

FACETS

University of Pittsburgh
School of Health and
Rehabilitation Sciences
F a l l 2 0 0 3



Born in Freedom

**Freedom House Enterprises
Ambulance Service**

FACETS

School of Health and Rehabilitation Sciences — Fall 2003 — Contents

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About the cover: *Freedom House paramedics in action.*
Photo courtesy of the Heinz History Center of Western Pennsylvania.

School of Health and Rehabilitation Sciences



A Work in Progress

This past July, I had the opportunity to attend the 12th anniversary celebration of the passing of the Americans with Disabilities Act (ADA). The setting was elegant – the newly renovated Jefferson Building of the Library of Congress – and as befits such a significant event, several ranking legislators, sub-cabinet level officers, and representatives of every major disability organization were in attendance to speak and participate.

The ADA is considered a seminal piece of legislation, guaranteeing the civil rights of Americans with disabilities. But while it is generally understood that the ADA was designed to eliminate discrimination against individuals with disabilities, one may assert with confidence that discrimination has yet to be extinguished.

However, much has been accomplished. The ADA has resulted in regulations in the form of Standards for Accessible Design in new construction and alterations of public venues and commercial facilities. This enabling law has also prohibited discrimination against persons with disabilities in employment for which they are otherwise qualified. Such employment also may require “reasonable accommodation.”

As with nearly all laws, the ADA is a work in progress. It is continually being defined and challenged. Perhaps you have heard of some of these challenges through the news media. But despite what you may have heard about court actions involving the ADA, the number of cases has been relatively modest considering that the number of people with disabilities is presently estimated to exceed 50 million. I trust that you also will not be surprised to learn that the number of abuses has been exaggerated (see www.usdoj.gov/crt/ada/pubs/mythfct.txt for information on facts and myths regarding ADA). For more comprehensive information, you may wish to visit the ADA homepage (www.usdoj.gov/crt/ada/adahom1.htm).

I also invite you to read the “Access” column in this issue of *FACETS*. I, along with my colleagues Kate Seelman, Ellen Cohn, and Miriam Hertz, discuss the impact this legislation has had on our school and our students.

On a slightly different note, I would like to take this opportunity to thank the many donors who have supported programs of SHRS. A complete list can be found, starting on the next page. We do, indeed, appreciate your generous contributions to the school.

With kindest regards,

Clifford E. Brubaker



Top: Cliff Brubaker and Dr. Margaret J. Giannini, Director of the Office on Disability at the Department of Health & Human Services

Bottom: Sen. John McCain and Cliff Brubaker



Giving

I want to thank all of our alumni and friends for their generous support of the School of Health and Rehabilitation Sciences during fiscal year 2003. Your contributions to the Annual Fund have allowed us to award scholarships based on need and academic merit, provide program support, graduate research support, and services to the community.



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Director of Development

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 Every effort was made to ensure the accuracy
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 omissions, please contact Karen Khan at
ktkhan@shrs.pitt.edu.

On the Front Lines in the Battle Against Lower Back Pain

In his military career and his medical career, Captain John D. Childs has traveled down a path of academic excellence. A native of Birmingham, Alabama, Childs entered the Air Force Academy in Colorado Springs in 1990. He emerged four years later as a Distinguished Graduate with a B.S. degree. Selected to attend graduate school, he next completed his Master of Physical Therapy at U.S. Army-Baylor University in San Antonio.

Childs began his clinical practice in Tucson, where his first boss was both a skilled manual therapist and a valuable mentor. Seeing patients, completing an MBA at the University of Arizona, and starting a family, saw Childs through the '90s. In 2000, he had the opportunity to enter the doctoral program in physical therapy at SHRS, and so the Childs family moved north.



Captain John D. Childs

Knowing the department is at the forefront of low back pain research, Childs was ready to embark on a study he believed could provide important evidence to support a simple, cost-effective and successful intervention for patients with low back pain. His goal was to isolate the group of patients who would benefit the most from spinal manipulation, thus establishing the validity of the clinical prediction rule (CPR) initially developed by some of his colleagues, including Dr. Julie Fritz, Assistant Professor, Department of Physical Therapy.

Spinal manipulation has been shown to be effective at improving pain and function for many patients with low back pain, but few studies have investigated which patients are more likely to benefit from this type of intervention as opposed to other thera-

pies. In fact, historically, much of low back pain research has used patho-anatomical mechanisms such as MRIs to classify back pain. "Tools like the MRI are helpful in diagnosing some conditions that cause low back pain, but that doesn't mean they are appropriate or necessary for every patient," Childs remarks. He wanted to explore whether the standard patient history and physical exam provide enough information to help clinicians make accurate treatment decisions regarding the use of manipulation.

The study looked at 131 patients in eight clinical sites around the United States. Slightly more than half were men, and most were in their forties.

The CPR for spinal manipulation includes five criteria. The first three are determined through the patient history, and then the examiner looks for two additional criteria in the physical exam. Study patients who met at least four of the five cri-

teria were classified as having a “positive” CPR for spinal manipulation. Those who met less than four were classified as “negative.”

Patients were then randomly assigned to one of two intervention protocols, each comprising five physical therapy sessions over four weeks. The first group received spinal manipulation during the first two sessions and then participated in a stabilization exercise intervention and a low-impact aerobic program for three additional sessions. The second group completed the stabilization exercises and low-impact aerobic program during all five sessions.

Patients received follow-up exams at one and four weeks into the study. Those with at least 50 percent improvement in the Oswestry Disability Questionnaire (ODQ) were classified as a success. The Numeric Pain Rating Scale – a patient self-report mechanism – was used as a secondary measure to determine the effects of treatment on the patient’s level of pain.

Patients who were positive on the CPR and who received spinal manipulation achieved two and a half times the minimum clinically important difference (MCID) on the ODQ compared to spinal manipulation patients who were negative on the CPR. These same patients achieved almost three and a half times the MCID compared to patients who were positive on the CPR but who received the stabilization exercise intervention. Childs observed similar results on the Numeric Pain Rating Scale, and the results were consistent at the one and four

week exams.

Childs’s research can help clinicians accurately identify patients with low back pain who are likely to benefit from spinal manipulation. Additionally, the failure to offer this intervention for these patients appears to increase their risk of worsening. Ultimately, the CPR should improve decision-making for clinicians, potentially resulting in improved outcomes of care, increased satisfaction, and decreased costs.

The Air Force gives doctoral candidates the freedom to be full-time students, but the pressure is on to complete their degree in three years. “It was a dream come true to be able to focus all my professional attention on the program, but now it’s back to reality,” says Childs. Back in San Antonio and practicing at Wilford Hall Medical Center, Childs is beginning to experience the balancing act between clinical practice and seeking the grant monies that will enable him to continue his research.

“Back pain is epidemic,” notes Childs. “It is every bit as much of an issue when airmen are deployed as it is during peacetime. The global situation offers a unique opportunity to research how the CPR can be implemented in a deployed environment,” adds Childs. “For example, a Special Forces team generally consists of four or five individuals including one medic. If the medic knows how to apply a simple CPR and use one technique, he or she may be able to effectively treat a team member with acute low back pain in the field and achieve successful results.”



Feedback

In response to the “Community of Neighbors” article in the Summer 2003 issue of *FACETS*, I would like to say bravo and thanks to the UPSOTA. Rebuilding Together Pittsburgh is proud to have volunteer occupational therapists on board supplying a higher lever of expertise in our free home repair program for low-income elderly homeowners in Allegheny County.

Rebuilding Together Pittsburgh is a nonprofit organization dedicated to renovating and repairing homes of low-income elderly residents. Over 60 percent of seniors in Allegheny County struggle to keep a warm, safe, and dry roof over their heads, making “aging in place” a luxury. We are one of a few organizations providing free repair services and home modifications in the county. This is possible due to the generous participation, skill, and knowledge of local building trades, corporations, OTs, civic groups, schools, and hospitals.

Together, we can continue to rebuild Pittsburgh one home at a time and ensure our elderly homeowners can age in place in a safe and repaired environment. We look forward to working with Denise Chisholm and the wonderful volunteers representing the University of Pittsburgh Student Occupational Therapy Association.

Cindy Gilch
Executive Director
Rebuilding Together Pittsburgh

Emergency Medicine Program Creates National EMS System in

Qatar



The School of Health and Rehabilitation Sciences has become a world-renowned academic institution, in large part because of its talented faculty. So it's no wonder that countries from around the globe have come increasingly to SHRS for guidance on their health and rehabilitation-related needs.

Recently, members of the Department of Rehabilitation Science and Technology have provided training in India and Brazil, and students from Japan have traveled stateside to observe the Athletic Training Program. And after providing comprehensive EMS training in Qatar, the Emergency Medicine Program has added its name to a growing list of SHRS globetrotters.

In May of last year, Dr. Walt Stoy, Associate Professor and Program Director, and Tom Platt, Assistant Professor and Vice Program Director, Emergency Medicine Program, were invited to Qatar to conduct an assessment of the state's EMS system. Along with a team of professionals, the two sought to compare the current system with that in the United States, which conforms to guidelines set by the U.S. Department of Transportation through the National Highway Traffic Safety System.

"The officials in Qatar wanted to see how their system stacked up to the best in the world," explains Platt. "We were more than

happy to provide them with a benchmark for their program and begin helping them accomplish the goals they were willing to set in place. As it turns out, their goals were pretty lofty."

The technical assessment was no small task. An EMS system contains ten components, many of which are quite complicated. For example, one component pertains to regulation and policy, making it necessary for the team to examine laws that surround the EMS system, funding sources for the system, and other related matters. Two others – resource management and training – focus on ensuring that there are sufficient physical resources, equipment, and ongoing EMT training.

"While much of a well-designed EMS system has to do with infrastructure," explains Platt, "There are components like public information and education that are vital to a working system."

"The technical assessment went so well that we were asked to help transition the state's entire EMS education system as well. They wanted us to model the program based upon the SHRS curriculum so that they would meet the U.S. Department of Transportation national standards for EMT basic training."

Platt and the team switched gears and offered an EMS instructor's course to employees of the Hamed Medical Corporation, which is the state-run healthcare system.

But it was at this juncture that the team faced their biggest challenge – a complicated language barrier. Most of the EMS providers in Qatar are anesthesia technicians from Tunisia. Therefore, the EMS technicians-to-be spoke Arabic, had learned their basic medical training in French, and would need to learn EMS training from Platt and the team in English.

"Initially, the language barrier seemed almost insurmountable," remembers Platt, "But Emergency Medicine people communicate on a basic level that made the process a lot easier than we expected. EMS clinicians care so much about the profession that we found a way to get past the language issues."

