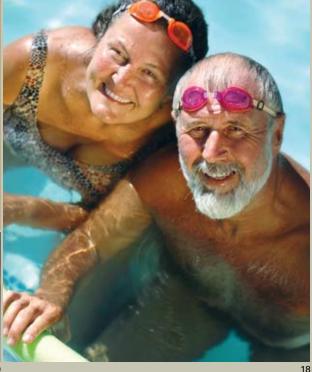
UNIVERSITY OF PITTSBURGH SCHOOL OF HEALTH AND REHABILITATION SCIENCES FALL/WINTER 2008 Can be the new

FALL/

NTFNTS







- From the Dean
- Giving Patty Kummick
- Access Dr. Kate Seelman
- **SHRS Donors 2008**
- **Student News**
- **Calendar of Events**
- **Faculty News**
- 10 Alumni News
- 11 Department News
- **Alumni Profile** Home Again
- Emergency! Doha.
- 16 The Real World

- **FACETS Feature**
- 24 Communication **Science and Disorders** The Double-Edged Sword
- 26 Emergency Medicine Three Decades Strong
- **Health Information** Management Taking Control of Your Health
- **Occupational Therapy** Living Longer, Living Independently

- 32 **Physical Therapy** One Step at a Time
 - **Rehabilitation Science** and Technology Helping People with Disabilities Help Themselves
 - 36 Sports Medicine and Nutrition
 - Testing for Improvement Whatever Happened to Slow Food?
- 41 Dialogue A Conversation with Margaret Goshio Hanley



Publisher

Clifford E. Brubaker

Executive Editor

Writing and Design

Forge Communications

Patty Kummick

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



FROM THE DEAN



Dear Alumni and Friends of SHRS,

As you can see, the theme of this issue of Facets is "Can 100 be the New 75?" I trust that you will appreciate the 'poetic license' taken in this theme. The point here is that barring severe and sustained pandemics or other catastrophic events, it is likely that the average lifespan will continue to increase - providing, of course, that we are also successful in conveying the importance of diet, nutrition, and lifestyle.

The more common sentiment from people on this point appears to be focused on living well and quality of life rather than longevity, as I think few of us look forward to extended life in a state of infirmity. 'Quality of life' is probably an over-used descriptor. The common intent when speaking of quality of life is generally to convey living in an elevated state of health and the ability for self-determination.

I shall direct your attention to the Access segment with Dr. Neil Resnick, Thomas Detre Professor of Geriatric Medicine and director of the University of Pittsburgh Institute on Aging. Dr. Resnick makes several important points; perhaps the most intriguing notion is that age alone is not a disabling condition. He also notes that we have important resources to extend quality of life as we age. Most notable among these are exercise and nutrition.

We also have the advantage of advice from an authentic centenarian. Margaret Goshio Hanley, our featured guest for the Dialogue segment, has provided an interesting perspective for life after 70, 80, 90 and Other articles provide information on diet, nutrition, exercise, technology, and therapies designed to maintain and improve the quality of life over the life span. While health and wellbeing are the province of many disciplines, it seems unlikely that any school would have a more extensive responsibility and therefore, a necessary commitment to contribute to education, discovery, and delivery of services to promote quality life.

I trust that we shall accept this challenge!

Chypol & Brubalen

Live well, long, and prosper!

Cliff Brubaker cliffb@pitt.edu

"...barring severe and sustained pandemics or other catastrophic events, it is likely that the average life span will continue to increase..."



ost times, when donors consider making a gift, they don't base their decision on what they could receive in return. But the University of Pittsburgh offers giving mechanisms that actually provide you with some

income. Please let me introduce you to Charitable Gift Annuities (CGA). CGAs enable you to make a generous gift to SHRS while establishing a lifetime income stream and gaining substantial tax benefits.

A CGA is an irrevocable gift that you make to the University. The University, in turn, agrees to pay one or two annuitants – typically the donor and the donor's spouse – a fixed sum each year for life. The payments are guaranteed by the unrestricted resources of the University and can be made in annual, semiannual, or quarterly installments. After the lifetime of the annuitant(s), the remaining portion of the gift is directed to SHRS or to the specific department or program you designate.

There are significant tax advantages to a charitable gift annuity. For example, you receive an immediate charitable deduction. In most cases, part of each payment is tax-free, which increases each payment's after-tax value. If you donate appreciated property such as stock, you can avoid some capital gains tax. By contrast, if you were to sell the stock instead, all of the capital gains tax would be due in the year of the sale.

Here are a few other points to keep in mind:

- The minimum gift is \$10,000.
- The minimum age for a gift annuity is 55.
- Once a gift annuity is established, the amount of the annuity payment will not vary. New annuities, however, may be created at anytime.
- If you wish to enhance your charitable deduction, you may choose a lesser annuity rate or elect to defer the beginning date of your annuity payments.

For more information about CGAs or other planned gifts, contact me or check out the University's Web site, www.pitt.planyourlegacy.com for more details.

Patty Kummick

Director of Development

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

SHRS DEPARTMENTS, FACULTY, STUDENTS BENEFIT FROM DONORS

While SHRS receives gifts of varying sizes for many purposes, this past year has brought about some firsts.

Thanks to a pledge from Denise Dunyak, (HIM '81, SIS '86) the Department of Health Information Management has received its first alumna-established endowed fund for student support. Upon completion of the pledge, students may be eligible for the award based on merit and need.

According to Dr. Mervat Abdelhak, associate professor and chair, Department of Health Information Management, Dunyak's gift could be the impetus for other HIM alumni to provide similar support for students and faculty in the department.



Another first was the formation of an endowed fund by a group of alumni to honor a SHRS department chair. Five alumni of the doctoral program

in Physical Therapy pooled their pledges to establish the Anthony Delitto Endowed Fund in Physical Therapy to honor that department's chair. The fund was announced by donors Dr. John Childs (PT '03), Dr. Julie Fritz (PT '98), Dr. Steven George (PT '02), Dr. Gregory Hicks (PT '02), and Dr. Robert Wainner (PT '00) at a special reception to honor Delitto at the APTA meeting in San Antonio. The announcement came as a surprise to Delitto, who hopes to grow the fund into a scholarship for students in the Department of Physical Therapy.

Yet another first was the establishment of an Education Travel Fund by Bruce R. Baker, a friend of SHRS. Baker, recognizing the importance of travel as an enhancement to education, set up the fund to benefit students and junior faculty in all departments of the School. The travel assistance enables students and junior faculty to travel across the United States and abroad for education-related opportunities. Award recipients eagerly report back to Baker on the value of their travel experience.

Many giving opportunities are available to interested alumni, faculty, and friends of SHRS. They provide very special ways to acknowledge a particular department, faculty member, or the general vision and philosophy of the School. We are very grateful to all of our donors and hope these three stories may inspire you to consider a major gift to SHRS.



Kate Seelman

It has been described as the one minority group to which we all aspire to be members. It is "the aged." Today, nearly 40 million people fall into that category. Within 20 years, that number will

Fueling this swell is the baby boom generation, 78.2 million strong. Every hour of every day, another 330 boomers turn 60. This is not the generation that fits the stereotype of the frail and feeble elderly. It is the generation that controls three-fourths of this country's wealth; that uses these dollars to remain physically and mentally active.

But aging comes with a cost. According to the U.S. Census Bureau, today's boomer spends an average of \$3,262 per year on health care. At age 65, that number is projected to increase to \$3,899. Today, our nation's annual health care expenditure is an estimated \$2.2 trillion. Within 15 years, that number will top \$8 trillion.

Is America prepared to pay the price for its rapidly aging population? Dr. Neil M. Resnick, Thomas Detre Professor of Medicine, Chief of the Division of Geriatrics at the University of Pittsburgh, and director of the University of Pittsburgh Institute on Aging, doesn't think so. "It could co-opt the entire U.S. economy," he asserts.

I've asked him to explain.

ging is the elephant in the room, and at present, there seems to be a lack of will by Congress, the presidential candidates, and society as a whole to take this issue on. Right now, our attention is distracted by the war, by the economy, by the housing crisis, by oil prices. All are important. But if we don't begin to address the health care crisis facing older Americans, we won't have the financial resources left to deal with any of these other issues.

This isn't a problem that can wait until tomorrow to be addressed. Our elderly are feeling the impact of our lack of an integrated health care system today. Whether they are independently mobile and highly functional with a need for intermittent or preventive services, or suffering from a chronic disease or diseases that require comprehensive care, older Americans are suffering. And they are not alone. So are their family members, who must spend so much of their productive and leisure time tied up trying to arrange care that's often inadequate. So are young people, who see the resources they need for education and employment being diverted to the care of the elderly.

When it comes to the elderly, ours is a health care system that is better attuned to the realities of aging a century ago – when by age 65, people had accumulated far more risk factors, conditions, and morbidity – than it is for today. In fact, the roots of current health care policy can be traced back to Otto von Bismarck who, in 1889, led Germany to use age 65 as its criterion when it adopted the first modern old-age social insurance program. Franklin Delano Roosevelt used the same age as the basis for a social security cut-off some 40 years later, as did Lyndon Johnson and Congress when they created Medicare in the early 1960s. So, 65 years is really a sociopolitical definition of old age and has no biological correlate

In truth, it is almost impossible to describe what we have as a health care "system." For example, beyond procedures such as colonoscopies and mammograms, reimbursement for prevention is virtually ignored. Services related to lifestyle issues such as diet, exercise, and smoking cessation, which have a direct impact on health, are not usually covered. Nor are services such as care coordination or medication management, let alone the problems faced by those older people with many concurrent conditions, who take a dozen or more pills a day.

In addition, we lack a good evidence base for treatment of most of the common diseases that impact the elderly, and the treatment guidelines that do exist are often complex and unwieldy for both doctors and patients to apply, especially for older patients. Complicating the situation is the fact that the recommended treatment for one condition might be contraindicated by another one of the patient's conditions, so the physician is forced to prioritize and then hope that the patient can comply with the multiple directives. Add in the fact that there are multiple payors and an array of service deliverers, and older persons could easily devote most of their waking hours each day trying to manage their own health care.

Where can they turn for guidance? The computer-literate might log on to government Web sites, but most are difficult to navigate and not user-friendly. The majority will look to their doctor or another health care professional. Unfortunately, the vast majority of them are unprepared to help.

Fewer than three percent of physicians have had even one hour of geriatric education; the figure is still lower for nurses and pharmacists. Paradoxically, as the number of older people is spiraling upward, the number of experts in geriatric medicine, nursing, pharmacy, and the therapies is decreasing at an alarming rate.

These trends seem to portend a dim future for health care for older Americans. Yet the challenge to improve geriatric care could also be an enormous opportunity because we'd need new drugs, new devices, new infomatics, and new diagnostic and treatment algorithms. We also would need new providers.

And who would do all of that? Our young people. Aging could mean new jobs - new high-paying, productive jobs - where young people could feel that they were making a contribution to society while they're making a good living.

It would also mean that there would be better care for older Americans. It would enable them to be more productive, more independent, and more engaged members of our society. Some might be inspired to embark on an encore career, which would help address some of the work issues confronting us not just here in Pittsburgh, but across the country. We have a need for people with wisdom and experience. Older people who are now living decades longer than ever before are optimally positioned to fill that need, as long as we can keep them healthy and functional.

