Science and Showmanship Combine at Annual Meeting

The 2005 Annual Meeting in Puerto Rico was a tremendous success. There were 273 total attendees, which included 30 resident/fellows, 7 international members, and 3 local physicians. The meeting began on Wednesday, January 12, 2005, with Therapy Day and Bioskills courses. Gail Groth was Program Chair for Therapy Day and concentrated the program on outcome measures.

In the afternoon, the first AAHS Bioskills Workshops began with lectures and demonstrations of various surgical techniques. A welcome reception that evening allowed time to revisit friendships and establish camaraderie. The meeting commenced on Thursday morning, with instructional course lectures that were packed with attendees and filled with information. Following instructional course lectures, the opening session began with an outstanding lecture covering “adrénaline and hand and finger surgery” by Don LaLonde. Concurrent scientific paper sessions ensued with symposiums interspersed covering difficult problems, such as nerve gaps, scaphoid deficits, and tendon defects. Thursday afternoon also highlighted the first comprehensive hand surgical review course headed by Peter Murray, MD.

The review course was sold out and the reviews have been outstanding.

The meeting continued on Friday with a variety of instructional course lectures, scientific presentations, and symposium. During the meeting there were two keynote speakers that “raised the bar” with exceptional lectures. Terry Whipple, MD, spoke about courage, wisdom and risk, and how it relates to hand surgeons and daily life. Commander Menzies gave an inspiring lecture that questions...
Pay it Forward

One of the more popular movies of 2000 was *Pay It Forward*, the story of a boy who turns an extra credit assignment in school—to come up with an idea that can change the world—into reality. He does it through the idea of paying it forward, that is, doing a good deed for no particular reason except to be kind, and then encouraging the recipient to do the same—not to pay the favor back, but to pay it forward as another unexpected act of charity. The idea catches on, and the ripples of kindness that it creates become a kind of magic, the kind that leaves a good feeling in the heart, despite the sadness of the movie’s ending (I won’t give that away, in case you haven’t seen it). The movie has its own web site to this day (www.payitforward.com), and there is even a *Pay It Forward* Foundation.

The movie was based on a book of the same name, by Catherine Hyde. She says that her inspiration was a real event in her own life—her car broke down in a bad neighborhood. Just when she thought it could not get worse, the engine burst into flames. As she saw some down-at-the-heels men approaching, she was sure she was about to die, but instead these strangers pulled her from the car, put out the fire, and called police and fire units to the scene. The strangers then disappeared, before she could even say thank you.

Of course, such stories are a part of the human fabric—society did not grow from selfish roots. And we have our own chain of paying forward, I am happy to say, right here within AAHS.

In 1987, the AAHS met in San Juan, Puerto Rico, at the Caribe Hilton Hotel. The local arrangements host was Miguel (Mickey) Vargas-Busquets, an optimistic, forward-looking bundle of energy who was determined that everyone have a good time, and grow to love his native Puerto Rico as much as he did. In that he succeeded, and, with our latest foray to the Caribbean now under our belts, a new generation of AAHS members has been seduced by the Latin temps and sultry breezes of America’s tropical commonwealth.

Mickey soon after became a delegate to the IFSSH. With a few years his contagious enthusiasm propelled him to the post of Secretary General of the IFSSH. He died, too young, in 1994.

As the administrative leader of IFSSH, Mickey’s goal was to extend a helping hand to the underserved wherever he found them, especially those hand surgeons and hand therapists struggling in Third World countries. Like ripples in a pond, those early efforts to connect hand care professionals in AAHS with those in Puerto Rico steadily spread around the world, as Mickey encouraged the newly freed nations of Eastern Europe as well as those in Latin America and south Asia to join IFSSH. His biggest task was to convince the established hand societies from more developed lands that outreach in this way was worthwhile, even if the dues might be a little late or the training standards and certification processes a little less formal. One of those nations, Hungary, served as the host of the most recent IFSSH congress. That meeting was planned during AAHS’s first international joint venture, which, of course, Mickey attended, a combined meeting with the Hungarian Hand Society in Budapest in 1992. Mickey was instrumental in smoothing the way for the Hungarian’s bid. Sadly, neither Mickey nor his dear friend, Hungarian hand surgeon Endre Cziffer, lived to see the 2004 event, but all who knew them know that they would have been very pleased with the high quality and inclusive atmosphere of the meeting.

After Mickey’s untimely death, AAHS leadership chose to honor this special man in a special way, with the Vargas traveling fellowship, an outreach effort in which, each year, a hand therapist and hand surgeon ‘pay it forward’ through travel to an underserved location, not only to treat, but more importantly to teach, so that in the future these sites could become self-sufficient, and provide for their own patients with their own skills.
and resources.

Now those ripples have spread in new directions, and AAHS has ‘paid it forward’ to Thailand, Kenya, Venezuela, Egypt, Lithuania, Uganda, to native American locations around the US, and, most recently, to Guatemala. Next year’s team will visit Ecuador. In all of these sites, friendships have grown between our AAHS representatives and specialists locally, and often there have been return and reciprocal visits over the years, building on Mickey’s legacy, improving the quality of hand care around the world, and establishing lifelong bonds of friendship across cultures as diverse as any on the planet, but linked by the common bond of humanity.

Today another generation of ripples is spreading. Energized by her role as an early Vargas award recipient, and motivated by a recent trip to her native Guatemala, long time AAHS member and hand therapist Lynn Bassini has cast another pebble in the pond. The Guatemala Healing Hands Foundation is her gift, her means of paying it forward once again. The Foundation organizes education programs for the hand care professions of Guatemala, and helps hand surgeons and therapists from the US make their way to this beautiful but underserved corner of the globe. You can help pay it forward by contacting the Guatemala Healing Hands Foundation at 290 6th Ave, Brooklyn, NY 11215, or by visiting their web site (www.guatemalahands.org). Or start you own ripples. It’s contagious.

notice. Gail Groth was Program Chair for the therapy day and concentrated a superb program on outcome measurements. The meeting in Puerto Rico offered two new exceptional educational experiences. The first AAHS Bioskills Workshop began with lectures and surgical demonstration techniques regarding scaphoid fracture fixation, intercarpal arthrodesis, and arthroplasty of the distal radioulnar joint, wrist, and fingers. In addition, the first comprehensive Hand Surgery Review Course was superbly organized by Dr. Peter Murray. This course was a packed and sold-out review. It addressed topics covered on the board examination, the hand surgery certification and resident-in-training examinations. Our two keynote speakers gave inspiring lectures. Dr. Terry Whipple spoke about courage, wisdom and risk and how it relates to hand surgeons and daily life. Commander Menzies gave a spellbinding lecture on his research, providing a compelling continued on page 4

A Successful Balancing Act

To be President of the American Association for Hand Surgery is a tremendous honor, and I am so grateful for the support and mentoring from the members of this outstanding organization. In particular, our immediate past presidents, Drs. Alan Freeland, Allen Van Beek, and Richard Berger, have been tremendous role models and continue to be such exemplary leaders for this organization.

The 2005 Annual Meeting in Puerto Rico was an unconditional success. All of us who attended the Puerto Rico meeting are grateful to our Program Chair, Dr. Scott Kozin and our last President, Dr. Richard Berger, who “raised the bar” with an exceptional meeting. Thank you, Scott and Richard! There were 273 attendees. We are indebted to the Central Office for being able to change our venue at such late

American Association for Hand Surgery 2005 Officers and Board

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<td>Susan Mackinnon, MD</td>
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<tr>
<td>President-Elect</td>
<td>Ronald Palmer, MD</td>
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<td>N. Bradley Meland, MD</td>
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<td>Treasurer (3-year term)</td>
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<td>Historian</td>
<td>Michael Neumeister, MD</td>
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<td>Richard Brown, MD</td>
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<td>Senior Director At Large</td>
<td>Nicholas Vedder, MD</td>
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<td>Junior Director At Large</td>
<td>George Landis, MD</td>
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<tr>
<td>Junior Affiliate Director</td>
<td>Julianne Howell, PT, MS, CHT</td>
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Elected Committee Positions

| Nominating Committee     | Mark Baratz, MD    |
|                         | Robert Russell, MD |
case that the Chinese discovered America in 1421, seventy years before Christopher Columbus.