After a full year, the EMS training program in Qatar is an enormous success. The 25 students who Platt and the team initially trained have gone on to teach an additional 120 EMT-basics. Notes Platt, "The program has become an extension of our work here. They use our curriculum and have taken the National Registry of EMT Certification Exam. As of July, 47 eligible candidates have passed the exam – making them as capable as any EMT in the U.S."

PARTNERING for Learning

SHRS and Tech-Link Program of Pittsburgh have a history of teaming up to produce exciting opportunities for students with disabilities to learn about careers in math, science, and technology.

Last winter, Tech-Link held a dynamic Robotics Camp at the Human Engineering Research Laboratories (HERL). Over the summer, two area high school students with disabilities interned at SHRS. Brandon Butler, a senior at Woodland Hills High School, came to the Department of Rehabilitation Science and Technology, and Eric Wood, an incoming freshman at Duquesne University, worked at HERL. A third student interned at the National Weather Service.

This fall, the partnership is at it again. Twelve middle school students with and without disabilities will participate in an eight-week robotics program co-sponsored by HERL and the School of Engineering.

Tech-Link's close affiliation with the University of Pittsburgh presents countless opportunities for high school students with disabilities to obtain learning experiences that would not normally be available. For more information, contact Sondra Balouris Brubaker at sab992@pitt.edu or visit their Web site at www.tech-link.org.

Giving Teachers a Voice

Dr. Kittie Verdolini, Associate Professor, Department of Communication Science and Disorders, is principle investigator in a recently awarded, \$1.7 million grant to study the biomechanics of loud speech. The five-year grant from the National Institute on Deafness and other Communication Disorders entitled “Biophysiological Mechanisms of Heightened Speech” will focus on how people can reduce the harm they cause to their voice by talking too loudly on the job.

While heightened speech is commonplace in many professions, most people underestimate – and even ignore – the impact it can have on the voice. The problem appears to be most prevalent with teachers.

“Teachers experience near epidemic proportions of voice problems traceable to prolonged, loud speech on the job,” explains Verdolini. “Functional consequences of such problems include reduction and loss of work and subsequently, reduced cognitive functioning for students. Societal costs annually range in the billions of dollars because of this problem.”

But rather than eliminate loud talking, Verdolini and her team of co-investigators believe that voice training could be the perfect fix – turning an activity that once caused injury into one that prevents it.

Says Verdolini, “Loud speech has traditionally been viewed as an anathema for vocal health, but in this application, we hold the opposing view that specialized approaches may have therapeutic value in the treatment of both acute and chronic injury.”

If all goes well, those teachers who now struggle to be heard will rule their classrooms with a commanding presence – and an equally commanding voice.

Lightening the Load

Students from the Department of Occupational Therapy recently conducted weigh-ins at two Pittsburgh-area grade schools as part of the second annual National School Backpack Awareness Day. They weighed students and their bags to make sure that the backpacks didn't exceed the recommended 15 percent of their body weight and advised on the proper way to wear the packs. Studies indicate that heavy or improperly worn backpacks can cause significant injuries and may lead to health problems later in life.

“If we can reach children early, we'll be able to change their backpack-wearing habits,” says Dr. Nancy Baker, Assistant Professor, Department of Occupational Therapy. According to the U.S. Consumer Product Safety Commission, more than 21,000 backpack-related injuries were reported at hospital emergency rooms, doctors' offices, and clinics in 2002.





Making the Counseling Connection

Writing the Book on a New Dimension of Audiology

When a young child is diagnosed with a hearing loss, practitioners and families are faced with a number of significant challenges. The audiologist must determine the degree of loss, devise a strategy of treatment, and provide counsel and support for both the child and his or her family. On the other side of the coin, the family needs to adjust its daily routine to accommodate both the strengths and weaknesses of its hearing-impaired member.

From Kristina English's vantage point, making that all happen often proves to be a substantial undertaking – particularly since most audiologists have had little training in counseling patients or families on how to deal with the issues surrounding a hearing loss. An Assistant Professor of Audiology in the Department of Communication Science and Disorders, she has recently co-authored a new book, *Counseling in Audiologic Practice*, to guide audiology professionals on how to master the counseling skills necessary to support both patients and families affected by hearing loss.

"Since the mid '90s, I have been teaching courses on counseling in audiology, and have been using an existing textbook, written by my co-author John Clark, and his colleague, Fred Martin. That book, which was published in 1994, was at least a decade ahead of its time and was viewed as the definitive text for audiology studies," remarks English. "However, through my teaching, I and many of my colleagues recognized that the single chapter on kids and hearing loss wasn't really doing the subject justice. In particular, discussion about helping children and families cope with a hearing loss was completely missing from the Clark-Martin book."

To address this lack of information, English ended up writing her own book, *Counseling Children With Hearing Loss*, a few years ago. Shortly after this book came out, Clark and Martin asked her if she would be interested in helping to update their book. English readily agreed. The new edition of *Counseling in Audiologic Practice* was published in July 2003.

According to English, the updated version is one-of-a-kind. "It is probably the most organized and focused resource available to help audiologists think about the psychological impact hearing loss has on patients and their families. The book has more information on how a child's hearing loss impacts parents, grandparents, and siblings than any other book currently available. Our approach centers on family systems theory; the idea that when something happens to an individual in a family, it impacts the entire family unit. As a result, the entire family, as a system, has to adjust to a member with a hearing loss. The text gives audiologists and ultimately, their patients, suggestions on how to cope with the changes a hearing loss can bring, and also presents strategies to help maximize a patient's strengths and overcome their shortcomings."

"It is probably the most organized and focused resource available to help audiologists think about the psychological impact hearing loss has on patients and their families."

Typically, addressing the psychosocial issues involved with hearing loss takes a back seat to technological advancements. That, however, is changing thanks to strong campaigning to make counseling a key part of an audiologist's doctoral training. "This book takes things to the next stage," contends English. "In addition to the necessary technological training audiologists need, we also present the psychosocial concepts, provide the audiologist with strategies to recognize them, and then offer ideas on how to integrate counseling and technology into a coordinated treatment program. That's what we're really proud of. And now that a growing number of audiologists are pursuing doctoral work, there is a time and place to present this information effectively, as well as coursework to support it."

One of the concepts discussed in the book centers on the coping strategies of vigilance and

respite, well known in other rehabilitation fields but not discussed in audiology. Vigilance occurs when individuals pull themselves together during difficult times. It is marked by heightened concentration, increased attention, and heightened efforts to comply and succeed. Respite occurs when individuals pull back to "recharge their batteries" and recover both mentally and physically.

"We point out that individuals with impaired hearing can only function at the vigilance level for a certain length of time – otherwise they'll fall apart," observes English. "They have to go into respite function to recover. When a person has a hearing loss, that means pulling back socially, trying to obtain some 'down time.' However, to families, this strategy can look like they are being intentionally ignored. When families don't understand that dynamic, they will

invariably play the blame game, and complain that 'He only hears what he wants to hear.' They don't see the fluctuation between vigilance and respite as a sound mental choice. This book gives practitioners the counseling background they need to change that mindset."

The concept behind the book has caught the eye of a number of influentials in the audiology arena. In April of 2004, English and Clark will present at the American Academy of Audiology Annual Meeting in Salt Lake City.

"This topic is one of those things that should have always been part of our practice," sums up English. "We haven't been as effective as we should have been with helping to facilitate personal adjustments. Now is the time to fix that."

For more information, contact Kristina English at kenglish@pitt.edu.

Listen to the Music

Musicians and music enthusiasts alike know that hearing is essential to their enjoyment of music, but what many don't know is that continual exposure to loud music can cause significant hearing loss.

In September, the University of Pittsburgh Medical Center (UPMC) held the grand opening for its state-of-the-art UPMC Musician's Hearing Center. Designed to help musicians as well as the music enthusiasts who listen to them protect and improve their hearing, the Center will provide therapy and consultation services to people experiencing hearing loss after years of loud music.

"Musicians, whether in a rock 'n roll band or in the symphony, routinely expose themselves to high decibel sounds at a close range for long periods of time, which can have a gradual and detrimental effect on hearing," says Dr. Catherine Palmer, Associate Professor, Department of Communication Science and Disorders and Director of the UPMC Center for Audiology and Hearing Aid Services. "By opening this clinic, we hope to be able to evaluate musicians and their specific musical environments, and to provide them hearing protection to save their hearing."

For more information on the UPMC Musician's Hearing Center, contact Catherine Palmer at palmerc@pitt.edu.

Class Acts

John Abt, a doctoral student in the Sports Medicine Program, was awarded a National Athletic Training Association (NATA) Doctoral Scholarship, as well as a NATA Doctoral Research Grant. He also received an ACSM Doctoral Research Grant.

Heather Rusiewicz, a master's student in the Department of Communication Science and Disorders, has been selected as one of the Bamford-Lahey Scholarship winners for 2003-2004. The \$10,000 Scholarship was awarded by the Bamford-Lahey Children's Foundation.

Michael J. Dvorznak, **Sandra Hubbard**, and **Andrew J. Rentschler**, master's students in the Department of Rehabilitation Science and Technology, have been awarded VA Pre-Doctoral Fellowships (NATA).

Ketki Desai, **Tamara L. Mills**, **Elizabeth R. Skidmore**, doctoral students in the Department of Occupational Therapy, **Jeanne M. Zanca**, a doctoral student in the Department of Physical Therapy, and **Ann Fisher**, **Jennie Kane**, **Leslie Necastro**, **Jessica Richards**, and **Briana Rusiski**, second-year occupational therapy students, participated in Assistive Technology Day. The Department of Occupational Therapy-sponsored event was held in July for 110 Pennsylvania Governor's School for Healthcare (PGSHC) students.

Ayako Habu and **Natalie Senese**, master's students in the Sports Medicine Program, each received an Osternig Masters Research Grant from the National Athletic Training Association (NATA).

Megan Navish and **Jennifer Vargo**, students in the Department of Communication Science and Disorders, were each awarded Pennsylvania Academy of Audiology Student Scholarships.

Peter Cody Hunt, a doctoral student in the Department of Rehabilitation Science and Technology, was recently recognized by *Pittsburgh* magazine and the Pittsburgh Urban Magnet Project (PUMP) in its "40 under 40" list, signifying him as one of 40 talented individuals under the age of 40 who is making a positive impact on the region's development.



Sandra Hubbard, Andrew J. Rentschler, Michael J. Dvorznak

What's New with you?

