- Permanent Disability Evaluation Schedule, The Spine , page A4-11

- DRE (diagnosis-related estimate) or DBI (diagnosis-based impairment) categories are not defined by experimental procedures or measurements, they are defined by diagnostic criteria which may vary depending on the source consulted. As a result, those categories lack empirical meaning.³²

For many years, the *Guides to the Evaluation of Permanent Impairment* published by the American Medical Association (AMA Guides) have been developed by scores of the leading authorities using the most contemporary science based concepts and terminology of disablement to promote consistent scoring of impairment ratings with increased transparency and precision. The purpose of the AMA Guides is not any different than the PDES for measuring functional impairment. The AMA Guides are direct and accurate in stating they assess functional impairment or WBI, not earning capacity as the Board inaccurately claim for the PDES. We do not recommend the Board adopt the AMA Guides wholesale to assess functional impairment as many other jurisdictions have. Rather, the science and practices of diagnosis based impairment should be adopted for a made in BC schedule that reflects appropriate values for WBI.

We retained an expert, Dr. Robert Rondinelli, to assess the appropriateness of the Board's proposal to continue to rely on the current methods in the PDES to assess functional impairment of the spine. Dr. Rondinelli's report is set out in Appendix A to this submission, as are his qualifications to provide this expert opinion. In brief, Dr. Rondinelli is a Board Member: American Board of Independent Medical Examiners (ABIME); a Certified Independent Medical Examiner (CIME); and an internationally recognized expert on impairment ratings and disability determinations. He is also the Medical Editor of the most recent edition of the AMA Guides, 6th Edition.

In his extensive report, Dr. Rondinelli reviews the science of measuring functional impairment of the spine and notes that it has progressively evolved away from reliance on ROM to the point that it is no longer even a standalone consideration in the current edition of the AMA Guides.³³ We ask that his report be accepted as an important contribution to the revision of the PDES.

His main concerns are as follows:

1. ROM has Lack of Content Validity as a Measure of Functional Impairment

Dr. Rondinelli concludes that scientific studies have repeatedly shown that spinal ROM lacks validity as an indicator of spinal function for impairment rating. According to the studies, there is no clear evidence of an association between loss of spinal ROM and loss of function as measured in terms of mobility, other objective measures of condition severity or functional capabilities in the activities of daily living (ADLs). Dr. Rondinelli also concludes that any potential relationship is confounded by other factors, including a lack of norms to measure functional ROM, lack of a consistent relationship between ROM and pain for acute and chronic lower back pain, and lack of predictive associations between loss of spinal ROM and loss of ADLs.

³² WorkSafeBC PDES Discussion Paper December 2012

³³ AMA Guides to the Evaluation of Permanent Impairment, Sixth Edition Chapter 17 The Spine and Pelvis

2. ROM does not have Reliable and Reproducible Measurements

The Board's discussion paper claims that ROM can be skewed only by an examinee's sub-optimal effort.³⁴ Dr. Rondinelli concludes otherwise, based on current scientific literature that current spinal ROM measurement techniques lack necessary levels of reliability and reproducibility, even in the hands of experienced evaluators. The magnitude of the potential measurement error is sufficient to raise doubts about any examiner's rating of spinal impairment in a clinical setting. In his view, the measurement of ROM can be skewed by a number of factors including:

- lack of standardized terminology
- reference coordinates
- measuring technique
- instrumentation reliability
- inter rater variability and intra rater variability

Dr. Rondinelli's view is well illustrated in a recent WCAT decision³⁵ in which the Vice Chair quoted a Senior DAMA's memo regarding a huge variance in ROM measurements in two Permanent Functional Impairment Evaluations (PFIE) of the same worker six months apart. The Senior DAMA stated:

Measurements of human performance, even in intensely trained elite athletes, vary from one examination to another, even if performed by the same examiner immediately following the first examination. Untrained patients being re-examined have considerably greater variation in performance. The examination report is only a verbal picture of their performance at one point in time. The performance may be more symmetrical at one examination, and less so at another. The measurements are recorded as accurately as possible by the physicians, but minor variations are not considered significant. For WorkSafeBC's purposes a difference of 5 degrees or more must be present to be significant. Some jurisdictions consider values within ten degrees to be equal, while the American Medical Association Guides allow a 10% difference as equal performance. Finding round figures is neither extraordinary, nor is it inconsistent with normative values.