Our association continues to work towards our mission of education. The board has approved the creation of an on-line CME component. This project is the result of several years of work by Drs. Keith Brandt and Donald Nagle. This feature will allow members to view presentations online and then receive CME credits for their educational experience. The presentations will include a variety of topics from hand fractures to nerve injuries to reimbursement issues. The necessary software is now installed, and the data base will be populated with presentations throughout the year. You will be notified by e-mail when a new presentation is available for viewing.

Dr. Miguel Saldana has passed the baton of the Hand Surgery Endowment to the capable hands of Dr. Alan Freeland. Dr. Freeland and his committee will be meeting to develop a strategy to bring the Endowment to the next level. In keeping with the Association’s level of service to community and volunteer efforts, the AAHS and Hand Surgery Endowment continue to support educational opportunities for our members including the Vargas International Hand Therapist Teaching Award. This award is named in honor of the late Miquel Vargas, a hand surgeon from Puerto Rico. It fosters an exchange of educational ideas between therapists in this organization and a host country to improve patient care for upper extremity problems. The 2005 Vargas Award was presented to Emily Altman, PT, CHT, who will be traveling to Ecuador.

Our immediate Past President, Richard Berger, MD has led our organization with great skill, compassion and wisdom. His commitment continues through leadership to establish the La Federacion de Organizaciones del Cuidado de Mano de Centro y Norte America/Federation of Central and North American Hand Care Organizations. The annual meeting of the AAHS in Puerto Rico brought about a unique opportunity to discuss the possibility of forming a federation of North and Central American and Caribbean hand care organizations. Leadership of the AAHS, American Society for Surgery of the Hand, American Society for Hand Therapy, MANUS Canada, Mexican Society for Surgery of the Hand, Guatemalan Society for Surgery of the Hand and the Puerto Rican Society for Surgery of the Hand met to discuss a “federation for hand care.” There was unanimous enthusiasm to develop such an organization with a mission to continuously provide the highest level care for patients with upper extremity disorders, to continuously improve our understanding of those disorders and to exchange ideas, resources and to foster increased cooperation and understanding among hand care professionals in the Americas. Each representative is working with their own organization to come to a mutual agreement. There is a genuine sense of commitment to seeing this come to fruition. This will truly be a historic event for hand surgery. Our support is firmly behind this project and we are indebted to Richard Berger for initiating and now spearheading this concept.

Christine Novak is our Program Chair for the 2006 meeting in Tucson and is working diligently to make this a superb meeting. Scott and Richard have set high standards! The theme of this meeting is “Challenges in Hand Surgery.” The meeting will feature panels and instructional courses of experienced clinicians discussing challenging problems as they relate to hand surgery. The call for Abstracts for the Scientific Session will be sent out soon and I encourage you to submit your abstract. Dr. Peter Murray has agreed to continue the comprehensive Hand Surgical Review Course once again in 2006. A silent and live auction will be included in one of the evening events with the proceeds going to our Hand Surgery Endowment. I hope you will support it with your contributions. Laura Downes Leeper and the AAHS Central Staff are already working to make the Tucson meeting (January 11-14, 2006) one of the best ever. For those
of you who are able to spend a few
days before or after the meeting in
the Tucson area, there are some of
the world’s finest spas for mind,
body, and soul. More information
to come!

Hand surgery has been a stimu-
lating challenge for me throughout
my career; however, it has been
through the American Association
for Hand Surgery that I have seen
that the hard work of academic
surgery can be combined with
friendship, fun, and camaraderie.
The AAHS is composed of individ-
uals with diverse backgrounds and
experiences. This organization
strives to involve all members in its
activities and treats all members
with equal respect. Our meetings
are held in beautiful locations and
organized so that our members can
enjoy not only stimulating educa-
tional programs, but also the natur-
al physical beauty of the places that
we are so privileged to visit. As I
have observed my four children
grow into accomplished adults, I
see that their generation more than
mine strives for balance in all
aspects of their lives. I am so grate-
ful to my children and to this orga-
ization for bringing balance into
my life. With its long-standing tra-
dition of combining work and play,
the Association has been well ahead
of its time in achieving ‘balance’
however, the AAHS can only excel
with the support of its members
and we will all benefit from the
efforts of our membership. I
encourage you to become involved
in the wonderful organization by
becoming involved with
Committees, supporting the Hand
Surgery Endowment, recruiting
new members and supporting our
education program, including the
Annual Meeting. For a small invest-
ment of your valuable time, you
will help foster advances in hand
surgery and hand therapy and reap
the benefits of a dynamic and
vibrant AAHS.

The AAHS Board of Directors and
the 2004 Annual Meeting Program Committee would
like to thank the following companies
for their support and participation:

Acumed
American Association for Accreditation of Ambulatory Surgery
Facilities (AAAASF)
American Society for Plastic Surgeons, Plastic Surgery
Educational Foundation
Arthrex, Incorporated
Artimplant AB
Ascension Orthopedics, Incorporated
ASSI, Accurate Surgical and Scientific Instruments Corporation
Avanta Orthopaedics
Cook Vascular
EBI
Estes & Associates
The Foundation for Biomedical Research
The Guatemala Healing Hands Foundation
Hand Innovations, Incorporated
Home Medical Services
Integra
KMI, Kinetikos Medical, Incorporated
Med Link Medical, Incorporated
Micrins Surgical Incorporated
Neu Med Incorporated
ONI
Ortheon Medical
Stryker
Surgical Specialties Corporation
Synovis Micro Companies Alliance
Synthes
TriMed
VBM Medical, Incorporated
ViOptix
Wright Medical Technology, Incorporated
The Hand Surgery Endowment: Campaign 2005

The Hand Surgery Endowment (HSE) was chartered in 1996 under the leadership of Founding President Robert Schenck as a subsidiary of the American Association for Hand Surgery (AAHS) to support and implement the educational, research, humanitarian, and membership outreach endeavors of the AAHS. The AAHS membership has generously supported the HSE through the ensuing years. Since 1996, the HSE has contributed funding to the Hand Therapy Seminar, Presidential Guest Speaker, Best Resident/Fellow Presentation, Best Hand Therapist Presentation, and Best Poster at our Annual Meeting. Funds have also been allocated to the Annual Vargas International Traveling Fellowship. Seed grant; resident, fellow, and associate member registration; and publication support are on the drawing board. HSE contributions also assist the AAHS in maintaining academic excellence and in stabilizing dues and registration fees, keeping the AAHS an attractive investment for sustaining and prospective members.

The 2003-2004 HSE Board of Directors is pictured below. We can assure you of hard working, steadfast leadership. “Campaign 2005” is kicking off. Watch the Hand Surgery Quarterly, your mail, and e-mail for announcements. We already have our first corporate contributions and are striving for more. Planned giving and legacies will be offered. Your generous contributions vitally strengthen AAHS and assure its future as a leader in safe and effective hand and upper extremity care.

Alan Freeland, MD  
President, HSE

2003-2004 HSE Board of Directors

Front row: Miguel Saldana (Ex-Officio, Past President), Richard Brown (Secretary/Treasurer), Jorge Orbay, Jeff Palmer (Financial Advisor). Back row: William Swartz (Vice President), Susan Michlovitz, Joe Danyo (Ex-Officio, Founding AAHS President), Alan Freeland (President), Robert Walton. Not pictured: Bradly Meland (Ex-Officio, Past Secretary/Treasurer) and Reneta Webb, Administrator

Research Grant Awards

The AAHS Research Grant Committee is pleased to announce the 2005 grant awards. The following three grants were selected by our committee members from an extremely competitive group of proposals. Each will each be awarded $5,000.

