Noteworthy Decision Summary

Decision: WCAT-2007-01520 **Panel**: Michael Carleton **Decision Date:** May 16, 2007

Permanent Partial Disability Award – Loss of Range of Motion – Section 23(1) of the Workers Compensation Act – Permanent Disability Evaluation Schedule

This decision is noteworthy as an example of a useful and detailed analysis of a permanent disability award based upon loss of range of motion.

The worker sustained a compensable L5-S1 left-sided disc herniation and underwent a left L5-S1 micro discectomy. The claim was also accepted for chronic pain. The worker was granted a 6.0% permanent partial disability award, representing 3.5% for loss of range of movement of the lumbar spine, and 2.5% for specific chronic pain. The worker disputed the percentage of his permanent functional impairment (PFI) award.

The panel denied the worker's appeal. The range of motion a person has in any given joint can vary from day to day, depending on factors such as level of activity, stress level, and pain. Although the PFI evaluation range of motion measurements were not considered reliable, the disability awards officer used them to calculate the worker's entitlement to an award for loss of range of movement. The employer had argued that the reduced range of motion, which was limited by pain, was captured by the award for chronic pain and that it was more appropriate to provide the worker with an award based on surgical loss, rather than on the range of motion findings. However, the panel found it was reasonable for the disability awards officer to provide an award based on the range of motion findings, as there was consistency between the disability awards medical advisor's range of motion measurements and various examination findings on the claim file. In some cases the method of measurement used by the disability awards medical advisor was more precise. The panel noted an amendment to the Permanent Disability Evaluation Schedule in 2003 which placed rotation under the thoracic spine as a scheduled item. As a result of this change, assessment of deficits in rotation under the lumbar spine was no longer supported by policy.

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Introduction

The worker appeals an August 16, 2006 decision by a review officer with the Review Division of the Workers' Compensation Board, operating as WorkSafeBC (Board). In that decision the review officer confirmed a February 15, 2006 decision by a disability awards officer (DAO) concerning the extent of the worker's entitlement to an award for permanent partial disability. The review officer confirmed the DAO's decision that the worker is entitled to an award of 6.0% of total, representing 3.5% for loss of range of movement of the lumbar spine, and 2.5% for specific chronic pain that is disproportionate to the objective physical impairment.

Both the worker and the employer are participating in the appeal.

Issue(s)

Has the Board accurately determined the extent of the worker's entitlement to an award for permanent partial disability under section 23(1) of the *Workers Compensation Act* (Act)?

Jurisdiction

This appeal was filed with WCAT under section 239(1) of the Act.

WCAT may consider all questions of fact and law arising in an appeal, but is not bound by legal precedent (see section 250(1) of the Act). WCAT must make its decision on the merits and justice of the case, but in so doing, must apply a policy of the board of directors of the Board that is applicable in the case. WCAT has exclusive jurisdiction to inquire into, hear and determine all those matters and questions of fact, law and discretion arising or required to be determined in an appeal before it (section 254 of the Act).

This is an appeal by way of rehearing, rather than a hearing *de novo* or an appeal on the record. WCAT has jurisdiction to consider new evidence, and to substitute its own decision for the decision under appeal.

Background and Evidence

On April 16, 2004 the worker sustained a low back injury while employed as a warehouseman. The Board later accepted the claim for an L5-S1 left-sided disc herniation.

The worker underwent surgery on December 15, 2004, involving a left L5-S1 micro discectomy.

Following a motor vehicle accident on February 18, 2005, when the worker was diagnosed with cervical, thoracic and lumbar soft tissue injuries, the worker was assessed by a neurologist. At that time there were no root tension signs, strength was considered to be normal, and lumbar flexion remained limited to 45 to 50 degrees.

The neurologist, Dr. Y said the worker did not require further surgery. He said the worker should be treated conservatively, including repeat lumbar epidural injections.

The worker attended an occupational rehabilitation program from October 24, 2005 to January 5, 2006, when he was discharged as fit to return to modified pre-injury duties. The worker had completed a graduated return to work, but was reported to have functional limitations which limited him from returning to his regular job duties.