Success is possible, but only if we have the societal will and the buy-in from all of the stakeholders who must be involved. We need to acknowledge that the problem is massive and must be addressed, and recognize that the answer doesn't lie with one entity; rather, good ideas are required from patients, their caregivers, the technology industry, the drug industry, the device industry, the insurance industry, doctors, therapists, nurses, and every other kind of health care professional.

In short, aging needn't be a burden. It can be our future.

SHRS Donors 2008

Thanks to all our alumni, faculty, staff, and friends for their generous support of the School of Health and Rehabilitation Sciences during fiscal year 2008. Their contributions enabled us to grow the SHRS Alumni Endowed Scholarship Fund, establish other endowed scholarship and student resource funds, provide student awards based on need and academic merit, and provide program support, graduate research assistance, and services to the community.

Corporations,

American College of Rheumatology Research Arrow Electronics

Arthritis Foundation AVADA Hearing Care

Bristol-Myers Squibb

Connecticut General

Craig N. Neilsen

David Physical Therapy & Sports Medicine

Dow Corning Corporation

Faster Seals Western Pennsylvania The Fli's Cheesecake

Company Intelligent Hearing

Systems Kevstone Paralyzed

Veterans of America

Lambda Foundation National Academies Keck Futures Initiative

Paralyzed Veterans

Prentke Romich Company

The Prudential Foundation

Remed Recover Care Centers LLC

The Technology

Individuals over \$5,000

Bruce R. Baker Anne Pascasio Judith T & Paul Andrew Rockar Jr Stephanie & Sean Darren Shimada Walt A. Stov Alice &

Thomas W. Zaucha

\$1,000 - \$4,999

Sondra A. Balouris & Clifford Brubaker Christine Chase John David Childs

Rosemarie & Rory A. Cooper Ronna Sue &

Joseph Russell Judith Lomakin Dodd Geraldine Michelle

Grzybek Audrev L. Holland Laurence Baker

Susan Pressly Lephart & Scott M. Lephart

David Hale Perrin Anna M. & Thomas Edward Platt

Douglas L. Poust Timothy C. Sell Mildred L. Wood

\$500 - \$999

Mervat Nagib Abdelhak John Patrick Abt

Dorothy B. Allen

Mary Jo Geyer & Richard Mark

George Edward Carvell Kate Matta DeComo &

Peter Michael DeComo Shameem Gangjee Eva Larson &

Kristin Klingensmith Henson & James

Estate of Andrew J Kuzneski Jr Michael Scott

LaFrankie Sheila Pratt & Malcolm

Filen Green Morton & Rodney Dale Morton Katherine Delores

Denise Shaw Seiffer Debra A. & John

Colleen Frances White Jean & R. Lee Young

\$100 - \$499

Jane McCloskey Adamczyk & Michael Adamczyk Sjarif Aburrachman

Laurie Braun Andrea Paul G. Armiger

Alice Ellis Audino Susan Aurandt Barker Anthony Barry Bertini

Margaret Bianchi Ronald Philip

Miriam Randolph Boyd Kenwyn Boyer Caroline Robinson Brayley

David M. Brienza Paula Carev

Allen Cartwright James Francis Cerullo

Denise & Mark Chisholn

Robert Anthony Chubon Sandra Jean Cognetti

Ellen R. Cohn Mindy L. Columbus Jill & Kevin Conlev

Richard Leslie John Frederick De Blasis

Brian Forrest Derickson Colleen Jane Dunwoody Sean P. Easley

Larry Clinton Eaton Carol Ann Deemei Elsesser & James Elsesser Cheryl Mickey Ferris

John Charles Fisher Denise Vekasy Fortson

Cynthia Alice Gaulin Pamela Ann Gentile Alice Springer Gibson & Karl Robert Gibson Paula Lizak Gilchrist Kathleen M. Goring David G. Greathouse

Carol & Harry L. Green

Max J. Green Lynn Hudson Hale & James Gerard

Constance & Kenneth J. Havrilla

Laurine Marie Johnson

Nancy L. & Norman L.

Patricia E. Karo

James Keane

Susan S. &

Margaret Mary Keltz

Mikael D. Kimelman

Toni Denise Klauger

Susan Ruth Klein

Patricia Kummick

Jovce A. Kuznesk

Suzanne Bem Lewis

Robert Harry Lilli

Karen Stegman Lilli &

Evelyn Jacobs Lipowitz

& Jonathan Lipowitz

Mary Jane Luckey

Suzanne B. Lvnch

Patricia Joan Madle

John Terrill Majors

Denise Malinoski

Patrick T. Mangus

Palmira Mascaro

Kathryn Porter

McReath

Brett Decker

Cynthia Ann Maziarz

Raymond L. McCov

Mary Beth McGrew

Cynthia Grygier

Cynthia Miles

Thomas D. McCracken

Wanda Virtue Molchen

Matthew J. Mrazil

James Thomas

Kwiatkowski

Roberta & Robert

Christie Sue Savoi Sharon K. Headley Maryann Scialabba Mary Ann Hosak John Isaac Jr.

> Samuel Robert Seitz Joan Kramer Shames & George H. Shames

Mary Ellen Overmier Smith Patrick Joseph Sparto

C. Port Sterne Jr.

David Christopher Mary Patricia Sweeney Peter M. Thomas

Michael GerardTimko Christopher Andrew

Michelle Beckley Wetzel Christine M. Wieser

Claire L. Williams Sonva Mugnani Wilt Lois Barnhart Wolf &

Steven L. Wolf Joseph Matthew

Kathleen McClain Zack Cynthia A. Zakoworotny

\$50 - \$99

Noma Bennett Anderson & William Anderson Brian Joseph Aquilante

Raul F. Avala Allen Wayne Barbard Helen S. & Brooks Cynthia Lou Bartlet

Leslie L. Becki

Diane Marie Beichne

Ronald Bernazzoli Ruth Dubec Beyeler Kathy Yurchak Blazei Michelle Suzanne

Erin M. O'Connoi Doris P. Bradley Thomas Drew Oleary Mary Ellen Buning Tami J. Poffel Stephen Patrick Burke Reece Everson Poulton Robert J. Burns Harold A. Price

Michele Wester Buzard & Gregory Scott Scott Campbell

William Candy Betty L. Carr Cindy Cavallero

Constance Joan

James L. Coyle

& Robert Anthony

Sue Cooperman Cox

Leanne Palmer Darling

& Scott Miles Darling

Helen Lutkus Denne

Gretchen Barone

David P. Draiman

Mary Kay Dunaway

Sharon Simon Dunlap

Stephanie Ray Emert

Jane Henderson

Eversole & Ronald

M. Lucille Moore Detto

Eugene J. Chebra Anthony E. Roscoe Murray J. Saucier Jr. Brad M. Chernock Gail Alspaugh Clark Linda M. Collins

Christine Johnston

Ophelia Munn-Goins

Mary Eleanor &

Robert F. Murray II

Shirley Campbell

Ketki Dhruv Raina

Barbara Schick Raiu

Richard Merlin

Sharon Rogers

Lorraine & Jay Ranalli

Johnny L. Smith

Russell Glenn Steves

Eversole Flizabeth Diana Fox Joan Yurick Fucci 8

Donald James Fucci Susan A. Fuentes

Karen Collins Gibson Kathleen Jane Gilmartin

Vicki Gartenberg

Susan Jane Wright Lorraine Glumad Lisa Beth Greenblatt Jacqueline T.

Mildred Zinberg Angela Rahn Halpern

Colleen D. Hamm

Barbara Ann & Richard M. Havs Christine Elizabeth Heard Bonacci Betty M. & Todd Clara Lozano Ayala 8 Charles Henkelmani Kimberly Anne & David Franklin Holsinge Frank J. Holzman Stacev A. Hrin

Marjorie C. Johnson

Bethany R. Jones Joan Herman Kahn Robert Richard Kamenic Jr.

Beth Elaine Kauffma Valerie Durci Korzur

Marvann Gilmartin Landers Susan J. Landers-Simon

David E. Leary Paula Mary Leslie Pamela Sue & Kenneth D. Lessans

Michelle C. & George Arthur Lindley IV Heidi M. Richards

Julie Gand Linhart & Randolph Linhart

Robert Lucching Barbara Mellott MacDonald John Macner Jr

Robert Owen Madtes Nikki Sopcisak Marhefka

Deborah J. Markle Jane Mazzoni-Maddigan

Denise Lyons McCloy & James Louis McClov Kathleen K. &

Robert E. McMille Floyd Franklin

Mary G. Mient Peter James Minnehan Julie & Mark Mintz

Constance Marie

Carol Mutschler Mova Valerie Henigin Musselman & Thomas Andrew Musselman

Barbara W. & Lee Myers

Brian K. Olson Patti Donley Olson Paula Joanne & Paul D. Palme

Michael John Marcia L. Moner Patterson &

Mary & Lee Robeson

James Albert Rossi Jr.

Dorothy M. Ruttle-Neil

Eugene V. Patterso Mark Vincent Pepicelli Amy D. Perchick Lee Ann Pickering Brenda Marie Punako

Marirose A. Radelet Denise Irene Rematt Pamela Ernst Revnolds Geraldine D. & Jose Enrique Rivera Theresa H. Robbins

James Clayton Sattel Kathleen Schlough Mark B. Bauer Caren Bernstein

Linda B. Scislowicz Rocco Sgarro Karl John Sheaffer Audrey Cox Shisler Sharon & Karl C. Boone

Mark P. Sampogna

Rebecca Rightnour

Christine Ann

Schroeder

Sallee E. Silverman Richard Callaghan Simpson Mary Jo Smith

Michelle Flaine Smith Cynthia Criswell Speck &Theodore Guy Speck Carol Burkhart Spicher

Krista Marie Stauffer Jo Apple Steinhart Charlotte

Jane L. Stver-Acevedo Crystal M. Case I. Wavan Pasek Jessica L. Cecco Sue C. Tarplee

Cynthia R. Trapano Alton L. Chitty Jr. Kevin Edward Colleen Romesberg

Katherine Verdolini Assimakopoulos John Vicchio Cohen Carol B. & Robert

Kathleen

Wenstrom Bruce C. Weston Roberta I. White-Prentice

Wilbon-Jackman Maria Caste Willoe Deborah Menk Wilson Audrey E. Rudolph

Under \$50

Andrea L. Alduino Dorothy Ahearn Allis Susan McCracken Patricia Anania

Donald G. Angelone Leslie Billow Atkins Marie E. & Richard Michael Bagay

Sue Ann & Monty Baker Barbara Wicke Balas

Patricia Ann Barus Suzanne Marie &

Ina L. Block Denise Elaine Bogaty-Smith

Lori R. Brown Matthew C.

> Mary Behling Browne M. Jean Buffardi Jean Kohlhaas Byers & Charles M. Byers

Michael Anthony Mary Deitrich Capra

Thomas J. Stengel Polesiak Carev Judith Audrey Stitley Cathi Carroll-Davis

> Delbert R. Celaschi Gail Harmon Chitty &

Renato Valente Ciavola

> Charlotte Young Colledge

Lynetta Ann Walker Linda Mary Wallace Cynthia J. & Perry

Edward Wanched Mariorie Jane Weigel N. Jill Davies

Toni D.

