

FACETS



University of Pittsburgh
School of Health and
Rehabilitation Sciences
Summer 2004

Special Focus:
The Aging of America

FACETS

School of Health and Rehabilitation Sciences — Summer 2004 — Contents

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Growing with Age



This edition of *FACETS* is devoted to issues of aging. I recently attended a presentation by Dr. Walter Frontera, Chair of Physical Medicine and Rehabilitation at Harvard University. Dr. Frontera provided a particularly enlightening presentation on exercise, aging, and muscles. In his opening remarks, he noted that Earth has been populated by 40 billion hominids over the approximate two million years since the point at which they are recognized as having differentiated into the species *Homo Sapiens*. Twenty percent of all such hominids who have ever lived are alive today. This observation adds a sense of urgency and calls to mind quite an array of pending and potential problems that must be confronted.

It seems apparent that this logarithmic expansion of the species will continue in the absence of a cataclysmic event. This natural expansion is paralleled by continuing progress in science and medicine that promises regeneration of tissue and organs with further expectations for extended life span. The number of people who will require rehabilitation seems to be expanding exponentially. While this would appear to create a never-ending and ever-expanding market and need for rehabilitative services, the source of funds to pay for these services is not presently evident.

It would seem unrealistic to think we can adequately address predictable future rehabilitation needs with current approaches, practices, and technologies. The problems are complex. It is likely that solutions will be multi-dimensional and multi-disciplinary. The articles in this issue of *FACETS* provide a sense of the problems and prospective solutions.

With kindest regards,

Clifford E. Brubaker



ACCESS

Dr. Kate Seelman

No single group will have a more significant impact on the careers of our graduates than the aging Baby Boomer generation. As educators, we must prepare these students to deliver the highest-quality care in the face of what will be unprecedented demand.

While our students will be on the front lines of service delivery, government institutions at the federal, state, and local levels will be required to provide the infrastructure and the financial support to meet the burgeoning senior population's long-term care needs. Pennsylvania, which is already confronting the leading edge of the aging boomer tidal wave, is making significant strides to address the challenge.

I've asked Nora Dowd Eisenhower, Secretary, Pennsylvania Department of Aging, to discuss how the Commonwealth is preparing.

The Commonwealth of Pennsylvania faces significant challenges as it prepares to cope with an influx of Baby Boomers who are rapidly approaching retirement age.



Nora Dowd Eisenhower

An estimated 76 million Baby Boomers will begin turning 65 years old in just seven short years from now. Recognizing this, the Department of Aging is undertaking a number of important steps designed to enhance and improve the types of services that will be available to older Pennsylvanians in the future.

One of the most difficult challenges we face is rebalancing our long-term care system. Whenever I am asked to speak publicly, I often ask how many audience members look forward to moving into a long-term care facility. Rarely are any hands raised.

This is confirmed by what we are hearing from the people we serve. A growing number of older consumers and adults with physical disabilities would

prefer to remain in their own homes for as long as possible. Fortunately, not only is this what consumers want, it is also a more cost-effective option for government.

In Pennsylvania today, 82 percent of long-term care funds support facility-based care, with only 18 percent supporting services to people in their homes, such as the services provided to older adults through the Department of Aging. It is estimated that for every five dollars expended in facility-based care, three dollars can be saved by appropriately providing services to the same consumer in his or her home.

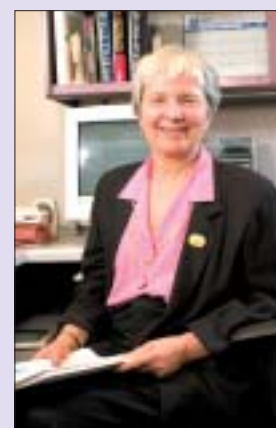
We are also pursuing other initiatives to better meet consumers' needs with existing resources. At the direction of Governor Ed Rendell, the Department of Aging is partnering with the Departments of Health and Public Welfare and the Office of Health Care Reform to enable meaningful consumer choice and increase the availability of home and community-based services.

Through our "Community Choice" demonstration, we have revised our intake and enrollment processes to initiate an individual's assessment for home- and community-based services within 24 hours of their scheduled discharge from a hospital or nursing facility, and begin services within 48 hours.

Given the demographic realities of an aging population in Pennsylvania, the growing demand for long-term support services, strong consumer preference, and the cost-effectiveness of community-based in-home services, it is essential that the Commonwealth shift a greater proportion of its resources to these services.

As we keep an eye toward the future, we must also be observant of the changing "face" of our older population. Between 1990 and 2000, Pennsylvania's total older minority population grew by 14 percent; at the same time, our overall population increased by only three percent. During that same period, the number of Hispanic elders grew by 42 percent and the number of Asian elders increased by an incredible 115 percent.

While our growing diversity is a welcome trend,



Kate Seelman

giving

it also presents a unique challenge. Social service programs and outreach efforts must be responsive to the needs of minority communities. We cannot assume that the approaches and messages that we use for the majority population will be accepted or understood by minority communities.

Ensuring a high quality of care for all older adults is a priority for the Department of Aging. Toward that end, we support the creation of a higher standard for assisted-living care and licensure of assisted-living residences. This will improve staff and administrator qualifications and training, strengthen enforcement, and provide an affordable continuum of care by allowing the use of Medicaid Home and Community Based Care funding in a residential environment.

We also recognize that a qualified workforce is an essential component of ensuring the highest-quality care for older adults. Direct-care workers are central to our goal of allowing people to remain independent for as long as possible.

We have recently awarded a third round of grants to support initiatives designed to strengthen the direct-care workforce across the state. We have also awarded funding to demonstration projects that improve recruitment and retention in the direct-care workforce and promote the importance of this profession. The grant initiative is also funding the development of a Direct Care Worker Association that will provide resources, support, and professional affiliation for these workers.

As you know, the most important aspect of providing comprehensive and quality care is the human touch. We must never lose sight of our mission to treat all older adults with the same compassion, dignity, and respect with which we would hope to be treated as we grow older. I know this is intrinsic to the mission of the School of Health and Rehabilitation Sciences.

I am extremely grateful to Dr. Seelman for affording me the opportunity to share this important message with you. Working together, we can ensure that our Commonwealth will continue to be one of the best places in which to live, work, retire, and enjoy our later years.

As the new Director of Development for the University of Pittsburgh School of Health and Rehabilitation Sciences (SHRS), I consider myself one of the School's newest students. Although I'm not enrolled in a particular course of study or attending formal lectures or clinics, I'm learning about:

- Programs that are creative, relevant, and nationally recognized;
- Research that affects every walk of life and every age category;
- Faculty who are honored and recognized for doing outstanding work — not once or twice in the course of a career, but on a consistent basis;
- Students who have the compassion to work intimately with people in need and who desire to be the best they can possibly be; and
- Alumni and friends whose interest and generosity enrich all of these efforts.

Imagine the dollars needed to support student scholarships, faculty enhancements, research, equipment, and acquisitions! These needs are real and ever-growing, and we greatly depend upon our alumni and friends to play a role in the ongoing development of our School. By working together, we can manage difficult tasks and accomplish marvelous things.

Please make your gift to SHRS or a favorite department or program. A gift can be assigned for general use or designated for a specific purpose. It can be large or small. Often people think their small gift couldn't possibly make a difference. Please remember that small gifts add up in a variety of ways. Picture your small gift combined with others. The end result could be most impressive. You may also want to consider the option of making a pledge. Through regular payments toward a pledge, you could end up making a sizeable contribution to a particular area of interest. Finally, you might also want to explore the possibility of planned giving. Planned gifts may take the form of a charitable remainder trust, charitable gift annuity, life insurance, pooled income fund, or bequest.

Many giving options exist, and the benefits to the donor are great — not to mention the benefits to your alma mater. While students are with us only a few short years, when they graduate they become a part of the same life-long SHRS family to which all of our alumni and friends belong. It's truly my pleasure to now be a member of the family! Please be in touch.

If you would like more information about giving, please contact me by telephone at (412) 383-6548, by e-mail at pkummick@shrs.pitt.edu, or by mail at 4031 Forbes Tower, Pittsburgh, PA 15260.

Sincerely,



Patty Kummick
Director of Development

More High Marks for SHRS from *U.S. News & World Report*

Four graduate programs of the University of Pittsburgh's School of Health and Rehabilitation Sciences (SHRS) have earned top spots in *U.S. News & World Report's* 2005 annual graduate school ranking guide. The Departments of Physical Therapy, Communication Science and Disorders, and Occupational Therapy all rose in the rankings since the last time they were evaluated by the magazine in 2000 and 2001.

The Department of Physical Therapy finished third among physical therapy departments across the nation, surpassing other institutions that shared the third position in 2000.

Two programs under the Department of Communication Science and Disorders saw dramatic advances in their rankings from 2000 — Speech/Language Pathology improved to 10th from 18th, and Audiology moved up to 13th from the 23rd spot in 2000.

The Department of Occupational Therapy, ranked 14th this year, is up from 17th in 2001.

"We are pleased with our ratings in *U.S. News* and believe that they reflect a high regard for our faculty by their professional colleagues, as well as an acknowledgement of our faculty's exceptional work over the past few years," said Dr. Clifford E. Brubaker, Dean of SHRS. "These rankings appear to be the highest in their respective disciplines among Pennsylvania colleges and universities."

The *U.S. News & World Report* rankings were determined by a survey of accredited graduate school deans, faculty, and administrators.

For more information on SHRS departments and programs, log on to the School's Web site at www.shrs.pitt.edu



A PROFESSOR OF DISTINCTION

Dr. Rory Cooper, Professor and Chair, Department of Rehabilitation Science and Technology, has been named a Distinguished Professor of Rehabilitation Science and Technology, the highest honor the University confers on a member of the professorate.

"This is the first such appointment of a faculty member in the history of our School," said Dean Cliff Brubaker. "Please join me in congratulating Rory for this wonderful and well-deserved honor. By gaining this high distinction, Rory has also elevated our School and its programs."

Cooper was recruited to the University of Pittsburgh in 1994 to help establish the first formal Department of Rehabilitation Science and Technology in the United States. Over the past 10 years, the department and its faculty and staff have become a widely recognized leader in the field.

Cooper is one of the preeminent international experts in wheelchair design and has made numerous contributions to the field of mobility research. He founded and directs the Human Engineering Research Laboratories, a joint venture consisting of the University of Pittsburgh Medical Center (UPMC), the University of Pittsburgh, and the VA Pittsburgh Health Care System, and is the author or co-author of more than 200 papers, expanded abstracts, and book chapters, and the author of two books, *Rehabilitation Engineering Applied to Mobility and Manipulation* and *Wheelchair Selection and Configuration*.



A Community Of Neighbors

Hearing aids can be expensive, averaging nearly \$1,000. Unfortunately, for many seniors relying on a fixed income, this price tag puts these essential assistive listening devices outside the reach of their limited retirement budgets.

But thanks to the HEAR NOW program, thousands of seniors across the country do not have to bust their budgets to receive the gift of hearing. Since 1995, the program has provided more than 65,000 hearing aids to people who could not normally afford them.

For the past six years, audiologists and students from the Department of Communication Science and Disorders have participated in the program through their work at the University of Pittsburgh Medical Center (UPMC) Center for Assistive Technology (CAT). They provide hearing aids for about 15 people each year, funded through the HEAR NOW program.

"HEAR NOW offers a valuable service to the community, and we're proud to lend our services to the program," says Reva Rossman, part-time Instructor,

Department of Communication Science and Disorders, and co-coordinator of the program. "The people we treat would have no other option were it not for the hearing aids generated through the program."

According to Rossman, there are no age requirements to participate in the program, but, she notes, "Most of our consumers are the elderly because of the program's extremely low income guidelines. For example, an individual must make

no more than \$11,640 per year to qualify; a couple can make only \$15,615."

HEAR NOW is a project of the Starkey Hearing Foundation, which provides more than 20,000 hearing aids annually, both in the United States and around the world.