It's easy to share your good news about a new job, a promotion, or an honor or award. Simply e-mail the information to Karen Khan at ktkhan@shrs.pitt.edu and we'll include it in the "Yearbook" section as space allows.

'90s

John Duffy, BS (PT '91) is celebrating the 2nd anniversary of his Web site PTupdate.com. The site is a resource center for physical therapists, occupational therapists, and athletic trainers and receives hits from visitors around the world.

Kristie Spencer, MS (CSD '92) was just awarded a Ph.D. from the University of Washington Department of Speech and Hearing Sciences. She will begin this fall as Assistant Professor in the same department.

YEARBOOK

Margaret Lehman Blake, Ph.D. (CSD '99) recently had her first baby, a girl named Joanna.

'00s

Tom Corfman, Ph.D. (RST '03) accepted a position with the National Institute for Disability and Rehabilitation Research (NIDRR) as a Rehabilitation Program Specialist.

LaTonya Thompson, MS (HIM '03) has recently accepted a position with PointDX, North Carolina, where she will be working on their lexicon of medical terms and linking them to ICD-9 codes.

Dolores Hankins, MS (HIM '03) has recently accepted a position as a clinical application analyst with Universal Health Services, King of Prussia, PA.

NEW

and Noteworthy

Dr. Mervat Abdelhak, Associate Professor and Chair, Department of Health Information Management, was elected President of the American Health Information Management Association.

Dr. Carmela M. Battaglia, Assistant Professor, Department of Occupational Therapy, and occupational therapy students **Jennie Kane** and **Jessica Richards** presented a Disability Awareness Class at Camp Cadet sponsored by the Washington County State Police in July.

Dr. Jennifer Brach, Assistant Professor, Department of Physical Therapy, won the Geriatric Award of Excellence from the Geriatric Special Interest Group of the Pennsylvania Physical Therapy Association.

Dr. David Brienza, Associate Professor, Department of Rehabilitation Science and Technology, received the Distinguished Service Award from the Rehabilitation Engineering & Assistive Technology Society of North America (RESNA).

Dr. Mary Ellen Buning, Assistant Professor, Department of Rehabilitation Science and Technology, was selected to receive the Rehabilitation Science and Technology Distinguished Teaching Award by a committee of current and past students.



Patricia Dorn, Deputy Director of VA Rehabilitation Research and Development, and Dr. Rory Cooper

Dr. Rory Cooper, Professor and Chair, Department of Rehabilitation Science and Technology, received the Paul M. Magnusson Award from the Department of Veterans Affairs Research and Development Office. This is the highest award given by the VA for rehabilitation research and development.

Dr. Judith Dodd, Adjunct Assistant Professor, Clinical Dietetics and Nutrition Program, was a Finalist for the *Pittsburgh Business Times* HealthCare Hero Awards in the Healthcare Educator category.

Dr. John Durrant, Professor, Department of Communication Science and Disorders, presented two papers, one titled "Reliability of ERA Using Auditory Steady-State Responses," and a second titled "Validity and Accuracy of ERA Using Auditory Steady-State Responses," at the XVIII Biennial Symposium of the International Evoked Response Audiometry Study Group in June in Tenerife, Spain.

Dr. Kristina English, Assistant Professor, Department of Communication Science and Disorders, was the keynote speaker at the Educational Audiology Association conference in St. Louis, MO.

Dr. Margo Holm, Professor, Department of Occupational Therapy, **Ketki Desai**, Research Associate, Department of Occupational Therapy, and Dr. Adele Towers, presented a paper titled "Functioning and Disability in Nail Patella Syndrome" at the 6th International Symposium on Nail Patella Syndrome in June in St. Louis, MO. They also presented a paper titled "Everyday Living with Nail Patella Syndrome" at the First Medical Conference for Nail Patella Syndrome – UK in August in Chester, England.

Dr. Scott Lephart, Associate Professor and Chair, Department of Sports Medicine and Nutrition, was recognized with an Outstanding Research Paper award from the *Journal of Athletic Training*.

Dr. Jean McCrory, Greg Norman Assistant Professor of Biomechanics and Assistant Director, Neuromuscular Research Lab, became a Fellow in the American College of Sports Medicine.

Dr. Malcolm McNeil, Professor and Chair, and **Dr. Patrick Doyle**, Associate Professor, Department of Communication Science and Disorders, received a three-year grant titled "Cognitive and Linguistic Mechanisms of Language Performance in Aphasia." The grant is from the VA RR & D.

Elaine Mormer, Instructor, Department of Communication Science and Disorders received Student Honors of the Southwestern PA Speech-Language-Hearing Association.

Dr. Mike Parmuka, Assistant Professor, recently joined the Rehabilitation Counseling program in the Department of Rehabilitation Science and Technology.

Dr. Thomas Platt, Assistant Professor and Vice Program Director, Emergency Medicine Program, was honored with the 2003 Outstanding Teaching Award from the College of Education Alumni Society Board of Directors at Pennsylvania State University.

Dr. Sheila Pratt, Assistant Professor, Department of Communication Science and Disorders, received

recognition for Outstanding Service to the Academy of Rehabilitative Audiology. She also received a three-year grant titled "Effects of Sensory Hearing Loss on Auditory Language Processing in Aphasia." **Dr. Malcolm R. McNeil** and **Dr. John Durrant** are co-investigators on the grant.

Dr. Joan C. Rogers, Professor and Chair, Department of Occupational Therapy, presented "Rehabilitation Issues Falls and Falls Prevention" and **Elizabeth Skidmore**, Research Associate, Department of Occupational Therapy, presented "Rehabilitation Issues Post Stroke" to the Korean Nurses at the University of Pittsburgh School of Nursing in July.

Dr. Kate Seelman, Associate Dean for Disability Programs and Professor, Department of Rehabilitation Science and Technology, was invited to serve as a Visiting Health and Science Scholar at the National Rehabilitation Center for Persons with Disabilities in Japan. She delivered a keynote lecture at the 26th Annual National Rehabilitation Conference and participated in a World Health Organization seminar. While in Japan she also visited Tokushima University and delivered an additional keynote address at the Osaka City Rehabilitation Seminar for Citizens. She was also the keynote speaker at a professional staff meeting for the Western Pennsylvania School for Blind Children.

Dr. Richard Simpson, Assistant Professor, Department of Rehabilitation Science and Technology, was given the Career Award by the National Science Foundation in recognition of a user modeling method for individuals with disabilities.

Dr. Elizabeth Skidmore, was recently hired as an Assistant Professor in the Department of Occupational Therapy at SHRS. She will teach neurobehavioral science and neurorehabilitation.

Dr. Connie Tompkins, Professor, Department of Communication Science and Disorders, was a Finalist for the *Pittsburgh Business Times* HealthCare Hero Awards for the Research and Innovation category.

Dr. Kittie Verdolini, Associate Professor, Department of Communication Science and Disorders, was awarded Third Place Prize at the American Brochoesophageal Association/American Laryngological Association Combined Otolaryngological Spring Meeting in Nashville, TN.

Dr. Susan Whitney, Assistant Professor, Department of Physical Therapy, and Director of Rehabilitation, Center for Vestibular Disorders, CRS/UPMC, won the Chattanooga Research Award and the Service Award from the American Physical Therapy Association.

ACCESS

July of this year marked the 12th anniversary of the passage of the Americans with Disabilities Act (ADA). Here, Dr. Clifford Brubaker, Dean, and Dr. Kate Seelman, Associate Dean for Disability Programs, discuss the impact this landmark legislation has had on SHRS and the role the school and its graduates are playing in shaping how the broader community defines and understands disability. Joining them is Dr. Ellen Cohn, Assistant Dean for Instruction, and Dr. Miriam Hertz, Assistant Professor and Director of the graduate certificate program in Disability Studies.

Much like the civil rights legislation of the 1970s, the ADA spawned a cultural movement. Do SHRS students see themselves as entering a profession that is at the forefront of change?

Hertz: I think there is a cohort phenomenon occurring here. The graduate students whom I see, people in their middle 20s and 30s, grew up in a time and a place when the disability movement was still young. I have to encourage them to broaden their horizons. Many of the undergraduates, on the other hand, do perceive a movement. These students have gone to public schools with children with disabilities. There has been more integration, not only in their schools, but in their communities at large. They understand in an innate way than there has been a sea change.



Dr. Miriam Hertz

Cohn: We've actually designed an introductory course that exposes students to the different disciplines to give them a unique perspective on disability than they otherwise would not have had.

Brubaker: I think a lot of students enter our school with preconceived notions based on their awareness of the field. But that always changes over time. I'd be disappointed if they didn't feel some obligation to the cultural movement. An understanding of disability is embedded in our programs. However, by necessity, this cannot be the primary



Dr. Clifford Brubaker

focus. The nature of many of our programs is that they are accredited by unique organizations that specify to a very high degree what we must teach. There is not a great deal of latitude in these programs.

Seelman: The focus on disability is the vision of our undergraduate Rehabilitation Science program, which was initiated in 2000. It is an umbrella program that integrates many disciplines, but they are tied together by the disability focus.



Dr. Kate Seelman

Cohn: I think we have a responsibility not only to train our students in the disciplines, but also to give them an understanding of what the culture is and what their roles are. Additionally, we need to teach them to analyze what's occurring socially, economically, and politically and how these changes fit into their discipline.



Dr. Ellen Cohn

Hertz: I teach several disability courses, both at the undergraduate and the graduate level, and I've seen the need for a cultural shift for new students. Most arrive with a curative mindset. What I try to convey is that any action they take toward people with disabilities must include that person's point of view. Different people with different disabilities want different things. Some people with disabilities want that disability alleviated as much as possible, while others want to focus more of their energies on equal participation in the community. We all want different things out of our lives.



ACCESS

One significant change that has resulted from the ADA is that people with disabilities are moving from the role of patient to practitioner. Is this reflected at SHRS?

Seelman: You see it constantly in our school. Today, faculty and students with disabilities are working side by side with faculty and students without disabilities. It has become completely accepted. But the diversity in our school didn't happen by accident – in fact, it's quite an exception.

Brubaker: Yes, this is one of the most important things we've done here. We've always been very aggressive in recruiting students, faculty, and staff who have disabilities. It certainly changes the environment. It's one thing to talk about it, but it's something different to instill the practice throughout your institution.

Hertz: I can speak from my own experience. I'm a person who stutters and it comes across quite noticeably. I'd venture to say that 15 years ago, I wouldn't have been considered for a faculty position. If someone like me came along then, it would have been very difficult to be deemed employable. People would have questioned my ability to teach in the classroom and probably not thought of me as a potential colleague. Times have changed.