Dr. Rondinelli has provided a powerful review of current scientific literature. Based on this, he recommends that spinal ROM be abandoned as the principal measure of spinal function in the PDES. Simply put, the Board's proposal to maintain ROM as the primary measure of functional impairment for the spine and limbs is unsupported by current scientific evidence.

In contrast, we requested that the Policy Analysts assigned to the discussion paper provide us with any scientific reports or studies to support the conclusions that ROM was a valid and reliable measure of functional impairment. Although we are grateful for the considerable amount of information we received in response, we have yet to receive any documentary evidence to

³⁴ PDES Discussion Paper, December 2012, p 24

³⁵ Decision Number: WCAT-2013-02191, July 31, 2013

support ROM as a valid and reliable measure of functional impairment. No scientific studies were provided.

WCAT Decision: 2013-02191, July 31, 2013 is one example that illustrates the problem with using ROM to measure functional impairment. It also refutes the Board's assertion that ROM can be skewed only by an examinee's sub-optimal effort.

In this case a worker was assessed twice by two different examiners for the same condition which had not significantly changed between the two examinations. The first examination was by a Board Disability Award Medical Advisor. The second was by an external service provider physician. The first examination appeared to be done reasonably well with the exception that it appeared that there was only one measurement made of motions instead of three to ensure consistency. In the second PFI examination all the figures were rounded to increments of 5 degrees. Appropriate instrumentation was not used. Landmarks for measuring motion were not used. The measured ROM was greatly at odds with measurements in every other medical examination of the worker. The most glaring error was that in the second PFI examination the measured leg length was 5 cm greater than that made by other expert examiners before and after the questionable examination.

There is a lack of quality control in regards to PFI examinations conducted by WorkSafeBC. It is apparent that in other jurisdictions and studies there has been systematic evaluation of the quality and consistency of PFI assessment. Similar quality control is required here. The poor quality of PFI assessments further impugns the PDES and the Board's practices on PPD assessment.

As may be seen from his report, Dr. Rondinelli also recommends that any revision of the PDES give consideration to an alternative rating system and to alternative metrics. In particular, he recommends an alternative method that plays to the diagnostic strengths of the rating physician and lends itself to the evidence-based scientific underpinnings of a diagnosis-based approach. We ask that the use of a Diagnosis Based Impairment model of spinal impairment as proposed by Dr. Rondinelli be considered although the model should be made in BC rather than adopted directly from the AMA Guides or other schedules. Diagnosis based measures are the best method that is available.

6.2 The Limbs

The PDES relies almost entirely on reduced ROM for the assessment of the limbs, as it does for the spine. However, ROM is only one aspect of limb function and while it has some relevance for joint injury, ROM typically does not address soft tissue and muscle/tendon impairment. In fact, there are many limb injuries where joint ROM is not reduced or is even increased notwithstanding a significant functional impairment of that limb.

A real example of this is an operating room (OR) nurse who suffered traumatic epicondylitis as a result of a work incident. Her injury was surgically treated but the tendon would not always stay in place. She was unable to perform the duties of an OR nurse as they are quite physically demanding on the upper limbs. The employer was able to accommodate the nurse in an alternative job (scheduling) but her opportunities in this accommodated job were quite limited. Although she had very severe non-ROM limitations in her arm, the ROM of her injured arm was not reduced from that of her uninjured arm so her functional impairment was rated at 0% despite her significant functional impairment.

It is claimed in the discussion paper that functional factors such as strength endurance and coordination are considered under PDES based assessments while they are not under diagnosis based methods, such as in the AMA Guides. This is not true. As a matter of practice, such factors are not recognized or assessed under the PDES with the exception of strength, which may be assessed in very rare circumstances under Additional Factors Outline (AFO) for upper or lower extremity cases.³⁶ And if impairment can be assessed by ROM, the AFO does not allow strength to be considered at all.