The program is based on a simple formula. HEAR NOW accepts donations of old and used hearing aids and sells them to a repair lab. The proceeds from the sale are then used to purchase new devices that are distributed to those in need. In 2000, more than 23,000 hearing aids were collected and recycled, generating over \$150,000 in funding for new hearing devices.

To qualify, applicants must be U.S. citizens and meet the income guidelines outlined in the program's

application form. Explains Rossman, "After people qualify, we recommend that they see a physician to make sure their hearing loss doesn't have a medical or surgical solution. They normally then see an audiologist to get their hearing assessed and then come to our facility, where we do the hearing aid fitting and testing." Follow-up visits are scheduled.

"We're always available for consumers after the fact," says Rossman. "If a person is not happy with a hearing aid, or needs an adjustment or counseling,

our audiologists are here to help."

Rossman says HEAR NOW is an invaluable community resource. "Everyone deserves to be able to hear, regardless of their financial situation," she explains. "We're happy to be able to help them."

And as valuable as the program is to the community, it is arguably just as valuable for the

Hear Now

students who participate in the program. Explains Elaine Morner, Clinical Coordinator and Instructor, Department of Communication Science and Disorders, and co-coordinator of the program, "HEAR NOW provides students with a great deal of enhanced training in the clinical setting. It's

a good opportunity for them to learn through experience."

Julie Bier, a first-year master's degree student

in the Department of Communication Science and Disorders, echoes these sentiments. "I've only worked with four or five patients, but I already feel that I've had a great impact on these people's lives. It's wonderful that we're given the opportunity to help."

For more information on HEAR NOW, visit the Starkey Hearing Foundation Web site at www.sotheworldmayhear.org or contact Reva Rossman at rossmannrn@upmc.edu

"HEAR NOW offers a valuable service to the community, and we're proud to lend our services to the program."

YÉÇw
YtũxãÄ



It's never easy to say goodbye, but it's particularly difficult to say farewell to Karen Khan.

FACETS was Karen's creation. When she joined SHRS as Development Director four years ago, she quickly recognized that the School was, as Dean Brubaker so poetically put it, "an undiscovered jewel." *FACETS* was designed to showcase this gem.

Karen's imprint can be found on every page of every issue of *FACETS*. But probably never more so than on this, her final issue as Executive Editor.

In late January, Karen's 85-year-old father fell on an icy sidewalk outside his New York City apartment and broke his hip. During the weeks that followed, his physical and mental condition deteriorated. Fortunately, Karen and her siblings were able to be by his side virtually around the clock. But as she sat with her father during those long days, she wondered, "What happens when an elderly patient has no family to sit all day keeping watch, no one to advocate for them, and no one to talk to the doctors and ask questions about treatment?"

She shared these musings with her SHRS colleagues, and it was during discussions that followed that the focus of this issue crystallized. Karen recognized the enormous contribution this School is making to the care and treatment of the elderly, be it through research, clinical care, education, community service, or healthcare policy development. This issue underscores the School's leadership in the field of aging.

Karen's father, George Joseph Duggan, died on February 24. This issue is dedicated to his memory. It is also a tribute to the insight and energy Karen brought to the magazine. All of us at *FACETS* extend to her our heartfelt thanks.

FACULTY NEWS

Dr. Mervat Abdelhak, Associate Professor and Chair, Department of Health Information Management, presented, "Shared Strategic Directions," at the American Health Information Management Association's (AHIMA) Team Talks in Philadelphia, PA, Houston, TX, and Nashville, TN, in March. She also served as a member of the Scientific Program Committee for the 2004 Spring Conference for the American Medical Informatics Association in Washington, D.C., in April and presented, "Catching the Wave: Leading Through e-HIM," at Siemens Medical Solution Regional Meeting in Pittsburgh in May, and, "Success by Association: The Future of HIM Starts with You," at the Pennsylvania Health Information Management Association's (PHIMA) annual meeting in Philadelphia in May. Abdelhak also presented the Keynote Address at the Assembly on Education for the AHIMA in Chicago, IL in June.

Dr. Nancy A. Baker, Assistant Professor, Department of Occupational Therapy, received a Career (K01) Award from the National Institute of Occupational Health and Safety to study computer typing style. Baker also presented a continuing education course "Carpal Tunnel Syndrome and the Dental Health Professional" for the Dental School Alumni Lecture Series, University of Pittsburgh in April and presented continuing education workshops on computers and musculoskeletal disorders to members of the staff of the University of Pittsburgh's Center on Instructional Development and Distance Education and the UPMC Rehabilitation Network in April and May.

Dr. Carmela Battaglia, Assistant Professor, Department of Occupational Therapy, accepted a position as Associate Professor of Occupational Therapy and Director of Graduate Services at Keuka College, NY. She will start in August.

Dr. Gina Bertocci, Associate Professor, Department of Rehabilitation Science and Technology, recently accepted a position as Endowed Chair of Biomechanics in the Department of Mechanical Engineering at the University of Louisville.

Dr. David Brienza, Associate Professor, Department of Rehabilitation Science and Technology, was inducted into the American Institute for Medical and Biological Engineering (AIMBE) College of Fellows. This honor is for contributions in rehabilitation engineering leading to a better understanding of soft tissue biomechanics and the prevention of pressure sores.

Denise Chisholm, Assistant Professor, Department of Occupational Therapy and alumnae **Cathy Dolhi**, M.S., OTR/L and **Jodi Schreiber**, M.S., OTR/L authored *Occupational Therapy Intervention Resource Manual: A guide for occupation-based practice*.

Dr. Al Condeluci, Adjunct Professor, Department of Rehabilitation Science and Technology, was honored with the From Generation to Generation Leadership Award by the Western Office of the Temple University Institute on Disabilities.

Dr. Kris English, Assistant Professor, Department of Communication Science and Disorders, was given Honors at the Southwestern Pennsylvania Speech and Hearing Association's annual meeting in April.

Dr. Miriam Hertz, Assistant Professor, Department of Health Information Management, presented "Computer and Internet Accessibility for People with Visual Impairments: Community-Based Research," at the Society for Disability Studies annual meeting in June.

Dr. Margo Holm, Professor, Department of Occupational Therapy, received a grant from the Beckwith Fund for Innovation in Healthcare to develop and assess competencies for patients, caregivers and health professionals for the care of patients implanted with Ventricular Assist Devices. Holm presented a series of day-long classes on Evidence-based Practice to the Melmark School, Berwyn, PA, and Children's Hospital of Philadelphia, in April.

Dr. Catherine Palmer, Associate Professor, Department of Communication Science and Disorders, spoke at the 2nd Annual AAA Encore in April.

Dr. Tom Platt, Assistant Professor and Associate Program Director, Emergency Medicine program; **Dr. David Hostler**, Adjunct Assistant Professor, Emergency Medicine program; and **Kevin Parrish**, a Emergency Medicine alumnus, won the award for best poster presentation for "A Prospective and Qualitative Prehospital Comparison of Head Immobilization Devices" at the Journal of Emergency Medical Services (JEMS) Conference in March.

Dr. Joan Rogers, Professor and Chair, Department of Occupational Therapy; **Dr. Margo Holm**, Professor, Department of Occupational Therapy; and doctoral candidate **Ketki Desai** presented "Cross-Sectional Performance-Based Functional Outcomes of Patients Receiving and Not

Receiving IV tPA” at the American Heart Association’s 5th Scientific Forum on Quality of Care and Outcomes Research in Cardiovascular Disease and Stroke in Washington, D.C., in May.

Dr. Susan Shaiman, Assistant Professor, Department of Communication Science and Disorders, received the Student Government Board Students Choice Award. The award is given to faculty and staff who have made an exemplary contribution to the university community.

Dr. Elizabeth Skidmore, Assistant Professor, Department of Occupational Therapy, presented “Constraint-Induced Movement Therapy: Paradigm to Practice” at Operation Stroke third annual Update on Medical Perspectives and Therapeutic Interventions in Boardman, OH in May.

Dr. Connie Tompkins, Professor, Department of Communication Science and Disorders, was a platform speaker at the second annual Research Symposium in Clinical Aphasiology held during the Clinical Aphasiology Conference in Park City, UT in May.

Department of Occupational Therapy faculty members **Dr. Carmela M. Battaglia**, Assistant Professor, **Dr. Elizabeth R. Skidmore**, Assistant Professor, and colleagues presented “Why do I need ICF in my Practice?” and **Denise Chisholm**, Assistant Professor, and colleagues presented “Documenting Occupation” at the American Occupational Therapy Association Annual Conference in Minneapolis, MN in May.

The annual Clifford E. Brubaker Lecture was held at SHRS on May 4, 2004, by guest lecturer Denis Anson, MS, OTR, Director of Research and Development, Assistive Technology Research Institute, College Misericordia, Dallas, PA. Anson presented, “Writing for Accessibility,” intended to increase awareness of the limitations of individuals with disabilities for assistive technology professionals.

CALENDAR

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In Memoriam

“It was an honor to know him.”

Of all the eulogies delivered by Dr. Tatsuo Iwamori’s friends and colleagues, this simple phrase most eloquently captures his impact on all who knew him.

Iwamori dedicated his career to improving the quality of care in Japanese hospitals. After earning both an MBA and a PhD, he became a Professor in the School of Engineering at Tokyo Denki University, where he used his unique background to study healthcare as much from a senior manager’s perspective as that of a healthcare practitioner.



Dr. Tatsuo Iwamori

Iwamori became part of the SHRS family when he accepted a one-year visiting professorship in September 2003 in the Department of Rehabilitation Science and Technology. He had become familiar with the *Six Sigma Book for Healthcare*, co-authored by Dean Cliff Brubaker, and wanted to conduct research on the subject at American healthcare centers.

He completed extensive studies on the successful Six Sigma projects at Heritage Valley Health System, as well as the Toyota Production Method projects being implemented through the Western Pennsylvania Regional Healthcare Initiative and the University of Pittsburgh Medical Center (UPMC). True to his strong work ethic, Iwamori also found time to author an extensive paper applying Confucianism to ethical behavior in corporate management.

“Dr. Iwamori’s Six Sigma approach to hospital management has the potential to open a new era in the healthcare delivery process,” says fellow researcher Dr. Hisaichi Ohnabe. “It is my hope that we will continue his research with the same desire and passion. He will always be with us here in the Department of Rehabilitation Science and Technology.”



University of Pittsburgh

ALUMNI



Sharing classroom memories with their professor and current program chair, Dr. Mervat Abdelhak, are 1981 alumnae Laurie Johnson, Denise Dunyak, Holly (Wohl) Wobransky, and Sheila (Carolla) Peters

Mark DiCello, BS, (HRA '92) was recently promoted to National Director, Commercial Operations for HealthSouth Hospitals, where he will be responsible for overseeing and directing the inpatient division's managed care contracting initiatives. He continues to be based in Pittsburgh.

Yih-Kuen Jan, Ph.D., (RST '04), a recently graduated doctoral student from the Department of Rehabilitation Science and Technology, was appointed to a Post-Doctoral Fellowship in the Department of Rehabilitation Sciences in May.

Eric Wallis, MS, RHIA (HIM '03), Executive Officer of Patient Administration/HIPAA Privacy Officer, Walter Reed Hospital, was recently presented with the LTC Paul Hatkoff Award of Excellence. This award recognizes the top Company Grade Patient Administration Division (PAD) Officer in the Army. This is an Army-wide award given every two years.

SHRS alumni met at the Pennsylvania Health Information Management Association (PHIMA) annual conference in Philadelphia in May. The meeting provides the opportunity for HIM professionals from the state to attend education sessions, network with fellow members, and learn about new HIM software and services. SHRS alumni included: **Linda (Wolf) McLinden** ('87), **Eileen Totten** ('83), **Sheila (Carolla) Peters** ('81), **Denise Dunyak** ('81), **Laurie Johnson** ('81), **Holly (Wohl) Wolbransky** ('81), and **Jay Joseph** ('75).

