STATE OF MINNESOTA
DEPARTMENT OF LABOR AND INDUSTRY
WORKERS' COMPENSATION DIVISION

In the Matter of the Proposed Adoption by the Minnesota Department of Labor and Industry, Workers' Compensation Division, of Rules Governing Permanent Partial Disability.

STATEMENT OF NEED AND REASONABLENESS

INTRODUCTION

Minn. Stat. § 176.105 (1984) directed the Commissioner of the Department of Labor and Industry to adopt temporary rules for the rating of permanent partial disability in workers' compensation by January 1, 1984. Prior to January 1, 1984, permanency ratings were set forth in Minn. Stat. § 176.101, subd. 3. This rules proceeding converts those temporary rules into permanent rules.

In promulgating the temporary rules, several statutory requirements were met. Actuarial analysis determined that the schedules in the aggregate provide benefits approximately equal to those payable under the statutory schedule that existed prior to January 1, 1984. Minn. Stat. § 176.105, subd. 4(a) (1984). Pursuant to Minn. Stat. § 176.105, subd. 4(b), the Commissioner conducted an analysis of the existing statutory permanent partial disability schedule for the purpose of determining the number and distribution of permanent partial disabilities and the average compensation for various permanent partial disabilities. The Commissioner also performed a written analysis of the disability schedules of other states as suggested by Minn. Stat. § 176.105, subd. 4(b) (3). These documents were made part of the rulemaking record at the public hearing held on November 4, 1983, pursuant to Minn. Stat. § 176.105, subd. 4 (1984). The Statement of Need and Reasonableness for the temporary rules, also included in the hearing record, documented the Commissioner's consideration of the factors listed in Minn. Stat. § 176.105, subd. 4(b) (1)-(7).

Having worked with the temporary rules for the past year and a half, the Commissioner has found them to be fair, objective, and consistent. As the rules greatly simplify the rating of disabilites, the rules are strongly supported by medical professionals.

The proposed permanent rules are essentially identical to the temporary rules. The few clarifying changes and additions that have been made to the temporary rules are explained in the detailed analysis of the rules below.

PART 5223.0010. General.

The basic purpose of specifying disability for categories of impairment is to promote consistency and objectivity in the rating of permanent impairments, thereby reducing litigation regarding the rating of disabilities.

Subpart 2 provides rules for interpreting the schedules. One of the purposes of the interpretation rules is to ensure selection of the smallest number of categories necessary to fairly represent the disabling condition. Thus, cumulation and duplication are prohibited. A specific restriction on cumulation is included for the musculoskeleletal schedule. To avoid rating on a basis other than the categories of the schedules, averaging or prorating is also prohibited.

The statutory A + B (1-A) formula is added to this subpart. Its addition to the permanent rules was requested by medical practitioners, who often do not have copies of the statute readily available. Its inclusion increases the ease of use of the rules.

The schedules are the exclusive rating basis as stated in Subpart 3. The disability rating assigned to each category includes a consideration of loss of function.

Subpart 4 lists the documents incorporated by reference. These documents are standard medical references which are in common use. The documents are incorporated only to the extent that they are specifically referenced or are necessary for definition.

The edition references of Items A, G, and J of Subpart 4, the A.M.A. Guides, Dorland's, and Hollinshead, respectively, are changed from the temporary rules to reflect new editions of these reference works. Because of the new incorporation by reference requirements of Minn. Stat. § 14.07, subd. 4 (1984), publishers are identified and a statement of availability and frequency of change is added to the permanent rules.

PART 5223.0020. Definitions.

Most of the sections of this rule define medical terms. Although these terms are defined in Dorland's or other documents incorporated by reference, the definitions in those documents were not sufficiently specific for the purpose of these rules. These terms are thus defined in the context of their use in the rules.

PART 5223.0030. Eye Schedule.

The Minnesota Medical Association adapted the eye schedule from the Wisconsin schedule and from the A.M.A. Guides. The eye schedule of this rule is a significant improvement over the out-dated method used under the statutory schedule. With the statutory schedule, only distance vision was used as a measure of impairment. Thus, there was no compensation for impairment of near vision, of field vision, or of ocular motility. The schedule set forth in this rule corrects these inadequacies and provides a method for determining visual impairment which was consistent with present medical practice.

The examination requirements of Subpart 2 follow generally accepted ophthalmological practices.

Subpart 3 describes the three factors (central visual acuity, field vision, and ocular motility) used to measure vision and the possible range within which the measurement of each factor may fall. For central visual acuity, the maximum at Subpart 3.A.(1), and the minimum for distance vision at Subpart 3.B.(1)(a), are those of both the A.M.A. and Wisconsin schedules. The minimum for near vision at Subpart 3.B.(1)(b) follows the Wisconsin schedule. The A.M.A. Guides measure near vision to only 14/140. The use of the Wisconsin limit permits greater distinctions at the higher levels of impairment.

For the visual field, the A.M.A. Guides were followed in choosing the maximum limit of 500 degrees at Subpart 3.A.(2). This maximum differs from the Wisconsin limit of 420 degrees. The availability and general professional acceptance of the A.M.A. visual field charts supported the selection of the A.M.A. method. The effect of increasing the normative visual field is to slightly increase the disability rating, and thus compensation. A visual field of 420 degrees is measured as unimpaired under the Wisconsin system, while the same visual field is impaired when measured against a 500 degree standard.