The current proposal is to incorporate the AFO into the PDES. But the values for limb strength in the AFO demonstrate lack of consistency and scientific validity as a measure of WBI and are difficult to reconcile with a ROM method. For example, a worker who loses a lower extremity altogether is provided 65% WBI under the PDES. By contrast, a worker whose limb is still present has marked loss of strength or no power is rated at 5% and 7% WBI, respectively, even though the limb is functionally useless. These internal inconsistencies will not be addressed by the Board's proposal to incorporate the AFO into the PDES.

We submit that the measurement problems for the spine noted in Dr. Rondinelli's report also apply to the limbs for ROM with the exceptions that movement of individual joints can be measured in the limbs. We would support the use of a diagnosis based schedule using methods similar to those in the AMA Guides but with ratings developed in BC.

6.3 Psychological Disability

Our major concern with the PDES as it relates to psychological disability is the manner in which the Board rates the impairment.

In other types of PFI examinations the examiner provides a measurement for the condition rated under the PDES. However, we frequently see psychological conditions that are rated as moderate or severe by the psychologist or psychiatrist conducting the examination and then rated in the mid or low mild range by the Psychological Disability Awards Committee (PDAC). The PDAC's practice of re-determining and lowering the PFI rating, rather than accepting the PFI examiner's rating means that workers with psychological injuries are treated in a different manner from those with physical injuries. It also means that the rating does not have the validity of an independent expert examiner but is open to organizational bias in the rating.

The Supreme Court of British Columbia commented on PDAC's practices in *Bagri v. Workers Compensation Appeal Tribunal* 2009 BCSC 300. In this case, the court found that the PDAC effectively disregarded the findings of the external service provider and substituted their own views with respect to permanent impairment. The court found this practice to be 'patently unreasonable' and commented:

Policy 97.40 of the WCB provides that the report of a “. . . external service provider takes the form of expert evidence which in the absence of other expert evidence to the contrary, should not be disregarded”. Nevertheless, the PDAC and, it turns out, the Vice Chair completely disregarded Dr. Shergill's expert

³⁶ Additional Factors Outline, Upper Extremity Conditions, 2. Strength, p 13, and Lower Extremity Conditions, 1. Strength, p 18

evidence even though there appears to be no other expert evidence to the contrary.

Given the clarity of the Psychological Guidelines together with the PDES rating for psychological impairment, external providers are clearly able to provide sound expert opinion on impairment, based on a clinical examination of the worker. In the absence of expert evidence to the contrary, it is patently unreasonable for the PDAC to substitute its own different assessment. It is also contrary to Board policy and undermines the integrity of the PDES schedule for these injuries.

We recommend that Board Policy be amended to direct the PDAC to accept the outside ratings and apply the Guidelines accordingly.

6.4 Respiratory Conditions

Respiratory conditions are currently not part of the PDES. The Board's proposal is to incorporate a section XVIII ASTHMA from the AFO into the PDES. Asthma is only one of many respiratory or pulmonary conditions and to add only asthma would be significantly incomplete. Further, we note that the ratings for asthma were adapted from the AMA Guides and then the ratings were lowered. There should be comprehensive consultation with external experts in regards to assessment and rating of all respiratory/pulmonary conditions.

6.5 Non-Scheduled Awards

Non-scheduled awards involve a DAMA making a judgement about functional impairment. The unreliability of the ratings in the PDES puts values of any non-scheduled award into question. We recommend that non-scheduled items be included in a comprehensive review by external experts.

6.6 Additional Factors Outline

The Discussion Paper proposes to move elements of the AFO into the PDES. The AFO was initially issued June 16, 2004 and last revised on December 29, 2006. It is outdated. Furthermore, the AFO was developed internally by Board DAMAs without proper consultation from independent experts or stakeholders.

For these reasons, we recommend that the AFO, or elements of it, should not be moved into the PDES and enshrined in Board policy. Rather, the AFO should only be used on an informal basis, as a guideline, until such a time as it is updated in a comprehensive review of the assessment of PPD.

