PROMOTION RECOMMENDATION UNIVERSITY OF MICHIGAN MEDICAL SCHOOL DEPARTMENT OF PHYSICAL MEDICINE AND REHABILITATION

Edward A. Hurvitz, M.D., associate professor of physical medicine and rehabilitation, with tenure, Department of Physical Medicine and Rehabilitation, Medical School, is recommended for promotion to professor of physical medicine and rehabilitation, with tenure, Department of Physical Medicine and Rehabilitation, Medical School.

Academic Degrees:

B.S.	1980	Wayne State University
M.D.	1984	Wayne State University

Professional Record:

2002-present	Associate Professor of Physical Medicine and Rehabilitation,
	University of Michigan
1995-2002	Assistant Professor of Physical Medicine and Rehabilitation,
	University of Michigan
1988-1995	Lecturer, Department of Physical Medicine and Rehabilitation,
	University of Michigan

Summary of Evaluation:

Teaching: Dr. Hurvitz was appointed as the department chair of Physical Medicine and Rehabilitation, University of Michigan, in September of 2006. In that position he has played a major role in most of the department's educational programs, either as an active teacher and mentor, a direct leadership role, or in a supportive role from the chair's office. He has been actively involved in teaching students at many levels, from undergraduate and graduate (Kinesiology) to all levels of medical training, including mentoring junior faculty. His major accomplishments include directing a graduate course through Rackham in methods of rehabilitation; co-directing the department's T-32 Medical Rehabilitation Research Training Program for ten years through 2011; and national work on development and dissemination of educational materials sponsored by national societies relative to his field. Dr. Hurvitz gives frequent lectures to his own residents as well as residents and fellows from other programs. He has lectured at regional, national and international forums. He has been a visiting professor in Detroit, Chicago, and Israel. Most of his lectures relate to cerebral palsy, his recognized area of expertise, but he gives other presentations on children with disabilities and the field of PM&R. His lectures are well received as is his bedside and clinic teaching. Dr. Hurvitz also has several research mentees and has served on three Ph.D. committees.

Research: Dr. Hurvitz has published 48 scientific articles in peer-reviewed journals (25 since his last promotion, including six in press, with two more submitted). He has been the principal investigator on two federally funded projects and two projects funded by industry, and has been a co-investigator on several grants. He co-directs the Cerebral Palsy Research Consortium of Michigan, a collaborative effort with Michigan State University and Wayne State University developed to foster multicenter cerebral palsy research. These efforts have led to a large epidemiological study of the origins of cerebral palsy, the beginnings of a research registry for CP in Michigan and three

collaborative conferences. Dr. Hurvitz has been involved in an NIH sponsored multidisciplinary panel investigating definitions and measurement of hypertonia in children. He has served as a reviewer for ten journals, including *Pediatrics*.

Dr. Hurvitz has a primary research interest in individuals with cerebral injury throughout the lifespan. His primary lines of research in this area are: 1) fitness, obesity, and health and functional outcomes in adults with cerebral palsy; and 2) motor dysfunction, especially measurement of the effects of intervention, with a new emphasis on attempting to measure outcomes in adults relating to intervention done to them when they were children. In the area of health and fitness, Dr. Hurvitz published a paper reviewing his clinic population and its risk for obesity. It was one of the first papers addressing this issue in cerebral palsy. He has collaborated with his mentee, Dr. Mark Peterson, on three recent publications in the area. This article is a concept review to be published in the American Journal of Physiology, and deals with the special nature of metabolic dysregulation and muscle physiology in the adult with cerebral palsy. Dr. Hurvitz will serve on Dr. Peterson's mentorship team in his new K01 award which will study this area. In recognition of his evolving work in the area, Dr. Hurvitz was asked to write an editorial on an article related to fitness measurement in cerebral palsy by the main journal of the field of cerebral palsy research, Developmental Medicine and Child Neurology (DMCN). Currently, a grant from the National Institute of Disability and Rehabilitation Research related to this work is pending; a recent R21 was scored but not funded. In the area of motor dysfunction, Dr. Hurvitz has an established collaboration with the Center for Human Motor Research in the School of Kinesiology. This partnership has led to a series of studies into motor control testing of upper extremity motor function in individuals with spasticity. Recent and ongoing projects examine the effects of a home-based internet monitored therapy unit designed to improve upper extremity function and related studies. These studies were funded by the National Institute on Disability and Rehabilitation Research (NIDRR) field-initiated research awards (Dr. Susan Brown, PI) and by a CIHR award (Dr. Goble.) Also in the area of motor intervention, Dr. Hurvitz collaborated with the Rehabilitation Institute of Chicago on a survey of the largest population of adults who had the selective dorsal as children. This study will be published Journal of Neurosurgery: Pediatrics. The epidemiological study noted above is led by Dr. Nigel Paneth of MSU, a prominent epidemiologist in the field of cerebral palsy research and a co-director of the Cerebral Palsy Research Consortium of Michigan. It is supported by the NIH. Dr. Hurvitz has been a leading clinical consultant on the project, and took a major role in a recent publication which was the first to apply a set of three classification scales to a large group of patients, and to study the interactions and correlations between the scales. This paper appeared in DMCN.

Recent and Significant Publications:

Hurvitz EA, Conti GE, Brown SH: Changes in movement characteristics of the spastic upper extremity after botulinum toxin injection. *Arch Phys Med Rehabil* 84:444-454, 2003.

