Disability Duration Guidelines

Proposed by the State of New York
Department of Insurance
to the
Workers' Compensation Board

September 2010

Introduction to the Disability Duration Guidelines

For claims involving non-schedule permanent partial disability under Workers' Compensation Law, Section 15(3)(w), with a date of injury or illness on or after March 13, 2007, compensation is payable for a specified maximum number of weeks depending on the percentage of loss of wage-earning capacity ("Duration Maximums").

These Disability Duration Guidelines provide part of the methodology for determining the percentage of loss of wage-earning capacity and related Duration Maximums for individuals who are subject to Section 15(3)(w) and are not working. The Disability Duration Guidelines are to be comprised of three inter-related segments: (a) Medical Impairment Guidelines; (b) Residual Functional Abilities/Losses Guidelines; and (c) Loss of Wage-Earning Capacity Guidelines. The Advisory Committee and Task Force were able to reach a consensus regarding Guidelines for the first two segments concerning medical impairment and functional capacity. Several alternatives regarding Guidelines for loss of wage-earning capacity were considered over many months, but the Advisory Committee was unable to achieve consensus.

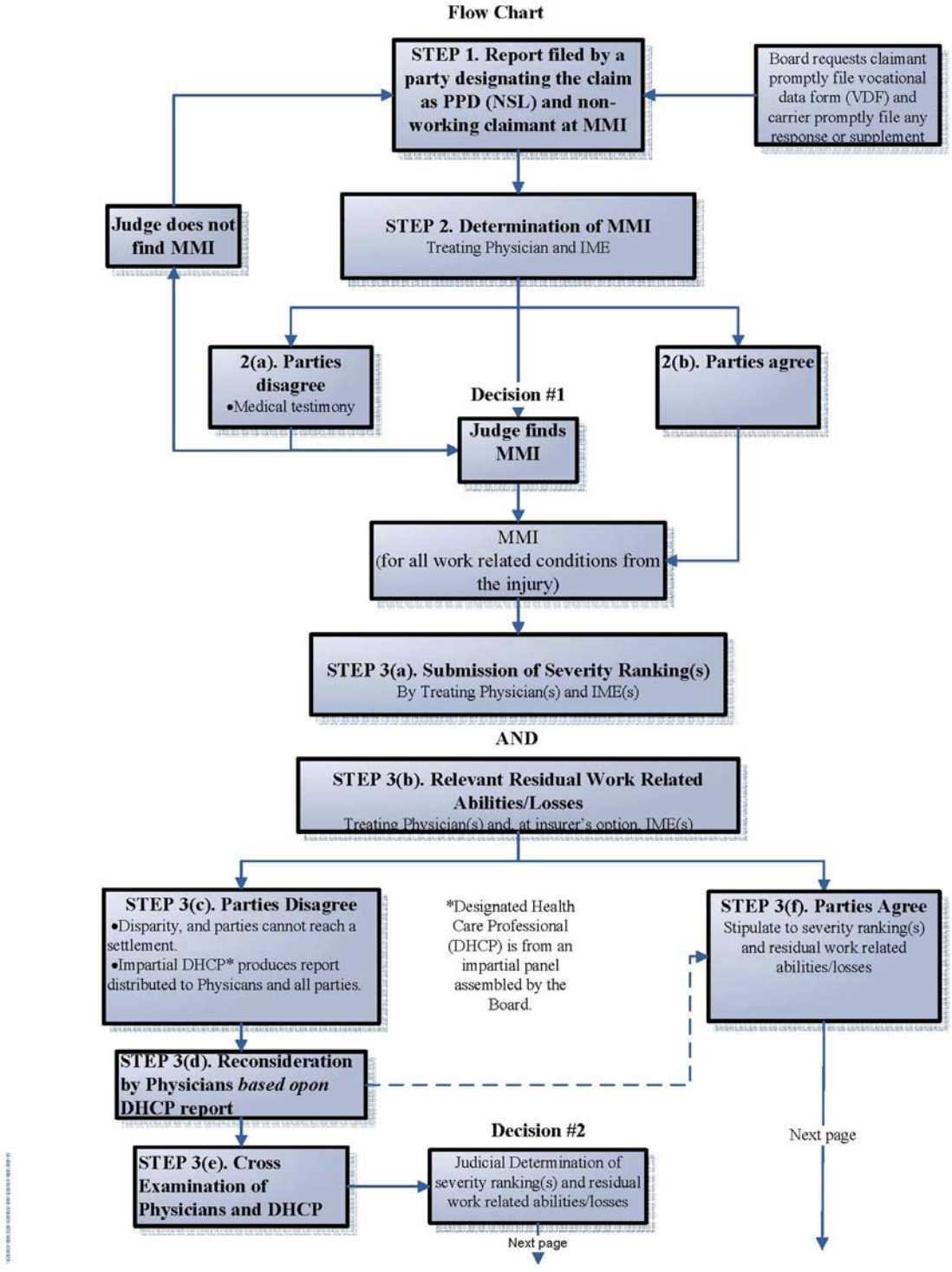
For an individual who has reached maximum medical improvement (MMI), the attached Medical Impairment Guidelines provide the physician with accurate and objective tools to document an individual's impairment resulting from medically documented work related injuries or illnesses. By following the detailed steps outlined for a medical impairment analysis, the physician determines the appropriate Medical Impairment Class and determines the related severity ranking for the permanent impairment condition. The Medical Impairment Class and severity ranking provide a foundation for evaluating the impact of the injury or illness on the individual's functional abilities that is an input for determining loss of wage-earning capacity.

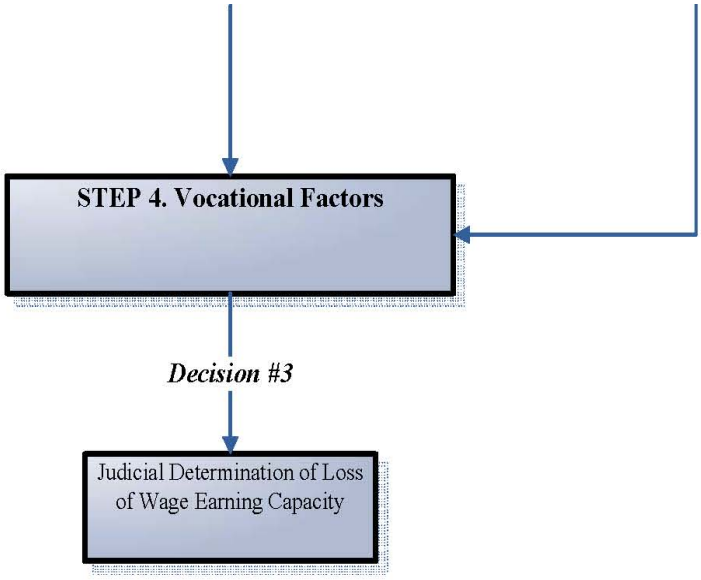
The attached Functional Guidelines provide a methodology for measuring an individual's residual functional abilities and losses in relation to the diagnosed work-related medical impairment and the likely requirements in the workplace. The treating physician and the IME (if applicable) assess the individual's residual functional abilities according to a prescribed set of standard metrics and document their findings on a newly created Functional Assessment Form. In the event of material differences between the findings of the treating physician and the IME, the parties or the Judge may request a functional capacity evaluation (FCE) by an impartial medical professional (Designated Health Care Professional or DHCP). The DHCP, who shall have the requisite qualifications, shall be selected by the Board from a Panel assembled by the Board. The FCE by the DHCP shall follow a standard protocol, be performance-based and actually calculate, during an examination of the injured worker, functional abilities according to metrics from the U.S. Department of Labor Dictionary of Occupational Titles. The physicians may issue a new or modified Functional Assessment in light of the impartial FCE. The parties shall have the right to cross-examine the DHCP who conducted the FCE. The results from the Functional Guidelines are an input to and inform the determination of loss of wage-earning capacity.

The Loss of Wage Earning-Capacity Guidelines should utilize the results from the Functional Guidelines together with vocational factors, such as the education, skill level and age of the injured worker, to determine loss of wage-earning capacity. Information regarding vocational factors should be collected from the individual using the attached, newly created Vocational Data Form, and may be supplemented by the employer. The Advisory Committee and Task Force considered four approaches for determining loss of wage-earning capacity, the first two of which were discussed extensively: (1) Grid Approach: the design of a grid that assigned percentage

points of loss of wage-earning capacity depending on various factors, including the injured worker's loss of functional exertional ability, age, skill level, and education; (2) Vocational Specialist Approach: the use of an impartial vocational specialist to provide an expert opinion on the injured worker's residual wage-earning capacity; (3) Hybrid Approach: the use of a combination of the two preceding approaches; and (4) Litigation Approach: the injured worker and insurer would submit such evidence regarding the injured worker's earning capacity and loss of wage-earning capacity as they deem relevant for the Judge's consideration. Because a consensus could not be reached by the Advisory Committee about the approach for determining loss of wage-earning capacity, this third segment of the Guidelines is referred to the Board for development and determination.

The procedural steps for utilizing the Duration Guidelines are illustrated by the flow chart below. The Duration Guidelines envision three separate judicial decisions: (1) determination of whether the individual has reached MMI, (2) assignment of the Medical Impairment Class and severity ranking, and determination of residual functional abilities and losses, and (3) determination of loss of wage-earning capacity.


Flow Chart
STEP 1. Report filed by a party designating the claim as PPD (NSL) and non-working claimant at MMI
Board requests claimant promptly file vocational data form (VDF) and carrier promptly file any response or supplement
Judge does not find MMI
STEP 2. Determination of MMI
Treating Physician and IME
2(a). Parties disagree
•Medical testimony
Decision #1
2(b). Parties agree
Judge finds MMI
MMI
(for all work related conditions from the injury)
STEP 3(a). Submission of Severity Ranking(s)
By Treating Physician(s) and IME(s)
AND
STEP 3(b). Relevant Residual Work Related Abilities/Losses
Treating Physician(s) and, at insurer's option, IME(s)
STEP 3(c). Parties Disagree
•Disparity, and parties cannot reach a settlement.
•Impartial DHCP* produces report distributed to Physicans and all parties.
*Designated Health Care Professional (DHCP) is from an impartial panel assembled by the Board.
STEP 3(f). Parties Agree
Stipulate to severity ranking(s) and residual work related abilities/losses
STEP 3(d). Reconsideration by Physicians based opon DHCP report
Decision #2
STEP 3(e). Cross Examination of Physicians and DHCP
Judicial Determination of severity ranking(s) and residual work related abilities/losses
Next page
Next page


STEP 4. Vocational Factors
Decision #3
Judicial Determination of Loss of Wage Earning Capacity

Section I: IMPAIRMENT GUIDELINES

General Considerations

The Medical Impairment Guidelines provide a standard framework and methodology for physicians to evaluate and report an individual's medical impairment. The Guidelines provide the physician with accurate and objective tools to document an individual's impairment resulting from a medically documented work related injury or illness.

Specific guidelines have been developed for injuries to body parts commonly encountered in Workers' Compensation clinical practice, such as the spine and the pelvis. For impairments to parts of the body not covered by specific Chapters within these Guidelines, Chapter 8 entitled "Other Injuries and Occupational Diseases (Default Guideline)" establishes the method for proceeding.

These Guidelines require an accurate history, contemporaneous physical examination and review of the medical record, including test results. The Guidelines provide detailed criteria for each medical impairment, with a greater weight given to objective findings as outlined in each Schedule of the Guidelines. Inclusion of an accurate history and objective test measurements in an impairment analysis is essential. Physicians are not to infer findings or manifestations that are not drawn from the physical examination or test reports, but rather physicians are to look to the objective findings of the physical examination and data as contained within the medical records of the patient. This methodology of the Guidelines is intended to foster consistency, predictability and inter-rater reliability for determining impairment.

Organization of the Guidelines

The Medical Impairment Guidelines are organized by parts of the body. Each body part is designated by a Chapter number and each Guideline within a Chapter is designated as a Schedule. For example, the "Spine and Pelvis" are Chapter 2; Schedule 2.1 within that Chapter governs “Soft-Tissue Spine Conditions - Non Surgically Treated” for each of the three spinal regions. Tables support various Schedules. Thus, Tables 2.1 through 2.4 are used for determining the degree of radiculopathy for Schedule 2.1 (as well as other Schedules in Chapter 2).

The impairment conditions in each Schedule are divided into Medical Impairment Classes. At the beginning of each Schedule is a grey box that sets forth the overarching considerations that the physician must bear in mind when applying the Schedule and assigning a Medical Impairment Class. Each Class contains detailed criteria for selection of that Class. Objective tests are generally more determinative of Class designation than other factors.

The Medical Impairment Classes are organized by degree of impairment severity. Each Class has a severity ranking assigned to it that is generally reflective of the expected functional status for each Class relative to other Classes within a Chapter. Severity rankings are from “A” (the least severe medical impairment) to “Z” (the most severe medical impairment) for the Classes within a given Chapter. The severity rankings for the Classes of one chapter should not be compared to the rankings in other Chapters. For example, a “D” ranking in the Spine and Pelvis Chapter is not intended to imply that a “D” ranking in the Respiratory Chapter is of equal severity.

The Medical Impairment Class and severity ranking should not be used as a direct translation to loss of wage earning capacity.

Steps for Use of Guidelines

In order to prepare a report to be used as a medical impairment analysis, the physician should do the following:

1. Review the General Principles of the Guidelines;
2. Review the medical record and identify the records used in the preparation of the report;
3. Perform a thorough contemporaneous history and physical examination and recount the relevant medical history, examination findings and appropriate test results;
4. State the work related medical diagnosis(es) based upon the relevant medical history, examination and test results;
5. Identify the Chapter and Schedule applicable to the diagnosed work related medical condition (the detailed Table of Contents to the Guidelines may be helpful in doing this);
6. Select the appropriate Medical Impairment Class and determine the related severity ranking for the impairment condition.

There is no formula for combining severity rankings. In the case of multiple body part injuries, the information from the Medical Impairment Classes and their relative severity rankings are to be reported separately and each is considered in determining residual functional abilities/losses.

Chapter 1: Medical Impairment General Principles

1. Before an impairment rating is considered, the patient must reach maximal medical improvement (MMI). It is important to note that the right to appropriate medical treatment for the claim related injury or illness does not terminate upon a patient reaching MMI.

2. Classification should not occur until MMI has been reached. For purposes of these Guidelines, in cases that do not involve surgery or fractures, MMI cannot be determined prior to 6 months from the date of injury or disablement, unless otherwise agreed upon by the parties. Nothing in these Guidelines is intended to prevent an application for reclassification if the medical condition worsens.

3. Inclusion of a condition in these Medical Impairment Guidelines shall not be used as evidence that the condition is or is not work related in any particular case.

4. Objective tests, where listed in these Guidelines, generally carry more weight than subjective symptoms. The performance of objective tests should be determined by the patient's clinical condition. Inclusion of objective tests as criteria in these Medical Impairment Guidelines does not imply that the tests should be performed.

5. Medical impairment is generally predictive of residual functional ability/loss. Medical impairment cannot be directly translated to loss of wage earning capacity (LWEC).

6. Assistive devices (such as canes, crutches, wheelchairs) are not taken into account in determining medical impairment but may be considered in the assessment of residual functional ability/loss.

7. Severity ranking within a specific Impairment Schedule is generally predictive of the expected functional loss from the medical impairment.

8. These Guidelines cite standards of medical-scientific literature that may make reference to categories of persons based on physiological differences; this does not result in discriminatory determination of loss of wage earning capacity.

9. Nothing in these Guidelines is intended to determine whether an injury is a "grave injury" under Section 11 of the Workers' Compensation Law.

Chapter 2: Spine and Pelvis

Schedule 2.1: Soft Tissue Spine Conditions - Non Surgically Treated

1. Schedule 2.1 requires a minimum duration of six months of symptoms from the time of the injury to the impairment rating and no surgical intervention.

2. The appropriate spine injury schedule (Schedule 2.1: Soft Tissue Spine Conditions - Non-Surgically Treated, or Schedule 2.2: Surgically Treated Spine Conditions, or Schedule 2.3: Vertebral Fractures) should be chosen for determining impairment to a given spinal region.

3. All references to symptoms and findings must be related to and consistent with the specific documented workplace injury. A history of workplace injury encompasses acute, repetitive or episodic events.

4. Severity rankings are from "A" (the least severe medical impairment) to "Z" (the most severe medical impairment) for the Medical Impairment Classes within a Schedule.

5. These are the severity rankings for the Medical Impairment Classes of the Spine and Pelvis Chapter and should not be compared to the rankings in other Chapters. For example, a "D" ranking in the Spine and Pelvis Chapter is not intended to imply that a "D" ranking in the Respiratory Chapter is of equal severity.

6. The severity ranking is generally predictive of the functional outcome for each Class relative to the other Classes within a Schedule.

7. The medical impairment ranking is not to be used as a direct translation to loss of wage earning capacity.

Please state diagnosis(es) at time of impairment rating: **Medical Impairment Class**	**Severity Ranking**		
	Cervical	Thoracic	Lumbar
Class 1. Medically documented injury with: • no symptoms; • no clinical findings.	**None**	**None**	**None**
Class 2. Medically documented injury with all of the following: • recurrence/persistence of symptoms; • no objective clinical findings consistent with spinal pathology; • no correlative imaging findings.	A	A	A

Class 3. Medically documented injury with all of the following: • recurrence/persistence of symptoms; • no objective clinical findings consistent with spinal pathology; • correlative imaging findings.	B	B	B
Class 4. Medically documented injury with: • recurrence/persistence of symptoms; and • (a) weakness in myotomal distribution and/or sensory changes in dermatomal distribution; or • (b) tension/compression signs; or • (c) objective clinical findings*. The symptoms and findings must be consistent with: • spinal pathology and • correlative imaging findings or • correlative electro-diagnostic findings as described in the radiculopathy chart (Table 2.1) * Objective clinical findings mean atrophy or reflex changes	C-H See Tables 2.1, 2.2 and 2.4 for determining placement within range.** (This excludes adjustments for multiple roots and root avulsion.)	C-G See Tables 2.1 and 2.4 for determining placement within range.** (This excludes adjustments for multiple roots and root avulsion.)	D-J See Tables 2.1, 2.3 and 2.4 for determining placement within range.** (This excludes adjustments for multiple roots and root avulsion.)
** Use Tables 2.1, 2.2 and 2.3 as appropriate to determine the number of points associated with the identified radiculopathy. Then use Table 2.4 to determine the letter that corresponds to the number of points. This letter is the Severity Ranking within the radiculopathy range.			

