

U N I V E R S I T Y O F P I T T S B U R G H

FACETS

SCHOOL OF HEALTH AND REHABILITATION SCIENCES

SPRING/SUMMER 2006

GOING
GLOBAL



FACETS SCHOOL OF HEALTH AND REHABILITATION SCIENCES

CONTENTS

SPRING / SUMMER 2006



FROM THE DEAN



Cliff Brubaker

For instance, Dr. Rory Cooper and his team at the Human Engineering Research Laboratories would not have been able to meet the challenge of creating a lightweight, durable wheelchair that would be affordable for the 10 million Indians who need them had they simply exported American technology. Instead, they engineered a chair that could be easily manufactured in India using inexpensive, indigenous materials. They are now applying the lessons learned, first by creating a pediatric version of the chair, and now by adapting the chair for production and sale here in the U.S.

Dr. Walt Stoy and his colleagues at the Center for Emergency Medicine have encountered comparable hurdles as they develop EMS infrastructures and training programs in countries around the world. Our system may be the model, but successful transferability requires an appreciation of local customs and practices.

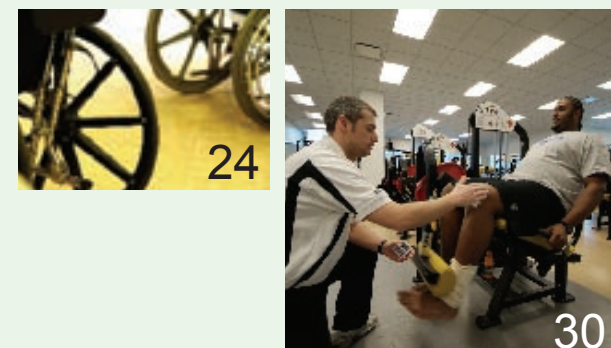
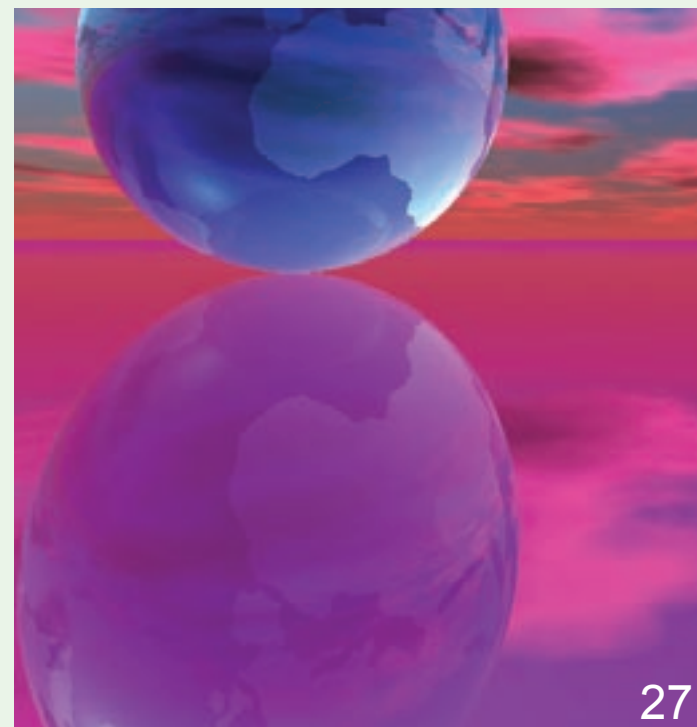
Our cover story in this issue of *FACETS* gives you a glimpse into our school's global outreach. It is impressive. We have assumed a major role in the professional development of international students in all eight health care disciplines within SHRS. Our faculty are in demand world-wide for their academic acumen. Our telerehabilitation and Web-based capabilities promise even greater interaction with our international colleagues in the future. Our students are engaged in international course work, volunteer experiences, and study abroad programs, all designed to increase their awareness and appreciation of the importance of diversity and inclusion.

Diversity and inclusion are certainly watchwords of the FISA Foundation and its executive director, Dee Delaney, who is featured in Dr. Seelman's *ACCESS* column. We're fortunate to have developed a strong partnership with this philanthropy whose mission is to ensure equal access for women and people with disabilities. Not only has the foundation provided funding for our first endowed chair; Ms. Delaney will be introducing our research and rehabilitation technology innovations to over 1,500 of her professional colleagues who will travel to Pittsburgh this May for the annual conference of the Council on Foundations. During their three-day meeting, these grant makers will be afforded the opportunity to experience first-hand projects that can be replicated in their own communities.

Finally, I'd like to thank those alumni and friends who have lent their support to our endowed scholarship fund. Through their generosity, some of our most deserving students can now receive the financial assistance they need. My hope is that more of you will consider a gift so that even more students can extend the reach and the reputation of SHRS.

With kindest regards,

Cliff Brubaker
cliffb@pitt.edu



- 3 **From the Dean**
Cliff Brubaker
- 4 **Giving**
Patty Kummick
- 5 **Access**
Dr. Kate Seelman
- 6 **Student News**
Calendar of Events
- 7 **Alumni News**
- 8 **Alumni Profile**
Staying in the Game
- 10 **Faculty News**
- 12 **Department News**
- 13 **Physical Therapy**
Gold Medal Therapy
- 14 **Physical Therapy**
Being a Pepper
- 16 **Occupational Therapy**
A Gain on Pain
- 18 **Communication Science and Disorders**
When Silence Isn't Golden
- 20 **Emergency Medicine**
Preparing for the Worst
- 22 **Sports Medicine and Nutrition**
Certifying Sports Nutrition
- 24 **Rehabilitation Science and Technology**
Wheelchair Capital
- 27 **FACETS Feature**
Going Global
- 30 **The Real World**
- 33 **Health Information Management**
Advancing Personal Health Records
- 34 **Doctor of Clinical Science (CScD) in Speech Language Pathology**
- 35 **Dialogue**
A Conversation with Judith E. Heumann

Publisher
Clifford E. Brubaker

Executive Editor
Patty Kummick

Writing
Patrick Mangus

Design
Jim Scattaregia

Photography
Jim Judkis



University of Pittsburgh

FACETS is published by the Office of the Dean, School of Health and Rehabilitation Sciences. It is produced twice a year for alumni, students, staff, faculty and friends of SHRS.

The University of Pittsburgh is an affirmative action, equal opportunity institution.

About the Cover

The images of life in Karagwe, Tanzania, are courtesy of Dr. Linda Winkler, associate professor, Division of Natural Sciences, University of Pittsburgh – Titusville. Melissa Buss, who is featured in the article *Going Global*, will be accompanying Dr. Winkler to Africa this summer.



A credit to each of you

I am so excited to share some wonderful news with you. First of all, due to the combined efforts of our generous alumni and friends, SHRS has exceeded its original goal of \$75,000 for the new SHRS Alumni Endowed Scholarship Fund. In fact, we've raised over \$100,000 in gifts and pledges to date. This is truly remarkable and a credit to each of you who gave when asked.

In keeping with my usual method of operation, I was ready to close the campaign file, announce its successful conclusion, and move on to the next challenge. But Dean Cliff Brubaker has asked that we continue to encourage gifts to this campaign. By growing our scholarship fund to even higher

levels, we're able to provide financial assistance in greater amounts and to more deserving students. So, one year after the kick-off of the scholarship campaign, I'm inviting each of you to continue to support this fund ... or begin by making your first donation. Any amount is appreciated and makes such a difference to the overall fund. Perhaps next year I'll be reporting a total of twice our current amount!

Secondly, SHRS has been the recipient of some very special major gifts from alumni and retired faculty over the course of 2005. It's a privilege to recognize these donors today and share their good works with you.

Anne Pascasio, PhD, PT '53 and SHRS founding dean, established an endowed fund to maintain and enhance the Anthony and Filomena Pascasio Learning Resource Center. The center is a hub of student activity and is equipped with the latest electronic equipment to enhance learning along with computer work stations, a study area, models, and treatment table. With Dr. Pascasio's gift, the center will receive updates and new equipment on a regular basis.

Mildred L Wood, PhD, retired faculty, established an endowed SHRS Student Resource Fund, open to all students in the school. The fund provides student awards for books, poster and paper presentations, travel to professional conferences and meetings, and other such activities.

Sean Shimada, PhD, RST '97, also established an endowed Student Resource Fund to benefit students in the Department of Rehabilitation Science and Technology. Sean's gift will support RST students by providing financial support to help address student needs.

Thanks to **Joe David, PT '88**, and **Paul Rockar, PT '81**, students in the Department of Physical Therapy can apply for two new scholarships. The David Physical Therapy & Sports Medicine Center / Joseph M. David Endowed Scholarship Fund and the Paul and Judy Rockar Endowed Scholarship Fund each provide significant tuition support for PT students.

So in the world of development, 2005 has been a busy, productive, and successful year for SHRS. But the best news is that more of our students will be recognized for their outstanding efforts through these awards, and they will have access to valuable learning resources thanks to the generosity of those who came before them.

If you would like to discuss establishing an endowed fund or would like more information on ways to make a major gift to your alma mater, please let me know. After all, I'm here to help make it easier for you to support your school and our future generations.

Sincerely,

Patty Kummick
Director of Development

412-383-6548
pkummick@shrs.pitt.edu
4031 Forbes Tower
Pittsburgh, PA 15260

*SHRS has exceeded its original goal
of \$75,000 for the new SHRS
Alumni Endowed Scholarship Fund*



There are approximately 27 million women with disabilities in the United States. This number includes women with physical and sensory disabilities such as cerebral palsy, multiple sclerosis, and vision or hearing impairments, women with mental illness or cognitive disabilities such as retardation, and women with disabilities secondary to chronic medical conditions such as diabetes. In Allegheny County, roughly 15 percent of women between the ages of 16 and 64 report some sort of disability.

One out of five of these women live in poverty. Many don't have access to even the most routine preventive health care. Fortunately, here in Southwestern Pennsylvania, the FISA Foundation is working to bridge that gap. The foundation continues the legacy that began almost 100 years ago when the alumnae of six girls preparatory schools founded Harmarville Convalescent Home for Women. This facility later became Harmarville Rehabilitation Center, internationally known for its innovative therapies for people with physical disabilities. In the mid '90s when Harmarville was sold to a for-profit company, the proceeds were used to create the endowment of the FISA Foundation.

I've asked Dee Delaney, FISA Foundation executive director, to discuss the foundation's role in addressing the unique challenges facing people with disabilities, particularly women.

When the FISA Foundation was formed, there was no question that our grant making would continue to benefit women and people with disabilities. From a philanthropic standpoint, both were under-funded populations. At the time, only 2.6 percent of available dollars were being directed to disability-related programs; women received 5.6 percent of the funds. As an organization whose history was rooted in service to both groups, we were committed to changing that dynamic. Our hope was that we could convince other grant makers and leaders to look at our community through a 'disability and gender lens.' Our plan was to lead by example.

For instance, our board and staff recognized that women's health and disability issues frequently intersect and that we were uniquely positioned to help. While roughly one out of seven women in Southwestern Pennsylvania has some kind of disability, they are not well represented in either the women's movement or the disability rights movement. Women with disabilities experience domestic and sexual violence at a higher rate than non-disabled women. While they may consume more health care services than the general population, they encounter a number of subtle physical and attitudinal barriers that limit their access to routine preventive care such as inaccessible mammogram machines and examination tables, insensitivity to the need for information about sexual health, contraception, fertility and related issues, inadequate support services, and problems with reimbursement.