STUDENT NEWS

Fabrisia Ambrosio, **Rachel Cowan**, **Bradley Impink**, **Jonathan Pearlman**, **Ian Rice**, and **Jeanne Zanca**, graduate students in the Department of Rehabilitation Science and Technology, were recently presented with 2004 Integrated Graduate Education Research Traineeship (IGERT) NSF Fellowship Awards. The awards are given through a partnership program between University of Pittsburgh and Carnegie Mellon University.

Meghan Bernarding, **Gia Cardinale**, **Timothy Etling**, **Joy Holte**, **Daniel Sopata**, **Erin Switzer**, and **Lindsay Thelin**, master's degree students in the Department of Occupational Therapy, and **Denise Chisholm**, Assistant Professor, Department of Occupational Therapy, participated in previewing and rebuilding 10 homes for Rebuilding Together – National Rebuilding Day on April 24, 2004.

Trina Clemons and **Kim Dao**, master's degree students in the Department of Occupational Therapy,

were awarded provost scholarships/assistantships for the 2004 school year.

Irina Collins, a master's degree student in the Department of Occupational Therapy, received the 2004 Reba M. Sebelist Scholarship of the Pennsylvania Occupational Therapy Association.

Alyson D'Ambrosio, **Meghan Bernarding**, **Gia Cardinale**, **Joy Holte**, **Katie Lowrey**, **Ania Plocha**, **Erin Switzer**, and **Lindsay Thelin**, master's degree students in the Department of Occupational Therapy, participated in the 25th Annual Hand in Hand Festival held in March 2004. D'Ambrosio coordinated the effort.

Ketki Desai, doctoral candidate; **Dr. Joan Rogers**, Professor, Department of Occupational Therapy; **Dr. Elizabeth Skidmore**, Assistant Professor, Department of Occupational Therapy; and **Dr. Margo Holm**, Professor, Department of Occupational

Therapy, presented “Use of the Mini-Mitter Actiwatch-64 to Identify Functional Use of the Affected and Unaffected Upper Extremities Post-Stroke.” Desai, Rogers, and Holm also presented “Competence for Independent Living: The Performance Assessment of Self-Care Skills as a Decision Tool” at the American Occupational Therapy Association Annual Conference in Minneapolis, MN in May.

Stacey Friscia, Katie Lowrey, Tracy Sugalski, Erin Switzer, and Lindsay Thelin, master's degree students in the Department of Occupational Therapy, were inducted into Pi Theta Epsilon, the national honor society for occupational therapy students.

Stephanie Hackett, MS, RHIA, will present an article, “Accessibility of Internet Web Sites Through Times,” at the 6th International ACM SIGCAPH Conference on Assistive Technologies. The article, based on her thesis, will also be published in a special issue of *Behavioral and Information Technology*.

Joy Holte, Erel Plotkin, Erin Switzer, and Lindsay Thelin, master's degree students in the Department of Occupational Therapy, were each awarded the 2004 Jewish Healthcare Foundation/Coro Center for Civic Leadership Pittsburgh Health Sciences Fellowship.

Ryan Hughes, a student in the Rehabilitation Science program, has received the coveted Emma W. Locke Memorial Award. The award is given to one undergraduate student who is chosen by a committee from among nominees selected by the deans of the

undergraduate schools. This award recognizes high scholarship, character, leadership and devotion to the ideals of the University of Pittsburgh.

Brianna Rusiski, a master's degree student in the Department of Occupational Therapy, received the Award of Scholarly Excellence at the 2004 SHRS Recognition Day.

Jeanne Zanca recently completed a Trainer Certification Course at the Coro Center for Civic Leadership. This course is designed to prepare participants to serve as trainers in a variety of leadership oriented courses such as communication skills, group dynamics, project management and meeting management.

Xiaoming Zeng, MD, PhD, accepted the position of as Assistant Professor, Department of Health Services and Information Management, in the School of Allied Health Sciences at the University of East Carolina. He will teach health information technology, medical terminology, and research methods.

The 2004 RESNA (Rehabilitation Engineering and Assistive Technology Society of North America) Whitaker Foundation Student Paper Awards were presented to **S. David Algood, Fabrisia Ambrosio, Beth Ann Kaminski, Yusheng Yang, and Emily Zipfel**. These awards are presented to students based upon the submission of a research paper. The winners are provided a \$1,000 cash prize and expected to present their paper at the annual RESNA Conference. **Eliana Chaves**, a doctoral student in the Department

of Rehabilitation Science and Technology received the 2004 Rory A. Cooper and Dion Johnson Paper Award for outstanding research paper at the conference.

Undergraduates in the senior class of the Emergency Medicine program conducted a half-day student recruitment event at the University of Pittsburgh Student Union in April. Dr. Walt Stoy, Associate Professor and Chair, Emergency Medicine program, facilitated the event, which drew more than 150 prospective Emergency Medicine students.



The SHRS Alumni Society and the SHRS Student Advisory Board provided snacks and drinks for students during the Spring Semester finals week.

The Myths of Aging

At 100, Bob Hope still inspired respect and admiration from those who laughed at his on-screen antics and were moved by his six decades of visits to our troops fighting far from home.

When he died at 100, George Burns was perhaps better known for his starring role in “Oh, God!” than he was for his vaudeville career and his pioneering television comedy with his wife, Gracie Allen.

However, despite our admiration for these two celebrity centenarians, society as a whole is not nearly as enamored of those among us who have reached the age where we can be described, as Rush Limbaugh so aptly puts it, as “seasoned citizens.”

When students enroll in various courses taught by Dr. Connie Tompkins, Professor, Department of Communication Science and Disorders, they're required to take a test. It's not for credit. It's designed to impress upon students that there are some significant myths that permeate our society about growing older and what that means. “In my discipline of speech-language pathology, students are surprised to realize that they have these unconscious biases, and they're glad to learn about them,” says Tompkins.

She notes that students come into the program much more comfortable working with children, and it may take some of them quite a bit of time to be comfortable interacting with older people.

“One significant myth is that most older people are lonely,” says Tompkins. “That's why they supposedly ‘talk your ear off’ whenever the opportunity arises.”

False. Chances are if you'd met the same person a decade ago, you wouldn't have been able to get a word in edge-wise then either. Absent a physical or psychological impairment, people don't change their stripes just because they age.

“The reality is that older people are a very heterogeneous group. We tend to have uniform stereotypes of older people – but as a group they're at least as variable as younger people,” says Tompkins. “Research indicates that older people are no more lonely or garrulous than younger people.

“Ageism is a reality of our society,” Tompkins continues. “We tend to view older people through the prism of their age, rather than responding to the amalgam of who they are. A number of stereotypes

develop in our brains, to help us to process and organize information about the world. Unfortunately, some stereotypes are more damaging than others. Where someone went to school or where they work help us define people who are younger, but

somehow, these get overlooked with age.”

Tompkins indicates that age is a common marker – when you can drive, when you can vote, when you're of a legal age to drink – even running for president requires that an individual be at least 35 years old. “But age is totally arbitrary – one sixteen-year-old can be

a very good driver, and another shouldn't even get behind the wheel.”

Says Tompkins, “Research shows that chronological age is not a very good predictor of much of anything. What is more important is your physiological age and life satisfaction. Your blood pressure under conditions of stress, and even your hearing acuity, are much better predictors of cognitive function and of feelings of well-being.”

Why is it we revered George Burns's storytelling? “The overall notion is that as we get older, everything declines,” states Tompkins. “But there are various aspects of language that improve with age. Older people, as a group, have better vocabularies than younger people, and they do better at interpreting figurative language, such as proverbs, idioms, and metaphors.”

She notes that when young adults are asked to recall information from a text, they'll reproduce it more faithfully, while older people will elaborate and draw inferences and be more interpretive. That difference, says Tompkins, can be traced to “more

“Research shows that chronological age is not a very good predictor of much of anything. What is more important is your physiological age and life satisfaction.”

Test Your Aging Prowess

In 1976, Erdman Palmore, Professor Emeritus at Duke University, devised a test to help mitigate misconceptions about aging and stimulate a dialogue on the subject. Following are some of the questions from Palmore's test, taken from *The Facts of Aging Quiz*® 1998, Springer Publishing, Inc. See if you can separate fact from fiction.

QUESTIONS (Answer true or false to each question.)

1. The majority of old people, 65-and-older, are senile.
2. The five senses – sight, hearing, taste, touch, and smell – all tend to weaken in old age.
3. The majority of old people have no interest in, or capacity for, sexual relations.
4. Most older adults have difficulty adapting to change; they are set in their ways.
5. The majority of old people feel miserable most of the time.
6. The majority of older people say they are seldom bored.
7. At least one-tenth of the aged are living in long-stay institutions, such as nursing homes, mental hospitals, or homes for the aged.

1. False. About 10 percent of older people have some form of dementia or severe mental illness. Another 10 percent have some mild or moderate cognitive impairment. The majority of people over 65 have neither.
2. True. All senses do tend to decline with age, although it varies from person to person.
3. False. Research shows that sex continues to play an important role in older people's lives.
4. False. Older people are no more rigid than their younger counterparts, a relatively stable personality characteristic. Considering that their children leave home, they retire, and they may lose a spouse, older people seem to accommodate well.
5. False. A national survey showed about half of those surveyed stated that they were either as happy or happier than they had been at younger ages. Just one-quarter of those surveyed said that this was the unhappiest time of their lives.
6. True. Although some older people admit to boredom or monotony, the majority says they are seldom bored.
7. False. This is one of the most persistent misconceptions about older people. Only about five percent of older people are in long-term-care facilities at any one time. However, the chances of being in an institution do increase with age, and as many as 40 percent of older people may be institutionalized at some point in their lives, often temporarily.

ANSWERS

world knowledge: as you age, you can read more into certain situations.”

In one research project Tompkins conducted, younger and older adults were given a topic and asked to tell a story about it. These stories were played to young adult listeners on a tape recorder. The listeners preferred the older adults' stories and rated them as more interesting. “The older people did more things to engage the listener. For instance, you could hear the tone of voice on the tape recorder,” Tompkins continues. “In terms of the structure of the story, older people were more likely to use a classic narrative form, where you build toward some complication and then it's resolved. The listeners wanted to learn what was going to happen.”

Beginning in 2011, the Baby Boomer generation will officially enter the 65-and-older population and will continue to expand that demographic until 2029. This, the largest generation in American history, will likely have as profound an effect on society as they age as they did in growing up. Consider that, in 1950, there were 776 baseball Little Leagues in North America – a decade later, that number grew to 5,700.

As an aside, Tompkins notes that there are not enough physicians going into gerontology and geriatrics, a limitation that will become clearer in the years to come.

“The truth is, older people have great stories to tell and have developed, over the years, the vocabulary to make them interesting,” Tompkins points out. And sometimes, the older the story, the more interesting it becomes.

For more information, contact Connie Tompkins at tompkins@csd.pitt.edu

Going Solo

New Technology Helps People with Cognitive Impairment Gain Independence

We all experience momentary lapses in memory. And while these moments can be embarrassing and frustrating, they generally have little impact on our lives.

But for millions of Americans suffering from cognitive impairment, memory loss affects executive reasoning tasks – the ability to determine what they need to do and how to do it. In mild cases, a person may forget how to make the morning coffee. In more severe cases, people forget to eat.

Cognitive impairment can strike at any age, but the incidence of cognitive impairment is most pronounced in the elderly population. Difficulties with executive reasoning tasks can be the result of traumatic brain injury (TBI), stroke, or other brain impairments. It can also signal the onset of Alzheimer's disease.

The vast majority of people with cognitive impairment need some form of daily assistance – help that invariably comes from family members and friends. By some estimates, family caregivers account for 80 percent of all home care services. And with people over the age of 85 representing the fastest-growing population segment in the United States, this trend shows little sign of letting up.

But things could soon change for people with cognitive impairment and their families thanks to Solo, a prototype cognitive orthosis project being spearheaded by Dr. Richard Simpson, Assistant Professor, Department of Rehabilitation Science and Technology. The project uses PDAs and other electronic personal organizers to map out daily schedules and offer step-by-step instructions on how to perform routine activities.