For ocular motility, the maximum limit at Subpart 3.A.(3) is consistent with that of Wisconsin and the A.M.A. Guides. The minimum limit at Subpart 3.B.(3) is adopted from the Wisconsin schedule.

The 50 percent minimum at Subpart 3.B.(3) prevents overcompensation of ocular motility impairment. The worst case of double vision should not be compensated to the same extent that total blindness is compensated. Without the 50 percent minimum, this could occur because of the calculation method employed.

Subpart 4 prescribes the methods for measuring the three factors of vision. Subpart 4.A.(1)-(4) set forth standard testing and calculation procedures. Table 1 is taken from the Wisconsin schedule and its use is consistent with the selection of the Wisconsin standards for maximum and minimum central visual acuity efficiency.

Subpart 4.A.(5) and (6) permit downward adjustments of the efficiency measurement for aphakia and pseudophakia, conditions resulting from the development of cataracts. These adjustments are intended to compensate for the increased fragility of the eye and the need for corrective lenses. In cases of severe impairment, the adjustment under these provisions may result in less compensation than an adjustment for glasses under Subpart 5.B.(2) or (3). In order to permit a higher compensation for the injury, the adjustment is not made where an adjustment under Subpart 5 permits more compensation.

Subparts 4.B. and 4.B.(1) describe standard procedures for measuring visual field efficiency. Subpart 4.B.(2)sets forth the standard procedure to be followed in cases of irregular impairment of field. The number of radii selected will depend on the nature and extent of the particular impairment. The divisor for calculating efficiency will vary from case to case, depending on the number of radii selected.

Subpart 4.B.(3) is also the standard procedure followed by ophthalmologists where field vision is severely impaired.

Subpart 4.C., the measurement of ocular motility, follows the method set forth in the A.M.A. Guides. The A.M.A. ocular motility chart was selected because of its availability and general acceptance in the ophthalmological profession. The proposed permanent rules incorporate the 1984 edition of the A.M.A. Guides, and the page references for the motility chart and the visual field chart of Subpart 4.B. are thus changed from those of the temporary rules.

Subpart 5 prescribes the method for combining the three factors (central visual acuity, field vision and ocular motility) to determine the visual efficiency of one eye. The factors are simply multiplied together. The method chosen is that used by Wisconsin and is relatively uncomplicated. The A.M.A. method is considerably more complex and requires the use of comparative value tables.

Subpart 5.B. permits adjustments to the efficiency calculation in certain cases. For most eye conditions, visual impairment is the most objective and significant aspect of symptomatology. In some cases, vision is not affected by the condition or visual impairment is not a fair measure of the disability. Subpart 5.B.(1) provides additional compensation for conditions of the eye where visual impairment due to the condition was considered an inadequate basis for compensation.

Subpart 5.B.(2) and (3) permit additional compensation where corrective lenses are required as a result of the injury. The rationale for this adjustment is that dependence or increased dependence on corrective lenses is in itself an impairment, even where the correction gives 100 percent visual efficiency.

Subpart 6 follows the A.M.A. Guides in prescribing the method for calculating visual system impairment from the impairment to each eye. Both the Wisconsin and A.M.A. systems use this method. Table 2 is taken from the A.M.A. Guides.

PART 5223.0040. Ear Schedule.

The ear schedule was promulgated by a Minnesota Medical Association's Otolaryngology Committee. Consistent with the A.M.A. Guides, the schedule is based on binaural rather than monaural hearing loss. Use of the binaural standard reflects the belief that hearing impairment should be compensated as an impairment to the audiological system rather than to one ear in isolation. Thus, the effect on overall hearing determines the extent of compensable loss.

Subparts 2-4 of the rule describe the medical and testing procedures which precede the calculation of disability. Generally accepted medical procedures are required in Subparts 2 and 4. For audiological testing, calibration at regular intervals is required in Subpart 3 to ensure accurate measurement of hearing loss. Equipment calibration requirements are the ANSI standards which are generally used in the profession. The requirement to keep records is included so that a reliable method is available to substantiate a claim of proper calibration.

Subpart 5 of the rule prescribes the methods for calculating disability. At Subpart 5.A.(1), four test readings are required. Some procedures delete the 3,000 hertz reading and require only three test readings. By including the fourth reading at 3,000 hertz, the rule permits compensation for hearing loss in the higher ranges.

The 25 decibel "fence" of Subpart 5.A.(3) is the level at which there is usually no impairment in the ability to hear normal speech under normal conditions. The effect of the fence is that hearing in an ear is considered unimpaired if the average hearing level for that ear is 25 decibels or less.

The calculation procedure in Subpart 5.A.(4)-(6) is consistent with that used in the A.M.A. Guides and is in common use among practicing otolaryngologists.

The ear schedule of Subpart 5.C., translating binaural hearing loss to whole body disability, is taken from the A.M.A. Guides.