Non-category: Medically documented injury event with subjective symptoms, with objective clinical findings consistent with spinal pathology and no correlative findings on imaging (such as x-rays, non-contrast MRI). Further objective testing is indicated to identify the underlying pathology. Pending such testing, a finding of MMI should be deferred.

Schedule 2.2: Surgically Treated Spine Conditions

1. The appropriate spine injury schedule (Schedule 2.1: Soft Tissue Spine Conditions – Non Surgically Treated, or Schedule 2.2: Surgically Treated Spine Conditions, or Schedule 2.3: Vertebral Fractures) should be chosen for determining impairment to a given spinal region.

2. All references to symptoms and findings must be related to and consistent with the specific documented workplace injury. A history of workplace injury encompasses acute, repetitive or episodic events.

3. Severity rankings are from "A" (the least severe medical impairment) to "Z" (the most severe medical impairment) for the Medical Impairment Classes within a Schedule.

4. These are the severity rankings for the Medical Impairment Classes of the Spine and Pelvis Chapter and should not be compared to the rankings in other Chapters. For example, a "D" ranking in the Spine and Pelvis Chapter is not intended to imply that a "D" ranking in the Respiratory Chapter is of equal severity.

5. The severity ranking is generally predictive of the functional outcome for each Class relative to the other Classes within a Schedule.

6. The medical impairment ranking is not to be used as a direct translation to loss of wage earning capacity.

Please state diagnosis(es) at time of impairment rating:			
	Severity Ranking		
Medical Impairment Class	Cervical	Thoracic	Lumbar
Class 1. Medically documented injury with all of the following: • related surgical intervention(s); • no residual symptoms*; • no post-surgical clinical findings. * "Residual symptoms" refers to symptoms from the original condition and not from post-operative complications covered in Schedule 2.2, Class 5.	None	None	None
Class 2. Medically documented injury with all of the following: • related surgical intervention(s); • residual symptoms*;	A	A	A

• no objective residual clinical findings**; • no post-surgical imaging findings that can account for the symptoms. * "Residual symptoms" refers to symptoms from the original condition and not from post-operative complications covered in Schedule 2.2, Class 5. **Objective clinical findings mean atrophy or reflex changes.			
Class 3. Medically documented injury with all of the following: • related surgical intervention(s); • residual symptoms*; • no objective residual clinical findings**; • post-surgical imaging findings that can account for the symptoms. * "Residual symptoms" refers to symptoms from the original condition and not from post-operative complications covered in Schedule 2.2, Class 5. **Objective clinical findings mean atrophy or reflex changes.	B	B	B
Class 4. Medically documented injury with all of the following: • related surgical intervention(s); • residual symptoms; • one or more residual findings of: (a) weakness in myotomal distribution and/or sensory changes in dermatomal distribution; or (b) tension/compression signs; or (c) objective clinical findings.** The symptoms and findings must be consistent with: • post-surgical imaging findings that can account for the symptoms; or	C-H See Tables 2.1, 2.2 and 2.4 for determining placement within range.*** (This excludes adjustments for multiple roots and root avulsion)	C-G See Tables 2.1 and 2.4 for determining placement within range*** (This excludes adjustments for multiple roots and root avulsion)	D-J See Tables 2.1, 2.3 and 2.4 for determining placement within range.*** (This excludes adjustments for multiple roots and root avulsion)

• post-surgical correlative electro-diagnostic findings as described in the radiculopathy chart (Table 2.1) **Objective clinical findings mean atrophy or reflex changes.			
Class 5. Complications related to surgery: • symptoms consistent with the complications and with either: • clinical findings; or • imaging findings and/or lab work consistent with post-surgical consequences, which does not include commonly seen post-surgical changes.	Ranking may clinical	be adjusted circumstances.	according to .
***Use Tables 2.1, 2.2 and 2.3 as appropriate to determine the number of points associated with the identified radiculopathy. Then use Table 2.4 to determine the letter that corresponds to the number of points. This letter is the Severity Ranking within the radiculopathy range.			

Schedule 2.3: Vertebral Fractures

The impairments listed below are the same with or without surgery, unless otherwise indicated.

1. In the event of multiple fracture patterns to the same spinal region, the rater is to use only the highest rating from Schedule 2.3(a), 2.3(b) or 2.3(c). For spinal cord injury, the rater should use Schedule 2.4.

2. Non-adjacent fractures at distinctly different areas may be rated separately. Accompanying impairments to other organ systems are calculated separately.

3. The appropriate spine injury schedule (Schedule 2.1: Soft Tissue Spine Conditions – Non Surgically Treated, Schedule 2.2: Surgically Treated Spine Conditions, or Schedule 2.3: Vertebral Fractures should be chosen for determining impairment to a given spinal region.*

4. All references to symptoms and findings must be related to and consistent with the specific documented workplace injury.

5. Severity rankings are from "A" (the least severe medical impairment) to "Z" (the most severe medical impairment) for the Medical Impairment Classes within a Schedule.

6. These are the severity rankings for the Medical Impairment Classes of the Spine and Pelvis Chapter and should not be compared to the rankings in other Chapters. For example, a "D" ranking in the Spine and Pelvis Chapter is not intended to imply that a "D" ranking in the Respiratory Chapter is of equal severity.

7. The severity ranking is generally predictive of the functional outcome for each Class relative to the other Classes within a Schedule.

8. **The medical impairment ranking is not to be used as a direct translation to loss of wage earning capacity.**

*** FRACTURE PATTERNS**: 2.3(a) Stable Compression Fracture Pattern; 2.3(b) Translation/Rotation Fracture Pattern (including PLC integrity); and 2.3 (c) Distraction Fracture Pattern (including PLC integrity)[1, 2]

Schedule 2.3(a): Stable Compression Fracture Pattern

The impairments listed below are the same with or without surgery.

1. Pre-existing compression fracture should be rated only when there is objective evidence of an aggravation by the new injury or accident. Such objective evidence will usually require supportive imaging studies.

2. Severity rankings are from "A" (the least severe medical impairment) to "Z" (the most severe medical impairment) for the Medical Impairment Classes within a Schedule.

3. These are the severity rankings for the Medical Impairment Classes of the Spine and Pelvis Chapter and should not be compared to the rankings in other Chapters. For example, a "D" ranking in the Spine and Pelvis Chapter is not intended to imply that a "D" ranking in the Respiratory Chapter is of equal severity.

4. The severity ranking is generally predictive of the functional outcome for each Class relative to the other Classes within a Schedule.

5. The medical impairment ranking is not to be used as a direct translation to loss of wage earning capacity.

Please state diagnosis(es) at time of impairment rating: **Medical Impairment Class**	**Severity Ranking**		
	CERVICAL	**THORACIC**	**LUMBAR**
Class 1. Medically documented injury with all of the following: • imaging finding(s) of healed compression fracture(s); • no residual symptoms; • no clinical findings.	None	None	None
Class 2(a). Medically documented injury with all of the following: • imaging finding(s) of healed compression fracture(s); • residual symptoms consistent with the healed compression fracture(s); no residual clinical findings of spinal deformity), ROM limitation, or weakness.	A	A	A

Class 2(b). For compression fractures of two or more consecutive vertebrae, two or more of which have $\geq$ 20 % compression, the severity ranking is increased by one letter.			
Class 3(a). Medically documented injury with all of the following: • imaging finding(s) of healed compression fracture(s) with compression percentage less than or equal to 50%; • residual symptoms consistent with the healed fracture(s); • residual clinical findings consistent with the healed fracture(s). Clinical findings are one or more of the following: • spinal deformity; • ROM limitation; • sensory changes • weakness.	B	B	B
Class 3(b). Medically documented injury with all of the following: • imaging finding(s) of healed compression fracture(s) with compression fracture percentage greater than 50% ; • residual symptoms consistent with the healed fracture(s); • residual clinical findings consistent with the healed fractures. Clinical findings are one or more of the following: • spinal deformity; • ROM limitation; • sensory changes; • weakness.	C	C	C
Class 4. Medically documented injury with all of the following: • imaging finding(s) of healed compression fracture(s) with compression percentage	C-H See Tables 2.1, 2.2 and	C-G See Tables 2.1	D-J See Tables 2.1, 2.3 and

>50%; • residual symptoms consistent with the healed fracture(s); • clinical neurologic findings consistent with radiculopathy. Clinical neurologic findings consistent with radiculopathy are one or more of the following: • weakness in myotomal distribution and/or sensory changes in dermatomal distribution; or • tension/compression signs; or • objective clinical findings.* The symptoms and findings must be consistent with: • post-fracture imaging findings that can account for the symptoms; or • post-fracture correlative electro-diagnostic findings of fibrillation potentials and/ or positive sharp waves seen in at least 2 muscles in the distribution of a nerve root. (Table 2.1) *Objective clinical findings mean atrophy or reflex changes.	2.4** for determining placement within range. (This excludes adjustments for multiple roots and root avulsion.)	and 2.4** for determining placement within range (This excludes adjustments for multiple roots and root avulsion.)	2.4** for determining placement within range. (This excludes adjustments for multiple roots and root avulsion.)
Class 5. Medically documented injury with all of the following: • imaging finding(s) of healed compression fracture(s); • residual symptoms consistent with the healed fracture(s); • clinical neurologic findings consistent with spinal cord or cauda equina injury.***	***See	Spinal Cord Schedule 2.4	Injury
**Use Tables 2.1, 2.2 and 2.3 as appropriate to determine the number of points associated with the identified radiculopathy. Then use Table 2.4 to determine the letter that corresponds to the number of points. This letter is the Severity Ranking within the radiculopathy range.			

Note: For discordant pain intensity, see Schedule 7.1, Pain.

Schedule 2.3(b):Translation/Rotation Fracture Pattern (including PLC integrity)

The impairments listed below are the same with or without surgery.

TYPIFIED BY UNILATERAL AND BILATERAL DISLOCATIONS, FACET FRACTURE DISLOCATIONS, PARS FRACTURES WITH VERTEBRAL SUBLUXATION (traumatic spondylolisthesis)[3]

1. For Compression/Burst Fractures refer to Schedule 2.3(a) Stable Compression Fracture Pattern.

2. Severity rankings are from "A" (the least severe medical impairment) to "Z" (the most severe medical impairment) for the Medical Impairment Classes within a Schedule.

3. These are the severity rankings for the Medical Impairment Classes of the Spine and Pelvis Chapter and should not be compared to the rankings in other Chapters. For example, a "D" ranking in the Spine and Pelvis Chapter is not intended to imply that a "D" ranking in the Respiratory Chapter is of equal severity.

4. The severity ranking is generally predictive of the functional outcome for each Class relative to the other Classes within a Schedule.

5. The medical impairment ranking is not to be used as a direct translation to loss of wage earning capacity.

Please state diagnosis(es) at time of impairment rating: **Medical Impairment Class**	**Severity Ranking**		
	CERVICAL	**THORACIC**	**LUMBAR**
Class 1. Medically documented injury with all of the following: • imaging finding(s) of healed fracture(s); • no residual symptoms; • no clinical findings.	None	None	None

Class 2. Medically documented injury with all of the following: • imaging finding(s) of healed displaced or non-displaced fracture(s); • residual symptoms consistent with the healed fracture(s); • no residual clinical findings of spinal deformity (kyphosis, scoliosis), tenderness, ROM limitation, sensory changes, or weakness.	A	A	A
Class 3. Medically documented injury with all of the following: • imaging finding(s) of healed displaced or non-displaced fracture(s) with residual symptoms consistent with the healed fracture(s); • residual clinical findings consistent with the healed fracture(s). Clinical findings are one or more of the following: • spinal deformity; • ROM limitation; • sensory changes; • weakness.	C	C	C
Class 4(a). Medically documented injury with all of the following: • imaging finding(s) of healed displaced or non-displaced fracture(s); • residual symptoms consistent with the healed fracture(s); • clinical neurologic findings consistent with radiculopathy. Clinical neurologic findings consistent with radiculopathy are one or more of the following: • weakness in myotomal distribution and/or sensory changes in dermatomal distribution; or • tension/compression signs; or • objective clinical findings.*	C-H See Tables 2.1, 2.2 and 2.4** for determining placement within range. (This excludes adjustments for multiple roots and root avulsion.)	C-G See Tables 2.1 and 2.4** for determining placement within range. (This excludes adjustments for multiple roots and root avulsion.)	D-J See Tables 2.1, 2.3 and 2.4** for determining placement within range. (This excludes adjustments for multiple roots and root avulsion.)

The symptoms and findings must be consistent with: • post-fracture imaging findings that can account for the symptoms; or • post-fracture correlative electro-diagnostic findings of fibrillation potentials and/ or positive sharp waves seen in at least 2 muscles in the distribution of a nerve root. *Objective clinical findings mean atrophy or reflex changes.			
Class 4(b). Displaced spinal fractures/dislocations at two or more levels, add the following to the severity rating for radiculopathy.	C	C	C
Class 5. Medically documented injury with all of the following: • imaging finding(s) of healed displaced or non-displaced fracture(s); • residual symptoms consistent with the healed fracture(s); • clinical neurologic findings consistent with spinal cord or cauda equina injury.***	***See	Schedule 2.4: Cord Injury	Spinal
**Use Tables 2.1, 2.2 and 2.3 as appropriate to determine the number of points associated with the identified radiculopathy. Then use Table 2.4 to determine the letter that corresponds to the number of points. This letter is the Severity Ranking within the radiculopathy range.			

Note: For discordant pain intensity, see Schedule 7.1: Pain

Schedule 2.3(c): Distraction Fracture Pattern (including PLC integrity)

The impairments listed below are the same with or without surgery.

ROSTRAL SPINAL COLUMN BECOMES SEPARATED FROM POSTERIOR ELEMENT. FRACTURES MAY BE PRESENT. KYPHOTIC DEFORMITIES. OFTEN VERY UNSTABLE FRACTURES. ANGULATION FREQUENT AT TIME OF INJURY.[4, 5]

1. Severity rankings are from "A" (the least severe medical impairment) to "Z" (the most severe medical impairment) for the Medical Impairment Classes within a Schedule.

2. These are the severity rankings for the Medical Impairment Classes of the Spine and Pelvis Chapter and should not be compared to the rankings in other Chapters. For example, a "D" ranking in the Spine and Pelvis Chapter is not intended to imply that a "D" ranking in the Respiratory Chapter is of equal severity.

3. The severity ranking is generally predictive of the functional outcome for each Class relative to the other Classes within a Schedule.

4. The medical impairment ranking is not to be used as a direct translation to loss of wage earning capacity.

Please state diagnosis(es) at time of impairment rating: **Medical Impairment Class**	**Severity Ranking**		
	CERVICAL	**THORACIC**	**LUMBAR**
Class 1. Medically documented injury with all of the following: • imaging finding(s) of healed fracture(s); • no residual symptoms; • no clinical findings.	None	None	None
Class 2. Medically documented injury with all of the following: • imaging finding(s) of healed displaced or non-displaced fracture(s); • residual symptoms consistent with the healed fracture(s); • no residual clinical findings of spinal deformity, ROM limitation, sensory changes, or weakness.	A	A	A

Class 3**.** Medically documented injury with all of the following: • imaging finding(s) of healed displaced or non-displaced fracture(s) with residual symptoms consistent with the healed fracture(s); • residual clinical findings consistent with the healed fracture(s). Clinical findings are one or more of the following: • spinal deformity; • ROM limitation; • sensory changes; • weakness.	C	C	C
Class 4(a). Medically documented injury with all of the following: • imaging finding(s) of healed displaced or non-displaced fracture(s); • residual symptoms consistent with the healed fracture(s); • clinical neurologic findings consistent with radiculopathy. Clinical neurologic findings consistent with radiculopathy are one or more of the following: • weakness in myotomal distribution and/or sensory changes in dermatomal distribution; or • tension/compression signs; or • objective clinical findings.* The symptoms and findings must be consistent with: • post-fracture imaging findings that can account for the symptoms; or • post-fracture correlative electro-diagnostic findings of fibrillation potentials and/ or positive sharp waves seen in at least 2 muscles in the distribution of a nerve root.	C-H See Tables 2.1, 2.2 and 2.4** for determining placement within range. (This excludes adjustments for multiple roots and root avulsion.)	C-G See Tables 2.1 and 2.4** for determining placement within range (This excludes adjustments for multiple roots and root avulsion.)	D-J See Tables 2.1, 2.3 and 2.4** for determining placement within range. (This excludes adjustments for multiple roots and root avulsion.)

*Objective clinical findings mean atrophy or reflex changes.			
Class 4(b). Displaced spinal fractures/dislocations at two or more levels, add the following to the severity rating for radiculopathy.	C	C	C
Class 5. Medically documented injury with all of the following: • imaging finding(s) of healed displaced or non-displaced fracture(s); • residual symptoms consistent with the healed fracture(s); • clinical neurologic findings consistent with spinal cord or cauda equina injury.***	***See	Schedule 2.4: Cord Injury	Spinal
**Use Tables 2.1, 2.2 and 2.3 as appropriate to determine the number of points associated with the identified radiculopathy. Then use Table 2.4 to determine the letter that corresponds to the number of points. This letter is the Severity Ranking within the radiculopathy range.			

Note: For discordant pain intensity, see Schedule 7.1: Pain.

Table 2.1: Radiculopathy Criteria[6]

Residual radicular pain > 6 months after surgery is usually investigated with post operative imaging.