(1)

The effect of IL-10 overexpression on the biomechanical and histological properties of healing tendon

Sudheer C. Reddy, MD, Pedro K. Beredjiklian, MD, Louis J. Soslowsky, PhD  
Department of Orthopedic Surgery, University of Pennsylvania

The purpose of this project is to study the effect of overexpression of IL-10 in tendon repair. Overexpression of IL-10 has been linked to scarless wound healing in fetus. The authors propose to use a viral vector that favors IL-10 production, and will attempt to transfect tenocytes to promote scarless tendon wound healing.
Neurochemical response in forelimb tendons in a rat model of upper extremity work-related musculoskeletal disorder

Jane Fedorczyk, MS, PT, CHT, Mary Barbe, PhD, Ann Barr, PhD, PT
Department of Physical Therapy, Temple University

The purpose of this project is to determine the presence and timing of a neurochemical response in forelimb tendons of rats that have performed a high repetition – high force reaching and grasping task. Work-related musculoskeletal disorder (WMSD) has shown to be associated with upregulation of neurochemical response (substance P, glutamate and CGRP) in tendons, extensor muscles, peritendon connective tissue, and humeral ligaments in humans.

Surface-modified biodegradable conduits for nerve repair

Kacey G. Marra, PhD., Lizzie Santiago, PhD, W. P. Andrew Lee, MD
Division of Plastic Surgery, University of Pittsburgh

The purpose of this study is to modify a flexible biodegradable tube design to enhance axonal regeneration within the conduit. The authors will develop a conduit consisting of poly(caprolactone) and collagen based macroporous microcarriers. The surface of the nerve guides will be modified with laminin-derived peptides to enhance axonal regeneration.

Respectfully submitted,

AAHS Research Grant Committee
W. P. Andrew Lee, MD, Chair
Matthew Bernstein, MD
Christine Cheng, MD
Susan Michlovitz, PhD, PT
Maria Siemionow, MD, PhD, DSc

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Matthew Bernstein, MD
Christine Cheng, MD
Susan Michlovitz, PhD, PT
Maria Siemionow, MD, PhD, DSc

Best Resident Papers
$250 award for each paper

Gillian D. Smith, MbBCh, FRCS; Andrew Scott LaJoie, PhD, MSPH; Luis Scheker, MD
Congenital Trigger Digit: A Study of the Age of Onset And Incidence of Spontaneous Resolution

Carmen D. Crofoot, MD; James Raphael, MD; Lori Hirsh, MD; Dana Herring; Mara Katsos, MS III
Intramedullary Fixation for Metacarpal Fractures

Vargas International Hand Therapy Teaching Award

Emily Altman, PT, CHT
Traveling to Ecuador with Jorge Orbay MD

AAHS 2005 NEW MEMBERS

Active Members
Kenneth Chekofsky, MD, MBA
New York City, NY
James Creighton, Jr, MD
Indianapolis, IN
Raja Dhalla, MD
Riverside, CA
Eric Paul Hofmeister, MD
San Diego, CA
Peter Jebson, MD
Ann Arbor, MI
Kathleen Robertson, MD
New Orleans, LA
John Regan Ruder, MD
Arlington Heights, IL
Alok Shah, MD, FRCSC
Dodge City, KS
Aamir Siddiqui, MD
Detroit, MI

Patrick Stewart, MD, FACS
Effingham, IL
Richard Tepper, MD
Westfield, NJ

Affiliate Members
Emily Altman, PT, CHT
New York, NY
Teresa Brininger, MBA, MS, OTR/L, CHT
Pittsburgh, PA
Deborah Schwartz, OTR/L, CHT
Marlton, NJ

Candidate Members
Robert Campolattaro, MD
Hampton, VA
David Dennison, MD

Rochester, MN
Linda Dvali, MD, FRCSC, MSc
Hamilton, Canada
John Hijjawi, MD
Rochester, MN
Kelly Holtkamp, MD
Springfield, MO
Karen Horton, MD, MSc, BScH
Winnipeg, MB Canada
Michel Saint-Cyr, MD
Louisville, KY

Corresponding Members
Gustavo Arnoldo Lopez Paz, MD
Guatemala
Toshiyasu Nakamura, MD, PhD
Tokyo, Japan
who truly reached America first. After hearing his lecture, one is clearly convinced that the Chinese discovered America in 1421, seventy years before Christopher Columbus. Saturday evening was highlighted by an art exposition and dinner dance, attended by over 250 individuals who appreciated a wonderful art exhibit and danced the night away.

On Saturday, the combined meeting between the American Association for Hand Surgery, American Society for Peripheral Nerve Surgery, and the American Society for Reconstruction Microsurgery was held. Instructional course lectures began early in the morning, along with combined scientific sessions. On Saturday evening, there was a combined art auction and exhibit reception that raised over $10,000 for UNICEF. The atmosphere was generous, as the proceeds will benefit numerous worthy causes.

Overall, the meeting was a huge success and the Central Office deserves substantial credit for switching venues at such a late notice. Their hard work, combined with the enthusiasm of the membership, made the 2005 Annual Meeting memorable.

Scott H. Kozin, MD
2005 Scientific Program Chair
The tournament attracted many a seasoned golfer, including Scott Levin MD (below), William Swartz MD (right), and Lawrence Colen MD (far right).

The meeting wasn’t only business, as members found time to reconnect with friends, colleagues and family at the Welcome Reception.

2005 Day at the Links Results

Winning Foursome, scoring 69
David Groth
Paul Groth
Loren Scheter
David Song

Longest Putt
Paul Groth (12’ 1”)

Closest to the Pin
Eruyn Radek (13’)

Longest Drive
Gabriel Kind
President Susan Mackinnon, MD

Dr. Susan Mackinnon will assume the position of President of the American Association for Hand Surgery at the Annual Meeting in January of 2005. She says that she has always found the AAHS to be an organization that not only excels in the continued education of hand surgeons, but importantly provides an environment that encourages friendly communication between its members. Susan is a native of Canada and graduated from the medical school at Queen’s University in Kingston, Ontario, Canada. She trained in general surgery for three years at the same institution prior to completing her plastic surgery training at the University of Toronto. She completed a fellowship and studied peripheral nerve research at the University of Toronto in the Division of Neurosurgery and it was in this year that she began her research on nerve allotransplantation. In 1980 she was a hand fellow at the Raymond Curtis Hand Center in Baltimore. She then joined the surgical staff at the University of Toronto. Funded through the Medical Research Council of Canada, she did research investigating nerve regeneration through absorbable conduits studying the specificity of nerve regeneration and advancing this work to a clinical reality. In the 1980’s in Toronto she continued her research work on nerve allotransplantation. Unlike solid organ transplants, the peripheral nerve allograft functions as a temporary structural scaffold or bridge across which host axons regenerate to reinnervate distal host sensory and motor targets. She established that indefinite immunosuppression was not necessary. Dr. Mackinnon performed the first cadaver nerve transplant in 1988. In 1988 she was awarded the Medal Prize in Surgery from the Royal College of Physicians and Surgeons for her work on nerve regeneration.

In 1991 Susan moved to St. Louis with her husband, Dr. Alec Patterson, and four children to join the faculty in the Department of Surgery at Washington University School of Medicine. In 1996 she succeeded Dr. Paul Weeks as the Chief of the Division of Plastic Surgery. Her research work in St. Louis funded through the National Institute of Health continues to investigate nerve allotransplantation. Susan’s research work has resulted in the use of peripheral nerve allografts clinically to reconstruct extensive and otherwise irreparable peripheral nerve injuries. Her current experimental focus is towards developing tolerance to the peripheral nerve allografts so that the potential side effects from systemic immunosuppression can be avoided. Dr. Mackinnon’s surgical practice is restricted to problems related to nerve injury. Her laboratory work has allowed her to address numerous questions relating to nerve injuries and translate the laboratory findings to the management of her nerve injured patients. Her current clinical emphasis is on the use of innovative nerve transfers to reconstruct complex proximal nerve injuries by transferring an expendable source of nerve fibers close to the sensory/motor end targets. She is especially proud of the extremely productive residents and fellows from many surgical specialties that have worked in her laboratory over the years.