Subpart 6 of the rule disallows an adjustment for presbycusis. Some schedules from other states decrease the whole body disability rating where presbycusis is diagnosed. Because presbycusis generally affects the higher ranges of hearing, some compensation for presbycusis may occur through the inclusion of the 3,000 hertz testing level. The difficulties of diagnosis and the desire to maintain simplicity in the calculations support the reasonableness of the prohibition against adjusting disability for presbycusis. To the extent that presbycusis is documented as a pre-existing impairment, an adjustment pursuant to Minn. Stat. § 176.101, subd. 4 (a) may be made.

Subpart 7 of the rule disallows an adjustment for tinnitus. The disallowance is due to the subjective nature of the complaint and the difficulty of accurate diagnosis. Where complaints are objectively substantiated, the tinnitus usually impairs hearing and is thus indirectly compensated by increased impairment readings.

PART 5223.0050. Skull Defects.

The skull defects schedule was developed by the Minnesota Medical Association's Neurology Task Force to standardize the disability ratings for damage to the cranial bones of the head. In considering skull defects, the Task Force concluded that skull fractures, when not associated with skull defects, are usually not a permanent partial disability and thus did not include fractures under this rule. The rule distinguishes between filled defects, in which bone or artificial substances are used to replace the damaged skull, and unfilled defects. With unfilled defects, the brain remains unprotected by a rigid covering and the compensation for these defects is therefore higher.

PART 5223.0060. Central Nervous System.

The organization of the central nervous system schedule follows that of the A.M.A. Guides in addressing central nervous system impairments in terms of disorders of the cranial nerves, the spinal cord, and the brain.

Subparts 2 through 6 of the schedule categorize disabilities due to impairment of the cranial nerves. The percentages of disability generally follow the A.M.A. Guides, but provide greater detail and specificity. To the extent that hearing is affected, impairments of the cochlear nerve are compensated under the Ear Schedule, Part 5223.0040. Impairments of the oculomotor, trochlear and abducens nerves, which are responsible for eyeball motility and regulation of pupil size, are compensated by the Eye Schedule, Part 5223.0030. Impairments of the olfactory nerve are compensated under Subpart 8.L.

Subpart 7 categorizes disorders due to spinal cord impairment. For upper extremity impairments at Subpart 7.B., the disability rating for relatively minor impairments varies depending on whether the preferred or nonpreferred extremity is affected. The distinction between preferred and nonpreferred is not made for the more severe impairments. This is because with severe impairments the ability to perform self cares is minimal, and the distinction between preferred and nonpreferred extremities becomes meaningless.

Urinary bladder and anorectal impairments due to spinal cord injury are categorized at Subpart 7.D. and E. The distinction among categories is based on degree of continence and voluntary control.

Sexual function impairment due to spinal cord injury is categorized at Subpart 7.F., using the same categories as are used in Part 5223.0220 Subparts 6 and 9. The temporary rules repeated the categories of Part 5223.0220, while the permanent rules incorporate them by reference.

Impairments due to brain injury are categorized in Subpart 8. The categories generally follow the A.M.A. Guides in classifying the impairments under communication disturbances, cerebral function disturbances, emotional disturbances, consciousness disturbances, and epilepsy. The rule goes beyond the A.M.A. Guides in distinguishing expressive and receptive communication disturbances and in providing categories for psychotic disorders, paralysis, headaches, and loss of taste and smell.

Item K. of Subpart 8 is a new addition to the proposed permanent rules. In the temporary rules only peripheral loss of taste is rated at 8 MCAR § 1.9006 C. 1. This mechanism for loss of taste is extremely rare and would require damage to both peripheral facial and hypoglossal nerves. The more common injury is a total loss of taste from a head injury to

the central nervous system. Because 8 MCAR § 1.9006 C. 1. is the category which most nearly describes the condition, total loss of taste from a head injury would be rated at 3 percent under the temporary rules. Adding the new category simply clarifies and makes technically correct the ratings currently in use.

Item L., loss of smell, is also a new addition to the permanent rules. A category for this impairment was not previously included because of the lack of objective tests for determining the presence of the impairment. As recent medical developments now provide testing procedures, it is appropriate to add this category.

A major contribution to objectivity in rating under this schedule is the incorporation of the Kenny scale for self cares at Subparts 4, 7.B., and 8.F. The Kenny scale provides an objective procedure for rating independence in self cares. Each of the self care factors is rated on a 0 to 4 scale. The numbers translate to medical judgment terminology as follows:

> A composite score of 24 to 28 or a single factor score of 4 means totally independent.
> A composite score of 16 to 24 or a single factor score of 3 means minimally or mildly dependent.
> A composite score of 10 to 16 or a single factor score of 2 means moderately or markedly dependent.
> A composite score of 0 to 10 or a single factor score of 1 or 0 means severely or totally dependent.

In most cases, the subjective medical judgment should suffice for a rating; a formal evaluation pursuant to the Kenny system will be unnecessary. In questionable cases, however, the use of the Kenny evaluation procedure should practically eliminate disputes regarding the degree of dependence in self cares. Incorporation of the Kenny rating system thus significantly contributes to objectivity and the reduction of litigation in the application of this schedule.

PARTS 5223.0070. - 5223.0170. Musculo-Skeletal Schedule.