Hurvitz EA, Green LB, Hornyak JE, Khurana SR, Koch LG: Body mass index measures in children with cerebral palsy related to gross motor function classification: a clinic-based study. *Am J Phys Med Rehabil* 87:395-403, 2008.

Brown SH, Lewis CA, McCarthy JM, Doyle ST, Hurvitz EA: Effects of internet-based home training on upper limb function in adults with cerebral palsy. *Neurorehabilitation and Neural Repair* 24:575-583, 2010.

Peterson MD, Haapala HJ, Hurvitz EA: Predictors of cardiometabolic risk among adults with cerebral palsy. Arch Phys Med Rehabil 93:816-821, 2012.

Hidecker MJ, Ho NT, Dodge N, Hurvitz EA, Slaughter J, Workinger MS, Kent RD, Rosenbaum P, Lenski M, Messaros BM, Vanderbeek SB, Deroos S, Paneth N: Inter-relationships of functional status in cerebral palsy: analyzing gross motor function, manual ability, and communication function classification systems in children. *Dev Med Child Neurol* 54:737-742, 2012.

Service: Dr. Hurvitz was appointed chair of the Department of Physical Medicine and Rehabilitation in September 2006. In this role, he serves on several major committees for the Medical School and Health System including the Faculty Group Practice board of directors, the research board of directors, the Clinical Capital Committee, the Neuroscience Hospital Steering Committee, and the Medical Benefits Advisory Committee. He is the vice chair of the U-M Musculoskeletal Comprehensive Center. Dr. Hurvitz also served as Chief of Service at the VA from 1991 to 1996. On a University level, he has served on the recent search committee for the dean of Kinesiology. Nationally, Dr. Hurvitz has held and continues to hold several leadership roles in the societies related to the field of PM&R and pediatric PM&R. Recently, he was elected to the nominating committee for the American Academy of Cerebral Palsy and Developmental Medicine, and was asked to serve on an advisory committee for the Association of Academic Physiatrists. His work for people with disabilities was recently recognized with a Certificate of Appreciation from the UM Council for Disability Concerns.

Dr. Hurvitz's primary area of clinical work has been in the management of children with disabilities, particularly cerebral palsy. He was one of the first physiatrists in the country to use botulinum toxin to manage focal spasticity in children with cerebral palsy, and it is still an important part of his practice. In addition to spasticity management, he develops broad, interdisciplinary treatment plans for children, adolescents, and adults. In 2008, he co-founded the Adults with Cerebral Palsy clinic, the only one of its kind in Michigan. Dr. Hurvitz provided physiatric services for the myelodysplasia clinic for many years, and recently worked with neurosurgery and other disciplines to re-invigorate the clinic. He currently attends clinics at the Burlington outpatient facility as well as the new Mott Children's Hospital. Dr. Hurvitz is certified by the American Board of Electrodiagnostic Medicine. His contributions in this area include intraoperative nerve evaluation for dorsal rhizotomy and electrodiagnostic studies for the brachial plexus clinic.

External Reviewers:

Reviewer A: "Dr. Hurvitz has an impressive national and international reputation in the field of developmental disabilities, cerebral palsy and pediatric rehabilitation medicine. He is an original thinker and this keen mind is evident in his many excellent publications. He is in high demand as a speaker at many different instructional courses throughout the world."

Reviewer B: "He has served multiple roles with the American Academy for Cerebral Palsy in Developmental Medicine and is currently the Secretary of the Chairs Council for the Association of Academic Physiatrists. He is frequently invited to present on a national and international basis. Dr. Hurvitz is extremely well respected as a peer, colleague, and national leader in the field of Physical Medicine and Rehabilitation."

Reviewer C: "His published peer-refereed papers and chapters in professional books indicate excellence in research and writing that I associate with the most outstanding leaders in academic PM&R."

Reviewer D: "His recent work has focused on upper limb rehabilitation in patients with brain abnormalities, functional assessment of patients with cerebral palsy from childhood into adult life and determinants of health in patients with cerebral palsy....He has created some new knowledge that should be useful in the management of patients..."

<u>Reviewer E</u>: "Dr. Hurvitz took on a relatively large PM&R program compared to others in the field, with a strong research component. He has been able to maintain the profile of the Department at a national level, and has supported and contributed to the ongoing research efforts. In particular, the PRM component of the Department is acknowledged nationally as a center for excellence."

Summary of Recommendation:

Dr. Hurvitz is a recognized leader in the field of physical medicine and rehabilitation, especially in the area of pediatric rehabilitation medicine. He has an international reputation as an expert in the care of individuals with cerebral palsy throughout the life span, and has recently developed a special expertise in adults with cerebral palsy. He has an outstanding record of publication and presentation, and is involved in several "cutting edge" areas of research related to his field. As chair, his administrative activities have helped grow the field of PM&R and the Department of PM&R at the University of Michigan Health System, and have contributed to every aspect of the school's mission. We are fortunate to have him on our faculty and I am pleased to recommend Edward A. Hurvitz, M.D. for promotion to professor of physical medicine and rehabilitation, with tenure, Department of Physical Medicine and Rehabilitation, Medical School.

James O. Woolliscroft, M.D.

Dean, Medical School

Lyle C. Roll Professor of Medicine

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