DISCUSSION PAPER

1. TITLE

Permanent Disability Evaluation Schedule

2. ISSUE

At issue are proposed revisions to the Workers' Compensation Board's ("WCB") *Permanent Disability Evaluation Schedule* ("*PDES*").

Stakeholders and the recent Core Review of major law and policy have raised issues about the *PDES*. In his final report, the Core Reviewer recommended that the WCB review the *PDES* to ensure it reflects current medical/scientific knowledge, and can be understood by decision-makers. He also recommended that the WCB develop an appropriate process for ongoing review of the percentages listed on the *PDES* to ensure that the *PDES* maintains currency with emerging medical/scientific knowledge.

Given the complexity of this issue, the Policy and Regulation Development Bureau ("Bureau") is proposing that this project be addressed in two phases. The first phase is presented in the attached paper and involves proposed changes to the *PDES* to reflect current medical/scientific knowledge, and to ensure that the *PDES* is understood by decision-makers.

Under the first phase, substantive policy changes will be recommended to reflect changes in medical assessment approaches, and to update out-of-date medical and scientific terminology and longstanding WCB practice. Consequential changes to permanent disability award policies are also required to ensure consistency in wording with the *PDES* and to remove any duplication.

The second phase of this project regarding the development of a process for ongoing review of the *PDES* has been identified as a priority project for 2004.

3. BACKGROUND

The *PDES* is used by the WCB as a guide in the estimation of a worker's permanent partial disability under section 23(1) of the *Workers Compensation Act* ("*Act*"). The *PDES* sets out percentages of disability for given permanent medical impairments. These percentages represent the extent of total disability (100%) that results from the permanent physical or psychological impairment.

3.1 How this issue arose?

A review of the *PDES* has not been undertaken for some time. In the absence of updated policy, the Disability Awards and Clinical Services Departments developed practices and procedures to guide staff in the assessment of permanent partial disabilities. Concerns have been raised that these practices and procedures were not widely available to stakeholders. As well, concerns have been raised that certain aspects of the *PDES* have become inconsistent with the latest medical/scientific approaches to permanent disability assessment.

Similar concerns were also raised in the Core Services Review of major law and policy. The Core Reviewer, in his final report, recommended that the WCB review the *PDES* to ensure it reflects current medical/scientific knowledge, and can be understood by decision-makers. In order to address this recommendation and the stakeholder concerns, a review of the *PDES* was undertaken by the Disability Awards and Clinical Services Departments

3.2 Section 23(1)

Permanent disability awards are payable under the *Act* when an occupational injury or disease causes a worker to sustain a permanent residual disability. A permanent disability award is assessed and becomes payable when the WCB determines that the worker's temporary impairment from the occupational injury or disease has stabilized, but the worker has been left with a permanent medical impairment.

Permanent disabilities may be partial or total. Section 23 of the *Act* establishes the WCB's system for the provision of permanent partial disability awards.[1] This section provides that where a permanent partial disability results from a work injury, a worker's entitlement to a permanent partial disability award must be assessed under the method set out in section 23(1) of the *Act*.

Section 23(1) of the *Act* provides:

> Subject to subsections (3) to (3.2) and sections 34 and 35, if a permanent partial disability results from a worker's injury, the Board *must*
>
> (a) estimate the impairment of earning capacity from the nature and degree of the injury, and
>
> (b) pay the worker compensation that is a periodic payment that equals 90% of the Board's estimate of the loss of average net earnings resulting from the impairment.
>
> (italic emphasis added)

[1] Compensation for permanent total disability is provided under section 22 of the *Act*.

The estimated impairment of earning capacity determined under section 23(1)(a), reflects the extent to which a particular injury is likely to impair a worker's ability to earn in the future. It also compensates for such factors as short-term fluctuations in the compensable condition, reduced prospects of promotion, restrictions in future employment, and reduced capacity to compete in the labour market.

3.3 *PDES* and Section 23(1) Assessments

In assessing a worker's entitlement to a permanent partial disability award under section 23(1), section 23(2) of the *Act* provides:

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

The *PDES* is published in Appendix 4 of the *Rehabilitation Services & Claims Manual* ("*RS&CM*") Volume II. The *PDES* serves as a guide in the measurement of a worker's permanent partial disability by setting out percentages of disability for given permanent medical impairments. These percentages represent the extent of total disability (100%) that results from the permanent physical or psychological impairment. In those cases where an impairment is not covered by the *PDES*, the WCB may refer to other published guides such as the American Medical Association's *Guides to the Evaluation of Permanent Impairment* ("AMA *Guides*") to assist in determining the level of disability.[2]

Section 23(1) assessments are completed once a worker reaches maximum medical recovery with no further changes anticipated in the condition.[3] A Disability Awards Officer ("DAO") is responsible for ensuring the necessary examinations are carried out and for making a decision on a worker's entitlement to a section 23(1) award. Either a Disability Awards Medical Advisor ("DAMA") or an External Service Provider may conduct permanent impairment evaluations.

Through these evaluations, a worker's level of functioning is determined and based on the findings; the appropriate percentage of disability from the *PDES* is applied. The DAO uses this information to determine a worker's section 23(1) entitlement. The DAO takes the percentage of disability and applies it to the worker's long-term average net earnings, and the section 23(1) award is 90% of this amount. When a section 23(1) award is calculated with reference to the

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2 Policy item #39.50, Non-Scheduled Awards, *RS&CM*, Volume II.
3 Policy item #39.01, Decision-Making Procedure under Section 23(1), *RS&CM,* Volume II.

PDES it is referred to as a scheduled award. Age adaptability[4] and enhancement factors[5] may also apply to scheduled awards.

In the vast majority of cases, the assessment of a worker's loss of earning capacity under section 23(1), with reference to the *PDES*, appropriately compensates a worker for his or her injury.[6]

However, where the combined effect of the worker's occupation at the time of injury and the worker's disability resulting from the injury is so exceptional that the amount determined under section 23(1) does not appropriately compensate the worker for the injury, the WCB may assess the worker under the section 23(3) method of assessment. In considering whether the combined effect is so exceptional, the WCB will only give regard to the nature of the worker's occupation at the time of injury and the resulting disability.