Dr. Mackinnon is eager to continue to maintain the high standards set by previous association leaders. She looks forward to assuming a leadership role and continuing the precedent set by the American Association for Hand Surgery to advance education of hand surgery in a friendly inclusive and open environment.
The Outcome of Hand Therapy Day

Gail N. Groth MHS, OTR, CHT
Senior Affiliate Director

Curious to see if environmental factors truly do influence outcomes, therapists and surgeons gathered for the Annual Meeting opened with Hand Therapy Specialty Day. The theme of the day was “Outcomes in Our Hands.”

Outside, the environment was caught in a tropical tug-of-war with fast-moving rain showers followed by steamy sunshine. Inside, the environment was less competitive as therapists and surgeons from North and South America, Europe and Asia joined together in a roundtable format to openly discuss issues surrounding outcomes measurement and research.

The day was opened by Gail Groth MHS, OTR, CHT with an introduction to the International Classification of Functioning, Disability and Health (ICF), the lesser-known twin of the more familiar ICD coding system. The ICF would have us describe outcomes on two primary levels: body structure and function as well as a person’s level of activity and participation.

Joy MacDermid, PhD a new member of AAHS and widely-recognized authority on outcome measures lectured on “The Relationship between Impairment and Disability”. Her take-home point was that given the moderate relationship between impairment and disability (rather than fully dependent) it is important to measure both.

Peter Amadio, MD followed with a very helpful lecture on “Disease-Specific versus Global Instruments.” He charged the audience to first carefully define the job and then pick the tools. In other words, define what purpose the outcome measure is to serve (focused clinical research, third-party reporting, large simple trials, etc), and then move the discussion to optimal outcome instruments.

A trio of hand therapy clinicians led by Becky von der Heyde MS, OTR, CHT and included Aviva Wolff OTR, CHT and Diane Barus OTR commandeered the room for a new educational format. We rotated through each of their stations and had the chance to closely look at fifteen outcome measures (ex: DASH, COPM, MHQ). They provided us with all the necessary website and contact information. It was an excellent practical session that armed each of us with more measures than we will ever have the chance to use! We owe these three a debt of gratitude for the hours they invested in this project.

Mary Watkins, DPT, author of Foundations of Clinical Research and honored professor gave a revealing lecture on “Measuring Outcomes”. She focused on what we do and, more specifically, don’t know about our commonly used instruments that measure loss of body function and structure. It was a fascinating look at manual muscle testing and other traditional measures.

Sue Michlovitz, PhD, CHT and gifted photographer lectured on “Outcomes in Everyday Clinical Practice: What Do We Do?” She opened her clinic to us and shared from a practical perspective what outcome tools she keeps in her clinic and when and why she uses them. She also talked about the correlations between outcome measurement tools and function.

Sharon Dest, PT, CHT, co-Vargas Award winner of 2004 (in conjunction with Paula Galaviz OTR, CHT) delivered a moving expose on life, health and disability in Guatemala. We look forward to hearing more from her in the future as she apparently has contracted the mission-bug that seems to have affected many of the AAHS members—Warren Schubert, Scott Kozin and Jaiyung Ryu to name a few. The Vargas Award 2005 was given to Emily Altman and she will be traveling to Ecuador with Dr. Orbay later this year. Thank you to Paul Brach PT, CHT for arranging this opportunity.

A special thank you to all affiliate members for their involvement and commitment to AAHS. Next year Julianne Howell MS, RPT, CHT is planning an exciting forum that will explore controversies paired with evidence-based practice. More on that later. A final thank you goes to Richard Berger MD, President, and Scott Kozin MD, Program Chair, for planning this year’s comprehensive annual meeting.
### Outcome Measures in YOUR Hands

Compiled by Rebecca von der Heyde MS, OTR, CHT, Aviva Wolff OTR, CHT, Diane Barus OTR

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<tr>
<th>Outcome Measure</th>
<th>General Information</th>
<th>Time to Complete</th>
<th>Scoring</th>
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<tr>
<td>AIMS2-SF Ankylosing Spondylitis Measurement Scales 2-</td>
<td>26 items, condition-specific to RA</td>
<td>5-10 min</td>
<td>Likert scale (higher score=poorer health)</td>
<td>Maeder RF, Gertman PM, Mason JH. Measuring health status in arthritis: The Ankylosing Spondylitis Measurement Scale. Arthritis &amp; Rheumatism 23, 146–152, 1980. <a href="mailto:rmeenan@bu.edu">rmeenan@bu.edu</a></td>
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<td>Short Form</td>
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<td>AUSCAN Australian/Canadian Osteoarthritis Hand Index</td>
<td>15-items to measure pain, disability and joint stiffness in hand osteoarthritis</td>
<td>5 min</td>
<td>5-point Likert scales and 100 mm VAS</td>
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<td>COPM Canadian Occupational Performance Measure</td>
<td>Interview-style tool to pick 5 most important functional limitations</td>
<td>20-40 min</td>
<td>–</td>
<td><a href="http://www.caot.ca/copm">www.caot.ca/copm</a></td>
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<td>CTQ Questionnaire</td>
<td>19 items, condition-specific to carpal tunnel</td>
<td>5 min</td>
<td>ranges from 1 to 5 (higher score=poorer health)</td>
<td>Levine et al. (1993) JBJS Vol 75A(11): 1585-1592</td>
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<tr>
<td>DASH Disabilities of the Arm, Shoulder and Hand</td>
<td>30 items, entire UE, optional sports/music/work module</td>
<td>6 min</td>
<td>0-100 (higher score=higher disability)</td>
<td><a href="http://www.dash.iwh.on.ca">www.dash.iwh.on.ca</a></td>
</tr>
<tr>
<td>HAQ Health Assessment Questionnaire</td>
<td>2-page generic health status measure, popular in UK</td>
<td>–</td>
<td>0-4 (higher score=higher disability)</td>
<td><a href="http://www.hqlo.com">www.hqlo.com</a></td>
</tr>
<tr>
<td>HFS Hand Function Sort</td>
<td>62 tasks organized by OSHA work levels to quantify perception of ability to perform UE tasks</td>
<td>10-15 min</td>
<td>0-248, falling into one of four work categories</td>
<td><a href="http://www.epicrehab.com">www.epicrehab.com</a></td>
</tr>
<tr>
<td>MHQ Michigan Hand Questionnaire</td>
<td>37 items (68 questions), hand-specific, measures hands separately</td>
<td>15 min</td>
<td>0-100 (higher score=higher performance)</td>
<td><a href="http://www.med.umich.edu">www.med.umich.edu</a></td>
</tr>
<tr>
<td>PEM Patient Evaluation Measure</td>
<td>21 items to measure hand symptoms and function</td>
<td>5 min</td>
<td>0-98 (higher score=higher disability)</td>
<td>JBJS(Br) 2001 Mar 83(2):235-40</td>
</tr>
<tr>
<td>POSNA Pediatric Musculoskeletal Functional Questionnaire</td>
<td>Condition-specific, measures UE and LE function, ADLs, pain, expectations, satisfaction</td>
<td>–</td>
<td>Computerized algorithm</td>
<td>AAOS 6300 N. River Rd Rosemont, IL 60018</td>
</tr>
<tr>
<td>PRWE Patient Rated Wrist Evaluation</td>
<td>15 items equally rate pain and function; adapted for elbow, forearm and hand</td>
<td>3-5 min</td>
<td>0-100 (higher score=higher disability)</td>
<td><a href="mailto:jmacder2@uwo.ca">jmacder2@uwo.ca</a></td>
</tr>
<tr>
<td>ShortForm-36</td>
<td>36 items, generic health status</td>
<td>10-15 min</td>
<td>Computerized algorithm</td>
<td><a href="http://www.outcomes-trust.org">www.outcomes-trust.org</a></td>
</tr>
<tr>
<td>SMFA Short Musculoskeletal Functional Assessment</td>
<td>46-item measures dysfunction and “bother”</td>
<td>10-15 min</td>
<td>0-100 (higher score=higher disability)</td>
<td><a href="http://www.ortho.umn.edu/research/clinicaloutcomes">www.ortho.umn.edu/research/clinicaloutcomes</a></td>
</tr>
<tr>
<td>SPADI Shoulder Pain and Disability Index</td>
<td>13 items, region-specific to shoulder, measure pain and disability separately</td>
<td>5-10 min</td>
<td>0-100 Likert Scale</td>
<td>Moon.ouhsc.edu/dthompson/CDM/outcomes.htm</td>
</tr>
<tr>
<td>WOOS Western Ontario Osteoarthritis of the Shoulder Index</td>
<td>19 items, condition-specific to shoulder arthritis</td>
<td>5 min</td>
<td>0-100 mm visual analogue scale</td>
<td><a href="mailto:stdshg@uwo.ca">stdshg@uwo.ca</a></td>
</tr>
<tr>
<td>WORC Western Ontario Rotator Cuff Index</td>
<td>21 items, condition-specific to rotator cuff</td>
<td>5-10 min</td>
<td>0-100 mm visual analogue scale</td>
<td><a href="mailto:stdshg@uwo.ca">stdshg@uwo.ca</a></td>
</tr>
</tbody>
</table>
Outcomes Assessment for the Upper Extremity: A Panel of Professors Q & A