We've worked to address this deficiency. We provided support for the creation of the Center for Women with Disabilities at Magee-Womens Hospital. Here, women can access a full range of services in a barrier-free setting, including primary care, gynecologic and obstetric care, behavioral health, social services, nutrition and weight management, and wellness/health promotion. We also commissioned a study from RAND on the short-term costs and long-term benefits of providing specialized care for these women.

An exciting new project is the creation of online curricula specific to the health care needs of women with disabilities. The clinical curriculum, which focuses on treatment protocols, is targeted to physicians and medical school students. A second curriculum will teach women with disabilities how to navigate the health care system and advocate for equal access. The curricula taskforce consists of experts in the field of disabilities and women's health from across the country.

While not just a women's issue, our work with the University of Pittsburgh School of Dental Medicine will expand access to another vital health care service: dental care. Few dentists in this community are equipped to treat people with complex disabilities. Many people who have mobility problems find it difficult to navigate dentists' offices, transfer into dental chairs in tiny exam rooms, or position themselves for thorough oral examinations. People with significant cognitive disabilities may be particularly frightened of the dentist and have difficulty tolerating pain, thus resisting the exam. In these situations, dental care is only possible if trained staff are available to sooth the patient and administer anesthesia.

There are some bright spots on the horizon. Pitt's School of Dental Medicine is addressing some of these situations in its special needs dental clinic, but capacity is limited and the waiting list is extremely long. The University has allocated space for an expanded clinic, and a capital campaign has been launched to outfit it and provide more training in the field of special needs dentistry. Achieva, a non-profit organization serving the developmental disability community, recently held a day-long forum looking at the barriers to dental care statewide with the goal of policy change. A number of dental school faculty participated.

And our interest isn't limited to health care issues. With FISA's support, the University Center for Social and Urban Research at the University of Pittsburgh created a statistical snapshot of the disability community in southwestern Pennsylvania using 2000 census data. The disparity between people with and without disabilities in terms of education, employment, and income was striking.

By joining with the PVA to fund the first endowed chair at SHRS, now held by Dr. Rory Cooper, we've been able to tap into leaders such as Dr. Seelman, who are shaping disability policy and practice. SHRS has given us unparalleled access to experts in the field and insight into the cutting edge research and rehabilitation technology that is emerging from the school. We'll be showcasing many of these innovations when the Council on Foundations holds its annual conference here in Pittsburgh in late spring. Over 1,500 grant making professionals will be introduced to replicable projects tailored to meet the needs of people with disabilities.

We are proud of the groundwork laid by FISA during its first decade as a foundation. Through the collaborative efforts of our partner organizations and institutions such as SHRS, the Pittsburgh region is becoming a more inclusive community. However, barriers still exist. All of us must continue to support the self-determination, equality of care, and quality of life for women, girls, and people with disabilities.



Student News

Margaret Smitka, an undergraduate student in the Coordinated Program in Clinical Dietetics and Nutrition, was selected by Dean Cliff Brubaker and Department Chairman Scott Lephart as the nominee from SHRS for the 2006 Emma W. Locke Memorial Award. The award recognizes high scholarship, character, leadership, and devotion to the ideals of the University.

Katie Seilus, a senior in the Athletic Training program, was recently awarded the 2006 Eastern Athletic Trainers Association Undergraduate Scholarship.

Jeremy Rose, an undergraduate student in the Department of Health Information Management, was one of the first recipients of the Horatio Alger Military Veterans Scholarship. Rose served five years in the Marines and completed two tours of duty in Iraq. The scholarship assists veterans of Afghanistan and Iraq in financing bachelor's degrees.

Vanessa Edwards, a senior in the Department of Health Information Management, was awarded the Fattah Scholarship, providing full tuition to continue her studies as a graduate

student in Health Policy and Management and Community Health Issues at Drexel University. Edwards was also selected as one of 15 students nationwide to participate in the Barbara Jordan Policy Scholars Program. She will serve a nine-week internship in the Congressional offices in Washington, DC, this summer.

Jen Swanson, Physical Therapy sports resident, had the good fortune to work in the Pittsburgh Steelers training room this past season as part of her residency training. She couldn't have picked a better year for this assignment ... considering the SUPER season the Steelers had!

Nancy Dubuar and **Avi Kouzi**, master's students in the Department of Occupational Therapy, were selected to participate in the Jewish Healthcare Foundation Jonas Salk Health Fellowship, a program that is co-sponsored by the University of Pittsburgh Center for Bioethics and Health Law. The Fellowship introduces talented and highly motivated graduate students in a variety of health-related disciplines to prominent health professionals and religious leaders from the Pittsburgh community. Through these

opportunities, Fellows meet and engage in dialogue with guest speakers about ethical issues confronting the health care system today.

Masters in Occupational Therapy (MOT) students **Natalie Forbes**, **Dana Gais**, **Lana Gealy**, **Julia Hoffman**, **Dion Kong**, **Celeste McMichael**, **Jessica Neuhart**, **Jennifer O'Brien**, **Janna Olszewski**, **Lynnsey Pipik**, **Kathryn Purdy**, **Laurie Rickle**, **Caitlin Sanford**, and **Louise Santoro** were inducted into Pi Theta Epsilon, the national honor society for occupational therapy students.

Reena McCormick, MOT student, provided a hands-on presentation about the occupational therapy profession to 90 ninth grade students enrolled in the Career Connections Charter High School in Pittsburgh, Pa.

MOT Students **Jennifer Balkey**, **Chereal Crenshaw**, **Shayla Hayes**, **Elizabeth Kackenmeister**, and **Devon Smedley**, along with **Denise Chisholm**, assistant professor, represented the Department of Occupational Therapy in the *Investing Now: Hands on Science* program.



Alumni News

The following alumni were recognized with awards at the Pennsylvania Physical Therapy Association (PPTA) conference this past fall: **Karl Gibson (PT '76, '83)**, Carlin-Michels Achievement Award, the highest award given by the association; **Linda Esposto (PT '73)**, Service Award, and **Denise English (PT '73)**, Humanitarian Award.

Noma Anderson, PhD (CSD '79), Dean, Florida International University's School of Health Sciences, has been elected president of the American Speech-Language-Hearing Association (ASHA) for 2007. She is a speech-language pathologist and has been a member of ASHA for 30 years.

Mina Harkins (MT '69) was recently hired as manager, accreditation division, at COLA, a premier clinical laboratory educational, consultation, and accreditation organization. She oversees the rollout of the company's new anatomic pathology specialties.

Jonathan Hoerner (EM '04) is the operations supervisor for Cetronia Ambulance in Allentown, Pa. Jon reports that two 2005 EM grads are working as paramedics for the same company.

Laurie Johnson, MS, RHIA (HIM '81, '88), accepted a position as director of education and training at MedCom Solutions, Inc., Pittsburgh. MedCom Solutions focuses on chargemaster products and services including strategic pricing for hospitals and physician office settings.

Paul Rockar (PT '81) was elected to the American Physical Therapy Association (APTA) Board of Directors for a three-year term. (We understand Paul received the greatest number of votes!)

Anthony E. Roscoe (HIM '99) is currently enrolled in the Master of Studies in Law concentrating in health law. He was also recently accepted into the Jewish Healthcare Foundation and University of Pittsburgh Center for Bioethics and Health Law Jonas Salk Health Fellowship for 2005-2006.

Gary M. Santel (HRS '96) underwent kidney transplant surgery last year. His donor was his sister, Lisa Santel. Gary was diagnosed in 1992 with polycystic kidney disease, a hereditary condition. He returned to work at the Allegheny County Health Department WIC Program eight weeks after surgery and all is going well for him. The whole experience gave Gary a new outlook on life in general and has made him realize how much love and courage it took for his sister to give him the ultimate gift of life.

George Shames, PhD (CSD '48, '52, and professor emeritus), recently had his mystery/thriller novel, *"The Company of Truth,"* published. Stuttering plays a part in the storyline and the book is available through Barnes & Noble and Amazon.com.

Angelo Tardio (PT '86) was one of nine members inducted into the East Boros Chapter of the Pennsylvania Sports Hall of Fame's Class of 2005.

Giampietro (John) Vairo, MS, ATC (HRS '03), recently joined Princeton University as an athletic trainer in the Department of Health Services. John previously served as an athletic trainer with Panthers Football and as adjunct faculty in the Department of Sports Medicine and Nutrition's Athletic Training Program.

Gabriel Vargas (HRS '03) was awarded the United Nations Association Fellowship. He is an MPH candidate in the Global Health Policy and Programs, School of Public Health and Health Services at the George Washington University, Washington, DC.

Forest Weyen (EM '04) was recently promoted to chief of Monongalia EMS, Morgantown, W. Va.

CALENDAR of Events

April

April 21

State of the Science Workshop on Hearing and Vision Loss

Sponsored in part by HERL
Walter Reed Army Medical Center
Washington, DC.

May

May 26

State of the Science Workshop on Assistive Technology

Sponsored in part by HERL
Walter Reed Army Medical Center,
Washington, DC.

September

Friday, Sept. 15, and
Saturday, Sept. 16

Fourth International AAC Institute Symposium on Evidence-Based Practice and Preferred Practice Patterns, SHRS

October

Tuesday, October 10

Twelfth Annual Endowed Scully Visiting Lecture Program

Featuring Laurie Hack,
PhD, PT, FAPTA
Location TBA

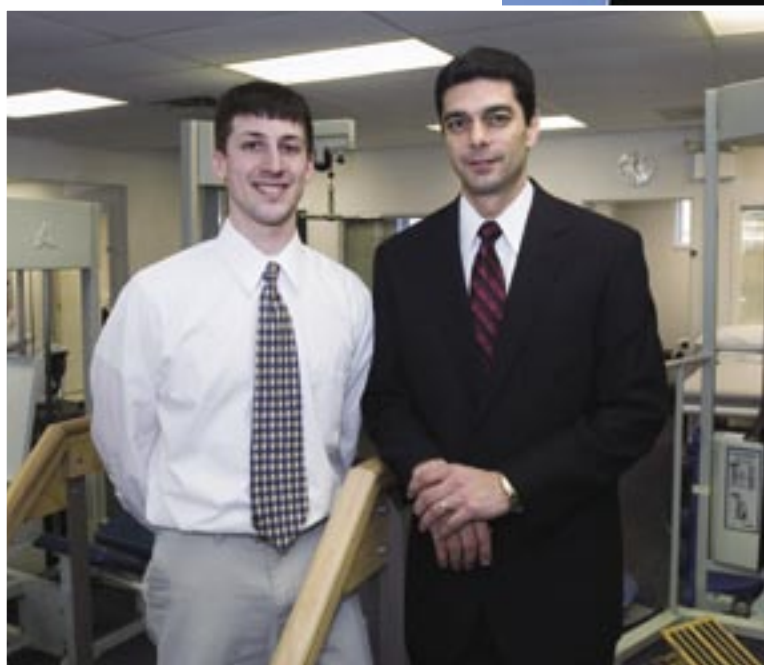
Saturday, Oct. 21

University of Pittsburgh Homecoming, Pitt vs. Rutgers



Joe David knows first hand the importance of physical therapy; and not simply because he's a board certified specialist in Orthopaedic Physical Therapy and founder of the David Physical Therapy and Sports Medicine Center in Mt. Lebanon, Pa.

Before embarking on his PT career, David was a basketball player. A good one. The Pittsburgh native was a standout at Upper St. Clair High School and an academic All-American at the University of Pittsburgh. And like any accomplished athlete, he spent plenty of time on the PT table.



Michael Gans (I)
and Joe David

So when David decided "to move on with my life" rather than pursue a professional basketball career, physical therapy seemed a natural progression. He spent the summer of 1986 volunteering in the PT department at Montefiore Hospital, was accepted into SHRS that fall, and in December 1988, graduated with a master's degree in Sport and Orthopaedic Physical Therapy. He recently completed his doctorate in Physical Therapy from Temple University.