3.4 History of the *PDES*

The *PDES* was originally derived from a report presented to the Association of Workmen's Compensation Boards by Dr. D.E. Bell in 1960. The *PDES* was designed to show, in percentage form, the potential impairment of earning capacity of an untrained common laborer.[7] The *PDES* in its current form has been largely unchanged since 1966 with two exceptions. The first was the inclusion of a section on the spine in 1990, and second was the inclusion of psychological disability ratings in 2001.

The *PDES* attributes a percentage of total disability to each permanent impairment specified. For example, an amputation of an arm is rated at 65% of total disability. When that percentage rate is applied, it means that a worker is entitled to a section 23(1) award based on 65% of 90% of the worker's average net earnings as determined under the *Act*.

An award under section 23(1) is intended to represent a measure of loss in terms of disability expected, on average, to result from a particular impairment. The term "disability" is defined as an alteration of an individual's capacity to meet personal, social, or occupational demands or statutory or regulatory requirements

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4 Policy item #39.11, Age Adaptability Factor, *RS&CM,* Volume II. The age adaptability factor is used for workers over age 45. The disability rating is increased by 1% of the assessed disability for each year over age 45 to a maximum of 20% of assessed disability.

5 Policy item #39.12, Enhancement, *RS&CM,* Volume II. Where a worker has an additional disability either pre-existing the injury or the injury causes more than one disability, the WCB may increase the overall percentage of disability that would otherwise be awarded.

6 Policy item #40.00, Section 23(3) Assessment, *RS&CM*, Volume II.

7 D.E. Bell, M.D., *Report to the Association of Workmen's Compensation Boards of Canada, Subject: Permanent Disability Evaluation*, August 22, 1960, at p. 4.

because of an impairment. The term "impairment" reflects a loss, loss of use, or derangement of any body part, organ system or organ function.[8]

Current policy provides that any revision to the *PDES* must be undertaken by procedures that are appropriate to changes of a legislative nature. Policy also provides that the schedules in use in other jurisdictions are part of the material that would be looked at in any revision of the *PDES*.[9]

3.5 Core Review Recommendations

In his May 2002 report, the Core Reviewer made a number of recommendations regarding the *PDES*. Specifically, he recommended that the WCB conduct a review of the *PDES* to ensure it is reflective of current medical/scientific knowledge, and can be readily understood by the decision-makers who must utilize it. He also raised the following comments for the WCB's consideration when conducting this review:

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

- Policy item #39.10 of the *RS&CM,* Volume II, be revised to require all decision-makers within the worker's compensation system to apply the applicable percentage (or range of percentages) when the specified physical or psychological impairment under consideration is listed on the *PDES*.

- Where a range of percentages is utilized with respect to the impairment of earning capacity associated with a particular physical or psychological injury, which is specified on the *PDES*, the WCB should endeavor to keep the range within a narrow scope (which should be defined as a range of no more than 5%).

- The percentages of impairment of earning capacity listed on the *PDES* should not contemplate a component for any expected level of pain associated with the particular impairment.[10]

- The WCB should develop an appropriate process by which it can conduct an ongoing review of the impairment percentages listed on the *PDES* to

[8] AMA *Guides*, 5th Edition revised. Chapter 1, p. 8.
[9] Policy item #39.50, Non-Scheduled Awards, *RS&CM*, Volume II.
[10] In November 2002, the prior Panel of Administrators approved separate policy for chronic pain treatment, rehabilitation and compensation.

ensure that the *PDES* maintains currency with emerging medical/scientific knowledge.

4. DISCUSSION

The aim of a schedule such as the *PDES* is to provide a standardized, objective approach to evaluating a worker's permanent impairment. The *PDES* attributes a percentage of total disability to each disability specified.[11] However, the *PDES* does not contain a comprehensive list of disabilities. In certain instances, the WCB may consider other sources such as schedules in place in other jurisdictions to assist in the determination of a worker's section 23(1) entitlement.

As noted previously, it has been quite some time since a review of the *PDES* was undertaken. In response to the Core Reviewer's recommendation to review the *PDES* to ensure it reflects current medical/scientific knowledge, and can be understood by decision-makers, the Disability Awards and Clinical Services Departments reviewed the *PDES* and identified a number of proposed changes.

The following discussion provides an overview of the review process and a summary of the proposed *PDES* changes.

4.1 Process for Review of the *PDES*

It is important to note that the evaluation of permanent physical and psychological disabilities requires consideration of both medical/scientific diagnostic criteria as well as consideration of the experience-based judgement of those professionals that perform the evaluations. The combination of these two evaluations assists in the determination of a worker's entitlement to a section 23(1) award.

A review of the *PDES* was completed by a group composed of two senior DAMAs and a senior DAO. This group analyzed the following sources as part of the identification of potential changes:

- Current medical literature on medical/diagnostic criteria for permanent impairment assessments;
- American Medical Association's *Guides to the Evaluation of Permanent Impairment,* each edition ("AMA *Guides*");
- The various schedules used in other Canadian, United States, and other international jurisdictions; and

[11] Appendix 4, *Permanent Disability Evaluation Schedule* - #39.10, *RS&CM,* Volume II.

- Practices and procedures in the Disability Awards and Clinical Services Departments of the WCB with respect to section 23(1) assessments and evaluations.

Based on this research and analysis, together with input from other DAMAs, DAOs, and various medical specialists from the WCB's Visiting Specialists Clinic, the proposed changes were identified.

4.2 Categories of Proposed *PDES* Changes

In general, the proposed *PDES* changes fall under the following categories:

i. Changes in medical/scientific approach to assessment

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

ii. Changes to more appropriately reflect the impact of an impairment on a worker's earning capacity

Under the current *PDES*, certain disability ratings, such as those related to partial amputation of the fingers, do not appropriately reflect the impact of the loss on a worker's earning capacity. For example, partial amputation of a finger is weighted higher for the portion closer to the palm of the hand than the fingertip. However, because of the importance of fingertip sensation in performing work, the loss of the fingertip alone may have an impact on the worker's earning capacity almost equal to the loss of a larger portion of the finger. It is proposed that the weighting for the digits of the hand be reversed such that the fingertip is weighted more than the portion of the finger closer to the palm.

iii. Changes to bring *PDES* in line with longstanding practice and procedure

While the *PDES* has not been updated in a number of years, the Disability Awards and Clinical Services Departments have maintained practices and procedures to assist WCB staff in the adjudication of section 23(1) awards. These practices and procedures set out new and/or revised evaluation processes for such items as joint immobility.