The Around the Hand Table discussion in this issue seeks to share some of the questions posed and responses given during the Hand Therapy Specialty Day, “Outcomes in Your Hands” at the 2005 Annual Meeting. After the meeting, Program Chair Gail Groth, MHS, OTR, CHT, conducted a virtual roundtable discussion with the afternoon “Panel of Professors’ members Peter Amadio, MD, Mayo Clinic, Rochester, MD, Kevin Chung, MD, The University of Michigan, Ann Arbor, and Joy MacDermid, PhD, PT, McMaster University. Each of the outcome measures mentioned in this discussion is linked to the table on page 12 where you are provided information on how to obtain the measure.

Ms. Groth: Outcomes research in hand surgery and therapy seeks to understand the end results of our interventions. This type of research has become the key in developing better ways to monitor and improve our quality of care. It has also altered the culture of clinical practice by changing how we assess the end results of our interventions. Drs. Chung, MacDermid and Amadio, how does one go about picking the right outcome measure?

Dr. Chung: After over a decade of outcomes movement in hand surgery, several outcomes tools for the hand have withstood the test of time and found to be good measures of hand outcomes. These questionnaires include the Carpal Tunnel Questionnaire (CTQ) developed by Levine and Katz, the Disabilities of the Arm, Shoulder and Hand (DASH) developed through collaborative efforts of the American Academy of Orthopaedic Surgeons, the Michigan Hand Outcomes Questionnaire (MHQ), that was supported by the Robert Wood Johnson Foundation, and the Patient-rated Wrist Evaluation Questionnaire (PRWE) by Joy MacDermid from McMaster University. There are several others from other countries that are being tested. These questionnaires all have unique properties. For example, if one wants to measure outcomes for carpal tunnel syndrome, the CTQ is certainly a good choice. On the other hand, recent publications have shown that the DASH and MHQ may be just as responsive as the CTQ for tracking outcomes after carpal tunnel surgery; therefore, these two questionnaires are reasonable alternatives. If one needs to evaluate outcomes after wrist procedures, the PRWE is a good choice. The DASH and the MHQ may also perform well for the wrist.

We have quite a bit of experience using the MHQ and we have found that the MHQ can be useful across most hand surgery conditions, in particular, for studying outcomes of rheumatic conditions. Multicenter clinical trials are underway using the MHQ as the main outcomes measure for joint replacement surgery in rheumatoid arthritis and for outcomes studies in the treatment of systemic sclerosis.

Dr. MacDermid: As a first step I recommend people look in the literature to find what outcome measures are available that they might use. Ask around; especially ask people who use them to find out what they like and don’t like. If you can, it is really useful to use two different options for a month and then make a decision. Make sure whatever you pick has high reliability and validity so that other people will accept your results. Kevin has mentioned some of the major choices in hand surgery/therapy. I would say the advantage for the PRWE is that is short and easy, the MHQ is that it covers a number of important domains providing insight on the nature of the disability and the DASH that it can be used for the entire upper limb and is widely reported/validated. I also agree that for some specific problems like CTS, shoulder instability or nerve repair, specific scales might be worthwhile.

Dr. Amadio: The first thing is to figure out what outcomes you want to measure. Which are important? Why are you collecting outcomes? If your goal is to track the functional progress of a single patient over time, then some upper limb functional status questionnaire like the DASH may be useful, since you can use it for all patients with upper limb problems. Or you could go with separate hand, wrist, elbow etc. questionnaires, if you want more specific details and are willing to put up with managing multiple questionnaires. If you are doing research, then more detailed, body part and even treatment specific instruments may be needed. If you continued on page 14
are more interested in tracking satisfaction, then other tools will be needed.

**Ms. Groth:** What outcomes measures do you currently use in your practices?

**Dr. Amadio:** In clinical practice, I do not use any questionnaires; this is a consequence of working in a large institution. Any new forms need to be integrated into our electronic medical record. So currently I am left with a very long demographic questionnaire that inventories symptoms from all body symptoms, plus a physical examination that is not completely standardized, though we do have automated pinch, grip and ROM measurements, using the Dexter system. For research, I tailor the measures to the question. I prefer condition specific questionnaire such as the CTQ when they exist; when not, I usually use the DASH as a general measure of upper limb function, and couple it with the SF-36 as a general health measure. When appropriate I also use surveys for depression, anxiety, and other associated conditions.

**Dr. Chung:** We also do not use questionnaires routinely to track outcomes for individual patients. However, we have an active clinical research program and most patients are participating in ongoing outcomes studies or clinical trials. From a research standpoint, the continued outcomes assessment will provide evidence-based data that can guide future treatment. The questionnaire that I use is the MHQ, which we developed over ten years ago. We have found the MHQ quite responsive across hand conditions, including carpal tunnel syndrome and rheumatoid arthritis.

**Dr. MacDermid:** In my clinical studies I use the SF-36, the DASH and the most specific measure available. For wrists/hands I use the PRWE, for carpal tunnel syndrome the CTQ. For shoulders I have tried a number including the SPADI (Shoulder Pain and Disability Index), the SST and the Shoulder Pain Index (ASES) and don’t know which is best. I personally like the SPADI because it has subscales for pain and function. But to score it I use a numeric scale, not the visual analogue scale (VAS). I have found that the VAS is too time-consuming and not well accepted by older patients. For elbows we use the Patient-rated Elbow Evaluation (PREE) or ASES. In our injured-worker clinic I use a pain scale, the DASH, a work distress scale and a work activities scale that describes the job tasks.

**Ms. Groth:** The clinic with which I am most closely affiliated is currently seeking an outcome measure to apply routinely to all upper extremity patients. We are in the middle of a three month trial to pick between the Canadian Occupational Performance Measure (COPM) and the Quick DASH, an 11-item subset of the DASH measure.

**Ms. Groth:** There are surgeons and therapists who say they have no real intention of performing research. Do they need to worry about measuring outcomes?