Holly Parke Andria &

Mary Lynn & Margaret Wilson Conard Drapola Cornell Priscilla Tokar Cotte Barbara S. Couvrette Christine Cox Mary Ann S. Danley Lenora Jean Davis Anna P. Degabriel Martha E. DeMarzi Eileen Ann Dobbins Elizabeth Ann Dolby Kim A Donaldson Bernice Sirota Dressler & Hans Dressler Mark Vincent Drnach Louis Duane Durigor Corrine Durisko Rona & Stuart Eisen Grace Schmitt Ellison* & Charles E. Ellison Diana Dewey Emanuele Alma & Glenn Engle **Denise Thiebaud** English & Dennis H. English

Sandra G. Erksa Lynn Mary & G. Kellev Fitzgerald Jean Fellows Foust Mary Campbell Foust Virginia Hulshult Franz Paula Frost Susan Evanick Fuhr Bobbi Johnson Furnas Audrev Engelhardt Gallagher Carole Hostettler Galletta & Dennis Galletta Christine & Daniel Garrison Linda Bienkowsk Gartlev Lisa Lynn Gay Catherine W. Gerrish Henry Gillespie Margaret M. Giordano Patricia Dannhardt Robin Leigh Gries Donna Marie Grube Mary Jane Harris Kenneth E. Hartley Jacalyn Molino Hartmann Margaret West Craig S. Hendershot William S. Herk Julie K. Holcomb

Karen Lee Holtz Patricia A. Irvin Lawrence I. Issadore Andrea D. Johnson Scott Jubeck Paul Katz

Mary Jane Parker Kelly

Mark Alan Kerestan

John Kernic

Paul Kleindienst

Tanisha C. Knox

Kathleen R. &

Kolumban &

Robert N. Kohle

Evelvn Fetterman

Michael J. Kolumba

Doris Kopler Koskos

VincentT. Kowalski

Janet Marie Lang

David Lecce

Lehman &

Loughran

Catherine Taylor

Michael Lehman

David M. Lishinsky

Barbara Olshefski

Georgann Lombardi

Mary Anna MacQueer

Marie Berton Lasher

Haberthur Manko Marilyn Hornvak Marchick Louis A. Martino Wanda Lea Beatty Mayhew Nancy Janssen Sandra M. McCuen Marybeth Baker Peggy Armburger Gregory F. Meloy Hilary Herron Miked Alisa Ann Mille Deanna Stefanek Miller Mary M. Miller Scott Andrew Mills Paulette Minto-Glover Mary M. Miskov Osborn Molling Tiara Kush Morrison John Kerr Musgrave IV John Mutschler **Dorothy Brallier Noble** Barbara L. North Pamela Jean O'Baker Beth Nypaver Parks Lauren Wendy Pasekoff-Russ Douglas Gilbert Patch Kathleen Donley Pennesi Gail Donahue Pepin Timothy F. Peretich Leelie R & Chad Michael Peters

Stipanovich Pierce

Patricia Hazen Querry

Elsbeth Beaver Rapp

Yvette Meitner Reiner

Pamela Lassiter Rhone

Ellen & Douglas

Elizabeth Anne

& Frank Reiner

Bruce Robinson

Reva Nan Rossman

Craig Wilson Rowitz

Ruscetta & Jeffrey

Matthew Ruscetta

Lois Schoenberger

Edward L. Scott

Ronald W. Schwesinger

Melissa Nascone

A. Reddy

Linav &

Kimberly

Stephen A. Scott

Ronda L. Seelig

William B. Seibert

Natalie Lise Senese

Charles Lewis Shadle

Mary Beth B. Shafer

Nancy Kulikowski

Maria Monaco

Yvonne P. Simon

Cynthia Jane &

Aland D. Smith

Angela K. Sorg

John B. Sowers

Arlene Robin

Spiegelman

Lynn Spieker

Elizabeth

Candace & Stepher

Lyndia C. Stauffer

Mary J M Stickley

Mutschler Stone

Julie A. Strand

Cynthia Ann Smith

Dennis Hugh Soles

Donald George Sims

Albert Walter Skrabski

Patricia B. Strott-Wheatley Amy Marie Killeen & John Raymond Linda Tessaro William R. Thomson John F. Troxel Linda Marie Turner Norma Jean Ulery Giampietro L. Vairo Nancy Allshouse Varley Barbara Ann Vento Anne M. Veres Cindy Ann Donna Coldren Wainwright Valerie Magliocca Watzlaf Donna Ray Weiss Mary Sue Gustafson Christine Marie Sharon Hetrick Roemer & Robert Quay Roemer Gail A. & Thomas S. Wiles Thomas D. Winner Jr.

*deceased

Margaret

Katherine A. Winters

Heather Anne Worthy

Kimberly Ann Yankasky

4 FACETS FALL/WINTER 2008

Student News

Tessa Utz, student in the Department of Communication Science and Disorders, was awarded a Chancellor's Undergraduate Teaching Fellowship for the 2008 Fall term. Utz will serve as a teaching assistant in the Intro to Audiology class under instructor Elaine Mormer. The fellowship is made possible through the University Honors College.

Monisha Panda, coordinated masters in Dietetics student, won the 2008 Pennsylvania Dietetic Association Foundation Diversity scholarship. The scholarship is awarded to a minority student pursuing a degree in food and nutrition science to become a registered dietitian who has demonstrated commitment to the dietetic profession and exhibits leadership qualities as evident by volunteer activities in community organizations, campus activities, or in other organizations.

Andi Saptono, a doctoral candidate in the Department of Health Information Management, attended the American Telemedicine Association 13th Annual International Meeting and Exposition, Seattle, WA. Saptono presented his poster, "Online Portal as a Solution to Deliver Rich Collaboration Features in Telerehabilitation," and was nominated for the 2008 Student Paper Award.

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

Amalie Andrew, MOT student, was awarded the 2008 Department of Occupational Therapy Award of Scholarly Excellence for scholastic achievement and scholarly excellence in research and leadership activities.

Danielle Shuttleworth, MOT student, was awarded the 2008 Department of Occupational Therapy Award of Professional Excellence for her promotion of occupational therapy through national leadership activities and international service projects.

Amalie Andrew, MOT student, serves as a co-leader of the 2008-2009 JHF Jonas Salk Fellowship, a project of the Jewish Healthcare Foundation, co-sponsored by the University of Pittsburgh Center for Bioethics and Health Law.

Lori Lengyel, MOT student, was awarded the 2008 American Occupational Therapy Foundation Ethel Beard Burstein Scholarship.

Jilliene Irwin, MOT student, was awarded a 2008 National AMBUCS scholarship.

Hannah Ritter and Laura Waterstram, MOT students, received the Reba M. Sebelist Scholarship from the Pennsylvania Occupational Therapy Association.

Benjamin Gross, MOT student, was awarded the Abe and Jean Comensky Memorial Scholarship of the United Jewish Federation of Greater Pittsburgh Drs. Ketki Raina, assistant professor, Min-Mei Shih, post-doctoral associate, and MOT students Betsy Boyce, Katherine Boyle, Heidi Carpenter, Megan Duncan, Benjamin Gross, Wikar Kadhim, Sudong Kang, Ashley Keene, Amanda Miller, Chikaodiri Onuoha, Angela Pasquarelli, Anne Marie Sweeney, Carla Tcruz, Ryann West, and Lori Zatlokovicz represented the Department of Occupational Therapy at The Assistive Technology Day for the Pennsylvania Governors' School for Healthcare.



Kelly Brower, a student in the Rehabilitation Science undergraduate program, served as a volunteer in Belize last summer through International Service Learning. Brower worked with a team of volunteers and medical professionals meeting with and treating the inhabitants of the island's remote rural villages. Her service was an educational experience she would recommend to everyone.

Eight students from the Human Engineering Research Laboratories were recognized for their student scientific papers at the 2008 Rehabilitation Engineering and Assistive Technology Society of North America (RESNA) Conference on June 26-30 in Washington, DC. The following Student Scientific Paper award winners received

\$1000 and free conference registration: **Dr. Dany Gagnon** for his paper "Do Stroke Characteristics Change During a High-Intensity 12-minute Corridor Wheelchair Propulsion Test in Experienced Manual Wheelchair *Users?*;" **Hongwu Wang** for his paper "Influence of Gripping Moments during Wheelchair Propulsion on Natural Surfaces;" Padmaja Kankipati for her paper "Shoulder Joint Loading for Three Types of Lateral Wheelchair Transfers;" Amol Karmarkar for his paper "Monitoring Wheelchair-Related Physical Activities in Older Adults in Nursing Care Facilities," and Ana Souza for her paper "Impact and Usage of Pushrim Activated Power Assist Wheelchair Among Individuals with Tetraplegia."

HERL students receiving honorable mention were **Shivayogi Hiremath** for his paper "Estimating Temporal Parameters of Wheelchair Propulsion based on Hand Acceleration;" Michael **Turkovich** for his paper "The Effect of Shoulder Position on Pushrim Forces during Overground Manual Wheelchair Propulsion," and Vishnu Ambur for his paper "Accelerometry-Based Classification of Wheelchair Propulsion Patterns Using Machine Learning Techniques."

Sara Sibenaller, student in the Department of Rehabilitation Science and Technology, received the Rory Cooper-Dion Johnson Award from the University of Pittsburgh Department of Rehabilitation Science and Technology for her 2008 RESNA paper "Kinematic Characteristics of Athetoid Movement During Target Acquisition."

Calendar of Events

OCTOBER

October 11-16, 2008

AHIMA Annual Meeting, Seattle, Wash.

The Department of Health Information Management will host a reception for HIM alumni, Monday, October 13, 6 – 7:30 p.m., Madrona Room, Sheraton Seattle Downtown Hotel. Sponsored in part by the SHRS Alumni Society.

Tuesday, October 14, 2008

Fourteenth Annual Endowed Scully Visiting Lecture Program

Featuring Cynthia Zadai, DPT, assistant professor, MGH Institute of Health Professions; William Pitt Union Lower Lounge; reception at 6:30 p.m., lecture at 7 p.m.

Friday, Oct. 24, 2008

Pitt Welcome Back Reception ... A New Tradition on **Campus for All Pitt Alumni**

6 – 8:30 p.m., Commons Room, Cathedral of Learning Return to campus and celebrate Homecoming in style at a fun and festive reception in the Commons Room prior to the fireworks display.

- Complimentary hors d'oeuvres, desserts, and beverages (proof of age required)
- Meet friends and classmates from decades past
- The Commons Room like you've never seen it before
- Visit the Nationality Rooms and stay for the fireworks
- Casual attire

RSVP by Oct. 17 to alumnievents@ia.pitt.edu or 1-800-ALU-PITT Sponsored by the Pitt Alumni Association

Thursday, October 30, 2008

Thornburgh Family Lecture Series: Disability Law & Policy

1 – 2:30 p.m., Teplitz Courtroom, Barco Law Building Featuring I. King Jordan, former president, Gallaudet University. Call 412-648-1373 for more information.

Friday, October 31, 2008

Matthews-Rubin Lecture

3 p.m. reception, 4 p.m. lecture, 4060 Forbes Tower. "The Nature of Aphasic Deficits in Syntactic Processing," presented by Dr. David Caplan, professor, Neurology, Harvard Medical School and Massachusetts General Hospital. Sponsored by the Department of Communication Science and Disorders.

NOVEMBER

Saturday, November 8, 2008

SHRS Open House

10 a.m. – 1 p.m., Forbes Tower, Atwood Street. An opportunity for interested students to meet with faculty, staff, and current students and tour SHRS.