It is proposed that a number of the current procedures be included in the

PDES. This will provide clarity and assist decision-makers, workers, employers and other parties in understanding the section 23(1) assessment process. These procedures have been provided to workers, advisors and the appellate bodies on request.

iv. Changes to reduce unnecessary duplication and complexity

The treatment of hand impairments and amputations of the fingers and thumb are set out in the current *PDES* in both the 12 hand charts and by individual amputation item. This duplication is unnecessary as the WCB staff refer primarily to the hand charts as the complete list of each impairment is considered difficult and confusing.

It is proposed that the hand charts be reduced from 12 charts to five charts. It is also proposed that the detailed list of amputation values of individual digits of the fingers and thumb be deleted. This approach to assessment is consistent with other jurisdictions such as Alberta.

A detailed summary of each of the proposed *PDES* changes is contained in Appendix A of this paper.

4.3 Process for Ongoing *PDES* Reviews

The Core Reviewer recommended that the WCB develop an appropriate process by which it can conduct an ongoing review of the percentages listed on the *PDES* to ensure that the *PDES* maintains currency with emerging medical and scientific knowledge.

Stakeholders and reviewers of the system have also raised concerns that the *PDES* may no longer accurately determine the average loss of earning capacity it is intended to measure. In particular, there is concern that the *PDES* does not take into account socio-economic changes that have occurred over time as occupations, economic conditions, and even legal obligations related to return to work change. As well, it has been noted that the *PDES* does not reflect changes that have occurred in terms of WCB vocational rehabilitation interventions.

One option that has been suggested is to do a study of various impairments and their long-term impact on a worker's earning capacity. Based on the results of the study, average disability percentages could then be established for each level of impairment. Such a study would require a significant financial and resource commitment on the part of the WCB.

Another option is to allow a period of time for the new permanent partial disability award system to operate. As part of the evaluation of the new system, the WCB is collecting statistics on the number of section 23(3) projected loss of earnings awards that are being granted. This information may provide the WCB with information that will enable it to target certain aspects of the system where it

appears that the *PDES* is not providing adequate compensation. Those issues identified would then be added to the Bureau's work schedule.

While options have been identified, this issue is complex and will require additional research and analysis by the Administration and the Bureau. The first phase of this project is reflected in the proposed changes to the *PDES* set out in this paper. The next phase of this project has been identified as a priority project for 2004.

5. OTHER JURISDICTIONS

The majority of Canadian jurisdictions changed their permanent disability assessment systems in the 1980's and 1990's to provide for two separate types of benefits. Generally, they provide a lump sum for the non-monetary effects of a permanent impairment, and an award paid to age 65 if there is an actual loss of earnings.

Non-economic loss awards are determined with reference to an impairment rating schedule. The majority of Canadian jurisdictions use schedules based on the guidelines developed originally by Dr. Bell. Nova Scotia, Prince Edward Island, Ontario and the Yukon, however, use various editions of the AMA *Guides* to rate impairment.

6. OPTIONS AND IMPLICATIONS

Option 1 – Status quo

No changes would be made to the *PDES*. The WCB will apply the percentages as listed in the *PDES* when establishing a worker's section 23(1) award. Items not contained in the *PDES* will continue to be addressed through practice, procedure and reference to schedules in other jurisdictions.

Implications:

- The *PDES* will not reflect the latest medical/scientific information with respect to such items as rotation of the spine.
- Section 23(1) assessments for medical impairments such as partial finger amputations will continue to be confusing for WCB staff to adjudicate given the duplication in the *PDES*.
- Questions and appeals on the WCB's determination of a worker's percentage of disability where practice, procedures or the schedules in place in other jurisdictions are applied will continue.

- Does not address ongoing concerns from stakeholders or the Core Reviewer on the need to update the *PDES* to reflect latest medical/scientific information.

- Provides an opportunity for the WCB to assess the new permanent partial disability award system.

Option 2 – Adopt the Proposed *PDES* Changes

This option has the following elements:

- The *PDES* will be revised to reflect the proposed changes set out in Appendix A of this paper.

- A review of the policies contained in Chapter 6 of the *RS&CM,* Volume II, will be required as a number of policies repeat sections of the *PDES* where proposed changes have been identified. For example, policy items #39.21, Amputation of One Finger; #39.22, Amputation of More Than One Finger; #39.23, Amputation of Thumb; and #39.24, Amputation of Thumb And One Or More Fingers would require review.

Implications:

- The *PDES* will be updated to reflect current medical and scientific evidence on the assessment of a number of disabilities.

- Greater clarity for staff in determining percentages of permanent partial disability.

- A majority of the changes reflect current practice and should therefore result in minimal additional costs. For example, including the six different types of movement that are measured to determine complete shoulder immobility. There are, however, two changes that may have potential financial implications:

    - Changes to the Finger Values – While the total value for the hand has not changed, it is anticipated that an increase in the value of awards will result for those claims where the distal phalanx (i.e. fingertip) only is affected. For example, under the current schedule if a worker amputates the distal phalanx of the index finger, an award of 0.80% of total disability would be granted. Under the proposed changes, the worker would be entitled to an award of 1.6% of total disability. The proposed award is considered to be a more appropriate representation of the expected loss resulting from the injury.

- Changes to the Spine – The addition of thoracic spine rotation to the thoracic spine section of the *PDES* documents past practice and therefore will result in no change. Removal of the rotation from the lumbar spine section resulted in an increase in the values of the other ranges of the lumbar spine motion proportionately to keep the total available percentage of disability for the lumbar spine unchanged. These changes may result in a slight increase in awards.

- May result in reduced appeals, as the *PDES* would include a number of items that are currently set out in practices, procedures or other schedules.

- Addresses stakeholder concerns and the Core Reviewer's recommendation that the *PDES* be reviewed to ensure that it is reflective of current medical/scientific knowledge, and can be readily understood by the decision-makers who must utilize it.

7. CONSULTATION

Stakeholders are asked to provide feedback on the options provided and may provide any additional comments that may be relevant to the issue.