The inspiration for Solo comes from one of the co-developers of the project, Dr. Ned Kirsch, Adjunct

Assistant Professor, University of Michigan, and his work in the 1980s using an Apple IIE to help people with brain injuries perform simple tasks like baking cookies. "It was revolutionary," remembers Simpson of his exposure to the project. "The computer was like a best friend, explaining what to do next and how to do it to people who wouldn't have known otherwise. Practically speaking, it would have been difficult to use in a real life situation because people couldn't drag a computer around with them all day. But the concept was right on."

The solutions evolved with the technology. Kirsch and others eventually began using pagers to keep people on a daily living schedule, prompting them to do the laundry or watch a television show. But that was as far as the technology could lead Kirsch; he was stuck. His technology could cue someone to perform a task, but was useless if the person didn't know the steps needed to complete it.

At the same time that Kirsch was perfecting his research, Simpson was working at the Johnson Space Center in Houston, TX. The Center, which develops technologies for manned space flight, proved the perfect forum for Simpson to begin devising ways to take Dr. Kirsch's work to the next level.

Simpson explains, "An astronaut's entire day is mapped out by people on the ground to ensure that their limited resources last through the mission. All of

this planning is done in a central location and is completed well ahead of time. It's precise to the minute.

The software that I worked on at the Space Center effectively told the astronauts what they had to do, when they had to do it, and even how to do it."

He continues, "When I applied the technology to the work Dr. Kirsch

had conducted at Michigan, the situational parallels couldn't have been more obvious. So when I came to the University of Pittsburgh in 2000, I began collaborating with Dr. Kirsch and used a variation of the astronaut time schedule software to begin developing a device to help people with cognitive impairment."

Solo picks up where Kirsch's projects left off. Simpson uses his mother-in-law, who is experiencing age-related cognitive impairments, as an example of



Solo's pioneering functionality. "This technology will potentially allow us to organize all of her daily activities and give detailed instructions on how to perform every activity. All of the information is on a PDA, which keeps her on task and ensures that she remembers how to finish everything that she's started. And if something goes wrong – for instance the toaster doesn't work – the device will give her

contingency plans that will enable her to still get the job done. If plan B doesn't work, Solo will automatically contact my wife to inform her that she needs to drive over to help."

In the event that the schedule changes at some point in the week, Simpson or his wife could make the changes to her routine remotely via a PC. He explains, "If my mother-in-law is invited to a baseball game, my wife can change her mother's weekly schedule and make instruction changes to account for the change in plans."

The technology relies on four basic components that work in tandem to aid an individual with cognitive impairment. The primary scheduling component of Solo is the Activity Assistant, which provides all of the scheduling and activity instructions on a portable device that a person carries with them all day. The caregiver application, called the Design Assistant, allows changes to be made to the instructions and activities, and the Cognitive Manager and Information Server allow information to be changed via the Internet.

While the project is still in Phase I, funded through a grant from the National Center for Medical and Rehabilitation Research of the National Institutes of Health, Phase II will take the scope of Solo's functionality far beyond any devices of its kind in the market.

"Caregivers will soon be able to manage and monitor a person's performances in completing activities, with real-time oversight not further down the road," Simpson notes.

For more information on Solo, contact Richard Simpson at ris20@pitt.edu

Meaningful Interaction



Like many of her peers in rehabilitation sciences professions, Dr. Elizabeth Skidmore, Assistant Professor, Department of Occupational Therapy, began her career by exploring pre-medicine as an undergraduate major. However, it didn't take her long to find her true calling.

Skidmore's early career search was motivated by her desire to select a profession that would provide a variety of challenges. This led her to medicine. However, she remembers finding the interactions between doctor and patient far too limiting. She wanted to interact with individuals in a meaningful way, and she wanted to see it carry over into their daily lives. This led her to occupational therapy, a discipline that helps people to function successfully in a variety of "real world" settings following a disabling illness or injury.

Soon after earning her undergraduate occupational therapy degree at the Western Michigan University in 1996, Skidmore began putting her academic training to practice. She remembers, "I considered pursuing graduate school immediately after earning my degree, but elected to begin working in a clinical setting, to gain experience. And in retrospect, it was a good decision for me."

She worked first at Life Care Center in Ft. Wayne, IN, and then at Genesis HealthCare System in Zanesville, OH, earning three years of valuable clinical experience in a number of occupational therapy practice areas.

During her tenure in her second clinical position, Skidmore became convinced that she would need to pursue graduate-level education to reach her full potential. "At that time, I was in a

leadership position and was constantly being asked to make difficult decisions about what programs and services the facility should cut and which it should keep," she explains. "While I felt strongly about certain decisions, I knew I needed additional training to support my arguments."

She came to SHRS in 1999 to earn a post-professional master's degree in occupational therapy and has been here ever since. This past fall, Skidmore became a member of the School's faculty, and received her doctoral degree in rehabilitation science shortly thereafter.

In the past year, Skidmore taught two courses in the entry-level Master of Occupational Therapy Program. In addition, Skidmore was invited to provide lectures in additional SHRS courses.

Skidmore's primary research interests surround neuro-rehabilitation outcomes and interventions, specifically those pertaining to brain injury and stroke. She's completed much of this work with her doctoral

advisor, Dr. Margo Holm, Professor, Department of Occupational Therapy, one of her role models in the study and practice of occupational therapy.

"I have been fortunate to study under the guidance of Dr. Joan Rogers, Dr. Margo Holm, and Dr. Lynette Chandler," Skidmore explains. "Each has been an excellent mentor in my professional development. As I completed my doctorate, I considered whether I would like to stay and continue to learn from them, or move to another location."

When offered the faculty position, the choice wasn't a difficult one. She recently completed her first year as an Assistant Professor in the Department of Occupational Therapy.



She wanted to interact with individuals in a meaningful way, and she wanted to see it carry over into their daily lives.

Search Your Heart



In the field of clinical dietetics and nutrition, successful client outcomes are often directly linked to those clients making important lifestyle changes. And so by connecting with community resources like the American Heart Association (AHA), the Clinical Dietetics and Nutrition Program provides its students with an essential educational tool – hands-on opportunities to work with public initiatives that teach people how to treat and prevent disease through nutrition.

Judy Dodd, Adjunct Assistant Professor, has capitalized on her involvement with the AHA to the great benefit of her students and the public at large. Dodd is Past-President of the Board of the AHA Allegheny County Division, and her work with the Prevention Initiatives Committee led to her involvement in the Search Your Heart program.

Underwritten by a national grant from Mazola Oil, Search Your Heart is a faith-based health initiative that initially targeted African-American churches and was later revised to include materials for all demographic populations. The initiative trains church leaders to implement programs within their churches addressing the risk factors for heart disease and stroke – including high blood pressure, high glucose (an indicator of diabetes), diet, high cholesterol, obesity, and inactivity. In Pittsburgh, a group called Clergy and Churches United, based in the Hill District, furnished the first seven participating churches and launched a series of “train the trainer” educational programs on subjects including nutrition and diet, exercise, diabetes, blood pressure, and cholesterol management. Dodd agreed to sponsor and host the nutrition and diet component module in the University of Pittsburgh Clinical Dietetics and Nutrition Food Laboratory, and she secured support from Giant Eagle grocery stores for the food used in the demonstrations.

Francisca Amatekpor, a master's student in clinical dietetics, took on this component of the Search Your Heart program as an independent study, supervised by Dodd and assisted by undergraduate seniors Shawna Gornick, Segapotso Radikara, and Meredith Mensinger. This was Amatekpor's first opportunity to act as the trainer – in fact, she had only recently arrived in the United States from Ghana. “Comprehensive educational materials were provided by the AHA. From these I put together the teaching outline and identified the recipes we would use. I was confident in my knowledge of the subject,” says Amatekpor. However, she admits to being a bit self-conscious about her first time in front of the classroom.

Her program consisted of five stations that progressed through the preparation of a heart-healthy meal and focused on the components of that meal which represented nutritionally sound practices. In the end, participants had created a meal of Creole chicken over brown rice, confetti coleslaw, and fruit salad. More important, they had learned about fat, cholesterol, sodium, glucose, and portion size – all critical concerns in a heart-healthy diet.

“Although I may have lacked self-confidence during the first session, I was very encouraged by the kinds of questions people asked and even more by the improvement in their scores from the pre- to the post-assessment that we used,” says Amatekpor. “Most of all, I'm encouraged because I was asked to come back and train another group!” Another important member of the team is Joan Procopio, a graduate of the Clinical Dietetics and Nutrition program and also a member of the AHA's Prevention Committee, who works as a Program Manager for Chronic Disease Prevention at the Allegheny County Health Department. Procopio worked closely with Amatekpor and helped her implement the training at

the next level to additional church leaders.

“Some of the stuff I already knew, but I did learn quite a bit from our excellent instructors,” says Marianne M. Jackson, a community advocate and member of First Emmanuel Tabernacle, who participated in the first training session. Plans are under way for nutrition classes that will incorporate several churches in and around Jackson's Schenley Heights neighborhood, and Jackson will be ready to share her new knowledge.

“I think it's very important because so many of our church members are seniors who already have health problems,” says Jackson. “It will be a learning experience for them, where they can understand that simple things like cutting back on sodium and using a low-cholesterol cooking oil can make a big difference. Maybe it can even help them live longer and better lives.”

Baseline testing conducted in the seven participating churches underscores the need for the Search Your Heart program. Of 173 members tested, 44 percent had elevated blood pressure, 39 percent had high cholesterol, 38 percent were overweight, and 10 percent had elevated glucose levels.

Dodd says, “These numbers are indicative of what we know about our community – that many people have risk factors for heart disease and stroke and may not be aware of them. We know for a fact that heart diseases claim nearly 950,000 lives each year. That presents us with a challenge. Can we shrink those numbers at least in part through programs like this one – programs that empower people to make small lifestyle changes that can have a big impact on health? I think we can.”

For more information, contact Judy Dodd at jdodd@pitt.edu

The Aging of America

It is called the “2030 problem.” It is the challenge that will confront the United States when the last of the Baby Boomer generation reaches the traditional retirement age. 2030 is the year when one adult in every five will be age 65 or older. It is the year when an estimated 71 million Americans will look to the country’s health and social services sectors for the support they need to successfully manage the realities of aging, and to the government and private insurers for the dollars to pay for it.

Some analysts have painted a near-apocalyptic portrait of America in 2030. It will be a country where the population of frail elderly far outnumbers the pool of workers needed to care for them. It will be a country virtually bankrupted by the cost of providing essential elder care.

But there also are optimists who find hope in recent data regarding the health status of today’s elderly. The National Long Term Care Survey found that, between 1982 and 1999, the percentage of elderly considered disabled dropped from 26.2 percent to 19.7 percent, despite a one-third increase in the elderly population during that period. There has been an accompanying decline in the nursing home population.

These researchers point to two factors contributing to this trend: a better educated elderly population, and better science. According to the U.S. Department of Education, in 2030, the percentage of the elderly who have graduated from college will be twice what it is today, while the percentage of those who didn’t complete high school will be one-third of

current levels. This is significant because research has shown that there is a strong correlation between education and disability. The disability rate for college graduates is about half that of high school dropouts.

Anticipated advances in science also should significantly reduce the need for long-term care for the elderly. Better pharmaceuticals are being used to treat or prevent such debilitating diseases as osteoporosis, arthritis and rheumatism. Knee and hip replacements have become almost commonplace. Strides are even being made in treating or preventing Alzheimer’s and other dementias – conditions that most often require long-term care in the later stages. One study found that the percentage of non-institutionalized elderly with severe cognitive impairment dropped from 6.1 percent to 3.8 percent between 1993 and 1998.

Maintaining a Healthy Elderly Population

While there may be disagreement about the scope of the 2030 problem – will we have 1.6 million disabled elderly as the most optimistic observers predict, or the 18 million estimated by the more pessimistic prognosticators – there is no disagreement that any decline in disability, no matter how small, will have a significant impact on the economic cost of providing long-term nursing care. The wellness of our aging Baby Boomers will play a critical role in the equation.