Staying in the Game

Today, with his active playing days behind him, David still feels a special kinship with his athlete-patients. "I've been there," he says. "I've been hurt. I've lain on the table. I know how it feels to be unable to play because of injury. I know how it affects a competitive person. You want to get back to playing with your team."

"I've had numerous injuries during my career, so I can get inside of the person I'm treating and understand their psychological make-up, which can improve how I treat them physically."

Beyond empathy, David says the name recognition from years in the sports spotlight also has been a plus for the eponymous Physical Therapy and Sports Medicine Center he opened in 1994.

"I played my whole basketball career in this area, so people remember my name," David acknowledges. But he's quick to point out that you can't build a business on name recognition alone. "After the referral, you've got to do a good job."

"I run this business like a family," he continues. "And I treat my patients like they're guests in my home."

David continues to treat patients regularly, even with a staff that has grown to include four physical therapists, three PT assistants, and four certified athletic trainers. "I'm committed to being hands-on," he explains. "That's what I enjoy most."

It's this commitment to seeing patients that keeps him from expanding beyond his single location. "If I had a number of facilities, I'd just become an administrator," he notes somewhat scornfully. "The thrill is in getting that person better; improving their quality of life. That's what keeps you going."

The father of four also acknowledges that maintaining a healthy work/life balance is also a factor. "I'm not interested in getting caught up in what 'society' expects you to do," he explains. "I want to be able to go home at night and spend time with my family. I want to play a round of golf. I enjoy coaching basketball. It's quality of life that's important."

A PROFESSIONAL EVOLUTION

When David started his practice a dozen years ago, managed care was in its infancy and reimbursement wasn't the issue that he says it is today. "Insurance controls everything. We have to justify that the treatment prescribed is reasonable and necessary. Each year, it gets more and more difficult to get reimbursed for what we do," he says. "They've decreased the number of visits

that are allowed, co-pays are higher, and some of our patients, particularly those on fixed incomes, just can't afford to pay for the number of visits required."

David insists, however, that he has not let reimbursement affect how he treats patients. "We do the best we can to work with our patients," he notes. "We have to think long-term. For example, if someone is allowed only 20 visits a year and they're using them in April, we have to anticipate that they might turn an ankle in November and need additional treatment. So if necessary, we streamline the physical therapy and then show the patients what they can do at home if they can't come in here."

Reimbursement pressures notwithstanding, David has no regrets about his career choice. He keeps his hand in the game he loves

by coaching the Mt. Lebanon High School Boy's Basketball team. There's also the occasional pick-up game, but not with his colleagues at the Center. "No one wants to play me," he shrugs.

GIVING BACK

He has also acknowledged the school that gave him his start by funding a Physical Therapy scholarship. "You look back on why you are successful – for me, it was folks like Dave Perrin, my athletic trainer at Pitt, who told me about the profession, and the great professors at the University of Pittsburgh's department of Physical Therapy."

It's an opportunity to give back and thank them for the opportunity they gave me."

David said that helping to select this year's scholarship recipient, Michael Gans, a third-year student in the DPT program, was extremely difficult. "Both finalists were really strong," he says. "I would have liked to award the money to both of them."

He was particularly impressed with how well-rounded and personable the candidates were; qualities he believes are critical to being a successful practitioner. "You need more than 'book smarts'," he emphasizes. "Interpersonal skills are extremely important. You can know all there is to know academically, but if you can't interact with a variety of personality types, you're not going to be successful."

"On any given day, you can see a plumber, a teacher, and a business executive; all with the same shoulder problem. But that doesn't mean you can interact with them the same way. Interpersonal skills are critical. It can be the difference between keeping a patient, and losing one."

From a man with a track record of winning more than losing, it's a professional game plan worth following.



Faculty News

Nancy A. Baker, assistant professor, and **Pamela E. Toto**, clinical instructor, Department of Occupational Therapy, coordinated the efforts of three fellow OT faculty members, four doctoral candidates and 41 first year Master of Occupational Therapy students to participate in the American Occupational Therapy Association's Backpack Awareness Day last September. The groups visited two junior high schools in the Woodland Hills School District and instructed over 200 seventh graders about backpack safety.

Baker also presented "*The Reliability of an Observational Tool to Assess Personal Computer Keyboarding Style*" at NORA Symposium 2006: Research Makes a Difference.

Joan C. Rogers, professor and chairman, Department of Occupational Therapy, was elected to the board of directors of the American Occupational Therapy Association.

Rogers also received a Star Award from the Association of Rheumatology Health Professionals for her long-standing contribution to arthritis care and research.

Denise Chisholm, assistant professor, Department of Occupational Therapy, was elected to a second term as the Pennsylvania representative to the American Occupational Therapy Association Representative Assembly.

Chisholm and **Cathy Dolhi** (SHRS 2000), presented "*Focusing on Occupation Throughout the Occupational Therapy Process*" at the 28th Annual Pennsylvania Occupational Therapy Conference.

Ketki D. Raina, post doctoral associate, Department of Occupational Therapy, presented a paper on the "*Functional Outcome Study*" at the Resuscitation Outcomes Consortium's Steering Committee Meeting, San Diego, Ca.

Dr. Walt Stoy, program director and professor, Emergency Medicine program, received the Lifetime Achievement Award from the National Association of EMS Educators, an organization Stoy founded. At the organization's annual education symposium, Stoy also presented the James O. Page Leadership lecture titled "*The Zen and Art of Education*."

Stoy also has been invited to sit on the Board of Directors of the Advocates for EMS. The organization was founded in 2002 by the National Association of EMS Physicians and the National Association of State EMS Officials to lobby on behalf of EMS policy and funding issues in Washington.



Above: David Hirsch and Dr. Catherine Palmer. Right: Boy Scouts prepare hearing aids for reuse.



Dr. Catherine Palmer, associate professor, Communication Science and Disorders, recently assisted David Hirsch, a Boy Scout from the Pittsburgh area working toward the rank of Eagle Scout, who chose to complete a project related to hearing aids and helping people. Hirsch and his fellow scouts collected hearing aids, and with the help of Palmer, cleaned, repaired, tested, and donated some 59 hearing aids to the Hermosillo Project. The project, sponsored and run by the University of Arizona Department of Speech and Hearing Sciences, provides audiological services and hearing aids to hearing impaired children in Hermosillo, Sonora, Mexico. Others involved in the project included audiologists in the greater Pittsburgh area and the Lion's Foundation.

The following faculty from the Department of Physical Therapy presented, moderated, or consulted at the American Physical Therapy Association Combined Sections Meeting in San Diego in February: **Dr. Anthony Delitto**, **Dr. G. Kelley Fitzgerald**, **Dr. Susan Whitney**, **Dr. James Irrgang**, **Dr. Sara Piva**, **Lynn Fitzgerald**, **Jaime Berlin**, and **Keelan Enseki**.

At the invitation of Pa. Senator Robert Wonderling, **Dr. Katherine Seelman**, professor and associate dean for disability programs, is serving on the Senate Technology in Healthcare Working Group. The group consists of state leaders in academia, business, industry, and government to "further integrate and promote the use of technology in health care, better serve our seniors by enabling them to age at home, and address rising medical costs in the Commonwealth."

Seelman has also been invited to serve on the American Association for the Advancement of Science (AAAS) Education and Human Resources Advisory Board for an NSF-sponsored project entitled "*Integrating the Social, Behavioral and Economic Sciences in AAAS Internet-based Educational and Career Resources*."

Recently, Seelman presented and authored a book chapter on "*Technology for All Citizens: A Challenge for Accessible Medical Devices*," in Bethesda, Md., and presented a keynote address, "*Disability Employment Statistics: Controversies and Realities*" to the Pa. Association of Rehabilitation Facilities, State College, Pa.

Dr. Malcolm McNeil, professor and Chair, Department of Communication Science and Disorders, and **Dr. Joan C. Rogers**, professor and chair, Department of Occupational Therapy, were named as two of *Therapy Times*' "Most Influential Leaders, Luminaries, and Influencers in the Therapy Industry." McNeil was recognized for his research on aphasia and his theoretical reformulation and research on apraxia of speech. Rogers was recognized for her long history of empowering others, including patients with dementia and depression, her profession, colleagues, and students.

McNeil also was selected to receive the "Honors of the Council," the highest honor awarded by the Council of Graduate Programs in Communication Sciences and Disorders. The award is bestowed on individuals whose contributions to the Council and/or graduate education in communication sciences and disorders have been of such magnitude that their impact is recognized throughout the professional community.

Dr. Mark R. Schmeler, instructor, Department of Rehabilitation Science and Technology, was appointed to the national Power Mobility Device Technical Expert Panel formed on behalf of the Centers for Medicare and Medicaid Services (CMS) to provide technical expertise regarding the refinement of proposed codes and proper testing requirements for power wheelchairs and other power-operated vehicles. The objective of the elite evaluation panel is to provide CMS with technical expertise regarding the proposed codes and testing requirements to meet the goals of classifying power mobility products based on durability and performance.

Elaine Trefler, assistant professor, Department of Rehabilitation Science and Technology, received the Lifetime Achievement Award from the National Registry of Rehabilitation Technology Suppliers (NRRTS). The award is presented to an individual who has made a consistent, significant, and wide-reaching impact on the provision and on the providers of rehabilitation technology products and services for at least 10 years. Trefler is only the second recipient of this prestigious award.

Dr. Katherine (Kitty) Verdolini, associate professor, Department of Communication Science and Disorders, was named Editor for Speech for the *Journal of Speech, Language and Hearing Research* of the American Speech-Language-Hearing Association.

Dr. J. Scott Yaruss, associate professor, Department of Communication Science and Disorders, received the "Honors of the Association" from the American Speech-Language-Hearing Association at its national convention in November. The award recognizes professional or scientific achievement and is given to a member who has shown outstanding contributions to the professions.

Dr. Connie Thompkins, professor, Department of Communication Science and Disorders, will be giving two invited lectures including the Michael J. Ellis Distinguished Lecture on Disability Science and Practice at the University of Illinois at Urbana-Champaign, and another lecture at the University of Pennsylvania Department of Neurology.

Dr. Rory Cooper, professor and chair, Department of Rehabilitation Science and Technology, received the James J. Peters Award to honor long-time advocacy for people with disabilities at the 2005 American Paraplegia Society conference.



Department News



The **National Association of Future Doctors of Audiology (NAFDA)** University of Pittsburgh chapter held a white coat ceremony for the eight new members of the Doctor of Audiology program in the Department of Communication Science and Disorders. Inductees included Nicole Beninati, Jaryn Pulice, Andrea Antoline, Leslie Myers, Whitney Rubel, Anga Lao, Dionne Russell, and Kevin Burkhardt.

The **Emergency Medicine Program** was recently accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP). The program was commended on a number of points including its international student mix, reputation, clinical sites, faculty, exposure to EMS research, and the format which forces students to focus on the program.

TechLink won two trophies at the FIRST LEGO League competition recently. One trophy was for a research project related to the competition's theme of Ocean Odyssey and the other trophy was for software programming. TechLink is supported by faculty and students from SHRS, HERL, and the School of Engineering.



Gold Medal Therapy



The February 2002 ice storm hit Bonner Springs, Kan., with a vengeance, leaving Doris Elliott-Watson's yard littered with fallen tree limbs. Not content to leave them lying on her lawn until spring, the septuagenarian bundled up against the winter cold and proceeded to drag the broken branches to the curb. The next day, she couldn't drag herself to her feet.