7. ONGOING REVIEW

The Discussion Paper proposes an ongoing review to either continue with the process (status quo), incorporate formal consultation with Disability Awards into the PRDs annual work plan consultation process or to schedule comprehensive reviews at specific intervals. (e.g. every five years). In our view, none of these proposals are adequate.

Certainly, the status quo is unacceptable. The PDES has not been substantively updated since 1966. And even when the 2002 Core Review flagged it as requiring updating, it took over 10 years for this project to be undertaken.

We also see little usefulness in formal yearly reviews or five year reviews by the same internal Board people who administer and direct the PDES. Only a review process that includes external experts and stakeholders can be considered a comprehensive external review of the assessment of permanent partial disability. A process for review should be developed in consultation with a Panel of Experts, and as part of their mandate these experts should identify the appropriate timing and nature of PDES reviews.

8. CONCLUSIONS & RECOMMENDATIONS

After reviewing the PDES and how the Workers' Compensation Board in British Columbia assesses PPD we conclude that there is virtually no connection between the disability percentages set out in the PDES and any assessment or impairment of earning capacity. In addition, the PDES is outdated, scientifically invalid and unreliable even for the assessment of functional impairment.

Section 23(1) of the *Act* requires that a worker be compensated for the **estimated impairment of earning capacity** associated with the nature and degree of the injury. In our view, this statutory provision must be the starting point for any revision of the PDES or Board policy assessing a worker's PPD. While the Board is permitted to compile a Schedule under Section 23(2) of the *Act*, the Schedule so compiled must be reasonably capable of performing its task.

We submit that a functional award should continue to be provided in every case of PPD that does not involve an impairment of earning capacity greater than the functional award. The functional award should be recognized as being intended to compensate for anatomical loss, as well as such factors as:

- short-term fluctuations in the compensable condition;
- reduced prospects of promotion;
- restrictions in future employment;
- reduced capacity to compete in the labour market; and
- variations in the labour market.³⁷

However, until the PDES is fundamentally revised to be consistent with the *Act*, any worker that suffers an impairment of earning capacity should be entitled to assessment and compensation for that impairment on an individual basis under section 23(3) of the *Act*.

PREAMBLE

Currently, the PDES does not meet any reasonable test of its ability to estimate impairment of earning capacity. Further, there are inherent problems in compiling a single Schedule estimating impairment of earning capacity for all workers based on the specific "injury or mutilation." This is because there is a profound difference between the concepts of functional impairment and Impairment of Earning Capacity (IOEC).

Functional impairment and impairment in general are medical concepts which can be (in the right circumstances) reliably rated by a medical professional.

Impairment of Earning Capacity (IOEC) is a broader concept. While neither IOEC nor "disability" is defined in the *Act*, virtually all current models of employability and disability include individual, social, economic and environmental factors as key variables inherent in an IOEC concept. This is readily apparent from a common sense point of view. The impact of a worker's PPD on his or her earning capacity varies with every aspect of that worker's background (medical condition, education, personal attributes, work history, age, etc.) and with the employer's response to the PPD (accommodation, re-training) and conditions and resources

³⁷ Policy item #39.00 Rehabilitation Services & Claims Manual

outside the pre-injury workplace as well as the worker's occupation. While a worker's IOEC may vary dramatically after a disability, the impairment is real and the costs associated with the impairment of earning capacity are also real. Both the *B.C. Statistics Report 2010* and the *Annual Report 2007-2008 for Minister's Council on Employment for Persons with Disabilities* documented higher unemployment rates for disabled workers, a rate that increases with the severity of the disability. In addition, the median income of disabled workers is significantly lower than non-disabled workers and this difference increases with age and level of disability.

There is no doubt that the complexity and variety of factors relevant to IOEC make it difficult, in a single Schedule, to provide the estimates required by the *Act*. In addition, the IOEC factors vary over time and it is difficult to develop a single percentage which will reflect the IOEC accurately. For example, if an accommodation of a PPD worker ends because of an employer-related matter such as a business failure, the worker's IOEC changes dramatically. However, the courts have long addressed such matters in the assessment of damages in civil claims and there are methods, including actuarial calculations for estimating such factors.

