

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

# FACETS

SCHOOL OF HEALTH AND REHABILITATION SCIENCES    SPRING/SUMMER 2008

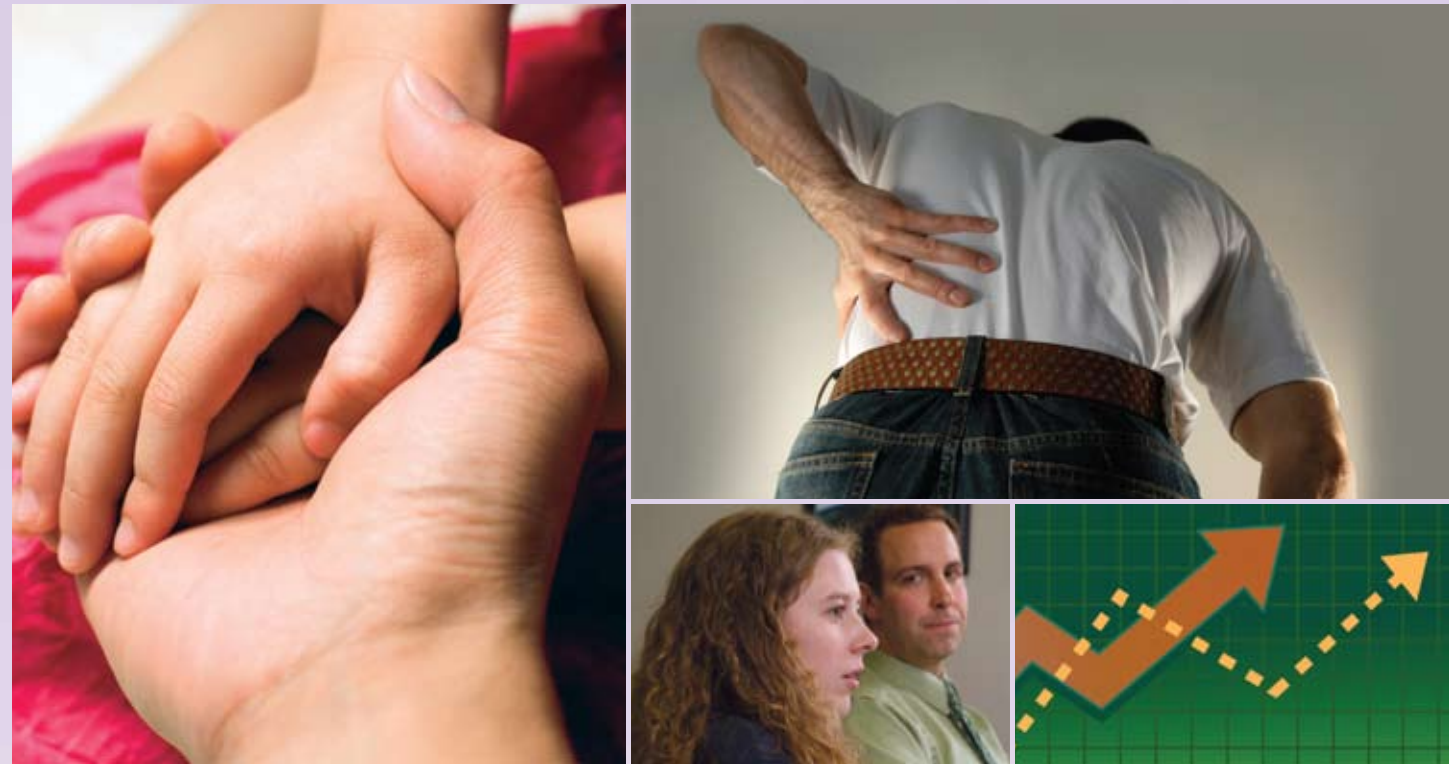


IN QUEST OF  
QUALITY



# CONTENTS

30



10

16

20

- |  |  |   |
|--|--|---|
| 1 <b>From the Dean</b><br>Cliff Brubaker                     | 20 <b>Health Information Management</b><br>In Quest of Quality             | 30 <b>Physical Therapy</b><br>Affordable Quality                      |
| 2 <b>Giving</b><br>Patty Kummick                             | 24 <b>Emergency Medicine</b><br>Field Work                                 | 32 <b>Sports Medicine and Nutrition</b><br>A New Player on the Roster |
| 3 <b>Access</b><br>Dr. Kate Seelman                          | 26 <b>Occupational Therapy</b><br>Setting Standards for Stroke Therapy     | 33 <b>Dialogue</b><br>A Conversation with Dr. Art Levine              |
| 4 <b>Student News</b>  | 28 <b>Rehabilitation Science and Technology</b><br>Wheeled Mobility Update |   |
| 5 <b>Calendar of Events</b>                                  |  |   |
| 6 <b>Faculty News</b>  |  |   |
| 8 <b>Alumni News</b>   |  |   |
| 9 <b>Department News</b>                                     |  |   |
| 10 <b>Alumni Profile</b><br>A Lifetime of Giving             |  |   |
| 12 <b>Clinical Instructor Profile</b><br>Feeders and Growers |  |   |
| 14 <b>The Real World</b><br>From Swallowing to Speech        |  |   |
| 16 <b>FACETS Feature</b><br>Perspectives                     |  |   |

24



**Publisher**  
Clifford E. Brubaker

**Executive Editor**  
Patty Kummick

**Writing and Design**  
Forge Communications

**Photography**  
Jim Judkis



**University of Pittsburgh**

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

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

*FACETS* is printed on paper produced from forests which have been certified in accordance with the rules of the Forest Stewardship Council.

*FACETS* magazine won the Public Relations Society of America, Pittsburgh Chapter, **2007 Renaissance Award** for External Publications.



FROM THE DEAN



The state and quality of health care are important for everyone. Health care costs consume nearly 20 percent of our Gross Domestic Product (GDP), with no imminent prospect for relief. The status and direction of health care would seem even more important to all of us as consumers, but surely even more so for those of us who have responsibilities for delivery of services, advancing knowledge, and training practitioners.

I shall call your attention to two timely commentaries in this issue of *FACETS*. The first of these is a *Dialogue* session with Dr. Arthur Levine, senior vice chancellor for the Health Sciences, and dean, School of Medicine. This conversation with Dr. Levine is presented on the inside back cover. Dr. Levine has provided a brief but rather stark view of the contemporary state of health care. I trust you will find this interview and his responses to queries regarding the status of health care and the delivery of services cause for concern, but perhaps you can also view this as a constructive and candid appraisal that

provides an unvarnished view of both the symptoms and consequences, and a sense of what will be necessary to address these considerable issues and problems.

The second commentary, located in the *Access* column, has been provided in the course of an interview with Dr. Loren Roth. Dr. Roth served until quite recently as senior vice president for Quality Care and chief medical officer for the UPMC Health System. Dr. Roth continues to serve as associate senior vice chancellor for the Health Sciences and as professor of Psychiatry and also of Health Policy. Once again, we are provided with a critical account of health care – this time more pointedly toward the notion of what constitutes quality, how quality has evolved as a central concept, and what medicine and health care look like from the vantage of both the patient and the provider. Dr. Roth has noted that truly effective medicine is a relatively recent phenomenon. He further acknowledges that the realization of medicine as first and foremost a service delivery industry is even more recent.

*The extraordinary and ever accelerating discoveries and accomplishments of science must now be matched by an equally enthusiastic – and adequately supported – effort to translate them to positive patient outcomes.*

The questions posed are provocative. It is quite clear that we must find ways to deliver quality health care at a lower cost. As both of these senior leaders have noted, the future of health care and the manner in which it is practiced and reimbursed will eventually hinge on outcomes. The extraordinary and ever-accelerating discoveries and accomplishments of science must now be matched by an equally enthusiastic – and adequately supported – effort to translate them to positive patient outcomes.

I believe the health science programs of the University of Pittsburgh are committed to this effort.

With best wishes,

Cliff Brubaker  
cliffb@pitt.edu





# giving

**Y**ou could say the University of Pittsburgh, its Schools of the Health Sciences, and SHRS have taken to the road. Over the past three years, Pitt, in one form or another, has ventured out of Oakland to cities across the country, inviting alumni and friends to gather with us for various events.

We've hosted Winter Academies in Naples, Fla., and Phoenix, and we've held health sciences alumni receptions in Cleveland, Erie, Lancaster, Raleigh-Durham, and Tucson. SHRS, its departments, and the SHRS Alumni Society have sponsored receptions at professional conferences in Anaheim, Atlanta, Boston, Indianapolis, Miami, Philadelphia, Phoenix, San Diego, and Washington, DC. Many of you attend our receptions and academies and it's always such a pleasure to gather with our alumni and friends in a casual environment.

These events are valuable on a number of levels. First of all, they're an opportunity for our alumni to reconnect and network with each other and with our faculty. Second, they enable us to keep our alumni current on accomplishments and developments at Pitt. Third, they provide me an occasion to put names to faces and to collect alumni information for this magazine.

So keep an eye on our Calendar of Events included in each issue of *FACETS*. SHRS will be present at Health Sciences Alumni Receptions in Lancaster, Pa. (Lancaster Country Club, April 10) and Philadelphia (Mutter Museum, May 7). You'll also find us at professional conferences in State College (PHIMA, May 7), San Antonio (APTA, June 13), St. Louis (NATA, June 18), Arlington, Va. (RESNA, June 28 – 29), and Seattle (AHIMA, Oct. 11-16).

I hope to see some familiar faces as well as lots of new ones in the coming months as we continue to proudly parade Pitt and SHRS across the country!

Sincerely,

Patty Kummick  
Director of Development

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

*I hope to see some familiar faces  
as well as lots of new ones in the  
coming months as we continue  
to proudly parade Pitt and SHRS  
across the country!*

## SHRS Improves in National Rankings

SHRS is proud to recognize two of its programs that received elevated status in the latest US News & World Report rankings of graduate college programs. The Department of Physical Therapy, ranked third in 2004, moved into the #2 spot, and the Department of Occupational Therapy realized a jump from 14th in 2004 to 9th. No other OT or PT program in the state of Pennsylvania outranked those provided by SHRS.

Also ranked were Speech Language Pathology, tied for 12th (previously ranked 10th) and Audiology tied for 16th (previously 13th).



# ACCESS

DR. KATE SEELMAN

*The physician's oath to "First, do no harm" dates back to the writings of Hippocrates in the 4th century BC. Yet while this pledge to practice and prescribe for the good of the patient implies a commitment to deliver and ensure the highest possible quality care, it wasn't until 1993 that the first formal studies and lengthy commentary on the subject were reported in the New England Journal of Medicine.*

*I've asked Dr. Loren Roth, who until January of this year was the senior vice president of quality care and chief medical officer of the University of Pittsburgh Medical Center and currently serves as associate senior vice chancellor at the University and as a professor of health policy and management at the Graduate School of Public Health, to discuss how the medical community's definition of quality care has evolved, and the implications of the current "quality movement" on our health care delivery system.*

**B**efore you begin any discussion of quality, it is important to remember that in most people's judgment, effective medicine is only about 75 years old. Prior to the advent of antibiotics in the 1920s and 30s, a random encounter between a doctor and a patient had as much chance of doing harm as it had in doing good. This wasn't the result of some failure in the delivery of care. No doctor wants to do harm. Rather, it was attributable to insufficient training and a general lack of scientific medical knowledge. Even in the early 1960s when I was in medical school, it was widely accepted that about half of what we were taught was wrong. We just didn't know what half it was.

In those intervening years, we certainly have made tremendous leaps in our level of understanding and knowledge. In medicine, this is where the excitement has been. It's been in the science... in the unfolding of knowledge...in the ability to develop and use technology to let us intervene more effectively. But by defining medicine in terms of science and art, we failed to recognize that, from the patient's perspective, we are first a service delivery industry.

I believe the quality movement is a recognition of that failure. For many years, I gave an opening lecture in medical school that began, "Medicine is a service delivery profession." This was a frightening concept for some, because it follows that if we are a service delivery profession, it means we need to be very patient-focused and to understand that patient satisfaction counts. It means that we have to pay attention to cost and cost-effectiveness. It means that we have to be efficient in how we deliver care. It means that we have to be accountable.

And frankly, up until about 15 years ago, accountability was anathema to some doctors. If patients encountered problems, it wasn't the fault of the physician. The physician made the right diagnosis or prescribed the right course of treatment. It was the patient who didn't understand or follow instructions, or the hospital that didn't administer the care properly, or the disease that didn't follow its normal course.

Fortunately, that attitude is changing, though we still have a long way to go in terms of quality improvement. There is still a tendency to draw a distinction between the science and humanity

of medicine, and what is seen as the business side of the profession; the delivery of an effective product that people want and are willing to pay for, and that actually gives them better health. But these lines are blurring, in large part because of the continuous escalation in health care costs. We cannot afford a health care delivery system that is not efficiently managed and delivered. I actually believe that the management sciences need to be taught in medical schools.