At the time the worker's claim was referred to Disability Awards on January 12, 2006, a memo (form 22) indicated the claim had been accepted for chronic pain in addition to the L5-S1 posterolateral disc protrusion.

The worker underwent an assessment for permanent functional impairment (PFI) on February 21, 2006. The disability awards medical advisor (DAMA) reported that the worker had restricted range of movement of the spine, which was associated with pain. Under the heading, 'Neurological Examination', the DAMA noted there was "collapse weakness" associated with the dorsiflexors of the left ankle. There was also "collapse weakness", associated with the extensors of the left hip flexors of both the right and left hips. The DAMA noted under 'Special Tests' that straight leg raising when sitting was 80 degrees on the right and 80 degrees on the left, and straight leg raising in the supine position was 70 degrees on the right and 40 degrees on the left.

The DAMA provided the following lumbar range of motion findings:

RANGE OF MOTION (Active)	**Right**	**Left**
- flexion		*50˚
- extension		*20˚
- lateral flexion	*35˚	*20˚
- rotation	*40˚	*49˚

- modified Schober's test, he gained 4/15 cm*

* The worker reported back pain.

[reproduced as written]

Following the examination the DAMA provided an additional factors memo, in which he provided the following comments and recommendations:

1. Findings as noted of unreliable restricted spine movement with reported pain.

2. Minor left nerve root irritation may be considered, in spite of the noticeable controversy between straight leg raising in sitting and in supine.

3. The collapse weakness with reported pain is an unreliable finding.

At the time the DAO provided the March 31, 2006 decision concerning entitlement to an award for permanent partial disability, he enclosed a memo (form 24 dated March 28, 2006) summarizing his conclusions. The DAO noted that although the range of movement findings were restricted by pain, she used those measurements to calculate the worker's entitlement to an award for range of movement. She calculated the worker was entitled to an award of 3.5% for loss of range of movement of the spine. An award of 2.5% was provided for disproportionate specific chronic pain. The DAO concluded there was no hard evidence of nerve root damage, and determined that an award would not be provided for additional factors under item #39.10 of the *Rehabilitation Services and Claims Manual, Volume II* (RSCM II). An award was not provided for the worker's collapse weakness, as the DAO concluded that those complaints did not represent an actual objective impairment of function.

The worker requested a review of the DAO's decision at the Review Division. In providing the August 16, 2006 decision, the review officer noted that pursuant to the Permanent Disability Evaluation Schedule (PDES) a one-level lumbar spine discectomy is rated at 2.00%. The review officer agreed with the DAO's determination that the worker was entitled to an award based on loss of range of motion rather than the surgical impairment, as that determination was in keeping with the policy requirement that the final disability rating should be based on the greater of the two.

On considering the worker's entitlement to an award for additional factors under item #39.10, the review officer agreed that the worker's complaints, including minor left nerve root irritation, did not warrant an additional award beyond the 3.50% which was awarded for loss of range of motion.

Pre-Hearing Submissions

Prior to the hearing the worker's legal representative provided a copy of an April 5, 2007 functional capacity evaluation report, documenting the results of a functional capacity assessment that had been carried out on March 12, 2007.

The occupational therapist who carried out the assessment provided the following measurements concerning the range of motion of the worker's back:

Plane of Back Movement		
Flexion		35˚
Extension		20˚
Side Flexion	Right	30˚
Side Flexion	Left	35˚
Rotation	Right	40˚
Rotation	Left	40˚

On comparing the DAMA's findings to the findings obtained at the time of the functional capacity evaluation, the occupational therapist said there had been a 30% reduction in back flexion, a 14% reduction in side flexion to the right, a 75% increase in side flexion to the left and a 23% reduction in left rotation. The occupational therapist said he expected that the worker's impairment would be greater now than when it was assessed previously by the Board.

The occupational therapist said he did not find any collapse weakness, where this was detected previously by the DAMA. The occupational therapist said the worker presented with consistent physical performance on distraction based testing and passed placebo testing, and his clinical presentation was reliable.

Oral Hearing

The worker had legal counsel at the oral hearing he attended on April 30, 2007. The employer was represented by a consultant.