**Dr. Chung:** Many will question whether it is necessary to evaluate outcomes in our practices. Tracking outcomes is certainly time-consuming. Whether it is necessary to track outcomes in one’s practice is debatable, but it is always helpful to understand the quality of one’s work through outcomes assessment. There is also increasing emphasis by insurance companies and governmental agencies to track outcomes. In fact, the government is performing quality assessment of several medical centers, including the University of Michigan as one of the testing sites. The goal of this project is to identify indices of good quality and perhaps, rewarding high quality centers with better reimbursement contracts. This trend may continue in the private sector whereby physicians may need to demonstrate the quality of their practices through standardized outcomes measure.

**Ms. Groth:** I agree with you; however I would interject my concern for this use of outcome measures. Human nature leads us to scrub up our weaknesses and the medical world will be tempted to select patients likely to make us look good, leaving the more seriously impaired patients searching for medical care.

**Dr. MacDermid:** I think the assumption here is that outcome measures are for research- not clinical practice. This may be why so many people have not gotten around to incorporating them into their practice. In fact, I have found self-report measures to be a tremendous aid to clinical decision making. Further, most patients appreciate the fact that you are making their viewpoint an important consideration. I know there is a bit of a learning curve or adjustment period when you make any change in your normal clinical routines. But really, most of the time is just process set-up. After that patients do a lot of the work. The other major barrier that clinicians experience is that the numbers have no inherent meaning to them. We forget that a PIP extension lag of 20 dgs did not mean anything to us at some point either. The more you use these measures, the more you get a feel for what the scores mean. Relatively quickly you will get a feel for how to identify patients who are at risk of poor outcomes on the basis of their ques-
tionnaire score. The fact that you can share this information with payers or in a research database is a secondary benefit.

**Dr. Amadio:** I have no idea how to improve my results if I do not know my outcomes. This is Codman’s original End Result Idea-to match outcomes with expectations, and to use that knowledge to drive continuous improvement. So, any conscientious practitioner must have some idea of the expectations and outcomes of all individual patients, and for selected groups of patients of interest. For the latter, standardized measures are needed. If you want to provide better care five years from now than you do today, you need to know about and measure outcomes in your practice. Outcomes research is just a way of sharing what you learned with others.

**Ms. Groth:** The clinic is very busy—a scheduled patient, two walk-in patients and a final evaluation. Despite the intellectual knowledge of the importance of measuring outcomes, it is very difficult to find time for it! Do you have any strategies to share? Who usually handles this in your clinic?

**Dr. Amadio:** The best strategy is to do this as a routine. We collect our Mayo five-page Medical History/Current Visit symptom questionnaire in advance on all new patients, as well as on all patients who have not filled out this form within the past year. We do this by mail in advance if possible, if not, or if the mailed survey is not returned, in the office when the patient checks in, but before they are put in a room. The form is bar coded with the patient’s information, and is scanned into the electronic medical record. It is available online within minutes after that. In the office, it is important to have a routine exam so that a standard physical exam data set is also collected. That would cover the exam for initial and final visits. Final visit surveys are more difficult, as it is often not clear in advance that this is the last visit. The best strategy there is mail with telephone follow up, but that can be expensive and time consuming. Another option would be to offer a reward—small gift certificate, discount etc., when the final questionnaire is returned.

**Dr. Chung:** It is understandable that tracking outcomes imposes on personnel time, which is increasingly in short supply. Automated systems can be quite helpful, particularly with the availability of web-based self-administered surveys that can cut down on the time spend on questionnaire administration and answer coding. We are trying to move to the web-based surveys now and I am sure that this technology will be available rather inexpensively in the future.

**Dr. MacDermid:** Make it routine. Use volunteers or receptionists to get you set up with forms and processes. Make it a policy not to see the patient until the forms are complete. Review them with the patient so they know it matters and you care about what they said. Then use the scores to help set goals for treatment. Have blank forms easily accessible. Patients who have done it before will do without any help. Make it clear when they need to do it for repeat visits. You definitely need a baseline form and a discharge score. If you might lose someone, get it done as close to discharge as possible. Do this for two months and you will never look back.

**Ms. Groth:** Have a plan to give the outcome information back to those who collected it. Have this plan in place before you implement a new measure or a change in procedure. Also, track completion rates by therapist, or by day of the week, or by whatever and begin reporting this back to the interested parties. Once outcomes reports are included in monthly staff meetings alongside productivity and diagnoses, it seems to become more important.

**Ms. Groth:** If I wanted to look at the outcomes of our basilar joint reconstructive surgeries, what measure should I use?

**Dr. Chung:** Basilar joint surgery is a procedure that has predictable good results, whether one performs ligament reconstruction or simply trapeziun excision, as was shown by studies published from England. Because the effect size of this surgery will be large, most outcomes questionnaires should be responsive for this condition. I will recommend using either the DASH or the MHQ for this purpose. In addition, I will also recommend doing the standard physical assessments, such as grip/pinch strength and range of motion. Some may also want to measure radiographic parameters, but this has not been shown to correlate with overall hand function outcomes.

**Dr. MacDermid:** I have just finishing collecting data on over 125 of our tendon interposition arthroplasties for basilar arthritis. We used the DASH and the Patient-rated Wrist Hand Evaluation (same as the wrist evaluation with a supplemental question on appearance) and the AusCan which was designed for hand osteoarthritis so that we could try and make some decisions about which scales we would like to use in the future. I know pain is really important in this population, and they often have problems at other joints, which make be the major component of their functional difficulty, so I am less inclined to depend on the DASH score in this population. At the moment I would say that the three I evaluated or the MHQ would be valid choices. Our data analysis will be complete soon.

*continued on page 16*
and I hope to have a more evidence-based opinion in the future.

Dr. Amadio: I would only add that if you are interested in comparing different treatments, then a very specific questionnaire is preferable to something more general like the DASH. For example, you might want to capture thumb pain as opposed to other sites of pain in the same limb, more detailed thumb related activities like writing, turning keys, buttoning, or gripping tools, and questions regarding associated problems such as symptoms at the MCP joint due to hyper extensibility.

Ms. Groth: Thank you—that’s very helpful. Does anybody have any good ways to measure scar?

Dr. Chung: Scar is difficult to quantify and as far as I know, research on a scar outcomes measure has been lacking. Scar appearance is also rather subjective. While one patient may deem a small scar objectionable and causes great psychological distress, another patient may not be too bothered by a prominent scar. I am not sure if a scar measure, other than a measure of scar width or thickness, can be a reproducible outcome.

Dr. MacDermid: Much of the work on scar appearance is in the burn literature and often does not directly apply to hand scars. There are a number of issues that might be of interest. The subjective component includes the appearance, nature and impact of the scar and is best measured by self-report. We developed a simple self-report measure when studying silicone in post-op carpal tunnel scars. I cannot say much about its utility, because we have not continued this work but it is available in the Journal of Hand Therapy, along with a literature review on scar outcome measures for those interested. The other two aspects are more “objective”: the pliability of the scar and its size. Digital photography allows us a means to measure size and a number of devices can measure pliability. I have used the NK Durometer to measure scar compliance, although this is one very small aspect of the overall acceptability of a scar, so without other measures provides a very narrow view.

Dr. Amadio: This is a multidimensional question. There is patient satisfaction with the scar; symptoms associated with the scar; physical limitations associated with the scar, and even the biological activity of the scar, all of which have separate outcomes. All might be relevant at one point or another, not only to measure outcomes but also, and perhaps especially, in deciding if treatment of the scar is needed. Questionnaires might address the first two; physical exam the third, and a biopsy the fourth.

Ms. Groth: In order that we may stand on the shoulders of the giants of outcome assessment, ‘fess up. Tell us of a failure experience you’ve had with outcome measures.

Dr. Chung: Understanding the properties of an outcomes instrument is important. My experience with failure relates to not fully comprehend the limitations of a particular questionnaire because the data are not available yet. For example, early in my experience, I applied the SF-36 to track outcomes. But we have realized that although the SF-36 is...
one of the earliest questionnaires developed and has enjoyed wide popularity, its application for musculoskeletal conditions are rather limited. The paucity of questions for the upper extremity and the limited response categories (i.e., yes or no) makes this questionnaire not responsive to hand surgery. But we have learned from these experiences and the questionnaires we have now that are specific for the upper limb have performed admirably.