Under the current PDES, a permanently injured worker whose PPD has resulted in real IOEC costs has no opportunity to receive compensation for this impairment of earning capacity from the Accident Fund. Instead, under the PDES, these IOEC costs are effectively passed on to individual injured workers and their families and sometimes also transferred to other social programs. The central issue for revision of the PDES is how such a Schedule may fairly estimate IOEC costs and then, together with other Board policy, how it may be applied to properly and fairly compensate the injured worker for this aspect of a work injury.

In our view, there must be a major research and policy initiative to fundamentally revise the Board's approach to compensating workers with PPD through the PDES. The development of this initiative should be guided by the following principles:

1. IOEC is a disability concept, not an impairment concept. It necessarily involves an understanding and expertise in the factors affecting employability, disability and rehabilitation. The necessary experts in this area are those who have specialized knowledge and skills in vocational rehabilitation at both an individual and systemic level.
2. Costing IOEC requires an economic paradigm related to a disability model, not a medical model. The necessary experts in this area are those who have specialized knowledge and skills in economic and actuarial impacts of various factors.
3. There is a dearth of core data on the impact of PPD on the IOEC for injured workers for the period covering 2002-2013 due to the use of the PDES. This is compounded by the extensive cut-backs in Vocational Rehabilitation services by the Board and the extensive use of "deeming" provisions to adjudicate RTW outcomes rather than investigations. As a first step, it is important to survey this population with the specific objective of obtaining reliable data on which to revise Board policy and practice regarding the PDES.
4. There are a variety of legislative, policy and practice options for implementing these changes.

USE OF EXPERT PANELS

In 1996 the Ontario government proposed legislation to limit compensation for chronic pain. However, during public consultations, members of the medical and scientific community argued that there was growing evidence of a strong link between physical injury and chronic pain. The government then directed the Ontario Workplace Safety and Insurance Act (WSIB) to commission an independent study into chronic pain and report back to the minister, and in the meantime, to defer the proposed legislation. WSIB designed a two stage process to meet this directive. The first stage was to compile a panel of experts (“Expert Advisory Panel”) who were to achieve a scientific consensus on the cause, prognosis, treatment and prevention of chronic pain. The second stage was to compile a panel of stakeholders to develop policy and guidelines based on this scientific consensus by experts. The WSIB developed Terms of Reference for both panels and selected a ten member Expert Advisory Panel based on their expertise and areas of specialization.³⁸

In our view, a similar approach would be appropriate to the revision of the PDES. We call on the Provincial Government to establish two independent and unbiased panels, external to WorkSafeBC, on a priority basis. These two Expert Panels should be composed of credible experts, stakeholders and Chaired by a respected neutral party, modeled along similar lines of the Ontario Blue Ribbon Panels.

We propose that the first panel be of an Expert Advisory Panel consisting of appropriate experts and provided with the mandate and resources outlined below. We also propose that there be a second Law and Policy Panel mandated to examine the full scope of the manner in which PPD is and should be assessed in BC. Each panel should be provided with the resources to complete their enquiry including access to a variety of medical and non-medical disability experts, external and internal to the Board.

Panel #1: Expert Advisory Panel

As noted above, IOEC is a disability concept, not an impairment concept. The necessary experts in this area include those who have specialized knowledge and skills in vocational rehabilitation at both an individual and systemic level and the expertise to collect, analyze and interpret data regarding employment outcomes and the economic and actuarial impacts of various employment factors.

We propose that an Expert Advisory Panel be struck and mandated to do the following:

1. Research Employment and Cost Profiles for IOEC Analysis

³⁸ This was a vast task and the Expert Advisory Panel sought and received assistance from the Institute for Work & Health for this systematic literature review. The Expert Advisory Panel then wrote the Chronic Pain Expert Advisory Report (“Expert Advisory Report”) over a year and a half. Individual panel members wrote particular sections but the decisions and recommendations in the report represented the consensus reached by the Expert Advisory Panel as a whole. WSIB provided support, including compiling and editing, but was not involved in any decision making capacity. The Expert Advisory Report was published in February 2000 (with a Supplement in March 2000) and became the basis for the report by the policy panel and for the subsequent legislation in Ontario on chronic pain.