Admittedly, this will require an attitude shift, because if we are going to reengineer how care is delivered, we are going to have to take a holistic approach. Historically, the physician has had the greatest status and prestige. But physicians alone don't treat patients. Care is driven by an interdisciplinary team. Modern hospitals have an enormous infrastructure, and the doctor's role is only one part of it. You have nurses, pharmacists, and rehabilitation professionals. You have business people who know about the revenue cycle and supply chains. The individual skills and proclivities of all of these professions have to be considered in the quality equation.

We need a very close management focus on how care is delivered, and why we are unable to deliver the care that we know that we should. There is no mystery as to the reasons, but as in most institutional settings, there are numerous barriers to change. We need a much tighter definition of what is suitable and appropriate for each professional to do, and then as a team, letting each professional do what he or she does best.

Today, the emphasis is on process. As a medical professional, did you do what you are supposed to do? If the patient had a myocardial infarction, did you give him a beta blocker or notate why it was contraindicated? If the patient had congestive heart failure, did you prescribe an ace inhibitor? Why or why not?

As time goes on, we'll systematically begin looking at outcomes, such as mortality, which is quantifiable. We'll look at readmission. If a patient is readmitted, is it because of infection? Were they discharged too early? Did they receive adequate discharge instructions? We'll also look more closely at the tension and interaction between science and human behavior. What part is what the doctor did, and what part is the natural variation between patients and how they respond to treatment? What part is patient education? What part is the patient ignoring the instructions they receive?

Eventually, we'll look at the meta-outcomes. Does the patient still have heart disease? Is the cancer cured? And ultimately, functionality. Does the patient feel well enough to go back to work, and is he or she productive?

These are great service questions we need to ask and answer. This is where more research dollars should be directed. The excitement about discoveries involving molecular medicine and diagnostic technologies is very well justified. But to me, we need an equal emphasis on the process and effect of the day-to-day delivery of care. This is where great strides can now be accomplished in a relatively short time for the immediate benefit of patients.





# Student News

**Michelle Anderson**, masters in Occupational Therapy (MOT) student, was awarded the Hungarian Room Scholarship from the University of Pittsburgh Nationality Rooms. This scholarship will support her summer internship in Hungary with the Cordelia Foundation for the Rehabilitation of Torture Victims. Anderson's project will evaluate the effectiveness of psychosocial group interventions for improving self-efficacy and occupational functioning for torture survivors.

**Dr. Molly T. Vogt**, MOT student **Amalie Andrew**, and **Dr. Terence W. Starz**, published a peer-reviewed article titled "*Fibromyalgia: A Distinct Disease*" in the December 2007 issue of *The Female Patient*.

**Laura Barnes**, MOT student, was awarded the Graduate and Professional Student Book Scholarship Award.

**Bobbi Bires**, a graduate student in the Department of Sports Medicine and Nutrition, participated in and completed a multi-day, 60-mile Susan G. Komen walk in the Philadelphia area.

**Megan Duncan**, MOT student, was awarded the UPMC Endowed Scholarship.

**Abbey Sipp**, MOT student, was elected Student Representative to the Commission on Education (COE) of the Assembly of Student Delegates of the American Occupational Therapy Association. She was elected from a national pool of candidates to this prestigious position.

Sipp also presented "*Older Drivers with Low Annual Mileage as a Risk Factor for Unsafe Driving Performance*" (research posters) at Celebrating Research on Aging: Building Collaborations for the Future, University of Pittsburgh Institute on Aging.



The Department of Communication Science and Disorders held its annual White Coat Ceremony in October (above) recognizing audiology students from the Class of 2011 including (front row, left to right) **Sarah Sohns, Erika Becker, Kate Monahan, Ha-Sheng Li-Korotky**, and **Meghan Mueller** and (back row, left to right) **Kate Faunce, Jen Powers, Sharleen Morningstar**, and **Reem Mulla**. Missing are **Janelle Kisiday** and **Kim Rorabaugh**.

**Alexander Plocki**, Emergency Medicine student, recently addressed Pitt alumni who serve as faculty and staff at a luncheon hosted by Chancellor **Mark A. Nordenberg** and the Pitt Alumni Association. Plocki represented Pitt undergraduate students. He also served as president of the PAA Blue and Gold Society.

**Andi Saptono**, a doctoral candidate in the Department of Health Information Management, attended the International Conference on Aging, Disability, and Independence and presented his paper, "*Telerehabilitation Portal*," and a poster titled "*Online Portal Technology to Manage*

*Information in Telerehabilitation.*" The conference was held in St. Petersburg, Fla., in February.

**Danielle Shuttleworth**, MOT student, and **Dr. Elizabeth Skidmore**, assistant professor, Department of Occupational Therapy, presented "*Disability in Rural Guatemala*" at the Pennsylvania Occupational Therapy Association Annual Conference.

**Stephanie Young**, MOT student, was awarded the James W. Knox Memorial Scholarship Award from the University of Pittsburgh Nationality Rooms. The scholarship will support her trip to Bagamoyo, Tanzania, this summer. Young's project will examine daily activities of children in Tanzania and compare them to activities performed by children in the US.

**Michelle Anderson, Megan Duncan, Ashley Gargas, Hannah Ritter, Aby Sedwick, Sara Simons, Abbey Sipp, Laura Sorokes, Collin Thompson, Bobbi Ann Volkman, Laura Waterstram**, and **Stephanie Young**, MOT students, were inducted into Pi Theta Epsilon, the national honor society for occupational therapy students.

**Dr. Ketki Raina**, assistant professor, Department of Occupational Therapy, and MOT students **Sara Marsico, Sara Simons, Sara Spinelli, Cara Stone**, and **Stephanie Young**, represented the department in the "*Investing Now: Hands on Science*" program.

**Dr. Ketki Raina**, assistant professor, **Ana Allegretti, Sana Abu-Dahab, Razan Hamed**, and **Min-Mei Shih**, doctoral candidates, and **Amalie Andrew, Linda Ankney, Natalie De Rosa, Cynthia Gadway, Mary Martin, Anne McCue, Krista McFadden**, and **Kathleen Ward**, MOT students, organized and implemented an Assistive Technology Day for 110 students in the Pennsylvania Governor's School for Healthcare.



Students in the Department of Communication Science and Disorders' NAFDA organization participated in a Holiday Wrapping Party (above). The students sponsored a local family and supplied them with Christmas gifts.

Two students from the Department of Communication Science and Disorders were named 2007 Breckenridge Undergraduate Research Fellows by the University. **Kelly Coburn** studied the "*Impact of Internet Language for Individuals with Autism Spectrum Disorders*." **Dr. Cheryl Messick** served as her advisor. **Dorothy Yang's** project was "*Investigating Comprehension Differences Between Active and Passive Sentence Constructions in a Normal Geriatric Population*." Her advisor was **Dr. Mick McNeil**.

## Calendar of Events

### MAY

May 5 – 7, 2008

#### PHIMA Annual Meeting, State College, Pa.

The Department of Health Information Management will host an HIM Alumni Breakfast, Wednesday, May 7, 7:30 – 8:30 a.m., Senate Suite, Penn Stater Hotel. Hosts are Dr. Valerie Watzlaf and Patti Anania-Firouzan. Please RSVP to pgsofie@pitt.edu.

May 7, 2008

#### Alumni Reception, Philadelphia, Pa.

The Schools of the Health Sciences will host an alumni reception at the College of Physicians of Philadelphia Mutter Museum, 6 – 8 p.m. Please RSVP to 412-647-8983 or wnorma@pitt.edu.

### JUNE

June 6 – 7, 2008

The Pennsylvania Chapter of the American Hand Therapy Association, in partnership with the Department of Occupational Therapy, will be sponsoring a hand therapy review course.

June 11 – 14, 2008

#### APTA Annual Meeting, San Antonio, Texas

The Department of Physical Therapy will host a breakfast for PT alumni, Friday, June 13, 7 – 9 a.m., Lone Star Salon D, Grand Hyatt.

*Sponsored in part by the SHRS Alumni Society*

June 17 – 21, 2008

#### NATA 2008 Annual Meeting, St. Louis, Mo.

The Athletic Training and Sports Medicine programs will host a welcome reception for their alumni, Wednesday, June 18, 7:30 – 8:30 p.m., Hannigan's Restaurant & Pub, Laclede's Landing. *Sponsored in part by the SHRS Alumni Society*

June 26 – 30, 2008

#### RESNA Annual Conference, Arlington, Va.

The Department of Rehabilitation Science and Technology will host an alumni event coinciding with the conference. Details TBA. *Sponsored in part by the SHRS Alumni Society*

### OCTOBER

October 3 – 4, 2008

#### The 31<sup>st</sup> Annual Pennsylvania Occupational Therapy Conference, King of Prussia, Pa.

October 11 – 16, 2008

#### AHIMA Annual Conference, Seattle, Wash.

October 25, 2008

#### University of Pittsburgh Homecoming, Pitt vs. Rutgers





# Faculty News

## Communication Science and Disorders

**Dr. John Durrant**, professor (*right*), received the “Honors of the Association” from the American Speech-Language Hearing Association at its national convention in Boston in November.

**Dr. Paula Leslie**, associate professor, was invited to present the Naomi Lundy Workshop for the Southwestern Pennsylvania Speech-Language Hearing Association at The Children’s Institute in October. Her topic was “*Patient Decision-Making in Motor Neuron Disease and Tube Feeding.*”

Leslie presented sessions at the American Speech-Language Hearing Convention in Boston in November. She discussed the need for a “*Clinical Doctorate in Speech-Language Pathology*” and “*Managing Complex Risk Factors in Ethical Dysphagia Management.*” This ethical session is part of an ongoing collaboration with teams in the United Kingdom.

She was also invited to present “*Dysphagia: Evidence, Ethics and Understanding for the Interdisciplinary Rehabilitation Team*” as part of the UPMC Institute for Rehabilitation and Research Clinical Connections multidisciplinary continuing education workshop in January.

**Elaine Morner**, instructor, received the 2007 Marcia Finisdore Award for Advocacy from the Hearing Loss Association of Pa. at its conference in Harrisburg. The award is presented to an individual in recognition of excellence in improving communication access for hard of hearing people.



A measurement instrument for stuttering developed by **Dr. Scott Yaruss**, associate professor, was published by *Pearson Assessments*. The OASES (Overall Assessment of the Speaker’s Experience of Stuttering) version for adults is now available in the US in English and Spanish. Versions for children (ages 7 – 12) and teens (ages 13 – 17) are forthcoming. Worldwide translations are also in the works.

## Health Information Management

**Dr. Mervat Abdelhak**, chairman and associate professor, has been named chair of the American Health Information Management Association’s (AHIMA) Nominating Committee. Abdelhak is also serving on the Educational Strategy Committee and authoring “*Vision 2016,*” a white paper for education.

**Rebecca Harmon**, assistant professor, presented “*Emerging Workforce Issues in HIM and Beyond,*” at the Maryland Health Information Management Association’s annual meeting in March.

**Dr. Bambang Parmanto**, associate professor, has received an appointment as visiting scholar, Kobe University, Japan. Parmanto has also been named chair of the American Health Information Management Association’s Council on Research.

**Dr. Valerie Watzlaf**, associate professor, will be one of the primary faculty members involved in the second annual Research Training Institute of the Foundation of Research and Education (FORE) of the American Health Information Management Association. Participation in this intensive research training institute is designed to build and sustain a

community of HIM professionals committed to conducting applied research in health informatics and information management. The training institute will be held August 4-9, 2008, College of St. Scholastica, Duluth, Minn.

**Patti Anania Firouzan, Harmon, and Watzlaf** are preparing a case study on using the Virtual Lab in the education setting. They are highlighting three ways they have incorporated this tool into the HIM program, including its use in the online electronic health record course. They will present this information to AHIMA’s Assembly on Education in July 2008.

## Occupational Therapy

**Dr. Nancy A. Baker**, assistant professor, received the American College of Rheumatology Research and Education Foundation Health Professional Investigator Award.

**Dr. Denise Chisholm**, assistant professor, is the representative for the Pennsylvania Occupational Therapy Association (POTA) on the Health Professional Advisory Board for the Community PARTners Program, Clinical & Translational Science Institute, University of Pittsburgh.

**Dr. Joan C. Rogers**, professor and chair, received the Association of Rheumatology Health Professionals Distinguished Scholar Award for her exceptional achievements in scholarly activities pertinent to the study of rheumatic diseases.

**Dr. Elizabeth Skidmore**, assistant professor, was awarded a K12 Career Development Award by the Comprehensive Opportunities for Rehabilitation Research and Training Program, jointly sponsored by

Washington University, the University of Pittsburgh, and the University of Delaware. Skidmore’s research plan examines the dynamic interactions among domains of neurobehavior and activities of daily living disability after stroke.

Skidmore presented a plenary address “*Neurorehabilitation: Paradigm to Practice*” at the Scientific Meeting of the Neurorehabilitation and Reconstructive Neurosurgery Committee of the World Federation of Neurosurgical Societies and the 2<sup>nd</sup> Congress of the International Society of Reconstructive Neurosurgery Joint Meeting, Taipei, Taiwan.

**Rogers and Margo B. Holm**, professor, and **Min-mei Shih**, PhD candidate, presented “*Functional Outcomes of Stroke Survivors*” at the Scientific Meeting of the Neurorehabilitation and Reconstructive Neurosurgery Committee of the World Federation of Neurosurgical Societies and the 2<sup>nd</sup> Congress of the International Society of Reconstructive Neurosurgery Joint Meeting in Taipei, Taiwan.