The musculo-skeletal schedule of Parts 5223.0070 - 5223.0170 follows the A.M.A. Guides in dividing impairments into those of the back (Part 5223.0070), the upper extremities (Parts 5223.0080 - 5223.0140), and the lower extremities (Parts 5223.0150 - 5223.0170). In addition to the A.M.A. Guides, the Manual for Orthopaedic Surgeons in Evaluating Permanent Physical Impairment was also used in the development of the musculo-skeletal schedule.

PART 5223.0070. Back Schedule.

Disorders of the back are divided generally into those of the lumbar spine, Subpart 1, and those of the cervical spine, Subpart 2 and those of the thoracic spine, Subpart 3. While the back schedule is consistent with the Orthopaedic Manual, the departures from the manual improve the objectivity and workability of the rule. Subparts 1 - 3 clarify the various levels of disability while remaining consistent with the Orthopaedic Manual.

At the recommendation of the Minnesota Medical Association's Committee, a new category is added to the herniated intervertebral disc categories of the lumbar, cervical and thoracic spine. The new categories, at Subpart 1.B.(1)(a), Subpart 2.B.(1)(a), and Subpart 3.B.(1)(a), add ratings for cases where the neurologic deficit due to a herniated disc is resolved without surgery. Presently the rules include a rating only where neurologic deficit is unresolved and no surgery has been performed. As the neurologic deficit can be resolved without surgery in some cases, the addition of the new categories is needed to clarify the rating in these situations. The committee recommended the addition for consistency with the categories for surgical treatment of herniated discs. See Subpart 1.B.(2)(a), 2.B.(2)(a), and 3.B.(2)(a).

Subpart 1.B.(5) is a new category in the proposed permanent rules. The temporary rules do not describe handling of concurrent herniated discs treated simultaneously. Subitems (3) and (4) of this part describe separate clinical events and not a single episode involving more than one level. A single episode involving more than one level is currently rated either as a single level episode (in which case it is undercompensated) or by applying the additive formula to the single level rating (in which case the condition is overcompensated). The new category clarifies the rating of more than one herniated disc occurring during the same episode. The same clarification is made with respect to the cervical spine at Subpart 2.B.(5).

A new category is also added for minor fractures of the lumbar, cervical and thoracic spine, where vertebral height is decreased by ten percent or less. See subparts 1.E.(1), 2.E.(1), and 3.C.(1) respectively. Under the temporary rules, the rating of very limited fractures is unclear. Arguably no rating is available because there is no category accurately describing this condition. Alternatively, the limited compression fracture may be ratable under 8 MCAR § 1.9007, A.5.a., B.5.a., or C.3.a., which apply where vertebral height is decreased by 25 percent or less. As vertebral height may be decreased by only a few percent, this may cause overcompensation. Adding the new category more accurately rates minor compression fractures.

PART 5223.0080. Upper Extremity Amputation Schedule.

This rule is adopted from the A.M.A. Guides. Some categories were added to increase the specificity of the rule. The rating for amputation includes a consideration of motor and sensory loss. Pursuant to Part 5223.0010, Subpart 2, an additional rating under Parts 5223.0090 or 5223.0100 for motor or sensory loss is not permitted where this amputation schedule is used.

A new category is added at Subpart K.(4) of the permanent rules for mid-distal amputations of the thumb. This rating was included in the temporary rules for all the other digits, and its omission in the temporary rules was an oversight. See Subparts L.(4), M.(4), N.(4) and O.(4).

PART 5223.0090. Sensory Loss, Upper Extremities.

The A.M.A. Guides are used as the basis for this rule. The schedule departs from the Guides to simplify the levels of impairment, and to provide objectivity to the specific percentages applied. Pursuant to Part 5223.0010, Subpart 2., this schedule may not be used where either the motor loss or the amputation schedule is used.

At Subpart 1, a new sentence is added at the end of the subpart regarding the rating of carpal tunnel syndrome. Doctors using the temporary rules have questioned whether carpal tunnel should be rated under this section or under the wrist section (Part 5223.0130). , and This proposed addition specifies that carpal tunnel is rated under the wrist section, not under the sensory loss schedule. This is reasonable because the wrist schedule contains specific references to carpal tunnel syndrome. See Part 5223.0130, subp. 3C.,D.

PART 5223.0100. Motor Loss, Upper Extremities.

The A.M.A. Guides are used as the basis for this rule. The schedule departs from the Guides to simplify the levels of impairment and to provide objectivity in the specific ratings. Pursuant to Part 5223.0010, Subpart 2, this schedule may not be used where either the motor loss or the amputation schedule is used.

PART 5223.0110. - 5223.0140. Musculo-Skeletal Schedule.

The shoulder, elbow, wrist, and finger schedules are adopted from the Orthopaedic Manual. Each schedule is broken into two basic sections: range of motion and other conditions. The section entitled "Procedures and Conditions" provides workable evaluation procedures and is an

improvement on the Orthopaedic Manual. Pursuant to Part 5223.0010. Subpart 2, a disability should be rated under either the range of motion section or the procedures section; it should not be rated under both sections.

In the shoulder schedule, Part 5223.0110, changes and additions have been made under Subpart 3.D., G., H., and I. to recognize variations in the results of surgery. For the repair of a recurrent shoulder dislocation, the temporary rules contains ratings only where the surgery results in no loss of motion. The permanent rules clarify the rating where there is loss of motion after surgery.