Objective Testing	Documented Objective Findings at the Time of Rating	Score
Imaging:	Findings of: • significant disc abnormalities that displace nerve tissue and/or • bony/mechanical nerve root encroachment evident on imaging. These imaging findings must correlate with the clinical picture.	Yes/No Yes = 16 No=0
EMG Abnormalities:	Findings of: • fibrillation potentials and/or • positive sharp waves • seen in at least 2 muscles in the distribution of the involved nerve root(s).*	Yes/No Yes = 6 No=0
Muscle Involvement:	Findings of: • objective muscle weakness and/or	Yes/No Yes = 6-20 See Table 2.1(a) or determining value within range. No=0
	• muscle atrophy. Unilateral muscle atrophy shown: • by obtaining bilateral circumferential	Yes/No Yes = 6 No=0

	measurements of the calf, thigh, arm or forearm or by inspection of the hand or foot muscles; • with a recording at a specified distance from bony landmarks (such as medial malleolus, anterior superior iliac spine, medial or lateral epicondyle). • differences of less than 2 centimeters in measurement of the two limbs at the same level can be a normal variation, especially if the lesser measurement is on the non-dominant side. • symmetric muscle bulk and strength are expected unless the patient has a relatively long-standing neurologic impairment or disorder of the extremity muscle or joint. An alternative method for detecting atrophy can be sequential measurements over time, providing measurements are taken at the same distance from bony landmarks as above.	
Sensory Involvement:	Findings of: • reproducible alteration of sensation (sharp/dull, light touch) consistent with specific dermatomal distribution; and • dermatomal distribution of sensory disturbances consistent with the location of the spinal lesion; • as determined by the clinical examination, imaging studies and/or electrodiagnostic testing.	Yes/No Yes = 4-6 (See Table 2.1(b) for determining value within range) No=0
Reflex Changes:	Requires: • loss of/or significantly diminished deep tendon reflexes (biceps-tricepsbrachioradialis-patellar-or ankle jerk) as compared to the reactive non-affected side. • a difference of one or more grades in the reflex response between the two sides is significant. Reflexes:	Reflexes (0 to +++) Absent = 6 Present but diminished = 4

	• 0 Absent • + Present but diminished • ++ Normal • +++ Increased but not necessarily pathological	Normal = 0 (++, +++)
Tension-Compression Signs:	• Spurling's Sign** • Straight Leg Raise*** • Femoral Stretch****	Yes/No Yes = 4

*Electrodiagnostic Verification of Radiculopathy: Unequivocal electrodiagnostic evidence of acute nerve root pathology includes the presence of multiple sharp waves or fibrillation potentials in muscles innervated by one nerve root. However, the skills of the person performing and interpreting the study are critical. Electromyography (EMG) should be performed only by a licensed MD/DO qualified by reason of education, training and experience in these procedures who is in attendance while the procedure is being performed. EMG does not detect all compressive radiculopathies and cannot determine the cause of the nerve root pathology. On the other hand, EMG can detect non-compressive radiculopathies, which are not identified by imaging studies. Interpretation must in accordance with the published guidelines of the American Association of Electrodiagnostic Medicine.[7]

** Spurling's Sign is defined as pain in the distribution of a cervical nerve root that is produced by simultaneous neck extension, ipsilateral rotation, and axial compression.

***Straight Leg Raise is defined as pain in the distribution of the L5 or S1 lumbar nerve root that is produced when the ipsilateral hip is flexed from 30 degrees to 70 degrees, while the knee remains in full extension.

****Femoral stretch is defined as a pain in the distribution of the L2-L3-L4 nerve root that is produced when the patient is prone, the involved knee is flexed and the hip extended.

Table 2.1(a). Motor Deficits: Categories for Determining Impairment Due To Loss of Function Resulting From Nerve Disorders (Upper or Lower Extremity Value)[8, 9]

Grade	Description of Muscle Function	Motor Deficit
0	No contractions	20
1	Slight contraction and no movement	20
2	Active movement (range of motion as determined by passive measurement) with gravity eliminated	18
3	Active movement (range of motion as determined by passive measurement) against gravity (without resistance)	6
4	Active movement (range of motion as determined by passive measurement) against gravity with some resistance	0
5	Active movement (range of motion as determined by passive measurement) against gravity with full resistance (No deficit)	0

Table 2.1(b): Sensory Deficits: Categories For Determining Impairment Due To Nerve Root Disorders (Severity Multiplier)[10, 11]

The dermatomal distribution of sensory disturbances should be consistent with the location of the spinal lesion as determined by the clinical examination, imaging studies and/or electrodiagnostic testing.

	Description of Sensory Loss	Sensory Deficit
Anesthesia	Total sensory loss	6
Compromised	Diminished or altered sensation	4
Normal	No loss of sensation	0

Note: For each additional root in the same spinal region (cervical or thoracic or lumbar), the Severity Ranking shall be increased by one letter per level, up to a maximum of 3 letters.

For root avulsion established by history, physical exam and proper imaging, the Severity Class shall be L for the non-dominant side and M for the dominant side; and for a flail limb (complete lower motor neuron paralysis of a limb), P for the non-dominant side and Q for the dominant side.

Table 2.2: Spinal Nerve Root Impairment Affecting the Upper Extremity[12]

Nerve Root Impaired	Sensory Deficit	Weakness
C5	0	10
C6	6	10
C7	6	10
C8	4	12
T1	0	12

Table 2.3: Spinal Nerve Root Impairment Affecting the Lower Extremity[13]

Nerve Root Impaired	Sensory Deficit	Weakness
L3	0	12
L4	4	24
L5	4	16
S1	6	18

Table 2.4: Radiculopathy Severity Rankings

To determine placement within the range of severity rankings for radiculopathy, follow these steps:

1. Determine the number of points from Tables 2.1(a), 2.1 (b), 2.2 and 2.3 as applicable.
   a. Cervical: Tables 2.1(a), 2.1 (b) and 2.2
   b. Thoracic: Tables 2.1(a) and 2.1 (b)
   c. Lumbar: Tables 2.1(a), 2.1(b) and 2.3

2. From either Table 2.4(a) (for cervical or thoracic injury) or Table 2.4(b) (for lumbar injury) below, determine the letter that corresponds to the number of points. This letter is the severity ranking.

Table 2.4(a): Points for Cervical and Thoracic Radiculopathy

Severity Ranking	Cervical	Thoracic
C	0	0
D	4-16	4-16
E	17-32	17-32
F	33-48	33-48
G	49-64	49-64
H	65-80	-

Table 2.4(b): Points for Lumbar Radiculopathy

Severity Ranking	Lumbar
D	0
E	4-16
F	17-32
G	33-48
H	49-64
I	65-80
J	81-92

Schedule 2.4: Spinal Cord Injury

The impairments listed below are the same with or without surgery.

1. Severity rankings are from "A" (the least severe medical impairment) to "Z" (the most severe medical impairment) for the Medical Impairment Classes within a Schedule.

2. These are the severity rankings for the Medical Impairment Classes of the Spine and Pelvis Chapter and should not be compared to the rankings in other Chapters. For example, a "D" ranking in the Spine and Pelvis Chapter is not intended to imply that a "D" ranking in the Respiratory Chapter is of equal severity.

3. The severity ranking is generally predictive of the functional outcome for each Class relative to the other Classes within a Schedule.

4. The medical impairment ranking is not to be used as a direct translation to loss of wage earning capacity.

Please state diagnosis(es) at time of impairment rating: **Medical Impairment Class**	**Severity Ranking**		
			Lumbar Incomplete
Class 1(a). Medically documented injury with all of the following: • clinical neurologic findings consistent with lumbar level spinal cord injury. Clinical neurologic findings consistent with a lumbar level injury include one or more of the following (incomplete injury*): • paraparesis; (may include cauda equina) • motor weakness consistent with lumbar cord segmental level; • sensory deficit consistent with lumbar cord segmental level; sensory testing is required to establish the lumbar cord sensory injury level; • lower motor neuron findings including hypotonicity, areflexia, or atrophy. Complete the attached ASIA Worksheet (Table 2.5).			L1 K L2 L3 L4 E L5 D

Class 1(b). Medically documented injury with all of the following: • clinical neurologic findings consistent with lumbar level spinal cord injury. Clinical neurologic findings consistent with a lumbar level injury include one or more of the following (complete injury**): • paraplegia (may include cauda equina) • motor weakness consistent with lumbar cord segmental level; • sensory deficit consistent with lumbar cord segmental level; sensory testing is required to establish the lumbar cord sensory injury level; • lower motor neuron findings including hypotonicity, areflexia or atrophy. Complete the attached ASIA Worksheet (Table 2.5)			**Lumbar Complete** L1 N L2 L3 L4 F L5 E
Class 2(a). Medically documented injury with all of the following: • clinical neurologic findings consistent with thoracic level spinal cord injury. Clinical neurologic findings consistent with a thoracic level injury include one or more of the following (incomplete injury*): • paraparesis; • motor weakness consistent with thoracic cord segmental level; • sensory deficit consistent with thoracic cord segmental level; sensory testing is required to establish the thoracic cord sensory injury level; • upper motor neuron findings including: spasticity, hyperreflexia, Babinski sign, or clonus. • lower motor neuron findings including hypotonicity, areflexia or atrophy; • autonomic hyperreflexia. Complete the attached ASIA Worksheet (Table 2.5)		**Thoracic Incomplete** T1 W T2 T3 T4 Q T5 T6 T7 T8 N T9 T10 T11 K T12	

Class 2(b). Medically documented injury with all of the following: • clinical neurologic findings consistent with thoracic level spinal cord injury. Clinical neurologic findings consistent with a thoracic level injury include one or more of the following (complete injury**): • paraplegia; • motor weakness consistent with thoracic cord segmental level; • sensory deficit consistent with thoracic cord segmental level; sensory testing is required to establish the thoracic cord sensory injury level; • upper motor neuron findings including: spasticity, hyperreflexia, Babinski sign, or clonus. • lower motor neuron findings including hypotonicity, areflexia or atrophy; • autonomic hyperreflexia. Complete the attached ASIA Worksheet (Table 2.5).		**Thoracic Complete** T1 X T2 T3 T T4 T5 T6 T7 Q T8 T9 T10 T11 N T12	
Class 3(a). Medically documented injury with all of the following: • clinical neurologic findings consistent with cervical level spinal cord injury. Clinical neurologic findings consistent with a cervical level injury include one or more of the following (incomplete injury*): • quadriparesis; • motor weakness consistent with cervical cord segmental level • sensory deficit consistent with cervical cord segmental level; sensory testing is required to establish the cervical cord sensory injury level; • upper motor neuron findings including: spasticity, hyperreflexia, Hoffman sign, Babinski sign, or clonus. • lower motor neuron findings including hypotonicity, areflexia or atrophy; • autonomic hyperreflexia. Complete the attached ASIA Worksheet (Table 2.5).	**Cervical Incomplete** C1 C2 Z C3 C4 C5 Z C6 Y C7 W C8-T1 W		

Class 3(b). Medically documented injury with all of the following: • clinical neurologic findings consistent with cervical level spinal cord injury. Clinical neurologic findings consistent with a cervical level injury include one or more of the following (complete injury**): • quadriplegia; • motor deficit consistent with cervical cord segmental level • sensory deficit consistent with cervical cord segmental level; sensory testing is required to establish the cervical cord sensory injury level; • upper motor neuron findings including: spasticity, hyperreflexia, Hoffman sign, Babinski sign, or clonus. • lower motor neuron findings including hypotonicity, areflexia or atrophy; • autonomic hyperreflexia. Complete the attached ASIA Worksheet (Table 2.5).	**Cervical Complete** C1 C2 Z C3 C4 C5 Z C6 Y C7 Y C8-T1 X		

***Incomplete cord injury** means the preservation of motor or sensory function below the level of injury, including the lowest sacral segments. (Preservation of voluntary anal sphincter contraction or peri-anal sensation).
****Complete spinal cord injury (ASIA Impairment Scale)** means that there is no sensory or motor function preserved in the lowest sacral segment (S4-S5).

Table 2.5: Standard Neurological Classification of Spinal Cord Injury Worksheet (ASIA Worksheet)[14]

1. The ASIA Worksheet should be used to document the neurologic findings associated with a spinal cord injury. The total point scores for Motor and Sensory on the ASIA Worksheet are not used in the Spinal Cord Injury Schedule and need not be calculated.

2. The following steps should be used to document the neurological findings, using the appropriate Worksheet sections:
   - determine the sensory levels for right and left sides
   - determine motor levels for right and left sides (see Number 3 below)
   - determine the neurological level
   - determine whether the injury is complete or incomplete

3. To document motor levels/findings use the following muscle grading system:

Grade	Description
0	No contractions
1	Slight contraction and no movement
2	Active movement (range of motion as determined by passive measurement) with gravity eliminated
3	Active movement (range of motion as determined by passive measurement) against gravity (without resistance)
4	Active movement (range of motion as determined by passive measurement) against gravity with some resistance
5	Active movement (range of motion as determined by passive measurement) against gravity with full resistance (No deficit)

Patient Name _____

Examiner Name _____ Date/Time of Exam_____

STANDARD NEUROLOGICAL CLASSIFICATION OF SPINAL CORD INJURY

ISCOS

MOTOR

KEY MUSCLES (scoring on reverse side)

	R	L	
C5			Elbow flexors
C6			Wrist extensors
C7			Elbow extensors
C8			Finger flexors (distal phalanx of middle finger)
T1			Finger abductors (little finger)

UPPER LIMB TOTAL (MAXIMUM) _____ + _____ = _____ (25) (25) (50)

Comments:

L2			Hip flexors
L3			Knee extensors
L4			Ankle dorsiflexors
L5			Long toe extensors
S1			Ankle plantar flexors

Voluntary anal contraction (Yes/No) _____

LOWER LIMB TOTAL (MAXIMUM) _____ + _____ = _____ (25) (25) (50)

SENSORY

KEY SENSORY POINTS

	LIGHT TOUCH R	LIGHT TOUCH L	PIN PRICK R	PIN PRICK L
C2				
C3				
C4				
C5				
C6				
C7				
C8				
T1				
T2				
T3				
T4				
T5				
T6				
T7				
T8				
T9				
T10				
T11				
T12				
L1				
L2				
L3				
L4				
L5				
S1				
S2				
S3				
S4-5				

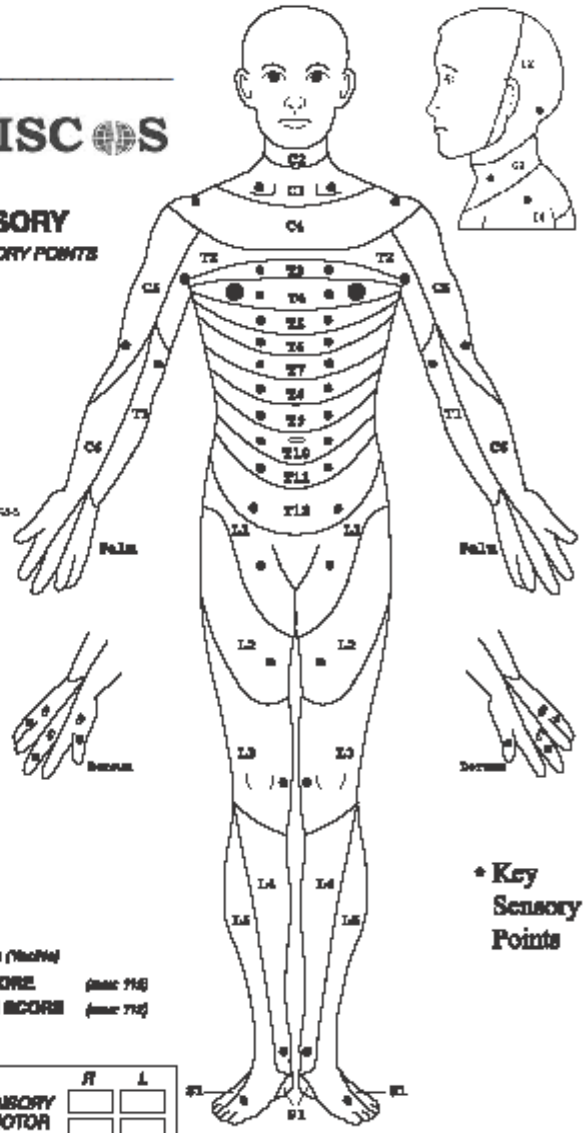
0 = absent
1 = impaired
2 = normal
NT = not testable

TOTALS (MAXIMUM) _____ + _____ = _____ (56) (56) (112)

_____ Any anal sensation (Yes/No)

_____ PIN PRICK SCORE (max 112)

_____ LIGHT TOUCH SCORE (max 112)



* Key Sensory Points

NEUROLOGICAL LEVEL (The most caudal segment with normal function) — SENSORY R _____ L _____ / MOTOR R _____ L _____

COMPLETE OR INCOMPLETE? _____ (Incomplete = Any sensory or motor function in S4-S5)

ASIA IMPAIRMENT SCALE _____

ZONE OF PARTIAL PRESERVATION (Caudal most of partially innervated segment) — SENSORY R _____ L _____ / MOTOR R _____ L _____

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REV 02/04

Schedule 2.5: The Pelvis

1. Severity rankings are from "A" (the least severe medical impairment) to "Z" (the most severe medical impairment) for the Medical Impairment Classes within a Schedule.

2. These are the severity rankings for the Medical Impairment Classes of the Spine and Pelvis Chapter and should not be compared to the rankings in other Chapters. For example, a "D" ranking in the Spine and Pelvis Chapter is not intended to imply that a "D" ranking in the Respiratory Chapter is of equal severity.

3. The severity ranking is generally predictive of the functional outcome for each Class relative to the other Classes within a Schedule.

4. The medical impairment ranking is not to be used as a direct translation to loss of wage earning capacity.

Please state diagnosis(es) at time of impairment rating:	
Medical Impairment Class	**Severity Ranking**
Class 1. Medically documented injury with: • imaging finding(s) of healed non-displaced or displaced fracture(s) or dislocation(s); • with or without surgery; • no residual symptoms; • no clinical findings.	None
Class 2(a). Sacrum Medically documented injury with all of the following: • imaging finding(s) of healed, non-displaced or displaced sacral fracture(s) • residual symptoms • clinical findings consistent with the healed fracture(s) Clinical findings are gait dysfunction and One or more of the following neurologic findings: • reflex abnormalities in the bulbocavernosus, or anal wink reflexes • sensory loss in a dermatomal distribution • urinary or anal sphincter dysfunction* (decreased anal sphincter tone on rectal exam), • bowel and/or bladder** dysfunction without incontinence.	C

Class 2(b). Sacrum Medically documented injury with all of the following: • imaging finding(s) of healed, non-displaced or displaced sacral fracture(s) • residual symptoms • clinical findings consistent with the healed fracture(s) Clinical findings are gait dysfunction and One or more of the following neurologic findings: • saddle anesthesia • urinary and/or fecal incontinence secondary to sacral nerve injury	I
Class 3. Symphysis Pubis Medically documented injury with all of the following: • imaging finding(s) of pubic symphysis separation or displacement; • residual symptoms; • clinical findings consistent with the separation or displacement. Clinical findings are one or more of the following: • asymmetry or deformity; • tenderness; • pain over symphysis pubis on provocative testing; • gait dysfunction.	A
Class 4. Coccyx Medically documented injury with all of the following: • imaging finding(s) of healed, non-displaced or displaced coccyx fracture(s); • residual symptoms; • clinical findings consistent with the healed fracture(s). Clinical findings are one or both of the following: • tenderness elicited upon provocative exam • reproduction of pain by mobilization of coccyx on rectal exam.	A

Class 5. Sacroiliac Joint Dysfunction Medically documented injury with all of the following: • imaging finding(s) of healed displaced sacroiliac fracture(s) involving the sacroiliac joint or dislocation of the sacroiliac joint • residual symptoms • clinical findings consistent with the healed fracture(s) or dislocation. Clinical findings are one or more of the following: • deformity • tenderness, • pain elicited upon provocative testing -positive Patrick's sign *** -positive Gaenslen's sign**** • gait dysfunction	A-C
Class 6. Ramus/Rami Medically documented injury with all of the following: • imaging finding(s) of healed, non-displaced or displaced single ramus, or bilateral and/or superior and inferior rami fracture(s); • residual symptoms; • clinical findings consistent with the fracture(s). Clinical findings are one or more of the following: • deformity; • leg-length discrepancy of $\geq$ one inch identified by measurement and a positive Galeazzi test;***** • gait dysfunction; • positive Patrick sign.	A-B

Class 7. Ilium Medically documented injury with the following: • imaging finding(s) of healed, non-displaced or displaced iliac fracture(s); • residual symptoms; • may have clinical findings consistent with the fracture(s) and correlated with residual symptoms. Clinical findings may be one or more of the following: • deformity; • leg-length discrepancy of ≥ one inch identified by measurement and a positive Galeazzi test;***** • gait dysfunction; • range of motion limitation; • disuse atrophy	B-C
Class 8. Ischium Medically documented injury with all of the following: • imaging finding(s) of healed, non-displaced or displaced ischium fracture(s); • residual symptoms; • clinical findings consistent with the fracture(s). Clinical findings are one or more of the following: • tenderness; • gait dysfunction; • straight leg raise limited by pain in area of injury; • positive Patrick sign. • MRI-partial or complete avulsion hamstring tendon.	B-C
Class 9. Acetabulum Medically documented injury with all of the following: • imaging finding(s) of acetabular fracture(s); • residual symptoms; • clinical findings consistent with the fracture(s). Clinical findings are one or more of the following: • limited range of motion; • gait dysfunction; • positive Patrick sign.	Evaluate based on restricted range of motion (ROM) of hip joint (LE) Scheduled Loss

* Sphincter EMG will demonstrate the presence of denervation.