FEBRUARY 2009

Saturday, February 21, 2009

2009 Winter Academy

Ritz-Carlton Resort and Beach Club, Naples, Fla. Join fellow alumni and friends as this fourth annual University of Pittsburgh event showcasing our luminary health science researchers. Visit www.winteracademy.pitt.edu for further details.

Faculty News

SHRS welcomes three new faculty members to its ranks:

Andrew L. Guzzo was appointed instructor in the Emergency Medicine Program. He received his BS from the EM program in 2006 and is a member of the Center for Emergency Medicine (CEM) STAT MedEvac program. For the past two years, Guzzo has worked at the CEM teaching in the EMT Basic and Paramedic programs. Last year, with the help of other EM faculty and staff, he started the EMT Basic clinical and field rotation. He is now responsible for coordinating and teaching in the EMT Basic program and will oversee and mentor senior EM students electing to do their internship In EMS education.

Dr. Cynthia S. Puranik joined the Department of Communication Science and Disorders as an assistant professor. Puranik completed her undergraduate studies at the University of Bombay, India, and her graduate studies at the University of Florida, Gainesville. For the past two years, she has been a postdoctoral fellow at the Florida Center for Reading



Research,
Florida State
University.
Cynthia is
a certified
speechlanguage
pathologist
and her
primary area
of research

involves understanding the development of early writing and the assessment of preschool children's emergent writing skills. Another area of interest includes the evaluation and early identification of children at risk of academic difficulties. Her work is currently being supported by a grant from the Institute of Education Sciences, US Department of Education.

Dr. Leming Zhou has joined the Department of Health Information Management as an assistant professor. Zhou has a PhD in Physics and a DSc in Computer Science from George Washington University. His skill set and strong background in physics (theoretical high-energy physics), mathematics, and computer science will bring more research power to SHRS in the areas of basic research and computational modeling. He will introduce a new research area in bioinformatics and genomics to SHRS, and participate in computational and mathematical modeling of clinical problems.

Communication Science and Disorders

Dr. Katya Hill, associate professor, Dr. Ming-Chung Chen, SHRS visiting research professor, and Tianxue Yao, senior instructor, Mandarin Chinese, Department of Modern Languages at Carnegie Mellon University, are coinvestigators on a research project exploring the transcription requirements for Mandarin Chinese (MC) in order to develop a core vocabulary list to support assistive and augmentative communication interventions in MC. Chen is also an associate professor in the Department of Special Education at Chiayi University, Taiwan. He has been a principal investigator of many research projects funded by National Science Council in Taiwan. His research focuses on MC learning and text entry for people with disabilities.

Dr. Sheila Pratt, associate professor, has been appointed as the Editor-in-Chief for the *American Journal of Audiology*, one of the primary publications of the American Speech-Language-Hearing Association and well recognized for the high quality of its published research.

Dr. Scott Yaruss, associate professor, was recognized by the National Stuttering Association as the Speech-Language Pathologist of the Year at June's national convention. Yaruss was also recognized for his longstanding service on the Board.

Health Information Management

Patricia Anania-Firouzan, assistant professor, presented "HIPAA Privacy and Security" at the Second WorldVista Education Seminar at Robert Morris University, Moon Township, Pa.

Rebecca Harmon, assistant professor, is serving as an academic consultant to the Pa. National Guard Community Preparedness School House Project, a component of UPMC's Strategic Bio-Defense Emergency Operations and Communications System. The project was developed to bring basic preparedness to communities across the nation so that citizens could learn the basics of prevention, preparation, response, and recovery to natural, terrorist-mediated, or accidental disasters.

Harmon, in her role as academic consultant, presented "Preparedness is Everyone's Business," to more than 100 allied health and nursing faculty members at Community College of Allegheny County's Faculty Development Institute. Harmon also presented "Using the Virtual Lab," at AHIMA's 2008 Assembly on Education Symposium in Louisville, Ky. This talk focused on the use of the hands-on virtual EHR laboratory as a constructivist learning tool.

Dr. Valerie Watzlaf, associate professor, was elected Director, American Health Information Management Association, for a three-year term beginning January 2009. (Thanks to the HIM alumni who supported her in the voting!)

Watzlaf is the editor of a textbook entitled *Health Informatics Research Methods: Principles and Practice*, released July 2008 by the American Health Information Management Association.

Occupational Therapy

Dr. Denise Chisholm, assistant professor, was elected to the American Occupational Therapy Association's Roster of Fellows. Chisholm was awarded this honor in recognition of her contributions to occupation-based practice.

She is co-author of Occupational Therapy Intervention Resource Manual: A Guide for Occupation-based Practice and has presented workshops on occupation-based practice across the U.S. In addition, Chisholm has represented Pennsylvania at the Representative Assembly of the American Occupational Therapy Association since 2003 and was recently elected Agenda Chair of the Representative Assembly.

Dr. Nancy Baker, assistant professor, was awarded an R01 grant from the National Institute for Occupational Safety and Health to study the effect of alternative keyboards on discomfort and typing kinematics.

Mary Lou Leibold, assistant professor, was awarded a Dissertation Research Grant from The American Occupational Therapy Foundation for her proposal titled "Applying Selective Optimization with Compensation to Older Adults Recovering from Depression."

Drs. Nancy Baker, assistant professor, **Denise Chisholm,** assistant professor, and **Ketki Raina,** assistant professor each presented a research paper/poster at the 15th Annual Nursing Horizons Conference, "Best Practices in Patient Safety: Sharing the Evidence."

Drs. Joan Rogers, professor, Margo Holm, professor, Elizabeth Skidmore, assistant professor, Mary Lou Leibold, assistant professor, Denise Chisholm, assistant professor, and Ketki Raina, assistant professor, presented papers at the American Occupational Therapy Association's 88th Annual Conference.

Drs. Denise Chisholm, assistant professor, Joan Rogers, professor, Charles Reynolds III, and Margo Holm, professor, presented "Disability in Community-Based Older Women with Depression" (research poster) at Celebrating Research on Aging: Building Collaborations for the Future, University of Pittsburgh Institute On Aging.

Dr. Denise Chisholm, assistant professor, and **Cathy Dolhi,** SHRS alumna, presented "Focusing on Occupation in Fieldwork" at WisCouncil, the educational council for academic and clinical educators in Wisconsin.

Dr. Margo Holm, professor, participated in the invitation-only "Consensus on Outcomes for Resuscitation Science Conference" sponsored by the American Heart Association. She spoke on post-discharge short-term and long-term outcomes, and was also invited to be a member of the writing group that will generate guidelines for standard care and research resuscitation outcomes.

Dr. Nancy Baker, assistant professor, presented a talk titled "Managing Fatigue in Juvenile Rheumatoid Arthritis" at the Juvenile Arthritis Family Day sponsored by the Arthritis Foundation – Western Pennsylvania Chapter.

Dr. Elizabeth Skidmore, assistant professor, participated as a member of the Technical Expert Panel assembled to advise Centers for Medicare and Medicaid Services in the development of a patient assessment tool for recipients of Medicare Part B services. The tool will be used to gather data and advise the development of outpatient therapy payment alternatives.

Physical Therapy

Dr. Jessie Van Swearingen, associate professor, was recently named a Catherine Worthingham Fellow of the American Physical Therapy Association. She joins fellow faculty (past and present) and SHRS alumni who have been so honored in the past including Drs. Anthony Delitto, David Greathouse, Robert Lamb, Anne Pascasio, Robert Richardson, Rosemary Scully, and Susan Whitney.

Rehabilitation Science and Technology

Dr. Rory Cooper, distinguished professor and chair, medaled at the National Veterans Wheelchair Games once again. He received gold medals in the following swimming competitions: 50 meter

freestyle, 50 meter backstroke, 50 meter breaststroke, and 100 meter individual medley. He also received a silver medal in the slalom (a wheelchair obstacle course).

While at the Wheelchair Games, Cooper and others from the department enrolled 142 subjects in various research projects being conducted through the department and the Human Engineering Research Laboratories.

Dr. Katherine Seelman, associate dean of Disability Programs and professor, served as keynote speaker at the 6th International Conference on Smart Homes and Health Telematics (ICOST) in June 2008 in Ames, Iowa. The conference theme was "Quality of Life Enhancement for People with Special Needs." She also presented the keynote address at the 8th Asia-Pacific Conference on Computer Human Interaction in July 2008 in Seoul, Korea.

Seelman represented the World Health Organization at the Pan American Health Organization Regional Consultation in May in San Jose, Costa Rica; and the Disability and Rehabilitation World Report on Disability and Rehabilitation Department of Injuries and Prevention in August, 2008 in Geneva, Switzerland.

Dr. Richard Simpson was recently promoted to associate professor with tenure.

Sports Medicine and Nutrition

Judith L. Dodd, adjunct assistant professor, has been awarded the 2008 Copher Award, the highest award bestowed upon a member of the American Dietetic Association. The citation presented to Dodd noted, in part, that the award was presented in recognition of her "distinguished service to the association and the profession. She is recognized as a leader with extraordinary compassion, diplomacy, and charm while being an advocate for the association and a model of highest quality professional practice and ethics."

8 | FACETS FALL/WINTER 2008 | 9

Alumni News

Communication Science and Disorders

David W. Hammer (CSD '77, '79) recently received the 2008 Pennsylvania Speech-Language Hearing Association Clinical Achievement Award. The award



is given by the American Speech-Language Foundation to individuals for

outstanding contributions in advancing clinical knowledge or practice in speech/ language pathology and audiology. Hammer is a member of the Audiology Communication Disorders Team at Children's Hospital of Pittsburgh. His specialty areas of interest are childhood apraxia of speech, autism and related disorders, childhood stuttering, and severe articulation/phonological disorders.

Health Information Management

Alaina Capanna (HIM '06) has recently accepted the position of systems analyst with UPMC (e-Record Project), Pittsburgh.

Amy Beale Derlink (HIM '95) started an Autism Outreach Center in April 2008 in Crawford County, Pa., and serves as vice president of CASA in Crawford County. Derlink is a HIPAA privacy officer with iod incorporated, Green Bay, Wis.

Julie Ercole (HIM '04) is serving as a planning analyst for West Penn Allegheny Health System's Strategic Planning Department. Ercole contributes market assessments, competitor analysis, physician profiles, and special projects in her current role.

Dr. Stephanie Hackett (HIM '00: PhD '07) is project manager, Division of Health Economics, UPMC, Pittsburgh.

Cheri Klos Hall (HIM '05) is a member of the RHIA exam reconstruction committee at AHIMA. She serves as assistant director, Health Information Management, for UPMC-Western Psychiatric Institute & Clinic, Pittsburgh.

Nathan McWilliams (HIM '98) recently completed his master's degree in Public Administration at Penn State University, Harrisburg. McWilliams is director, MIS/Trauma Registry, for the Pennsylvania Trauma Systems Registry, Mechanicsburg, Pa.

Beth Kruzynski Summer (HIM '93) is currently serving as regional vice president for iod, incorporated, Green Bay, Wis. She has held several offices and served on committees for WPHIMA (presently vice president of WPHIMA) and PHIMA.

Dr. Karen Wager (HIM '82) was awarded the Medical University of South Carolina Foundation Teaching Excellence Award for her accomplishments in mentoring and lecturing. An associate professor in the Department of Health Administration and Policy, Wager received her award in the Educator-Lecturer category and was nominated by her peers and students.