One intent of the ADA was the integration of people with disabilities into the workplace. It may be happening at SHRS, but has the business community embraced the concept?

Cohn: The business community seems to be on one side of the pole or the other. Many businesses in our community are very enlightened and empowered and have sought us out. However, other businesses look at differences in a defensive way. Instead of embracing differences, they look for ways to avoid being sued.



Hertz: I think businesses are traditionally concerned with the perceived out-of-sight costs of hiring a person with a disability. But research has shown that when you level out the different types of costs

of disability needs, the average outlay is quite low; in fact, one workplace study showed that 75 percent of accommodations required no cost at all. Accommodating a person with a disability is actually often very easy, but people don't realize it. And this is one of the stereotypes that creates the high rate of unemployment among people with disabilities. Even though there are anti-discrimination laws in effect, some businesses still drag their feet because of the misconception that the costs of accommodating a person with a disability will be exorbitant.

Brubaker: In terms of costs, I believe we could achieve significant cost savings if people had the right technology. There is a large cost associated with people who are totally dependent on public assistance, but if we invested in the appropriate technology,

Did You Know?

According to the latest U.S. Census...

49.7 million Americans have at least one disability.

22.9 million have multiple disabilities.

18.6 million Americans with disabilities are employed.

1.9 million between the ages 18 and 34 are enrolled in school. **1.4 million** attend college or graduate school.

9.3 million have a disability involving their sight or hearing.

21.2 million have a disability that affects physical activity like walking, climbing stairs, reaching, lifting or carrying.

12.4 million have a physical, mental or emotional condition causing difficulty learning, remembering or concentrating and **6.8 million** people have difficulty dressing, bathing, or moving around the home.

18.2 million Americans over the age of 16 have a condition that makes it difficult to leave the home.

the cost would be much less. Unfortunately, each part of the funding stream examines how it can reduce its own costs rather than all of the parts working together to reduce the cost of the whole. To solve this problem, we have to get all of the players together, find the interconnectedness in the various parts of the system, and begin to work as a team.

Hertz: Employment of people with disabilities is so pivotal. People with disabilities are much more employable than the average person would realize. If we were to improve disability policy to reflect this, we could have greater employment, help these individuals get off income maintenance rolls, and allow them to have a greater impact on society and the community.

What is preventing this change in disability policy?

Seelman: Historically, the disability community has not been a group that people want to include. Even back in the days of the civil rights struggle, the disability community was left out. We need to find leadership that backs the cause.

Part of the problem is that the disability community is so diverse. The women's movement and its players were definable. So was the African-American civil rights movement. How can mainstream society define the disability community?

Brubaker: It's customary for people to talk about the disability community as if it's monolithic, but it's not. It's probably pretty reflective of mainstream society. And the only way to get change is to get attention. The idea that something will happen as a result of a logical, factual explanation is erroneous.

Hertz: One thing that makes disability different from race, ethnicity, and gender is that any one of us could fall into the disability category at any time. This fear has been offered as one of the explanations for stigmatization of people with disabilities. The average person wants to find a reason why the disabled person is different or somehow "less" than they are because there is a fear that through an illness or an accident, they could be that person. It's such a fine line.

Cohn: I think much of this has to do with the fact that people with disabilities are virtually invisible. We don't see them on the covers



of magazines or on television shows. Some of our students are beginning to think of ways to make people with disabilities more visible.

Are there other barriers that must be overcome?

Brubaker: Reimbursement. I think there are real problems in the way costs are reimbursed. If you think about how it's done, there are serious disconnects between the government and business and healthcare. I think if someone could put it all together in some coherent way, the whole system would be far better off.

Seelman: The change from fee-for-service to capitation has been hugely significant.

Hertz: Managed care has caused some real difficulties for people with disabilities. There's certainly been enough research to show that people with disabilities do not receive all the healthcare they need. One area, specifically, is preventative care. People with disabilities are struggling under Medicaid and Medicare to get their acute issues attended to. There aren't enough dollars to go around.

Cohn: Just this past week, we did a model on prevention in my graduate course on professional issues and there were wonderful mechanisms for primary, secondary, and tertiary preventative activities. But when we discussed ways to pay for these services, we hit a wall. Managed care is just not equipped to allow practitioners to engage in these activities, even if they would increase productivity levels.

Seelman: The school has brought in people to deliver seminars on

Continues on page 34



The Goldman Standard

From an early age, Faith Beckerman Goldman had a clear vision of who she was and what she could do. During a career that spanned more than 30 years, Goldman helped both patients and staffers see their potential and visualize successful futures within their own limitations.

And she did it all while working around the constraints of irreversible low vision.

Goldman was born with obvious nystagmus – an involuntary movement of both eyes – and retrolental fibroplasia, a condition where sensory tissue within the eyes has been replaced with fibrous tissue and fibrotic blood vessels. She also possessed multiple factors of albinism.

“Growing up, I never really gave much thought to the fact that I was visually impaired,” remarks Goldman. “My parents wanted me to have a real life in a real school with real experiences, so they mainstreamed me into the Connecticut public schools instead of sending me away to a school for the blind. As a result, I always viewed myself as a ‘normal’ person because I was always surrounded with the attitude that I was normal. I just had to sit in the front row to see the chalkboard and needed to have my teachers put handouts and tests on carbon copies so I could see them.”

As she was finishing high school, Goldman was faced with the “now what” question of what to do with her life. Her parents and school counselors encouraged her to go to the Connecticut State Vocational Office in Bridgeport for three days of intensive testing. The evaluations concluded that Goldman had an aptitude for a career in the medical field and that she was suited for a hands-on profession. A school guidance counselor encouraged her to pursue a career in physical therapy.

In 1960, she enrolled at the University of Connecticut. But the result was not what Goldman had visualized.

“In the early ’60s, people tended to hide visual disabilities and there weren’t the kind of

accommodations there are now,” Goldman recalls. “I got to the University of Connecticut and couldn’t see anything. Everything was so far away and the rooms were incredibly big. There was no personal attention, and I flunked out after the first year.”

Not one to give up easily, Goldman then enrolled in Connecticut’s Danbury State College and obtained a B.A. in Biology in 1965. After graduation, she entered the

accommodated; but, I had a partner to help me get through those challenges.”

Goldman completed four internships, graduated from Watson in 1966, and got married to a military pen pal she had been corresponding with during her studies. The new couple then moved to New York City and Goldman began her first job at the Rusk Institute.

“I was at Rusk for two years, and due to the fact that it was one of the top places to be for rehab, I gained a false sense of security that wouldn’t become evident for years,” says Goldman. “There were all kinds of people with disabilities working there, so Rusk made accommodations as a matter of course. I had no idea how protected I was in that environment.”

In 1968, she went into



physical therapy program at D.T. Watson.

“I don’t recall if the faculty at Watson were all that aware of my visual deficits,” comments Goldman. “The teachers were demanding, but they were great to work with and extremely inspiring. They let me sit in the front of the classroom so I could see the board, and they provided visual enhancements on modalities, such as magnifying the dials on electro-stimulators and other types of treatment equipment. Some things, however, were just so small they couldn’t be

private practice. To visit patients, she navigated the New York City area via buses, subways, and cabs. Six years later, Goldman, her husband, and two children relocated to suburban New Jersey and she began working for a home health agency. Again, she didn’t recognize that accommodations were being made for her.

“I didn’t have to go to the office more than once a week, and my paperwork was routinely

mailed home to me. My husband also negotiated a contract with a local cab company so I wouldn't be stranded anywhere. A lot of people went out of their way to support someone who gave them really good work."

In 1980, however, the accommodations Goldman had become accustomed to disappeared with a move to Los Angeles. Upon her arrival in California, Goldman obtained a reciprocal physical therapy license and



promptly applied to the sister organization of the group she had worked with in New Jersey. To Goldman's surprise, she was not given a second interview, and was devastated to learn that she was removed from consideration because she couldn't drive. Goldman promptly filed suit against the organization.

"In the previous six years, I had walked and taken cabs everywhere and never missed a treatment," comments Goldman. "They said they didn't care. L.A. was different. I didn't agree. It was the first time the medical profession had ever discriminated against me because of my low vision. Not only was I appalled by this kind of treatment, I was furious that anybody else out there might have to face this kind of discrimination, too."

Eventually, the organization backed down and offered her a job. Goldman promptly turned

them down. She then got a job at a skilled nursing facility.

In 1985, Goldman became the rehabilitation director of a small, local rehabilitation organization. The facility grew from one therapist (Goldman) to five, and subsequently added occupational therapy and speech therapy to its service offerings. By 1994, Goldman was overseeing a facility that had 50 rehab beds and a large rehab department. Then, personal tragedy struck with the sudden death of her husband.

"I lost my husband – my best friend of 27 years, my driver, and my second set of eyes," she recalls. "I was really out there on my own."



This was only the beginning of several major changes for Goldman. Shortly after her husband's death, Goldman began having new acute visual problems on top of the chronic conditions she had had since birth. Goldman also discovered that her employer was less than interested in helping to address them. "It was then I learned that I had to be my own advocate to change this situation," she remembers.

In 1996, with visual problems continuing to mount, Goldman stepped down as director and became a staff therapist. A year later, she suffered an on-the-job shoulder injury that would require

two surgeries to correct.

"I couldn't work as a hands-on therapist ever again," says Goldman. "But I thought my expertise and experience should have opened new doors in the same facility for related jobs. It didn't happen. Instead, I learned that the facility that built its professional reputation on rehabilitating patients really didn't care about rehabilitating its own staff."

Goldman went on disability in 1998 and formally resigned her position in August of 2000.

"It has been extremely difficult to have a new disability added to a chronic one. It was even more painful to have an employer discriminate against me while all of that was going on," comments Goldman. "However, I cannot rest on the laurels of my past career. It doesn't pay my mortgage or give me inspiration to use my experience in another medium."



Goldman has joined the Klein Chaplaincy Service of South Bay to advocate for people with disabilities. She is also completing a novel about her late husband's life in Shanghai, China.

"Employees with disabilities have to be their own advocates," sums up Goldman. "And they have to involve their employers in discussions about accommodation. I strongly encourage all who have disabilities to know their legal rights from the get-go. Get the help and support you need to do what you have to do."

The Safety

Students at HERL Study Wheelchair Injury Prevention

Each year, thousands of wheelchair users are injured while engaged in some of life's most basic activities. These injuries occur in the home maneuvering through a kitchen or bathroom, on a sidewalk or ramp traveling to the grocery store, or in countless other everyday situations. But through the efforts of Dr. Rory Cooper, Professor and Chair, Department of Rehabilitation Science and Technology and Director of the Human Engineering Research Laboratories (HERL), and a team of graduate students, these everyday hazards could soon become a lot less dangerous.