The worker's legal representative said the worker was seeking a referral of his claim back to the Board for recalculation of entitlement, including an increase in entitlement for loss of range of movement, as well as entitlement for additional factors under item #39.10 of the *Rehabilitation Services and Claims Manual, Volume II* (RSCM II). The worker's legal representative said the worker is not requesting consideration of loss of earnings.

The worker provided evidence that he had returned to work, where his limitations are accommodated. He said he is not able to lift over 30 pounds; he receives assistance from fellow workers with any lifting above that amount. The worker said he drives a forklift, and now must take extra breaks to engage in stretching, as he is unable to manage a whole day of forklift operation without such breaks. The worker said he has low back pain which extends into his left leg below the knee, and tightness and aching of his back. He takes Tylenol No. 3s and Advil Extra Strength to manage his pain. The worker was taking stronger medication, but discontinued that medication six months ago because it was making him tired.

The worker said he was unable to engage in many activities he previously participated in, including soccer, baseball, mountain bike riding and roller blading. The worker said his sleep is affected by the effects of his injury.

The worker's representative said the DAMA's PFI evaluation report, in which the DAMA characterized the findings as showing unreliable restricted spine movement, do not provide a basis to accurately determine the worker's impairment. She said the April 5, 2005 functional capacity evaluation report prepared by the occupational therapist provided a more reliable basis on which to base the worker's entitlement to an award. She noted that the occupational therapist found the worker presented with consistent physical performance and found the worker's clinical presentation to be reliable. She also noted that the occupational therapist did not find any evidence of "collapse weakness."

The worker's legal representative submitted that the award for loss of range of movement provided by the DAO was arbitrary as it was an unsubstantiated exercise of discretion. She argued that the DAO had not utilized the Board's computerized Disability Awards Calculator in arriving at an award for loss of range of motion, and had merely relied on her own judgement.

With respect to the range of motion measurements, the worker's legal representative said the DAMA's findings concerning the worker's loss of range of motion are different from those of other examiners, specifically citing the results recorded at the occupational rehabilitation program, as reported in the discharge report of January 10, 2006. She submitted that the DAMA's findings are inconsistent with the findings of other examiners.

The employer's representative submitted that the DAO did, in fact, follow proper procedures and used the Board's impairment calculator to calculate the award for loss of range of movement.

The employer's representative noted that the biggest difference in prior medical examinations and the DAMA's examination was in the recorded range of movement for flexion. The employer's representative pointed out that a September 30, 2005 report from a neurosurgeon, Dr. Y, who assessed the worker at the Board's Visiting Specialists Clinic, noted that lumbar flexion remained limited to 45 to 50 degrees. The employer's representative said the DAMA's findings concerning flexion on February 21, 2006, at 50 degrees, are consistent with the findings of Dr. Y on January 30, 2005.

The employer's representative questioned that the DAMA's determination that the worker showed unreliable range of motion findings meant that his report and findings could not be relied upon to arrive at a determination concerning entitlement.

The employer's representative argued that the worker's entitlement would be better reflected by an award of 2% for the loss of an intervertebral disc, as the range of motion findings were largely related to pain, for which the worker received an award. The employer's representative questioned the value of the functional capacity evaluation report in determining the issues arising from the appeal.

In final rebuttal, the worker's legal representative said any consideration that might be given to reduction of the award required proper notice, and the fact that the employer raised the possible reduction of the award did not constitute such notice.

The worker's representative said the functional capacity evaluation report represents evidence that was submitted for the purpose of addressing the contentious issues in the appeal, and as such, it has evidentiary value.

Decision and Reasons

The worker is claiming for a work caused personal injury which occurred after June 30, 2002, the transition date for relevant changes to the Act. Entitlement under this claim is adjudicated under the provisions of the Act as amended by Bill 49, of the *Workers Compensation Amendment Act, 2002.* Policy relevant to this appeal is set out in the RSCM II.

Under section 23(1) of the Act where a permanent partial disability results from a worker's injury, the Board must estimate the impairment of earning capacity from the nature and degree of the injury. Section 23(2) states that 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. The PDES is found in Appendix 4 of the RSCM II.