** Bladder dysfunction should be corroborated with bladder function studies, including ultrasound or catheterization to measure residual volumes and/or cystometry.

*** Patrick sign: Knee on affected side is flexed to 90 degrees and the foot on the affected side rests on the opposite knee. While the examiner holds the pelvis firm against the exam table, the affected hip is externally rotated by pushing the knee on the affected side laterally toward the exam table. Pain during this maneuver is considered a positive test.

**** Gaenslen's sign: The patient is supine with the painful side as close as possible to the edge of the examining table or projecting beyond it. To stabilize this position and immobilize the lumbar spine, the patient flexes the knee and hip of the contralateral leg and draws the leg as close to the torso as possible. The examiner then passively hyperextends the other leg (the one not in contact with the table). If there is dysfunction in the sacroiliac (SI) joint, hyperextension of the leg will lead to motion in the SI joint causing pain or exacerbation of existing pain.

***** Galeazzi test: The patient is supine with the knees flexed 90 degrees and the soles of the feet flat on the examining table. The examiner assess the position of both knees from the end of the table and from the side. Normally both knees are at the same level. Where one knee is higher than the other, either the tibia if that side is longer or the contralateral side is shorter. Where one knee projects farther forward than the other, either that femur is longer or the contralateral femur is shorter.

Chapter 3: Respiratory

Schedule 3.1: Pneumoconioses and Other Occupational Respiratory Diseases (other than Asthma)

Radiographic or pathology findings are required to establish the diagnosis of pneumoconiosis. The severity of radiographic changes does not influence the degree of impairment.

For rating objective pulmonary test results, see Table 3.2 entitled Severity of Pulmonary Function Test Abnormality. To identify the predicted and lower limits of normal (LLN) values for FEV1 and FVC, see Tables 3.3(a), 3.3(b), 3.4(a) and 3.4(b) and for predicted DLco values see Table 3.5.

In the event that objective tests (spirometry or diffusing capacity [DLco]) indicate different impairment categories, use the more severe category. If the degree of dyspnea indicates a less severe impairment category than the objective test results, then the objective test results control the selection of the impairment category. If the degree of dyspnea indicates a more severe impairment category than the objective test results, then a cardiopulmonary exercise test is indicated. If the cardiopulmonary exercise test yields a VO2 max less than 84% of predicted, then the severity class is increased by one level from what the result would have been if determined by the original objective test results. See Table 3.6 and Table 3.7 and the related example of the impact of the cardiopulmonary exercise test on category placement.

Findings on physical examination of the lung have not been included as criteria in the impairment categories since they have not been demonstrated to predict function.

Severity rankings are from "A" (the least severe medical impairment) to "Z" (the most severe medical impairment) for the Medical Impairment Classes within a Schedule.

These are the severity rankings for the Medical Impairment Classes of the Spine and Pelvis Schedules and should not be compared to the rankings in other Schedules. For example, a "C" ranking in the Spine Schedule is not intended to imply that a "C" ranking in the Respiratory Schedule is of equal severity.

The severity ranking is generally predictive of the functional result for each Class relative to the other Classes within a Schedule.

The medical impairment ranking is not to be used as a direct translation to loss of wage earning capacity.

Please state diagnosis(es) at time of impairment rating:

Medical Impairment Class	Severity Ranking
Class 1. Medically documented workplace exposure with all of the following:	None

• no symptoms • abnormal x-ray findings that can be medically attributed to (correlated with) the exposure and • normal pulmonary function tests or • no prior PFT data available or no loss of function in excess of age effect.	
Class 2. Medically documented workplace exposure with all of the following: • no symptoms • normal pulmonary function tests • loss of pulmonary function: FEV1 in excess of age effect. (Table 3.1).	None
Class 3. Medically documented workplace exposure with all of the following: • mild dyspnea • normal pulmonary function tests, including spirometry, DLco and exercise testing.	A
Class 4. Medically documented workplace exposure with: • mild dyspnea and • abnormal pulmonary function tests as follows: (a) normal spirometry and lung volumes with one of the following (b) DLco $\geq$60% predicted but <80% predicted or (c) oxygen desaturation with exercise $\geq$20 mmHg decrease in PaO2 and/or $\geq$4% decrease in SaO2 or (d) abnormal cardiopulmonary stress test (exercise test) showing impairment of pulmonary function.	D

Class 5. Medically documented workplace exposure with: • mild dyspnea and • abnormal pulmonary function tests (a) FEV1 >70% but less than LLN or (b) DLco ≥40% predicted but <80% predicted.	E
Class 6. Medically documented workplace exposure with: • moderate dyspnea and • abnormal pulmonary function tests (a) FEV1 >70% predicted but less than LLN or (b) DLco ≥40% predicted but <80% predicted.	G
Class 7. Medically documented workplace exposure with: • moderate dyspnea and • abnormal pulmonary function tests (a) FEV1 60-69% predicted or (b) DLco ≥40% predicted but <80% predicted.	I
Class 8. Medically documented workplace exposure with: • moderate dyspnea, and • abnormal pulmonary function tests (a) FEV1 50-59% predicted or (b) DLco ≥40% predicted but <80% predicted.	L
Class 9. Medically documented workplace exposure with: • moderately severe dyspnea and • abnormal pulmonary function tests (a) FEV1 60-69% predicted or	M

(b) DLco ≥40% predicted but <80% predicted.	
Class 10. Medically documented workplace exposure with: • moderately severe dyspnea and • abnormal pulmonary function tests (a) FEV1 50-59% predicted or (b) DLco ≥40% predicted but <80% predicted.	O
Class 11. Medically documented workplace exposure with: • severe dyspnea and • abnormal pulmonary function tests (a) FEV1 50-59% predicted or (b) DLco ≥40% predicted but <80% predicted.	R
Class 12. Medically documented workplace exposure with • severe dyspnea and • abnormal pulmonary function tests (a) FEV1 50-59% predicted or (b) DLco <40% predicted.	T
Class 13. Medically documented workplace exposure with: • severe dyspnea and • abnormal pulmonary function tests (a) FEV1 35-49% predicted or (b) DLco <40% predicted.	V
Class 14. Medically documented workplace exposure with: • severe dyspnea and • abnormal pulmonary function tests	X

(a) FEV1 <35% predicted or (b) DLco <40 % predicted.	
Class 15. Medically documented workplace exposure with: • very severe dyspnea and • abnormal pulmonary function tests (a) FEV1 35-49% predicted or (b) DLco <40 % predicted.	Y
Class 16. Medically documented workplace exposure with: • very severe dyspnea and • abnormal pulmonary function tests (a) FEV1<35% predicted or (b) DLCO <40 % predicted.	Z

Table 3.1: Fifth Percentile Values of % FEV1 Loss by Test Interval (years) and Gender[15]

Test Interval, years	% FEV1 loss/year	
	Men	Women
1	- 10.4	- 10.6
2	- 6.1	- 6.4
3	- 4.6	- 4.8
4	- 3.8	- 4.0
5	- 3.2	- 3.6

To determine loss of pulmonary function in excess of aging process:

1. For comparisons between tests performed within 1-to-5 years-time-span

a. Subtract the most recent measured FEV1 value in milliliters available for comparison from the initial FEV1 value in milliliters.

b. Divide the value obtained in "a" by the initial FEV1 value in milliliters and multiply the result by 100. This provides loss of % FEV1 over the time interval considered for comparison.

c. Divide the value obtained in "b" by the number of years between the two tests considered for comparison. This provides loss of % FEV1 per year.

d. Compare the loss of %FEV1/yr obtained with the %FEV1/yr in the Table 3.1 above. If the value obtained in "c" is in excess of the value noted in the table for the corresponding time-interval, the loss of pulmonary function is in excess of the aging process.

Examples:

(i). 47-year-old male worker with a history of exposure to silica-containing dust while working for a company since the age of 25. Initial pulmonary function test done in 2004 revealed an FEV1 of 2,580 ml. A follow up test done in 2009 revealed an FEV1 of 2,140 ml. Is the loss in pulmonary function due to the aging process only?

a. Most recent FEV1 – initial FEV1: (2,140) – (2,580) = - 440 ml
b. - 440/2,580 = - 0.1705 x 100 = - 17.05%, loss of pulmonary function over 5 years
c. -17.05/5 = -3.41%/year
d. As per comparison with the reference Table 3.1, a loss of 3.41%/year is in excess of 3.2%/year; therefore, this is considered a loss of pulmonary function in excess of that due to the aging process.

(ii). 35-year-old male worker followed up for exposure to dust at work. Initial pulmonary function tests at age 30 revealed an FEV1 of 4,390 ml. Follow up tests done at age 33 revealed an FEV1 of 4,220. Is the loss in pulmonary function due to the aging process only?

a. Most recent FEV1 – initial FEV1: (4,220) – (4,390) = –170 ml
b. – 170/4,390 = –0.0387 x 100 = –3.87%, loss of pulmonary function over 3 years.

c. –3.87/3 = –1.29%/year

d. As per comparison with the reference Table 3.1, a loss of 1.29% over a three-year interval is less than 4.6%; therefore, this is considered aging-related loss of pulmonary function.

2. For comparisons of PFTs over time intervals longer than 5 years[16, 17]

a. Subtract the most recent FEV1 value in milliliters from the initial FEV1 value in milliliters and divide by the number of years. This reflects loss of FEV1 in ml/yr.

b. A loss of FEV1 in excess of 50 ml/yr is considered a loss of pulmonary function in excess of the aging effect.

3. For comparisons of PFTs for time intervals of less than 1 year[18]

For tests performed in intervals of less than one year, a change in FEV1 of greater than 7.1% is considered a loss of pulmonary function in excess of age.

4. General rules, comparability of pulmonary function tests[19, 20]

Specific recommendations developed by the American Thoracic Society and other professional organizations to ensure accurate and reproducible measurements when using spirometers and spirometry testing have been developed and should be followed when performing PFTs and evaluating changes over time.

Table 3.2: Severity of Pulmonary Function Test Abnormality[21]

3.2(a) Degree of Severity of Any Spirometric Abnormality Based on Decrease in FEV1[22]

Degree of severity	FEV1 % predicted
Mild	>70%
Moderate	60-69%
Moderately severe	50-59%
Severe	35-49%
Very Severe	<35%

3.2(b) Degree of Severity of Decrease in Diffusing Capacity[23]

Degree of severity	DLco % predicted
Mild	> 60% and < 80%
Moderate	40-60%
Severe	< 40%

Diffusing capacity should be altitude-adjusted and hemoglobin-adjusted.

Diffusing Capacity:[24]

- Altitude adjusted DLco = measured DLco x [1 x 0.0035 (PAO2 –120)], or
- Altitude adjusted DLco = measured DLco x [1 x 0.0031(PiO2 –150)], estimated PiO2 = 0.21(PB – 47)
- Hemoglobin-adjusted DLco = observed DLco (10.22 + Hb)/1.7 Hb for adolescent and adult male
- Hemoglobin-adjusted DLco = observed DLco (9.38 + Hb)/1.7 Hb for children under 15 and women[25]

Table 3.3(a): Prediction and Lower Limits of Normal Equations for Spirometric Parameters for Male Subjects[26]

Subjects	Intercept	Age	Age^2	Ht_{PRD} $(cm)^{2*}$	Ht_{LLN} $(cm)^{2*}$	R^2
Caucasian <20 yr of age						
FEV_1	-0.7453	-0.04106	0.004477	0.00014098	0.00011607	0.8510
FEV_6	-0.3119	-0.18612	0.009717	0.00018188	0.00015323	0.8692
FVC	-0.2584	-0.20415	0.010133	0.00018642	0.00015695	0.8668
PEF	-0.5962	-0.12357	0.013135	0.00024962	0.00017635	0.7808
FEF_{25-75}	-1.0863	0.13939		0.00010345	0.00005294	0.5601
Caucasian ≥20 yr of age						
FEV_1	0.5536	-0.01303	-0.000172	0.00014098	0.00011607	0.8510
FEV_6	0.1102	-0.00842	-0.000223	0.00018188	0.00015323	0.8692
FVC	-0.1933	0.00064	-0.000269	0.00018642	0.00015695	0.8668
PEF	1.0523	0.08272	-0.001301	0.00024962	0.00017635	0.7808
FEF_{25-75}	2.7006	-0.04995		0.00010345	0.00005294	0.5601.
African-American <20 yr of age						
FEV_1	-0.7048	-0.05711	0.004316	0.00013194	0.00010561	0.8080
FEV_6	-0.5525	-0.14107	0.007241	0.00016429	0.00013499	0.8297
FVC	-0.4971	-0.15497	0.007701	0.00016643	0.00013670	0.8303
PEF	-0.2684	-0.28016	0.018202	0.00027333	0.00018938	0.7299
FEF_{25-75}	-1.1627	0.12314		0.00010461	0.00004819	0.4724
African-American ≥20 yr of age						
FEV_1	0.3411	-0.02309		0.00013194	0.00010561	0.8080
FEV_6	-0.0547	-0.02114		0.00016429	0.00013499	0.8297
FVC	-0.1517	-0.01821		0.00016643	0.00013670	0.8303
PEF	2.2257	-0.04082		0.00027333	0.00018938	0.7299
FEF_{25-75}	2.1477	-0.04238		0.00010461	0.00004819	0.4724
Mexican-American <20 yr of age						
FEV_1	-0.8218	-0.04248	0.004291	0.00015104	0.00012670	0.8536
FEV_6	-0.6646	-0.11270	0.007306	0.00017840	0.00015029	0.8657

FVC	-0.7571	-0.09520	0.006619	0.00017823	0.00014947	0.8641
PEF	-0.9537	-0.19602	0.014497	0.00030243	0.00021833	0.7530
FEF_{25-75}	-1.3592	0.10529		0.00014473	0.00009020	0.5482
Mexican-American ≥20 yr of age						
FEV_1	0.6306	-0.02928		0.00015104	0.00012670	0.8536
FEV_6	0.5757	-0.02860		0.00017840	0.00015029	0.8657
FVC	0.2376	-0.00891	-0.000182	0.00017823	0.00014947	0.8641
PEF	0.0870	0.06580	-0.001195	0.00030243	0.00021833	0.7530
FEF_{25-75}	1.7503	-0.05018		0.00014473	0.00009020	0.5482

*Ht_{PRD} coefficient is used for prediction equation and Ht_{LLN} is used (replaces Ht_{PRD}) for the lower limit of normal equation. Lung function parameter = $b_0 + b_1 + * age + b_2 * age^2 = b_3 * height^2$

Table 3.3(b):Prediction and Lower Limits of Normal Equations for Spirometric Parameters for Female Subjects[27]

Subjects	Intercept	Age	Age ^{2}	Ht $_{PRD}$ $(cm)^{2*}$	Ht $_{LLN}$ $(cm)^{2*}$	R^2
Caucasian <18 yr of age						
FEV_1	-0.8710	0.06537		0.00011496	0.00009283	0.7494
FEV_6	-1.1925	0.06544		0.00014395	0.00011827	0.7457
FVC	-1.2082	0.05916		0.00014815	0.00012198	0.7344
PEF	-3.6181	0.60644	-0.016846	0.00018623	0.00012148	0.5559
FEF_{25-75}	-2.5284	0.52490	-0.015309	0.00006982	0.00002302	0.5005
Caucasian ≥18 yr of age						
FEV_1	0.4333	-0.00361	-0.000194	0.00011496	0.00009283	0.7494
FEV_6	-0.1373	0.01317	-0.000352	0.00014395	0.00011827	0.7457
FVC	-0.3560	0.01870	-0.000382	0.00014815	0.00012198	0.7344
PEF	0.9267	0.06929	-0.001031	0.00018623	0.00012148	0.5559
FEF_{25-75}	2.3670	-0.01904	-0.000200	0.00006982	0.00002302	0.5005
African-American <18 yr of age						
FEV_1	-0.9630	0.05799		0.00010846	0.00008546	0.6687
FEV_6	-0.6370	-0.04243	0.003508	0.00013497	0.00010848	0.6615
FVC	-0.6166	-0.04687	0.003602	0.00013606	0.00010916	0.6536
PEF	-1.2398	0.16375		0.00019746	0.00012160	0.4736
FEF_{25-75}	-2.5379	0.43755	-0.012154	0.00008572	0.00003380	0.3787
African-American ≥18 yr of age						
FEV_1	0.3433	-0.01283	-0.000097	0.00010846	0.00008546	0.6687
FEV_6	-0.1981	0.00047	-0.000230	0.00013497	0.00010848	0.6615
FVC	-0.3039	0.00536	-0.000265	0.00013606	0.00010916	0.6536
PEF	1.3597	0.03458	-0.000847	0.00019746	0.00012160	0.4736
FEF_{25-75}	2.0828	-0.03793		0.00008572	0.00003380	0.3787
Mexican-American <18 yr of age						
FEV_1	-0.9641	0.06490		0.00012154	0.00009890	0.7268
FEV_6	-1.2410	0.07625		0.00014106	0.00011480	0.7208

FVC	-1.2507	0.07501		0.00014246	0.00011570	0.7103
PEF	-3.2549	0.47495	-0.013193	0.00022203	0.00014611	0.4669
FEF_{25-75}	-2.1825	0.42451	-0.012415	0.00009610	0.00004594	0.4305
Mexican-American ≥18 yr of age						
FEV_1	0.4529	-0.01178	-0.000113	0.00012154	0.00009890	0.7268
FEV_6	0.2033	0.00020	-0.000232	0.00014106	0.00011480	0.7208
FVC	0.1210	0.00307	-0.000237	0.00014246	0.00011570	0.7103
PEF	0.2401	0.06174	-0.001023	0.00022203	0.00014611	0.4669
FEF_{25-75}	1.7456	-0.01195	-0.000291	0.00009610	0.00004594	0.4305

*Ht_{PRD} coefficient is used for prediction equation and Ht_{LLN} is used (replaces Ht_{PRD}) for the lower limit of normal equation. Lung function parameter = $b_0 + b_1 + * age + b_2 * age^2 = b_3 * height^2$

Table 3.4(a): Prediction and Lower Limits of Normal Equations for FEV1/FEV6 % and FEV1/FVC % for Male Subjects[28]

Subjects	Intercept $_{PRD*}$	Age	Intercept $_{LLN*}$	R^2
Caucasian				
FEV_1/FEV_6 %	87.340	-0.1382	78.372	0.2151
FEV_1/FVC %	88.066	-0.2066	78.388	0.3448
African-American				
FEV_1/FEV_6 %	88.841	-0.1305	78.979	0.0937
FEV_1/FVC %	89.239	-0.1828	78.822	0.1538
Mexican-American				
FEV_1/FEV_6 %	89.388	-0.1534	80.810	0.1711
FEV_1/FVC %	90.024	-0.2186	80.925	0.2713

*Intercept $_{PRD}$ is used for prediction equation and Intercept $_{LLN}$ is used (replaces Intercept $_{PRD}$) for the lower limit of normal equation. Lung function parameter = $b_0 + b_1 *$ age.