Since 1996, Cooper and his graduate researchers have been studying wheelchair safety in a unique facility called the Wheelchair Driving Activities Laboratory. Better known as the ADL (Activities of Daily Living) Lab, the HERL facility, located at the VA Pittsburgh Healthcare System – Highland Campus, has become a training ground for a host of tests on wheelchair design and injury prevention. For the students, it brings textbook concepts to life.



Course

The first lab was created during the Road Loads Project, which tested wheelchair driving on an obstacle course of hazards that mirrored those found in daily life. While the first lab was fairly limited, equipped with little more than several bumps, a carpet, and a door handle, it was more than adequate to accommodate the early rounds of testing.

"We developed the lab to test wheelchair road load, but it has evolved quite a bit since its inception," notes Cooper. "Initially, we examined the load on wheelchairs going over curbs and speed bumps in order to design stronger wheelchairs. But out of that study we began to wonder about the effects of these same forces on the wheelchair users themselves.

"The lab has evolved to become our indoor driving environment to assess new products," he continues. "It's been used to test the latest version of the Yamaha PAPA^W, a wheelchair with power assist technology that helps people with tetraplegia. It also was an important testing ground for the final INDEPENDENCE IBOTTM 3000 Mobility System prototypes. The lab has given us the opportunity to collect and compare more data than ever before. And as an added advantage, it's not weather dependant."

The lab was moved to its present location in 2000 and is markedly different than its predecessor. The course now boasts curbs of varying heights, ramps, and even steps. But the lab is more than a driving course. To simulate real life situations, researchers have added a bathroom, a counter, and a sink. One of the more recent additions is a transfer station, which allows researchers to study the forces associated with moving from a wheelchair to a car or van.

Another feature, a motion analysis system, was incorporated to study the effects of wheelchair tips and falls, to learn more about driving activities, and to study the impact of transfer techniques. "Many wheelchair accidents happen during ramp

transition, toward the end of a ramp," Cooper explains. "Most of the time, these accidents happen when the wheels hit the transition at the wrong angle. So our research should lead us to produce better designed wheelchairs that will support the forces involved in this type of accident and prevent the fall."

"The addition of the bathroom and other elements of the course has broadened our research quite a bit," notes Erik Wolf, a doctoral student in the School of Engineering, Department of Bioengineering, who has been working in the lab since 2000.

"One of our recent studies compared a power assist wheelchair to a manual wheelchair. While it's pretty obvious that a power assist chair would perform better going up a ramp, it's not as advantageous in the bathroom at a sink. The lab has become a lot more than just an obstacle course with bumps and ramps. It's now more of

"The lab brings people with different backgrounds and disciplines together to solve a problem."

an obstacle course based on a wheelchair user's everyday life."

While the lab's primary function is a wheelchair testing ground, its role in testing the intellect, tenacity, and teamworking abilities of graduate students follows a close second. At any given time, students from three schools and six different programs from the university work side by side.

"The lab brings people with different backgrounds and disciplines together to solve a problem," explains Wolf. "This isn't just close to a real-world working situation. It is one. One of the most rewarding parts of working in the ADL Lab is seeing the results of your work.

"Many engineers are given a project with the instructions 'build this' and little else," he explains. "In the ADL Lab, we know and receive feedback from the people we're building things for, and when we're finished, we can see the



difference we've made in someone's life."

Andrew Kwarciak, a master's student in the School of Engineering, Department of Bioengineering, concurs. "As an engineer, I wasn't very aware of disabilities coming into the lab. But I've developed a new appreciation for the challenges wheelchair users face. I think as a result of working here, I'm going to stay in the rehabilitation field. Not only is the job satisfaction huge, we've also become leaders in the field."

While the ADL Lab has expanded in both size

and function over the years, the lab will continue to evolve as long as wheelchair safety remains a concern.

"We've already created an outdoor sidewalk surface and have been discussing an uneven pavement surface. We've also discussed adding a car to simulate the act of moving in and out of a wheelchair and seat or loading a wheelchair into a car," says Wolf. "We'd also like to begin working power assist wheelchairs more into the course."

"The lab is designed to be a transition from bench top to community. This is the last proving ground before we hit the mainstream with a new technology, so we'll continue testing things as long as there are challenges without yet-discovered solutions," assures Cooper. "While there are plenty of things to continue studying inside, we're also excited to begin taking the testing outside on a more frequent basis."

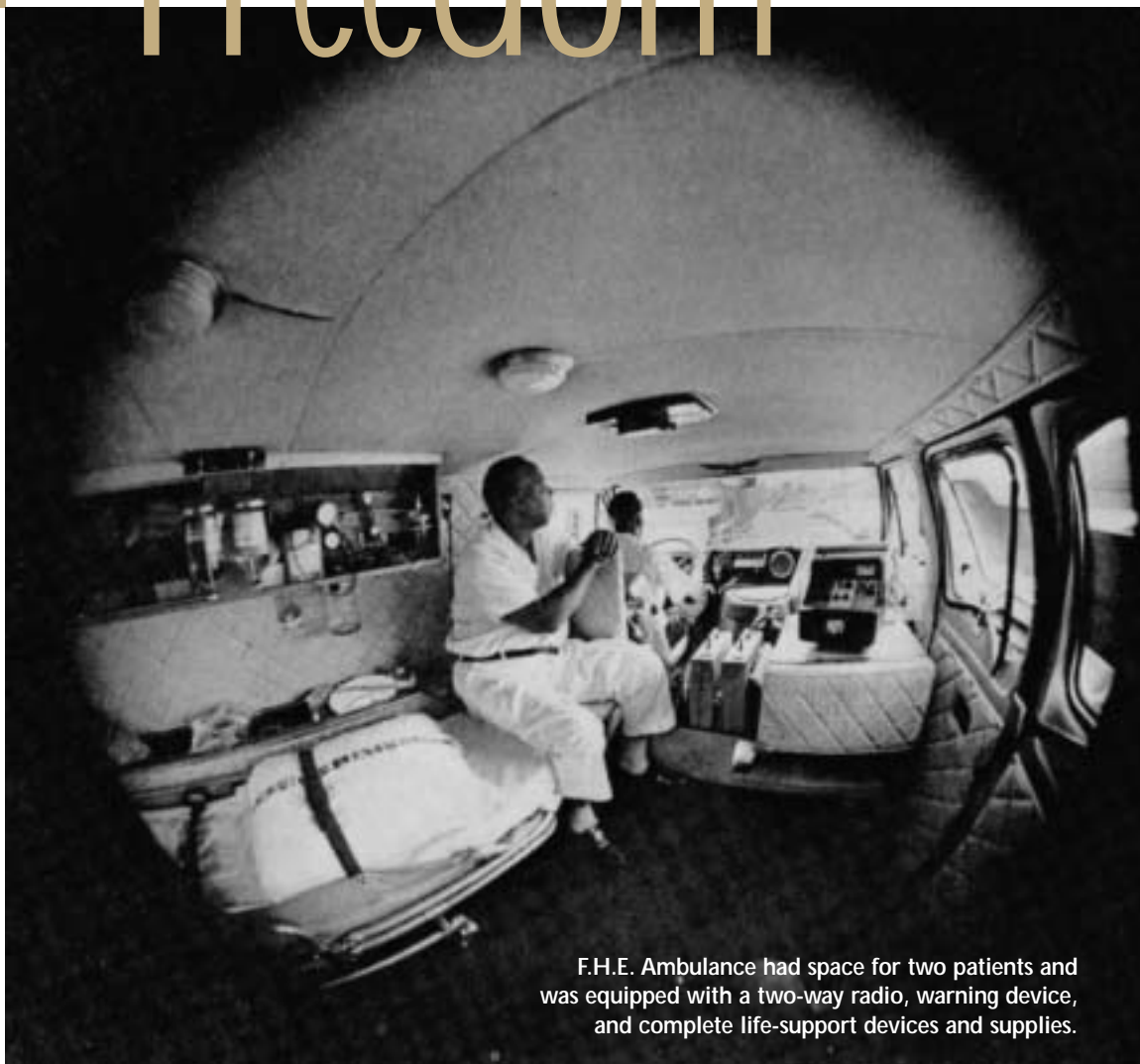
For more information, contact Rory Cooper at rcooper@pitt.edu.



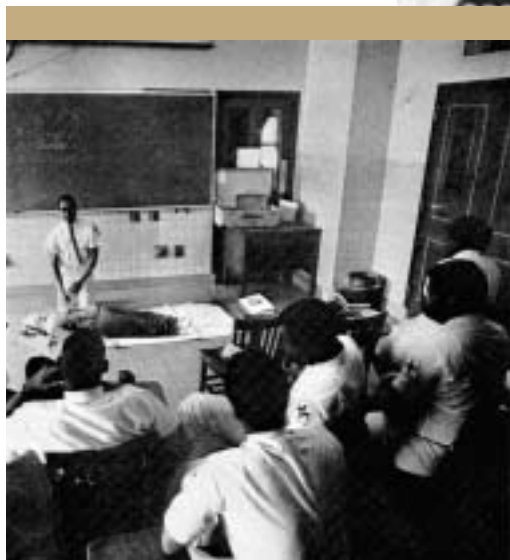
Born in Freedom

On paper, it was a project doomed to failure. Recruit 40 unemployed African-American men and women from Pittsburgh's most economically depressed community, train them to use the most sophisticated resuscitative techniques, and charge them to deliver emergency care; not in a hospital, but on the city's meanest streets. Yet this was the charter of Freedom House Enterprises Ambulance Service, and during its eight-year history, this pioneering organization not only answered 50,000 distress calls, it set the standard for emergency technician and paramedic training as well as ambulance equipment and design.

Trainees watch intently as an instructor demonstrates proper techniques on a dummy. Every effort was made to ensure that each trainee was able to complete the course.



F.H.E. Ambulance had space for two patients and was equipped with a two-way radio, warning device, and complete life-support devices and supplies.



Original Freedom House entrance.

In 1967, emergency medical service in Pittsburgh could be described with two words: “swoop” and “scoop.” When an accident or medical emergency would occur, untrained police officers would swoop onto the scene, scoop the victim onto a stretcher and into the back of a paddy wagon equipped with nothing more than a first-aid kit, and whisk them to the nearest hospital without any stabilization. Even legendary Pittsburgh mayor David L. Lawrence suffered the “swoop and scoop” protocol. It cost him his life.