Major Eric Wallis (HIM '03), chief of clinical operations at Bassett Army Community Hospital, Fort Wainwright, and community-based research Alaska, recently had an article published and scholarship. in Army Logistician, an internationallycirculated magazine. Wallis worked on the article while in the Army Command and General Staff College.

Health Related Professions

Michael P. Esposito Jr. (HRP '84) has been promoted to vice president, business development, and executive director, service line operations, at Norton Healthcare, Louisville, Ky. Joining Norton Healthcare in 1999, Esposito carries administration, operations, and planning responsibilities for adult and pediatric cardiovascular and pulmonary services; women's services; orthopaedics, neurology, and spine services, and a new employer relations/business development initiative.

Physical Therapy

Jane S. Brandenstein (D.T. Watson '66) was honored as the Western Pennsylvania Chapter of the Arthritis Foundation's first Joyce O'Connor Volunteer Service Award recipient. She has been an active volunteer with the AF for years and currently serves as vice-chair of the Board of Directors and a trainer for the land-based exercise program, "Take Control with Exercise" and the Arthritis Self-Help Course. Over the years, Brandenstein has trained hundreds of leaders for these courses, which benefit people with arthritis. She is also recently retired from the Centers for Rehab Services' Oakland Outpatient

Dr. Pam Reynolds (PT '72, '88) was promoted to full professor at Gannon University, Erie, Pa. Reynolds' areas of interest are in service learning

SHRS Recognizes Scholarship Recipients, Donors

This past April, SHRS hosted 48 scholarship ■ recipients and donors at the school's Scholarship Luncheon in the Kurtzman Room, William Pitt Union. The luncheon provided an opportunity for donors or scholarship trustees to meet the students selected for scholarship awards and to learn of their course of study and career aspirations. As part of the luncheon program, attendees heard about the value of scholarship support from students Shawn Sutton, Department of Physical Therapy, and Jessica Todd, Department of Communication Science and Disorders. SHRS currently provides awards through 22 donor-funded scholarship and student support funds. In 2007/2008, 42 students benefited from such assistance.



Dr. John Durrant, vice chair, Department of Communication Science and Disorders: Dr. Anne Pascasio, donor: Jennifer Todd, CSD student and recipient of an Anne Pascasio Scholarship, and Dr. Cliff Brubaker, Dean.



John Bonaroti, fund trustee; Doug Zaruta, athletic training student and recipient of the Tim Kerin Memoria Scholarship and Freddie Fu Award: Dr. Scott Lephart, chair. Department of Sports Medicine and Nutriti and Dr. Cliff Brubaker, Dean.



Dr. Dan Ding, assistant professor, Department of Rehabilitation Science and Technology; Joseph Olson, RST student and recipient of the Rory Cooper/Dion Joh Award, and Dr. Cliff Brubaker, Dean.

Department News

Communication Science and Disorders

The 2008 Matthews-Rubin Lecture will be presented by Dr. David Caplan, professor of Neurology, Harvard Medical School, on Friday, Oct. 31, 2008. His talk is entitled, "The Nature of Aphasic Deficits in Syntactic Processing." Please contact the Department of Communication Science and Disorders for further information.

Occupational Therapy

The Pennsylvania Chapter of the American Society for Hand Therapy in collaboration with the Department of Occupational Therapy sponsored a continuing education program, "Comprehensive Survey of the Hand Course."

Physical Therapy

This fall, the Department of Physical Therapy admitted 54 students to its Advanced Master of Science program. Students represent India, South Korea, and Saudi Arabia. The Advanced MS program offers concentrations in Neuromuscular PT (overseen by Dr. Sue Whitney) and Musculoskeletal PT (led by Mike Timko). These international students will have the opportunity to work under the direct supervision of a licensed physical therapist and to participate in PT Rounds.

The Department of Physical Therapy congratulates its 44 DPT graduates who successfully finished their plan of study in April. This class continues the trend of a 100 percent first-time Board pass rate. In June, the department welcomed 70 students into the DPT program.

For the second consecutive year, several DPT students participated in a summer research internship as part of an NIH-funded training grant.

Rehabilitation Science and Technology

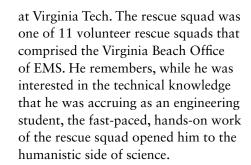
This year, the department hosted 26 summer interns to the American Student Placements in Rehabilitation Engineering (ASPIRE) and Quality of Life Technology (QoLT) Research Experience for Undergraduates internship programs. The programs engage students majoring in diversified areas of engineering, computer science, rehabilitation science, or related fields as they learn the real issues faced by persons with disabilities and apply engineering principles to improve their level of functionality, quality of life, and society participation.

s the old saying goes, 'Home is where the heart is.' For John Bianco, an alumnus of the first graduating class of the Emergency Medicine program in 1998, this phrase has two meanings and they have to do with more than just geography. While it's true that the Virginia Beach, Va. native took a 20-year departure from his hometown to study, work, and hone his skills in Pennsylvania before returning home in 2004, the phrase has an even deeper meaning.

Not only is he back where he started two decades ago, when he was a 19-year-old volunteer, Bianco has risen, through hard work and discipline, to become division chief of the City of Virginia Beach EMS, helping people in the same community where he began his career and doing what he loves.

A Passion is Born

Bianco fell into the field of Emergency Medicine as many paramedics do, working as a volunteer intern at the Princess Anne Courthouse Volunteer Fire Department and Rescue Squad while earning his undergraduate degree in biomedical engineering



"So many of the science fields, especially engineering, don't include a great amount of interaction with the people you are helping," he explains. "In emergency medicine, you are in the community helping people every day. You have an immediate impact on people's lives and, often, you follow up with people over time and are able to chart their progress towards better health and wellness. Success is measured in 'thank yous' and that's a pretty special thing."





These early experiences with emergency medicine were highly influential on Bianco and he soon shifted his attention towards paramedic training, earning an associate's degree from Tidewater Community College in 1993. Two years later, needing a job and already committed to a career

> in EMS, Bianco traveled to Pittsburgh to interview for a position as Regional **EMS Training Coordinator** for the Emergency Medical Service Institute (EMSI). He remembers, "Dr. (Walt) Stoy and Dr. (Tom) Platt were two of the first people I met on my first trip to the University of Pittsburgh, and they would both go on to become two of

my greatest mentors. Not only do I hold my degree from the School of Health and Rehabilitation Sciences (SHRS) as critical to my present-day success, but I'm also indebted to these two amazing guys - both of whom helped guide me down the road I'm on today."

Training for Success

Bianco started in the first class of the Emergency Medicine undergraduate program around the same time he began working as training coordinator at EMSI. He was able to transfer his associate's degree credits as well as the paramedic certifications he had earned in Virginia and applied them to his coursework at SHRS. Bianco also benefited from tuition reimbursement programs at Pitt - a service he encourages any student also working full-time to investigate. "Across the board, my employer at EMSI and every instructor at SHRS were terrific flexible with my coursework and very accommodating given my busy schedule," he says.

During this time Bianco also helped form the Emergency Medicine Student Association at the University of Pittsburgh, of which he served as president from 1997-1999. Of the need for the association, he explains, "We initially started the organization as a way to broaden our social networks, but it quickly morphed into a great way to further develop as EMS professionals and reach out to the greater university community to inform students about the program and about the wonderful career opportunities that were available with a degree."

Moving on Up

In 1998, Bianco graduated from the program and moved to State College, Pa, to run an educational program at Penn State University in the kinesiology department based on emergency

medicine. The new position, field supervisor and EMS instructor for the University, was meant to bolster a student-staffed ambulance corps run by the University, providing additional education and training for members and also to offer EMT certification for students.

Notes Bianco, "The new offering and the hands-on experience were a tremendous springboard for me. It gave me a faculty appointment at



Penn State with a charge to expand the curriculum offerings of emergency medicine within the Department of Kinesiology and it also challenged me to expand my skill sets to develop interesting, informative curriculum that would help encourage students' understanding and mastery of emergency medicine and leadership

And Moving Home

During the time Bianco had been away, the city of Virginia Beach had almost doubled in population and call volumes to EMS had exploded. At the time, the city's EMS service was the largest allvolunteer operation in the nation with 10 volunteer rescue squads.

"The rise in population forced the city to integrate highly qualified career

paramedic positions that could assist the volunteer rescue squads to ensure the city was getting optimal EMS coverage. Twenty-four paid medics were hired and there was also an opening for Division Chief – the one job I would have left Penn State for. Despite all of the wonderful things happening at Penn State and the challenging and rewarding work I was doing, the opportunity to take a high-level public service position back in Virginia Beach and to play a role in helping to move this progressive

system forward was hard to pass up.

"At this point, professionally, I have come full circle from my first taste of emergency medicine as a 19-year-old in Virginia Beach to now, where I have the honor of serving as Division Chief of Administration under EMS Chief Edwards, another time-honored mentor."

But Bianco has not stopped preparing for future successes. By the time this article appears, he will have received his master's

degree in Emergency Management and Public Safety Administration from Drexel University. He is also involved in helping to develop a quality and safe air medical program with the Virginia Beach Police Aviation Unit and the Virginia Beach EMS Flight Medic Team. Bianco recently accepted delivery of a brand-new Bell 407 multiplatform helicopter as part of the effort, and the program graduated its first airmedical class.

"There are always opportunities in emergency medicine - as in any field - to further your understanding and implementation of knowledge and of training practices. I strive to bring 100 percent to my job because, at the end of the day, your skills don't only benefit you, they benefit the people in your community who need you."

12 | FACETS FALL/WINTER 2008 FACETS FALL/WINTER 2008 | 13

Emergency! Doha.

The State of Qatar is a very wealthy place. The International Monetary Fund proclaims it has the highest GNP per capita of any country in the world. Its stock and trade, of course, is fossil fuels: Qatar holds the third largest natural gas reserves in the world and is the single largest supplier of liquefied natural gas. It's also a member of OPEC, albeit the smallest exporter of crude oil.

Yet with all this wealth – and a manageable population of just a bit over one million – 10 years ago there were just five ambulances in all of Qatar. But the country is committed to making its health care system including its emergency medicine program - second to none.

In 2006, UPMC entered into a fourand-one-half year partnership with Hamad Medical Corporation (HMC), Qatar's only health care corporation. The goal of the project is to bring top talent together and provide worldclass emergency medical care to the citizens and residents. The HMC/UPMC partnership is designed to implement world-class standards of emergency medicine at HMC and establish HMC as a world-class provider of emergency medical services.

But there was a learning curve that needed to be addressed. "Many of the emergency medical service providers in Qatar have a basic foundation of knowledge and skills, but lack the experience and more specialized training," says Bryan Kuszajewski, a 2008 graduate of the Emergency Medicine program, who has taken his clinical instruction experience to Qatar to train current and future EMTs and paramedics as supervisors. "I find they are much more task-oriented than is required to be a good supervisor. They need to be able to think for themselves, and to make the on-the-spot decisions required in the field.

"Many of them are not as engaged as we might want them to be, working a 7 a.m. to 3 p.m. 'job,' rather than a career," he notes.

The EMTs and paramedics as a group are quite multinational. "We have EMS providers from the Philippines, Jordan, Tunisia, Australia, Canada, and Iran serving throughout the health care system." Compared to neighboring countries, the citizens and workers in Qatar are better paid. "Many of them work to support their families in their native lands," says Kuszajewski.