Dr. MacDermid: My first use was a big failure (not to mention biased) and it was only because it was my first use that I was able to figure out why. Early in my career, our centre was just starting to think about patient satisfaction questionnaires. We were asked to hand them out as a pilot. I wanted to impress everyone what a great therapist I was and picked a lovely gentlemen who thought I was fabulous because I had diagnosed a double site neuropraxia that had occurred in a freak accident. A week later our program director asked to meet with me as there had been a single form returned and the patient was completely dissatisfied with my services. I knew it could only have come from the single one I had handed out and I was shocked. After inspecting the scale I noticed that he had also checked off answers in the sample area of the scale. I realized that this lovely and articulate gentleman who I had spent many hours with—could not read. I knew he had wanted to support me and I felt so terrible for him—that I had placed him in this situation where he was unsure if his feelings were being transmitted. I became sensitive to the high rates of illiteracy—often in patients you would not suspect. Scales need to use simple language that patients can understand. I now make sure we offer patients different options, if I feel this might be an issue.

Dr. Amadio: A whopper—the AAOS MODEMS project, which was designed as a large voluntary outcomes database, to be populated by

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2006 Application for Research Grants

The AAHS Research Grant Awards were established to further the purpose of the Association as stated in its Bylaws and to foster creativity and innovation in basic and/or clinical research in all areas pertinent to hand surgery.

Awards and Eligibility

Grants will be made for a one year period to up to three investigators. Grants are available to all AAHS members. One of the investigators must be an active or affiliate member of the association.

Grant Application

Applications may be obtained from the AAHS website at www.handsurgery.org, or, you can call 312-236-3307 to request a copy. Applications (an original plus seven copies) must be received by the committee chair no later than Monday, November 1, 2005, in order for the judging to be completed in time and the recipients to be announced at the Annual Meeting. The AAHS and the Research Committee are required by the IRS to document disbursement of grant funds. Award recipients will be required to sign a letter of acceptance and submit a progress report once each year. The AAHS must be acknowledged as the source of funding in any presentation or publication. A final report must be submitted at the completion of the study. It is expected that the results of the funded research be submitted for presentation at an Annual Meeting within two years of the receipt of the award. Funds must be returned to the AAHS if the study is not undertaken within twelve months of the receipt of the award. Failure to follow these guidelines will disqualify the recipient from any further grant opportunities and from presenting any papers at the AAHS Annual Meeting for a period of three years following such default.

Mail Grant Proposals to

W. P. Andrew Lee, MD
University of Pittsburgh
3550 Terrace Street
Scaife Hall 690
Pittsburgh, PA 15261

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continued on page 18
questionnaires completed by paid subscribers and their patients. We built it, but no one came.

**Ms. Groth:** Ditto for the ASHT UE Net project. I want to thank everybody for participating in this virtual discussion.

REFERENCE LIST


**Denise Kinlaw, PT, CHT**

**Personal:** I am physical therapist who is dedicated to the profession. I have been practicing for 32 years in the same facility doing patient care and teaching physical therapy students.

**Education:** I am a graduate of Mayo Foundation’s program in Physical Therapy. I did training here in Hand Therapy and have been a hand therapist since 1979. I received my certification in 2003.

**Employer:** Mayo Clinic, Rochester, MN

**AAHS Involvement:** New Affiliate member, 2004.

**Best Part of My Job:** Since I am also an assistant professor of physical therapy in the Mayo College of Medicine, I have two loves. I love teaching students and colleagues and I love working with my patients. Being able to do both is the best part of my job.

**Major Accomplishments:** I have been teaching interventions in the physical therapy program for over 30 years.

**Clinical Specialties:** I am called the brachial plexus guru by my colleagues. I am interested in manual therapy, massage therapy and interventions related to denervated muscle.

**Greatest Challenge:** My greatest challenge was my first patient with a brachial plexus lesion that I was able to follow throughout his rehabilitation. Coming to grips with the “Doi” protocol for extraplexal neurotization was both exciting and challenging. I had to remember my electrical stimulation, neuromuscular re-education and biofeedback techniques.

**Three Words That Describe Me:** My students refer to me as particular, my patients refer to me as compassionate and I refer to myself as persevering.
The following international congress may be of interest to AAHS members. We pass along this special message to you from the Director.

Dear Colleagues,

We are delighted to inform you that the first announcement of Bone2005, the second edition of the major bone event which is going to be held in Granada (Spain) during October 26-29, 2005, is now available at the official congress website:

http://www.bonefoundation.com/bone2005

We furthermore kindly invite you to visit the congress website for all additional information on the congress itself as well as on Granada. You should not miss the opportunity to attend Bone2005, a multidisciplinary congress where many specialists can benefit form the knowledge on the bone tissue.

Neither the treatment of the bone pathologies won’t be possible without the knowledge of the basic investigation nor a good investigation will be possible without facing the problems and the results in the hospitals and clinics. Therefore, two years later, a new opportunity opens up of celebrating Bone2005, in Granada, Spain. Three days dedicated to combine basic and applied knowledge, in the plenary sessions, and to present the own contributions in the parallel sessions dedicated to each one of the specialties. Three days of scientific exchanges surrounded by a different and unique atmosphere in a city like Granada that encounters multiple cultures, a place of fantasy, where any told history may sound like a tale.

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We would look forward to welcoming you in Granada.

With best regards,

Juan Jose Garcia
Director

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Hand Surgery Quarterly
Spring 2005
March 11, 2005

RE: Around the Hand Table: Recurrent Nerve Compression [Winter 2005]

Dear Editor:

Recurrent symptoms following carpal tunnel release (CTR) are diagnostically troublesome, as conveyed in the Recurrent Nerve Compression dialogue. The participants concentrated on pronator teres (PT), thoracic outlet (TOS) and cervical radiculopathy as likely sources for recurrent symptoms in patients who have no evidence of unsuccessful CTR.

We have rarely confirmed pronator teres or cervical radiculopathy as a co-morbid condition in carpal tunnel syndrome (CTS). We have never linked TOS—an exceedingly rare condition—with post-CTR symptoms. The discussants gave only cursory notice to ulnar neuropathy (cubital tunnel syndrome [CubTS]) as a possible source for these symptoms. We have found CubTS to be a common and often overlooked co-morbid condition.

In a study of 1,445 patients with electrodiagnostic test results for median and ulnar nerve conduction we found that for every two abnormal median nerves at the wrist there was one abnormal ulnar nerve at the elbow, and for every four cases of clinical CTS there was one symptomatic ulnar nerve at the elbow.

We often find our symptomatic post-CTR patients to have complaints consistent with CubTS, not recurrent CTS. We recommend that the pre-CTR work-up include electrodiagnostic assessment of the median and ulnar nerves. The median nerve can be tested with any of several techniques that gives both sensitive and specific results. Standard techniques for assessing ulnar nerve function at the cubital tunnel are problematic, particularly in milder cases. We have achieved an acceptable level of sensitivity and specificity by adapting the short-segment Kimura technique for assessing the ulnar nerve in 5-centimeter segments above and below the elbow.

When both CTS and CubTS are clinically symptomatic, simultaneous release of the carpal tunnel and cubital tunnel resolves symptoms in both nerve distributions and minimizes the occurrence of post-operative complaints that clinicians may attribute to rare conditions such as PT or TOS.

Very truly yours,

Peter A. Nathan, MD

Northwest Orthopaedic Hand Opportunity

Spokane, WA Exciting opportunity for BC/BE Orthopaedic Surgeon who has a Fellowship in Hand surgery. Join our busy expanding practice of four progressive, young Fellowship trained surgeons looking for a fifth surgeon to provide Hand care and support in some General orthopaedic surgery. This is a private single specialty practice that works with Holy Family Hospital, a level III community hospital, with minimal emergent trauma, located just five minutes from the clinic. Competitive compensation, good call arrangements and excellent benefits.