The diagnosis was bone-on-bone osteoarthritis and, according to her physician, the only cure was knee replacement surgery. For most seniors, the news would have been disappointing, but

not unexpected. Surgery and loss of mobility are accepted side-effects of aging. But not for Elliott-Watson. Just four years previous, the avid cyclist had biked across the country. She was a master gardener who prided herself on being able to cut her own lawn, trim her own bushes, and plant her own flowers. "This is terrible," she remembers thinking. "I'm a nurse. I'm going to figure out a way to save my knees."

Her research turned up what she estimates was 150 articles on the subject, including a piece in *Physical Therapy Journal* that she describes as "the one." It was authored by Dr. G. Kelly Fitzgerald, assistant professor, Department of Physical Therapy, and described a therapy regimen he had created for a 73-year-old woman, also an amateur athlete, who suffered from the same condition. The program, which includes exercise therapy and movement-enrichment, was chronicled in the Winter 2002 issue of *FACETS*.

"This woman was my age and she was active and she got her knees back," recalls Watson. "If it worked for her, then I thought, why wouldn't it work for me?"

And the therapy did work. After four months of following Fitzgerald's 12-step program, Elliott-Watson was walking without pain. By spring of the following year, she was participating in hundred-mile bike rides. In July 2003, she won dual gold medals in the 5K Walk/Run and Cycling competitions in the Sunflower State Games, an honor she repeated the following year. These victories qualified her for participation in the biennial National Congress of State Games, which were held in Colorado Springs in late July 2005. Her gold medal winning time in the 5K Walk/Run on a treacherous mountain course was 1:15:49.

"My mission is to let as many people know this good news as possible," says Elliott-Watson, who had contacted Dr. Fitzgerald shortly after reading his article and has kept him up to date on her progress. "It is much more satisfying to have my own knees than to have gone through replacement. Dr. Fitzgerald literally changed my entire life."

For more information, contact Kelly Fitzgerald at kfitzger@pitt.edu





Being a Pepper

He was known as “Mr. Social Security” for his ardent defense of Social Security and Medicare. From 1929, when he first entered politics and sponsored a bill allowing Florida’s seniors to fish without a license, to 1986, when he introduced legislation that barred mandatory retirement based on age, Claude D. Pepper was a tireless fighter for the rights of the elderly.

It’s fitting that the nine Older Americans Independence Centers (OAIC) across the country, including the one here at the University of Pittsburgh, honor the memory of the former Florida senator and congressman. The Pepper Centers, as they are known, target the prevailing fear of all aging Americans – the decline of physical function and a loss of independence.

The OAIC program was designed to establish “centers of excellence” in geriatric research. Funded by the National Institute on Aging, its goal is to translate basic and developmental research on aging into applications and interventions that increase or maintain the independence of older persons. Equally important, the program supports the creation of the next generation of geriatric researchers through career development and training.

Research conducted at the OAICs is diverse. For example, UCLA’s Pepper Center is looking at ways to improve medical and nursing care for assisted living residents, while the emphasis at the University of Maryland is cardiovascular disease. The focus of the Pittsburgh Pepper Center is balance disorders.

The Pittsburgh Center, established in 2004, is headed by Dr. Stephanie A. Studenski, one of the nation’s foremost authorities and researchers on mobility, balance disorders, and falling in older adults. Studenski is also the director of clinical research for the University of Pittsburgh Institute on Aging and a professor in the Schools of Medicine and Nursing as well as SHRS. Working

with her is a team of 50 researchers from five schools: medicine, nursing, public health, health and rehabilitation sciences, and engineering.

The program consists of eight distinct but interrelated cores: Leadership/Administrative; Pilot/Exploratory; Research Career Development; Participant; Assessment/Measurement; Technology; Data Management/Analysis, and Adherence/Retention. It integrates 11 independently funded studies, all designed to either identify effective interventions that could be used in clinical or community settings to maintain or improve balance, or further define an evidence-based diagnosis of factors that contribute to balance disorders that could be used in clinical practice for prevention and treatment.

BALANCE AND THE ENVIRONMENT

Typical of the work being done at the Pepper Center in the Pilot/Exploratory Core are studies being conducted by faculty in the Department of Physical Therapy.

Dr. Patrick Sparto, assistant professor, and his team are looking at older adults’ ability to respond to changes in their environment. “Specifically, I’m looking at differences in balance reactions,” he explains. “For example, if a person is walking from a well-lit

to a darkened environment, it can throw off his balance. The same is true if they move from a flat, level surface to a grassy or sandy surface. I want to see how an older adult’s reaction to the change compares to someone who is younger.”

The focus of the Pittsburgh Pepper Center is balance disorders.

Dr. Jennifer Brach, assistant professor, is interested in developing a new measure to help identify persons who are at risk for falling or losing their independence. “Currently, walking speed is the frequently used measure,” she says. “However, speed is usually assessed in an unchallenging clinical environment where lighting is good and the surface is smooth.”

Like Sparto, Brach wants to examine walking speed in a real world environment. “The ability to adapt one’s walking to a challenging situation may be important in identifying individuals who are at risk for falling or losing their independence,” she hypothesizes.

Dr. Jessie VanSwearingen, associate professor, is researching progressive walking disability, which she describes as a slow, gradual change in multiple systems that occurs as people age.

“These are not people who have suffered a catastrophic illness or injury such as a stroke or a hip fracture that prevents them from walking,” she explains. “These are people who, over time, developed trouble walking. Nobody can pinpoint exactly why the deterioration occurs, and no one has looked at interventions that could reverse the decline.”

Using a Gait Mat and a foot switch system, a control group of participants age 18 to 50 is establishing the baseline of what constitutes normal walking. A group of older participants age 65-plus then will follow a similar protocol, and the results compared.

“Our theory is that the earlier you can identify subtle changes in gait, the less intervention you’ll need and the more success you’ll have,” says VanSwearingen. “On the other hand, if you don’t pick up changes in gait until they’re falling or walking really slow, they’ve already lost a lot of skill and it may take more and longer intervention.”

Using existing and newly established measures of gait, VanSwearingen and her colleagues will compare intervention strategies in hopes of defining improved treatments that will be clinically useful for practitioners. “We’ll be comparing two approaches. We’ll look at the therapy used to address balance issues, which focuses on improving strength, range of motion, and conditioning as well as a more skill-centered approach, where we simulate component patterns of walking and mobility tasks experienced in daily life, such as turning and pivoting around objects, and walking at different speeds through various patterns.”

While there are a number of reliable measures for the static therapy, that is not true for the more dynamic approach.

“We can’t measure skill well,” she acknowledges. “There are things we know about skill and we recognize when someone is skilled, but we don’t have a measure to quantify it. So how can you do an intervention to improve skill if you don’t have an outcome that measures improvement?”

VanSwearingen and colleagues hope to correct that deficiency.

OTHER OUTCOMES

While the development of interventions to improve balance and mobility for older adults will be the end-result of the Pepper Center research, there are a number of other planned by-products.

For example, a registry of prospective study participants is being created. Currently, there are approximately 1000 participants in the registry, and the number will continue to grow as the

program continues. It will be a resource for anyone needing access to the region’s senior population for research purposes.

A library of measurement tools in relevant physical, psychosocial, cognitive, and medical domains that are easy to administer, acceptable to older adults, validated, and reliable is being assembled. Elizabeth Hile, a research physical therapist in geriatric medicine, is working with the Assessment Core on that project.

Perhaps most important, the next generation of geriatric researchers is being identified and supported. Doctoral students like Jaime Berlin, an instructor and research assistant, have the opportunity to learn about research first hand. Berlin is involved in two of the Pepper Center Pilot Projects.

Brach, a former Pepper Scholar who recently received the prestigious Paul Beeson Geriatric Research Career Award from the National Institute on Aging, received financial support from the OAIC so she could collect preliminary data and prepare her career proposal. She is now able to maintain her research focus and, through seminars and meetings, interact with peers across the campus and the country.

All agree that a new spirit of collaboration has emerged. “There always had been a lot of small networks out there,” says Sparto, “but we didn’t have the opportunity to do multidisciplinary research like we do now.”

VanSwearingen says the program’s multidisciplinary approach has blurred traditional academic boundaries. “People are seen as being part of the Pepper Center, not necessarily a school. It has done a phenomenal job of pulling together a huge amount of talent on aging on this campus.”

For more information on the Pittsburgh Pepper Center, visit www.pitt.pepper.edu





Your body aches.
You're tired all of the time.
A good night's sleep is
a distant memory.
Weeks go by, then
months. The pain and
exhaustion seem never-
ending. Your friends
and family worry.
"What's wrong?" they
ask. "Where's the Mary
I used to know...the
Supermom...the woman
with the energy of three
people?"

"You need to see a
doctor," they insist.

Succumbing to pressure,
you schedule an appoint-
ment. Your medical history
is taken and a battery of
tests is run. Blood. X-rays.

Days go by, and you get the call from the doctor. Everything
looks normal," she says. "We've ruled out osteoarthritis, lupus,
and multiple sclerosis."

You breathe a sigh of relief. But the pain and the exhaustion
continue. Soon you're back in the doctor's office for more exams,
more tests.

For as many as six million Americans ... the vast majority
women in their mid-to-late forties ... the fatigue, the disrupted
sleep, and the pain in muscles, ligaments, and tendons that
continue unabated for months – even years – are symptoms of
fibromyalgia, a chronic pain syndrome. However, because these
symptoms can be associated with any number of diseases, the
syndrome is difficult to diagnose. Some physicians even doubt
its validity.

In 1990, the American College of Rheumatology established
diagnosis criteria for fibromyalgia. Persons must have
experienced widespread pain for at least three months and
have a minimum of 11 of 18 positive tender points under relatively
mild, firm pressure. However, even here, there is disagreement.
Some physicians find the guidelines too stringent; others ques-
tion whether palpation of tender points is a valid diagnostic tool.

While the syndrome isn't progressive, crippling, or life-
threatening, it is chronic. There is no agreed-upon cause,
there is no cure, and there is no "one size fits all" treatment
regimen. Managing the symptoms through some combination
of medication, exercise, and education seems to be the key.



But what triggers the
symptoms? Is it stress?
Is it over or under
activity? Is it diet or
exercise? The answers
are as different as the
people who suffer from
the syndrome.

DATA FOR MANAGEMENT

Dr. Joan C. Rogers,
professor and
chair, Department of
Occupational Therapy,
and Dr. Margo B. Holm,
professor, were co-
principle investigators
in a recently-completed
three-year, NIDRR-
funded study to
determine if persons

living with fibromyalgia, when provided with objective data on
their activity level, pain medication usage, and sleep patterns as
well as educated about nutrition and fitness best practices, would
be better able to manage their condition. Hazel Breland, OTR/L,
a PhD candidate in Occupational Therapy, was the research
coordinator.

There were 72 women in the home-based, randomized clinical
trial, all from the Western Pennsylvania area. Most had been
referred by Dr. Terrence Starz, a physician with the University of
Pittsburgh Medical Center. The group was evenly split between
high school and college graduates, and most were in their mid-
to-late forties.

A body monitoring device, a SenseWear® Pro₂ Armband Sensor,
was used to capture physiological and lifestyle data via 11 data
collection channels on the armband. Worn 24/7 on the right tricep
except when bathing, the sensor recorded data including the
number of steps taken, physical activity duration, and energy
expenditure as well as sleep and rest quantity. Pain medication
usage was self-recorded with an event button on the armband.
The intervention group wore the armband continuously for eight
weeks. The control group wore it for the first and last weeks of
the eight-week trial.