Supervising people halfway around the world in a Muslim country can present quite a challenge. "For example, Muslims are currently adhering to the traditions of the Islamic holy month of Ramadan, a religious observance that requires that they fast from sunup to sunset." During the fast, they consume no food or water, making the 12-hour shifts very taxing in the high heat of Qatar. "We have

to keep an eye on people to ensure that they don't dehydrate."

Even business meetings have their own flavor in Qatar. "Everything is based on relationships," he notes. "A business meeting begins with coffee, tea, dates, and five minutes of chatting about anything but work before you get down to business."

Muslim traditions and beliefs bring other elements to the mix. Some ambulances are staffed with a female paramedic to ensure the privacy of a female patient. But if a female is not available, Kuszajewski states the male EMTs need to adapt, in some cases modifying procedures like performing an EKG. Although English is the official language of Hamad Medical Corporation, virtually every ambulance is staffed with a fluent Arabic speaker.

A Different World

Kuszajewski's current experiences are a far cry from his previous assignments, first as a paramedic in Greensburg, Pa., and then in the same post for the City of Pittsburgh Bureau of EMS for the last 13 years. During his education and training with the Center for Emergency Medicine and SHRS, he served as a field preceptor for paramedic students

In his spare time, Kuszajewski even served as a featured paramedic in the short-lived TLC television show, "Paramedics," a reality TV version of the then popular "Third Watch."

But it was his clinical experiences and work with the Center for Emergency Medicine that prepared him for the current assignment. "I was exposed to so much outside the traditional EMS curriculum in the areas of finance, budgeting, human resources, things that I know I am using every day." Kuszajewski has been assisting HMC department heads with budgeting and staffing, among other issues.

Exploring Qatar

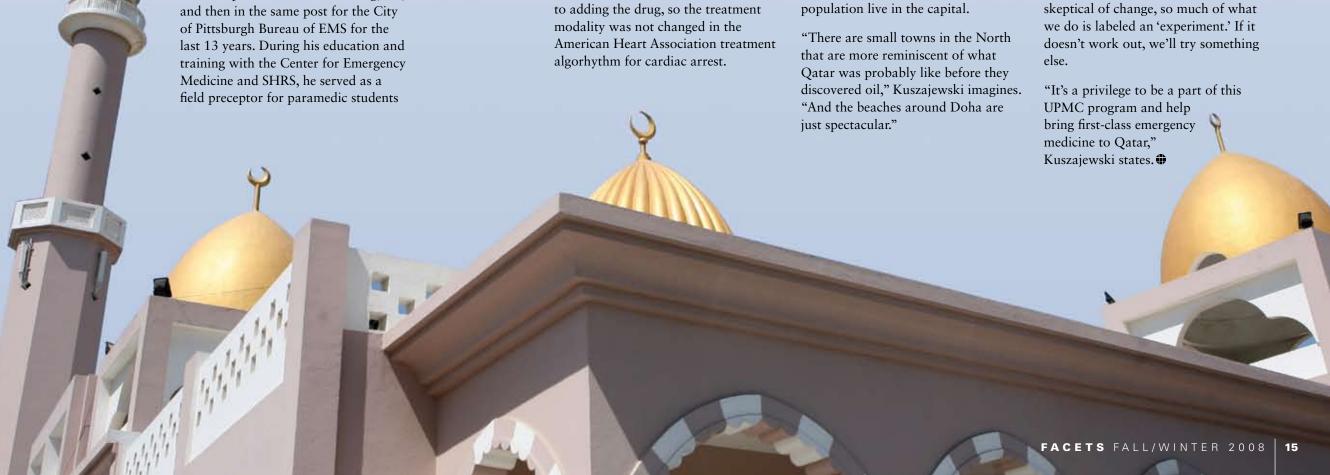
If you're lucky enough to work in an exotic locale like Qatar, by all means, Kuszajewski suggests, explore. "Friday, the Muslim holy day, is a good day to discover the country since there are fewer cars on the road," he offers. Given that Qatar is slightly smaller than the state of Connecticut – just 100 miles north to south and 55 across – chances are you can drive the country in under two hours. But, by and large, Qatar outside Doha is a vast desert, which is why 90 percent of the

What else does an American do on his time off? "It's been very warm since I arrived three months ago, although the weather is beginning to cool slightly." During the hottest part of the year, people gravitate to the malls since they're air-conditioned, although traditional markets, or souqs, abound in Doha, filled with the traditional smells, sounds, and haggling one would expect to encounter.

Sports are also a big part of the entertainment in Doha. "Soccer is a big sport here, but people also enjoy auto and motorcycle racing, and camel racing." There are also annual professional tennis tournaments.

To maintain his own edge in the field, Kuszajewski also volunteers one shift per week as an advanced paramedic, staffing the sole paramedic response unit in Qatar. Working along side Kuszajewski is Conlen Booth, a 2006 SHRS graduate from the Emergency Medicine program.

The three months he has spent in Qatar thus far have proved to be both interesting and rewarding. "I think I'm learning more than I'm teaching right now. I'm learning that people here are skeptical of change, so much of what we do is labeled an 'experiment.' If it



as part of the NHTSA EMT-Paramedic

professor and director of the Emergency

National Curriculum. Dr. Walt Stoy,

coordinator for this national effort.

Kuszajewski was also co-investigator

benefits of administering Vasopressin

along with epinephrine during cardiac

arrest resuscitation in the field. The

research proved there was no benefit

Medicine program, was project

of a study designed to assess the

Real World

cores of manuals are distributed each year containing valuable information, but they often go unheeded because they're just overwhelming. Researchers at the University of Pittsburgh did not want that to be the case with "Preservation of Upper Limb Function Following Spinal Cord Injury," clinical practice guidelines produced by the Consortium of Spinal Cord Medicine and published in 2005 by the Paralyzed Veterans of America. The panel was chaired by Dr. Michael Boninger, professor and chair, Department of Physical Medicine in the School of Medicine and medical director of the Human Engineering Research Laboratories (HERL). But some clinicians found the 48-page document too daunting. So Boninger and his colleagues set out to test the hypothesis that easy-to-follow clinical guidelines would be better received by clinicians and ultimately improve rehabilitation of spinal cord injury (SCI) patients.



Laura McClure, a doctoral candidate in the Department of Rehabilitation Science and Technology and a researcher at HERL, is helping to implement and coordinate the study, which includes both occupational and physical therapists, and an intervention group of patients as well as a control group. The control group is receiving the usual high standard of care offered at UPMC Institute for Rehabilitation and Research hospitals, while the intervention group is following a protocol designed by McClure to maximize adherence to the guidelines, notes Karen Greenwald, clinical research coordinator.

"Each study participant is evaluated four times in the year after their initial rehabilitation following a spinal cord injury," says McClure.

Patient Profiles Vary

Subjects in the study span the range of socioeconomic status, age, and ethnicity. One participant is Katie Smith, who suffered an SCI in a car crash more than a year ago. She spent a month in the ICU before being transferred for three months of rehabilitation. At just 23, she is one of the younger subjects in the study, but her youth may also have contributed to her rehabilitation; Smith is proud of how far she's advanced.

"When she first arrives, Katie and I talk about how her rehabilitation is progressing, if she's experiencing any upper body or shoulder pain, or any difficulty with activities of daily living," offers McClure, who notes that 30 percent of SCI patients experience difficulties with those activities.

"Patients with spinal cord injuries use their upper bodies for virtually everything," McClure points out. "They have to transfer from the wheelchair to their bed and the car, and they have to propel their wheelchair." The study includes people who use both manual and powered wheelchairs.



and physical therapists, including range of motion, strength, and ability

to transfer from their wheelchair. McClure also uses a hand-held dynamometer, which provides detailed and objective measurement of a joint's strength throughout its range of motion.

She also switches out a standard wheel on Smith's manual chair with "SmartWheel," which was developed at

HERL and is now commercially available through Three Rivers Holding, LLC. A number of the recommendations in the clinical practice guidelines were a direct result of research conducted by Boninger and his students, one of whom is McClure, using the SmartWheel. "This is a very important tool in helping to minimize shoulder pain and injury,"

says McClure. "We can monitor how much force Katie is using to propel the chair and how much is being lost to inefficiency, how much time is spent

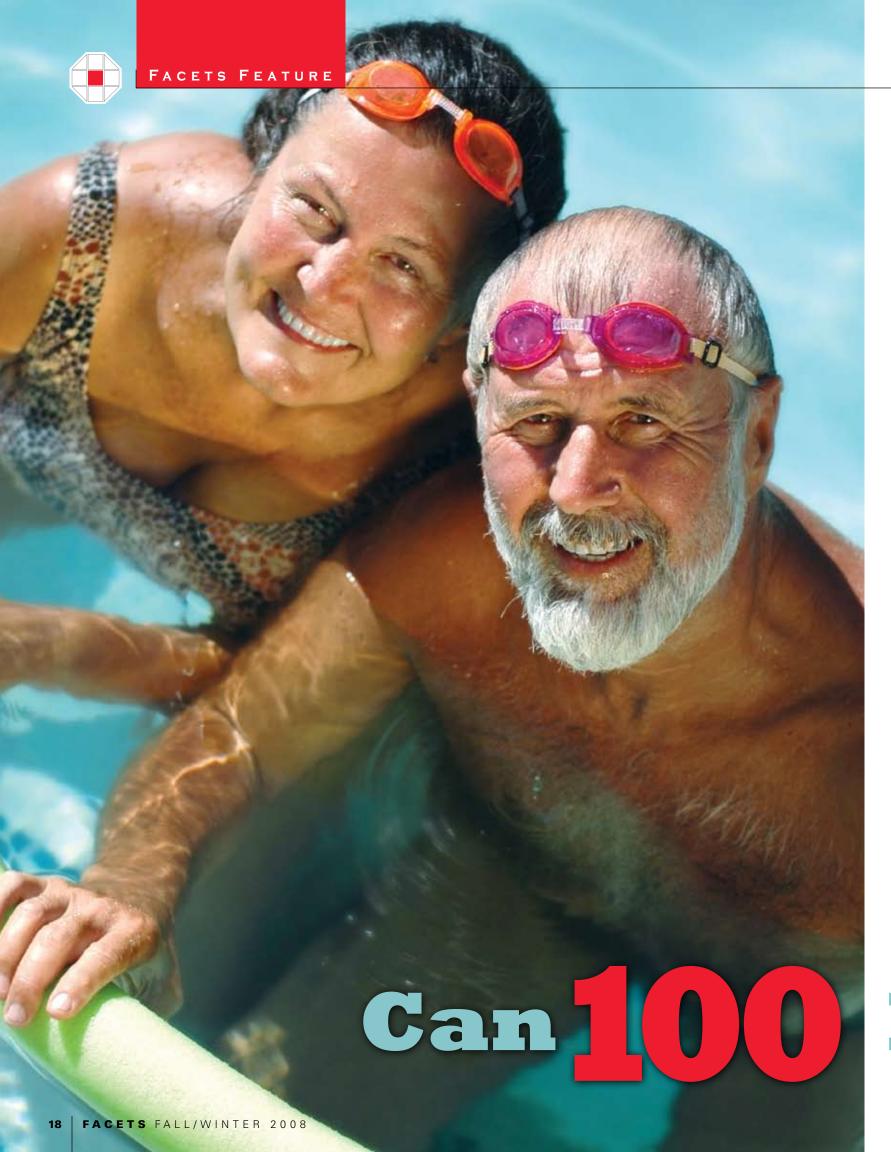
> pushing versus time in recovery, and how much torque she's applying to the wheel."