In the finger schedule, Part 5223.0140, extensive changes have been made. Item 1 of Part B of 8 MCAR § 1.9014 of the temporary rules is deleted and replaced by Item 2 of Part B, which is now Subpart 2.A. of the proposed permanent rules.

The disability percentages assigned to the thumb have been changed. Physicians using the schedule in the temporary rules complained that the schedule in the temporary rules failed to reflect the relative value of individual digits. This weighting is expressed in Part 5223.0080, amputations, which makes clear that the fingers are different in their importance. Without the proposed changes, ratings will frequently exceed the value of amputation of that member. For example, in rating a little finger injury under 8 MCAR § 1.9014 B.1.a.2., the value is 5 percent, yet the value for amputation at the DIP is 1 percent. This inconsistency occurs in many areas of 8 MCAR § 1.9014, and is contrary to Part 5223.0010, Subpart 2, which provides that "the percent of whole body disability for motor or sensory loss of a member shall not exceed the percent of whole body disability for amputation of the member." It is thus necessary to revise the schedule of the temporary rules so that the rating for motor or sensory loss does not exceed the rating for amputation.

To accomplish this, the multipliers are added to Subpart 2.B.(1)(a) - (d). They are derived from the weighting in Part 5223.0080. The additional changes in Part 5223.0140 are needed to allow this new system to work and maintain compatibility with the AMA and American Academy of Orthopedic Surgeons Disability Rating Guides, which served as the basis for these ratings. The net outcome is an increase in ratings for the thumb and index fingers, and a decrease in ratings of the ring and little fingers.

The temporary rules' category for soft tissue loss, now Part 5223.0140, Subpart 2.C., omitted any description of the size of the defect necessary for a rating. Without a clearer description of the ratable defect, trivial defects could be rated the same as distal amputations. This is corrected in the permanent rules. Also, the reference in this paragraph to 8 MCAR § 1.9009 is incorrect, and this typographical error is changed to the intended citation in the permanent rules.

PART 5223.0150. Amputations of Lower Extremities.

The amputation of lower extremities schedule is adopted from the A.M.A. Guides. The schedule is specific and provides objectivity in its application. Pursuant to Part 5223.0010, Subpart 2, an injury cannot be rated under both this rule and Part 5223.0160.

PART 5223.0160. Sensory Loss, Lower Extremities.

This rule is adopted from the A.M.A. Guides. The percentages of disability are within the ranges provided by the Guides. Pursuant to Part 5223.0010, Subpart 2, this schedule does not apply where the amputation schedule is used.

PART 5223.0170. Joints Schedule.

This schedule is adapted from the Orthopaedics Manual and the A.M.A. Guides. As with the upper extremities schedule, the body part is rated in one of two sections: range of motion or conditions and procedures. As provided by Part 5223.0010, Subpart 2, it is the intent of this rule to rate under only one of these sections. Thus, where a procedure or condition results in a loss of range of motion, the disability should be rated under the procedures or condition section only.

A new category is added at Subpart 5, the knee schedule. Originally Subpart 5.B.(1) applied to all cases where cartilage is removed from the knee. Subpart 5.B.(2) adds a rating for a partial meniscectomy where cartilage is partially removed. Subpart 5.B.(1) is clarified so that there is no overlap between this subpart and the new category for partial meniscectomies. As this is a relatively new surgical procedure it was not included in the temporary rules. The new partial meniscectomy is less intrusive than that described in Subpart 5.B.(1) and results in less permanent impairment. For this reason, it is rated lower than 5.B.(1). Without this new category, the procedure would be rated under Subpart 5.B.(1). The new category thus adds precision to the rules.

Item (12), patellar shaving, is also a new category in Subpart 5.B. It too reflects a relatively new procedure for which no accurate descriptive category was available in the temporary rules.

A new category is added to the ankle schedule in Subpart 7.B.(5). The new category is necessary to permit the rating of a surgical result that is less successful than that described in Subitem (4), an ankle reconstruction with normal range of motion. Without this additional category, all ankle reconstructions would be assigned the lower rating.

PART 5223.0180. Respiratory System.

The respiratory system schedule is a modification of the A.M.A. Guides. The classification of impairment is based primarily on the degree of dyspnea and the degree of impairment of ventilatory function. These factors are more easily evaluated than general characteristics such as malaise, fatigability, and excessive cough. Diffusing capacity studies are necessary when the patient's statement about the severity of dyspnea is inconsistent with forced spirometric measurement results. Diffusing capacity studies do not require subject cooperation, and are therefore useful as objective diagnostic tools.

The evaluation procedures listed in Subpart 1 are the accepted medical procedures applicable to respiratory system dysfunction.

The 0, 15 and 30 percent classes of Table 1 in Subpart 2 correspond to classes 1 through 3 of the A.M.A. Guides. The roentgenogram appearance factor is eliminated. The roentgenogram test result for each class in the A.M.A. Guides is equivocal, and thus not as definitive as the other criteria.

A zero percent class is included to clarify the fact that not all normal individuals will score one hundred percent on the forced spirometry measurement. Since there is a wide variation among normal individuals, no impairment is recognized until the test shows 85 percent of normal or less. The forced spirometry tests are administered three times to eliminate misleading results, with the highest test result determined as most representative of the subject's ability.