**Chisholm, Rogers, Holm, and Dr. Charles F. Reynolds III**, presented “*Disability in Community-Based Older Women with Depression*” at the 21<sup>st</sup> American Association for Geriatric Psychiatry Meeting, Orlando, Fla.

**Rogers, Chisholm, Skidmore, Baker, Ketki Raina**, assistant professor, and **Mary Lou Leibold**, assistant professor, participated in the American Occupational Therapy Association/ National Board for Certification in Occupational Therapy’s 1<sup>st</sup> Annual National Student Conclave. The AOTA held town meetings for students, alumni, and practitioners at the University of Pittsburgh in

September. Fred Somers, AOTA executive director, and Maureen Peterson, AOTA chief professional affairs officer, spoke with more than 140 students and practitioners about the AOTA Centennial Vision.

## Physical Therapy

**Dr. Anthony Delitto**, chair and professor, was named associate dean of research for the School of Health and Rehabilitation Sciences. Delitto will work with SHRS faculty and students to prepare them to facilitate their research efforts and to provide additional research training.

## Rehabilitation Science and Technology

**Dr. Rory Cooper**, distinguished professor and chair, was invited to speak at the Arnold and Mabel Beckman Center of the National Academies of Sciences and Engineering in Irvine, Calif., in September. He presented “*Quality of Life Technology – One Man’s Journey.*”

**Dr. Yih-Kuen Jan**, assistant professor, received funding from the Christopher and Dana Reeve Foundation to support his research proposal titled “*Effectiveness of Local Cooling on Enhancing Tissue Tolerance to Loading Pressure in Individuals with Spinal Cord Injury.*”

## Sports Medicine and Nutrition

**Dr. Diane Helsel**, assistant professor, was awarded the Pennsylvania Dietetic Association’s 2008 Outstanding Dietetics Educator Award. The award recognized excellence in teaching, mentoring, and leadership of educators in American Dietetics Association-accredited dietetics education programs.





# Alumni News



**Chancellor Mark Nordenberg (left) and Dean Cliff Brubaker congratulate Audrey Holland on being named a 2007 Legacy Laureate.**

**Dr. Audrey Holland** (CSD '55, '59, '61) (*above*) was named a University of Pittsburgh Legacy Laureate this past October. One of eight alumni selected for this honor, Holland was recognized for excelling both professionally and personally and exemplifying the best in leadership and commitment to the greater good. She joins fellow SHRS alumni **Pat Croce** (PT '77), Laureate Class of 2000, and **Peter DeComo** (HRP '77, '80), Laureate Class of 2005, in this honor.

**Jose Rivera** (AT '85) was named Adult Self-defense World Champion in the National Black Belt League Karate World Games in Myrtle Beach, S.C. Participants traveled from North, South, and Central America to compete. Rivera is on faculty at Indiana University of Pennsylvania's (IUP) Health and Physical Education Department and is co-advisor of the IUP Martial Arts Club.

**Brian Anderson** (HIM '94) is happily married with three sons and lives in Tennessee. Anderson is employed by Hospital Corporation of America (HCA) on the HIM Shared Services team. He reports that new employment opportunities exist for new graduates as well as seasoned HIM alumni at HCA.



**Dr. Xiaoming Zeng** (HIM '04) was recently named one of the East Carolina University Scholar Teachers for 2007-2008. The award

recognizes faculty who incorporate scholarship in their teaching and who mentor their students. Zeng is on faculty in the College of Allied Health Sciences' Department of Health Services and Information Management.

**Stacey Valalik** (HIM/HIS '96) and **Carrie Bruneck** (HIM '06) are employed by UPMC and will be involved in setting up electronic health records for the institution in the United Kingdom.

**Karl Gibson** (PT '76, '83) was selected as a 2007 recipient of the Lucy Blair Service Award by the American Physical Therapy Association.

**Denise English** (PT '73) was presented the St. Louis University Program in Physical Therapy 2007 Florence P. Kendall Service Award. The award recognizes a physical therapist who has performed outstanding service to the health care community in the area of clinical practice, education, professional association, or health care advocacy. English is committed to increasing the availability of rehabilitation services to the people of Haiti and she has been instrumental in creating and overseeing the development of a curriculum for training rehabilitation aides in that country.



**Leigh Weiss** (AT '04) joins the ranks of SHRS athletic training alumni who have experienced an NFL Super Bowl up close and personal. Weiss is on staff with the New York Giants and got to spend quality time with the Lombardi Trophy this past February.



**Emily Crow**, (CSD '92, '95) (*above*) speech-language pathologist in the Pittsburgh Public Schools, was the recipient of the UPMC Musicians Center Award for 2007. The award is presented to an individual in the Southwestern Pennsylvania area who has promoted hearing protection. The Musicians' Center is run by **Dr. Catherine Palmer**, associate professor, Department of Communication Science and Disorders.

**Dr. Cathy Dolhi** (OT '00) and **Dr. Denise Chisholm**, assistant professor, Department of Occupational Therapy, presented "Focusing on *Occupation in Fieldwork*" at WisCouncil, the educational council for academic and clinical educators in Wisconsin.

Alumni from the Schools of the Health Sciences were treated to a reception at the Carnegie Science Center, Pittsburgh, and a tour through the Bodies Exhibit this past fall (*below*). Among those in attendance were alumni and faculty from the Department of Sports Medicine and Nutrition, including (left to right) **Dean Cliff Brubaker**, **Dr. Diane Helsel**, **Sotiris Aggelou**, **Lori Cherok**, **Amy Aggelou**, and **Jose Rivera**.



## Department News

### Health Information Management

The **Department of Health Information Management** encourages its alumni to vote for Valerie Watzlaf, associate professor, who is running for director of AHIMA. An online ballot will be available June 17-30, 2008.

### Physical Therapy

The Department of Physical Therapy will host a Breakfast Reception to Honor Department Chair **Anthony Delitto** at the APTA Annual Conference in San Antonio, Texas. Delitto was selected to present the 39th McMillan Lecture. The event, open to PT alumni, will be held in the Lone Star Salon D Room at the Grand Hyatt on Friday, June 13, from 7 – 9 a.m. Reservations for attendance are necessary and can be made by contacting Dr. Kathy Kelly at [kkelly21@pitt.edu](mailto:kkelly21@pitt.edu).

### Rehabilitation Science and Technology

Faculty and students in the **Department of Rehabilitation Science and Technology** and the Korean Advanced Institute of Science and Technology (KAIST), South Korea, signed a memorandum of understanding to explore areas of mutual academic interest to further their common objectives in research and education in the fields of Quality of Life Technology. Both have agreed to develop formal programs including exchange of students and academic personnel and development of special research projects. KAIST is ranked 37<sup>th</sup> among the world's top 100 technology universities.

Congratulations to **Tech-Link** and its **Team Aeolus** (Ruler of the Winds) and **Team Helios** on their performances in the annual LEGO League. Aeolus ranked 8<sup>th</sup> in design and 3<sup>rd</sup> in programming with an overall score of 15/59. Helios performed respectably with a 34/59. Tech-Link received a LEGO trophy for third place.

### Sports Medicine and Nutrition

On April 16, 2008, **US Navy Special Warfare (SEALs)** will officially unveil at a Grand Opening ceremony the University of Pittsburgh Human Performance Research Laboratory at the Little Creek Amphibious Base, Va. The lab will be operated by the faculty of the Neuromuscular Research Lab, Department of Sports Medicine. The SEALs Lab is supported by a \$2.1M DOD grant to study injuries and training techniques of the SEALs and to optimize their tactical readiness. A similar research lab at Fort Campbell, Ky. is operated by the SMN faculty and supported by a \$2.75M DOD grant to study the 101st Airborne (Air Assault) Division of the US Army.

The Accredited Undergraduate Athletic Training Education Program has recently received University designation as an Undergraduate Program Major in the SHRS. (See article on p. 32)





When Ellen Wynn graduated from D. T. Watson in 1947, little did she know that the journey that lay ahead would span 50 years and 13 time zones. Now officially retired in St. Petersburg, Fla., Ellen Wynn Lesh has established a legacy of physical, emotional, and monetary support for children with disabilities, and more recently, single mothers and a youth soccer team in the Philippines.

Her memories of D.T. Watson are mixed. "It was a great place for us to be at the time, living on campus and working directly with children with polio," Lesh recalls. "However, it was difficult to watch them live with the disease. We learned so much from their strength." She also had the opportunity to study under Dr. Jessie Wright, the first of many of the early pioneers of physical therapy with whom she would work and study during her career.

She hadn't set out to study physical therapy. Lesh's early time at Pitt was dedicated to getting a Bachelor of Science degree. But when her uncle passed away suddenly – he had supported the family after they were abandoned by her father – Lesh had to find another way to fund her education. It so happened that scholarships in physical therapy were being offered to train professionals to treat the alarming number of new polio patients, and Lesh jumped at the chance.

Following graduation, she began working on Pittsburgh's Southside at a place she fondly remembers as "Miss Perry's Class for Handicapped Children." Summers were spent working in Wilkes-Barre, Pa., at one of the first camps for children with disabilities. Lesh would later go on to establish more camps in Pennsylvania, Maryland, and West Virginia, many of which still exist today.

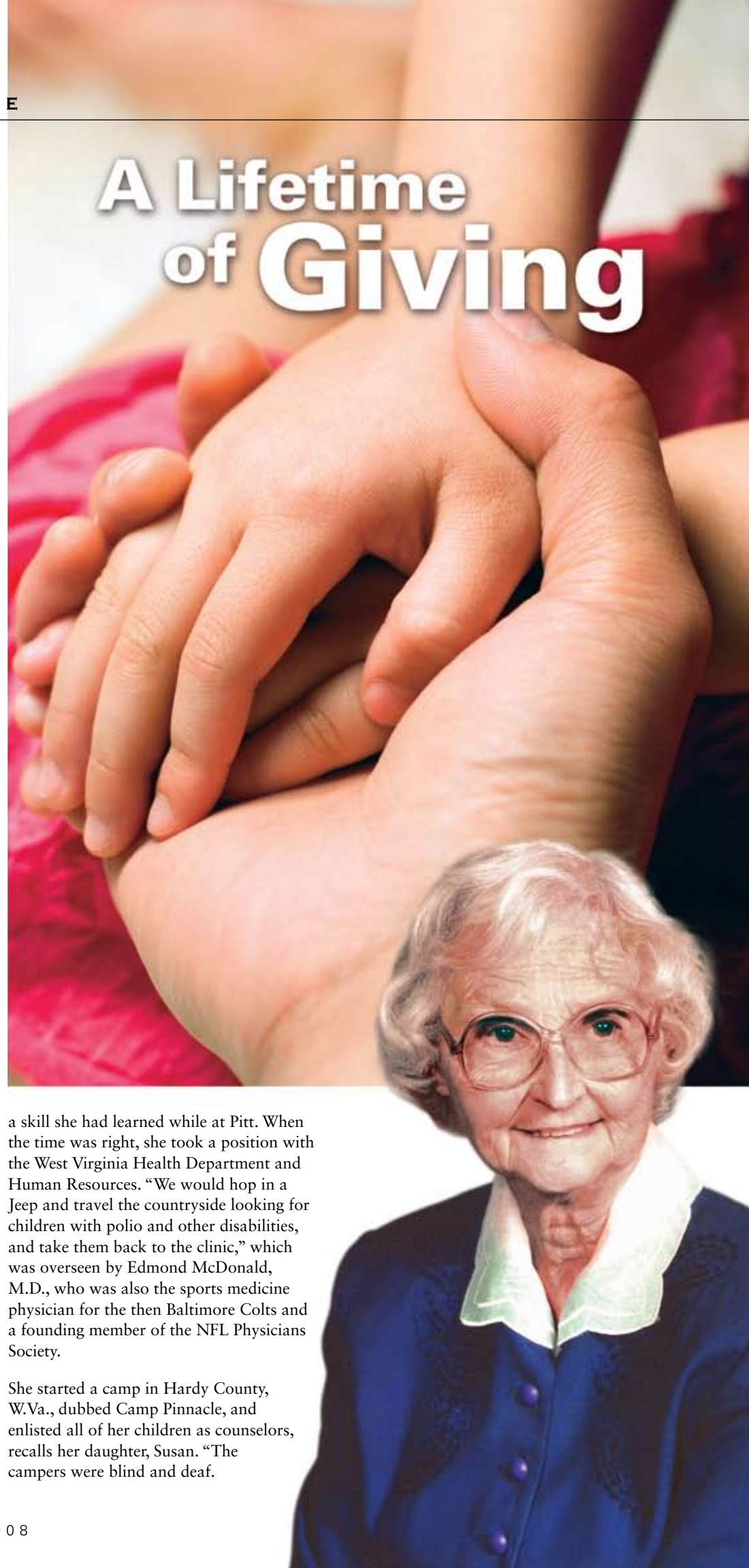
After leaving Miss Perry's, she spent the next five years in York, Pa., working for the Easter Seal Society. "We were working to establish a permanent residence for people with disabilities so that when they grew older, they would be able to maintain their independence," she says, noting that most of the children she worked with had cerebral palsy.