Table 3.4(b): Prediction and Lower Limits of Normal Equations for FEV1/FEV6 % and FEV1/FVC % for Female Subjects[29]

Subjects	Intercept $_{PRD*}$	Age	Intercept $_{LLN*}$	R^2
Caucasian				
FEV_1/FEV_6 %	90.107	-0.1563	81.307	0.3048
FEV_1/FVC %	90.809	-0.2125	81.015	0.3955
African-American				
FEV_1/FEV_6 %	91.229	-0.1558	81.396	0.1693
FEV_1/FVC %	91.655	-0.2039	80.978	0.2284
Mexican-American				
FEV_1/FEV_6 %	91.664	-0.1670	83.034	0.2449
FEV_1/FVC %	92.360	-0.2248	83.044	0.3352

*Intercept $_{PRD}$ is used for prediction equation and Intercept $_{LLN}$ is used (replaces Intercept $_{PRD}$) for the lower limit of normal equation. Lung function parameter = $b_0 + b_1 *$ age.

Table 3.5(a): DLCO Reference Equations for Men[30]					
Reference No.	N	Equation	r2	SEE	Smoking Status
96	84	6.8-0.238A+15.5 BSA	*	5.04	*
45	227	0.325H-0.200A-17.6	*	5.10	*
102	*	$3.75V_A$-0.153A+19.93	*	*	*
98†	123	0.410H-0.210A-26.31	0.60	4.82	NS
83	74	0.1646H-0.229A+12.9113	0.46	4.84	NS
101	80	0.441H-0.1936A-31.3822	0.32	5.79	NS
99	71	0.3551H-0.2741A-11.3527	0.67	4.57	NS
4	‡	0.3319H-0.1971A-18.006	0.79	4.21	*
119	194	0.3674H-0.1961A-21.8982	0.45	4.40	NS

Definition of abbreviations: V_A = alveolar volume in L STPD; H = height in cm; A = age in years; W = weight in kg; BSA = body surface area; ECCS = European Community for Coal and Steel; NS = nonsmokers; ES = ex- smokers; r2 = coefficient of determination; SEE= standard of error of the estimate. Estimates of regression variability are listed under SEE regardless of how the author labeled the variability.

*Information not available in reference.

† Adjusted to a standard hemoglobin concentration of 14.6 g/dl.

‡ Summary equations from several studies.

Table 3.5(b): DLCO Reference Equations for Women[31]					
Reference No.	N	Equation	r2	SEE	Smoking Status
96	51	0.5-0.117A+15.5BSA	*	5.04	*
120	41	0.212H-0.156A-2.66	*	3.69	*
102	*	$5.38V_A$-0.083A+7.72	*	*	*
98§	122	0.256H-0.144A-8.36	0.56	3.57	NS
83	159	0.1602H-0.1111A+2.2382	0.54	3.95	NS+ES
101	291	0.1569H-0.0677A+5.0767	0.09	4.31	NS
99	99	0.1872H-0.1460A+3.8821	0.38	4.50	NS
4	‡	0.2441H-0.1463A-8.20	0.44	3.49	*
119	167	0.1369H-0.1233A+0.0917W+1.8879	0.37	2.91	NS

Definition of abbreviations: V_A = alveolar volume in L STPD; H = height in cm; A = age in years; W = weight in kg; BSA = body surface area; ECCS = European Community for Coal and Steel; NS = nonsmokers; ES = ex- smokers; r2 = coefficient of determination; SEE= standard of error of the estimate. Estimates of regression variability are listed under SEE regardless of how the author labeled the variability.

*Information not available in reference.

‡ Summary equations from several studies.

§ No adjustment for hemoglobin (Hb) concentration; average Hb for the study population was 13.3g/dl.

Table 3.6: Selected Reference Values for Maximal Incremental Cycle Exercise Test[32]	
Variables	Equations*
V_{O2} ml/min, male	W x [50.75 – 0.372 (A)]
V_{O2} ml/min, female	(W + 43) x [22.78 – 0.17 (A)]
HR, beats/min	210 x 0.65 (A) †
O_2 pulse, ml/beat	Predicted V_{O2} max/predicted HR max
V_E/MVV, %	~72 ± 15
AT, L/min (V_{O2})	> 40% V pred

Definition of abbreviations: AT = Anaerobic threshold; HR = heart rate; V_E = minute ventilation; V_{O2} = oxygen uptake.

**Age* (A): years; *height* (H): centimeters; *weight* (W): kilograms.

Predicted weight men: 0.79 x H – 60.7. Predicted weight women: 0.65 x H – 42.8. When actual weight > predicted, the predicted weight should be used in the equations. Wasserman and colleagues introduced new corrections factors which have not yet been published in peer reviewed journals.

† See Lange-Andersen and coworkers

Table 3.7: Suggested Normal Guidelines for Interpretation of Cardiopulmonary Exercise Testing Results

Maximum or peak cardiopulmonary responses except for anaerobic threshold and V_E/VC_{O2} at AT[33]

Variables	Criteria of Normality
V_{O2} max or V_{O2} peak	>84% predicted
Anaerobic threshold	>40% V_{O2} max predicted; wide range of normal (40-80%)
Heart rate (HR)	HR max >90% age predicted
Heart Rate Reserve (HRR)	HRR<15 beats/min
Blood Pressure	<220/90
O_2 pulse (V_{O2}/HR)	>80%
Ventilatory reserve (VR)	MW – V_E max: >11 L or V_E max/MVV x 100: <85%. Wide normal range: 72 $\pm$ 15%
Respiratory frequency (f_R)	<60 breaths/min
V_E/VC_{O2} (at AT)	<34
V_D/V_T	<0.28; <0.30 for age > 40 years
P_{aO2}	>80 mm Hg
P $(_{A-a})$ O_2	<35 mm Hg

To determine the impact of Cardiopulmonary Exercise Test on category placement in Pneumoconioses Schedule:

Example

Patient complains of moderate dyspnea. Spirometry test results are normal, with FVC, FEV1 and FEV1/FVC values above Lower Limits of Normal (LLN). Diffusing capacity is normal, measured at 85% of predicted. Post-exercise oxygen saturation decreased by 2% as compared to baseline values, a non-significant decrease. Cardiopulmonary exercise test yielded a VO2 max of 70% predicted. All of the studies conformed to technical standards of quality as per recommendations.

Category Placement

This patient reports a degree of dyspnea that indicates a more severe impairment category than his spirometry and diffusing capacity test results. Therefore, this patient fulfills the criteria for cardiopulmonary exercise test evaluation. Result of this test showed an abnormally low VO2 max.

By "objective tests", this patient would be classified in category 4. However, since the degree of dyspnea is worse than that category and the exercise test result is abnormal, patient would be finally classified within category 5, i.e., one level above from what the result would have been if determined by the original "objective" test results.

Table 3.8: Dyspnea Evaluation Questionnaire[34, 35]

Mild	Do you have to stop for breath when hurrying on level ground or up a slight hill?
Moderate	Do you have to walk more slowly on level ground than people of your age because of breathlessness?
Moderately Severe	Do you have to stop for breath when walking more than 100 yards (length of football field) at your own pace on level ground?
Severe	Do you ever have to stop for breath after walking less than 100 yards or a few minutes on level ground?
Very Severe	Are you too breathless to leave the house or breathless after dressing or undressing?

Table 3.9: Lung Cancer

All persons with lung cancer are severely impaired at diagnosis in the anticipation that treatment of cancer will result in temporary significant impairment. At re-evaluation one year after diagnosis is established, if the patient is found to be free of all evidence of tumor, that person is evaluated according to criteria listed in Schedule 3.1.

If there is still evidence of tumor, the patient is considered severely or totally impaired.

Schedule 3.2: Asthma[36]

1. For rating objective pulmonary test results, see Table 3.2 entitled Severity of Pulmonary Function Abnormality. To identify the predicted and lower limits of normal (LLN) values for FEV1 and FVC, see Tables 3.3 (a), 3.3(b), 3.4(a), 3.4(b) and 3.5.
2. In order to be rated for asthma, there should be a diagnostic workup that confirms the diagnosis of asthma. To establish a diagnosis of asthma, the clinician should determine that all of the following are present:
   i. There is a compatible history of episodic symptoms. Asthma symptoms include cough, sputum, wheeze, chest tightness, or breathlessness and are usually worse at night.
   ii. Airflow obstruction that is at least partially reversible, either spontaneously or after treatment OR the presence of airway hyper responsiveness to methacholine or histamine in the absence of airflow limitation
      a. Spirometry is used to demonstrate airflow obstruction. Significant reversibility is defined as an increase in FEV1 or FVC of $\geq$ 12% AND of $\geq$ 200 ml from baseline measure after inhalation of a short acting B-agonist and/or a trial of corticosteroids.[37]
      b. Airway hyper responsiveness is considered present when the PC_{20} is less than 16 mg/ml of methacholine[38]. (PC_{20} is the provocative concentration of methacholine that causes a 20% fall in FEV1 values from baseline.)
   iii. And alternative diagnoses are excluded.

3. Work-related asthma is the broad term that refers to asthma that is induced (occupational asthma) or exacerbated (work aggravated/exacerbated) by inhalation exposures at work. Occupational asthma (OA) can be (1) de novo asthma or (2) recurrence of previously quiescent asthma, induced either by sensitization to a specific substance or a chemical at work (sensitizer-induced OA) or by exposure to an inhaled irritant at work (irritant-induced asthma).

4. Work aggravated/exacerbated asthma refers to pre-existing asthma that is made worse by inhalation exposure to airborne irritants or allergens at the workplace.[39]

5. If an injured worker does not meet all the necessary requirements for any one Medical Impairment Class, then in determining the appropriate Class, objective tests should be given greater weight than other criteria.

6. Severity rankings are from "A" (the least severe medical impairment) to "Z" (the most severe medical impairment) for the Medical Impairment Classes within a Schedule.

7. These are the severity rankings for the Medical Impairment Classes of the Respiratory Chapter and should not be compared to the rankings in other Chapters. For example, a "D" ranking in the Respiratory Chapter is not intended to imply that a "D" ranking in the Spine and Pelvis Chapter is of equal severity.

8. The severity ranking is generally predictive of the functional result for each Class relative to the other Classes within a Schedule.

9. The medical impairment ranking is not to be used as a direct translation to loss of wage earning capacity.

Please state diagnosis(es) at time of impairment rating:	
Medical Impairment Class	**Severity Ranking**
Class 1(a). Intermittent Asthma Symptoms: • ≤2 days/week or • nighttime awakening because of asthma symptoms ≤2x /month, and All of the following: Degree of interference with normal activity due to asthma symptoms: • no interference Rescue medication need: Short-acting beta-2 agonist for symptom control (but NOT for prevention of exercise induced bronchospasm) • ≤2 days/week. Lung Function: • normal FEV1 between exacerbations, • FEV1 >80% predicted, • normal FEV1/FVC between exacerbations. Exacerbations: • 0-1 x /year exacerbations requiring systemic oral corticosteroids.	A
Class 1(b). Intermittent Asthma Symptoms: • ≤2 days/week, or • nighttime awakening because of asthma symptoms ≤2x /month, and All of the following: Interference with normal activity because of asthma symptoms: • No interference	B

Rescue medication need: Short-acting beta-2 agonist for symptom control (but NOT for prevention of exercise induced bronchospasm) • ≤2 days/week Lung Function: • Normal FEV1 between exacerbations, • FEV1 >80% predicted, • Normal FEV1/FVC between exacerbations. Exacerbations requiring systemic oral corticosteroids: • ≥2x /year	
Class 2(a). Persistent Mild Asthma Symptoms: • >2 days/week but not daily, or • nighttime awakening because of asthma symptoms 3 – 4x /month, and All of the following: Degree of interference with normal activity because of asthma symptoms: • Minor limitation of normal activity. Rescue medication need: Short-acting beta-2 agonist for symptom control (but NOT for prevention of exercise induced bronchospasm): • >2 days/week but not daily and • not more than 1x on any day. Lung Function: • FEV1 >80% predicted and • FEV1/FVC normal between exacerbations. Exacerbations requiring systemic oral corticosteroids: • 0-1x /year exacerbations	D

Class 2(b). Persistent Mild Asthma Symptoms: • >2 days/week but not daily, or • nighttime awakening because of asthma symptoms 3 – 4x /month, and All of the following: Degree of interference with normal activity because of asthma symptoms: • Minor limitation of normal activity. Rescue medication need: Short-acting beta-2 agonist for symptom control (but NOT for prevention of exercise induced bronchospasm) • >2 days/week but not daily, and • not more than 1x on any day. Lung Function: • FEV1 >80% predicted and • FEV1/FVC normal between exacerbations. Exacerbations requiring systemic oral corticosteroids: • ≥2 x/year	F
Class 3. Persistent Moderate Asthma Symptoms: • daily symptoms or • nighttime awakening because of asthma symptoms > 1 x/week, but not nightly. and All of the following Degree of interference with normal activity because of asthma symptoms: • some limitation of normal activity. Rescue medication need: Short-acting beta-2 agonist for symptom control (but NOT for prevention of exercise	L

induced bronchospasm) • not more than 1x /day. Lung Function: • FEV1 between exacerbations >60% but <80% predicted, or • FEV1/FVC reduced by <5% of predicted. Exacerbations requiring systemic oral corticosteroids: • ≥ 1x/year	
Class 4. Severe Persistent Symptoms: • symptoms throughout the day, or • nightly awakening because of asthma symptoms. and All of the following: Degree of interference with normal activity because of asthma symptoms: • extremely limited normal activity. Rescue medication need: Short-acting beta-2 agonist for symptom control (but NOT for prevention of exercise induced bronchospasm) • several times per day. Lung Function: • FEV1 between exacerbations <60% predicted, or • FEV1/FVC reduced by ≥5% predicted between exacerbations. Exacerbations requiring systemic oral corticosteroids: • ≥ 1x/year	R
Class 5. Severe Persistent Symptoms: • symptoms throughout the day, or • nightly awakening because of asthma symptoms. and	Z

All of the following: Degree of interference with normal activity because of asthma symptoms: • extremely limited normal activity. Rescue medication need: Short-acting beta-2 agonist for symptom control (but NOT for prevention of exercise induced bronchospasm) • several times per day. Lung Function: • FEV1 between exacerbations <35% predicted, Exacerbations requiring systemic oral corticosteroids: • ≥ 1x/year	

Note: Current treatment recommendations state that patients with Occupational Sensitizer-Induced Asthma should NOT return to work in jobs that may result in exposure to the identified causing agent even if patients are asymptomatic.

Table 3.10: Severity of Any Spirometric Abnormality Based on FEV1[40]	
Degree of severity	FEV1 % predicted
Mild	>70%
Moderate	60-69%
Moderately severe	50-59%
Severe	35-49%
Very Severe	<35%

Table 3.11: Normal FEV1/FVC (%)[41]	
Age/yr	**%**
8-19	**85**
20-39	**80**
40-50	**75**
60-80	**70**

Table 3.12(a):Examples of Potential Causes of Asthma from Sensitizers[42]

This list is illustrative of substances which can cause asthma and is not complete.

1. Animals and birds (including their parts, bedding, and waste)
2. Seafood (e.g., crab, shrimp) and fish
3. Insects (e.g., cockroaches) and insect parts
4. Plant parts, including wood and grain dusts, vegetable gums, and baking flour
5. Pharmaceuticals and enzyme powders (e.g., detergents and dough additives)
6. Diisocyanates (e.g., in glues, coatings, paints)
7. Anhydrides (in epoxy, resins, plastics)
8. Amines (in shellac, lacquer, hairdressing, paint, plastics, resins)
9. Solder fluxes, colophony
10. Metal dusts and salts (e.g., platinum, nickel, cobalt, chromium)

Table 3.12(b): Examples of Potential Causes of Asthma from Irritants

This list is illustrative of substances which can cause asthma and is not complete.

1. Chlorine
2. Ammonia
3. Sulfur dioxide
4. Nitrogen oxides
5. Phosgene
6. Smoke
7. High level irritant dust

Chapter 4: Cardiovascular

Schedule 4.1:Valvular Heart Disease[43, 44]

1. The performance of objective tests should be determined by the patient's clinical condition.
2. Listing of objective tests within a class does not imply that all such tests must be performed for placement in that class.
3. Class placement will be determined by the objective test results.
4. Severity rankings are from "A" (the least severe medical impairment) to "Z" (the most severe medical impairment) for the Medical Impairment Classes within a Schedule.
5. These are the severity rankings for the Medical Impairment Classes of the Cardiac Chapter and should not be compared to the rankings in other Chapters. For example, a "C" ranking in the Cardiac Chapter is not intended to imply that a "C" ranking in the Spine and Pelvis Chapter is of equal severity.
6. The severity ranking is generally predictive of the functional result for each Class relative to the other Classes within a Schedule.
7. **The medical impairment ranking is not to be used as a direct translation to loss of wage earning capacity**.