A fifth 85 percent rating for severe impairment was added in the temporary rules to the A.M.A. Guide's four classes. The diffusing capacity and forced spirometry measurement ranges in the 60 percent class are thus reduced to smaller, more specific categories. The individual confined to bed and requiring oxygen in the 85 percent class is clearly more disabled than the 60 percent person who is ambulatory, even if only for short distances. The severe loss of organ function and restriction of almost all normal daily activities justify the creation of this class.

PART 5223.0190. Organic Heart Disease.

The organic heart disease schedule is a simplification of the classifications used in the A.M.A. Guides. Permanent impairment due to heart disease most commonly results from failure of myocardial function, or impairment of coronary circulatory function, or both. A definite percentage of disability, within the range given by the A.M.A. Guides, is assigned to each class.

Subpart 2 prescribes procedures to be followed in the diagnostic analysis. It is established medical practice to obtain a detailed history before assigning a rating. Similarly, a physical exam is needed to assess psychological responses to physical processes and physical responses to psychological processes, which are common in heart disease patients. Hence, it is essential that objective tests including x-rays and electrocardiograms be performed. Other standard tests, including echo-cardiography, exercise testing, and radionuclide studies, may be indicated by the symptoms present. Establishing a rating is appropriate only after maximum medical and surgical therapy and rehabilitation, plus a reasonable period of time to permit maximum circulation and other adjustments.

Each category of disability in Subpart 2 requires a diagnosis of organic heart disease. In the category of least impairment, organic heart disease is present according to diagnostic tests, but is asymptomatic. The remaining categories are distinguished by the effects of the activities of daily living, as defined in Part 5223.0020, Subpart 5, and other specified activities.

For each category of disability, the measurement of ischemic S-T segment changes is added in the permanent rules. The testing referenced in these additions provides reproducible, objective, and readily obtainable information which correlates with the functional status and helps document the appropriate rating category. It thus increases the accuracy of the ratings.

PART 5223.0200. Vascular Disease Schedule.

A separate schedule for vascular disease affecting the extremities has not previously existed, although the statutory schedule in Minn. Stat. § 176.101, subd. 3 (1982) contained values assigned for loss of limbs. The vascular disease schedule is derived from the A.M.A. Guides. These impairments are most commonly the result of diseases of the arteries, veins, or lymphatics.

Prior to classification by this schedule, vascular disease must first be diagnosed using accepted medical standards. A complete history and physical exam, as well as imaging examination, volume studies, or flow studies are required to establish the diagnosis.

Classification in this schedule depends upon the severity and extent of lesions on the extremities. When amputation due to peripheral vascular disease is present, the amputation of lower extremities schedule in Part 5223.0150 should be used.

In Subpart A, the categories of the vascular disease schedule are based upon the physical symptoms present and the resulting effect upon the activity of walking. An individual with a zero percent disability experiences rare and transient edema, but no other physical symptoms or pain upon walking. This minor condition is uncompensated.

A ten percent disability is characterized by intermittent pain upon walking approximately one city block at an average pace and persistent, incompletely controlled edema. No active ulcers or stumps are present.

The 30, 60 and 90 percent categories each require either an active ulcer or signs of activity in a stump; pain upon walking short distances; and severe or marked edema. Choice of class is based upon the physician's observation of signs of ulceration, diseased limbs, and degree of edema present. The pain reported by the patient is also considered. The 60 and 90 percent classifications both include advanced signs of disease, but are easily distinguished by the number of limbs affected.

A new category, Subpart B, is added to clarify the rating of upper extremities. The schedule in the temporary rules has proven inadequate and inaccurate for rating upper extremity impairments. The added categories are based on the A.M.A. Guides. These additions permit greater accuracy and fairness in ratings of the upper extremities.

PART 5223.0210. Gastrointestinal Tract.

The gastrointestinal tract schedule parallels the A.M.A. Guides and assigns percentages within the ranges given in the Guides. This schedule replaces the original schedule contained in Minn. Stat. § 176.101, subd. 3 (40) (1982), which gave no guidelines for assigning percentages of disability. The specificity of the schedule promotes objectivity, consistency, and workability in the rating of disability.

Subpart 1 follows the accepted medical practice of requiring a thorough history and physical exam, and recommends typical diagnostic tests.

Subpart 2 classifies disorders of the upper digestive tract according to symptoms or signs of disease, anatomic loss or alteration, and weight variations. These factors may be objectively evaluated by the examining physician.

Under the temporary rules, a class 1 symptom may be premised on purely subjective complaints of the patient. To promote consistency and objectivity as required by Minn. Stat. §§ 176.105, subd. 4(b)(6) and 176.021, subd. 3 (1984), class 1 requires objective evidence, in addition to subjective symptoms.

Classes 2 through 4 describe impairments resulting in increasing weight loss and decreasing responsiveness to treatment by drugs and dietary restrictions. The divisions among classes are based upon evidence of disease and loss of function of the upper digestive tract organs.

Colonic and rectal impairments are classified in Subpart 3. The basis for the division into classes of impairment is objective evidence of disease or anatomic loss or alteration. The physician notes the presence or absence of constitutional manifestations such as fever, anemia, and weight loss. The level of restriction in normal activities and diet is similarly graduated by class. These categories are specifically delineated, thereby reducing the likelihood of litigation.