According to Breland, the study was designed not just to provide
the researchers with data; the clients needed to have access to it
as well. "Our hypothesis was that if they received daily feedback
on their activity level and medication usage, they'd be better
equipped to correlate their behavior and their symptoms, and
subsequently, better able to manage their condition."

The interactive technology-based intervention was managed
on-line, and those participants who didn't have computer access
were provided a laptop, an Internet connection, and a generic
e-mail account to ensure privacy. Computer training was provided
for all participants. "Some of the participants were apprehensive
about the technology," Breland acknowledges, "but if they were
going to be successful, they needed to be empowered to use the
computer."

In the original program design, two hours were allocated for
computer training, but Breland admits it often took much more.
For her, this was not a problem. "These people were committing
eight weeks of their life to us, so it was up to me to help them,
no matter how long it took."

Breland also helped the participants understand the type of data
being generated by the sensor, and how to manipulate the infor-
mation so that they could get an accurate picture of their activity
level at various times throughout the day. This was particularly
enlightening when it came to sleep; sleep disturbance is a
common problem for fibromyalgia sufferers. "We'd have some
participants who'd say, 'I only get three hours of sleep a night,'"
explains Breland. "Then we'd have them look at the data and it
would indicate that they were asleep or at horizontal rest for 10 to
12 hours. While the data doesn't speak to the quality of the rest,
it certainly offered some surprising insight in terms of quantity."

The participants also completed a detailed Healthy Daily Routine
(HDR) questionnaire in which they were asked to record their daily
activities, the quantity of their sleep, and the time spent in struc-
tured exercise as well as to rate the nutritional value of what they
ate, the quality of their sleep, and their overall physical, emotional,
psychological, and spiritual well-being on a one-to-five scale.

By comparing the sensor-supplied data on activity level with
the quality-of-life ratings recorded in the HDR, Breland says
that the participants began to see associations. "Say for three
days straight they felt great and the sensor recorded four hours
of sustained physical activity, then on days four and five they
felt terrible. They could ask themselves, 'Am I overdoing it on
my good days?' In that case, pacing might help to manage their
symptoms."

At times, she says, participants
overestimated their activity level.
"People think that because
they're up and about, they're
being extremely active. But
the sensor objectified their
activity level. You could look
at the intensity
of the physical
activity, the
total number of
calories burned,

and the activity energy expended. So if someone was doing
household chores and rated themselves as being very active, the
sensor data might indicate that in reality, their energy expenditure
on these chores was low."

Education also was an important component of the study and
again, the computer played an important role. Participants were
encouraged to visit sites that offered information on the syndrome
and tips for managing symptoms, such as those sponsored
by the Mayo Clinic and the Harvard School of Medicine. The
National Sleep Foundation provided tips on getting a good night's
rest. Staying active is particularly important for most fibromyalgia
sufferers, and one of Breland's favorite sites was "Get Fit on Route
66," an interactive fitness program.

SEEING IS BELIEVING

Preliminary data analysis has been completed and abstracts
submitted to the American College of Rheumatology and the
Association of Rheumatology Health Professionals.

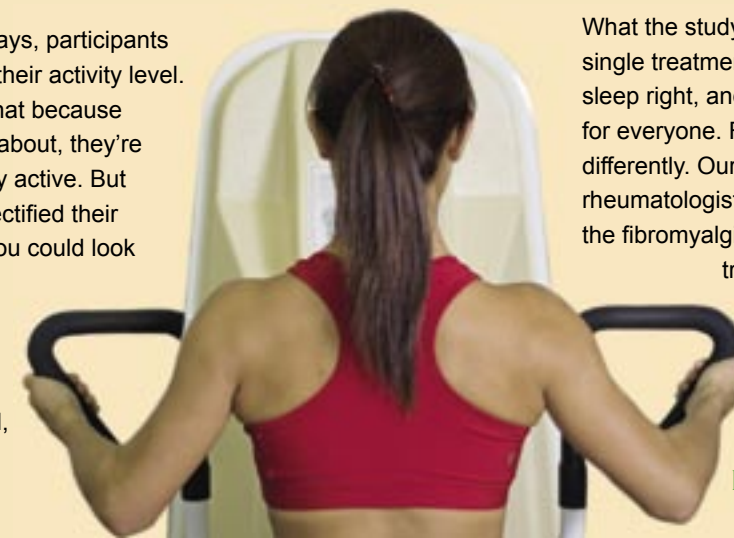
Meanwhile, anecdotal information seems to support the original
hypothesis. "For some participants, the information was revela-
tory," says Breland. "You need to believe change will make a
difference before you change. That's why the data are essential.

"For example, we know that finding the right sleep regimen for
you and your body is essential. As a result of the sleep data,
some changed the time they went to bed at night to ensure a
better night's sleep. Other people realized that if they paced their
day, they'd be better able to manage stress."

Maintaining a healthy diet is critical to symptom management,
and while the sensor did not record caloric intake, the HDR
proved helpful to some in identifying foods that trigger symptoms.
"We know that dairy, citrus, and MSG can be food triggers,"
Breland explains, "but one of our participants discovered that her
trigger was beef. She was feeling particularly bad toward the end
of one week, and when she went back and looked at what she'd
eaten, she realized that for three days straight, she'd eaten beef,
which was not normally a part of her diet. When she stopped
eating the meat, she started feeling better."

What the study has made clear to Breland is that there is no
single treatment protocol. "Yes, you have to eat right, exercise,
sleep right, and pace yourself," she says. "But that's good advice
for everyone. Fibromyalgia, on the other hand, affects everyone
differently. Our hope is that upon completion of data analysis,
rheumatologists will be better able to identify subgroups within
the fibromyalgia population, and then develop individualized
treatment regimes for them."

For more information, contact
Joan Rogers at jcr@pitt.edu or
Margo Holm at mbholm@pitt.edu





The ability to speak is something most of us take for granted. Saying "hello," "good-bye," and "I love you" is as natural as breathing.

Yet an estimated 2.4 million Americans are silenced by disease or injury. Many are children who have never had the opportunity to have their voices heard.

According to Dr. Katya Hill, associate professor, Department of Communication Science and Disorders, roughly half of this population could speak with the help of an augmentative and alternative communication (AAC) device such as that used by Dr. Stephen Hawking, bestselling author of *A Brief History of Time*, whose synthesized voice is almost instantly recognizable. However, it is estimated that only one to two percent of those who could use either a synthesized or digitized voice output device, do.

Hill, who is one of the pioneers in the field and will teach the AAC course, says that one reason for the gap is that until last year, there was no mandate by the American Speech-Language-Hearing Association (ASHA) for students to be taught the technology. "If you were in a university program that didn't offer a course on AAC, then you graduated without even a theoretical basis for prescribing one," she explains.



When Silence Isn't Golden



Dr. Katya Hill

"ASHA did a survey of speech language pathologists (SLP) recently and 60 percent of respondents said that while they have clients who use an AAC, it's usually only one or two clients, especially for SLPs who work in public schools systems. So the breadth and depth of usage is minimal."

Another reason, she says, was the predisposition of many SLPs to focus on natural speech. "When I first entered the profession in the late 1970s, I was working with clients with cerebral palsy. My training had been toward improving their natural speech," she remembers. "In fact, it wasn't that long ago that there was a concern among some professionals that using a device might actually hinder or prevent someone from speaking."

While acknowledging that some parents still believe this myth, Hill says that most professionals now know that voice output never replaces natural speech; it simply augments it. "An AAC system is not going to hinder or prevent improvement in natural speech," she contends. "In fact, many of us have experiences where we have put voice output in front of an individual and seen improvement in their natural speech. The words they were saying with the AAC system were the words they started to speak with their natural voice."

QUANTITATIVE MEASURES

Hill believes that the profession's current emphasis on evidence-based practice, where quantitative data rather than just personal experience drives clinical decision-making, will lead to increased use of AAC and improved outcomes. She was the recipient of two National Institute of Health (NIH) grants for research on the feasibility of language activity monitoring (LAM), and the software tool that resulted is now being used by a number of commercial AAC providers.

The software provides SLPs with 17 summary measures, such as average and peak communication rates. These were not operationally defined prior to her research. "You could do it with a stopwatch or by counting, but clinician A could get a very different rate than clinician B or clinician C," she explains. "Now, with LAM, the timestamp gives you very accurate average and peak rates."

Hill says that LAM is an invaluable tool for practitioners, parents, and users. "We have two goals. We want the most effective communication possible, and we want the client to communicate as fast as he or she can," she says. "To measure speed and effectiveness, you need quantitative data."

She doesn't dismiss the importance of the qualitative approach. "User satisfaction is extremely important, so using social validation measures to determine the perception of improvement is also appropriate."

But, she adds, "That's not numbers. I may think that I'm talking faster, but how much faster am I actually talking?"

Hill is organizing the fourth International Symposium on AAC Evidence-Based Practice at the University of Pittsburgh sponsored by the AAC Institute, a non-profit organization, in September 2006 for AAC stakeholders to discuss issues influencing clinical practice and outcomes.

MORE THAN EASE OF USE

Hill says that quantitative data supports an AAC principle that many clinicians and educators find counterintuitive; namely, that ease of use at first encounter rarely leads to effective use long-term. Hill, who has a PhD in rehabilitation science and technology, says it's a concept engineers immediately appreciate.

"It's more than what looks easy or logical," explains Hill, "it's the underlying process that ultimately determines communications effectiveness."

She cites an example of an adult with a degenerative neurological disease who could benefit from an AAC.

"The client can type, so if you sit him down in front of an AAC with a 'qwerty' keyboard, he can instantly use the device. However, we know from performance data collected over 15 years that spelling is the slowest method you can use to generate communication. Even alleged rate enhancement strategies like word prediction

have been shown to be no faster than spelling. In some cases, word prediction is even slower."

SOFTWARE IS KEY

Hill says that despite the fact that there are over 200 AAC devices on the market, there are only three methods by which language is represented and generated on these systems: alphabet-based, single meaning pictures and symbols, and multiple meaning pictures and semantic compaction.

She says that consumers are often confused by the many hardware choices, and she's frequently asked to help evaluate different devices.

"I just answered an e-mail from a mother of an 8-year-old. At school, they gave him a device that doesn't seem to be working well and now they want to try him on another one. The mom wanted to know which device was actually better. I gave her some guidance on how to compare, but I told her that both devices used the same methods to access language. They were different pieces of hardware, but the software was basically the same."

Continued on page 34



Preparing for the Worst

W.M.D.

Pre-9/11, it was an acronym virtually unknown to most Americans. But in the years since that fateful day, "WMDs" – Weapons of Mass Destruction – have become an inescapable part of the country's political landscape and lexicon.

While the nation has thus far avoided a repeat of the World Trade Center tragedy, experts agree that it is probably not a matter of "if," but "when" we'll face another terrorist attack. And, should the unthinkable occur, first responders will again be on the front lines.

The Center for Emergency Medicine, with its RaPiD-T course, is equipping these responders with the knowledge and skill necessary to make the proper treatment and personal safety decisions when confronting a WMD attack. Using the RaPiD-T system – Recognition, Protection, Decontamination, Triage, Treatment, and Transport – these professionals, who are first on the scene, are trained to appropriately react and respond.

You recognize that a neurological agent has been released. Unfortunately, in the time that it took you to assess the situation, you've become contaminated.

Michael Hahn, an instructor in the Emergency Medicine Program and project coordinator for the RaPiD-T program, describes a scenario where mastery of the protocol would be invaluable.

"You're an EMT who responds to a report of an explosion. Damage appears minimal and initially, victims of the blast appear

unhurt. Suddenly, two people start seizing. Others begin salivating. You recognize that a neurological agent has been released. Unfortunately, in the time that it took you to assess the situation, you've become contaminated."