A memory card is removed from the wheel and McClure can generate a report that allows her to assess, evaluate, and compare wheelchair propulsion and plot Smith's progress in rehabilitation.

Parenthetically, the Smart Wheel can also assist in justifying the purchase of ultra-light or power wheelchairs.

McClure notes that her dissertation will be based on this research. "I always wanted to be a physical therapist and I've always been interested in spinal cord injuries, so this is a great research project for me."





Imagine if you were born in 1908.

William Howard Taft defeated William Jennings Bryan for the presidency. Albert Einstein advanced his quantum theory of light. And the University of Pittsburgh football team was the first in the country to put numbers on its uniforms.

But if you were a man born that year, you could only expect to live to age 49½. A woman could expect to live three years longer. So how were today's nearly 60,000 centenarians able to beat the odds and even outlive the current life expectancy of 76 years for men and 81 years for women?

To be sure, good genes are a plus. But we've also had the advantage of incredible advances in medicine, coupled with a greater awareness of the importance of living a healthy lifestyle.

As a country, we stand at a precipice of longevity – in the next 20-plus years, the number of people over 65 will more than double to 71 million, or one in every five Americans. There's no question that we're adding years to our lives. The challenge is how we can add life to our

Keeping an Eye on Aging

There is no shortage of professional interest in helping our population age gracefully. The National Institute on Aging, the International Longevity Center, the AARP, the International Council on Active Aging, the Administration on Aging, the Alliance for Aging Research, the American Federation for Aging Research, the American Geriatrics Society, and the Lifelong Fitness Alliance are just some of the professional and consumer organizations devoted to ensuring that we age well.

At the micro level, Pittsburgh is blessed with its own resources. The Benedum Geriatric Center of UPMC, the University of Pittsburgh Institute on Aging, the Center for Aging and Population Health, and Claude D. Pepper Older Americans Independence Center are among the programs.

The National Institute on Aging has taken the lead on many of the aging



initiatives, including the Dynamics of Health, Aging, and Body Composition Study (HealthABC), a longitudinal study of more than 3,000 black and white men and women, ages 70-79, living in Pittsburgh and Memphis. The purpose of the study is to characterize the extent of change in body composition, identify clinical conditions accelerating these changes, and examine the health impact of these changes on strength, endurance, disability, and weight-related diseases of old age.

The primary investigators from the University of Pittsburgh are faculty in the Graduate School of Public Health (GSPH) and the School of Medicine. Dr. Jennifer S. Brach, assistant professor,

Department of Physical Therapy, who holds a Ph.D. in epidemiology from GSPH, has conducted a cross-sectional examination of baseline data from the HealthABC repository.

As part of the research, Brach studied "The Association Between Physical Function and Lifestyle Activity" among the well-functioning participants. Their activity was characterized at one of

> three levels: those with a basically sedentary lifestyle; people who participate in an exercise program; and those who live an active lifestyle - being a caregiver, cleaning the house, and performing other activities of daily living - but don't actually exercise.

"Our goal was to determine if a person has to participate in a structured exercise

program or was being active throughout the day – a busy person caring for a sick spouse or taking care of your grandkids – beneficial as well," says Brach.

"What we learned was older adults who participate in 20 to 30 minutes of moderate exercise most days have better physical function than those who are active throughout the day or who are inactive," Brach concludes. "We don't want to discourage people who do lead an active life – any activity is better than none at all – but the research demonstrates that exercise offers a greater benefit for physical fitness."

Continued on next page

be the new 152



FACETS FEATURE

But where can seniors go to get the kind of exercise Brach and others recommend? Many feel self-conscious joining their local gyms, some of which aren't easily accessible for older Americans. Programs like SilverSneakers®, a nationwide initiative that encourages physical activity for seniors, many of whom may not have been active in years, is available throughout the country. Run through a variety of fitness centers like the YMCA or even libraries, SilverSneakers offers a range of programs, many of which are paid for by a participant's health insurance.



At Sherwood Oaks, a senior community north of Pittsburgh, residents are experimenting with a senior version of "Dance, Dance Revolution," the music video game where players use their feet rather than their hands. Dubbed "Dancetown" by its creator Jeff Pepper, CEO of Touchtown, Inc., a provider of communications systems for retirement communities, the music video game has been modified and simplified for seniors.



Gathering Place

Community-based senior centers have long been a fixture in the community, a place where people could go to socialize, have a hot meal, or craft. It's estimated there are some 15,000 senior centers operating across the country, many vestiges of the '60s and '70s and the Great Society, when federally financed meals for the elderly were a must. But many of the centers are now underutilized – they just don't meet the needs of today's seniors.

The "new older adults." as Judith L. Dodd, adjunct assistant professor, Department of Sports Medicine and Nutrition, refers to them, don't congregate in church basements or relish traditional senior center menu items like tuna noodle casserole or goulash.

"Most of the current senior centers aren't being utilized as they should be because they are irrelevant," says Dr. Margo Holm, professor and director of post-professional education, Department of Occupational Therapy.

But in Chicago, among other cities, new, modern centers are sprouting up. They feature cheerful cafés where diners can order a chicken Caesar salad or a Panini. Several are run by Mather's LifeWays, a nonprofit organization established in 1941. In addition to food, these new centers offer health screenings, exercise programs, computer and craft classes, and music and dance lessons.

spacious, and comfortable. And while there is a modest charge for most activities – county-run facilities are generally no cost - the breadth of offerings is appealing to a younger clientele. It's not uncommon for three

The "new older adults,"

don't congregate in church

basements or relish

traditional senior center

menu items like tuna

noodle casserole or goulash.

The environments are bright and cheerful,

New York Mayor Michael Bloomberg is also taking up the senior center cause. In that city, the Department of Aging runs 329 centers throughout the five boroughs. But at an annual cost of \$94 million, the mayor is committed to ensuring that the centers, which he declares are underutilized, appeal to an audience younger than the current median age of 77. He is hoping to convert the current system into one that includes small neighborhood centers

generations of a family to

enjoy a meal together.

Continued on next page

community resources.

along with borough multi-service

of services and connections to other

centers featuring a comprehensive array





Finding Skilled Practitioners

The need for health care professionals trained in geriatric principals is escalating. And yet, the situation is getting worse, not better. In the latest report from the Institute of Medicine, Retooling for an Aging America: Building the Health Care Workforce, the number of certified geriatricians has dropped to 5,800 from 7,100 six years ago.

Today, 20 percent of Medicare beneficiaries have five or more chronic conditions and account for 70 percent of Medicare spending.

According to one estimate, the nation's teaching hospitals are producing one or two geriatricians for every nine cardiologists or orthopedic surgeons.

Dr. Neil Resnick, professor of medicine and director of the University of Pittsburgh's Institute on Aging, opines that fewer than three percent of physicians have even one hour of geriatric training and fewer than one percent of nurses and pharmacists have the equivalent.

"We know that a major contributor to that is reimbursement," says Resnick. "Despite the fact that, according to

research, it's a specialty that people enjoy very much, if you graduate from medical school with loans of more than \$100,000, it's not a surprise that geriatrics - with probably the worst reimbursement levels – is undersubscribed."

There are efforts underway to reverse this trend. In 2007, the Senate took up the Geriatric Assessment and Chronic Care Coordination Act, which codifies the coordinated team approach and requires Medicare to provide quality programs for multiple chronic illnesses. Today 20 percent of Medicare beneficiaries have five or more chronic conditions and account for 70 percent of Medicare spending.

Resnick points out that Dr. Edward Wagner, director of the MacColl Institute for Health Care Innovation, created the Chronic Care Model which describes the community, patient, family, and

professional resources required to care for the 133 million people in the U.S. with chronic conditions. While the model can be applied to any age range, it is of particular value when treating an older patient. But it is

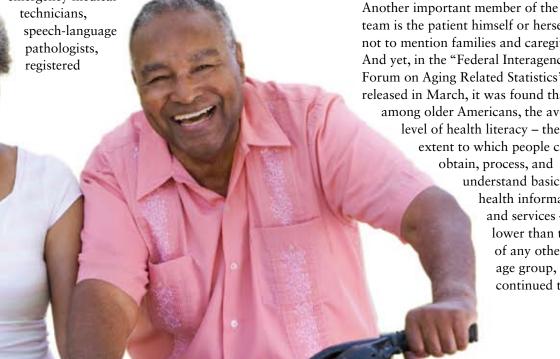
important to note that society as a whole can be healthier longer if younger people with chronic illnesses, such as asthma, are treated under the model.

Simply put, treating a person with multiple diseases is difficult. "Guidelines for treating one condition may be a direct contradiction for a second condition," says Resnick. "The patient may have several different payers and programs ranging from the area agencies on aging, senior centers, and services like Meals on Wheels, to Medicaid and Medicare. Each pays for certain things, but doesn't pay for others." No wonder patients are confused.

Beyond the Physician

emergency medical

The team caring for a person with chronic or multiple conditions isn't comprised of only physicians. Nurses, therapists, dentists, pharmacists,



dietitians, audiologists, and social workers may be a part of the group.

The "Retooling for an Aging America" study is slightly more upbeat about training and availability of geriatric experts in these professions.

"Some disciplines, such as occupational therapy, have traditionally served older clients, so the need for additional professionals is not as acute," says Dr. Ketke Raina, assistant professor in the Department of Occupational Therapy. But she notes that reimbursement remains a concern across medical disciplines. "An OT prefers to evaluate clients in their homes to ensure they perform as well as in the clinic, but if no reimbursement is forthcoming, the OT may have to settle for the clinical assessment."

Responsibility for Our Own Health

team is the patient himself or herself, not to mention families and caregivers And yet, in the "Federal Interagency Forum on Aging Related Statistics" released in March, it was found that among older Americans, the average level of health literacy - the extent to which people can obtain, process, and understand basic health information and services - was lower than that of any other age group, and continued to

decrease with age. Thirty-nine percent of people age 75 and over had belowbasic health literacy, compared with 23 percent of people ages 65 to 74 and 13

But with so much information available, how can this be? The interagency forum surmised that overall declining literacy in the U.S. is a primary cause for the deterioration of our health literacy.

percent of people ages 50 to 64.

"If you try to go to the popular government Web sites, many are very difficult to navigate," Resnick explains. "And because most physicians have very little education in geriatrics, they are ill-prepared to help the patient" with things outside the scope of an actual disease.

And caregivers aren't always helpful. Raina recalls a home assessment she conducted for a patient who was being released from a rehabilitation facility. "I recommended moving some furniture and removing a couple of throw rugs, but his wife was adamant. She didn't want her décor changed."

Caregivers also need to know their limitations. "Think of a case of a husband who had been ill and he has a frail tiny wife who thinks she can care for him," Raina points out. "We will focus on the way she can transfer her husband from bed to wheelchair in a way that is safe for her and for him.

"From my perspective," Raina continues, "I would like to emphasize that those living to be 100 need to have quality of life, and that means the ability to take care of themselves, their environment, and be independent in their home. This is extremely important for aging in place."