In the class 2 and class 3 descriptions of Subpart 3.B. and C., the word "or" is changed to "and." The use of "or" was an error in the temporary rules; "and" indicates that objective structural changes are necessary for a rating in these categories. Minn. Stat. §§ 176.021, subd. 3, and 176.105, subd. 4 support this change by their directives to base ratings on objective evidence.

Subpart 4 contains classes of anal impairment due to disease or local injury. Part 5223.0060, subp. 7E governs classification of disturbances in fecal continence resulting from neurological disorders.

Classes 1 through 3 each require objective signs of organic anal disease. The evaluator rates the degree of incontinence, frequency of symptoms, and amenability of the symptoms to treatment. There should be little difficulty quantifying the required treatment and the patient's response to treatment. Each class is distinguished by the response to and results of treatment.

The five percent impairment classification of Subpart 5.A. is based upon objective evidence of persistent liver disease when no symptoms of liver disease are present. As liver disease may be present in the absence of symptoms or physical findings, the requirement that biochemical studies indicate at least a minimal disturbance in liver function avoids reliance on complaints which are not objectively substantiated. The remaining classifications detail the physical manifestations of progressive liver disease.

Biliary tract impairments are rated in Subpart 6 according to the frequency of the impairment and the type of obstruction present. These classifications follow the A.M.A. Guides.

PART 5223.0220. Reproductive And Urinary Tract Schedule.

This rule provides criteria for evaluating disability due to impairment of the reproductive and urinary systems. Subpart 2 describes standard medical procedures to be followed in evaluating the impairment. Because of the diversity of potential impairments and injuries to these systems, tests which would apply to all conditions could not be specified. The listing of test procedures at Subpart 2.B is thus descriptive of the type of testing generally accepted for these disabilities. It is included to give guidance to the practitioner in selecting appropriate tests and procedures. Specific testing requirements for male impotence are added to the permanent rules at Subpart 2.B (4) and (5) to improve the clarity and objectivity of rating this impairment.

Subpart 3 contains the upper urinary tract schedule. The disability rating for a solitary kidney at Subpart 3.A. applies even where there is no impairment of function. The rationale for this rating is that reliance on only one kidney represents the loss of a normal safety factor. Dependence on a solitary kidney is thus a disability regardless of the present funtional ability of the renal system. When impairment of function is combined with a solitary kidney, the disability should be higher than the same functional impairment occurring with both kidneys. For this reason the rule provides for an increase in the disability rating for a class when a solitary kidney is present.

Subpart 3.B. - E. divides the upper urinary tract impairment into four classes. This division is essentially that of the A.M.A. Guides. As the creatine clearance test should be adequate in nearly all cases, the PSP test recommended by the A.M.A. Guides is not required.

Subpart 4 sets forth classes of bladder impairment. The extent of bladder reflex activity is the basis for distinguishing among the classes.

Subpart 5 provides two classes of urethral impairment. The class distinctions are those of the A.M.A. Guides and depend on the extent to which the disorder is controlled by treatment.

Subparts 6, 7 and 8 classify disorders of the male reproductive organs, and Subparts 9, 10 and 11 classify parallel disorders of the female organs. The classification generally follows the A.M.A. Guides, except at Subparts 6 and 9, which deal with loss of sexual function. The standards set forth in Subparts 6 and 9 are simpler and more objective than those of the A.M.A. Guides. Specific testing requirements for

male impotence are added at Subpart 6.A. and B. to improve clarity and objectivity in rating. A new category is added at Subpart 6.C. for psychogenic impotence. Because this is a treatable condition that is generally not permanent, it is uncompensated.

In Subpart 7, a new category for inguinal hernia is added at Subpart 7.D. An uncorrectable hernia is a physical impairment that is not specifically rated. The category most closely describing this condition is Class 1 under Subpart 7.A., but the description is not entirely accurate. The condition is relatively uncommon. However, by adding the category, the fairness and accuracy of the schedule is improved.

PART 5223.0230. Skin Disorders.

The skin schedule is based on the A.M.A. Guides. The disability is evaluated according to the effect of the disorder on the ability to function and perform activities of daily living, and according to the degree of treatment required. The classes represent a logical progression which is easy for the practitioner to use.

Each class requires the presence of signs or symptoms of a skin disorder. A Class 1 disorder, a two percent disability, must be supported by objective skin findings, thus eliminating the rating of undocumented complaints. The remaining classes are divided according to treatment and the effect of the disorder on activities of daily living, as defined at Part 5223.0020, Subpart 5.

No provision of Part 5223.0230 specifically provides compensation for disfigurement or scarring. Some types of scarring may cause skin disorders. Any functional impairment due to disfigurement or scarring will be evaluated under this schedule according to the degree of treatment required and the effect on activities of daily living. In addition, if the loss of function from scarring or disfigurement is to a body part or system other than the skin, that loss will be evaluated in accordance with the applicable schedule for that body part or system.

PART 5223.0240. BURNS.

This schedule was developed by burns experts on the Minnesota Medical Association Task Force.