In this case, Hahn says, the responder has a responsibility to alert police, fire, and other rescue units that are racing to the scene. "You need to stop others from becoming contaminated. You can't have three units arriving in a hot zone and those personnel becoming contaminated as well. You'd suddenly

be down three more crews within the first minutes of the event, with no one immediately available to help the victims."

Ideally, he says, the responder is able to recognize the situation and quickly protect him or herself from contamination. In the situation where recognition comes too late, self-decontamination would be a top priority.

REAL WORLD SIMULATION

The two-day RaPiD-T class uses a combination of lecture, table-top discussions, and hands-on simulation to prepare students for a variety of WMD-related incidents, including explosion, nuclear exposure, biological agents, and chemical/nerve agents. They're also trained to perform while wearing full personal protection equipment (PPE), including mask and gloves, which Hahn says is awkward and uncomfortable but vital. He says that cases of life-threatening illness among some World Trade Center first responders, recently reported in the media, could be the result of improper use of PPE and exposure to vaporized construction materials.

"One problem at the World Trade Center is that many first responders removed their masks at the site and inhaled contaminants," Hahn explains. "What they were breathing was extremely toxic. We're teaching the students the importance of protecting themselves; to know when it's safe to remove equipment."

Hahn's hope is that the program, the only one its kind in the U.S. to offer such extensive training and simulation, will eventually be part of all EMT-Paramedic training. Also, the classes are a junior year requirement for EM program students, and RaPiD-T is part of the Center for Emergency Medicine's continuing education program. The center provides certification and a RaPiD-T uniform patch.

In addition, graduates are given a field guide that they can keep in the cab of their rig. It takes them step-by-step through the RaPiD-T protocol, from how to identify the probable agent based on a visual assessment of the situation, to what type of protective gear to wear. "It isn't about being able to instantly

identify a specific type of agent," notes Hahn. "What we want them to do is recognize general categories. You can treat a general category and make a difference."

PRACTICAL APPLICATIONS

The Center for Emergency Medicine is awaiting certification of the RaPiD-T program from the Office of Domestic Preparedness (ODP). Hahn says this would eliminate one obstacle for those providers interested in taking the class – cost. "ODP certification

would open the door to federal funding, so tuition would be either free or very inexpensive."

But Hahn acknowledges that cost isn't the only hurdle to widespread acceptance of the training. "WMDs and terrorist attacks are no longer top of mind. People are feeling safer. The government is dialing back financing, and some paramedics and EMTs don't even think they need this type of training."

These professionals are being short-sighted, he says. "They think the training is only relevant for a specific, one-time

terrorist related event. In reality, what we're teaching can be used by them every day. We teach them to identify whether something is a WMD event, or simply a HazMat (hazardous materials) incident. Plus, much of what we teach is specific to a type of injury that is caused by something that is related to a WMD, such as insecticide poisoning, the collapse of a trench or a building, burns, or explosion. RaPiD-T can be used in any number of situations."

For more information, contact Mike Hahn at meh35@pitt.edu





Certifying Sports Nutrition

Whether you're an elite athlete or a weekend warrior, proper nutrition can improve performance, prevent injury, enhance recovery, and boost stamina and endurance. In a competitive culture, diet can be the winning edge.

Unfortunately, even the most astute athlete can be overwhelmed by the sheer volume of sometimes contradictory nutrition-related information that is available on the Web and in the media, and there's no shortage of self-proclaimed experts offering to interpret nutrition theory. Virtually anyone can – and does – call himself a sports nutritionist, from the trainer at the gym to the clerk at the health food store to the fitness guru with the book to sell to the toned celebrity making the talk show rounds.

Until now, there has been no way to formally distinguish the sports dietitian from the diet charlatan. Even registered dietitians (RDs) who are experts in sports and cardiovascular nutrition couldn't easily differentiate themselves from their less proficient colleagues. "There were no standards of competency nor were there any meaningful professional credentials," explains Dr. Kim Crawford, coordinator of graduate studies and assistant professor, Department of Sports Medicine and Nutrition.

Crawford and her fellow members of Sports, Cardiovascular and Wellness Nutritionists (SCAN), a dietetic practice group of the American Dietetics Association (ADA), are correcting that deficiency. In the summer of 2005, the Commission on Dietetic Registration appointed 12 SCAN members from across the country to a Sports Dietetic Practice Workgroup to develop the board certification process, including a sports dietetics practice audit and specialty examination. She says the board certification process "will elevate sports dietitians and give them the same recognition as other highly trained RDs who work in specialized fields. Being Board Certified as a Specialist in Sports Dietetics (CSSD) designates that you have the specific knowledge, skills and expertise to be competent in the sports nutrition field."

Crawford says the credential will be an invaluable tool for professionals and athletes alike.

"This is a very hot field," she notes. "Athletes, both professional and amateur, are starving for nutrition advice, so the demand for sports dietitians is skyrocketing. However, the provider pool is muddled by untrained or poorly trained people who are offering advice that is sometimes inaccurate, inappropriate, and maybe

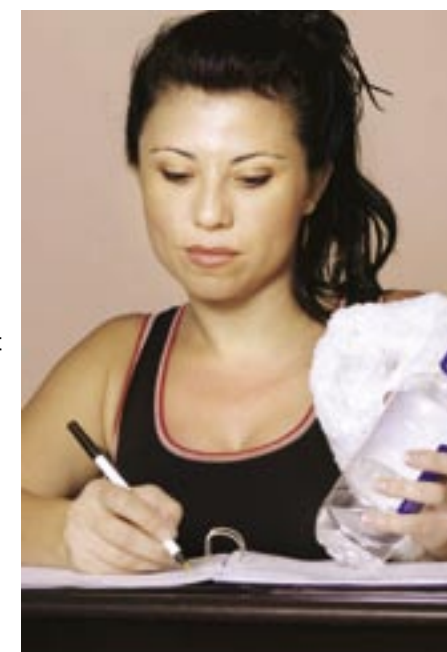
even dangerous. We have a professional obligation to make it easy for coaches, athletes and the sports-loving public to be able to gauge who has the specialized education and experience. They need to feel confident that they're getting safe, reliable sports nutrition guidance."

Crawford says that eligibility for certification will be based on both education and experience. "This an extremely sophisticated field, with a growing body of evidence-based research," she explains. "An undergraduate degree is no longer sufficient for the professional working in the field who wants to keep pace with the expanding demands. For instance, here at SHRS, we offer a Master of Science Degree with an emphasis in Wellness and Human Performance. It is designed for students seeking graduate

training to develop knowledge and skills related to nutrition and exercise in maintaining and improving health and physical performance."

SCAN is partnering with the ADA's credentialing agency, the Commission on Dietetic Registration (CDR), to finalize the credentialing process. The target launch date for the first examination for board certification as a CSSD is Summer 2006. The certification will be in effect for five years before reexamination is necessary.

For more information, contact Kim Crawford at kcrawfor@pitt.edu





Pittsburgh is world-renowned for its steel, its skyline, and its smoky past. Its football team is the world champion. Its health care is world-class. And, of course, its ketchup is the world's favorite.

Pittsburgh is also making its global mark in a field that may be lesser known, but no less important. Wheelchair technology.



Dr. Rory Cooper and his team at the Human Engineering Research Laboratories (HERL) are revolutionizing wheelchair design and production. Over the past dozen years, HERL has grown from a single lab with a single grant and a staff of two graduate students, to eight laboratories, 50 active clinical studies, over a dozen investigators and a team of engineers, machinists, clinicians, researchers, graduate students, and medical interns.

Innovation has led to technology transfer and commercialization. Several years ago, the IP Management Group was created to secure business partners interested in licensing or commercializing the technologies. The first success came in 1999, when HERL and Three Rivers Holdings, LLC received their first tech transfer grant for the Smart Wheel™, an instrumented wheelchair wheel that collects data for use in propulsion analyses. A second grant to commercialize the technology was awarded in 2002.

A similar route was taken with the Natural-Fit™ hand rim, which replaces the conventional round metal tubing found on most chairs with a smooth, anodized aluminum oval with an attached thumb guard that prevents fingers from being caught in the wheel's spokes. Both products are sold under Three Rivers Holdings' OUT-FRONT™ brand.

The Manual Wheelchair Datalogger, which was developed to track the usage of manual wheelchairs and for recording user activity, is now in use here in the U.S. as well as in Australia and Columbia. The data logger is a small, self-contained device that attaches to the wheel of a manual wheelchair and over multiple months, records distance traveled, speed, continuous travel, and the times when people are active. It can help to track or identify patterns of usage and levels of activity.

While sales of these products have been modest when compared to mass market merchandise – there have been roughly 25 Smart Wheels sold – Cooper and company are confident of the commercial promise of the current crop of new products and prototypes

Here's a preview of several of them.



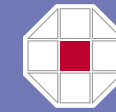
The India Adult Manual Chair

There are roughly 10 million potential wheelchair users in India. This lightweight but durable wheelchair, developed in conjunction with the Artificial Limbs of India Manufacturing Company (ALIMCO), can be manufactured in India for about \$150, putting it within reach of most users. An affordable U.S. version is under development.



The Smart Walker

This mobility device was designed specifically for older people living in long term care facilities. Not only does it provide support like a standard walker, it also features intelligent navigation technology. AT Sciences will be marketing the product.

**The Collapsible Wheelchair**

Designed for travelers, the wheelchair, when folded and wheels removed, fits in a standard airline overhead bin. Re-assembly takes minutes. Three Rivers Holdings will be marketing the product.

**Pediatric Wheelchair**

Another joint ALIMCO product, the lightweight pediatric wheelchair features a back that tilts and reclines and a seat that can be raised, lowered and lengthened. The pediatric wheelchair is being commercialized by Three Rivers Holdings for sale in the U.S.

**The Lever Wheelchair**

An efficient and practical alternative to traditional hand rim-driven chairs, the lever drive wheelchair is being commercialized by Green Technologies.

**The SMART Power Assist Module**

Designed for users with cognitive or vision disabilities who wish to travel independently, the module's sensors detect and alert the user to obstacles and drop-offs. Versions of the module can be used with power-assist and electric wheelchairs. AT Sciences will be marketing the product.

**GameCycle™**

Already making its mark in the market, the GameCycle™ is part exercise cycle, part videogame. The GameCycle pairs hand motion with a Nintendo GameCube™, enabling users to get an upper body workout while guiding a car through a race course.

A GameCycle is in use at Walter Reed Army Medical Center in Washington, DC.

GOING GLOBAL

The Nyakahanga
Hospital is in the Karagwe
District of Northwest Tanzania, midway
between Lake Victoria and the Rwandan border.

Like much of Africa, this region is plagued by a host of diseases, most notably AIDS and malaria. The hospital, the sole medical provider to the 400,000 people living in the region, is under-stocked and understaffed. There are no physiotherapy services available, so villagers with cerebral palsy, spinal cord injuries, paraplegia, and quadriplegia receive only the most basic of medical care.

- It is here in this rural mountainous region where Melissa Buss, a junior in SHRS's undergraduate Rehabilitation Science Program, will be spending her summer. Buss, who is looking to a career in international physical therapy, will spend half of her time doing AIDS-related demographic research and the balance assisting a young man from the district who is providing rudimentary physical therapy services while in training at a university in Kilimanjaro.

- Buss is one of a growing number of SHRS faculty and students who are extending the school's reach far beyond U.S. borders.

While some trend toward xenophobia, SHRS embraces both demographic and cultural diversity. It has developed a community of scholars that confidently pursues an inclusive international agenda.



