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Competency in ergonomics for rehabilitation professionals, November 1995

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Throughout my 18 years of clinical practice in physical therapy, including academics, it has become very apparent to both myself and colleagues in a number of fields, that basic education in ergonomics is absolutely critical to all rehabilitation professionals. I strongly feel that accrediting bodies for at least PT, OT, rehabilitation counselling and nursing should require certain basic educational objectives in ergonomics to be met within entry level professional curriculum. This knowledge should be tested in licensing board examinations too. Requirements for continuing education should also be considered.

Ergonomic education for rehabilitation professionals is critical for a number of reasons.

1. Wellness in our own practice of rehabilitation, which oftentimes is in the heavy work category, without on-the-job injury, requires knowledge of injury prevention. Ergonomics is a natural background for and sequel to the time honoured education in body mechanics.

2. Today's health professionals must be ready to help provide public education for health promo-

tion. Rehabilitation professionals are the best suited for teaching ergonomics and work place injury prevention to the American public.

3. Our ability to prevent recurrence of the most common and costly musculoskeletal injuries and problems, specifically back pain and upper extremity cumulative trauma disorders, absolutely requires that we can help our clients to critically analyze their home and work place for potential health hazards imposed by physical demands and prolonged positioning in poor postures.

4. Many of our students will be tasked with offering back schools, visiting worksites and certainly rehabilitating workers with the primary goal of treatment being successful return to work.

I would propose that all students in PT, OT, rehabilitation counselling, and nursing meet the following basic educational objectives in their entry level curricula:

At graduation, each rehabilitation professional will be able to:

1. Identify immediate ergonomic risks known to increase the prevalence of cumulative trauma disorders (CTD's), including, but not limited to, low

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back pain, neck strain, thoracic outlet syndrome, ulnar nerve entrapment, carpal tunnel syndrome, vibration disorders, visual strain, etc.

This would have to include:

- (a) seating and video display terminals (VDT) workplace design;
- (b) lifting task analysis and Occupational Safety and Health Administration (OSHA) guidelines;
- (c) awareness of temperature, light, sound and other environmental stresses; and
- (d) variables such as duration, intensity, repetitions and other administrative constraints contributing.

2. Educate communities and employers preventively and clients specifically in a variety of simple, 'first line' ergonomic abatements.

This would include:

- (a) simple administrative abatements such as interrupting prolonged positioning, stretch breaks, following heavy work with light work, etc.;
- (b) selection of simple equipment changes such as phone headsets, proper seating, VDT wrist rests, monitor mounting arms, vibration reducing gloves and shoe inserts, etc.;
- (c) prescription of simple exercise programs for home and work to decrease adverse effects of prolonged positions and activities; and
- (d) Education regarding home and recreation activities that will offset the physical demands of work and not add to them in a deleterious way. For instance, not working at

a VDT all day and going home to do needlepoint for a hobby.

3. Recognize when thorough worksite evaluations and more advanced ergonomic intervention is indicated and where to refer for consultation.

This would require:

- (a) ability to recognize repeating diagnosis in a specific group, perhaps one trade at one employer; and
- (b) knowledge of the various ergonomists available and what role each might play.

These are all entry level skills needed by all rehabilitation professionals. These are not specialized areas of training for post-entry level continuing education. Certainly, those of us who become involved heavily in work programs, job assessment and preventive ergonomic programs will need much more post graduate specialist education. But certain basic ergonomic principles are needed by all professionals in physical therapy, occupational therapy, rehabilitation counselling, nursing and medicine.

At Boston University in the Department of Physical Therapy, I include this material in my 'Musculoskeletal III: Evaluation and Treatment of Disorders of the Spine'. My hope is to rename our musculoskeletal courses to read: 'Prevention, Evaluation and Treatment of Musculoskeletal Dysfunction.' This would require all musculoskeletal courses to include ergonomics as part of prevention, thus guaranteeing inclusion in the entry level curriculum.