She then met and married William W. Lesh, Sr., M.D., and took a hiatus from physical therapy to raise six children. Until they were all in school, Lesh worked in the lab,

a skill she had learned while at Pitt. When the time was right, she took a position with the West Virginia Health Department and Human Resources. "We would hop in a Jeep and travel the countryside looking for children with polio and other disabilities, and take them back to the clinic," which was overseen by Edmond McDonald, M.D., who was also the sports medicine physician for the then Baltimore Colts and a founding member of the NFL Physicians Society.

She started a camp in Hardy County, W.Va., dubbed Camp Pinnacle, and enlisted all of her children as counselors, recalls her daughter, Susan. "The campers were blind and deaf.

# A Lifetime of Giving



It certainly taught us how lucky we were to be happy and healthy kids. But we had great fun and we learned a lot," says Susan, who became the first female chief master sergeant in the history of the 167<sup>th</sup> Airlift Wing in 2003. She was named the West Virginia Air Guard's Outstanding Airman for 2005.

## Teaching the Teachers

Ellen Lesh then decided to tackle work for the state of Maryland, instructing teachers at Coppin State Teachers College how to work with students with special needs. It was during this time that she had the opportunity to work with Margaret Rood, internationally recognized for her development of a neurophysiologic approach in the treatment of central nervous system disorders, such as cerebral palsy.

Once the teachers had been taught, Lesh spent 14 years with Frederick County School System. She also assisted the Potomac Center, a division of Maryland's Department of Health and Mental Hygiene, in establishing homes for children with disabilities.

## At Last Retirement – Well Almost

Before retiring to St. Petersburg with her husband, Lesh ventured back to York to visit the residence that she helped establish. "I was so surprised. Greeting me at the door was Emily, now in her fifties. She showed me the Christmas cards she was making, a hobby she began as a child." Emily then guided Lesh to Dennis' room. Dennis, it seems, had a crush on Lesh when he was a child – and apparently still did. "It was wonderful to see them again; wonderful to see that they were living healthy, independent lives, despite their cerebral palsy."

"Retirement" for husband William meant working in the St. Petersburg Free Clinic where, as luck would have it, a grant was received that required a physical therapist. "We would assess babies at the hospital and then go to their homes to provide PT." Lesh started the work as a team of one and for six years, helped the children. Today, there are teams of therapists working in three counties.

In 1994, William and Ellen established the Lesh Family Foundation, whose

mission is "supporting charitable organizations that further the belief in Christianity and a free and fair democratic society." The Foundation meant more predictable support for the clinics they already had helped to sustain in St. Petersburg and Pinellas County.

But then tragedy struck. Ellen Lesh developed an aneurysm and had a stroke and a heart attack. It took her two years to recover, during which time a lot happened. Sadly, her husband died in 1997. "That was obviously a very sad time for us," recalls Susan Lesh. "My mother was completely unaware that our father had passed away. It was difficult news to break to her when she regained consciousness."



On a more positive note, Lesh was honored, in absentia, by then Florida Governor Jeb Bush for all her work on behalf of the women and children of Pinellas County. Along with their work with the Free Clinic, the Leshes also supported the Pregnancy Care Center of Pinellas County, where they assisted single mothers and babies born addicted to drugs.

## The Lesh Foundation Goes International

November 6, 2005 was a great day for the people of Dumaguete City, Negros Oriental, the Philippines. Some 1,000 people received medical and dental attention at a new mission. The facility was the brainchild of one of Ellen Lesh's sons, William Jr., and his wife, Vivian Mendez-Lesh, a Filipina. Bill, a US attaché currently assigned to Bagdad, recognized that the Lesh Family Foundation could help to provide medical care for the people of the region.

Vivian marshaled the support of the Rotary Club Dumaguete-South, which provided medical equipment and services. Silliman University Medical Center, Holy

Child Hospital, and Negros Oriental Provincial Hospital were called on to staff the facility, and the Lesh Foundation provided the bricks and mortar. Vivian herself donated land for the Medical-Dental Mission.

"It was truly a wonderful day," she says. "Seeing all the patients – primarily women and children – finally have an opportunity to receive check ups and immunizations was truly gratifying."

The Lesh clan has visited the mission since the opening day, attending Easter services in 2006. They're also helping to field a youth soccer team, complete with matching jerseys. "We didn't realize it, but we purchased the shirts for children who had no shoes," Lesh laments. So once again, the foundation was called on to help children in need.

## Great Remembrances

For all the good the foundation has done, it's the individual achievements Ellen Lesh recalls when asked about the highlights of her extensive career. "I remember a boy named Robert. He and his twin were born with disabilities – hydroencephylitis – and placed in an institution, where the brother eventually died.

"Robert was quite a handful, eating everything in sight, regardless of whether or not it was food," Lesh recalls. "So they tied him in a wheelchair at an early age, and that's where he stayed until I saw him at age 43." Consequently, Robert never learned to walk, and the back of his head was flat because of his confinement. Lesh and a colleague managed to get him out of his chair and, with a lot of time and effort, taught him to walk.

"His face just beamed," Lesh marveled. She also remembers Iris, another former patient, who, in her forties, made her first trip to an amusement park with Ellen, who took her on the carousel and the rollercoaster.

Lesh credits her education and training at the University with allowing her to excel personally and professionally at every stage of her life. Daughter Susan concluded: "It was as though God planned that she receive this preparation to provide service to others throughout her life. She has served as a role model for my brothers and sister to continue service to others." ☛





As the development and utilization of information technology has exploded over the past quarter century, it has brought with it sweeping changes to modern medicine. Patient rights, the debate over soaring health care costs, physician and hospital compensation, and questions about Internet safety and security have become hot-button issues, paving the way for the growth and refinement of health information management (HIM).

As changes have affected the discipline, so too have they affected the practitioner.

Daniel Wassilchalk, executive administrator, Department of Radiology, University of Pittsburgh Medical Center (UPMC), has taken advantage of these changes to mold a career based on what he describes as an unorthodox approach to the practice of HIM. And based on his success, he is encouraging today's HIM undergrads to do the same.

Wassilchalk graduated from SHRS in 1983 with a bachelor's degree in Health Records Administration (now Health Information Management) and later earned a master's degree in Health Services Administration from George Washington University. Since that time, he has contributed to and played a leadership role in HIM efforts at a number of leading health care institutions across the country, working in both community-based and academic-minded health care institutions to hone his command and administration of advanced HIM processes and programs.

The experiences – which have focused most intensely on quality, patient safety, and the complicated risk management environment in today's health care institutions – have left him well prepared for his latest position at UPMC. Working directly with the Physicians Services division, Wassilchalk oversees Radiology faculty operations and administration at several UPMC hospitals and facilities.

#### Assessing and Improving Quality

To understand Wassilchalk's approach to HIM administration, it is important to examine his work on a high-profile UPMC project he began upon his return to Pittsburgh in 2005. Wassilchalk became involved in the Standardized Privilege and Application Process (SPAP) project, a UPMC Physicians Services program to help the organization work toward the alignment and standardization of the credentialing/privileging process for physicians and allied health professionals who request privileges at UPMC locations.

"It sounds pretty technical," Wassilchalk points out, "but it boiled down to creating a formalized mechanism for UPMC to be aware of the qualifications, training, education, and performance of physicians. Essentially, it chronicles what UPMC physicians or other health care professionals were capable and qualified to do at a hospital."

According to Wassilchalk, the SPAP project encompasses coding and data reporting, quality and performance measurement, pay-for-performance, and incentive planning. It was meant to assess and define practitioners' quality throughout the system – essential elements of UPMC's organizational health and future prosperity.

# Feeders *and* Growers

## SHRS Alum Helps Set the Stage for a Different Kind of HIM Grad

"Changes in technology have affected HIM in that we have access to more information than ever before – and so do both health care oversight organizations and compensation programs from insurance companies to government Medicare and Medicaid," he notes. "Having a handle on this information in an age of greater transparency is crucial."

Ever-tightening regulations pertaining to privileging and profiling make his unconventional HIM role even more crucial.

"Examining quality throughout the health care continuum is more important to the medical field than ever before," he says.

#### Knowledge In, Knowledge Out

Wassilchalk credits much of his success, his ability to think out-of-the-box, and his adaptability to his training at SHRS. It is because of this appreciation, together with a need to prepare the leaders of tomorrow, that he has taken an active role in a unique training program that he leads every spring semester.

Based on his intimate knowledge of privileging, quality improvement, utilization, and risk management, Wassilchalk organizes and heads up a two-day guest lecture series specifically designed for HIM juniors. The comprehensive review focuses on quality, utilization, risk, patient safety, and e-records, and is married to the HIM toolbox that students in the program build through their final two years of undergraduate studies. It covers everything from organizational theory to problem solving, critical data analysis to the basic fundamentals of quality improvement.

He explains, "When I reach back into my HIM toolbox, I'm reaching for tools like data integrity; coding classification systems; peer review models; quality improvement, patient safety, and risk management techniques; regulatory affairs, and payer relations. Students need to be intimately familiar with these areas to succeed in today's HIM environment, and I have an obligation to help them to thrive in any way I can."

"We conduct exercises and have case studies that examine HIM from a different perspective," Wassilchalk continues. "I want to be sure that students know there are many, many different ways to view the profession."



By all indications, his efforts have been a success – not only anecdotally, but based on a measurement of the ultimate academic end-goal: job placements.

"Based on the series, we've recruited seven HIM students

as interns at UPMC. In fact, two interns last year found employment within 30 days after graduation directly because of the project – one with UPMC and the other with NYU Medical Center. We're about to offer another student a permanent position with the project as soon as she graduates.

"I really look at our role as alumni as being feeders and growers – trying our best to give back based on the great things that have been given to us." ❁





In a room at the Children's Institute in Pittsburgh, a child and a student speech-language pathologist mimic alligator bites with their arms. They take huge chops out of the air and laugh together. However, they are not pretending to be scaly lizards. They are symbolizing proper feeding and swallowing methods; a stepping stone to speech.

For Annie Perkins, her interest in speech-language pathology began when her uncle was diagnosed with Amyotrophic Lateral Sclerosis, or "Lou Gehrig's Disease." She saw first-hand what a speech language pathologist can do.

*"You wouldn't think that feeding and swallowing are a big part of speech, but they actually are a very important first step."*

"A speech pathologist would work on his posture for breathing and assist him with alternative communication devices. I thought that was very interesting. Since then, I've wanted to learn about the profession," says Perkins. Now she's close to completing her master's degree in Speech-Language Pathology and is currently interning at The Children's Institute. Upon graduation, Perkins will take part in a clinical fellowship program, the final step toward becoming a licensed speech therapist. "The program is basically a nine month, supervised job that I need for my Certification of Clinical Competency, which is the licensure I need to practice speech-language pathology," notes Perkins.

#### Functional Feeding

Prior to her internship at the Children's Institute, Perkins' work was centered on basic speech and language treatments for children and adults. That all changed when she stepped through the doors of the pediatric rehabilitation facility.

# The Real

# World

## From Swallowing to Speech

Patsy McMelleon, a certified speech-language pathologist and Perkins' supervisor at the Children's Institute, has given her an opportunity not available to many students. "Annie is working in our functional feeding program, which mainly deals with simple eating and swallowing therapies for children and infants," says McMelleon. "This hospital sees children from all across the country who have undergone small bowel and liver transplants and have trouble learning proper feeding methods. Ninety percent of our patients need feeding therapy, and that's where Annie plays an important role."

in class with the reality of working at the Children's Institute. It's a big jump between the two, but it's definitely a good learning experience."

Each day at the Children's Institute varies. Patients can range from infants to children up to age 12 who have had a major operation or accident that has hampered their feeding and swallowing. Perkins and her supervisor evaluate each patient's condition and develop an appropriate therapy regimen. Typically, this includes four meals, two speech-language sessions, and two occupational therapy sessions daily. "The combination of therapies

tight when he has a spoon in his hand, so I use a method of reinforcement that works very well," she explains. "I show him the difference between a 'birdie bite' and an 'alligator bite', and if he takes an 'alligator bite', I give him a sticker, which usually prompts him to take bigger bites."

Aside from the hours of feeding and swallowing therapy, Perkins is also responsible for teaching the parents of the patient how to emulate her therapy methods. Children and infants at the Institute typically learn to feed on their own through bottles, cups, and spoons. If the parent isn't there to absorb the methods



Says Perkins, "There is no class for what I'm doing now; it's really an on-the-job learning experience. A very small percentage of speech-language pathologists actually do this kind of work, and I'm getting to see something that is very unique and medically advanced. You wouldn't think that feeding and swallowing are a big part of speech, but they actually are a very important first step. We deal with children and infants who come here from very far away because of the hospital's reputation. I am very fortunate to have such a great opportunity."

To say Perkins has a packed schedule would be an understatement. Monday through Thursday, she spends eight hours at the Children's Institute, then immediately transitions to the classroom. She says that the combination of taking classes and working full-time is a plus. "I can balance the theories that I learn

combined with occasional feedings helps patients overcome their specific illness quickly and without incident," explains Perkins.