FACULTY ON THE MOVE

It is not surprising that the faculty of a school whose departments consistently place near the top of the *U.S. News & World Report* rankings would be in demand by colleges and universities around the globe. As Dean Cliff Brubaker has so aptly pointed out, these rankings “reflect the high regard for our faculty by their professional colleagues.”

Brubaker himself may be the school's most frequent flyer. He travels a least once a year to Hong Kong, where he serves on a number of advisory panels and committees at the Hong Kong Polytechnic Institute, and his trips to India with Dr. Rory Cooper resulted in a joint venture agreement with ALIMCO (Artificial Limbs of India Manufacturing Company) and the development of the India Adult Manual Chair. This lightweight, affordable wheelchair will help nearly 10 million Indians access essential assistive technology. Brubaker is in discussion with officials in Saudi Arabia for a similar project.

Cooper – also well-traveled – is a frequent guest lecturer on campuses worldwide. Late last year, he was named an adjunct professor at Xi'an Jiaotong University in China. The Rehabilitation Science and Technology Department, which he chairs, hosts numerous international conferences and workshops and

co-sponsors the International Seating Symposium. This biannual event typically attracts over 900 researchers, consumers, manufacturers, and service providers for information sharing on mobility and seating research, practices, and products.

The school is keenly aware of the need to cultivate a pool of future practitioners who can provide care that is both culturally and resource appropriate, both here and abroad.

Dr. Walt Stoy and his team in the Emergency Medicine Program are seasoned globetrotters. They have worked with organizations and governments from Iceland to Ireland, Qatar to Kosovo, to create or enhance EMS training programs. Similarly, Health Information Management Department faculty lend their expertise to the governments of the Arab Republic of Egypt, China, Columbia, India, Italy, Greece, and Taiwan.

THE ASIAN CONNECTION

SHRS has particularly strong connections in the Far East.

Associate Dean Dr. Kate Seelman is a frequent visitor to China where she has been a keynote speaker at several international conferences. Dr. Margo Holm, professor, Department of Occupational Therapy, taught recently at two universities in Taiwan, and at the behest of that country's Occupational Therapy Association and Department of Health, made several presentations on managing late-life depression. Dr. Katya Hill, assistant professor, Communication Science and Disorders, just returned from a two-week teaching stint in Japan, with a focus on augmentative and alternative communication.

A little over a year ago, Dr. Catherine Palmer, associate professor, Department of Communication Science and Disorders, spent a summer in China, where she taught an advanced course in audiology at Sichuan University. Audiology is a nascent discipline in this country of over a billion people, and she says it was “fascinating to be in a place that hasn't yet developed the profession and watch it start to grow.” Palmer has stayed in contact with her Chinese colleagues and may collaborate on research in the future.

SHRS also plays host to a number of students and student groups from Asia.



The Center for Emergency Medicine receives grants from the Korean government to train its EMS students here in Pittsburgh. Likewise, the Department of Sports Medicine and Nutrition hosts biannual workshops with the Japanese Athletic Trainers organization.

Undergraduate students from Tokyo who visited the department's Southside training facility have returned to their native country inspired by the possibilities. Shingo Nakai, a graduate student at Waseda University, marveled, “There is nothing comparable in Tokyo now, but seeing these facilities makes me believe there will be. It's only a matter of time.”

Yoshiaki Tsuboyama, an undergraduate at the Juntendo University School of Sports, concurred. “This is the future of Japan. I have come here to learn so I can help make the change.”

THE NEXT GENERATION

Like their Japanese counterparts, students like Buss recognize that gaining a global perspective enhances their value as practitioners and as agents of change. “I believe that this international experience will give me a broader view of health,” Buss explains. “I am very excited to learn about the culture and how that affects all aspects of medical practice. Hopefully, that will translate into a greater understanding of the power and importance of culture in medicine – that there are many different yet correct ways to approach medical practice. This will enable me to help a wider variety of people enhance their quality of life.”

Developing this cultural sensitivity, even at the undergraduate level, is a priority at SHRS. The school is keenly aware of the need to cultivate a pool of future practitioners who can provide care that is both culturally and resource appropriate, both here and abroad.

This initiative is being led by Dr. Janice Vance, an assistant professor and academic advisor in the Department of Communication Science and Disorders, assisted by Amy Evans, undergraduate advisor in Rehabilitation Science. Vance, who is a native of Northern Ireland, has held positions in the University of Central England and the University of Cape Town. She was recruited to the university by the department's chair, Dr. Mick McNeil, another frequent international traveler, who was guest lecturing at the South African campus.

Thanks to her multicultural experience, Vance is acutely aware of how students will benefit from being exposed to the different models of care and service available in other countries, and how they are impacted by economic and cultural factors. “We want our students to be

exposed to other models of care,” she explains. “At minimum, it offers them a broader perspective so that they can better critique the U.S. system. Longer term, if they move into positions where they affect policy change, they'll have a basis of comparison.”

Vance will be leading a group of Communication Science students on a two-week integrated field trip to Belfast and Dublin, Ireland. She is funded for this trip by a grant from the Center for Western European Studies, part of the University Center for International Studies. Evans, who has a master's degree in public policy and management and has a deep interest in intercultural issues, will accompany her on this trip to help plan future initiatives involving other undergraduate programs in the school.

Their plan is to look at two health care systems: the British model followed in Belfast, and Dublin's Irish model. The students will be expected to compare and contrast the two distinct models with the health care system in the U.S.

“We want to empower students to think about global issues,” says Evans. “We want them to see different systems and structures; to understand how concepts like access and reimbursement are defined differently in other cultures. I expect it will be a bit of an eye opener for them.”

Vance and Evans agree that developing cultural competence must be a critical part of a student's education. “We are producing providers who will be dealing with diverse populations,” Vance emphasizes. “They will not simply be dealing with different delivery models. They will be dealing with different cultures and resources. We want our students to understand that they are world citizens.”



the Real World

IVAN IVANOV, ATHLETIC TRAINING

When Ivan Ivanov arrived in the United States some nine years ago from Bulgaria, he never dreamed that one day he'd be hoisting the Lombardi trophy. While an avid athlete, he knew little, if anything, about football. Soccer was his game.

But four years in Aspen, Co., during the Elway years whetted his appetite for the sport, and a 2004 trip to the Fiesta Bowl with the Pitt Panthers gave him a taste for gridiron glory.

Then, thanks to a year-long athletic training internship with the Pittsburgh Steelers during their championship season, Ivanov was standing on the sidelines at Ford Field during Super Bowl XL as the Steelers defeated the Seattle Seahawks. The trophy was his, at least for a Kodak moment.

"Amazing" is how Ivanov describes his Super Bowl experience. "We were in Detroit for the week before the game. We had practice every day, but then there were the parties, dinners every night. You felt like you were part of the team."

Ivanov's road to Detroit officially began in May 2005, but really kicked off during the Steelers training camp at Saint Vincent College in Latrobe, Pa., in late July. From that point through the season, it was virtually a seven-day-a-week job. "During the

week, I would have class in the mornings, and then come to the training facility," he explains. "Saturday would be spent getting the players ready, and then on Sunday, I'd arrive four hours

before the game." Ivanov traveled with the team throughout the season, only missing two away games because of a conflict with his class schedule.

Much of his work during the season was spent preparing players for the rigors of the game. "We'd do taping, bracing, and stretching," he says. "We'd evaluate them for injuries and assist with their rehab. Our goal was to keep players in the game, and for those who were injured, get them back on the field as quickly as possible."

Now that the season is officially over, Ivanov is assisting athletic trainer Ryan Grove, himself an SHRS

alumnus, in the rehabilitation of players who were either injured during the season or who had surgery following the Super Bowl victory. He says that the most common injuries he sees are to knees, ankles and shoulders, and it is his job as an athletic trainer to help tailor the rehabilitation to the position played.

"We have to be able to reproduce game situations," explains Ivanov. "We need to be sure that the player can do what he needs to do on the field pain-free."

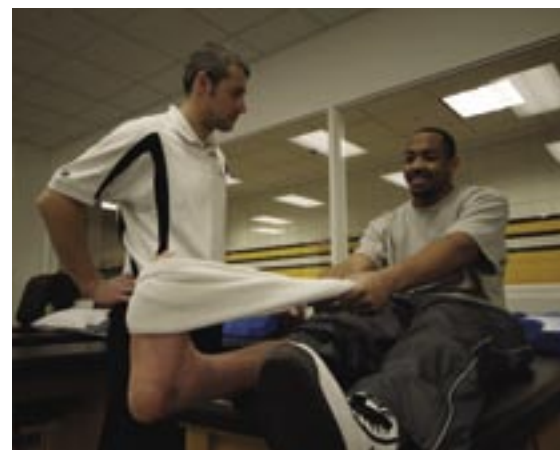
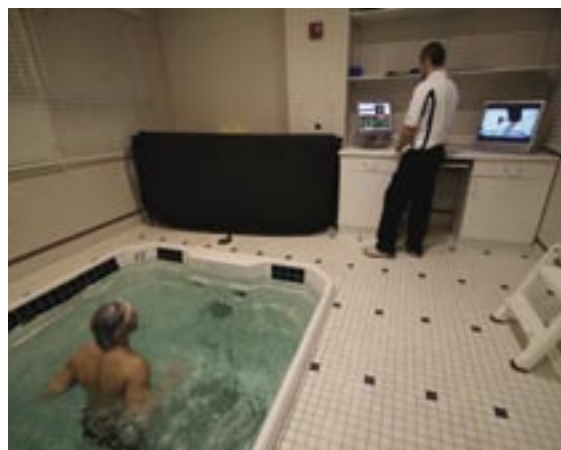
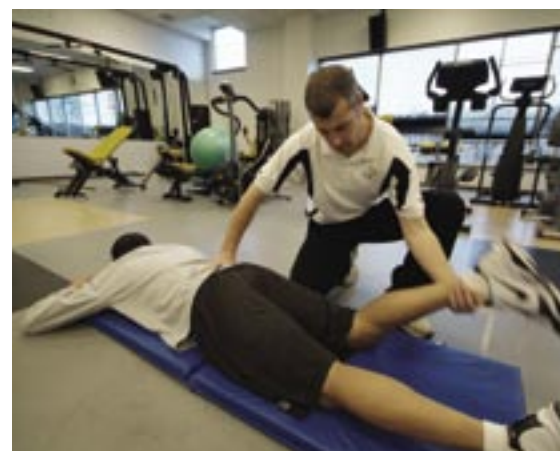




For a player like right tackle Max Starks, an offensive lineman who underwent post-season knee surgery and who is shown here doing strength training and receiving electro stimulation, this means motion-specific drills such as side steps. Rehabilitation for safety Russell Stuvaints, who tore his ACL during a game in Baltimore and is seen using the underwater treadmill, requires a focus on flexibility and full range of motion. Linebacker Andre Frazier, whose season ended in Denver with a high ankle sprain

and fractured fibula, is initially concentrating on restoring flexibility to his injured ankle. Later, he will work on movement in all directions as well as quick cuts.

Ivanov, a self-described ski bum who graduates in April, has applied for a fellowship in Vail, Co., where he'd work with the U.S. Ski team. If his application is successful, he says we can expect big things on the slopes next year. Jokes Ivanov, "I've never had a losing season."



Advancing Personal Health Records

It is one of the most massive undertakings in the history of health care: the creation of electronic health records (EHR) for every American. The cost has been estimated at \$10 billion and it could take over a decade for every hospital and doctor's office to convert reams of paper into a portable data stream that is accessible to physicians and patient alike.