Please state diagnosis(es) at time of impairment rating:

Medical Impairment Class →	CLASS 1	CLASS 2	CLASS 3	CLASS 4	CLASS 5
Severity Ranking →	0	A-C	D-I	J-R	U-Z
History	Asymptomatic and no medications	No continuous therapy- except antibiotic prophylaxis	Moderate dietary changes or drugs to remain free of HF, syncope, chest pain, or emboli	Heart failure and/or other symptoms on medications- moderate or Intermittent severe HF symptoms	Heart failure and/or other symptoms at rest regardless of medication Intermittent decompensation of HF symptoms
Physical Findings	No abnormality by auscultation	Auscultation identifies stenotic or regurgitant murmur	Auscultation identifies stenotic or regurgitant murmur Signs of mild HF	Auscultation identifies stenotic or regurgitant murmur Signs of moderate HF	Auscultation identifies stenotic or regurgitant murmur Signs of severe HF
Objective Test Results	Trace regurgitation or mild mitral	(a) Mild stenosis or regurgitation	(a) No surgical correction	(a) No surgical correction performed	No surgical correction performed with:

	valve prolapse with trace regurgitation on echocardiogram (echo) and No ventricular dysfunction or dilation	on echo and No ventricular dysfunction or dilation or (b) Normal functioning prosthetic valve and any of the following: (i) METs ≥7 (ii) Bruce protocol ≥6 min (iii) VO_2 max>20	performed with: Moderate stenosis or regurgitation on echo and Mild ventricular dysfunction or chamber dilation and any of the following: (i) METs <7 but ≥5 (ii) Bruce protocol >3 min (iii) VO_2 max 16-20. (iv) AVA>1.5 (v) AVG<25 (vi) MVA>1.5 (vii) MVG<5 or (b) Post valvular surgery and any of the following: (i) METs <7 but ≥5; (ii) Bruce protocol >3 min (iii) VO_2 max 16-20	with: Moderate stenosis or regurgitation on echo and Moderate ventricular dysfunction or chamber dilation and any of the following: (i) METs<5 but ≥2 (ii) Bruce protocol ≥1 min but <3 min (iii) VO_2 max 10-15 (iv) AVA 1.0-1.5 (v) AVG 25-40 (vi) MVA 1.0-1.5 (vii) MVG 5-10 or (b) Post-valvular surgery and any of the following: (i) METs<5 but ≥2 (ii) Bruce protocol ≥1 min but <3 min (iii)VO_2 max 10-15	Severe stenosis or regurgitation on echo and Severe ventricular dysfunction or chamber dilation and any of the following: (i) METs <2 (ii) Bruce protocol <1 min (iii) VO_2 max<10 (iv) AVA <1.0 (v) AVG>40 (vi) MVA<1.0 (vii) MVG>10.

Schedule 4.2: Coronary Artery Disease[45]

1. The performance of objective tests should be determined by the patient's clinical condition.
2. Listing of objective tests within a class does not imply that all such tests must be performed for placement in that class.
3. Class placement will be determined by the objective test results.
4. Severity rankings are from "A" (the least severe medical impairment) to "Z" (the most severe medical impairment) for the Medical Impairment Classes within a Schedule.
5. These are the severity rankings for the Medical Impairment Classes of the Cardiac Chapter and should not be compared to the rankings in other Chapters. For example, a "C" ranking in the Cardiac Chapter is not intended to imply that a "C" ranking in the Spine and Pelvis Chapter is of equal severity.
6. The severity ranking is generally predictive of the functional result for each Class relative to the other Classes within a Schedule.
7. **The medical impairment ranking is not to be used as a direct translation to loss of wage earning capacity.**

Please state diagnosis(es) at time of impairment rating:

Medical Impairment Class→	CLASS 1	CLASS 2	CLASS 3	CLASS 4	CLASS 5
Severity Ranking→	0	A-C	D-I	J-R	U-Z
History	Asymptomatic	Equivocal history of chest pain	History of documented MI or exertional angina Requires medication to limit symptoms	History of documented MI, angina with exertion or significant changes to ADLs to prevent frequent angina and/or HF	History of documented MI, angina can occur at rest Requires marked changes to ADLs and medication to remain free of symptoms at rest
Physical Findings	Normal physical exam	Normal physical exam	Normal physical exam with maximal exertion	Signs of HF with moderate exertion	Signs of HF with minimal exertion
Objective Test Results	Normal coronary angiography Normal echocardiography Equivocal or low-risk	Luminal irregularities on coronary angiogram (<50% stenosis) and any of the following:	(a) No surgical correction performed with Coronary angiograms showing	(a) No surgical correction performed with Coronary angiograms showing ≥70% fixed	(a) No surgical correction performed with Coronary angiograms showing ≥70% fixed obstruction

	myocardial perfusion scan or stress echo	Normal echocardiography Normal or low-risk myocardial perfusion scan or stress echo VO_2 max >20	≥50%-70% fixed obstruction and Obtained HR >90% maximum predicted with no ST-segment changes, VT, or hypotension and any of the following: (i) METs >7 (ii) VO_2 max 16-20 (iii) Mildly reversible defect (<25%) on myocardial perfusion scan or stress echo or (b) Recovered from CABG or PCI with any of the following: (i) METs >7 (ii) VO_2 max 16-20 (iii) Mildly reversible defect (<25%) on myocardial perfusion scan or stress echo	obstruction and Stress testing showing 1-2mm ST-segment changes and any of the following: (i) METs<7 but ≥5; (ii) VO_2 max 10-15 (iii) Moderate (25%-50%) reversible defect on myocardial perfusion scan or stress echo. or (b) Recovered from CABG or PCI and any of the following: (i) METs <7 but ≥5 (ii) VO_2 max 10-15 (iii) Moderate (25%-50%) reversible defect on myocardial perfusion scan or stress echo	and Stress testing showing >2 mm ST-segment changes and any of the following: (i) METs <5 (ii) VO_2 max <10 (iii) Severe (>50%) reversible defect on myocardial perfusion scan or stress echo. or (b) Recovered from CABG or PCI, and any of the following: (i) METs <5 (ii) VO_2 max <10 (iii) Severe (>50%) reversible defect on myocardial perfusion scan or stress echo

Schedule 4.3: Cardiomyopathies[46]

1. The performance of objective tests should be determined by the patient's clinical condition.
2. Listing of objective tests within a class does not imply that all such tests must be performed for placement in that class.
3. Class placement will be determined by the objective test results.
4. Severity rankings are from "A" (the least severe medical impairment) to "Z" (the most severe medical impairment) for the Medical Impairment Classes within a Schedule.
5. These are the severity rankings for the Medical Impairment Classes of the Cardiac Chapter and should not be compared to the rankings in other Chapters. For example, a "C" ranking in the Cardiac Chapter is not intended to imply that a "C" ranking in the Spine and Pelvis Chapter is of equal severity.
6. The severity ranking is generally predictive of the functional result for each Class relative to the other Classes within a Schedule.
7. **The medical impairment ranking is not to be used as a direct translation to loss of wage earning capacity.**

Please state diagnosis(es) at time of impairment rating:

Medical Impairment Class→	CLASS 1	CLASS 2	CLASS 3	CLASS 4	CLASS 5
Severity Ranking→	0	A-C	D-I	J-R	U-Z
History	Asymptomatic No medication	Asymptomatic on continuous treatment or occasional, mild HF symptoms on treatment	Mild HF symptoms on therapy or intermittent moderate HF symptoms on treatment	Moderate HF symptoms on therapy or intermittent severe HF symptoms on treatment	Severe symptoms of HF at rest or intermittent HF decompensation on treatment
Physical Findings	Normal physical exam	Minimal signs of HF	Mild signs of HF	Moderate signs of HF	Severe signs of HF
Objective Test Results	Normal echocardiography	(a) Minimally impaired LV function or (b) Minimal septal (<1.1 cm) hypertrophy or (c) Evidence of minimal restrictive disease on echo-cardiography	(a) Mildly impaired LV function (EF 41-50%) or (b) Slight septal hypertrophy (1.1-1.2 cm) or (c) Evidence of restriction or mild diastolic dysfunction	(a) Moderately impaired LV function (EF 30-40%) or (b) Moderate septal hypertrophy (1.3-1.4 cm) with moderate gradient or (c) Evidence of restriction	(a) Severely impaired LV function (EF<30%) or (b) Severe gradient across septal hypertrophy (>1.4 cm) or (c) Evidence of restriction or severe diastolic dysfunction (E<A) on echo and

		(echo) and Presently on therapy and at least one of the following: (i) VO_2 max >20 (ii) METs $\geq$7	(E>A) on echo and Presently on therapy and at least one of the following: (i)VO_2 max 16-20 (ii) METs $\geq$7	or moderate diastolic dysfunction (E=A) on echo and Presently on therapy and at least one of the following: (i) VO_2 max 10-15 (ii) METs <7 but $\geq$5 (iii) Malignant ventricular dysrhythmias (post-AICD or biventricular pacemaker)	Presently on therapy and at least one of the following: (i) VO_2 max <10 (ii) METs <5 (iii) Malignant ventricular dysrhythmias (post-AICD or biventricular pacemaker)

Schedule 4.4: Pericardial Heart Disease[47]

1. The performance of objective tests should be determined by the patient's clinical condition.
2. Listing of objective tests within a class does not imply that all such tests must be performed for placement in that class.
3. Class placement will be determined by the objective test results.
4. Severity rankings are from "A" (the least severe medical impairment) to "Z" (the most severe medical impairment) for the Medical Impairment Classes within a Schedule.
5. These are the severity rankings for the Medical Impairment Classes of the Cardiac Chapter and should not be compared to the rankings in other Chapters. For example, a "C" ranking in the Cardiac Chapter is not intended to imply that a "C" ranking in the Spine and Pelvis Chapter is of equal severity.
6. The severity ranking is generally predictive of the functional result for each Class relative to the other Classes within a Schedule.
7. **The medical impairment ranking is not to be used as a direct translation to loss of wage earning capacity.**

Please state diagnosis(es) at time of impairment rating:

Medical Impairment Class→	CLASS 1	CLASS 2	CLASS 3	CLASS 4	CLASS 5
Severity Ranking→	0	A-C	D-I	J-R	U-Z
History	Asymptomatic No medication	Asymptomatic with ordinary activity on NSAID or diuretic therapy or intermittent, mild chest pain or HF on no therapy	Intermittent chest pain or HF on chronic NSAID or diuretic therapy Symptoms with moderate activity	Chest pain or HF symptoms with normal exertion On long-term NSAID or HF therapy	Chest pain or HF symptoms at rest despite HF or NSAID therapy
Physical Findings	Normal physical exam	Minimal HF	Mild HF	Moderate HF Presence of friction rub	Severe HF Presence of friction rub
Objective Test Results	Normal echocardio-graphy and ECG Normal ESR	With or without surgery (pericardiecto-my or surgical pericardial window) and	With or without surgery (pericardiecto-my or surgical pericardial window) and at least one of	With or without surgery (failed or no response to pericardiecto-my or surgical pericardial window)	With or without surgery (failed or no response to pericardiecto-my or surgical pericardial window) and

		at least one of the following: (a) Small pericardial effusion or (b) Evidence of pericarditis on ECG and any of the following: (i) VO_2 max >20 (ii) METS $\geq$7	the following: (a) Mild pericardial effusion or (b) Evidence of constrictive pericarditis on echo-cardiography or (c) ECG evidence of pericarditis and any of the following: (i) VO_2 max 16-20 (ii) METs $\geq$7	and at least one of the following: (a) Moderate pericardial effusion or (b) Evidence of constrictive pericarditis on echo-cardiography or (c) ECG evidence of pericarditis and any of the following (i) VO_2 max 10-15 (ii) METs >7 but $\geq$5	One or more of the following: (a) Severe pericardial effusion or (b) Evidence of tamponade or constrictive pericarditis with severe LV dysfunction on echocardio-graphy or (c) ECG evidence of pericarditis and any of the following: (i)VO_2 max <10 (ii) METs <5

Schedule 4.5: Dysrhythmias[48]

1. The performance of objective tests should be determined by the patient's clinical condition.
2. Listing of objective tests within a class does not imply that all such tests must be performed for placement in that class.
3. Class placement will be determined by the objective test results.
4. Severity rankings are from "A" (the least severe medical impairment) to "Z" (the most severe medical impairment) for the Medical Impairment Classes within a Schedule.
5. These are the severity rankings for the Medical Impairment Classes of the Cardiac Chapter and should not be compared to the rankings in other Chapters. For example, a "C" ranking in the Cardiac Chapter is not intended to imply that a "C" ranking in the Spine and Pelvis Chapter is of equal severity.
6. The severity ranking is generally predictive of the functional result for each Class relative to the other Classes within a Schedule.
7. **The medical impairment ranking is not to be used as a direct translation to loss of wage earning capacity.**

Please state diagnosis(es) at time of impairment rating:

Medical Impairment Class →	CLASS 1	CLASS 2	CLASS 3	CLASS 4	CLASS 5
Severity Ranking	0	A-C	D-I	J-R	U-Z
History	Asymptomatic No medication	Asymptomatic or occasional palpitations or isolated syncopal episode Medications may be required	Symptomatic during daily activities, palpitations or isolated syncope, but requires drug therapy or pacemaker	Symptoms despite drug therapy or pacemaker with minimal activity or intermittent, severe symptoms	Symptoms despite therapy at rest, especially recurrent syncope
Physical Findings	Normal physical exam	Normal physical exam or occasional extra systole on auscultation	Auscultation of irregularity unless pacer dependent	Auscultation of irregularity unless pacer dependent	Auscultation of irregularity unless pacer dependent
Objective Test Results	Normal ECG or occasional PACs or PVCs and Normal echocardiography	(a) ECG documentation of dysrhythmia but no ECG or Holter documentation of ≥ 3 consecutive ectopic beats or	(a) ECG or Holter documentation of malignant dysrhythmia or (b) Post-	(a) ECG or Holter documentation of malignant dysrhythmia or (b) Post-	(a) ECG or Holter documentation of malignant dysrhythmia or (b) Post-

		pauses >2s or (b) Post-ablation or pacemaker and normal echocardiography and Atrial and ventricular rate 50-100 beats per minute	ablation, pacemaker, or AICD and any of the following: (i) Abnormal echo-cardiography with small ASD or VSD (ii) Mildly impaired LV or RV function (iii) Diastolic dysfunction (iv) Mild chamber enlargement or (v) Mild valvular stenosis or regurgitation	ablation, pacemaker, or AICD and any of the following: (i) Abnormal echo-cardiography with moderate ASD or VSD; (ii) Moderately impaired LV or RV function (iii) Diastolic dysfunction (iv) Moderate chamber enlargement or (v) Moderate valvular stenosis or regurgitation	ablation, pacemaker or AICD and any of the following: (i) Abnormal echo-cardiography with large ASD or VSD (ii) Severely impaired LV or RV function (iii) Diastolic dysfunction (iv) Severe chamber enlargement or (v) Severe valvular stenosis or regurgitation.

Schedule 4.6: Hypertensive Cardiovascular Disease[49]

1. The performance of objective tests should be determined by the patient's clinical condition.
2. Listing of objective tests within a class does not imply that all such tests must be performed for placement in that class.
3. Class placement will be determined by the objective test results, except in Class 0 and Class 1, where physical findings will control.
4. Severity rankings are from "A" (the least severe medical impairment) to "Z" (the most severe medical impairment) for the Medical Impairment Classes within a Schedule.
5. These are the severity rankings for the Medical Impairment Classes of the Cardiac Chapter and should not be compared to the rankings in other Chapters. For example, a "C" ranking in the Cardiac Chapter is not intended to imply that a "C" ranking in the Spine and Pelvis Chapter is of equal severity.
6. The severity ranking is generally predictive of the functional result for each Class relative to the other Classes within a Schedule.
7. **The medical impairment ranking is not to be used as a direct translation to loss of wage earning capacity.**

Please state diagnosis(es) at time of impairment rating:

Medical Impairment Class→	CLASS 1	CLASS 2	CLASS 3	CLASS 4	CLASS 5
Severity Ranking→	0	A-C	D-I	J-R	U-Z
History	Asymptomatic	Asymptomatic	Asymptomatic	Symptomatic or chest pain	Symptomatic or HF symptoms
Physical Findings	Normal BP with or without dietary modification only Normal physical exam, including funduscopic exam	Normal BP on single drug therapy or pre-hypertension without therapy Normal physical exam, including funduscopic exam	Normal BP, pre-hypertension or stage 1 hypertension on multiple drug therapy Possible hyper-tensive changes on funduscopic exam	Stage 1 hypertension despite multiple drug therapy Definite hyper-tensive changes on funduscopic exam	Stage 2 hyper-tension despite multiple drug therapy Definite hyper-tensive changes on funduscopic exam
Objective Test Results	Normal lab values, no evidence of end-organ damage Normal echocardiography and ECG	Normal lab values, no evidence of end-organ damage Normal echocardiography and ECG	Normal BUN/creatinine with Microalbuminuria and Normal to borderline LVH on echocardiography.	Elevated BUN and serum creatinine, with creatinine clearance 20%-50% of normal. and any of the following: (i) Proteinuria or	(a) Elevated BUN and serum creatinine, with creatinine clearance <20% normal and (b) Proteinuria or urinary sediment

				urinary sediment abnormalities (ii) Echocardiographic evidence of LVH.	abnormalities and any of the following: (i) Episodic hypertensive encephalopathy (ii) Hypertensive cerebrovascular damage (iii) Echocardiographic evidence of severe LVH, diastolic dysfunction, and/or signs of HF.