She says that what makes this program so successful is the integration of various therapies. "Every day, I work with staff members from a number of different disciplines. I just recently co-treated a patient with an occupational therapist, and we were side-by-side with doctors and nurses. It really is a fail-proof system."

#### Learning to Eat

Many of her patients suffer from oral aversion and refuse to have any food in or near their mouth. To help ease their antipathy, Perkins and her colleagues use a form of positive reinforcement to promote proper eating methods. "One of my patients is keeping his mouth shut very

that the staff use, Perkins points out, the learned feeding and swallowing methods can be lost.

"We have to teach the parents of our patients what we do here and how we are helping their children eat, swallow, and improve their speech and language. Once the patient leaves the Children's Institute, the parents must have a solid grasp on the therapies and how to perform them."

After graduation, Perkins will weigh her options regarding which direction her career in speech-language pathology will take. Her work with children and infants at the Children's Institute has definitely made pediatric speech-language pathology a viable choice. "I've really grown to love working here and with all my patients, so while I'm not sure yet, I'm leaning toward pediatrics. Only time will tell." ❁





## P E R S P E C T I V E S

What is quality health care?

Is it a positive outcome, the absence of errors, adherence to evidence-based protocols, or a winning bedside manner? Does the definition of quality vary depending on the discipline or the diagnosis? Is quality service delivery something that can be learned in the classroom, or is it a skill that can be honed only after years of clinical experience?

We asked a group of current students and graduates from each of the departments and programs within SHRS to share their views on these questions – and more – in a wide-ranging panel discussion. Participants include:



**Anthony House**, a doctoral candidate in the Department of Sports Medicine and Nutrition. He is an athletic trainer at the UPMC Sports Works.



**Emily Barto**, a student in the Department of Occupational Therapy. Currently completing a clinical rotation at Montefiore Inpatient Rehabilitation Clinic, she'll graduate in June.



**Drew Breakey**, a second-year student in the Department of Physical Therapy. He expects to graduate in 2009.



**Megan Wood**, a 2004 graduate of the Emergency Medicine Department. She is a paramedic as well as an instructor in the Emergency Medicine program.



**Tom Hritz**, a clinical nutrition manager at UPMC Mercy Hospital. He earned a bachelor's degree in Clinical Dietetics and Nutrition in 2000, and his master's degree in 2007.



**Cheralyn Ranjan**, a 2007 graduate of the Department of Communication Science and Disorders. A speech-language pathologist, she is completing a fellowship at the VA Healthcare System.



**Thomas Bursick**, a senior rehabilitation representative for Apria Healthcare. He earned a master's degree in Rehabilitation Science and Technology in 2003.



**Deborah Donovan**, director of Provider Quality Performance Management at Highmark. She is a 1982 graduate of the Department of Health Information Management.

*How is quality defined within your discipline?*

**House** – Having a rapport with your patients is critically important, particularly in terms of patient compliance with the treatment. You need to have a good working relationship, particularly with athletes, so that they can move quickly from rehabilitation back to competitive activities.

**Barto** – Rapport is important, because we need the patient to understand why we've recommended the treatment and agree that it has been proven to be effective through evidence-based practice. If they do, it's more likely they will follow through with the exercises when they go home.

---

*"To assess the quality of care, we look at a patient's clinical outcome, and how the care that was rendered benefited the patient in the long-run."*

---

**Breakey** – Quality assurance is definitely a hot topic in the Department of Physical Therapy. Positive patient outcomes require consistent delivery of quality care.

**Wood** – Quality in emergency medical services is different than quality in a therapy-based setting. We run our department based on protocols, and to maintain quality of care, you need to make sure everybody is following the same standard. This can be very difficult. For example, you have a brand new paramedic and one who's been around for 30 years. The veteran paramedic may not have been taught the new, innovative procedures that the brand-new paramedic comes into the field knowing. The result is a clash



in generational work styles. Our main issue is getting everyone working at the same skill level, so that we can consistently deliver the highest quality of care.

**Hritz** – Like the other more clinical disciplines, we look at quality in terms of standards of care and evidence-based practice.

**Ranjan** – That's true in speech pathology as well. Evidence-based practice is really emphasized in our program, both from a diagnostic standpoint and in treatment.

**Donovan** – To assess the quality of care, we look at a patient's clinical outcome, and how the care that was rendered benefited the patient in the long-run. We also look at questions such as are we identifying problems early enough so that we can administer the proper treatments to ensure that patients can recover more quickly?

**Bursick** – We work with people with disabilities, and quality, to me, means customer service. We need to be there for the client from beginning to end. We need to get them the best possible equipment, even if it means fighting with the insurance companies and the doctors.

*While quality in health care is often defined by adherence to evidence-based protocols, does that necessarily translate into patients perceiving that they are receiving the highest quality care? How important is perception in defining quality?*

**Barto** – I think that the patient's perception is very important. I usually start using the assigned protocol, but as I learn more about the patient, I try to tailor the treatment to their personality – what they like to do and what's going to motivate them to work hard in therapy. Also, I like to educate the patients on the treatment they're receiving and how it's going to benefit them in the future. I believe that if the patient feels like they are receiving a high quality of care, the more likely it is that they're going to comply with the protocol.

**Wood** – Sometimes, quality of care is as simple as making a patient feel a little bit better. In extreme situations, where the patient and the families are very emotional, if you can just be calm and supportive and knowledgeable, they'll perceive the quality of care they're receiving is extremely high.

*Continued on next page*





**Breakey** – A major issue that I see on a daily basis is the variation of coverage. Some people may be allowed only four weeks of PT per year, where someone else might get four weeks per diagnosis. Another problem is the varying level of experience of people in the field. One PT might have years of experience, and then there's the new guy coming in with a totally different understanding of the profession. You have



It may seem odd, but the nicer you are, the better the perception of the care. I always tell my students that you'll never get sued for being nice.

*What is the biggest obstacle in terms of administering the highest quality of care possible?*

**Hritz** – I'm usually dealing with high-risk patients. I need to find a balance, to find out where they want to be and try to teach them how to get there. Many come in with pre-conceived notions; they think I'm going to tell them that they'll never be able to eat like they did before. So I take them one step at a time and try to get them to make incremental progress.

**Bursick** – Perception means a lot. At times, I'm the bad guy because the therapist tells the client that they'll be able to function in a certain way or get a specific piece of equipment, and what they say isn't always realistic. Other times, I'm the good guy because I'm able to help the client do more than they ever expected.

**Bursick** – I would say my biggest obstacle would be reimbursement. I have to deal with Medicare laws that are constantly changing, which has been a growing problem of late. We're constantly working to overcome these obstacles. It is an ongoing problem and something needs to be done about it. For example, I see denials for a piece of equipment that the client has been using for 10 years, but because of new laws and regulations, I can't get it for them anymore. So now where do you go? We just have to keep fighting for patients' rights and address these problems so that we can eventually see some positive change in the system.

to temper what new therapists have learned and know versus what the therapists who have been out there for many years have learned.

**House** – Awareness is the biggest obstacle people in the athletic training profession face. Often, especially in a high school setting, students don't know who the athletic trainer is or even that there is a trainer on staff. Our profession needs to work on spreading the word so that students can come directly to us instead of worrying and wondering what should be done in the event of an injury.

*Do you think a concept like pay-for-performance would improve quality?*

**Barto** – I think we should be held accountable for the care that we're providing. However, you also need to recognize there are a lot of other factors that come into play. When you're treating patients, you have to be concerned with their motivation and if they are going to comply with the exercises that you give. Hopefully, pay-for-performance will reflect more on how well patients are functioning rather than on how well we met each step in a protocol.

---

*"I think we need to move more toward prevention. So much of what we're dealing with are chronic conditions, and many of them are preventable."*

---

**Bursick** – Pay-for-performance would be absolutely horrible in my field. There are people out there who would take advantage of the system; who would shortcut the therapy necessary, and give the client a poorer quality product. It happens already. Someone gives them a piece of equipment, it breaks down in a month, then they come to see me to fix it.

**Donovan** – I think that pay-for-performance is a win-win situation for both the provider and the patient. The provider gets additional reimbursement for complying with evidence-based practices, and the patients get treated with a very high quality of care.

*Why do you think health care costs are skyrocketing? Is it because we're demanding more from the system in terms of quality and technology?*

**Hritz** – I think Americans are kind of technological guinea pigs. We develop the technology here, we are the first to use it, and we do all of the refining. By the time it gets out to other parts of the world, the major expense has been absorbed within our system.

**Donovan** – As most of us know, the United States lags behind most other countries in terms of health care outcomes. It is a crisis. Part of the problem is conflicting reimbursement strategies. Physicians are thinking one way and hospitals are thinking another way.

**Wood** – From my standpoint, the patients are also partly to blame. Everyone deserves health care, but some people are abusing the system. Ninety-five percent of my day is not spent with patients who are critical; rather I'm driving people to dialysis or responding to a 9-1-1 call from somebody who has the sniffles. These are people who should have seen their primary care physician, or driven to the clinic by car. Instead, we have to charge them \$400 a pop for a regular run.

**Barto** – I think the move toward evidence-based care should help. Hopefully, we'll be able to get patients out of the hospital sooner and managing their care at home. This should improve efficiency and cut costs.

*Would removing reimbursement from the mix and moving toward a more socialized system improve quality or erode it?*

**Breakey** – I've been to England and I've been to Canada, and while you can go and get stitches for \$5 in those countries, if you need a hip replacement, you'll get an appointment sometime in 2012. There's got to be a give and take.

**Hritz** – I think we need to move more toward prevention. So much of what we're dealing with are chronic conditions, and many of them are preventable. I don't see reimbursement as that big of a factor.

**House** – How do you put a pricetag on helping someone return to their activities of daily living? Personally, I'd like to see more money being spent on prevention.

**Wood** – Reimbursement is the last thing on most paramedics' minds. While it would be nice to not have to spend as much time on paperwork, I really don't think it affects quality.

**Bursick** – So much of what I do is personalized. One person may need new equipment every two years; another, every five years. And the people I deal with want their equipment now, not later. If you make them wait, then their perception of quality would suffer. If we had a socialized system, I expect I'd get a lot of complaints.

**Donovan** – The system is definitely broken and something needs to be done. I just don't know if socialized medicine is the answer. ☘





# I N Q U E S T O F Q U A L I T Y

Above all else, do no harm.

While this phrase doesn't actually appear in the Hippocratic Oath, it has long been regarded as a basic tenet of physician practice. As medicine has evolved, so too has the meaning of the principle. For example, amputating a diseased limb to prevent gangrene was once seen as good medicine. Today, it would be a treatment of last resort.



But as advanced as our health care system has become, there are still life-threatening errors being made every day. Fed up with paying hospitals to treat preventable illnesses, Medicare has drawn a line in the sand. Beginning this fall, it will no

longer reimburse hospitals for eight preventable hospital errors, including urinary tract infections caused by catheter, or leaving objects in the body following surgery. No doubt other insurers will be quick to follow Medicare's lead.

"Medicare is saying 'we will not pay for your errors and complications that have been caused by negligence, inferior quality care, or care that wasn't delivered,'" states Dr. Mervat Abdelhak, chair and associate professor of the Department of Health Information Management (HIM). "The first rule of quality medicine is patient safety, and the failure to keep patients safe will now cost a hospital money."

It may seem an extreme measure to improve quality of care, but it may be long overdue. "We've known for a century that leaving sponges inside a patient following surgery is dangerous, and yet it remains a problem today," says Abdelhak.

She points out that HIM professionals are in a unique position to evaluate the overall quality of health care. "To improve quality, we rely on information, and we must ensure that we develop the infrastructure to collect the right data at the right time to evaluate the true effectiveness of our health care system."

## An Ailing System

In its landmark publication, "To Err is Human: Building a Safer Health System," the Institute of Medicine (IOM) declared, "More people die in a given year as a result of medical errors than from motor vehicle accidents, breast cancer, or AIDS." Published in 2000, the report served as a wake-up call to all health professionals that the system itself was ailing and extraordinary efforts would be required to cure it.

As important as patient safety is, the IOM expanded the definition of quality health care in its follow-up 2001 publication, "Crossing the Quality Chasm: A New Health Care System for the 21<sup>st</sup> Century." In it, the

authors describe our current system: "Health care today is characterized by more to know, more to manage, more to watch, more to do, and more people involved in doing it than at any time in the nation's history. Health care today harms too frequently and routinely fails to deliver its potential benefits."

Abdelhak notes that the second IOM report also included challenges to health care providers to evaluate effectiveness, patient centeredness, timeliness, efficiency, and equity of delivery.

"We need to continually evaluate the effectiveness of our treatment of illness and disease, which is one purpose of research," she says. "And we need to become more patient-centered, educating and involving the patient and his or her family so they become a more informed patient."

"Are we delivering treatment in a timely fashion, and are we being efficient – that is, are we ordering the right kind and number of tests to ensure a proper diagnosis, yet keeping costs in mind?" Abdelhak continues. "And finally, are we equitably delivering superior health care, regardless of gender, ethnicity, geographic region, or socioeconomic status?"

## HIM Professionals at the Forefront

The authors of "Crossing the Quality Chasm" make it abundantly clear that information technology is key in improving health care delivery. "The committee believes information technology must play a central role in the redesign of the health care system if a substantial improvement in quality is to be achieved over the coming decade," states Abdelhak. In fact, the American Health Information Management Association (AHIMA) has as its tagline, "Quality Health Care Through Quality Information."