But for Dr. Bambang Parmanto, assistant professor, Department of Health Information Management, the EHR is only the first step. His ambitious goal is "to record everything in life that is related to our personal health" and he's using a \$50,000 developmental research grant from Microsoft Corporation to design and develop the schema for MyHealthBits, an advanced personal health record system (PHR).

"We call it the 'holy grail,'" laughs Parmanto. "It would be a comprehensive health management tool that would make the user an active participant in his own health care."

Parmanto says that most PHRs available today are fairly narrow and static. The user can access a limited number of medical records – what Parmanto describes as a "small slice of the provider's medical records" – as well as post personal health data.

What Parmanto envisions is a dynamic PHR. "We're looking at a system that is comprehensive and accessible anytime, anywhere," he explains. "It would be portable, it would support information exchange between the patient and the provider, and it would be a resource that patients could use to gain a better understanding of medical conditions and recommendations for improving their health."

Parmanto says that his version will retain the traditional PHR elements, but with some dramatic differences. "Consumers could create a virtual library of relevant Web pages they've read," he explains. "They could personally track vital health information, and keep a log of on-line communication they've had with their providers."

"Ideally, the PHR would contain all patient records – including those from the primary care physician and specialists. A multimedia capability would enable both physicians and patients to access not only the traditional X-rays and MRI images, but also personal multimedia information such as phone conversations or Web conferencing between the patient and the providers."

In addition to self-recorded information, users could wear a monitoring device so that data on blood pressure, pulse rate, and glucose levels could be recorded and monitored. "For instance, I'm a regular jogger," notes Parmanto, "so my PHR would have data from my pedometer so I'd know how many steps I took, how long I ran, and what my pulse rate was throughout my run. It would be an on-line exercise journal that both my doctor and I could access."

An important feature of the advanced PHR would be access to customized health information resources. "If you had diabetes, for instance, the system would send you all the latest information on the disease," Parmanto explains. "You would get suggestions for managing the condition, such as diet and exercise. You'd get the information you need so that you could be the co-pilot with your physician in managing your care."

Parmanto says some providers have already begun moving in the direction of a more advanced PHR. "The Palo Alto Medical

Foundation has a PHR that is not as deep as what we're envisioning, yet has met with some success. Patients particularly like the timely access to test results. Twenty percent of the participants who used the PHR say they changed their behavior as a result of the information that was available to them."

He also is aware that insurance carriers are encouraging

employers to look at PHRs as a tool for cutting health costs. The idea is that if employees are more aware of their personal health history, they'll make better lifestyle choices and thus improve wellness.

Parmanto's research is focused exclusively on creating the technological infrastructure to support the advanced PHR, but he acknowledges there are a number of privacy and security issues that must be addressed before PHRs gain widespread acceptance.

"Privacy could be the Achilles heel of the PHR," he says. "Not only must the site where the data are housed be extremely secure, the patients must have confidence that their data are confidential. Ultimately, it must be up to the patients to determine what information they want to share, and who they want to share it with. We're building that provision into our system."

Parmanto will present initial results of his work at the American Medical Informatics Workshop in May, then again in July at a Microsoft Faculty Summit. No deadline has been set for completion of the project.



When Silence Isn't Golden continued

She says that many SLPs don't understand this principle. "If they're not seeing the student make the kind of progress they expected, they'll try a new device, something that looks slicker or interfaces with the computer. They don't think to look at the language methodology being used."

WHAT IS EFFECTIVE?

Another difficulty is reconciling the often differing expectations of the SLP and the parent.

"If I'm an SLP in the school system and my mandate is to provide special education, then my job is to make sure that I'm providing communication that is appropriate to meet the demands of the curriculum," Hill explains. "Effectiveness for me is a system that will allow a child to answer questions about the planets or participate in circle time."

"Parents, on the other hand, are looking at a broader environment that requires different types of communication. They want their children to talk to grandma and grandpa on the phone. They want them to go to Sunday school; to attend a Boy Scout meeting. It's here that I often see a disconnect. The need of the SLP to ensure inclusion in the classroom is far different than the need of parents who want normalcy for their child."

WHY WE COMMUNICATE

Hill says that it is imperative that SLPs who are working with AAC understand the importance of interactive communication. "They need to understand how people want to use language," she explains. "It's very motivating for a child to be able to access vocabulary that lets him say, 'I don't like this,' or 'give me that.' Some little kids get empowered very quickly when they realize they can say 'bug off.'"

And sometimes, she says, the motivation is much simpler and sweeter.

"I brought students out to a farmhouse in Union City to see a gentleman in his late 70s who was in the final stages of ALS and couldn't speak. He lived with his wife, and she was upset that he could no longer communicate his needs. The students questioned whether someone so old would feel comfortable using the technology."

"As I was programming the man's device, I asked his wife if there were any words or phrases that he'd frequently used; the types of things that if someone heard him saying it, they would say, 'Oh, yes, that's Tom!'"

"She thought for a few minutes. 'Starting when we were young and courting, he always called me 'darling,' she remembered. 'Can that go in that device?'"

"It could, and in his final days, this elderly man was able to express one of his greatest needs; to once again call his wife 'darling.'"

For more information, contact Katya Hill at khill@pitt.edu

Doctor of Clinical Science (CScD) in Speech Language Pathology

A new clinical doctorate in Speech Language Pathology is now being offered in the Department of Communication Science and Disorders. The Doctor of Clinical Science (CScD), the first of its kind in the country, provides new and continuing graduate students and returning speech-language pathologists (SLPs) with advanced academic course work, clinical skills, case-based learning experiences, allied discipline rotations, and extensive mentored clinical practice. Graduates will have fulfilled all requirements for certification by the American Speech-Language-Hearing Association (ASHA) as well as Pennsylvania state licensure.

According to James Coyle, instructor, Department of Communication Science and Disorders, it was the growing complexity of the field coupled with the shift to a more evidence-based practice that drove the development of the clinical doctorate. "The current scope of practice and breadth of knowledge associated with the practice of speech language pathology far exceeds that which can be acquired with the current master's degree entry requirement," says Coyle. "There has been substantial growth in the research and literature, and we're now seeing types of patients and disorders that weren't even part of the practice when entry level requirements were set in the 1960s."

Entry level post-baccalaureate students may enroll in the CScD program with the secondary objective of a Master's degree, earning both degrees over the course of study. Students with master's or PhD degrees in Speech Language Pathology with or without a completed clinical fellowship year may apply for advanced academic and clinical standing with commensurate reduction in the duration of the program.

Coyle says that at the time of graduation, students will have completed over 2000 hours of clinical contact as well as 15 weeks of medical and related professional rotations.

"This intensive and innovative program is intended to prepare the next generation of medical speech-language pathologists as leaders in their clinical specialties," he explains. "Our graduates will be autonomous, independent professionals who have demonstrated leadership and excellence in providing the full spectrum of assessment and rehabilitative services associated with the practice of medical speech pathology."

Applications to the Doctor of Clinical Science Program in Speech Language Pathology can be downloaded at www.shrs.pitt.edu or you can request an application by phone: 412-383-6540, or e-mail: samuels+@pitt.edu



Dialogue A Conversation with Judith E. Heumann

Judith Heumann is the World Bank's first advisor on Disability and Development. A pioneer in the disability rights movement, Heumann played a key role in developing the legislation that led to the creation of independent living centers and she co-founded the World Institute on Disability. She was assistant secretary for the Department of Education's Office of Special Education and Rehabilitative Services in the Clinton Administration.

Heumann was the featured speaker at the university's second annual Thornburgh Family Lecture on Disability Law and Policy.

Q Your position at the World Bank affords you a global perspective on disability issues, particularly in developing nations. How are these countries tackling the challenge?

A It's important to remember that disabled people all share common problems, no matter what the country. Certainly, opportunities and access may differ, and there are cultural nuances that exist that must be dealt with by the local disability community, but if the local group is empowered, they know what to do. I've seen amazing things in my travels ... a willingness to work hard, to be very creative, to do more with less. In rural India, for example, a local group built mud and rock ramps to make their community center accessible. In Pakistan after the earthquake, the independent living center sent out trucks to the affected areas to offer assistance to people with disabilities. In South Africa, disabled people are now constitutionally mandated to part of the government at all levels. This requirement was driven by the disability community.

Q You were instrumental in shaping disability policy here in the U.S. What advice do you give the disability community leadership in these developing nations?

A First, it is incumbent that they work with their governments, just like we did. You need access to the political process to affect change. Second, learn from what we did wrong. If we could do it all over here in the U.S., we wouldn't do it the same way. If you look at the ADA and Section

504 and education legislation, these were all civil rights add-ons. It would have been much better if issues like education and teacher training had been meaningfully integrated at the onset. In many of the countries I've referenced, they're just now developing constitutions and legislation. They have the opportunity to build disability rights in at the beginning. I tell them, 'If you have a clean slate, do it right the first time. We couldn't. You can.'

Q Billions of dollars are being spent each year in third world countries to address poverty and disease. Are the needs of people with disabilities being adequately addressed?

A There will always be competing priorities for limited resources and you can legitimately argue that if you can eradicate malnutrition and certain diseases, you can reduce or prevent certain disabilities. But it's a mistake not to put money into programs to help people who already have a disability. No one is arguing against the need to eradicate certain types of diseases. But if someone has had malaria or tuberculosis, they are going to be affected by it for the rest of their lives. Why not invest in making them productive. Likewise with polio. There has been a huge campaign to eradicate the disease, but there are at least 20 million polio survivors today. If you travel in Africa or Asia, many of the beggars you see on the street had polio. It would have been a small investment to assist them when they were first diagnosed, to get them braces or surgery; to get the kids into school. So it isn't a matter of either disease or disability. We need to fund both.

Q Do you see a global disability community developing?

A Absolutely. And of all the countries in the world, surprisingly, the United States is the least active in it. We have this mindset that we have much to teach, but little to learn. In reality, if we don't understand the context in which people live, what we have to teach could be quite inappropriate. Too often, we think that solutions must be first world solutions. This isn't always the case. In India, for example, they have very little money yet the local disability community is serving over 100,000 disabled people – getting them registered, getting them birth certificates, so that they would have access to transport vouchers and other government services. In areas where the government doesn't provide support, such as employment, they're helping them find work or become self-employed. When people have different challenges, they look for different ways of getting money. We could learn a lot from what's happening in these countries.

Q What role can the University play in this global disability community?

A You should view everything you do through a disability lens. For example, when you're recruiting international students, look for men and women with disabilities. If they can meet the entrance criteria, this is the population you want to reach. When the chancellor and faculty travel around the world, make sure that disability is part of their vocabulary. When you create brochures and other materials, include photos of students with disabilities. You want to send the message that disability is a normal part of university life.

A LEG UP



You can ...

- support the School of Health and Rehabilitation Sciences or program of your choice
- provide an income stream for life for you and/or a loved one
- enjoy certain tax benefits
- leave a lasting personal legacy

... all through a planned gift to the University of Pittsburgh.

How can you provide a leg up to students? With a charitable gift annuity to benefit the School of Health and Rehabilitation Sciences, you can provide income for life for yourself and a loved one, receive a substantial charitable income tax deduction, and have the satisfaction of knowing that you are ensuring that our proud tradition of educating talented and caring therapists, clinicians, and researchers continues.

For more information, contact Kathleen Helling, planned giving director, at 412-647-4220 or hkathleen@pmhsf.org.



University of Pittsburgh

School of Health and Rehabilitation Sciences

www.giveto.pitt.edu

University of Pittsburgh
School of Health and Rehabilitation Sciences
4031 Forbes Tower
Pittsburgh, Pennsylvania 15260

Change Service Requested

Nonprofit Org.
U.S. Postage
PAID
Pittsburgh, PA
Permit No. 511