Item #97.40 of the RSCM II outlines that the report of the DAMA or the external service provider takes the form of expert evidence, which, in the absence of other expert evidence to the contrary, should not be disregarded. The policy states this does not mean that a Board officer must adopt the percentage indicated by the DAMA or external service provider. It is always open to the Board officer to conclude that, although the functional impairment of the worker is a certain percentage, the disability (i.e. the extent to which that impairment affects the worker's ability to earn a living) is greater or less than the percentage of impairment.

I have first considered the worker's entitlement to an award for loss of range of movement. The PDES which is contained in Schedule 4 of the RSCM II, states that impairment from surgical loss of an intervertebral disc is 2% per level. It also states that when anatomic and/or surgical impairment is present, as well as loss of range of movement of the spine, the final disability rating will be based on the greater of the two. In this case, even though the range of motion measurements were not considered reliable, the DAO relied upon those range of motion findings to calculate the worker's entitlement to an award for loss of range of movement.

While the worker's legal representative has submitted that the DAO did not utilize the Board's Disability Awards Calculator, I do not accept that argument. While the DAO did not specifically indicate she used the Disability Awards Calculator, the claim file contains an April 30, 2007 document entitled "Permanent Functional Impairment Calculation," which contains the range of motion measurements obtained by the DAMA and calculated impairment values in relation to those measurements. I have no basis to conclude that that report was not generated through the utilization of the Board's computerized program for calculating impairment. I would note that the Board's Disability Awards Calculator is designed to calculate impairment values by reference to the ranges contained in the PDES.

The DAO said she had "calculated the reduced range of movement of [the worker's] lumbar spine, taking into account the surgical loss of the disc at L5-S1 and using the Permanent Disability Evaluation Schedule as a guide." She said she had calculated the impairment using the measurements provided by the DAMA, in arriving at an award of 3.5% of total disability. I have interpreted the DAO's statement that she had calculated the worker's award at 3.5%, as one which encompasses the use of the Board's Disability Awards Calculator.

I next considered whether the range of motion measurements provided by the DAMA accurately reflect the worker's range of motion. While it has been argued that reduced range of motion which is limited by pain is captured by an award for chronic pain, and it would be more appropriate to provide the worker with an award based on surgical loss rather than range of motion findings, I have adopted the reasoning of the review officer. He found that it was not unreasonable for the DAO to provide an award based on the range of motion findings, noting there was consistency in various examination findings on the file, and the DAMA's range of motion measurements Thus, in this case, I am not

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prepared to disturb the finding provided by the Board, which was confirmed by the Review Division, that the worker is entitled to both an award for reduced range of motion and chronic pain.

I nevertheless acknowledge that the range of motion a person has in any given joint can vary from day to day, depending on factors such as level of activity, stress level and pain, in addition to other factors.

Range of motion findings are contained in the file, which were provided both shortly before the worker reached a plateau (January 13, 2006) and shortly thereafter. When Dr. Y examined the worker on September 30, 2005, he reported that the worker's flexion remained limited to 45 to 50 degrees. When the worker was assessed by the DAMA on February 21, 2006, he similarly found that the worker's flexion was limited to 50 degrees. While the occupational therapist who assessed the worker on March 12, 2007 found that the worker's flexion was limited to 35 degrees, that evaluation was provided more than one year following the plateau date and the PFI examination. Given the difference in the findings, it is possible that the worker experienced a reduction in flexion in the one year period following assessment of PFI, or experienced a fluctuation in his condition which resulted in some further reduction in back flexion on March 12, 2007. In any event, I accept the expert opinion of the DAMA concerning the range of movement findings he recorded with respect to flexion at the time of assessment on February 21, 2006. I would note that the DAMA's conclusion is consistent with that of Dr. Y.

I would note that the DAMA's range of motion findings for extension (at 20 degrees) were identical to those of the occupational therapist who provided the April 5, 2005 functional capacity evaluation report. I have also noted that the occupational therapist reported that the worker had experienced a 75% increase in side flexion to the left by comparison with the range of motion findings for that plane provided by the DAMA.