*Continued on next page*







Major health centers like UPMC are at the vanguard of computerizing medical records. While the initial investment can be significant, the resulting streamlined operations and improved health care delivery is well worth the expense. “Systems are being designed to detect problems,” states Abdelhak. “If a patient’s lab values aren’t within the acceptable range, there should be something that alerts the physician.”

However, according to Abdelhak, small physician practices are the “weakest link,” when it comes to electronic records-keeping. She recalls questioning David Brailer, M.D., national coordinator for health information technology, when he visited UPMC not long after his appointment. “He essentially said, ‘I’m picking what is probably the most difficult area – the entrée into the health care system. It would have been easier to focus on major health centers, but we wouldn’t have improved the system in the time period we’ve targeted.’”

Even with proper support and direction, physicians have expressed concern that no matter what system they selected, it would be obsolete in a few years, or not provide the kind of interface they would require. “So AHIMA created a certification commission that allows our association and three other national groups to certify products,

*“All of us are patients at one time or another, and we should be taking responsibility for our health care and our personal health records.”*

software, applications, and systems so that a physician can determine the functionalities they need and be sure that the system they purchase will meet those needs in the coming years,” notes Abdelhak, who served as president of AHIMA in 2005, and held numerous other positions with the organization.

#### Patients Bear Responsibility

“Crossing the Quality Chasm” delineates 10 rules for improving the quality of health care, six of which require patient involvement (*see sidebar*). Personal health records (PHR) are certainly a part of the equation.

“All of us are patients at one time or another, and we should be taking responsibility for our health care and our personal health records,” asserts Abdelhak. “In a perfect world, it would allow your gynecologist to know what drugs or tests your internist has prescribed, and vice versa. Reducing the number of adverse drug events alone would improve patient safety.”

However, the PHR comes with its own risks. “The success of personal health records is dependent on their accuracy,” Abdelhak notes. “A physician whom you’ve never seen may be reluctant to treat a new patient, based on records they have not personally maintained. There may be liability issues that need to be addressed.”

#### Training the HIM Professional of Tomorrow

Maintaining a dynamic curriculum for such a fast moving profession is a challenge for HIM faculty. Dr. Valerie J. M. Watzlaf, associate professor, teaches both a course and a lab on quality care assessment. “This is such an exciting time to be part of this profession,” says Watzlaf. “Unlike a lot of other disciplines, ours changes almost daily, and our course work reflects those changes.” HIM faculty members are active in the professional associations like AHIMA as a way to stay ahead of the curve.

HIM has most recently added a course based on the principles of Six Sigma, which was originally developed by Motorola to reduce defects, and therefore improve quality. The goal is not just to spot the defects, but prevent their occurrence.

The need for this level of quality improvement became more acute as products – be they televisions or health care delivery – became more sophisticated.

## Patient as Participant

In its report, “Crossing the Quality Chasm,” the authors have presented 10 rules for improving the quality of health care. More than half of these (*in bold*) are directly dependent on patients’ involvement in their own health care, which personal health records foster.

- 1. Care based on continuous healing relationships.**
- 2. Customization based on patient needs and values.**
- 3. Patient as a source of control.**
- 4. Shared knowledge and free flow of information.**
- Evidence-based decision making.
- Safety as a system property.
- 7. The need for transparency.**
- 8. Anticipation of needs.**
- Continuous decrease in waste.
- Cooperation among clinicians.

“We have our students focus on elements of quality – being customer-focused and improving patient safety through technology. The customer – the patient – expects confidentiality and privacy, two areas of importance to the HIM professional,” Watzlaf notes. “Impeccable health records are essential to improving patient safety. But we need the support of the physicians, who are paramount to ensuring good records.” To that end, HIM offers a course for non-HIM students, hoping to move the entire health community away from paper and toward electronic records.

HIM graduates have always been in demand to maintain medical records in all kinds of health care settings – acute care, rehabilitation, and long term care. But increasingly, these graduates are assuming roles and responsibilities like privacy officer, risk manager, or compliance officer.

Watzlaf notes that graduates from HIM carry such titles as director of provider quality performance management and quality coordinator. “We believe that at the heart of the drive toward quality health care is the person with the data – the HIM professional.”







# Field Work

**F**or paramedics working in the field, every eight-hour shift can bring with it life or death situations. Quick thinking – and even quicker decision-making – means all the difference.

Educators at the Center for Emergency Medicine had this practical reality in mind when they developed the curriculum for the Emergency Medicine program. The program straddles a fine line between academic course work and clinical training, offering students deep professional knowledge coupled with the day-to-day field training they will need to function at a high level on the ground, when it counts the most.

Says Guy Guimond, instructor, Emergency Medicine, “The goal of the program is to ensure that students leave us confident that the education and training they received make them as prepared as any paramedic in the world.”

## Multi-dimensional Training

When students begin the program in their junior year, they must have already earned an EMT Basic certification. Students are assigned a mentor for their work in the field

during their first and second semesters and are assigned to two long clinical rotations, one in an affiliate hospital and one in the field.

When completed, students will have amassed at least 720 hours of clinical experience and roughly 90 clinical rotations, for an average of 22 hours of clinical experience each week. The program utilizes more than 40 clinical and field sites in and around Pittsburgh to give students a multi-dimensional training experience.

“Our program is one of the most intensive in the U.S. – and in the world – not only for the number of hours we require students to complete in clinical rotation, but because of the variety of health care environments we expose them to as they grow as clinicians,” explains Guimond.

Students have a multitude of options when choosing rotations, Guimond says, made all the more diverse because of Pittsburgh’s vast hospital and treatment network.

Clinical rotations include anesthesia, emergency, burn unit, medical command, medical procedures, obstetrics, operating room, pediatric emergency, psychiatric emergency, respiratory care, and trauma.

The program also offers elective sites that provide even more specialized training. Rotations can be made in the STAT MedEvac helicopter program, the emergency physician residency prehospital response unit, and children’s anesthesia as well as in several critical care units within member hospitals across the region.

## Getting to Work

The program is broken down into three core training phases. In phases one and two, students must complete 160 hours of field service and 140 hours in a hospital setting, moving from administering basic, non-urgent calls to both basic and advanced calls.

During the first semester of clinical training, students work shifts at an emergency dispatch center and are required to complete 20 field shifts – and 21 hospital shifts – before advancing to phase two. As emergency calls are received, they work as an

integral part of the paramedic team, responding to calls, administering treatment, and saving lives.

In the second semester, the experience these paramedics-in-training have gained is put to the test. Each student acts as crew chief on his assigned shift and is given the responsibility of leading the patient care aspect of incoming calls.

“In the first semester, our students are familiar with the technical aspects of performing skills. However, they have not received the in-depth knowledge on why skills are performed,” explains Guimond.

“By front-loading skills, they are able to develop psychomotor mastery under the guidance of decision-makers. As the program progresses and the students become the decision-makers, they are not worried about their ability to perform the skill. This initial intensive training helps them gradually build confidence and prepares them for the leadership opportunities to come.”

He continues, “After the first semester, our students have learned how to initiate an I.V. and administer medications, but in the second semester of clinical they put the ‘how’ and the ‘why’ together and learn the patho-physiology of the disease process. They’ve also gone from being a team member to a team leader.”

By phase three, students have extensive hands-on experience and advance to serve as crew chief for all calls, where a mentor oversees their progress and monitors their calls.

The program also shifts students from urban to suburban settings during the course of their clinical work.

“Excelling as a paramedic is based on having a strong foundation in the core competencies, but city and suburban settings can test a paramedic’s competencies in very different ways,” explains Guimond.

“Urban calls can run the full spectrum of emergency needs – basically any emergency situation you can imagine. While suburban calls have the same variety of emergency situations, they also include a greater number of non-emergency calls – situations where patients need to be transported to dialysis or transported from one health care facility to another.”

Upon completion of the first two semesters of training, students undergo a thorough evaluation of their knowledge, skills, and techniques. The Summative Field Evaluation is comprised of a series of “live” emergency calls, and each call is monitored in detail by the students’ assigned mentors. Part of this evaluation is a unique weekend-long sprint, jokingly dubbed “Hell Weekend,” that serves as a true test of skills for the paramedics-to-be.

Says Guimond, “This is a true test and the culmination of their training. The scenarios are more intense than any they would find in the real world, testing their grit, their split-second decision-making, and their nerves. Students are evaluated by mentors who have

worked with them from the beginning of their first semester, and monitored them every step of the way as they led teams through calls.”

## The Cream of the Crop

The program’s intensive clinical component combined with its stellar faculty, instructors, and training staff have made it one of the most highly-regarded in the nation. And the Emergency Medicine program’s graduation statistics justify this earned honor.

Of the 177 graduates from the various Emergency Medicine certificate programs in the region, 54 were certified to be paramedics in 2007. From this number, two thirds – 36 – attended the SHRS program.

To further underscore this record of success, Guimond notes that the state average for emergency medicine graduates who pass the state paramedics test hovers around 40 percent. “With a more than 85 percent passing rate, the Emergency Medicine program at SHRS is more than double the average,” he says with pride. 🌟







Each year, roughly 700,000 Americans will have a stroke. It is the third leading cause of death in the United States, and the leading cause of disability in adults, with over five million people living with the after effects of these neurovascular accidents.

In an April 2005 article in the *New England Journal of Medicine*, Dr. Bruce Dobkin, professor of Clinical Neurology at the UCLA School of Medicine and co-director of the UCLA Stroke Center, reported that about one of three stroke survivors with initial paralysis of the leg do not regain useful function, and as many as one in four are unable to walk without full physical assistance. Only 25 percent of stroke victims ever function at the same level as those who have never experienced a stroke.

# Setting Standards for Stroke Therapy

At about the same time that Dobkin's article appeared, the UPMC Institute for Rehabilitation and Research (IRR) established a multidisciplinary committee to develop evidence-based clinical protocols to ensure that its adult outpatient neurological programs were employing cutting-edge rehabilitation practices. The committee, which was led by Dr. Michael Munin of the Department of Physical Medicine and Rehabilitation, was comprised of administrators and clinicians employed by both UPMC and the Centers for Rehab Services. Dr. Elizabeth Skidmore, an assistant professor in the Department of Occupational Therapy, was charged with working with occupational therapy, physical therapy, and speech-language pathology practitioners to search, examine, and synthesize available literature as it related to key clinical practices. "We examined the state of science in stroke rehabilitation," Skidmore explains. "Dr. Dobkin's article was our starting point."

Skidmore says her group did more than read and report. "Once we had found and reviewed the available material, we devised therapy protocols to incorporate research-derived best practices that could be tailored to meet the specific needs of our clinical population."

Ultimately, the group developed 10 therapy protocols. They target the areas most commonly affected by a stroke: thinking, speech, use of the arms and hands, and gait.

"These clinical protocols specify the target population that would benefit, the evaluation tools that should be used, how the intervention should be conducted, and the expected clinical outcomes," explains Skidmore. "We anticipate that these updated protocols

will assure high-quality, state-of-the-art stroke rehabilitation services across all IRR outpatient facilities."

Skidmore points out that while clinical protocols were in place prior to 2005, the lack of common leadership over the various centers where neurorehabilitation services were being offered made standardization difficult. "UPMC had outpatient centers, the Centers for Rehab Services had outpatient services, and, while I think they were all providing excellent care, everyone was doing things slightly differently. With the creation of the IRR, these centers were united under common leadership. This was the impetus for the multi-disciplinary committee, and the subsequent protocols were designed to ensure that services were consistent across all settings."

These protocols, she notes, are not clinical pathways. "They are structured enough to ensure that therapy is consistent across the units, but flexible



enough to allow for client-centered modification. This is not a cookbook approach to therapy. Rather, these are general guidelines based on the evidence."

## Putting Protocols into Practice

Now that the protocols are in place, Skidmore is moving on to what she describes as "more complicated issues." She says that she is collaborating with her colleagues in neuropsychology and psychiatry to conduct research on the impact of cognitive impairment, depression, and apathy on stroke rehabilitation, particularly as it relates to upper extremity training.

"I am collecting data using neuro-psychological and psychiatric tests not typically employed by OTs and PTs in order to get really detailed information about specific aspects of cognitive impairment, depression, and apathy," she explains. "While these measures are sometimes used in rehabilitation, they aren't often used by those of us who are most concerned with motor recovery."

She says that most motor impairment research excludes individuals with cognitive impairments and depression. "We start by evaluating the effects of motor interventions on motor performance," she explains. "However, the reality is that most individuals who sustain stroke experience cognitive impairment and depression in addition to their motor impairment."

"We need to take the next logical step in motor impairment research and examine the effectiveness of our interventions on individuals with co-occurring motor, cognitive, and mood impairments. We are hoping to discern whether these individuals benefit from

motor intervention programs, and if they have a reduced response, how much. We are also hoping to learn if there are specific domains of cognitive or mood impairment that are predictors of response, so that we can use this information to devise more effective interventions for those with a reduced response. These issues have not been well-studied."