Lawrence collapsed with a heart attack during a political rally at the Syria Mosque in Oakland in November 1966. A physician and nurse on the scene found him pulseless and administered cardio-pulmonary resuscitation. But during the wild, three-block ride to the nearest hospital, the nurse riding in the back of the police wagon was jostled so severely that she was unable to continue the resuscitation. Lawrence was left brain dead from the lack of oxygen and died two weeks later.

Yet despite this high-profile tragedy — and the fact that each year, roughly half of the 500,000 heart attack fatalities occurred before the victim reached the hospital — there was no public outcry for change. The reason was simple. There was no better system. There were no emergency medical technicians. There were no paramedics. In most states, ambulance attendants needed only a driver’s license, or at most, a Red Cross first-aid course.

A Better Way

Dr. Peter Safar was one of a handful of visionaries who believed emergency care could be better.

It was in the 1950s while at Baltimore City Hospital that Safar had demonstrated the superiority of mouth-to-mouth ventilation over the then-favored artificial ventilation. He put together the formula for what is now known as cardiopulmonary resuscitation (CPR) and trained non-medical people like firemen and Boy Scouts in the lifesaving technique. When he arrived in Pittsburgh in 1961 to become chair of the Department of Anesthesiology at the University of Pittsburgh School of Medicine, he was convinced that if laypeople could master CPR, they could be trained in lifesaving techniques that would revolutionize emergency care. He also recognized that the vehicles used to transport critically ill or injured patients to hospitals — paddy wagons or ambulances operated by funeral directors

— were not only poorly suited for anything but horizontal transport, they were ill-equipped to save lives.

It would be six years before he would put his theory into practice in the most unlikely of sites: Pittsburgh’s Hill District, a neighborhood of run-down streets, poverty, crime, and dilapidated housing. Ambulance service to the community was virtually non-existent. A white nurse offered this explanation as to why. “First, there is no money in it. The people they are serving, many times don’t have enough money to buy groceries, much less pay for ambulance service.

“Also, there is a racial aspect. Most privately owned services have white drivers and white attendants. The poor areas are usually black, and on emergency calls you can run into some pretty tough situations — stabbings and shootings and the like. Many white attendants don’t like these calls because of these factors.”

A Fortunate Coincidence

In 1967, Philip Hallen, president of the Maurice Falk Medical Foundation, and Morton Coleman of the University of Pittsburgh School of Social Work, conceived the idea of creating an ambulance service staffed by unemployed African-American men and women trained as medical technicians. Looking for an owner/operator, they discovered Freedom House Enterprises (FHE), a fledgling economic development corporation that was an outgrowth of the United Negro Protest Committee.

At first glance, the ambulance service concept did not seem to significantly advance the FHE’s declared mission of “black capitalism.” Nonetheless, they took the idea to Ed Noroian, then director of Presbyterian-University Hospital, hoping for advice on purchasing vehicles that could be used to transport patients from the Hill District to the hospital. Noroian, aware of Safar’s interest in ambulance service, directed them to the Department of Anesthesiology. Soon thereafter, the Freedom House Ambulance Service was born.

The first training program began in October 1967 with

funding from the Office of Economic Opportunity (of which Hallen was chair), federal and state grants, and several local foundations. Forty-four trainees were recruited. The requirements for participation in the 32-week program were simple. You had to be black. And you had to be unemployed.

Yet despite the high rate of unemployment in the Hill District, recruiting participants proved difficult. The day before the program was to begin, the employee quota still had not been met. That night, according to then project director Gerald Esposito, he and FHE board president Jim McCoy, “went out on Centre Avenue to finish our recruiting.

Dr. Peter Safar



We literally pulled them off the streets to meet our quota.”

The course requirements were far more stringent than any that existed at the time. The program included roughly 300 hours of classroom and clinical work, followed by nine months of physician-supervised training aboard the ambulances. The students earned standard and advanced Red Cross first-aid certificates. Cardiopulmonary resuscitation, defensive driving, rescue techniques, and fundamentals of nursing were part of the curriculum. Each student spent a week at the County Morgue, assisting in autopsies, learning about pathological anatomy, and studying the role of the coroner. They also spent two weeks in the hospital working with anesthesiologists in operating rooms and another week with surgeons and nurses in emergency rooms. Since nearly half of the participants did not have a high school diploma, basic education was offered by the Pittsburgh Board of Education. As a result, 12 of the trainees earned

an equivalency diploma.

While one observer described the idea of training laymen in sophisticated resuscitative care as “madness,” Safar disagreed. “The training and life support capability of FHE emergency technicians are probably unique in the nation,” Safar said at the time “They have become models for national standards and should be made more use of community-wide by citizens with acute, life-threatening illness or injury.”

Despite their training, putting the paramedics to work proved difficult. In June 1968, immediately following completion of the first training session, FHE ran into what it described as “unforeseen and undue delays in funding that prevented it from going ahead as originally planned.” It would be a month before the service would go into operation, and only then with six weeks of funding from the U.S. Department of Labor and the Edgar J. Kaufmann Foundation. The City of Pittsburgh agreed to temporarily loan the organ-

ization two ambulances. Additional funding from the Kaufmann and Falk foundations kept it operating through the end of the year. But while the service answered over 3,000 emergency calls in its first six months – a dramatic demonstration of its viability – its finances remained a patchwork of short-term grants and subsidies.

A Fragmented System

The delivery of emergency services in Allegheny County was equally piecemeal and, with the exception of Freedom House, rudimentary. By 1972, most of the 124 ambulance services operating in the county, including 47 provided by funeral homes and commercial firms, were below minimum

national standards developed in 1968 by the National Academy of Sciences.

The funeral directors resisted certification, saying it was a threat to free enterprise and would lead to the creation of government

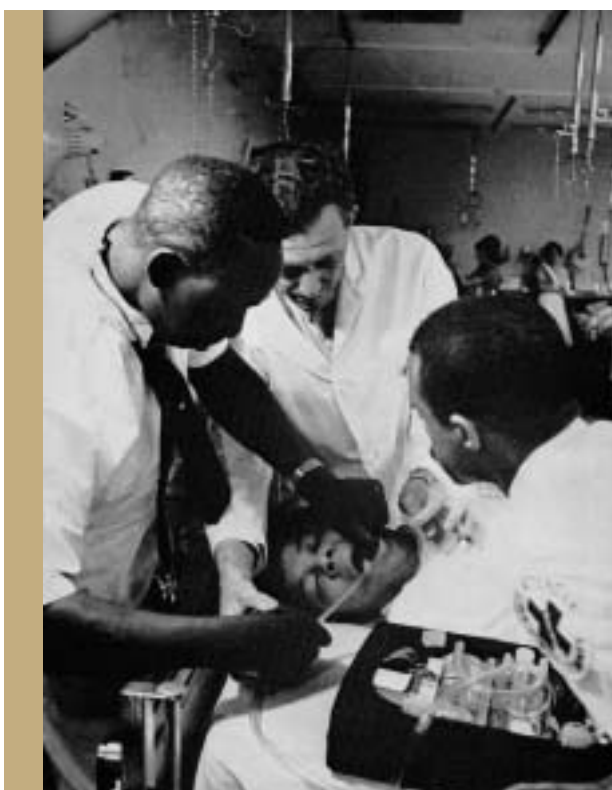
jobs at “the expense of the taxpayers.” Volunteer firemen argued that national recommendations for training and equipping ambulances would require too much time and money. The city believed that emergency medical services were the provenance of the county. The county believed it was a hospital responsibility. And the hospitals had no money.

Federal funds for the creation of a comprehensive system were available, but the city and county failed to agree on a plan within the requisite three-year time frame, despite near-constant lobbying by the Allegheny County Council on Emergency Medical and Health Services. In 1972, almost \$2 million in federal money was lost.

But the real victims were the people of the city and county who were dying as a result of inadequate care. “I get about 30 to 50 cases a year on my autopsy table where I feel good pre-hospital emergency care in ambulances could have saved these people,” said then – and current – County Coroner Dr. Cyril Wecht in a May 1973 interview. “I don’t mean to criticize the police,” he continued. “Even a medical doctor or nurse, if not specifically trained in emergency care techniques, isn’t going to know how to handle many cases.”

A 1973 study conducted by Safar and Dr. Don Benson of the Department of Anesthesiology and Critical Care Medicine at the University of Pittsburgh supported Wecht’s contention. They found that the police provided inappropriate care in 68 percent of emergency cases involving the seriously ill and injured brought to hospitals. The number dropped to 11 percent for Freedom House patients. At the time it was estimated that 2,000 lives could have been saved annually in Allegheny County if the most stringent national training standards were adopted. Most were heart attack victims.

Still, the debate continued. Clashes between Safar and then City of Pittsburgh Mayor Pete Flaherty made headlines,



Trainees were taught emergency procedures in the intensive care unit and the emergency room at Presbyterian-University Hospital.

with Safar describing the city police ambulance service as “a disgrace.” Flaherty countered that Safar was doing nothing more than politicizing the issue. “Our city emergency service is now under the responsible supervision of Superintendent [of Police] Colville and the officers who perform this service are trained and experienced.” Safar challenged the mayor to “prove that the police have passed even the most basic competence test of the American Registry for Emergency Medical Technicians.”

Dr. William Hunt, a non-practicing physician who was then an Allegheny County Commissioner, entered the fray, coming down on the side of the Pittsburgh mayor. “All too often those concerned with this problem forget that a policeman’s primary obligation to our community is to serve as a policeman, not as an ambulance attendant,” said Hunt. “They forget that the primary responsibility for medical care is in the medical field; that is, hospitals and doctors.”

A year earlier, Hunt had complained that Freedom House ambulances were being driven recklessly and that siren sounds were disturbing to motorists. There were unsubstantiated reports that Flaherty had told Freedom House Enterprises to stop using sirens on their calls.

An Offer Unheeded

Nonetheless, Freedom House continued to upgrade its services. By December 1973, all but two of its 35 paramedics had earned level-two national certification, which carried with it an Associate of Arts degree. Its fleet of five ambulances was among the few in the nation that qualified for rating by the National Research Council. These mobile “clinics on wheels” were replete with oxygen, obstetric delivery kits, burn treatment equipment, EKG monitors, a cardiac defibrillator, and what an article in the *Pittsburgh Courier* described as “gobs of other intricate ‘thing-a-ma-gigs’ for ‘taking care of business’.” At the time, it was the only ambulance service in the city that maintained round-the-clock radio contact with a physician.