The Expert Advisory Panel should conduct a research project to expeditiously identify each injured worker who was provided with a PPD in B.C. after July 2002 and the nature of their PPD awards. This should also include the RTW determinations entered by the Board for these workers.

The project would then collect accurate information about these workers' IOEC outcomes, including their real RTW outcomes through direct inquiry of these affected workers. The project would seek to document their actual employment capacities and the impairments of those capacities since their PPD. Finally it would gather data for each worker's employment and earning profile from PPD to present and compare that data to their pre-injury profile.

The factors would include at least:

- a. Did the worker return to the pre-injury employer? Was it with and without accommodation? Length of time in that RTW position.
- b. If RTW was with a different employer, the nature of that employment, length of time & how that employment was found.
- c. Periods of employment and unemployment from the date of disability to the present.
- d. The earnings profile for the PPD period.
- e. Earning information will include the following:
 - Employment income
 - Workers' compensation benefits
 - Short and long term disability benefits
 - CPP benefits
 - Other social assistance benefits
 - Actual RTW outcomes

Additionally, earnings information should be gathered for a comparative control group of uninjured workers.

This would provide valuable information about the real return to work outcomes for these workers, particularly where the worker did not return to the pre-injury job.

2. Investigation and Analysis of Psychological Distress

In addition, we recommend that there be a full investigation into the psychological impact on workers in receipt of fractional PPD awards. This should begin with an investigation of the documented 742 suicide threats to determine the circumstances of each worker at the time of the threat. This should be followed up with an in-depth interview with each worker by a confidential and compassionate expert, completely independent of the Board. The expert panel would then produce two reports: one report would identify key factors triggering distress and recommending changes to Board practice that may assist in the prevention or treatment of this distress. A second

report would provide a statistical analysis of the pattern of threat vis-a-vis the claim process with particular focus on the date of plateau and the date of an award under PDES.

3. Analysis and Assessment of IOEC

Once established, the Expert Panel should also be tasked with summarizing the science and current knowledge concerning the assessment of both permanent physical impairment and loss of earning capacity and recommending valid method of assessment. This responsibility would include research into constructing assessments about the impairment of earning capacity (such as an occupational variable) and how to analyze and cost this variable.

Once sufficient data has been collected and correlated, the Expert Advisory Panel should both publish and analyze the data with respect to their significance for an IOEC assessment. This analysis should include the following in addition to the analysis recommended by the Expert Panel:

- a. Assess the actual IOEC cost for each worker based on real RTW data
- b. Compare the worker's IOCE cost assessment to their PPD award
- c. Compare the actual RTW profiles (employment history, wage loss, unemployment) with Board's RTW outcomes
- d. Compare the IOCE cost assessment with the Board's RTW cost outcomes
- e. Collate this information for all workers with PPD awards 2002-present
- f. Analyze and assess worker's PPD awards vs. worker's IOCE costs across this population
- g. Analyze and assess nature of transfer of IOCE costs to other bodies

The Expert Panel should also consider how to relate impairment of earning capacity to permanent disability in a schedule, using this data base for empirical content, and make recommendations to the Law and Policy Panel. For example, some of these matters were discussed in Decision No. 8 by way of introducing an occupational variable.³⁹

4. Review Methods and Assessments of Specific Functional Impairments

In its review inquiry, the Expert Panel should also review particular issues of concern in the PDES such as the inclusion and assessment of respiratory conditions; unscheduled awards and the AFO and make recommendations on an appropriate and ongoing review process.

A high priority must be placed on updating both scheduled and non-scheduled awards to reflect current science concerning the assessment of permanent impairment in order to award for functional impairment that is not exceeded by impairment of earning capacity. The compensation for the assessment of PPD must be reviewed in a fair and transparent manner.