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Spokane is a medium-sized city located in the beautiful Pacific Northwest. Our area boasts 75 lakes all within a 50-mile radius and unlimited outdoor recreational activities, including several major ski resorts within easy driving distance. Spokane is the largest city between Minneapolis and Seattle with excellent public schools, outstanding healthcare facilities and an affordable cost of living.

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Providence Physician Services
Toll 1-800-442-8536
Tel (509) 232-1189
Fax (509) 232-1196
maleek@psew.org
Archiving your images

It can be a big problem. You’ve got those awesome pictures of that case last year, and need to dig them up for a presentation—tomorrow. No problem. They’re on your computer, in, um, C:\Documents and Settings\YOURNAME\My Documents\My Pictures\—aren’t they? Wow, didn’t realize how many pictures you had there, did you? Well, scroll through the thumbnails, and they’ll be there, somewhere, somewhere. Hmmm…

1437 images, but not the one you’re looking for. Oh, maybe they’re in that C:\Documents and Settings\YOURNAME\My Documents\temp\SONY\DCIM\100MSDC directory that you stored your memory card contents on temporarily last year when you needed to make space on your memory card to take pictures of your daughter’s awesome Halloween costume, or in another directory buried deep in your computer, or maybe they’re on the office server, or maybe you inadvertently erased them a while back, and aren’t finding out until now. It can be a big problem. You have got to organize your images in a way that you can easily archive them and easily retrieve them.

How hard could that be? These are computer files, after all, and that’s what computers do, isn’t it? You’ve got a fast computer with a monster hard drive. There’s got to be tons of software for this. Well, yes, and no. My office takes lot of pictures, including the face and hands of every new patient. I’ve got an archive of about 35,000 medical images, and my office currently archives nearly 200 images each week. What state of the art program do I use? A custom DOS program I wrote 10 years ago, which won’t even run under WinXP—because it’s got special features geared to automating the process and I still can’t find a better alternative. Why? The sheer number of files exposes a core problem with Windows, including WinXP: the file system. Windows can track many files, but shows performance problems (slowdowns, hang time, crashes) when there are more than a thousand files in a single directory, a small number when you take a lot of pictures over a few years. Now, the standard way to deal with larger numbers of files is to use a database. A database uses a different type of directory structure which can handle millions of files with essentially no performance problems. So why not use a database? There are two problems. First: in general, high end databases such as Access or Oracle are unintuitive—not user friendly, and many people will need a programmer or support person to walk them through simple tasks, like customizing a search.

The second and scarier problem is that databases hide your files. When data or files are put into an industrial strength database, the “different type of directory structure” is invisible to Windows. Once the images are fed into the database, you can’t just browse through the pictures using Windows explorer or an image viewing program. To Windows, a database directory looks like one big file, so “what goes on in a database stays in a database.” Now, there is another option, which is to leave the images where they are, and associate the images with a database—use a database to organize and index text associated with each image. This is what the programs below do. This doesn’t solve the problems of too many files in a directory or where to keep the files, but it’s a start.

That’s the problem—what’s currently available as a solution? There are a number of programs available for image archiving. Three shareware programs available on
line are worth considering, each well under $100:

**ACDSee** (http://www.acdsystems.com)  
ACDSee (Image 1) was one of the first low cost, high performance image browsing programs for Windows. It has a built-in text database function, saving a searchable “description” of each image file in a text file called “description”. ACDSee has bloated considerably over the years since its shareware debut, and Windows has incorporated a number of its original features, but it is a cheap, stable program, with many useful features, including file format conversion and tools for importing, organizing, searching and sorting images and their associated textual information.

**Thumbs Plus** (http://www.cerious.com) also uses a small database to index image files. It handles a variety of image formats, and like ACDSee and handles a number of proprietary digital camera formats (Image 2). Its real selling point is a toolset for making thumbnail displays and web page thumbnail linked image archives, which I have found very useful. The Thumbs plus database is a true database, not a text file, and is more versatile in handling large numbers of files.

**BR Photoarchiver** (http://www.br-software.com/index.html)  
This more recent contender from Norway is much more cleanly focused than the above programs on the onerous task of inputting the image annotations (Image 3). Again, images are associated with a database rather than incorporated into a database, so the original files can still be browsed with other programs. It provides the capability of setting up unique searchable data fields and default data values, real time savers. The program can export archives to the web or to
CD. A lean program, but a step in the right direction.

**Recommendations**

Plan in reverse. What are you going to use your archives for? Most likely, presentations. In that case, it's probably best to include the basic diagnosis (e.g., basal joint arthritis) and anything special about the images (e.g., collapse deformity). This will smooth the search for the most interesting images of a common topic.

Keep it simple, or you'll never get through it. As a minimum, you need to know the patient's name, date, diagnosis and special findings. It may not be necessary to include anything else. I don't.

Think twice before you decide to really organize your diagnoses into neat, database friendly categories, unless you either plan to use a very small number of categories (e.g., congenital, trauma, tumor, infection, metabolic, age related) or have already been successful organizing all of your ICD and CPT codes into neat categories. Hand conditions don't pigeonhole well, and neither approach is particularly helpful for ransacking your collection for a lecture.

Start now. Nuff said.

If you have slides, scan them now and archive the scans. If you have more than a few hundred slides, I recommend the Nikon super coolscan 5000 and SF 210 slide feeder, which will automatically scan 50 individual slides at a time. This setup will pay for itself at about the thousand slide mark compared to getting them scanned at the camera shop. Slide scanners are becoming much harder to find as digital cameras replace everything else—so do this now—you may not be able to find a new slide scanner in a few years.

Get someone else to do the work. Get a system in place, have your office staff or a high school student learn it. Then, catch up with your backlog by using a dictaphone to dictate the search terms for groups of images, have them do the scanning and data entry. This will save you a huge amount of time, in the same way that a phone call is usually much more time-efficient than an email. In the office, when I take a picture or decide that an Xray is valuable enough to be scanned and archived, I write down the patient name, date and a terse free text description, and have my staff transfer the images or scan the films and enter that information into the system immediately—and it’s done.

**The Future**

Keep your eye on what products are coming out. Periodically Google the term “image archiving software”. I’m working on a program which archives pictures indexed by patient, and is specifically geared to indexing and retrieving patient images for talks and papers, automating much of the input and providing unique search options (Image 4). It’s based on features I have been tweaking in the DOS environment for years, and now that it works the way I want it to, is being rewritten in JAVA to be available for general use. You’ll be the first to know when a ready for prime time version is available.

Rumor has it that because of the explosion of digital photography, the sheer number of people struggling with this problem is forcing a planned change in the Windows file system to accommodate the issue. Time will tell. Hopefully, image archiving functionality will be built into future versions of Windows. In the mean time, good luck, and get started!
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American Association for Hand Surgery Calendar

2005
July 8-10, 2005
Mid-Year Board of Directors’ Meeting
The Lodge & Spa at Cordillera Edwards, CO

September 22–24, 2005
American Society for Surgery of the Hand – 60th Annual Meeting
San Antonio, TX

2006
January 11–14, 2006
36th Annual Meeting
Loews Ventana Canyon Resort
Tucson, AZ

April 28–30, 2006
Brachial Plexus Course, hosted by AAHS
Mayo Clinic
Rochester, MN

July 14–16, 2006
Mid-Year Board of Directors’ Meeting
The Broadmoor Hotel
Colorado Springs, CO

September 7–9, 2006
American Society for Surgery of the Hand – 61st Annual Meeting
Washington, DC

2007
January 10–13, 2007
37th Annual Meeting
The Westin Rio Mar Beach Resort
Rio Grande, Puerto Rico

2008
January 9–12, 2008
38th Annual Meeting
The Westin Century Plaza Hotel & Spa
Beverly Hills, CA

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