Table 4.1: Classification of Blood Pressure for Adults[50]			
BP Classification	**SBP mm Hg**		**DBP mm Hg**
Normal	<120	and	<80
Prehypertension	120–139	or	80–89
Stage 1 hypertension	140–159	or	90–99
Stage 2 hypertension	≥160	or	≥100

SBP=systolic blood pressure DBP=diastolic blood pressure

Table 4.2: Fundoscopic Changes in Hypertension[51, 52]	
Type of hypertension	**Retinal changes**
Chronic hypertension	Silver-wiring, copper-wiring (tortuous retinal arterioles that develop abnormal light reflexes) Arterio-venous nicking (increased venous compression at retinal arteriovenous crossings) Flame-shaped hemorrhages
Acute hypertension	Cotton-wool spots Retinal hemorrhages Retinal edema Retinal exudates (focal, linear or wedge-shaped pigmented lesions)
Malignant hypertension	Papilledema

Chapter 5: Skin

Schedule 5.1: Skin[53]

1. This schedule does not apply to facial disfigurement as governed by statute.

2. Skin conditions eligible for an impairment rating may not be clinically evident at the time of the impairment examination. However, if there is objective evidence that the condition is relapsing or recurrent in the context of work place exposure, the condition may be eligible for impairment rating. The need to wear protective equipment that is standard in the work place does not, in and of itself, imply an impairment.

3. Severity rankings are from "A" (the least severe medical impairment) to "Z" (the most severe medical impairment) for the Medical Impairment Classes within a Schedule.

4. These are the severity rankings for the Medical Impairment Classes of the Skin Chapter and should not be compared to the rankings in other Chapters. For example, a "C" ranking in the Skin Chapter is not intended to imply that a "C" ranking in the Spine and Pelvis Chapter is of equal severity.

5. The severity ranking is generally predictive of the functional result for each Class relative to the other Classes within a Schedule.

6. The medical impairment ranking is not to be used as a direct translation to loss of wage earning capacity.

Please state diagnosis(es) at time of impairment rating:

Medical Impairment Class	**Severity Ranking**
Class 1. Objective findings of skin disorder may be present or absent but there is no, or minimal limitation in daily activities in the workplace. Subjective complaints may be present or absent.	0
Class 2. Objective findings of skin disorder are present and there is discomfort and minimal limitation in the performance of daily activities in the workplace.	A-C
Class 3. Objective findings of skin disorder are present and there is limitation in some daily activities in the workplace, including avoidance of and protective measures against certain chemical or physical agents. Intermittent symptomatic treatment is required.	G-J

Class 4. Objective findings of skin disorder are present and there is limitation in many or most daily activities in the workplace, including avoidance of and protective measures against certain chemical or physical agents. Continuous symptomatic treatment is required.	O-R
Class 5. Objective findings of skin disorder are present and there is limitation in all daily activities in the workplace, including avoidance of and protective measures against certain chemical or physical agents. Continuous symptomatic treatment is required.	U-Z

Chapter 6: Brain

Schedule 6.1: Brain[54]

1. Impairment for injuries that have resulted in damage to the brain is determined based upon a medical opinion which applies or describes the following criteria:

(a) The residuals included in this schedule must be a direct result of organic injury to the brain. For example, emotional or behavioral disturbances must result directly from injury to the brain. Emotional disturbances which are reactive to other residuals, but which are not directly organically based, such as frustration or depressed mood about memory deficits or work limitations, are not included under these criteria and must be addressed separately.

(b) The distinctions between Classes are intended to reflect, at their most fundamental level, the impact of the residuals on two domains: impairment of activities of daily living and, by implication, impairment of the ability to function in the workplace.

2. Medical impairment for injuries to cranial nerves and other CNS injuries not covered in the Schedule below should be determined by their effect on ADLs as reflected in the fundamental intent of the class.

3. As used in this Schedule, Episodic Neurologic Disorders refers to and includes any of the following, where symptoms may be episodic:

A. Any type of seizure disorder;
B. Vestibular disorder, including disturbances of balance or sensorimotor integration;
C. Neuro-ophthalmologic or oculomotor visual disorder, such as diplopia;
D. Headaches

4. Levels in this Schedule are based on the *Rancho Los Amigos Scale-Revised*, 1999.

5. Nothing is these guidelines is intended to define whether an injury is a "grave injury" under Section 11, Workers' Compensation Law

6. Severity rankings are from "A" (the least severe medical impairment) to "Z" (the most severe medical impairment) for the Medical Impairment Classes within a Schedule.

7. These are the severity rankings for the Medical Impairment Classes of the Brain Chapter and should not be compared to the rankings in other Chapters. For example, a "C" ranking in the Brain Chapter is not intended to imply that a 'C" ranking in the Spine and Pelvis Chapter is of equal severity.

8. The severity ranking is generally predictive of the functional outcome for each Class relative to the other Classes within a Schedule.

9. The medical impairment ranking is not to be used as a direct translation to loss of wage earning capacity.

Please state diagnosis(es) at time of impairment rating: **Medical Impairment Class**	**Severity Ranking**
Class 1. No residual symptoms. No clinical findings	None
Class 2. The fundamental intent of this Class is as follows: there are "nuisance" level residual effects of head injury, which may slightly impact the manner in which ADL's are performed, or the subjective ease of performance, but remains fully independent in all activities of daily living. Cognition: Functions at the equivalent of *Rancho Los Amigos Scale-Revised* level of 9 or 10 (e.g. is alert and oriented; behavior is appropriate and is able to recall and integrate past and recent events). Is independent in activities of daily living. If there are cognitive or memory deficits, they are no more than minimal or "nuisance" level, and do not materially impair activities of daily living, or the type of work that may be performed. Language: If there is a language deficit, it is no more than minimal (e.g. language comprehension or production might be less than normal, but it is adequate for daily living). Emotions/Behavior: If there are emotional disturbances, fatigue, or lethargy, they are minimal and occur only transiently during stressful situations and events. Sleep/Alertness: If there are episodic sleep disturbances, fatigue, or lethargy, they are minimal (e.g. any sleeping irregularity, fatigue, or lethargy does not interfere with daily living). Episodic Neurologic Disorders: If there is an episodic neurologic deficit, it is completely controlled and does not interfere with daily living.	A-C
Class 3. The fundamental intent of this Class is as follows: independent in all activities of daily living, but may require significant adaptations or modifications in normal patterns or means of activities of daily living in order to achieve ADL-independence. Cognition: Functions at the equivalent *Rancho Los Amigos Scale-Revised* level of 8 (e.g. is alert and oriented; behavior is appropriate and is able to recall and integrate past and recent events). Can perform all activities of daily living independently, but due to mild cognitive or memory deficits, may need to use compensatory strategies or devices such as multiple written reminders, alarms or digital devices; or may sometimes require more time than normal to complete activities of	F-L

daily living; or may use occasional reminders, prompts, or minor assistance by others as a compensatory strategy, but is not dependent on others. For example, can manage all transactions independently if necessary, and is not fundamentally dependent for this activity, but may ask a spouse to double-check financial transactions for errors. The cognitive or memory deficits limit ability to perform some types of functions, for example, mild attention deficits may preclude work in a busy, multi-tasking environment. Language: Language deficit is mild (e.g. language comprehension or production might occasionally interfere with daily living or limit the ability to perform some types of functions in the workplace. Emotion/Behavior: Emotional or behavioral disturbances or personality changes are mild. While they may be disproportionate to the stress or situation, they do not significantly impair ability to relate to others, or to live with others. They may limit some types of functions, for example, irritability may preclude jobs with high public contact. Sleep/Alertness: Episodic sleep disturbances, fatigue, or lethargy are mild (e.g. any sleeping irregularity, fatigue, or lethargy only occasionally interferes with daily living). Sleep disturbance, or mild or episodic fatigue or lethargy, may limit the ability to perform some types of functions for example, shift work or commercial driving. Episodic Neurologic Disorders: Any episodic neurologic deficit not completely controlled, and results in limits in ADL performance and some types of functions in the workplace, but still independent in ADL's. For example, headaches may intermittently interfere with daily living; diplopia which worsens with fatigue may cause driving restrictions; vestibular symptoms may limit ability to operate industrial machinery or avoid heights.	
Class 4. The fundamental intent of this Class is as follows: not completely independent in all ADL's, and requires some type of supervision, assistance, or guidance from another person at some times for some aspects of ADL's. Cognition: Functions at the equivalent of *Rancho Los Amigos Scale-Revised* level of 7 (e.g. is alert and oriented, behavior is appropriate but has mild to moderate impaired judgment or mild to moderate, functionally significant cognitive or memory deficits). Judgment, cognitive, or memory deficits result in impairment sufficient so that assistance or supervision is regularly required in order to perform some activities of daily living. Language: Language deficit is mild to moderate (e.g. language comprehension or production deficits frequently interfere with activities of daily living.).	Q-S

Emotions/Behavior: Emotional or behavioral disturbances or personality changes are moderate, disproportionate to the stress or situation, are present at all times and significantly impair the ability to relate to others or to live with others. Sleep/Alertness: Episodic sleep disturbances, fatigue, or lethargy are moderate. They frequently interfere with daily living. Episodic Neurologic Disorders: If there is an episodic neurologic deficit, it is not completely controlled. It markedly interferes with daily living. Cannot operate industrial machinery.	
Class 5. The fundamental intent of this Class is as follows: (a) Basically dependent on others for most aspects of ADL's, although may not need direct supervision at all times or (b) Requires assistance and supervision to perform all activities of daily living. Total supervision is required. Cognition: Functions at the equivalent of *Rancho Los Amigos Scale-Revised* level of 4-6 (e.g. impaired judgment or significant memory deficit, such that assistance and supervision are needed to perform most activities of daily living. or behavior is inappropriate, confused, not reliably oriented to time and place; may be agitated and has a severe memory deficit). Language: Language deficit is moderate to severe (e.g. language comprehension is often impaired or language production is often inappropriate or unintelligible). Emotions/Behavior: Emotional or behavioral disturbances or personality changes are moderate to severe, disproportionate to the stress or situation, are present at all times, require supervision, or seriously limit ability to live with others. Sleep/Alertness: Episodic sleep disturbances, fatigue, or lethargy are moderate-severe (e.g. they require supervision for daily living). Episodic Neurologic Disorders: If there is an episodic neurologic deficit, it is of such severity and constancy that activities have to be limited and supervised. Needs to live in a supervised setting such as a foster home, care facility, or supervised semi-independent residence.	W-Z
Class 6. Functions at the equivalent of *Rancho Los Amigos Scale-Revised* level of 1-3. Comatose or responses to stimuli are localized, inconsistent or delayed.	Z

Chapter 7: Pain

Schedule 7.1: Pain[55]

1. The other impairment Schedules take into account a range of expected severity and duration of pain and those Schedules cover all but a few individuals. This Schedule is designed for those individuals with extraordinary severe persistent painful conditions. Examples of such conditions include, but are not limited to, headaches following severe head trauma or skull fractures, and CRPS fulfilling the criteria. (Table 7.1)

AND

2. Extent to which pain symptoms can reasonably be accepted as consistent with the objective medical evidence. However, subjective pain statements will not alone establish disability; there must be a related history with medical and laboratory findings supporting a medical condition which could reasonably be expected to produce the pain.

A "yes or no" designation is not to be used as a direct translation to loss of wage earning capacity.

Please state diagnosis(es) at time of impairment rating including the condition(s) responsible for the pain symptoms:

	Medical Impairment Ranking
A: Extraordinary severe persistent pain with all of the following: (a) Reasonable medical basis for the pain; (b) Consistency of pain over time and situation; (c) Consistency with anatomy and physiology; (d) A Pain Disability Questionnaire (PDQ*)* (Table 7.2) score of at least 101 at the time of classification for the impairment rating; and (e) Does not exhibit behavior that is inconsistent with the pain symptoms.	Yes or No

Table 7.1: CRPS Diagnostic Criteria[56]

CRPS-I (RSD) general definition: describes a painful condition that develops after an initiating noxious event, not limited to the distribution of a single peripheral nerve. The syndrome shows variable progression over time.

In CRPS-II (Causalgia), a specific nerve is involved and pain is within the distribution of the damaged nerve.

To make the clinical diagnosis, the following criteria must be met:

1. Continuing pain, which is disproportionate to any inciting event.

2. Must report at least one symptom in three of the four following categories:

(a) Sensory: Reports of hyperesthesia and /or allodynia

(b) Vasomotor: Reports of temperature asymmetry and/or skin color changes and/or color asymmetry.

(c) Sudomotor/Edema: Reports of edema and/or sweating changes and/or sweating asymmetry.

(d) Motor/Trophic: Reports of decreased range of motion and/or motion and/or motor dysfunction (weakness, tremor, dystonia) and/or trophic changes (hair, nail, skin)

3. Must display at least one sign at time of evaluation in two or more of the following categories:

(a) Sensory: Evidence of hyperalgesia and/or allodynia

(b) Vasomotor: Evidence of temperature asymmetry (>1 degree centigrade) and/or skin color changes and/or symmetry

(c) Sudomotor/Edema: Evidence of edema and/or sweating changes and/or sweating asymmetry

(d) Motor/Trophic: Evidence of decreased range of motion and/or motor dysfunction (weakness, tremor, dystonia) and/or trophic changes (hair, nail, skin)

4. There is no other diagnosis that better explains the signs and symptoms.

Table 7.2(a): Pain Disability Questionnaire (PDQ)[57]

Patient Name _____ Date _____

Instructions: This survey asks your views about how your pain now affects how you function in everyday activities. This information will help you and your doctor know how you feel and how well you are able to do your daily tasks at this time.

Please answer every question by making an "X" along the line to show how much your pain problem has affected you (from having no problems at all to having the most severe problems you can imagine).

1. Does your pain interfere with your normal work inside and outside the home?

]_____]_____]_____]_____]_____]

Work normally — Unable to work at all

2. Does your pain interfere with personal care (such as washing, dressing, etc.)?

]_____]_____]_____]_____]_____]

Take care of myself completely — Need help with all my personal care

3. Does your pain interfere with your traveling?

]_____]_____]_____]_____]_____]

Travel anywhere I like — Only travel to see doctors

4. Does your pain affect your ability to sit or stand?

]_____]_____]_____]_____]_____]

No problems — Can not sit/stand at all

5. Does your pain affect your ability to lift overhead, grasp objects, or reach for things?

]_____]_____]_____]_____]_____]

No problems — Can not do at all

6. Does your pain affect your ability to lift objects off the floor, bend, stoop, or squat?

]_____]_____]_____]_____]_____]

No problems — Can not do at all

7. Does your pain affect your ability to walk or run?

]_____]_____]_____]_____]_____]

No problems — Can not walk/run at all

8. Has your income declined since your pain began?

]_____]_____]_____]_____]_____]

No decline — Lost all income

9. Do you have to take pain medication every day to control your pain?

]_____]_____]_____]_____]_____]

No medication needed — On pain medication throughout the day

10. Does your pain force you to see doctors much more often than before your pain began?

]_____]_____]_____]_____]_____]

Never see doctors — See doctors weekly

11. Does your pain interfere with your ability to see the people who are important to you as much as you would like?

]_____]_____]_____]_____]_____]

No problem — Never see them

12. Does your pain interfere with recreational activities and hobbies that are important to you?

]_____]_____]_____]_____]_____]

No interference Total interference

13. Do you need the help of your family and friends to complete everyday tasks (including both work outside the home and housework) because of your pain?

]_____]_____]_____]_____]_____]

Never need help Need help all the time

14. Do you now feel more depressed, tense, or anxious than before your pain began?

]_____]_____]_____]_____]_____]

No depression/tension Severe depression/tension

15. Are there emotional problems caused by your pain that interfere with your family, social and or work activities?

]_____]_____]_____]_____]_____]

No problems Severe problems

Table 7.2(b): Pain Disability Questionnaire (PDQ) Scoring Instructions[58]

Every 1.5 cm = 1 increment

0 1 2 3 4 5 6 7 8 9 10

]_____]_____]_____]_____]_____]_____]

If an "X" is exactly on the line between one number and the next, then it is scored as the lower number. If the "X" is one "millimicron" over into the next increment, then score "up". Score a value for each line, and sum the total for all 15 lines. If the patient has put 2 "X's" on the line, use the point that is halfway between the two points as the item score. For example, if an "X" is marked at 2 and an "X" at 6, one would score this particular item a 4.

The PDQ is made up of two factors: a Functional Status Component and a Psychosocial Component. To differentiate these two components, one must separate the scores.

A) Functional Status Component: Total the scores for items 1, 2, 3, 4, 5, 6, 7, 12 and 13 (maximum = 90)
B) Psychosocial Component: Total the scores for items 8, 9, 10, 11, 14, and 15 (maximum = 60)
C) Total PDQ Score: Total of the scores of all items (should equal to Functional Status Score + Psychosocial Component Score).

Blank Items: If some lines are left blank, they should be pro-rated. To do this, one must first determine whether the item is part of the Functional Status or Psychosocial Component. Then, one would calculate the total component score and divide by the number of component items answered to obtain a mean. This mean score would then be added to each item left blank for that particular component. For example, if a patient leaves question 5 blank, one would calculate the total for the Functional Status Component. Suppose that the 8 items answered sum to 48. One would then divide 48 by the number of items answered. In this case, 8 were answered, so the mean item score for the Functional Status Component is 6. One would then add 6 to the Functional Status Component, which for this example would be 54. When computing the total PDQ score, this of course, adds 6 points as well.

The same is true for the Psychosocial Component, although one must be careful because there are only 6 items comprising this component. For example, if the same patient mentioned above also leaves question 14 blank, one would have to pro-rate this item for the Psychosocial Component. If the remaining 5 questions for the Psychosocial Component are answered and sum to 30, we would have a mean item score of 6 for the Psychosocial Component. Again, one would add 6 points to the Psychosocial Component Total. Now, the Psychosocial Component will equal 36, and the total of the Functional Status and Psychosocial Components equals a total PDQ of 90.

Table 7.2(c): Pain Disability Questionnaire (PDQ)-Spanish Language

CUESTIONARIO DE INCAPACIDAD POR DOLOR (PDQ)

NOMBRE: _____ **#DE ID:**_____ **FECHA:**_____

Favor de leer:
Este cuestionario le pregunta su opinión sobre la manera en que su dolor ahora afecta cómo usted realiza sus actividaded diarias. Esta información le ayudará a usted y a su médico determinar hasta que punto puede desempeñar sus actividades diarias.

Por Favor, responda a todas las preguntas marcando una "x" sobre la línea para indicar cuánto le ha afectado su problema de dolor (desde no tener ningún problema hasta experimentar los problemas más graves que una persona pueda imaginarse).

ASEGÚRESE DE CONTESTAR TODAS LAS PREGUNTAS.