Wellness and disability prevention present unique challenges to occupational therapists, who work with the elderly along the entire continuum of care.

However, according to Dr. Joan Rogers, Professor and Chair, Department of Occupational Therapy, occupational therapists working with the healthy elderly will have to work against a decided lack of awareness of the importance of physical activity in aging. According to the U.S. Department of Health and Human Services, only one-third of the nation’s well elderly meet recommended moderate exercise levels. Lack of physical exercise and obesity are the second leading causes of death in the United States. As Pam Toto, Adjunct Professor, Department of Occupational Therapy, points out, many older adults use aging as an excuse for not exercising, thinking that a decline in overall health and functional abilities is inevitable. “Current research proves this to be untrue,” she says. “However, the myth still remains.”

Toto says that the Occupational Therapy Practice Framework identifies health and wellness,





prevention, and quality of life as potential outcomes of occupational therapy interventions. “Exercise for older adults can positively affect all three of these outcomes,” she contends. “Current research strongly supports the belief that a majority of declines in strength, endurance, and occupation performance in older adults are related to factors associated with disuse.”

She points to a landmark study conducted in a skilled nursing facility, where 100 frail elderly with an average age of 87 exercised using high-intensity strength training. In 10 weeks, their strength increased 115 percent. She also references a study completed by Washington University in St. Louis with 1,700 older adults. “The researchers found that a significant number experienced an increase in overall emotional health and how they felt about themselves after participating in an exercise program.”

Toto reminds that, while exercise and physical activity are both valuable components of a healthy

lifestyle for older adults, there is a difference between the two. “The National Institute on Aging defines physical activity as ‘any voluntary body movement that burns calories,’ while exercise is ‘physical activity that follows a planned format. It’s done with repeated movements, with the goal of improving or keeping up one or more specific areas of physical fitness.’ “

Exercise, she says, is generally broken into four categories: aerobic exercise, strength training, flexibility, and balance/coordination. Each plays an important role in improving or maintaining quality of life. Aerobic exercise, for example, can improve endurance, which is critical for such activities of daily living (ADLs) as meal preparation and showering. Strength training can prevent or reverse muscle atrophy, which is largely affected by inactivity. This is

particularly prevalent among seniors who may be inactive due to illness, injury, or disease.

While there has been little quantitative research to date, Toto says that there is much anecdotal evidence on the importance of flexibility in ADLs such as pulling on socks and pulling off tight-necked shirts. The focus for flexibility includes the chest and calf muscles, hamstrings, low back, neck, and shoulders. Balance and coordination, on the other hand, require core conditioning of the deep muscles such as those supporting the spine, pelvis, hips, and shoulders. “Because of its requirement for central, peripheral, sensory and motor input,” explains Toto, “balance remains the most complex of the four exercise components for the older adults.”

Accommodating Wellness

While exercise programs are readily available for seniors who are in the healthy-active phase, Rogers cautions that it is critical to not overlook those elderly who don’t fit neatly into the exercise paradigm. “For some, it’s simply an unwillingness to join a group,” she explains. But there are others, she points out, who can’t tolerate the range of exercise programs that are commonly available, such as aging people with disabilities who have become extremely obese. “Even if they are interested in going to a gym, the





facility itself or the equipment may not be accessible to someone in a wheelchair. Yet these people have the same exercise needs –

maybe even more – as people without disabilities. They're not going to get around in their wheelchairs without improvement to their levels of fitness."

These elderly may benefit from participation in an individualized occupational therapy program. "In a good occupational therapy program, you must be able to accommodate individual needs," adds Dr. Elizabeth Skidmore, an Associate Professor in the department. "It is important to conduct an upfront assessment and create a personal plan. You must then be willing to adapt the program as the patient ages and his or her physical or mental condition changes."

Skidmore says that wellness extends beyond exercise. "Wellness is a very broad umbrella," she explains. "As occupational therapists, we look at all of the elements that comprise wellness. For example, we look at medication management, nutrition, even scheduling, and keeping medical appointments."

For example, an occupational therapist can help to determine why elderly patients are unable to successfully manage their medication regimens and develop individualized modifications to assist with this important task. Jody Schreiber, an occupational therapist and Pitt alumna, says that there are a number of modifications that can be made for medication management, particularly for patients with low vision, which is common in the elderly. "There is large print everything," she notes. "Medication labels can be in

large print, or we can supply a bottle magnifier. If necessary, we can even create a color coding system to make it easier to distinguish between medications."

The Slowing-Down Phase

Eventually, most seniors move into a second phase of aging, when they begin to slow down and have difficulty handling typical activities of daily living. During this period, the elderly require additional assistance to remain independent, which is the particular provenance of the occupational therapist. "It isn't always a medical emergency that causes an older person to seek help," says Rogers. "It may be that the person recognizes that it is becoming increasingly difficult to see. Or as they walk up the stairs, they have trouble breathing. One of the things we know about older patients is that they go to the doctor because they recognize these changes. They don't necessarily recognize that something is happening with their lungs. They just know that when they're walking up the stairs, they're getting out of breath."

Rogers acknowledges that it is rare for a primary care physician to refer such a patient directly to an occupational therapist. Often, the OT enters the scene in an outpatient setting. And it is here that the treatment takes on a very personal tone. "When we assess patients," explains Roger, "we ask specific questions related to what they are no longer able to do that they could previously, and why they think the change has occurred. The answers vary greatly."

According to Skidmore, a decline in physical abilities also can have psychological ramifications. "Depression is very common in older individuals," she points out. "They have grieving issues. They could



be grieving that they can't do things; that they can't match their old standards. We help them to articulate the loss and recognize that they are going to have to compensate for that loss. For example, I'm working with a patient now who has the potential to return to full independence. But he doesn't want to change the way he did things. So the issue with him is not only getting him back to full independence, but it's also convincing him that he has to change the way he operates in daily life."

For the elderly with conditions such as a stroke or hip fracture, the therapist must attend to the impairment and disabilities causing the immediate problem as well as other medical and psychological problems that co-exist with the condition. According to Rogers, many of these elderly patients are confronting more than one medical condition. "You're dealing with the person who has the hip fracture plus dementia; a hip fracture plus arthritis; a hip fracture plus stroke."

Rogers says that in a typical medical setting, treatment is focused on the single condition that caused the hospitalization, such as hip fracture. It is up to the occupational therapist, she explains, to ask a more fundamental question: "How does this person with a hip fracture function?" The OT, she says, can help set a recovery regimen that is appropriate for the patient's other medical conditions. "If the person has a cardiac problem, then you'll be looking at mobilizing the person on a much slower pace. When the secondary condition is dementia, then you have to



work on simplification.”

Skidmore adds that the patient’s social support network also must be taken into account. “When we’re dealing with an older population, we need to know if the person is going home to a spouse or, if they live alone and independently, is there another support system in place. A simple thing like a hip fracture can limit their independence not only for a short time, but perhaps permanently. The social factors are much more pertinent when you’re working with older adults.”

Dementia – particularly Alzheimer’s – is a leading cause of disability in the aging. If current projections were to hold true, by 2040, roughly 14 million people in the United States could suffer from Alzheimer’s. While earlier diagnosis and the development of better drugs to treat symptoms could cut the prevalence rate, the economic and social costs remain formidable. Here, too, occupational therapists can make the difference between prolonged independence and nursing home care.

“While we cannot predict with certainty what will work, we do have a range of options for Alzheimer’s patients and their

families,” says Rogers. “For example, if Mom is burning everything, there are automatic shutoffs for stoves. If Mom isn’t eating, we can look at the structural cause of the problem. Maybe she can’t remember how to open a can or bottle to get the food out.”

Referrals to occupational therapy services for the elderly who are still independent, but are starting to experience subtle but persistent losses of function, are an important part of reducing the burden of the “2030 problem.” As physicians become aware of the benefit of both wellness and early occupational therapy interventions, this type of referral will hopefully increase. This type of service model, implementing therapy before a medical crisis, could

help to keep many elderly in the community. Rogers acknowledges that there is no panacea. But she insists that there is a panoply of services available to keep seniors in their homes and communities. “We can create a veritable nursing home without walls.”

Whether such a model will be broadly adopted is open to debate. According to the Congressional Budget Office, roughly 67 cents out of every public dollar used to support long-term care for the elderly is spent on institutional care. And this is despite seniors’ clear preference for community-based care.

However, the pendulum could be swinging. In recent years, the federal courts have ruled that people with disabilities have the right to service

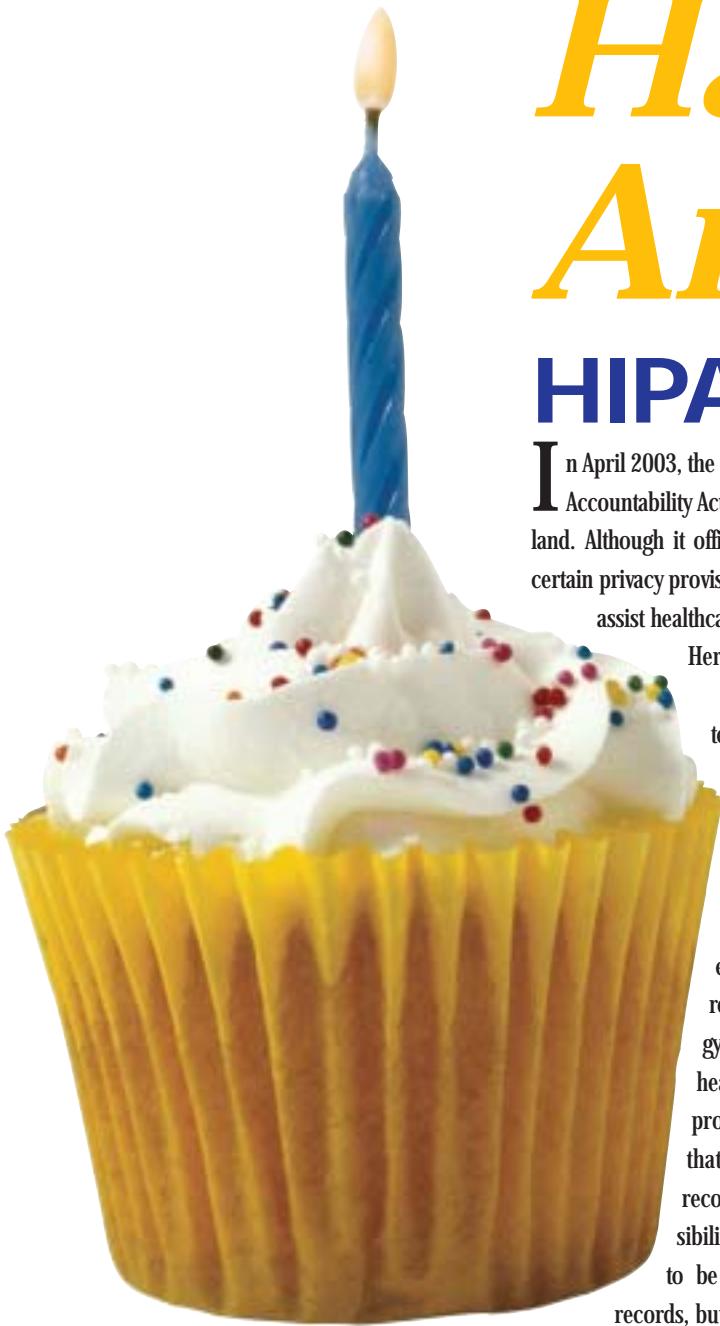
delivery in a community setting. The focus may be shifting. But as the national debate continues on how to best address the “2030 problem,” one thing is certain. Seventy-one million Americans aren’t getting any younger.

For more information on aging, contact Joan Rogers at jcr@pitt.edu



Happy Anniversary

HIPAA One Year Later



In April 2003, the Health Insurance Portability and Accountability Act (HIPAA) became the law of the land. Although it officially went into effect in 1996, certain privacy provisions of the Act were deferred to assist healthcare facilities in preparing for the Herculean task ahead.