While it's early in the research, Skidmore says that she is finding that in the general population of individuals referred for outpatient stroke rehabilitation, there is

more cognitive impairment and depression than the literature suggests. "This is based on early pilot data with just a few of the subjects that we've seen so far. However, it seems that more individuals have subtle impairments than we would have predicted."



Skidmore acknowledges that her current research wouldn't have been possible without the protocols. "If we hadn't standardized the therapy, it would be hard for us to identify if differences in outcomes were the result of the differences in the intervention, or because of differences in other factors."

The protocol-development process itself has also been a plus. "As a result of working with the clinicians, mentoring them, and reading and discussing the literature, I was able to formulate many of the ideas that led to this research. Ultimately, we may develop new protocols based on what we're finding. So this experience has been a nice marriage of academic research and clinical practice. I think this is a case where everyone wins." ●





# Wheeled Mobility Update

Government regulation can be a two-edged sword. Thanks in part to the Department of Veterans Affairs (VA), the single largest purchaser of wheelchairs, users are finding that their devices are better built and, by and large, comply with voluntary minimum standards.

While the standards may be voluntary and the organizations that developed them may have no power of enforcement, according to Dr. David Brienza, professor, Department of Rehabilitation Science and Technology, "The standards get teeth when funding agencies require that the products they pay for meet the standards."

But these same standards can stifle creativity and prevent wheelchair users from receiving a device that could provide the optimum experience. "Manufacturers are discouraged from adding the features, performance or otherwise, that could make their chair more useful, if they can't recoup the investment" says Brienza.

## Necessity – The Mother of Invention

In 1919, Herbert Everest broke his back in a mining accident and became a paraplegic. Unhappy with his bulky, wooden "invalid carriage," he persuaded friend and engineer Harry Jennings to think outside the box. What resulted was a lighter weight, foldable wheelchair and a company, Everest and Jennings (E&J), that once represented the gold standard in chair design. Years later, E&J failed when it flooded the market with substandard, expensive, cookie-cutter chairs. The U.S. Department of Justice filed charges against the company

for price fixing. Ultimately, the case was settled out of court.

According to Dr. Jonathan L. Pearlman, adjunct professor, RST, "When Everest & Jennings dominated the worldwide market for wheelchairs, it was pretty much 'one-size-fits-all.' Once the virtual monopoly ended, designs proliferated, becoming more sophisticated, and the need for standards became more acute."

The Department of Rehabilitation Science and Technology (RST) and its faculty have been instrumental in the development of these standards, which have been in effect for some 25 years, administered through the Rehabilitation Engineering and Assistive Technology Society of North America (RESNA) and the International Organization for Standardization (ISO). According to Dr. Rory Cooper, RST

chair and distinguished professor, "Our work in wheelchair seating and wheelchair transportation standards is cutting edge within the world academic community."



The department's research has been recognized over the years with grants from a number of funding sources including the U.S. Department of Education's National Institute on Disability & Rehabilitation Research (NIDRR), the Paralyzed Veterans of America, and the VA, among others.

And as wheelchair designs change, so must the standards. Pearlman points out that as the popularity of wheelchair sports has increased, the availability of lighter weight, more aerodynamic devices has become more prevalent. "Some of our recent work has included testing titanium chairs, which are very light weight, but it turned out that there were serious design flaws that created fracture sites, which could have resulted in metal fatigue and failure."

While wheelchair testing and standards are well-established in the U.S. and other developed nations, testing in third world countries, and even in nations like India, is still in its infancy, says Pearlman.

"Because there are few sites internationally like ours at the Human Engineering Research Laboratories (HERL) where chairs can be tested, we are devising simplified test methods that can be performed with relative ease, but still ensure the chair meets ISO standards," he notes.

## On to the Seat

Brienza, who is also director of Soft Tissue Integrity Research Programs at RST, notes that other standards have been developed for other parts and uses for the wheelchair, including those for seating.

"The seat cushion is fundamental to the use of a wheelchair. It's the interface between the person and their mobility device. The standards were designed to ensure that the individual receives the right seat cushion." Research has verified that along with the fundamentals such as the ability to feel sensation and the degree of mobility of the user, many other risk factors, such as nutrition and exposure to moisture, must be assessed.

For example, for a person who plays wheelchair basketball, an air cushion might not be the best choice, since it is less stable than a custom, contoured foam cushion. On the other hand, foam may force the build-up of heat and moisture, two of the risk factors for developing pressure ulcers.



Brienza notes that some of the latest research showed that by reducing the tolerance that the skin and soft tissue have to pressure, "we can reduce the number and intensity of pressure ulcers. We are looking at ways to actually cool the skin. Currently, there is a system that moves air through the cushion via a fan and air channels. But there are potentially more sophisticated and more effective ways to do it."

## The Evolution of a Wheelchair User

Before Jennings designed a light-weight, foldable device, the preponderance of people using wheelchairs lived in institutional settings. The design and performance considerations current users require were not considerations. But the passage of the Americans with Disabilities Act (ADA) in 1990 changed all that. People who had previously been denied access to educational and employment opportunities now had to use their wheelchairs to get to school or work.

However, safety was not addressed to any great degree until 1994, when RESNA's Technical Guidelines

Committee authorized the formation of the Standards Subcommittee on Wheelchairs and Transportation.

"Federal law requires vehicles to be accessible, and yet there was a gap between that accessibility provision and the safety of individuals seated in wheelchairs while riding in vehicles," states Dr. Patricia Karg, assistant professor in RST and associate director, Rehabilitation Engineering Research Center on Wheelchair Transportation Safety (RERC WTS), a collaborative effort between SHRS, the University of Michigan Transportation Research Institute, and the universities of Louisville and Colorado.

In a standard auto, it's generally considered safest if the wheelchair user transfers to a vehicle seat and uses a seatbelt system or a child safety seat. However, there are times when that isn't feasible.

Significant research is underway at RERC WTS thanks to the continuation of a grant from NIDRR. The researchers are investigating wheelchair use in public buses, school buses, vans, and mini vans. They are also evaluating the crashworthiness of wheeled mobility devices in front, rear, and side impact collisions.

While much of this research is conducted under controlled conditions, Kang is committed to moving outside the laboratory. "We need to look at real-world incidents to help determine how tiedowns, seatbelts, and other restraining systems are being used and how well they work in real accidents," says Karg. To that end, the RERC WTS developed a "Wanted" campaign that is seeking wheelchair-seated drivers or passengers who have been involved in a crash.

Cooper concludes, "In RST and at HERL, we have one of the strongest and most active research programs in the world. We are truly dedicated to helping people with disabilities. And I reiterate – our work with wheelchair standards is second to none." ■





In those great television medical dramas, physicians bark orders for tests, tests, and more tests. Most of us may not know a CBC from a Chem 7, but we do know that Noah Wyle's Dr. John Carter had them performed on virtually every ER patient he saw.

While a trauma victim may require a battery of tests, it's a safe bet that not every patient with a backache does. Yet, for UPMC Health Plan, low back pain testing and treatment ranked number three in its reimbursement hierarchy, following only neoplasms and cardiovascular conditions. While back pain can be excruciating, the reimbursement numbers just didn't add up.

So the health plan turned to its Musculoskeletal Advisory Committee to determine if there was a way to reduce the cost of treating low back pain while still providing patients with the quality care they required.

"For the past 11 years, our department has been researching which patients respond best to which treatments for lower back pain," says Dr. Anthony Delitto, professor and chair, Department of Physical Therapy. "Generally, we can now accurately and effectively direct patients into one of three categories of treatment – once they get to us, that is."

Low back pain patients, particularly at the first occurrence, usually do not begin with a physical therapist. They enter the system through their primary care provider, who is more likely to order an MRI or x-rays, prescribe potent pain killers like oxycodone, or refer the patient to a surgeon whose solution could be invasive.

"Regardless of who they see, patients want to make sure there is nothing seriously wrong and they want to feel better," says Delitto. "Ultimately, they want to get back to their regular routine.

"A thorough history and physical examination and the use of established tests and measures such as the Oswestry Disability Questionnaire can assist us in determining how a patient's back pain is affecting their everyday lives, helping us to determine what therapy will help them the most," says Delitto, who is also director of research at the Comprehensive Spine Center.

"There is a group of patients who seem to do best with a manual therapy approach, which includes manipulation and mobilization of the spine," he continues. "Another group tends to respond best to a strengthening and stabilization

program for the muscles in the trunk." These are people who have chronic, recurrent lower back pain – the patient who has his or her back "go out." A third group of patients responds well to end-range spinal extension and flexion exercises and postures.

Continuing the work with funding from the Foundation for Physical Therapy along with an NIH-funded clinical trial, the researchers further honed their theory and clarified criteria within each subgroup. "Patients who respond best to manipulation therapy, for example, tend to have localized pain in the back and shorter duration of symptoms," Delitto points out. "People who are

older and have lumbar spinal stenosis tend to respond better to flexed postures and a flexion-based exercise program."

But the researchers also noted that there are psychosocial factors that impact the long-term management of low back pain. "There are patients for whom back pain is a new and frightening disability, who are afraid of exacerbating the pain," cautions Delitto. These patients assume a fear-avoidance mentality, and the result can be "de-conditioning" that puts them at risk for a long-term disability. "People with higher fear-avoidance need to be reassured that their pain is not a sign of further injury to the spine, and that

*"For the past 11 years, our department has been researching which patients respond best to which treatments for lower back pain."*

re-engaging in their everyday activities is the answer. Avoidance, such as prolonged bedrest, only makes the condition worse."

#### **A Reimbursement System Gone Awry**

"Our ability to more accurately predict what therapy is best for each patient obviously is a great advantage to the patient, but it's also a plus for the insurer," Delitto notes.

However, this solution is not a win/win for everyone. Drug companies, surgeons, and facilities with idled MRI machines could be considered losers in this scenario.

Employers are becoming increasingly concerned about the effect of prevalent disabilities like low back pain on their health care costs as well as productivity. According to researchers at Kansas State University, back injuries cost American industry between \$10 billion and \$14 billion in workers compensation costs, and result in roughly 100 million lost workdays annually.

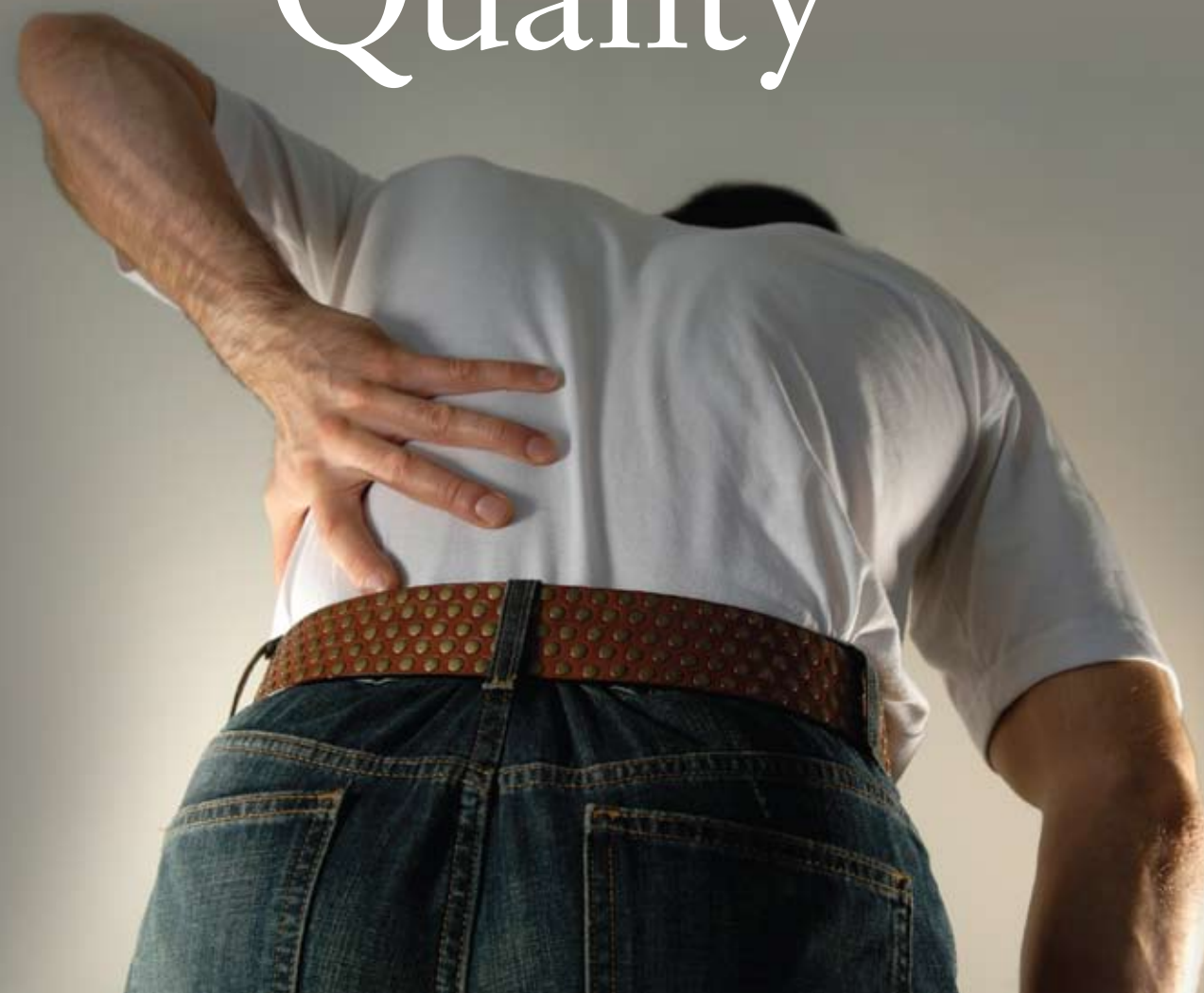
While physicians and other health care providers are skeptical about letting insurers and employers exert undue influence on medical treatment, the National Coalition on Health Care notes that in 2007, employer health insurance premiums increased by 6.1 percent, twice the rate of inflation. While the patient is the customer, the employer is footing much of the bill.