On the other hand the occupational therapist who provided the April 5, 2007 report reported the worker had experienced a 14% reduction in side flexion to the right. He recorded right side flexion at 30 degrees, whereas the DAMA recorded that same plane of movement at 35 degrees. Although a 5 degree differential exists between the range of movement finding of the DAMA and the occupational therapist with respect to his measurement of that plane of movement on February 21, 2006, that 5 degree difference was demonstrated approximately one year later. Aside from the fact that the later measurement is not substantially different from the earlier one, it may simply represent a fluctuation in the worker's condition. In any event, the later measurement does not reliably indicate the worker's range of motion in that plane approximately one year earlier.

While much has been made of the DAMA's opinion that the range of movement findings did not reliably reflect the worker's range of movement, the fact remains that the range of movement findings provided by the DAMA were utilized for calculation of the worker's

award. Thus, while the worker's legal representative has argued that the DAMA's findings were "unreliable," my interpretation of the DAMA's opinion is that the DAMA believed that the worker's symptoms of pain were a significant factor in restricting the worker's range of movement. I do not interpret the DAMA's opinion that the worker demonstrated an unreliable restricted spine movement as being indicative of a greater level of disability than the worker demonstrated at the time range of motion measurements were taken on February 21, 2006.

In reaching my conclusions concerning the worker's entitlement to an award for loss of range of motion, I have considered the range of motion findings recorded at the time the worker was admitted to an occupational rehabilitation program on October 24, 2005, and the range of motion findings at the time of discharge from that program on January 5, 2006. I would note that the method of measurement employed by the physiotherapist who conducted the range of motion findings differs from that employed by the DAMA. In conducting the PFI evaluation, I am satisfied that the methodology employed by the DAMA involved specific testing protocols. Although not specifically stated in this particular worker's case, generally testing protocols used by the DAMA include a computerized goniometer, which measures "active" or worker-demonstrated movements. Consistent with guidance provided by the American Medical Association Guides to the Evaluation of Permanent Impairment, an inclinometer, a gravity-responsive angle measuring device, may also be used to measure spinal range of motion. Regardless of the device that is used to assess impairment, the purpose of the equipment is to factor out simple human discrepancies that arise by individual medical examiner's techniques in reference to determining the level of disability.

I would note that in assessing the worker's range of motion, the physiotherapist at the occupational rehabilitation program indicated that the flexion measurement was reflected by the distance between the floor and the worker's fingertips. Similarly, side flexion on the left and right was determined by the distance of the worker's fingertips from the floor on the left and the right. Because of anatomical variances among individuals (e.g. arm length), I consider that method of measurement to be less precise than that employed by the DAMA, and I have therefore not relied upon the measurements that have been obtained.

I next considered range of motion findings in relation to rotation. The occupational therapist who provided the April 5, 2007 functional capacity evaluation report, commented that there had been a 23% reduction in left rotation in comparison to the DAMA's findings. While the DAMA found that the worker had 49 degrees of rotation on the left, the occupational therapist recorded a measurement of 40 degrees on the left.

Review of the document entitled "Permanent Functional Impairment Calculation," dated April 30, 2007 (which shows the worker's calculated impairment by reference to range of motion values obtained at the time of the permanent functional impairment on February 21, 2006), does not indicate that range of motion values were provided for right and left rotation. Item #77.00 of the PDES shows spine normal range of motion

values. The normal range of motion value for rotation is recorded under the thoracic spine at 45 degrees. A value for rotation is not present under the lumbar spine.

A discussion paper which was presented to the board of directors of the Board on April 1, 2003, contains the following analysis with respect to rotation of the lumbar spine:

> Advancements in medical science have occurred in recent years, which are not reflected in the current *PDES*. For example, the current *PDES* provides for a percentage of disability for rotation of the lumbar spine. However, current medical knowledge is that the lumbar portion of the spine is anatomically constructed in a way that prevents all but a small amount of rotation. It is the thoracic spine that provides most of the rotation. As a result, it is proposed that the *PDES* include a percentage of disability for thoracic rotation.

On June 17, 2003 a resolution of the board of directors resulted in changes to a number of items in the PDES, including item #77.00. That resolution became effective on August 1, 2003, and adopted the analysis in the discussion paper, which resulted in placing rotation under the thoracic spine as a scheduled item.