In anticipation, hospitals, long-term care facilities, and other institutions conducted a complete assessment of all facets of the operation. Even activities such as fundraising, e-mails, and faxing needed to be evaluated in light of the new regulations. Information technology experts, in conjunction with health information management professionals, helped to ensure that computer-based patient records were limited in their accessibility. Nurses, for example, needed to be able to view patient medical records, but not necessarily billing records,

and visa-versa for billing clerks, who need not have access to detailed medical records.

The position of Chief Privacy Officer, often an HIM expert, helped to simplify the legalese contained in the statutes and train everyone, including administrators, medical personnel, and even the housekeeping staff to understand their role in the HIPAA process. The bell rang on April 16 and the horses were off.

In some ways, it now seems *pro forma*. Family physicians, specialists, dentists, and local pharmacies have issued privacy policies that patients and customers have dutifully signed.

But in practice, what does the landscape look like one year later? How successful was the in-house

training and what pitfalls were uncovered? By all accounts, the “big picture” of HIPAA has been successful, but what about the details of the regulations, particularly in facilities whose census is primarily people over the age of 65?

“In some cases, people overreacted,” says Kim Peterson, Manager of the Health Information Management Department and Hospital Privacy Officer of LifeCare Hospitals of Pittsburgh. Her facility, currently the largest LifeCare hospital in the U.S., accepts primarily seniors for up to 25 days following acute care hospitalization and treatment. “Many of our patients are very sick people when they arrive here,” she explains, “and are often not able to provide what some would classify as the proper consent under HIPAA. Initially, our nurse liaisons who evaluate patients before transfer often couldn’t get access to patient records without authorization. Superior patient care didn’t seem to come first.”

If the patient had a family member authorized to act on their behalf, things went much more smoothly, notes Peterson. But in some cases, it became tacit acknowledgement – privacy officer to privacy officer – to ensure that the proper pre-admission evaluation could be conducted and that if a patient required a special drug, for example, “we could be sure that it was available the moment the patient was transferred.”

Once the patient was transferred to LifeCare Hospitals of Pittsburgh, other issues arose, according to Peterson. “Who can legitimately receive information about the patient’s condition? We learned quickly to have a family member sign a HIPAA acknowledgement, and to let us know who speaks for the family and who is designated to receive information about the patient’s condition,” she remembers.

“When confronted with questions from a family member at two o’clock a.m., what does the nurse do?

How much information does he or she divulge?” asks Peterson. Until the system was shaken down, less information was the safer course of action.

Once a patient completes his or her course of care at LifeCare, they often are transferred to a skilled nursing, rehabilitation, or long-term care setting. “The problems we experienced on intake were, early on, sometimes replicated when a patient was discharged,” says Peterson.

Details, Details

When Cari Harrison graduated from SHRS in 1999 with an undergraduate degree in HIM, HIPAA was in the works, but not necessarily on the radar screen. Now Director of Medical Records at Shadyside Nursing and Rehabilitation Center, Harrison recalls that she spent significant time before and after the implementation of HIPAA educating her medical and staff personnel. “By and large, we anticipated virtually all of the pitfalls that HIPAA could present,” she notes. But, as is sometimes the case, the devil is in the details.”

Shadyside is a 150-bed facility and is generally nearly 90 percent occupied, so nameplates outside patient rooms were necessary. “Our staff has photos of each of our patients to ensure that they get the proper tests and medication,” says Harrison. “But having the patient’s name posted outside the room was designed as another step in that assurance,” not to mention that it allowed staff to refer to patients by name when they entered a room. “It makes patient care that much more personal,” she continues.

Questions arose about patient privacy and the nameplates, however. Harrison appealed to her in-house legal counsel for direction, and they assured her it was legal and in the best interests of the patient.

The same can’t be said, however, for birthday celebrations. “Our activities director would compile and post a weekly list of birthdays to provide patients with a bit of personal attention on their special day,” says Harrison. But that gesture, no matter how well-intentioned, proved to be a problem under HIPAA. Now, the director’s list includes only the first name and last initial. Staff and employees can help

the patient celebrate the occasion, without outsiders becoming privy to information that’s off-limits.

Like LifeCare Hospitals of Pittsburgh, Shadyside Nursing and Rehabilitation Center struggles with the same challenge of providing information to family members. However, because Shadyside offers a respite care program – allowing families to take vacations or business trips knowing that their loved ones are cared for – further complications arose.

While the primary caregiver is out of town, maintaining contact with the facility and the patient may fall to individuals who are less familiar with the healthcare system. “We always try to ensure that before the primary caregiver leaves, they have provided us with specific information on who, in their absence, is designated to receive information about the patient and his or her condition,” notes Harrison.

Watch What You Say and Where You Say It

According to Harrison, HIPAA has impacted even simple things, like the location of a fax machine. “We

do a lot of communicating, particularly with other healthcare institutions, by fax,” she explains. “It was important to ensure that fax machines were located in areas that protect the patients’ privacy and medical information.”

It even extends to off-the-cuff conversations, like staff grouching about a particularly difficult patient. “We are very conscious of all the details pertaining to HIPAA and remind our staff that if they need to vent, they need to be cautious of their surroundings and what they say.”

The American Health Information Management Association recently completed a survey of 2,000 healthcare compliance officers, and the results were heartening. “Even before the HIPAA privacy rule took effect last year, it created concern within the healthcare industry, along with confusion, frustration, and some misinformation,” states Melanie Brodnik, PhD, RHIA, president of AHIMA. “Despite all the anxiety over this issue, it appears as if healthcare organizations are integrating HIPAA privacy into their culture and seeing

SoftMed®, a health information systems technology company, recently donated updated software for student use in the Department of Health Information Management. One piece of software, ChartRelease®, will ensure that facilities comply with HIPAA Privacy regulations that require tracking of disclosures of protected health information. Other donated software includes ChartFact®, ChartLocator®, and ProviderCV®. SHRS Alumna Julie Buehler, RHIA, and SoftMed consultant, trained faculty on the proper use of the updated equipment.

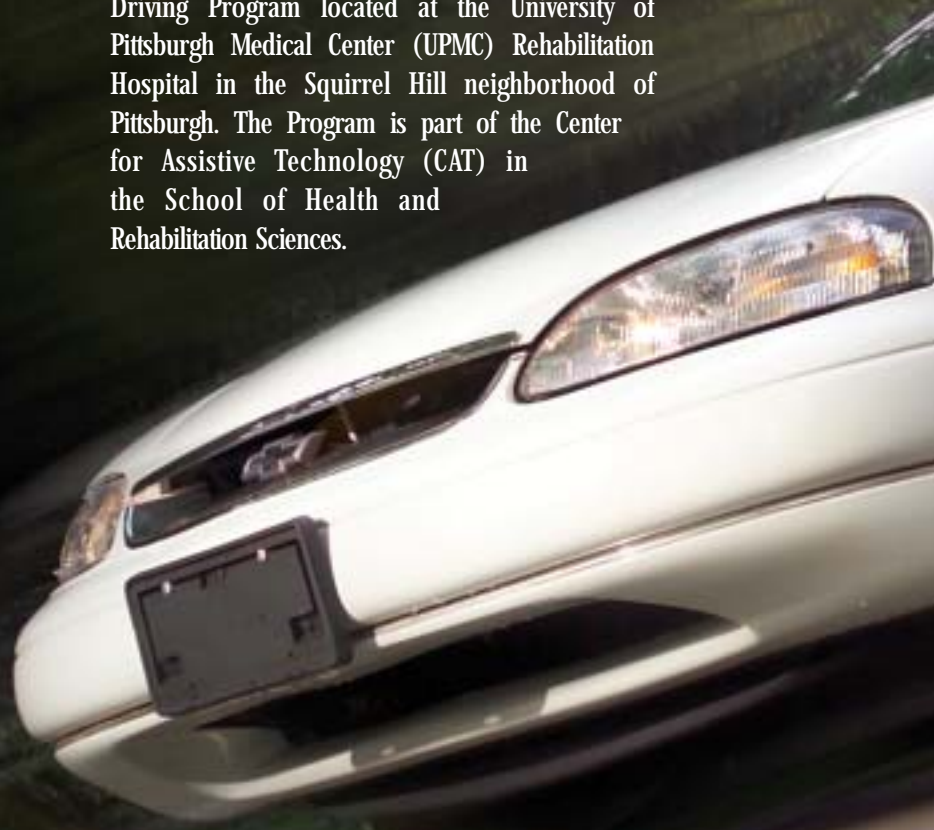
Keep on Rolling

For 18 years, Jim McConaughey and his wife, Anna, drove to Florida to escape the winters in Weirton, WV, and visit their daughter, now a school principal in the Pompano Beach area.

But during the winter of 2004, McConaughey began to experience heart problems and received a pacemaker. Compounding his health issues, he developed deep vein thrombosis (DVT), and the resulting weakness in his legs left him fearful, making it unsafe to drive. Although licensed, his wife no longer drove.

"We went to the grocery store and to church, and that was it," says McConaughey. His brand new Buick Park Avenue sat in the garage most of the time. For a man who never missed a day of work in 38 years as a steelworker and plant manager, the situation became untenable. "I was a prisoner in my own home."

So he consulted his physician, who prescribed a driving program for McConaughey and recommended that he have the Buick outfitted with hand controls. He was referred to the Adaptive Driving Program located at the University of Pittsburgh Medical Center (UPMC) Rehabilitation Hospital in the Squirrel Hill neighborhood of Pittsburgh. The Program is part of the Center for Assistive Technology (CAT) in the School of Health and Rehabilitation Sciences.







Amy Karas Lane, Clinical Supervisor, Occupational Therapist, and a Certified Driver Rehabilitation Specialist, evaluated McConaughy. She conducted a comprehensive assessment consisting of a review of his medical and driving history as well as an evaluation of his vision, perception, cognition, and physical motor and mobility skills.

Then, it was into the car to evaluate the type of vehicle modifications he would need to successfully continue to drive.

"Jim's situation was very straightforward," says Lane, noting that many of the clients she sees have experienced strokes, head injuries, Parkinson's disease, or other illnesses or disabilities that may impede their driving ability to a greater degree than what McConaughy experiences.

"Driving is not a right, it's a privilege. Yet, many people with disabilities may be able to drive safely with proper evaluation, training, and possible vehicle adaptations and modifications," says Lane.

Occupational therapists are especially well-suited to becoming involved in the driving rehabilitation process. In fact, the American Occupational Therapy Association has a major initiative focusing on safe



mobility, specifically for the older driver. Due to this region's aging population, the need for driving evaluations will continue to increase as older adults question their driving ability and consider alternative community mobility options.

In McConaughey's case, the adaptations included a steering device, a "spinner knob" attached to the steering wheel, and a hand control that operates the accelerator and brake. Other options available for drivers with disabilities include "low-tech" devices

such as left-foot accelerators, foot pedal extensions, turn signal crossovers, remote switches, and custom seats. "High-tech" devices may include electronic gear selectors, joystick driving systems, and voice-activated control systems.

Few auto establishments are authorized to install adaptive equipment. Most are members of the National Mobility Equipment Dealers Association, of which there are less than a half dozen in southwestern Pennsylvania and just one in West

Virginia, which was not near McConaughey's panhandle location. Only after successfully completing his driving training with the hand controls did Lane recommend a mobility equipment dealer in the Pittsburgh area.

Most major automotive manufacturers participate in a mobility assistance program for aftermarket adaptive equipment modifications. In McConaughey's case, because his car was so new, Buick covered most of the cost of having his vehicle modified.



It took McConaughey just three lessons – about six hours – to master the adaptive technology. Lane stresses that this is atypical for the clientele that she sees, explaining that not all clients are able to drive, even with adaptive technology and driving lessons. “I recently evaluated a client with a head injury who did not have the skills to safely operate the vehicle and he was understandably disappointed.”