Stakeholder comments will be accepted until **May 2, 2003**. When responding, please provide your name, organization, and address. Comments may be sent by mail, fax or e-mail to:

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The WCB's governing body, the Board of Directors, will consider the opinions expressed by stakeholders before it adopts any amendments to the current policies.

Please note that all comments become part of the Bureau's database and may be published, including the identity of organizations and those participating on behalf of organizations. The identity of those who have participated on their own behalf will be kept confidential according to the provisions of the *Freedom of Information and Protection of Privacy Act*.

APPENDIX A

PROPOSED *PDES* CHANGES

The *PDES* contains a list of impairments and the associated percentage of disability. Set out below is an overview of the proposed *PDES* changes.

1. UPPER EXTREMITY

(A) Amputations

i. Finger Amputations (Items 6 to 40)

It is proposed that current *PDES* items 6 to 40 pertaining to finger amputations be removed as they are considered confusing and duplicate the documentation contained in the hand charts. The hand charts that are contained in the *PDES* are the main reference used by DAOs.

ii. Hand Charts

It is proposed that the 12 hand charts contained in the current *PDES* be replaced with five hand charts as set out in Appendix B. Under the current *PDES*, there is a different chart for each variation of one, two, three and four finger amputations. The proposed five hand charts provide percentages for the following: thumb and metacarpals, single finger, two fingers, three fingers and four fingers. This change is proposed to reduce unnecessary and confusing complexity and to eliminate unjustifiable variation in individual finger values among the twelve charts.

It is also proposed that the percentage of disability weighting of values from proximal (closest joint to hand) to distal (tip of the finger) structure be reversed. Presently, the amputation values for the index finger are as follows: 0.8% for the distal joint, 1.6% for the middle joint and 1.6% for the proximal joint. Under the proposed Chart 2, Single Finger, the percentages for the distal and the proximal joints have been reversed. This will more appropriately reflect the fact that the loss of the distal portion of the finger has a greater impact on a worker's ability to function.

The proposed treatment of the hand charts and the weighting of disability reflect the approach of jurisdictions such as Alberta.

(B) Joint Immobility

i. Shoulder (Item 41)

Shoulder, Complete with no Scapular Movement…… 35
- **(a) Flexion…… 14**
- **(b) Extension…… 3.5**
- **(c) Abduction…… 7**
- **(d) Adduction…… 3.5**
- **(e) External Rotation…… 3.5**
- **(f) Internal Rotation…… 3.5**

Shoulder immobility complete with no scapular movement is presently rated at 35% of total disability. In practice the 35% is measured with reference to six different types of movement. These include flexion and extension movement, abduction and adduction movement, and external and internal rotation. It is proposed that these six movements be included in the *PDES*. These changes are consistent with longstanding practice of the DAMAs and reflect the approach to measuring restrictions in shoulder movement set out in the AMA *Guides*.

ii. Wrist (Item 45)

Wrist …… 12.5
- **(a) Flexion…… 4**
- **(b) Extension…… 4**
- **(c) Radial Deviation…… 2.25**
- **(d) Ulnar Deviation…… 2.25**

Wrist immobility is valued at 12.5% of total disability. Similar to shoulder immobility, wrist immobility is subdivided into four movements: flexion, extension, radial deviation and ulnar deviation. These changes are consistent with longstanding practice and reflect medical approach to measuring restrictions in wrist movement.

iii. Pronation and supination of forearm (Items 47 and 48)

Combined…… 10
- **(a) Pronation alone…… 6 (previously rated at 3%)**
- **(b) Supination alone…… 4 (previously rated at 5%)**

Item 46 of the *PDES* lists pronation and supination complete in mid position at 10% of total disability. Pronation, which is rotation of the forearm and hand so that the palm is down, is rated at item 47 at 3% of total disability. Supination, which is rotation of the forearm and hand so that the palm is up, is rated at 5% of total disability.

It is proposed that pronation of the forearm be valued at 6% of total disability and supination be valued at 4% of total disability. These changes are proposed as the design of most work implements favours pronation ability. The proposed change reflects more accurately the impact on a worker's earning capacity.

iv. Thumb and Finger Mobility Restrictions (Items 49 to 53)

It is proposed that items 49 to 53 pertaining to thumb and finger restrictions be removed as these are confusing and duplicate documentation contained in the hand charts. The hand charts are the major resource used by DAOs in calculating finger and thumb immobility values.

(C) Surgical Procedures – New items

i. Shoulder replacement arthroplasty – 6.5% of total disability

ii. Elbow replacement arthroplasty – 5.8% of total disability

These items represent current practice of the DAOs. These procedures did not exist at the time of the development of the *PDES*.

(D) Upper Extremity Range of Motion Values – New items

It is proposed that normal range of motion values be included in the *PDES*. The proposed range of motion values are contained in Appendix C. These values were obtained from the 1991 text "Joint Motion, Method of Measuring and Recording" prepared by the American Academy of Orthopaedic Surgeons and approved by the Canadian Orthopaedic Association. The values in the text were obtained by averaging four sources of range of motion.

This table of values has been used by the DAOs and DAMAs since at least June 1995. The values are used in instances of bilateral injury where there is no "normal" side for comparison.

2. LOWER EXTREMITY

(A) Amputations

i. Leg, at Ankle End Bearing **(Syme's Amputation)** – 25% of total disability (Item 58)

ii. Midtarsal (Chopart's Amputation) – 20% (Replaces Item 59)

iii. Tarsometatarsal (Lisfranc's Amputation) – 15% (Replaces item 59)

It is proposed the terms Syme's, Chopart's and Lisfranc's amputations be inserted for clarification as these terms are used in medical literature. These awards have been given in practice, therefore, clarification of correct medical terminology.

Chopart's and Lisfranc's amputations replace item 59 of the *PDES*, amputations through the foot which was listed at 10-25% of total disability. The inclusion of these two impairments clarifies existing practice.

(B) Joint Immobility

i. Hip (Item 65)

Hip…… 30

(a) Flexion…… 9
(b) Extension…… 2
(c) Abduction…… 7
(d) Adduction…… 3
(e) External Rotation…… 6
(f) Internal Rotation…… 3

Similar to upper limb immobility, hip immobility is determined through six movements. It is proposed that total hip immobility of 30% be further divided into each of the six movements. These further refinements reflect longstanding practice of the DAMAs.

ii. Great Toe, MP Joint (Item 69) – 1.25%

Ankylosis is awarded 50% of amputation value.[12] Amputation of the great toe is listed at 2.5% of total disability. Great toe ankylosis is currently listed at 2.5%. It is proposed that the percentage of disability be established at 1.25% to correct this error.