Mitchell Brown, at the time the Freedom House operating manager and one of the original group of trainees, suggested that FHE’s purview be expanded citywide. “We’ve proven ourselves to be a viable service to the community, so it’s difficult to understand why local government officials are so lethargic toward extending us to a total, citywide level,” Brown said. “The city really needs our services. It doesn’t

make sense for people to die or suffer unnecessary hardships because of untrained, poorly equipped private ambulance attendants, when we could be expanded and sponsored to serve the entire community with the best mobile medical units in the world.”

But whether it was racism — as some at the time contended — or political reality, Brown’s dream was not to be. Within six months, Mayor Flaherty and Superintendent Colville finally agreed to train police officers and staff fully-equipped emergency vehicles.

The handwriting was on the wall. In his letter of resignation from the Freedom House board, Safar wrote, “My personal advice at this time for FHE is not to accept handouts in the form of short-term funding only. If only this is available, the FHE ambulance service should be permitted to die a dignified death.”

Yet despite these words, Safar was reluctant to sound the knell. In January 1975, an advanced training program, which was to become the official paramedic curriculum of the U.S. Department of Transportation and the legal standard in more than 40 states, was launched. Freedom House

technicians were intensively trained in a variety of advanced life support techniques. By May 1975, when FHE presented a disaster drill before an international symposium on emergency and critical care medicine, experts from around the world judged its paramedics among the most skilled and sophisticated in the nation.

But soon after, the city decided to launch its own mobile intensive care service. In August of that year, the mayor agreed to work through the Emergency Medical Services Institute — which Safar helped organize — to develop a modernized ambulance service. FHE was not part of the plan. By early autumn, it became obvious that city funding would not be forthcoming. Negotiators began to sell FHE equipment to the city. The paramedics were offered jobs with the new city service.

A Bitter End

It was a difficult time for the FHE paramedics. For eight years, they had struggled to survive. For eight years, the city administration had been the adversary. Now, they were forced to either work for the enemy, or be unemployed. The



Left to right: Philip Hallen and Dr. Peter Safar



Philip Hallen (3rd left, top),
Freedom House paramedics, and
several unidentified supporters.



One of the original
Freedom House
ambulances.



Inside Presbyterian-
University Hospital.



Dr. Nancy Caroline (center, front row)
surrounded by the team.



majority of the nearly 30 FHE paramedics chose a paycheck. Yet even that proved short-lived.

The city, hoping to avoid another ambulance controversy, offered a Memorandum of Understanding to Freedom House in which it agreed to provide jobs without requiring needless recertification. But in the ensuing months, that promise was broken. The FHE paramedics, who had been trained to the most exacting national standards, were forced to go through another course that did not meet federal requirements. Within a year, only 12 remained on the city payroll.

At its dissolution, Dr. Nancy Caroline, who succeeded Don Benson as medical director at FHE, wrote, "All of you have reason to be proud of the work you have done here. You have taken a dream and made it real. Through your efforts in the field, you have profoundly affected thousands of lives: the young and the old, the wealthy and the indigent, the prominent and the anonymous – you have served them all, and for eight years you have provided them with a quality of pre-hospital care unequalled anywhere in this city."

In an April 1977 article in *Pittsburgh* magazine, she added this postscript.

I meant every word of it. Still, I cannot escape the feeling that they were cheated somehow. Eight years. The federal standard for ambulance design and equipment. The federal standard for emergency technician and paramedic training. Eight years. 50,000 ambulance runs. How many people, not only in Pittsburgh, but all across the country, owe their lives to the pioneering work done at Freedom House?

Today, the legacy of Freedom House continues at SHRS. Our undergraduate Emergency Medicine program prepares students for the technical, clinical, and administrative challenges of a career in EMS. The program's students are diverse. Some enter the program directly from high school with aspirations of becoming paramedics. Others are already in the field and want to either take on additional managerial duties or improve their clinical teaching skills.

The Emergency Medicine program is headed by Associate Professor Dr. Walt Stoy, a recognized leader in the field. Stoy, who also serves as program director for the Center for Emergency Medicine, recently received the Rocco V. Morando Lifetime Achievement Award from the National

Association of Emergency Medical Technicians. He was instrumental in revising the national standard curriculum for first responders, EMT-intermediates, and EMT-paramedics, which upgraded the education and training of EMS providers.

Thanks to Stoy's leadership, the program has attracted students from over 20 countries around the world. The program faculty also are assisting a number of countries in upgrading their emergency medicine services. Their work in Qatar is detailed in a separate article on page 8 of this issue of *FACETS*.

For more information on the Emergency Medicine program, contact Walt Stoy at stoy@pitt.edu.

In Memoriam

Dr. Peter Safar, who is regarded as the father of the mouth-to-mouth resuscitation technique and whose vision and determination are chronicled in the *FACETS* feature, "Born in Freedom," passed away on August 3.

Safar, who was 79, was born in Vienna, Austria, and survived a World War II Nazi labor camp before emigrating to the United States. He established the first intensive care unit at Baltimore City Hospital in 1958, and it was here that he developed cardiopulmonary resuscitation, known the world over as CPR.

In 1961, he joined the University of Pittsburgh School of Medicine as head of the Department of Anesthesiology. In that same decade, he was a founding member of the American Heart Association's CPR Committee and the U.S. National Research Council Committee on EMS. He helped initiate the first guidelines on CPR, ambulance design and equipment, and emergency medical technician and paramedic training. His group conducted the first CPR education research.

His professional publications include 1,389 entries, 384 peer-reviewed publications, and more than 30 books and manuals. He was author, editor or co-editor of the first textbooks on respiratory therapy and emergency medicine. His alumni and past and present associates include more than 100 professors and researchers worldwide in anesthesiology or the fields of acute medicine.

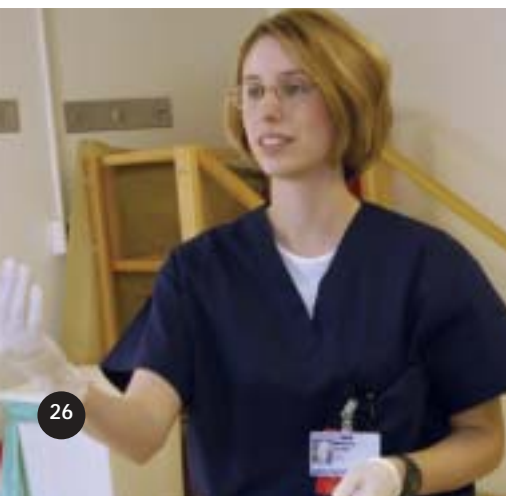
He will be missed.

A large, close-up image of a hand holding a glowing, translucent sphere. The sphere has a rainbow-like iridescent sheen, with colors ranging from deep blue and green on the left to bright yellow and orange on the right. The hand is positioned as if cradling the sphere, with fingers slightly curled. The background is a dark, solid color.

The Real World

*They've sat through hundreds of hours of lectures.
They've pored through dozens of textbooks.
Now comes the time to put that knowledge to work.*

*The Challenges and Rewards of Clinical Education
in Physical Therapy*



Many physical therapists discover their profession by stumbling into it — literally. Melissa Lauffer's story isn't much different. As a competitive runner and dancer in high school, she suffered numerous sports-related injuries and took it upon herself to rehab back into shape. During her studies at

Appalachian State University, Melissa earned a degree in Exercise Science and then came to the University of Pittsburgh, where she began as a PT undergrad.

Melissa is now a doctoral student on the verge of graduation. But first she must complete a clinical rotation at UPMC Presbyterian. This is one day in her life.



The Real World

The Challenges and Rewards of Clinical Education

“Right now I’m in the middle of a year-long clinical rotation at UPMC Presby. I’m currently working in the PT Neuro Satellite, but I was a member of the cardiac team at the beginning of my rotation and I’ll be finishing out the rotation on the liver transplant unit.”

Since I’ve been in the PT Neuro Satellite, I’ve been working with Chris Harrison, my clinical instructor. We both see our patients in the Neuro Satellite and help them through similar therapy activities.

The patients come from three neurological units and have had some type of neurological incident. For example, we might see patients who have had brain tumor resections or spinal surgery – it really varies. Occasionally we see patients that had increased cerebral pressures that required the physician to drain fluid from around their brains. We are expected to evaluate their functional mobility, which in turn assesses the effectiveness of the drain.

During a typical day, Chris and I each see 11 or 12 patients. Each of our sessions lasts between 20 and 30 minutes, but this depends entirely on the needs of the patient. Sometimes we focus on just one activity and do it over and over until the patient feels comfortable.”



"We transport most of our patients to the Neuro Satellite by wheelchair. But there are always patients who can't make the trip. We take time at the end of the day to go room-to-room and work with these patients at their bedside."

"Our patients usually have similar diagnoses or functional deficits, allowing us to do comparable physical therapy exercises with them. The only time we stray from these activities is when a patient physically cannot perform the exercise. This may happen if a patient is having a slower recovery or if they're simply exhausted from the activities we've already been guiding them through."



"The primary goal of in-patient physical therapy is discharge planning. From day one the decision has to be made whether the patient will be able to go home or will need to be transferred to another facility for further rehabilitation."

"We begin by ambulating a patient, which is a technical term for maneuvering from point A to point B. This is our way of warming them up and it gives us a gross assessment of their dynamic balance. If the patient is excelling at this task, we may also ask him or her to perform different tasks along the way. For instance, we'll ask the patient to turn his or her head to the right and left or change speed. Both of these things challenge their balance further and are a good indication of overall progress. Ambulating a patient is more important than most people think. Even if a patient has an arm injury, it could throw off his or her balance while walking especially if their ambulation was impaired prior to their admission to the hospital."



“Here (below), I’m helping the patient with stair climbing. We have to ensure that the patient will be safe when he or she returns home and begins navigating through their community. I need to know that my patient will be able to safely climb steps if she encounters them after she’s discharged from the hospital. We may skip this exercise if the patient will never have to encounter stairs in daily life or is fully competent climbing stairs upon their initial evaluation. Otherwise, it’s something we practice with all of our patients.”