Since its inception in September 1999, the Adaptive Driving Program has “graduated” a number of students, and McConaughey is proud to count himself among them. He’s ready to make the 1,000-mile trip to Florida today. Anna, on the other hand, would prefer to wait until the snow starts to fly.

For more information on the Adaptive Driving Program, contact Amy Karas Lane at laneak@msx.upmc.edu



Redefining *Emergency Response*

New Program Trains EMTs on Emergency Prevention

Five years ago, when Dr. Daniel Swayze and fellow emergency medicine professionals examined the state of the EMS and the overall healthcare delivery landscape, they recognized several service challenges looming on the horizon.

The EMT shortage rivaled that in the nursing industry. Ambulance companies grappling with reimbursement issues and a shrinking employee pool were going out of business, leaving large service gaps in their wake. The number of uninsured Americans was skyrocketing. And there was general agreement among industry experts that illness and injury prevention and maintenance of chronic illness were components of the healthcare system being widely ignored.

But while others may have looked at this complex set of challenges as a problem, Swayze, Adjunct Instructor, Emergency Medicine Program and Director of Prehospital Care at the University of Pittsburgh Medical Center (UPMC), and co-founder Dr. Paul Paris, Chairman of the Department of Emergency Medicine, University of Pittsburgh School of Medicine, saw them as an opportunity. What resulted was the EMed Health program, a collaborative project of Prehospital Care at UPMC, the Center of Emergency Medicine of Western Pennsylvania, and the Pennsylvania Emergency Medical Foundation. The program aims to retrain underutilized EMTs to do home visits for the elderly and uninsured, and conduct injury prevention and disease management programs.

Of the program's roots, Swayze explains, "The problem of ambulance company closings is worst in rural America, so we started the program with this population in mind. Rural areas have vast service areas with a comparatively small population. The equation makes for few emergency calls.

"At the same time," he continues, "there is a large percentage of the rural population that would benefit greatly from preventive services in the home, especially the elderly. Our goal was to maintain short emergency response times while harnessing the training and expertise of EMTs to address routine

healthcare issues that are too often overlooked."

The home care program consists of a variety of preventive medicine measures. EMTs may teach residents about fall prevention or help make their homes safer for infants and children. People suffering from chronic illnesses can be coached on illness management. Or the intervention can simply be a "Q & A" during routine monitoring to make sure the person is not susceptible to any healthcare threats.

"Elderly people may gain the most from this program," explains Swayze. "In many cases, there are simple interventions for the elderly that greatly reduce their risk of being hospitalized. For example, studies have shown that someone with a history of falls is at high risk of falling again. Technicians can pinpoint people with this type of risk and offer in-home solutions that may reduce the likelihood of a fall in the future. Similarly, elderly people with health conditions requiring prescription drugs often forget when or how to take their medication. In these cases, EMTs can offer ways to create prescription usage schedules or explore other ways to ensure that people are regularly taking their drugs."

Continued on page 34



Scientist as Detective

Randomized, clinical trials are nerve-racking, and not just for the subjects who don't know which treatment or drug they are receiving or if it will make a difference. The principal investigator is in the same boat. He or she won't know any results until the trial is wrapped up.

That's just the case for Dr. G. Kelley Fitzgerald, Assistant Professor, Department of Physical Therapy, and a principal investigator who will be kept in the dark for the next four years regarding the outcome of research designed to compare exercise methodologies for people with knee osteoarthritis (OA). This is his third randomized trial, proving he's a man of great patience.

"My participation is 'now,' during the administrative phase of the project," notes Fitzgerald. The moment it gears up this summer, however, he's out of the loop.

"But when the data is finally collected, it's exciting, because that's when you decide if you have a story to tell," says Fitzgerald. "You're like a detective getting close to solving a case. You've been collecting the clues – but you may not know which ones are important yet."

He notes, however, "Whether you're right or wrong, you're going to make an important contribution. If a hypothesis is proven to be true or not doesn't matter; the research will result in new information."



Win/Win Situation

The current project, "Knee Stability Training in Individuals With Knee Osteoarthritis," is funded by the National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS) with a \$1.4 million grant, and is currently enrolling 160 participants for the project. (See sidebar.)

Unlike some drug trials in which a control group may be given a placebo, this project is a win/win. "Both groups in our study will receive one of two exercise regimens, and we honestly don't know which one is better," says Fitzgerald. "But we do know that exercise is beneficial for most people with knee OA, so we're confident that our subjects will benefit from participation."

He points out, "We know that strength training helps, but it's not enough. We know that range of motion exercise helps, but it's not enough. We know that aerobic exercise helps, but it's not enough. We can do a lot better," says Fitzgerald. "People with

knee OA have varied problems and, up until now, exercise regimens have been a ‘one-size-fits-all’ approach.”

Poor quadriceps function, knee laxity, knee misalignment, obesity, other chronic diseases, or fear and anxiety are variables that could impact the outcome of therapeutic exercise, and researchers will be evaluating those variables. Fitzgerald is also hoping to learn whether or not participation in a therapeutic exercise program might slow the progression of arthritis.

Prior to starting the exercise treatment, participants will attend three sessions in which baseline and clinical testing will be done to evaluate strength and range of motion. They also will complete self-report surveys, answering questions about their health and how arthritis affects their lives. Radiographic examinations and motion analysis testing will complete the workup.

During the next phase of the project, researchers will supervise participants as they go through their exercise program at the University of Pittsburgh Medical Center (UPMC) Sports Medicine Complex two times each week for six weeks. According to Fitzgerald, the duration is standard, with traditional physical therapy programs that insurance companies will support.

Each participant will be evaluated at two months and at six months after their enrollment date. A coordinator will make monthly contact to ensure that they are adhering to the exercise program and completing daily exercise logs. Longer-term follow-up will require a competitive renewal of the current grant.

Joining Fitzgerald are fellow Department of Physical Therapy faculty members Dr. James

J. Irrgang, Assistant Professor and Vice Chair of Clinical Services, and Dr. Patrick Sporto, Assistant Professor. Research Associate Sara Piva, and graduate students Alexandra Gill and Lisa Curtis are also part of the team, as is Chester V. Oddis, M.D., School of Medicine, Dr. Stephen R. Wisniewski, Graduate School of Public Health, and Rakie Sham, School of Engineering.

Wanted: A Few Good Men & Women

Dr. Kelley Fitzgerald and his colleagues are seeking subjects for a knee osteoarthritis study. One hundred and sixty men and women over the age of 50 are needed for the study. Since knee osteoarthritis affects women more often than men, Fitzgerald suspects that the ratio is likely to be around 70/30. Eligible individuals should:

- Have been diagnosed with knee OA by a physician
- Not use an assistive device for mobility
- Have no history of stroke or heart attack
- Have had no knee or other lower extremity replacement surgery

Physician referrals are preferred. Personal physician approval is required for individuals who want to volunteer for the study.

For additional information, contact Sara Piva at srpst24@pitt.edu or call (412) 383 - 6712.

Uncovering the Issues

The clue for this research surfaced during a previous project when Fitzgerald and his colleagues were looking at quadriceps muscle function. A surprising number of the participants in the study were experiencing similar problems, complaining of knee instability – a feeling that the knee is giving way or slipping during regular daily activities.

These individuals were exhibiting complaints comparable to those of young adults who had anterior cruciate ligament (ACL) damage, even though they didn’t have a ligament injury. “We did a follow-up study with people with knee OA, looking at their neuromuscular control patterns, and we found that they had altered patterns similar to people with ligament injuries, and even seemed to be compensating in similar ways.”

The hypothesis that emerged was changing the exercise regimens designed for young ACL patients to meet the requirements of older, knee OA patients.

Fitzgerald says that he and his colleagues need to be better detectives when it comes to determining which exercises work best for which patients, or what additional treatments may need to be included to enhance the overall effects of exercise on knee OA. “Are there different exercises that are needed, or are there treatments that need to be done in conjunction with exercise?” Fitzgerald questions.

Check back in four years for the results. Fitzgerald should have the case solved.

For additional information, contact Kelley Fitzgerald at kfitzger@pitt.edu



Stepping Ahead

Helping Elderly Patients Overcome the Hurdles of Hip Fracture

Most elderly patients who've experienced a hip fracture agree on one thing: it all happened in an instant. One minute, they were going about their daily routines, and the next moment – due to a fall or failure within the joint itself – they were on the floor in excruciating pain. Before they knew it, they were in the hospital, in surgery, and, eventually, in the recovery room with a pinned or completely replaced hip joint.

It's a scenario Tom Zaucha has seen time and time again. An SHRS alumnus and Vice President for Business Development of the Keystone Rehabilitation Systems division of Benchmark Medical, Inc., Zaucha has seen literally thousands of elderly hip fracture

patients in his three decades of practice. From his point of view, while patients in this group may share a common bond as hip trauma victims, they can be divided into two distinct subsets that each provide specific challenges to physical therapists.

The first group consists of well elderly patients who have suffered a fracture, and can be rehabilitated in an in-patient setting, eventually sent home. The second set is composed of those individuals who were frail or in declining health prior to the fracture, and who must now go to a nursing, assisted-living, or personal-care environment instead of returning home.

Determining the patient's situation, as well as their physical condition prior to the injury, is critical to designing an effective physical therapy approach. And it's something Zaucha and his team of therapists at Keystone Rehabilitation Systems carefully consider.

"Generally, we find independent, motivated, forward-thinking people in the first subset," explains Zaucha. "These are people who view their fracture as a hurdle they need to get over so they can get on with their lives. They want to get out of bed, get on with the

therapy, and move on with their activities as soon as possible. The second group,” he continues, “may be more dependent, hesitant to move, and afraid of falling and injuring themselves again. And due to their physical condition, a number of these people may be depressed about their health and their futures. In either case, it’s our job to determine what a patient can do for themselves, what they can’t do without assistance, and how we can help improve on the situation with therapy that improves stamina, strength, and the ability to ambulate.”

According to Zaucha, physical rehabilitation for hip fracture patients moves through three distinct stages: dependency, semi-dependency, and, ultimately, independence. In all cases, the goal is to move the patient out of the dependent stage as quickly as possible. This is frequently done in the hospital within a day or two of surgery.

“First and foremost, we want them out of bed,” he says. “Our immediate goal after assessing a patient is to show them how to sit up, hang their legs over the edge of the bed, stand and pivot on the uninjured side, and eventually learn how to transfer themselves to a wheelchair, chair, and the commode. Once those basics are in place, we can move ahead with the other factors of the rehab program.”

For many patients, one of the fundamental components of their hip rehab program is to build upper body strength. For the first time in years – or in some cases, ever – many of these people are doing low-weight arm and chest exercises to improve their ability to lift themselves in bed, guide themselves into chairs, and propel their wheelchairs. Once strength begins to build, the PT team can focus on expanding the patient’s range of motion, improving weight bearing and balance capabilities, and establishing and normalizing gait. Depending on the patient’s physical condition, the typical therapy program can range anywhere from two weeks to three months.

From Zaucha’s point of view, “Hip fracture patients should be receiving physical therapy at least one to two times a day for the entire period they are in a rehab program. Anything less really doesn’t

produce solid results. Also, it’s essential to take the time to talk to the patient about their activity level prior to their injury. If they routinely walked down to the corner store to get their paper, that needs to be a goal in the recovery program. If they didn’t go outside of their home on a regular basis, we need to know that, too.”

He also strongly believes in home visits to assess the environment the patient will be returning to once they are released from the rehab facility. “You need to know how these people live and what the barriers facing them are,” he explains. “If they live in a house that’s full of steps, you need to tailor your rehab program to accommodate that. If the home has hazards, such as throw rugs, you need to see to it that they are removed before the patient returns. Find out if a walker can fit through the bathroom doorway. Determine whether the commode is too low. These are all things that you really can’t understand unless you see them.”

Support from outside the physical therapy team is also critical to a patient’s progress. “These people really need encouragement after the trauma they’ve been through,” remarks Zaucha. “Whether it’s from family, friends, or neighbors, emotional support makes a huge difference. It’s also important to keep the orthopedic surgeon, orthopedic nurses, social workers, and occupational therapists involved in every step of the rehab process. Communication among these professionals is the key to developing and executing an effective course of treatment.”