(C) Limb Shortening – Leg Length (Item 72)

(a) 1.5 cm or less…… 0
(b) 1.6 cm to 2.5 cm…… 2
(c) 2.6 cm to 3.5 cm…… 3
(d) 3.6 cm to 4.5 cm…… 4
(e) 4.6 cm to 5.5 cm…… 6
(f) 5.6 cm to 6.5 cm…… 8
(g) 6.6 cm to 7.4 cm…… 10
(h) 7.5 cm or more…… 15

[12] Ankylosis is defined as immobility and consolidation of a joint due to disease, injury or surgical procedure.

PDES currently sets out three measurements for leg length shortening and the associated percentage of disability: 2.5 cm shortening valued at 1.5%, 5.0 cm shortening valued at 6% and 7.5 cm at 15% of total disability. It is proposed that additional measures be added in order to document previously assigned intervals not listed in the current *PDES*.

(D) Miscellaneous Surgical Procedures

i. Total Knee Prosthesis or Hemiarthroplasty (New Item) – 9%

ii. Ligamentous Laxity of Knee (New Items)

(a) ACL or PCL
Grade I/Mild (5 – 9 mm) – 1.67%
Grade II/Moderate (10 – 14 mm) – 3.34%
Grade III/Marked (15 mm or more) – 5%

(b) MCL or LCL
Grade I/Mild (5 – 9 mm) – 0.83%
Grade II/Moderate (10 – 14 mm) – 1.66%
Grade III/Marked (15 mm or more) – 2.5%

iii. Ligamentous Laxity of Ankle, Medial or Lateral (New Item) – 0-2%

These items were previously awarded based on past practice by DAMAs. These proposed changes will document past and current practice to ensure future consistency.

(E) Lower Extremity Range of Motion Values – New item

Similar to the proposed approach for upper extremity range of motion, it is proposed that normal range of motion values be included in the *PDES* for the lower extremity. The proposed range of motion values are contained in Appendix C. These values were obtained from the 1991 text "Joint Motion, Method of Measuring and Recording" prepared by the American Academy of Orthopaedic Surgeons and approved by the Canadian Orthopaedic Association. The values in the text were obtained by averaging four sources of range of motion.

This table of values has been used by the DAOs and DAMAs since at least June 1995. The values are used in instances of bilateral injury where there is no "normal" side for comparison.

(F) Spine

Thoracic Spine

i. Loss of Range of Motion Rotation, Right and Left, Each (New item) – 0-3%

Lumbar Spine

i. Loss of Range of Motion

Flexion – 0-9% (previously rated at 0-7%)
Extension – 0-5% (previously rated at 0-3%)
Lateral Flexion, Right and Left Each – 0-5% (previously rated at 0-2%)

Rotation of the thoracolumbar spine was moved to the section on the thoracic spine from the section on the lumbar spine. Medical and science information confirms that the structure of the lumbar spine prevents all but the most minor rotation. As most of the rotation takes place in the thoracic spine, this section was added to the thoracic spine section and rated at 0-3% of total disability. The overall maximum value of the thoracic spine continues to be rated at 6%.

Given the proposed removal of an item from the lumbar spine section, the ranges of motion in the lumbar spine were revised upwards slightly to reflect the relative values for movements other than rotation.

The change was made on the advice of Dr. Howard Ritchie, WCB of British Columbia Orthopaedic Consultant, who has extensive background in spinal surgery. Current medical literature also supports this view. For example, the AMA *Guides* 5th Edition provides that axial rotation is "minimal in the lumbar spine".

Finally, it is proposed that the ranges for discectomy be replaced by a single percentage as the DAMAs advise that they cannot always correlate the severity of symptoms with the extent of surgery. It is not reasonable to propose a range for that procedure. Other schedules and jurisdictions use a fixed amount for this assessment. For example, a discectomy at T12 to S1, per level was rated at between 0-2% of total disability. It is proposed that the revised rating be set at 2% of total disability.