Subpart 1 requires the use of the Lund and Browder method for determining the percentage of body surface affected. This method is commonly used by physicians. Because some physicians mistakenly equate the percentage of body surface affected with the percent of whole body

disability, Subpart 1 specifies that this equation is not an appropriate rating method. The method is inaccurate because burns to relatively immobile body parts, such as the back, affect function less than burns of the same size to a joint area, such as the knee or elbow.

Subpart 2 excludes electrical conduction burns because the effects are significantly different from those of other burns. The sensitivity factors listed in Items B through F are common effects of non-electrical burns that affect functional abilities.

Items B and D now require the presence of a scar to obtain a rating for burns. This is necessary to avoid excessive ratings of trivial conditions. Subitems B.(1) - (5) and D.(1) - (5) were not included in the temporary rules. These subitems are added in recognition of the different importance of various body members. The rules are thus more accurate and precise than the temporary rules.

Subpart 3 governs the rating of electrical conduction injuries. They are rated under the musculo-skeletal and sensory provisions of the rules. This is because these injuries cause impairments more similar to those of traumatic injuries rather than the impairments caused by flame burns.

Subpart 4 describes categories for rating cosmetic disfigurement on the face, head, neck or hands due to burns. Other cosmetic disfigurements are not covered due to their minor effect on function and employability. Severe disfigurement to members which are ordinarily not covered by clothing may affect employability and workplace behavior. This subpart thus provides categories for rating relatively severe cosmetic disfigurement.

PART 5223.0250. PREEXISTING IMPAIRMENTS.

Minn. Stat. § 176.105, Subd. 4 (b)(6) (1984) provides that, in promulgating these rules, the commissioner may consider the treatment of pre-existing disabilities with respect to the evaluation of permanent functional disability. This rule on pre-existing impairments is made necessary by the 1983 legislation authorizing apportionment of pre-existing disabilities. Minn. Stat. § 176.101, Subd. 4(a) (1984). Prior to this statute, apportionment was available only in extremely limited circumstances. See, e.g., Wallace v. Hanson Silo, 235 N.W. 2d 363, 305 Minn. 395 (1975). Further, where an employee has sustained injuries both before and after January 1, 1984, apportionment of multiple disabilities was complicated by the transfer to a whole body disability rating system, from a system where disability was rated as a percentage of a body member. This rule is thus necessary to simplify this new apportionment system.

Three methods of apportionment are prescribed by this rule. Because of the complexity of apportionment, an example is included with two of the methods to illustrate the application of the method.

Item A is a catchall that is to be used only if Items B or C are not applicable. Generally, this part will be used where the pre-existing disability has not been rated. The pre-existing injury is rated according to the whole body schedules of these rules. The whole body schedule was selected to avoid the conversion step where a percent-of-member schedule is used.

Item B describes the method to be used where the pre-existing impairment has been rated under a whole body system. The system may be that of these rules or a system used in a non-workers' compensation proceeding or by another state. The apportionment method here is a simple subtraction procedure. The method produces a fair result in a simple and straightforward manner.

The method described in Item C applies where the pre-existing disability has been rated as a percent of a member under the system existing prior to January 1 of 1984. This method is complicated because it requires converting the percent of a member to a percent of the whole body. Tables 1 and 2 are used in this conversion procedure. The tables set forth the maximum whole body disability assigned to a member. These maximums are essentially the maximums set forth for each member by the schedules of these rules. After converting to a whole body percentage, the subtraction procedure as described in Item B is applied.

This method was developed after consideration of the rating practices under the old law and the types of apportionment situations likely to arise under the current law.

Item D prescribes the method for apportioning disabilities where more than one member is injured in an occurrence. Because the intent was not clear in the temporary rules, the wording of this part has been changed in the permanent rules. The rule clarifies the method for combining a disability which is subject to apportionment. The apportionment calculation is completed first. Then the combination formula is applied.

For example, an injury to the back causes a 10 percent disability of the whole body. A later occurrence injures the back and the knee. The knee disability is rated at 15 percent of the whole body while the back is now rated at 25 percent of the whole body. The apportioned back disability is 15 percent (25 percent - 10 percent). Applying the A + B (1-A) formula, the combined whole body disability attributable to the later occurrence is 27.75 percent.

IMPACT ON SMALL BUSINESSES

The Commissioner has considered the potential impact of these rules on small businesses to the extent required by Minn. Stat. § 14.115 (1984). Insurers, self-insured employers, and health care providers who rate permanency may be affected by these rules. Self-insured employers and insurers are not small businesses within the meaning of Minn. Stat. § 14.115, subd. 1 (1984). Health care providers who rate permanency, generally medical doctors and chiropractors, are service businesses regulated by government bodies for standards and costs as described in Minn. Stat. § 14.115, subd. 7 (1984). Minn. Stat. § 14.115 (1984) thus does not apply to these health care providers. The Commissioner has therefore not considered methods for reducing the impact of these rules on the classes of persons who may be affected by them.

FISCAL IMPACT ON LOCAL PUBLIC BODIES

The Commissioner has considered the fiscal impact of these rules on local public bodies pursuant to Minn. Stat. § 14.11, subd. 1. (1984) and has found none. No additional financial burdens are placed on local public bodies, as the adoption of these rules will not require the expenditure of public money by local public bodies.

JV/lc