Every therapist, however, is not cut out to work with elderly

patients. “I truly believe that you have to really want to work with the elderly,” he observes. “You can’t rush these people through treatment. It takes time for them to do things, and progress may not be immediately visible. However, the results – when they do arrive – can be extremely satisfying.”

Zaucha does have some advice for recent physical therapy grads who have an interest in working with the elderly, particularly those with hip injuries. “For the first year, work with a senior therapist closely and see how they apply the psychological and physical concepts to their patients. Also, get to know the physicians and establish a rapport with them. You’ll learn a great deal and will be much more effective when the time comes to start treating patients on your own.”



Redefining Emergency Response

Continued from page 29

Discharge Monitoring

Swayze says the in-home preventive model is also useful for people who have recently been discharged from the hospital. He points to patients recovering from congestive heart failure as an example of a group that would benefit from in-home services post-discharge. These patients, says Swayze, have a very high hospital readmission rate. "If congestive heart failure patients were monitored to make sure they were taking their medication and weighed to ensure they were following their diet, readmissions could be reduced by up to 85 percent."

He emphasizes that the program is not meant to replace in-home visits by occupational therapists, physical therapists, or nurses. However, he points out that there are economic advantages to EMT-provided preventive care.

"By preventing a fall that could lead to a hip or skull fracture and subsequent hospital admission, these preventive techniques will improve the health and wellness of people and save the healthcare system substantial dollars over the long run," he asserts.

Swayze notes that the uninsured also benefit from the program. "Studies have shown that many people without insurance miss recommended screenings, vaccinations, or counseling that may prevent injury and disease," he explains. "Home visits go a long way toward providing a cost-effective improvement in the quality of life for this population."

In its current form, the EMed Health program consists of a 15-instructor network that covers the whole of western Pennsylvania. The instructors have an emergency medicine background and are doing much of the EMT in-home work themselves. They also run programs and seminars in individual communities.

While the program was started five years ago, a \$150,000 grant from the R.K. Mellon Foundation received in February 2002 helped solidify EMed Health's present form and laid the groundwork for its continued success.

Describes Swayze, "At this point in the life cycle of the program, our small group of instructors does it all. Not only do they meet with people in their homes,

they also organize various community programs, like domestic violence awareness seminars delivered to PTA groups. Given the strides we've made, I see a bright future ahead."

Motivational Interviewing

The cornerstone of the EMed Health program's in-home healthcare assessments is a customized questioning style called motivational interviewing. The interviews are similar to traditional assessments, with the patient asked a series of questions about their lifestyle and risk behaviors. But this is where the commonalities end.

"Medical practitioners have always operated on the premise that in order to change someone's behavior, you have to ask questions, determine risk areas, and give advice. But we know this doesn't work," Swayze explains.

Motivational interviewing relies on the interviewee coming to his or her own conclusions about risk behaviors. "Most people know that they're engaging in unhealthy behaviors," Swayze remarks. "This line of questioning puts the onus on them to decide which unhealthy behavior they would like to change. Studies have shown this method to be far more effective than its predecessor."

Swayze is also working on a second component to the program that enlists pre-med and medical school volunteers to do emergency risk appraisals for patients in the emergency department at UPMC Presbyterian. "This 25-person group, which we refer to as the ED Health Advocates, conducts health-risk assessments with all of our emergency room patients. Using motivational interviewing techniques, the advocates ask patients questions about immunization, smoking, diet, and exercise. It's typical that many of the questions have nothing to do with the cause of the emergency room visit."

Funding for the Future

According to Swayze, the next phase of the program will require significant grant dollars from the Centers for Disease Control (CDC) and other public health funding agencies. "It will include a series of efficacy studies on the success of the program on a limited scale."

Phase Three, he says, would be the big leagues: national, multi-center studies. "We would need to demonstrate that this is a natural and valuable role for emergency medicine to be playing in the community.

We need to show that emergency medicine could be in the community helping to preserve life, not just there at the end helping to save it."

The implications that the EMed Health program can have on healthcare in the U.S. are tremendous.

"Each year, there are about 110 million emergency department visits in this country. Emergency departments are already accessing almost half of the U.S. population in a healthcare setting. If a large percentage of these people were trained to ask basic health-related questions, we could thwart many illnesses and diseases that aren't being addressed until they reach a problem stage," Swayze emphatically explains.

With a final bit of food for thought about the potential of the EMed Health program, he notes, "Just think about the impact that basic preventive care could have on deaths from flu and pneumonia. They combine to kill about 65,000 people a year. At that rate, any impact is an immensely positive one."

For more information on the EMed Health program, contact Daniel Swayze at swayzedr@upmc.edu or the program's new coordinator, Heather Eschenauer, at eschenauerha@upmc.edu



What Do You Think?

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Dialogue

A Conversation with Dr. Stephanie Studenski

Dr. Stephanie Studenski, Professor of Medicine in the University of Pittsburgh School of Medicine and an SHRS faculty member with a secondary appointment in Occupational Therapy, is one of the nation's foremost authorities on mobility and functioning in the elderly. A researcher as well as a clinician, she is developing practical ways to evaluate and treat elderly patients who may have difficulties with function.

We've asked Dr. Studenski to discuss the impact of mobility and balance problems on the elderly's quality of life.

Q: How prevalent are mobility and balance problems in the elderly?

A: *Thirteen percent of all Americans aged 60 and over have some difficulty going outside the home alone, and the proportion is higher in women than in men. In Americans age 70 and over, 20 percent of women and 13 percent of men have difficulty walking a quarter mile or more.*



In terms of indoor mobility, between five and 10 percent of community-dwelling older adults have severe limitations to mobility, such as getting around inside the house or getting out of a chair. The proportions are much higher in long-term-care settings, where more than half the residents have trouble with basic indoor mobility and virtually all need assistance for outdoor mobility.

Q: What causes these mobility and balance problems?

A: *We tend to think of common conditions like arthritis as the primary cause, but conditions like low vision and heart and lung problems can also create mobility problems, as can neurological conditions, such as Parkinson's disease or a stroke. It's important to remember, for example, that being depressed can reduce a person's*

activity, and therefore their mobility. Many medications make a person tired or dizzy, reducing mobility and activity. Regardless of the underlying cause, when activity is reduced, you become even weaker and more tired, which decreases the mobility level. It's a vicious cycle.

Q: In cases where there are multiple causes for mobility and balance problems, how is the healthcare community responding?

A: *There is a whole world of what we call multiple, co-existing conditions that we as health professionals think require a multidisciplinary approach. Most older people have more than one contributor to their mobility problem, and I worry, at times, that the*

traditional model of helping people is based on a single diagnosis. If a patient is being seen for his or her Parkinson's, or being evaluated following a stroke, we may overlook other factors that impede the individual's mobility or balance.

These patients require medical expertise from professionals familiar with working to accommodate multiple causes. For example, one diagnosis might suggest a patient use a cane, but if they have arthritis or shoulder pain, a cane is not likely to work. When people are experiencing multiple conditions, even a simple evaluation can be difficult.

Q: Given the realities of managed care, how do older people traverse this system?

A: *This is such a challenging area. With the exception of acute rehabilitation, the model*

we use for paying for healthcare is very event-oriented. In community-based patients with mobility issues, they might see their Parkinson's physician, their optometrist, their cardiologist, and an occupational therapist. It's very difficult to get coordination.

Q: What is being done to improve the situation?

A: *We are very interested in building better transitions between a rehabilitation model and a wellness model. Many people whom we see with mobility problems will, at sometime or another, require acute services for an event or disabling condition. However, once they "graduate" following that episode, it's unlikely that they are ready to run over to a health club and join a fitness group. Programs like SilverSneakers* are a start, but even that is beyond some of these individuals.*

Q: Do you think the Baby Boomer generation is more attuned to wellness and exercise than today's older adults?

A: *Absolutely. I think there is no doubt that there is an increased awareness of the benefits of wellness behaviors. We need to keep in mind, however, that we all will age, and our goal is to do it as well as we can and live as independently as possible. But prevention doesn't mean you will never get old or become disabled. We can delay it, but we're not going to eliminate age-related disabilities.*

* The SilverSneakers® Fitness Program was created to provide a cost-effective, preventive benefits program for commercial and Medicare group plans, Medicare Advantage plans, and Medicare Supplement organizations.



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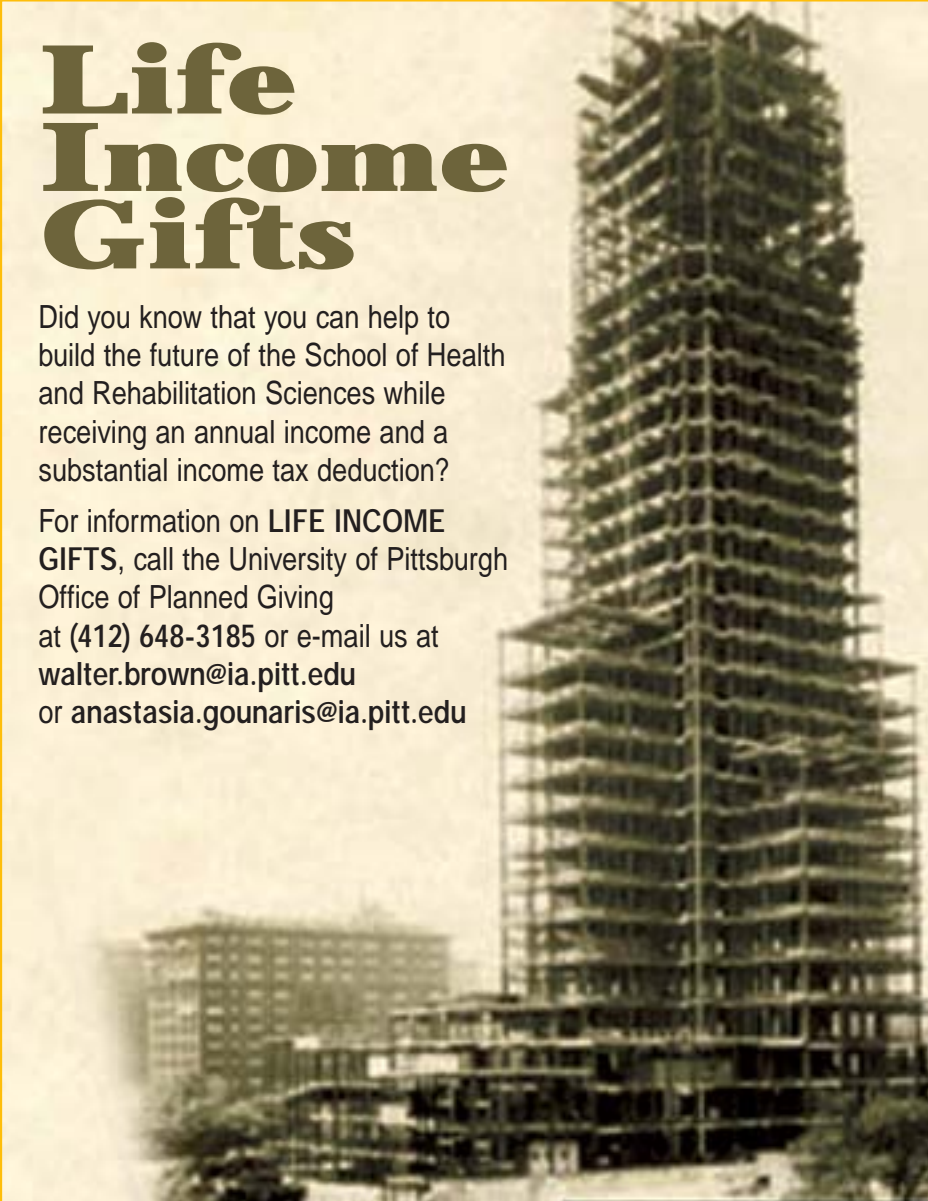
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