APPENDIX B

HAND CHART CHANGES

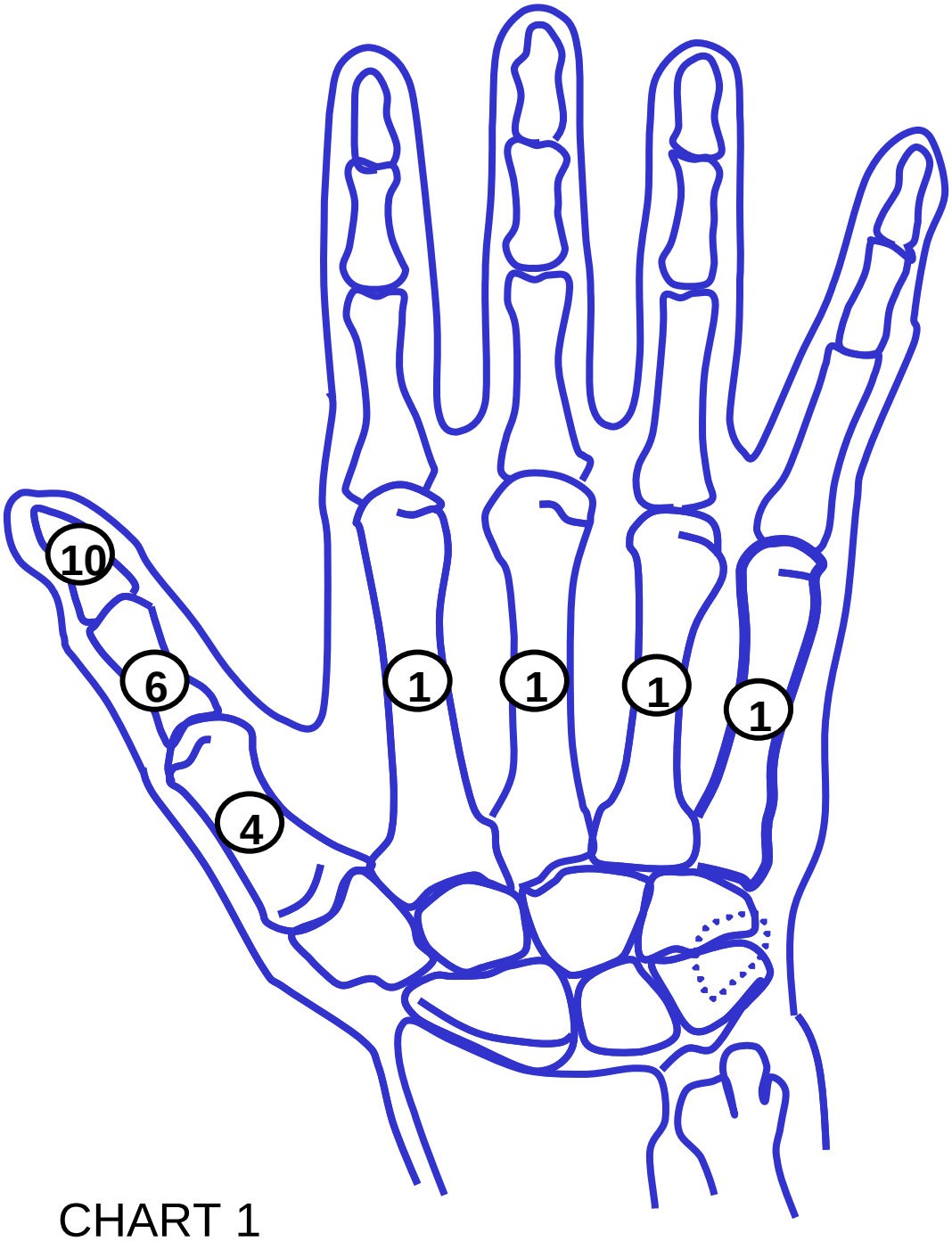

CHART 1
THUMB AND METACARPALS

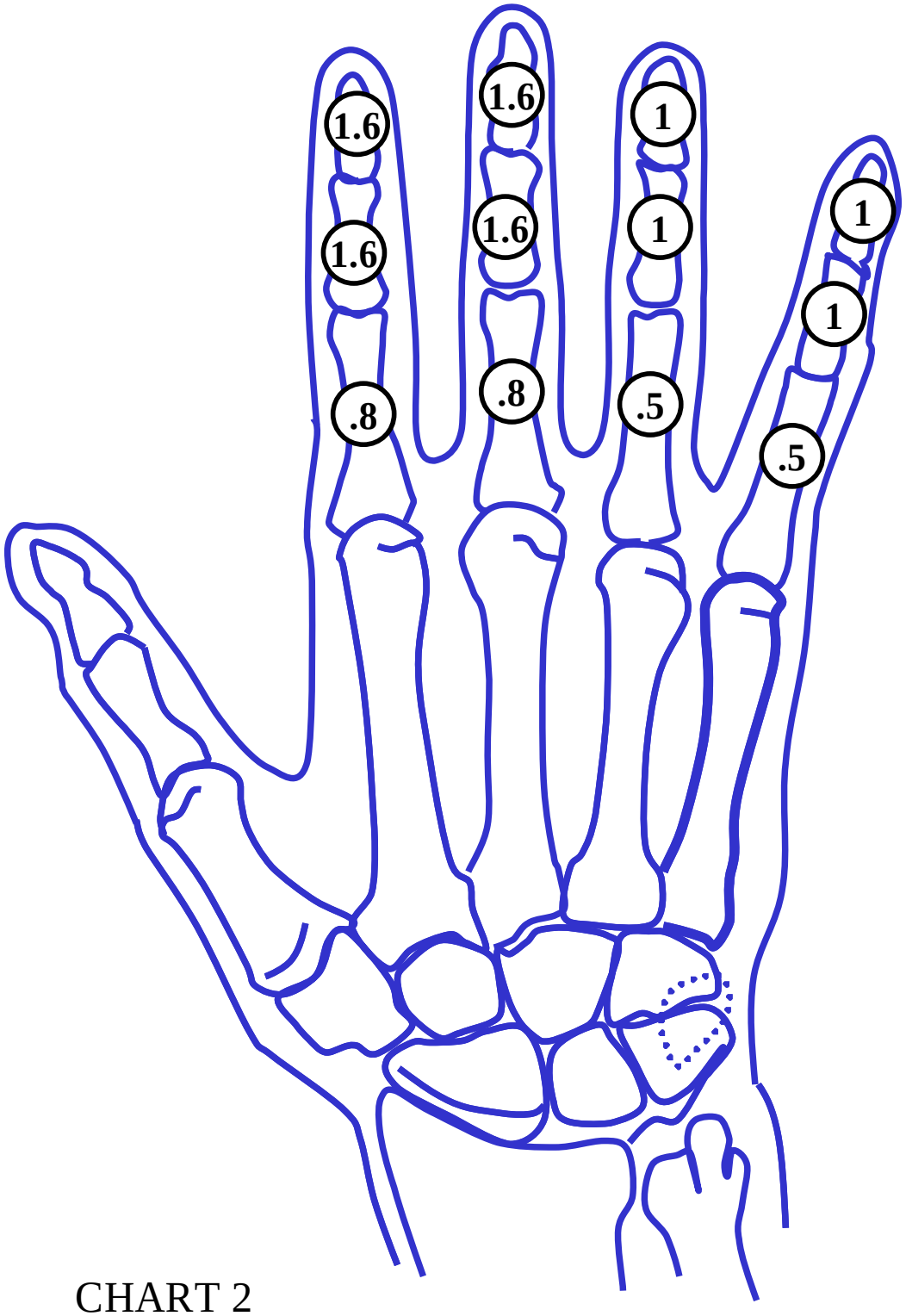

CHART 2
SINGLE FINGER

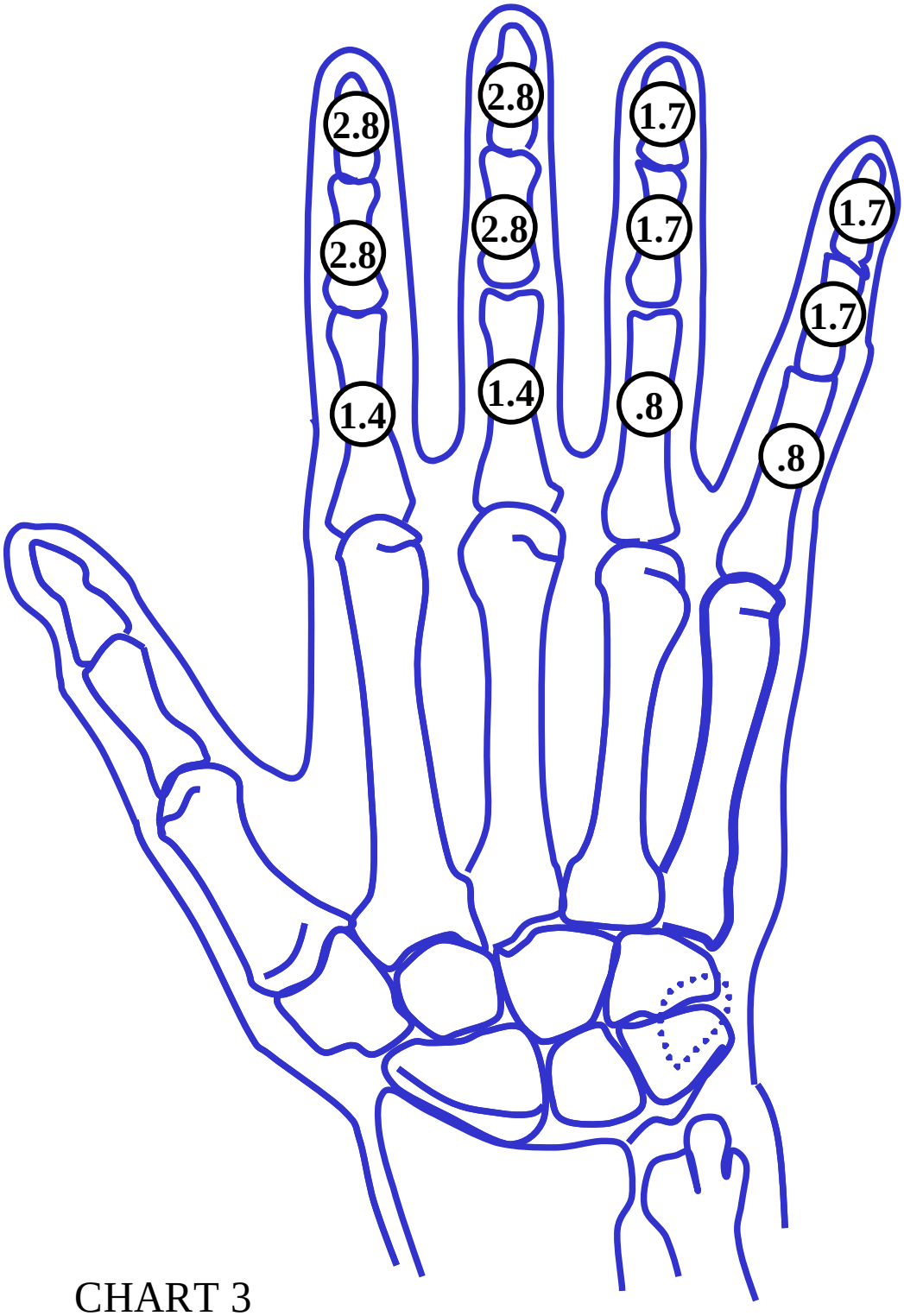

CHART 3
TWO FINGERS

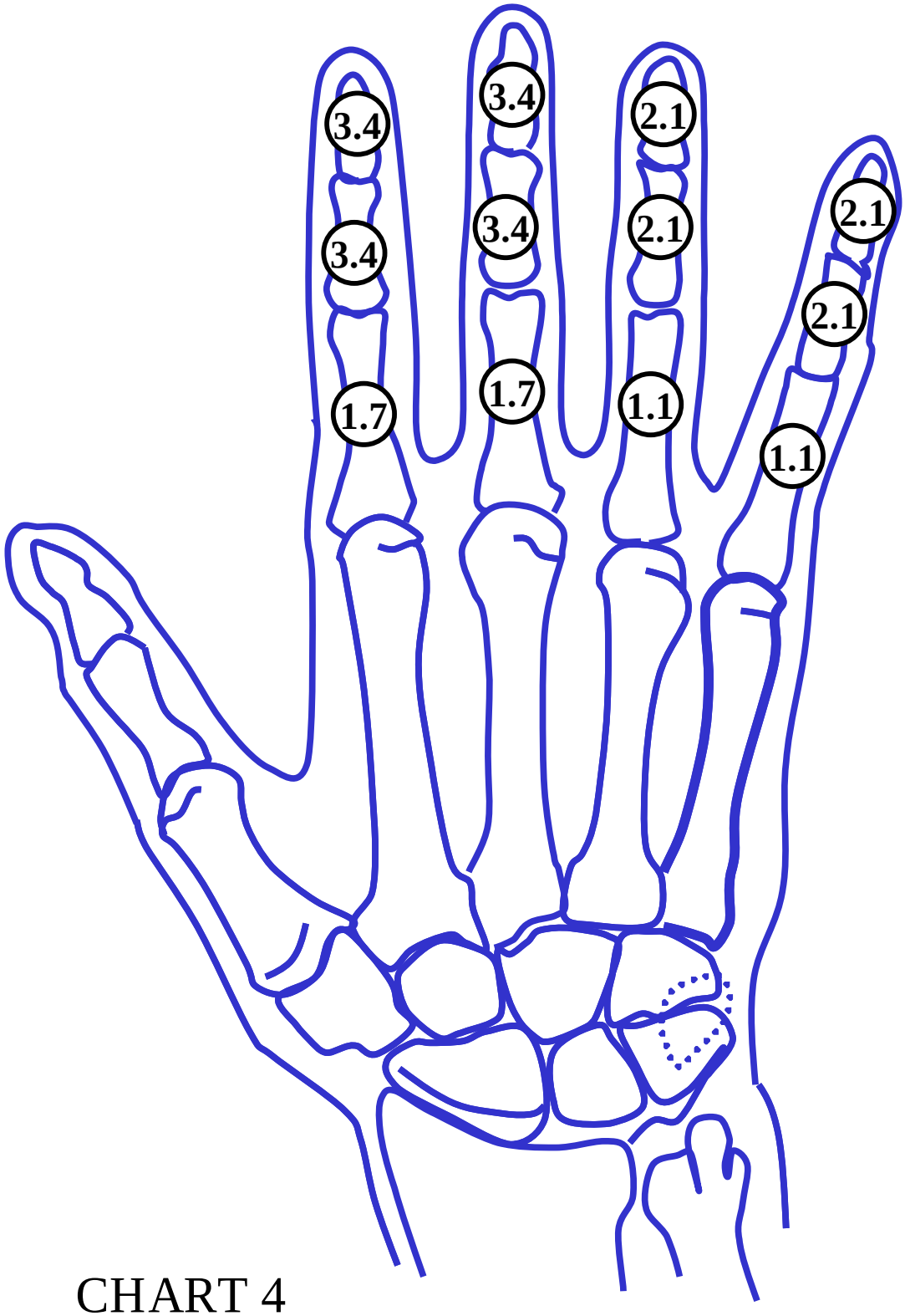

CHART 4
THREE FINGERS

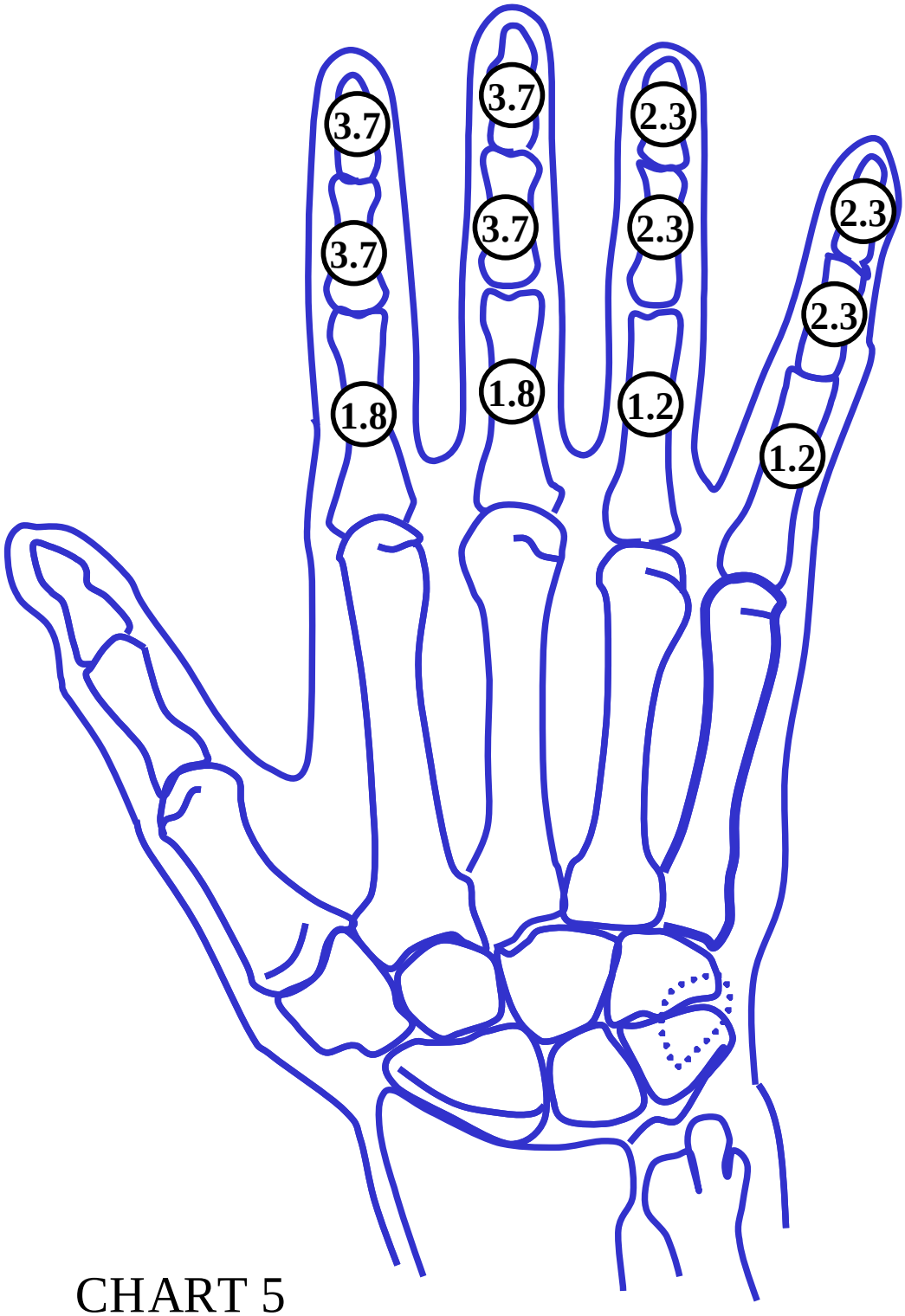

CHART 5
FOUR FINGERS

APPENDIX C

NORMAL RANGE OF MOTION VALUES (DEGREES)

SHOULDER

Flexion	158
Extension	53
Abduction	170
Adduction	50
* Internal Rotation	70
* External Rotation	90

* Arm in Abduction of 70 - 90 degrees; if unable to achieve this degree of abduction, internal and external rotation is measured in a neutral position, arm at side. The normal range in neutral position is 68 degrees for each movement

ELBOW

Flexion	146
Extension	0

FOREARM

Pronation	71
Supination	84

WRIST

Flexion	73
Extension	71
Radial Deviation	19
Ulnar Deviation	33

FINGERS

DIPJ Flexion	80
Extension	0
PIPJ Flexion	100
Extension	0
MPJ Flexion	90
Extension	0

THUMB

IPJ Flexion	81
Extension	0
MPJ Flexion	53
Extension	0
CMCJ Flexion	15
Extension	50
Palmar Abduction	50

HIP

Flexion	113
Extension	28
Abduction	48
Adduction	31
Internal Rotation	30
External Rotation	45

KNEE

Flexion	134
Extension	0

ANKLE

Dorsiflexion	18
Plantar Flexion	40

SUBTALAR

Inversion	5
Eversion	5

GREAT TOE

IPJ Flexion	60
Extension	0
MPJ Flexion (Plantar Flexion)	37
Extension (Dorsi Flexion)	63