³⁹ Decision No. 8, page 33

Panel #2: Law and Policy Panel

As noted above, we also propose the creation of a second Law and Policy Panel mandated to examine the full scope of the manner in which PPD is and should be assessed in BC including the use of a Schedule as informed and supported in their work by the Expert Advisory Panel. We recommend that in addition to the work of the Expert Advisory Panel, the Law and Policy Panel be mandated to conduct detailed comparisons with other jurisdictions on the use of schedules and ratings to compensate for PPD.

This Panel should also conduct research and develop policy regarding the non-economic compensation of permanent disability.

The Law and Policy Panel would then make recommendations for legislative, policy and practice changes that would return the assessment of PPD in BC to a sound and just basis consistent with the principles of Workers' Compensation.

ADDITIONAL RECOMMENDATIONS: PDES and Specific Conditions/Proposals

1. We endorse the recommendations provided by Dr. Rondinelli regarding the PDES assessment of the spine and view these recommendations as applicable to the limbs as well. In summary:
 - a) ROM should be abandoned as the principle measure of spinal function.
 - b) Any revision of the PDES method of assessment should be based on the diagnostic strengths of physicians and the evidence-based science on which diagnoses are based, similar to the approach in the AMA Guides.
 - c) Any revision should also give consideration to alternative metrics, be easy to administer and cross-validate and be linked in a meaningful way to any computations of work loss.

Such an approach would incorporate important aspects of disability such as tolerance, endurance and strength which now are entirely missing from the Board's assessment practice.

2. There should be policy or practice directives requiring PDAC to apply the rating of psychological impairments by outside providers and not to substitute their own assessment of these impairments.
3. There should be further consultation with experts regarding respiratory conditions and their inclusion and assessment under the PDES.
4. We oppose the inclusion of the Additional Factors Outline (AFO) on the basis that it is now outdated and should not be incorporated into policy, without substantial research and revision.

5. The current calculation of lump sum payments provides a windfall to the Board at the expense of the worker. The policy and practice around lump sum payments should be reviewed and revised in the context of this review of the PDES.
6. The current rates under the PDES were compiled when the PFI awards were provided for life. The rates should be revised on the basis that they are now only paid to age 65 or returned to being paid for life.
7. A process for regular ongoing review of the assessment of PPD must be established that includes stakeholders and external experts.
8. A process should be developed to assess and monitor the quality of PFI evaluations.

LIST OF APPENDICES

- Appendix A A Critical Review of Spinal Range of Motion (ROM) as a Method of Assessing Permanent Back Injuries By Robert D. Rondinelli, MD, PhD July 30, 2013
- Appendix B Historical Preferences and Methods of the BC Workers' Compensation System for Permanent Impairment Rating – Permanent Disability Evaluation Schedule, Summary by J. Parker BC Nurses' Union June 2013 provided to Dr. R. Rondinelli
- Appendix C Detailed History of the PDES, J Parker BC Nurses Union, September 2013
- Appendix D The Meredith Report Province Of Ontario Final Report *Laws relating to the liability of employers to make compensation to their employees for injuries received in the course of their employment which are in force in other countries, and as to how far such laws are found to work satisfactorily.* The Hon. Sir William Ralph Meredith, C.J.O., Commissioner October 31, 1913
- Appendix E Report of D.E. Bell, M.D. to The Association of Workmen's Compensation Boards of Canada, Subject: Permanent Disability Evaluation, August 22, 1960
- Appendix F Report of The Committee on Permanent Disability Evaluation to The Association of Workmen's Compensation Boards of Canada, Romeo Depeyre, M.D., C.R. Salisbury, M.D., D. Lees, M.D., D.E. Bell. M.D. September 1, 1964
- Appendix G Permanent Disability Evaluation under Workmen's Compensation, D. E. Bell M.D. March 1966
- Appendix H Reporter Series Commissioners Decisions No. 8, 9, 22, 33, 95, 109, 160, 202, 297, 383, 394 and 407
- Appendix I WorkSafeBC Ten-year summary of consolidated financial statements covering the years 2001 to 2012 and Calculation of Reduction in WorkSafeBC Ltd Costs Post Bill 49

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