As a result of the change in the PDES, assessment of entitlement for deficits in rotation under the lumbar spine is no longer supported by policy. Even though the DAMA assessed rotation in relation to the lumbar spine, rather than the thoracic spine, I would note that the measurements obtained by the DAMA show that the worker exceeded the population norm on the left, where a measurement of 49 degrees was achieved, and was close to the population norm on the right, at 40 degrees. I find that neither the evidence nor the revised policy supports an award for restricted rotation in relation to the lumbar spine.

Following my review of the range of motion findings, I confirm that the range of motion findings with respect to flexion, extension, left-sided flexion and right-sided flexion were accurately determined by the DAMA, and in relying upon those measurements, the DAO accurately calculated the worker's entitlement to an award for loss of range of motion.

I next considered whether the worker is entitled to an award for other variables under item #39.10 of the RSCM II. Item #39.10 states that the PDES is a set of guide-rules, not a set of fixed rules. The Board officer in Disability Awards is free to apply other variables relating to the degree of physical impairment in arriving at a final award.

When the worker was seen in final follow up by Dr. Y on September 30, 2006, he commented that there were no root tension signs and strength was normal. He further commented that there was no residual or recurrent disc herniation or other compressive pathology. At the time of PFI examination on February 21, 2006, the DAMA noted that

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sensation to toothpick prick sensation was intact throughout all the dermatomes of the two lower extremities. He further commented that deep tendon reflexes were brisk bilaterally.

While the DAMA felt some collapse weakness was evident when assessing muscle strength during neurological examination, the occupational therapist did not find that the collapse weakness was present. The occupational therapist also noted there was somewhat reduced strength (4/5) on the left of the hip flexors, hip extensors and knee extensors.

I have considered whether the evidence establishes the worker is entitled to an award for other variables. In addition to finding that the evidence does not support the presence of sensory loss, I do not find that the evidence reliably establishes that the worker has a left sided loss of strength which has not adequately been considered by other methods. In reaching this conclusion I have considered the Board's Additional Factors Outline (AFO). The AFO is not published policy, and is not binding on decision makers, but provides guidance and promotes consistency in determining percentages to be awarded for certain non-scheduled impairments, including decreased strength. The current version of the AFO is available on the Board's website.

The AFO indicates that in "rare" cases, if the DAMA believes the individual's loss of strength represents an impairment factor that has not been considered adequately by other methods, the loss of strength may be rated separately. The AFO indicates that normally, decreased strength cannot be rated in the presence of decreased range of motion, painful conditions, deformities or absence of parts that prevent effective application of maximal force in the region being evaluated. In this case, the worker does have reduced range of motion and chronic pain, both of which I conclude are likely to affect the worker's left sided strength. I therefore conclude that he is not entitled to a separate award for loss of strength. I further conclude that the evidence does not establish that the worker should be provided for an award for any other variables.

Conclusion

The worker's appeal is denied. I confirm the review officer's August 16, 2006 decision that the worker's permanent partial disability under section 23(1) has been accurately determined.

The worker's legal representative requested various expenses, including transportation expenses the worker had experienced as well as a half day of time loss. She also requested reimbursement of the cost of the April 5, 2007 functional capacity evaluation report.

Section 13.23 of WCAT's *Manual of Rules of Practice and Procedure* (MRPP) states that WCAT will generally order reimbursement of expenses for obtaining written evidence regardless of the result of the appeal where: (a) the evidence was useful or

helpful to the consideration of the appeal; or (b) it was reasonable for the party to have sought such evidence in connection with the appeal.

While the functional capacity evaluation addressed some issues that were not before me in the appeal, the functional capacity evaluation did provide some evidence that directly related to the issues that were before me, including the extent of loss of range of motion and the worker's possible entitlement to an award for other variables. After careful consideration, I have concluded that the worker's union should be reimbursed for the cost of the functional capacity evaluation report, as it was reasonable for the worker's union to have sought some of the evidence which is contained in that report. The MRPP indicates that WCAT will generally limit the amount of reimbursement of expenses to the rates or tariffs established by the Board for a particular purpose, and I therefore order the Board to reimburse the worker's union for the cost of the functional capacity evaluation report, subject to the normal tariff the Board would provide for a report of that nature.

Since the worker was not successful in the appeal, no other expenses are ordered.

Michael Carleton
Vice Chair

MC/ec