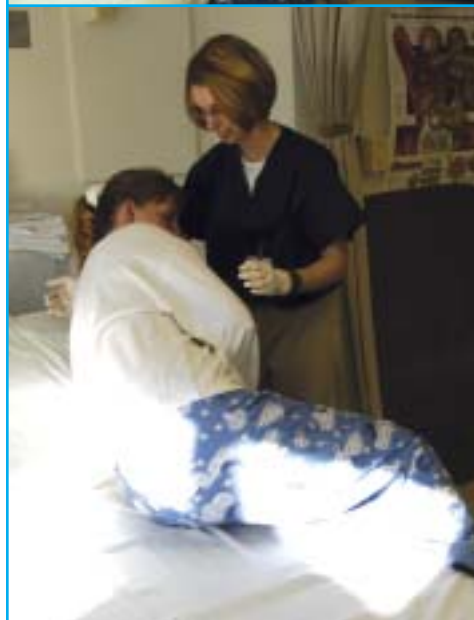
The Real World

The Challenges and Rewards of Clinical Education



“Getting in and out of bed is another crucial exercise on the way to recovery, because a patient will have to do it on a daily basis. The ability to get in and out of bed is critical to quality of life – it’s a must. We teach all of our patients the proper way to get in and out of bed in order to minimize the strain on their back.

It’s important for all of our patients, but obviously patients who’ve undergone recent back surgery need the most guidance. We teach these patients how to perform a log roll, which keeps the shoulders and hips moving synchronously and prevents any excess strain through the back.”



“The ring toss (above) is a dynamic balance activity that we do with patients who have not lost their balance while ambulating haven’t needed assistance climbing stairs, and have been independent with other activities. It’s the next step on the road to recovery. The ring toss forces patients to reach outside of their base of support, which helps challenge their balance.

The ring toss works very well for people who have difficulty with reaching activities, but it’s effective for anyone with balance deficits.”



“Here (right), we’re working on a serpentine obstacle course. This is yet another task to challenge a patient’s balance. There are countless times in the home or in the community when people have to walk around or step over an object. Many of our patients have small children who leave toys lying around the house, so we have to ensure that they are able to safely avoid these types of hazards.

Finally, we may play catch with a ball. It sounds simple, but it’s more difficult than the ring toss or obstacle course. It requires the patient’s cerebellum to anticipate what their next move should be. The patient has to foresee the ball coming toward him or her and decide how to catch it. They have to judge the best way to catch the ball without losing balance. Again, it sounds easy to most people, but after a neurological incident, it takes time to regain some of those skills that may have been taken for granted.”



Aging in Place

A Unique Residential Care Community Relies on Futuristic Technology, Old-Fashioned Ideals



When Dr. Joan Rogers and Dr. Margo Holm of the Department of Occupational Therapy were asked to take a look at the data mining potential of a new high-tech residential care community, they were intrigued. And what better way to assess the situation than to move in – if just for a few days.

Their brief stay at Elite Care's Oatfield Estates in Portland, Oregon, gave them a glimpse at a promising new future in which assisted living and nursing care truly extends autonomy and active living for the elderly.

Elite Care is owned and operated by Bill Reed and Lydia Lundberg, a husband and wife with a shared vision and the resources to bring it to life. Reed's farming background provided the seed for a new residential care design based on the age-old traditions of extended farm families who lived together and provided mutual support and care. Merge this idea with the absolute state-of-the-art in supportive technology, and you arrive at the "high tech, high touch" concept that is Elite Care.

Designed for Living

Arriving at the sprawling Oatfield Estates campus – which consists of several residential structures, wide pathways, raised gardens, and ponds – Rogers and Holm were greeted in a warm and casual style. Each residence features open living spaces with no corridors, large common areas, barrier-free bathrooms, elevators, and private living quarters for 15 full-time residents. Twelve bedrooms are for residents (mostly older adults) who need some degree of assistance. There are three small apartments for the staff, who live in community with residents and provide ongoing care in the mode of family life.

Common areas are equipped with large screen televisions for "family movie nights," ping-pong tables, pianos, and other community-oriented fur-

nishings. Residents may participate in family life by sharing in meal preparation and clean up and their guests are never charged if they join them for meals. More importantly, they become part of the family, helping to foster residents' independence and engagement in the communal life of the home.

Another important element in the design of the Elite Care facility is a sustainable connection with nature. Residential structures have lots of windows, and residents are encouraged to consider the entire campus part of their home.

"At least three of the residents had been on locked Alzheimer's wards before they moved into Oatfield," notes Rogers. "Their ability to live with this kind of autonomy is nothing short of amazing."

An Automated Environment

After familiarizing themselves with the "high touch" side of Elite Care, it was time for Rogers and Holm to explore the "high tech" features that promote health and safety, enhance autonomy, and assure quality control.

Elite Care's core software and hardware pieces consist of a tracking system, assistance call system, Walkabout Watch, biofeedback, Smarthouse technology, and a resident/caregiver interface software system.

Each resident wears a wireless pendant that emits infrared and radio frequency signals, which allow staff to track his or her location at all times. Pendants also function as "cognitive aids" by unlocking doors or turning off high-risk appliances when certain residents enter a room. Walkabout Watch uses closed circuit cameras to watch for wandering, and sensors placed under the beds keep track of residents' weight and whether or not they are in bed at night.

Each resident's bedroom is equipped with an elder-friendly, intuitive touch screen that can be

used to access information on the weather or daily activities, send e-mail, play games, or call for assistance from a staff member. Caregivers have their own computer interfaces so they can see who has called and from where. They also wear pendants, and the system keeps detailed data logs, not only of who responds to each call, but how long it takes the staff member to reach the resident and how long he or she stays.

Mining the Data

"Lydia and Bill are very interested in finding ways to get meaning out of the volumes of data produced by and about each resident as well as the data that monitors and grades caregivers," says Holm. "For example, the data might be used to monitor changes in residents' interactions and activity patterns – in other words, to quantify why a resident might say, 'I just can't do what I used to do.' Or, data might provide assistance in training this unique staff to better empower residents to get involved in daily life."

Rogers hopes to continue the dialogue with the people at Elite Care, and eventually to offer occupational therapy students the opportunity to use Oatfield Estates as a truly unique fieldwork site.

While there are great challenges to making this concept a mainstream product, there also is a growing market for better quality elder care. "I see real potential for replicating this concept within an elderly person's home," Rogers notes. "There is a great deal of value in integrating the extended family – whether real or surrogate – in the long-term care of the elderly, and conversely, allowing older adults to continue to contribute their wisdom and abilities to the family and the community."

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ACCESS

the problems of payment, and members of the faculty, including myself, have delivered testimony in Washington touching upon this point. We offer a course on third party payment. Some of our students and faculty have a very high level of public policy knowledge.

What more can SHRS do to advance the principles underlying the ADA?

Brubaker: The fact is that there are only so many resources. And we have to set priorities that are – by their nature – controversial. Our institution has to do what it can to best serve the needs of people. And we have to realize that this cultural change is going to take time. We must have a sustained effort. But the university setting is the perfect place to set the stage. The people who graduate from here will be our future leaders. This is an ideal place to allow people to become familiar with disabilities. We want students not just in our school but also throughout the university to understand what disabilities are about and value people for what they can do.

Cohn: Through dialogue, we can begin to change the culture.

Hertz: We're working to integrate disability studies into the curriculum. We want our graduates leaving here with a good grasp of the importance of the topics we've discussed here today.

Seelman: We're also beginning to acknowledge that research should not just be clinically based. It must also happen in the

community. Our research may follow wheelchair users, for example, as they attempt to move around their community, their work, or their homes. We are a cutting-edge school, in part because we go well beyond an emphasis on health.

Brubaker: Being able to place our graduates – particularly those with disabilities – has been the seminal act that the school has accomplished. It's very important for us to have a close association with the business community. Whether it's through board membership, service program participation, or by offering our students internship opportunities, it all is moving us in the right direction.

Every time we have a student in an environment that raises his or her awareness of disability, we're moving in the right direction. That's really half of success. It is in this situation that the cultural change starts to take root.



What Do You Think ??????

Have an opinion about something you read in *FACETS*?

E-mail your thoughts to Karen Khan at

ktkhan@shrs.pitt.edu.

We'll print letters to the editor as space allows.

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Dialogue

A Conversation with Clyde Jones

Clyde Jones is the chief development officer of the newly formed University of Pittsburgh and UPMC Medical and Health Sciences Foundation. The new entity will raise philanthropic funds on behalf of all of the university's schools of the Health Sciences, including SHRS. We invited Mr. Jones to describe his vision for the foundation.

Q: What prompted the creation of the unified fundraising organization?

A: UPMC and the University of Pittsburgh Health Sciences took a look at their capacity for garnering philanthropic support and they both realized that while they were doing a good job independently, they could do a better job if they could work as a team. So they decided to create a new entity, this foundation, which would be responsible for fundraising for the entire academic medical center: clinical care, research, and education. In this way, the fundraisers would be able to do their work in a comprehensive, systematic manner.

Q: Why will this approach benefit potential donors?

A: Because donors will no longer have to choose one worthwhile institution over another. Say, for example, you have had neurological care in the hospital. Your experience was positive, and you've indicated an interest in lending your financial support. In the past, the hospital



Clyde Jones

fundraiser might come to you and ask if you would support a specific clinical initiative. Then, someone from the university might come to you and ask if you would support a research initiative. As the donor, you were caught in the middle.

So you'd say, "I just want to support neurology. You tell me what's most important." The two fundraisers made their case, and whomever was the most persuasive got the donation.

Under the new model, we go to the potential donor who has an interest in neurology and say, "Here are all of the things we're doing in neurology. This is how they all fit together. Now let's talk about what is most important to you and how we can maximize the impact of your gift."

Q: Will donors be able to continue to support individual departments within schools?

A: Absolutely. Gifts will continue to be directed to whichever entity the donor chooses to support. That doesn't change. It's simply that the fundraising effort will be coordinated.

Q: Most recently, you were director of development for New York-Presbyterian Hospital and Weill Medical College of Cornell University, where you successfully completed a \$600 million capital campaign. What do you see as your primary challenge in this new position?

A: The medical center has shown great skill at garnering corporate and foundation support. What we haven't been able to do is maximize individual giving. In a lot of

academic medical centers around the country, most of the money is raised from individual donors. It's just the opposite here. People have come to believe that foundations and corporations will take care of the philanthropic need. We want people to start looking to themselves to lend support. They need to understand how their individual generosity can make a big difference.

Q: How can this be accomplished?

A: It must be a partnership between the faculty, the staff, and development to reach out to the community of donors and spread the good word. Individual donors need to understand that their support is critical to creating a thriving enterprise. And I'm not talking simply about alumni of the school. I'm talking about people who have benefited from our clinical expertise or our research. Who better to grasp the importance of supporting your work than someone who has benefited from it?

For more information on how you can support SHRS, contact Karen Khan at ktkhan@shrs.pitt.edu or Clyde Jones at jonescb@upmc.edu.





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