1. ¿Interfiere su dolor con el trabajo normal dentro y fuera de su hogar?
   ]_____]_____]_____]_____]_____]
   Trabajo normalmente — No puedo trabajar

2. ¿Interfiere su dolor con el cuidado personal (tal como bañarse, vestirse, etc.)?
   ]_____]_____]_____]_____]_____]
   Me puedo cuidar por si mismo — Necesito ayuda con todo mi cuidado personal

3. ¿Interfiere el dolor con sus viajes?
   ]_____]_____]_____]_____]_____]
   Viajo adónde quiero — No puedo viajar

4. ¿Su dolor afecta la capacidad de sentarse o pararse?
   ]_____]_____]_____]_____]_____]
   Ningún problema — No puedo hacerlo

5. ¿Su dolor afecta la capacidad de levantar objetos sobre su cabeza, para sujetar o alcanzar objetos?
   ]_____]_____]_____]_____]_____]
   Ningún problema — No puede hacerlo

6. ¿Interfiere el dolor con la habilidad de levantar objetos del piso, agacharse, doblarse o ponerse en cuclillas?
   ]_____]_____]_____]_____]_____]
   Ningún problema — No puede hacerlo

7. ¿Su dolor afecta la capacidad de caminar o correr?
   ]_____]_____]_____]_____]_____]
   Ningún problema — No puedo hacerlo

8. ¿Disminuyeron sus ingresos desde que comenzó el dolor?

]_____]_____]_____]_____]_____]_____]

No disminuyeron — No tengo ingresos

9. ¿Necesita tomar medicamento para el dolor diariamente?

]_____]_____]_____]_____]_____]_____]

No necesito medicamento para el dolor — Tomo medicamentos para el dolor durante todo el dia

10. ¿El dolor le obliga a visitar médicos con más frecuencia que antes de que comenzara?

]_____]_____]_____]_____]_____]_____]

Nunca visito médicos — Visito médicos cada semana

11. ¿Interfiere su dolor con la capacidad de ver a las personas importantes para usted con la fracuencia que usted quisiera?

]_____]_____]_____]_____]_____]_____]

Ningún problema — Nunca las veo

12. ¿Su dolor interfiere con actividades recreativas y los pasatiempos que son importantes para usted?

]_____]_____]_____]_____]_____]_____]

Ningún problema — No puedo hacerlo

13. ¿Necesita la ayuda de sus familiares y amigos para realizar sus actividades o tareas diarias (incluyendo el trabajo dentro y fuera de su hogar)?

]_____]_____]_____]_____]_____]_____]

Nunca necesito ayuda — Necesito ayuda continuamente

14. ¿Se siente mas deprimido, tenso o ansioso que antes de que comenzará su dolor?

]_____]_____]_____]_____]_____]_____]

No depresión/ tensión — Depresión/tensión severa

15. ¿Experimenta usted problemas emocionales a causa de su dolor que interfiere con actividades familiares, sociales o laborales?

]_____]_____]_____]_____]_____]_____]

Ningún problema — Problemas severos

Rev. 3/16/06

Chapter 8: Other Injuries and Occupational Diseases (Default Guideline)

Schedule 8.1: Other Injuries and Occupational Diseases

1. The following procedure for determining medical impairment shall be used when a medical diagnosis establishes that a body-part or occupational disease is not covered by Chapters 2 through 7.

2. The first time that the medical impairment for an uncovered body-part or occupational disease is to be determined, the claim shall be referred to the Board's Medical Director.

3. To determine the medical impairment for the body-part or occupational disease that has been referred, the Medical Director shall select a guideline from the medical impairment guidelines used in other states for workers' compensation claims or shall develop a guideline using methods consistent with those used by the Task Force. The Medical Director should take into account the severity rankings of these initial Chapters in developing the severity rankings for any such future guidelines, and shall use a ranking system consistent with these initial Chapters, as provided herein.

4. All subsequent claims for injury to that body-part or for that occupational disease shall use the guideline designated by the Medical Director under paragraph 3. (The Medical Director may change the designated guideline in accordance with paragraph 3, but thereafter any future claims for injury to that body-part or for that occupational disease shall be governed by the newly designated guideline.)

5. **Any impairment percentages or whole body impairment percentages set out in the designated guideline shall not be used as a direct translation to loss of wage earning capacity.**

6. The medical impairment determined using the designated guideline shall be used for determining loss of wage earning capacity in the same fashion as the medical impairment determined under Chapters 2 through 7.

Chapter 9: Glossary

1. **Spinal pathology**

   Abnormality or disease of the spinal components (e.g., vertebrae, soft tissues, intervertebral discs, spinal cord and spinal nerves) demonstrated by elements such as physical exam, imaging, lab work and other diagnostic studies and resulting in conditions including but not limited to vertebral fracture, herniated disc, radiculopathy, spinal stenosis or spondylolisthesis.

2. **Activities of Daily Living (ADLs) and Instrumental Activities of Daily Living (IADLs)**

   The tasks of everyday life. These activities include eating, dressing, getting into or out of a bed or chair, taking a bath or shower, and using the toilet. Instrumental activities of daily living are activities related to independent living and include preparing meals, managing money, shopping, doing housework, and using a telephone.

3. **Medically documented,** as used in the Spine and Pelvis Impairment Schedules (Schedules 2.1, 2.2, 2.3, 2.4 and 2.5)

   Written information contained or provided in any medical report, whether in outline or narrative form that documents circumstances pertaining to a work-related injury or disease and the services provided. This includes, but is not limited to clinical notes, test results, consultative reports and operative reports.

4. **Medical Impairment**

   A deviation, loss, or loss of use of any body structure or function in an individual with a health condition, disorder or disease as defined in these Impairment Schedules.

5. **Functional Impairment**

   Restriction in or lack of ability to perform a physical or cognitive activity due to a medically diagnosed impairment.

6. **Maximum Medical Improvement (MMI)**

   An assessed condition of a claimant based on medical judgment that (a) the claimant has recovered from the work injury to the greatest extent that is expected and (b) no further improvement in his/her condition is reasonably expected. A finding of maximum medical improvement is a standard precondition for determining the permanent disability level of a claimant. The need for palliative or symptomatic treatment does not preclude a finding of MMI. In cases that do not involve surgery or fractures, MMI cannot be determined prior to 6 months from the date of injury or disablement, unless otherwise agreed to by the parties.

8. **Recurrence***

   The reappearance of a sign or symptom of a disease after a period of remission.**

9. **Exacerbation***

Temporary worsening of a prior condition by an exposure/injury. Following a transient increase in symptoms, signs, disability and/or impairment, the person recovers to baseline status or what it would have been had the exacerbation never occurred.

10. Aggravation*

Permanent worsening of a prior condition by a particular event or exposure. A physical, chemical, biological or other factor results in an increase in symptoms that never returns to baseline, or what it would have been except for the aggravation (the level pre-determined by the natural history of the antecedent injury or illness)

* Recurrence, Exacerbation and Aggravation are medical definitions that may be relevant to clarifying what constitutes a new injury, but are not intended to modify existing case law regarding that issue.

** A determination that a sign or symptom is a recurrence within these Guidelines requires the existence of a prior injury, but does not necessarily address the question of whether the reappearance of the signs and symptoms was caused by a new injury.

Section II: RESIDUAL FUNCTIONAL ABILITIES/LOSSES GUIDELINES

1. These Guidelines apply to injured workers who (a) have been determined to be at MMI; (b) have a permanent impairment that is not subject to a scheduled loss of use; (c) have a medical impairment class rating(s) under the Medical Impairment Guidelines; and (d) are not working.

2. Physical activities place physical demands on an individual relative to the workplace. Depending upon the diagnosed medical impairment, not all activities will be relevant to any one individual.

3. The key outcome of evaluating physical and/or cognitive functional abilities is a determination of an individual's residual abilities and losses in relation to the work related diagnosed medical impairment and to the likely workplace requirements.

4. The treating physician (MD, DO) and IME (if applicable) should determine the current functional abilities and losses, using a standard Functional Assessment Form (FAF) as attached. Such report shall be identified by the appropriate CPT code for disability determinations paid at no less than the code for a comprehensive consultation at level 5. (CPT code 99245)

5. If there is material difference between the determinations of the treating physician and the IME (referenced in paragraph 4 above) and if counsel for the parties are unable to resolve the difference by agreement, then the injured worker, the insurer or the Judge may promptly request a Functional Capacity Evaluation (FCE) by a Designated Health Care Professional as identified in paragraph 6 below.

6. The WCB shall assemble a Panel of Designated Health Care Professionals (DHCP) consisting of physicians (MD, DO), registered physical therapists and registered occupational therapists who shall be impartial and designated by the WCB as having the requisite qualifications to perform a FCE using a format and methodology approved by the WCB. The WCB, in its discretion, may remove any DHCP from the Panel.

7. The FCE report by the DHCP shall be performance-based, using measurements actually calculated during an examination of the injured worker and pursuant to a standard protocol established by the WCB. Following the completion of the FCE, the DHCP shall complete the FAF based on the findings of the FCE. The FCE report shall also address the material differences in the FAFs by the treating physician and IME. In performing this evaluation, metrics from the U.S. Department of Labor Dictionary of Occupational Titles should be used, such as dynamic abilities (lifting, carrying, pushing, pulling and gripping), general tolerances (walking, sitting and standing) and specific tolerances (climbing stooping, kneeling and reaching). There shall be an audio-video recording of the examination which shall be admissible as evidence.

8. The FCE report and FAF prepared by the DHCP shall be transmitted to the treating physician and IME for review and for an opportunity to reconsider their initial assessment. They shall become part of the WCB case file and transmitted to parties in interest. Upon request by the treating physician or IME, a copy of the audio-video recording of the DHCP's examination will be provided. Based upon the additional information, the treating physician and IME shall decide whether to issue a new or modified FAF regarding current functional abilities/loss with accompanying rationale. For these services physicians will be paid an appropriate amount. (CPT code 99215)

9. The parties shall have the right to cross-examine the DHCP who has conducted the FCE; regardless of whether a DHCP is involved in the case, the parties may submit to the Judge the functional assessment opinions of their respective medical practitioners.

10. The Judge shall make findings regarding the current functional residual abilities/ losses of the injured worker as a result of the injury or occupational disease at issue.

11. The WCB shall create an Oversight Committee comprised of two representatives reach from labor and business, and a representative from the WCB, who shall serve as the Chair. The representatives from labor and business shall each include at least one New York State licensed physician *(*MD, DO). The Oversight Committee shall receive and investigate complaints regarding the performance, and/or impartiality of a DHCP ("designation issues") and by a majority vote, shall determine these issues and make recommendations to the WCB, including censure or removal of a DHCP from the WCB DHCP Panel. Such complaints, supported by factual evidence, may be filed by parties who have appeared in cases in which a DHCP has participated. The Oversight Committee should not decide designation issues based on one particular case and its decision will have no effect on the findings or outcome of a particular case.

Functional Assessment Form (FAF)

For injured claimant at MMI

Section 1. CLAIMANT INFORMATION

Claimant Name: _____

WCB Claim Number: _____

Claim Related Diagnosis(es): _____

_____

Date of Injury/Disease: _____

Section 2. RETURN TO WORK

1. Could this claimant perform his/her at-injury work activities without restrictions? ☐Yes ☐ No
If yes, the rest of this form should not be completed.

2. Could this claimant perform his/her at-injury work activities with restrictions? ☐Yes ☐ No

Section 3. RESIDUAL FUNCTIONAL CAPACITIES

Please describe claimant's residual functional capacities for any work at this time (not limited to the at-injury work activities):

Work Activity	**Never**	**Rarely/Occas**	**Intermit/Freq**	**Regularly/Constantly**	**Limitation* Claim Related *(E/P/N)****
(a) Lifting/carrying	☐	**_____#lbs**	**_____#lbs**	**_____#lbs**	☐***E*** ☐***P*** ☐***N***
(b) Sitting	☐	☐	☐	☐	☐**E** ☐**P** ☐**N**
(c) Standing	☐	☐	☐	☐	☐**E** ☐**P** ☐**N**
(d) Walking	☐	☐	☐	☐	☐**E** ☐**P** ☐**N**
(e) Climbing	☐	☐	☐	☐	☐**E** ☐**P** ☐**N**

Comments:

_____

_____

Comments:

_____

_____

Comments:

_____

_____

Comments:

_____

_____

Comments:

_____

_____

(f) Kneeling ☐ ☐ ☐ ☐ ☐**E** ☐**P** ☐**N**
Comments:
_____
_____

(g) Bending/stooping ☐ ☐ ☐ ☐ ☐**E** ☐**P** ☐**N**
Comments:
_____
_____

(h) Pulling/pushing ☐ ☐ ☐ ☐ ☐**E** ☐**P** ☐**N**
Comments:
_____
_____

(i) Simple grasping ☐ ☐ ☐ ☐ ☐**E** ☐**P** ☐**N**
Comments:
_____
_____

(j) Fine manipulation ☐ ☐ ☐ ☐ ☐**E** ☐**P** ☐**N**
(includes Keyboarding)
Comments:
_____
_____

(k) Reaching overhead ☐ ☐ ☐ ☐ ☐**E** ☐**P** ☐**N**
Comments:
_____
_____

(l) Reaching at/or ☐ ☐ ☐ ☐ ☐**E** ☐**P** ☐**N**
below shoulder level
Comments:
_____
_____

(m) Driving a vehicle ☐ ☐ ☐ ☐ ☐**E** ☐**P** ☐**N**
Comments (specify):
_____
_____

(n) Operating ☐ ☐ ☐ ☐ ☐**E** ☐**P** ☐**N**
machinery
Comments (specify):
_____
_____

(o) Temp extremes/ ☐ ☐ ☐ ☐ ☐**E** ☐**P** ☐**N**
high humidity
Comments (specify):

_____

_____

(p) Other/ environmental limitations ☐ ☐ ☐ ☐ ☐**E** ☐**P** ☐**N**

Comments (specify):

_____

_____

*Identify all limitations that resulted from an injury occurring after the claim related event.
E=Entirely P=Partly N=None

IV. EXERTIONAL ABILITY

Please check the applicable category for the claimant's exertional ability.

__**Very Heavy Work-**Exerting in excess of 100 pounds of force occasionally, and/or in excess of 50 pounds of force frequently, and/or in excess of 20 pounds of force constantly to move objects. Physical Demand Requirements are in excess of those for Heavy Work.

__**Heavy Work-**Exerting 50 to 100 pounds of force occasionally, and/or 25 to 50 pounds of force frequently, and/or 10 to 20 pounds of force constantly to move objects. Physical Demand requirements are in excess of those for Medium Work.

__**Medium Work**-Exerting 20 to 50 pounds of force occasionally, and/or 10 to 25 pounds of force frequently, and/or greater than negligible up to 10 pounds of force constantly to move objects. Physical Demand requirements are in excess of those for Light Work.

__**Light Work** - Exerting up to 20 pounds of force occasionally, and/or up to 10 pounds of force frequently and/or negligible amount of force constantly (Constantly: activity or condition exists 2/3 or more of the time) to move objects. Physical demand requirements are in excess of those for Sedentary Work. Even though the weight lifted may only be a negligible amount, a job should be rated Light Work: (1) when it requires walking or standing to a significant degree; or (2) when it requires sitting most of the time but entails pushing and/or pulling of arm or leg controls; and/or (3) when the job requires working at a production rate pace entailing the constant pushing and/or pulling of materials even though the weight of those materials is negligible. Note: The constant stress and strain of maintaining a production rate pace, especially in an industrial setting, can be and is physically demanding of a worker even though the amount of force exerted is negligible.

__**Sedentary Work-**Exerting up to 10 pounds of force occasionally (Occasionally: activity or condition exists up to 1/3 of the time) and/or a negligible amount of force frequently (Frequently: activity or condition exists from 1/3 to 2/3 of the time) to lift, carry, push, pull or otherwise move objects, including the human body. Sedentary work involves sitting most of the time, but may involve walking or standing for brief periods of time. Jobs are sedentary if walking and standing are required only occasionally and all other sedentary criteria are met.

__**Less than Sedentary Work-**unable to meet the requirement of Sedentary Work

Board Authorized Health Care Provider

_____

Name *Signature* *Specialty* *Date*

Section III: LOSS OF WAGE EARNING CAPACITY

VDF
Vocational Data Form (VDF)

Section 1: Claimant Information

Name: _____
Address:_____
City:_____ State:_____ Zip Code:_____
Date of Birth:_____ Age:_____
WCB Case Number: _____
Work Related Diagnosis(es): _____
_____
Date of Injury/Disease: _____

Section 2: Education

High School
Name:_____ Dates attended:_____
Location: City_____ State_____ Country_____
Graduated: □ Yes Year_____ Diploma_____
□ No If no, what is the highest grade of school completed?_____

GED
Name of school:_____
Location: City_____ State_____ Country_____
Passed □ Yes Year_____
□ No

Vocational/Trade School
Name:_____ Dates attended:_____
Location: City_____ State_____ Country_____
Graduated: □ Yes Year_____ Certificate/Degree_____
□ No

College
Name:_____ Dates attended:_____
Location: City_____ State_____ Country_____
Graduated: □ Yes Year_____ Degree_____ Major_____
□ No

Post-graduate
Name:_____ Dates attended:_____
Location: City_____ State_____ Country_____
Graduated: □ Yes Year_____ Degree_____ Field of Study_____
□ No

Claimant Name_____

Have you completed any special or on-the-job training, or apprenticeship? □ Yes □ No
If yes, type of training:_____
Date completed:_____
Certification/license received:_____
Expiration date(s) of certification/license:_____

Have you served in the US military? □ Yes □ No
Branch_____ Dates_____
Occupational/specialized training:_____

For additional education/training not included above, please list institution name, type of training/education, date(s) of attendance and any degree or certificate earned.

_____
_____
_____
_____

Section 3: Occupation
List all your occupation(s) during the past 10 years (most current first).

Occupation:_____
Job activity(ies):_____
Duties/responsibilities:_____
Length of time in this occupation: approx _____yrs _____months

Occupation:_____
Job activity(ies)_____
Duties/responsibilities:_____
Length of time in this occupation: approx _____yrs _____months

Occupation:_____
Job activity(ies):_____
Duties/responsibilities:_____
Length of time in this occupation: approx _____yrs _____months

Section 4: Employment
List your employers during the past 5 years, starting with your job at-time-of-injury.
Include only jobs held for at least a year.
This section does not apply to claimants under the age of twenty.

Claimant Name_____

Name of employer:_____

Location: City_____ State_____
Job titles(s):_____
Dates of employment:_____

Name of employer:_____
Location: City_____ State_____
Job titles(s):_____
Dates of employment:_____

Name of employer:_____
Location: City_____ State_____
Job titles(s):_____
Dates of employment:_____

Name of employer:_____
Location: City_____ State_____
Job titles(s):_____
Dates of employment:_____

Signature of claimant:_____

Claimant's name:_____
Print or type

Date:_____

The information on this form regarding Employment shall not be used to contact employers, other than the at-injury employer.

References

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