The January 12, 2008, issue of *The Wall Street Journal* reported an effort similar to the UPMC Health Plan initiative that is paying big dividends for the people of the Pacific Northwest. Low back pain patients at Virginia Mason Medical Center, Seattle, now see a physician and a physical therapist during the initial consult, with the physician often prescribing physical therapy as the first plan of attack. The result has been a drastic reduction in the number of MRIs prescribed. "One of the big differences from the Washington state-based study is that in our environment, physical therapists can see patients in a direct access mode, meaning the patient can see the physical therapist directly. Thus, we have the potential to save even more money because for many patients, the physician's visit is unnecessary," says Delitto.

Delitto notes that not surprisingly, reimbursement to other provider services within the Virginia Mason system declined dramatically. But in a novel approach to controlling health care costs, large employers such as Boeing and Starbucks demanded that the insurance company adjust its fees, *increasing* physical therapy reimbursements to \$49 from \$42 for each 15 minutes of therapy.

"If we want to rein in medical spending and costs, rewarding successful patient outcomes should not be antithetical. It should be the norm," Delitto points out. "Hopefully, quality improvement programs like that proposed by the UPMC Health Plan will help to reconfigure the cost equation toward quality care overall – including physical therapy – and move us away from being rewarded for the quantity of tests that are done." ●

## Affordable Quality







The star hockey player of a local high school just sprained his ankle. He hobbles off the ice and limps to the locker room. As the fans and other players worry, the athletic trainer springs in to take action. In minutes, the skates are off and treatment begins.

Working in high school athletics is just one of the many career possibilities open to alumni of the new undergraduate degree in athletic training recently introduced within the Department of Sports Medicine and Nutrition. A trainer might work alongside researchers, analyzing how a baseball pitcher's fastball could lead to chronic shoulder injuries, or develop an appropriate exercise or nutrition regimen to help a person with a disability. "There are really no boundaries to the work an athletic trainer can do," explains Dr. Kevin Conley, Athletic Training program director and vice-chair of the Department of Sports Medicine and Nutrition. "They can work with an athlete of any age, an industrial worker performing physical tasks, or even an average citizen engaged in recreational sports. The options are numerous."

### The Curriculum

Athletic trainers must be able to recognize, evaluate, and assess injuries as well as provide immediate care when needed. They are actively involved in the rehabilitation process, helping their patients regain strength and avoid further injury. Undergraduate training begins with two years of pre-professional prerequisites ranging from chemistry to psychology, biology to basic athletic training.

The final two years – considered the professional phase – is divided between classroom education and clinical experience. Students rotate through three on-campus athletic training facilities and several off-site affiliated settings. Coursework includes Injury Evaluation and Treatment, Therapeutic Exercise, Exercise Physiology, and Pharmacology in Rehabilitation. "We feel that the



combination gives students a good, well-rounded education that prepares them for this fast-paced career," says Conley.

"We start out by teaching our students the measures to prevent injuries," he continues. "This is followed by clinical evaluation and diagnosis, where students utilize the skills they learn in the classroom to recognize injuries and make clinical evaluations. We then move on to immediate care, where they learn how to manage an injury when it is first recognized. Injuries range from the basic to the catastrophic."

One of the most important aspects of the program is rehabilitation and reconditioning. "This is where we train students to put together rehabilitation

programs based on the particular injury, and individualize each plan so that the patient can return to his or her original level of performance as quickly and as safely as possible," he explains.

Upon completion of the four-year undergraduate degree, students are eligible to take the Board of Certification exam. "Being certified opens up a full complement of employment opportunities," notes Conley. "This includes athletic training services for high schools, colleges, universities, and professional athletic teams. Additionally, many students seek employment in private sports medicine and rehabilitation clinics and in health and fitness-related settings."

### A New Major Is Born

Until October of last year, the Athletic Training program was only a concentration area within the Department of Sports Medicine and Nutrition – though one that had its share of notable alums. "We've had some of the most respected athletic trainers in the country graduate from this program," says Conley. "For example, Leigh Weiss, a 2004 graduate, was hired by the New York Giants as an athletic trainer. He now has a Super Bowl ring." Weiss joins other alums serving as athletic trainers with NFL teams including Ryan Grove ('93, '96) with the

Pittsburgh Steelers, Rick Burkholder ('87) with the Philadelphia Eagles, and Kevin O'Neill ('76) with the Miami Dolphins. Other notable alums are working with top-ranking collegiate sports teams or are on faculty at other respected universities.

"Dr. David Perrin, an SHRS distinguished alumnus, is the provost and vice chancellor for Academic Affairs at the University of North Carolina at Greensboro. He's definitely a very well-known figure at this university and throughout the sports medicine field."

Nonetheless, Conley and his fellow faculty members knew that the transition to a degree program was essential not only in order to comply with new accreditation requirements, but to increase its national attention.

"The process to transform from a concentration to a degree program took about one year," explains Conley. "We were required to submit a proposal for consideration of the change, which was then reviewed and passed by committees in the University, the vice chancellor for the Health Sciences Schools, and ultimately, the University provost. It seemed like a long process, but it was worth it in the end."

Currently, there are 40 students enrolled in the athletic training major. While it has only been available for five months, Conley says the degree is already attracting attention. "Based on the number of inquiries I receive, interest is up. I'm confident these queries will translate into applications. Only time will tell, but the future looks bright." 🌟



# Dialogue

A Conversation with Dr. Arthur Levine

## Dr. Arthur S. Levine

Senior Vice Chancellor for the Health Sciences and Dean, School of Medicine, University of Pittsburgh

*Dr. Art Levine joined the University in November 1998 after spending over 30 years at the National Institutes of Health. Beyond his University responsibilities, Dr. Levine works closely with the University of Pittsburgh Medical Center to ensure that health care delivery, biomedical research, and education – the three legs of the "classic academic stool" – remain equally strong and well-positioned for growth. He is also fostering a less traditional fourth mission – the growth of intellectual property that can redound to the benefit of regional economic health.*

**Health care costs have skyrocketed in recent years. Has there been a commensurate improvement in the quality of care?**

No, and unless we address the many issues that have driven the cost of care to a record high, we will continue to get an inadequate bang for our buck. Our nation spends a great deal more on health care per capita than any other industrialized nation, but lags woefully in appropriate and well-coordinated care; safe and timely care; the proportion of citizens who have long and healthy lives; and the equity with which all of our citizens are treated. The problem isn't that we spend too much on health care – currently, it's about 20 percent of our GDP – it's that we get so little for it.

**Do you believe that health professionals have focused sufficient attention on the quality of their service delivery?**

Not really. Across all service delivery settings, we are often inefficient and continue to make too many errors.

In general, this is reflective of our lack of national standards as well as a lack of nationally-interoperable medical records. We practice medicine defensively and expensively – often with unnecessary and inappropriate diagnostic tests – because we fear litigation. As a result, both practitioners and hospitals sometimes obscure rather than learn from their mistakes.

**What role, if any, does reimbursement play in the quality discussion?**

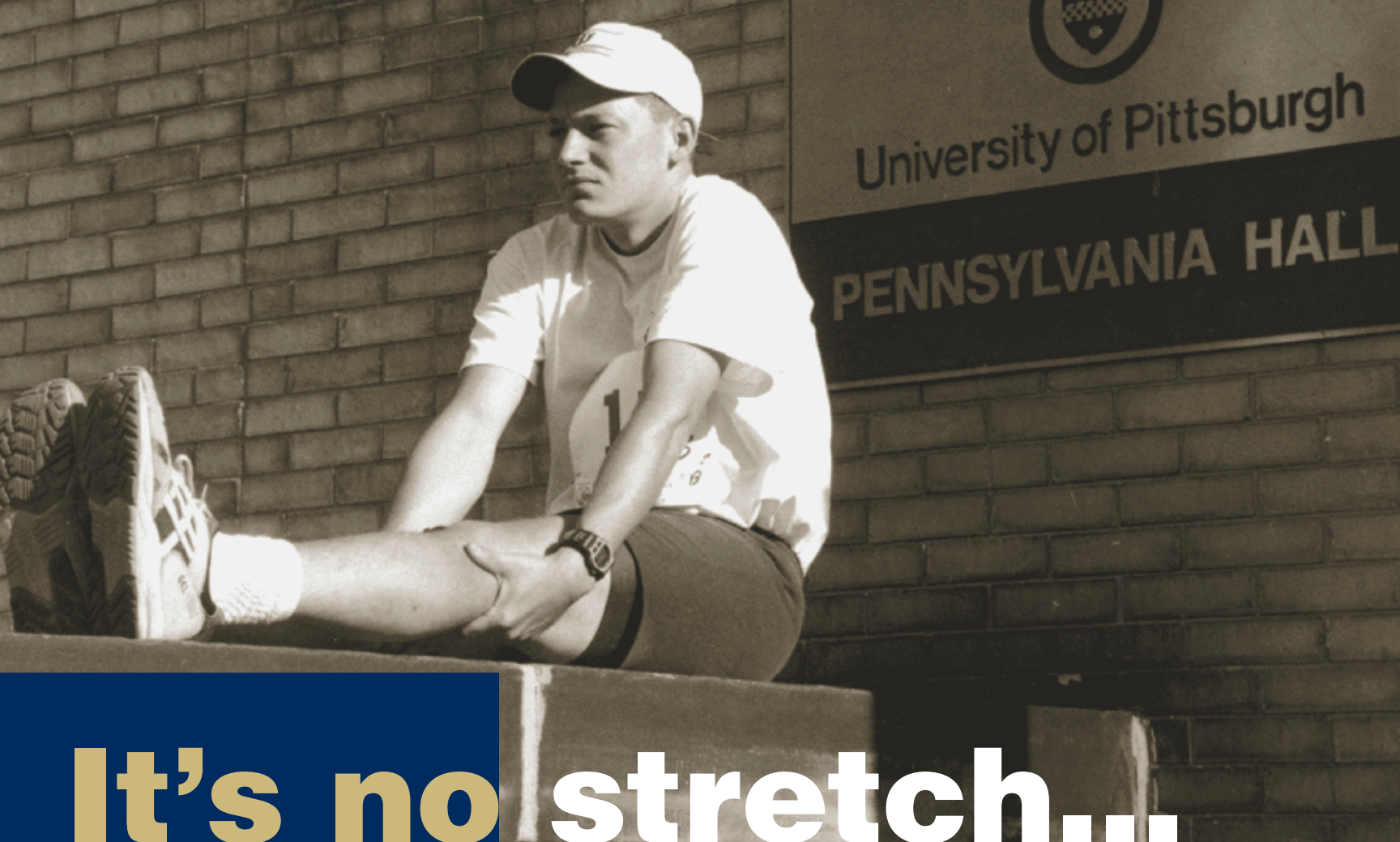
We generally reimburse caregivers for treatment, but not for prevention, despite the fact that much of our health care cost is driven by smoking, obesity, and other preventable root causes of illness. Most physicians are paid piecemeal, so they are likely to do too much rather than too little. It's widely assumed that when a new federal administration is installed, health insurance will be made available to all Americans at a national level. However, I worry that the price tag will be staggering

unless we simultaneously address the many issues that have driven up the cost of care. The most pressing is the fact that only half of all adult patients receive treatment for their illness based on scientific evidence, and children fare far worse. Roughly half of our payment for health care is squandered.

**Are concepts like "pay for performance" and "no pay for avoidable errors" realistic given the complexity of the modern health care system?**

While I believe these approaches are two of the bright spots in the discussion, they are largely experimental, with many challenges as to where the truth lies in complex clinical settings. The bottom line is that we cannot address the many issues that confront health care independently and incrementally. The whole mess must be fixed.





# It's no stretch...

**...to imagine yourself as a philanthropist.** You don't have to be wealthy to make a difference with your charitable giving. When you make a planned gift to the School of Health and Rehabilitation Sciences, you not only ensure that our proud tradition of educating talented and caring therapists, clinicians, and researchers continues, but you can also provide income for life for yourself and a loved one, and receive a substantial charitable income tax deduction.

For more information, contact Patty Kummick, director of development, at 412-383-6548 or [pkummick@shrs.pitt.edu](mailto:pkummick@shrs.pitt.edu).



**University of Pittsburgh**  
*School of Health and Rehabilitation Sciences*

[www.giveto.pitt.edu](http://www.giveto.pitt.edu)

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

Change Service Requested

## You can ...

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

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