7e've all known an elderly person who has suffered from hearing loss. As with many degenerative auditory and speech conditions, the impairment often comes gradually, leaving the individual more and more closed off from friends and family, and more gradually still, closed off from the world.

Hearing loss in the elderly is more than just the loss of a vital communication function. It brings with it serious social and emotional issues – challenges that are often as intertwined in the loss of health and wellness as the hearing impairment itself.

But recent research from Dr. Sheila Pratt. associate professor, and others in the Department of Communication Science and Disorders, is aimed at reversing the cycle of isolation all too often associated with hearing loss in the aging. Specifically, their work centers on how older adults with hearing loss process speech and language and how this relationship then relates to their social interactions with family, peers, health care professionals, and others.

Explains Pratt, "Hearing loss and cognition decline are just two of the things that many older people are forced to come to terms with as they age. They are also dealing with the natural process of aging, the loss of memory and motor skills, and the onset of diseases or other disorders, so a loss of hearing can very often compound these other issues.

"Communication is a powerful tool in the healing and rehabilitative process and, for many people, a loss of hearing and the concurrent breakdown in communication can begin to cause or exacerbate other more serious health issues."

Health issues, Pratt contends, can never be looked at in isolation. And with this in mind, most of her recent work on hearing loss in the elderly population has come in the form of two studies: one that deals with persons with aphasia who are also experiencing hearing loss, and one that explores the relationships between hearing impairment and a rise in social and emotional detachment and disorders.

The Double-Edged Sword of Hearing Impairment in the Elderly

The Synergy of Healing

For Pratt's research with persons with aphasia, she has assessed the auditory language processing skills of approximately 130 participants over a four-year period at the VA Pittsburgh Health System at Highland Drive, one of the largest veterans' health centers in Western Pennsylvania. Of the study, she explains, many people with aphasia due to brain injury also experience hearing loss but never receive the proper attention to their hearing because health care providers and caregivers are focused on the more pressing and overt health affects of the brain injury.

"Hearing loss is rarely of primary

concern when someone suffers a brain injury as a result of a stroke. These patients present health issues that are more pressing than hearing loss, but as patients stabilize and require rehabilitation, hearing loss should become more of a concern. Hearing loss is very common among adults and becomes more

common and more severe with age. So with older adults there is increased risk of hearing loss, severely hindering the diagnosis of neurogenic communication disorders as well as the proper implementation of rehabilitation. The problems associated with hearing loss compound the larger health issues related to the stroke," she reiterates.

Trouble communicating is compounded not only by aphasia, but also by hearing to produce a negative emotional issues. Pratt begs the question: if patients cannot hear what their speechlanguage pathologist says to them, how will they respond to therapy?

While the solution may seem simple, it likely will require substantial effort by Pratt and others to convince health care providers that fitting hearing-impaired stroke victims with hearing aids will make their jobs easier and might lead to more progressive – and more complete - patient recovery.

"For patients suffering aphasia due to stroke, the shock of the brain injury and the effort associated with the rehabilitative process can be hard enough. By taking small steps early on to check for hearing and other sensory impairments, we can ease the recovery and help people improve their health and self-esteem – in a more advanced manner."

Understanding the Root of Depression

While the first project deals with the compounding health affects that can impact people experiencing hearing loss the second study Pratt has led analyzes its debilitating social and emotional impacts.

frequently avoided. As conditions worsen, people often quit talking and remove themselves from conversations for fear of miscommunications. For some, it can contribute to alienation and depression."

While the data from Pratt's study of 546 elderly adults have yet to be completely examined and analyzed, anecdotally, she and colleagues have found a relationship between severe hearing loss in older adults and depression. Based on these findings, Pratt has come to two certain conclusions. First, hearing loss in older individuals should be treated more aggressively with hearing aids and cochlear implants, along with other devices such as assistive listening devices. Second, depression should

> not be ignored in this population, but should be treated the same as or more aggressively than the rest of the population.

Pratt also suggests that counseling could have an enormous impact on family members who are often troubled by their family member's

detachment. "Open communication and even counseling with family members can go a long way in helping them deal with hearing loss and negative emotional responses associated with it. In these situations, the patients themselves aren't the only ones affected," she says.

In the end, Pratt says, hearing loss needs to be addressed in combination with other medical challenges in the elderly.

"A loss of hearing affects every part of a person's life and we need to address any hearing problems as rapidly as possible. It is my hope that, through our work here at the VA and through the University of Pittsburgh, we can begin to make some headway and increase awareness about how to help solve an avoidable problem with our



greatly among people, but as hearing loss becomes more severe with age, many respond negatively and become more isolated from others. Although the results of studies have been mixed, there is a suggestion that hearing loss heightens the risk of depression," she explains. "What we've found in our research is that more pronounced hearing loss in older adults tends response and an increased likelihood of depression. A concern is that the negative emotional response reflects reduced communication with family and friends and increased isolation."

"The impact of hearing loss varies

Pratt continues, "Family functions, which can be noisy and involve many people speaking at once, can cause older people with hearing loss to become frustrated, meaning that, over time, family gatherings become sources of consternation and are more



The Center for Emergency Medicine of Western Pennsylvania has come a long way in 30 years.

From its roots in 1978 as an education and research institute, the Center has developed into one of the preeminent research and training institutions in the world with six member hospitals (including UPMC Presbyterian/ Shadyside, UPMC Mercy, Children's Hospital of Pittsburgh of UPMC and Altoona Regional Hospital), more than 40 clinical and field sites in and around the city of Pittsburgh, dozens of professors and instructors, and thousands of students taught and trained annually. The Center has close ties to the City of Pittsburgh Department of Public Safety, which plays an integral role in training Pitt

students, and the University recently added an Emergency Medicine Residency program to its roster. And as the Center has grown in prominence in the emergency medicine community, the Emergency Medicine program at the School of Health and Rehabilitation Sciences (SHRS) has shared in its successes.

The academic framework that is now the Emergency Medicine program can be traced back to Dr. Ronald D. Stewart, who was recruited by the University of Pittsburgh to become the Medical Director of the Department of Public Safety Bureau of EMS for

the City of Pittsburgh. At a time when emergency medicine was still a littleknown field – both in academic circles and among the general public – his first order of business was to found the Center for Emergency Medicine.

Finding a Home and a Purpose

Thirty years ago, the medical community in Pittsburgh was close-knit. Under Stewart's watch, the University of Pittsburgh Affiliated Residency in Emergency Medicine (the precursor to the current program) was established in connection with Mercy Hospital, West Penn Hospital, and Presbyterian University Hospital. Dr. Paul Paris, who is now a professor in Pitt's School of Medicine and holds a secondary appointment with the Emergency

Medicine program, was the Affiliated Residency Program's first director, a position which he held while serving as associate medical director of the City of Pittsburgh EMS.

The Center for Emergency Medicine spent its early years as an affiliate of Pitt's School of Medicine until, in 1983 it became privatized and operated as its own entity. Since then, the Center matured at a rapid pace, adding faculty members and courses of study. In 1997, the Emergency Medicine program was incorporated into SHRS.

Given the Center's close early affiliation with the School of Medicine, this connection drew the most direct academic focus. Much of the early curricula pertained exclusively to teaching and training fourth year medical students and visiting physicians involved in continuing education.

Remembers Dr. Walt Stoy, professor and director, Emergency Medicine program, and one of the Center's first academics, "For most of the first decade of the Center's existence, we worked closely with the School of Medicine probably most closely with Surgery and Critical Care Medicine. Prehospital care training was in high demand in those days and between our work with med students and our continuing education program, where physicians came from across the state, we had an impact on thousands of health care professionals."

It was during these early years that the Center developed its identity.

As a highly specialized discipline within the health care industry, emergency medicine has always been on the front lines of care – first on the scene to diagnose and administer aid, a place where instincts and quick decisionmaking are crucial to ensuring patients' well being and survival. And because emergency medicine is regarded as the 'door to the institution,' the discipline has long been highly respected across the spectrum of health care services.

"Emergency medicine maintains an important role in the continuum of care and our role as first responders is integral in everything we do," says Stoy.

Cementing a Legacy

As the Center grew and began developing a reputation for its superb pre-hospital curriculum, health care professionals around the country began to take notice. In the early '90s, the federal government, under the National Highway Traffic Safety Administration, tapped the Center to develop the national standards for pre-hospital EMS coursework. (Predating the Center, in the 1970s Nancy Caroline and Peter Safar had developed the original paramedic curriculum that the country followed.)

In 1997, the Emergency Medicine program was incorporated into SHRS.

In 1994, the Center developed the EMT – Basic National Standard Curriculum, in 1995, it crafted the same standards for the national First Responder curriculum and again, in 1998, the Center created the national EMT Intermediate and Paramedic curricula.

In 1996, academics at Pitt and at the Center were asked to be principle investigators for the "Agenda for the Future," a working document that identified 14 components of EMS that would need evaluation moving into the 21st century and beyond.

Not long after, faculty members, including Stoy, were involved in the crafting of an EMS educational agenda in Washington, D.C., that examined EMS core content and national testing.

"Faculty members at SHRS have had the honor of having input in many federal EMS programs over the years," says Stoy. "But our strong reputation in the community doesn't come from the strength of just a few, but from the collective atmosphere of curiosity and commitment that we have developed over the years here at Pitt."

As further evidence of this worldrenowned expertise, of the 200 presentations given at the last two annual National Association of EMS Physicians meetings, 20 were given by students from the Emergency Medicine program, twice as many as from any other attending institution.

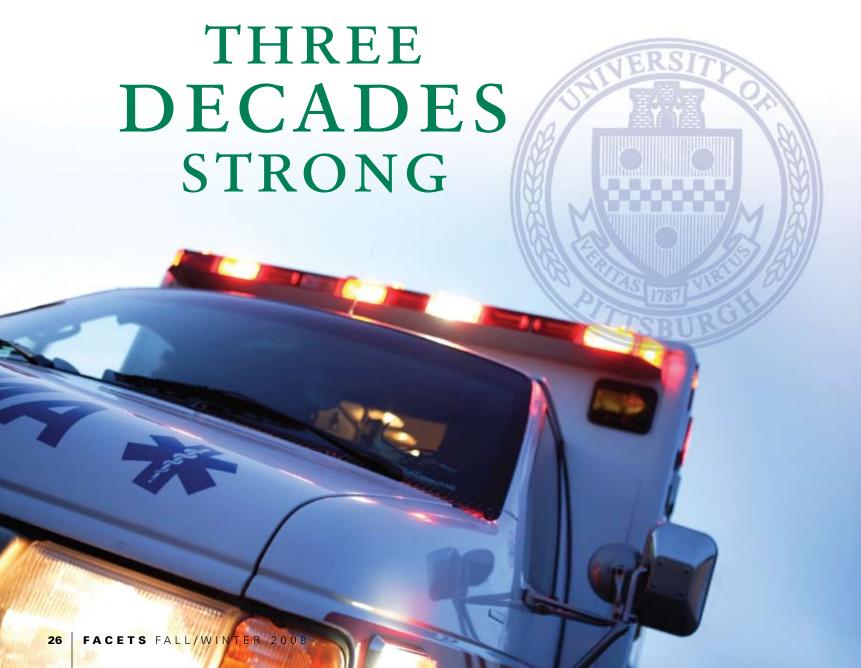
The Students Make the Difference

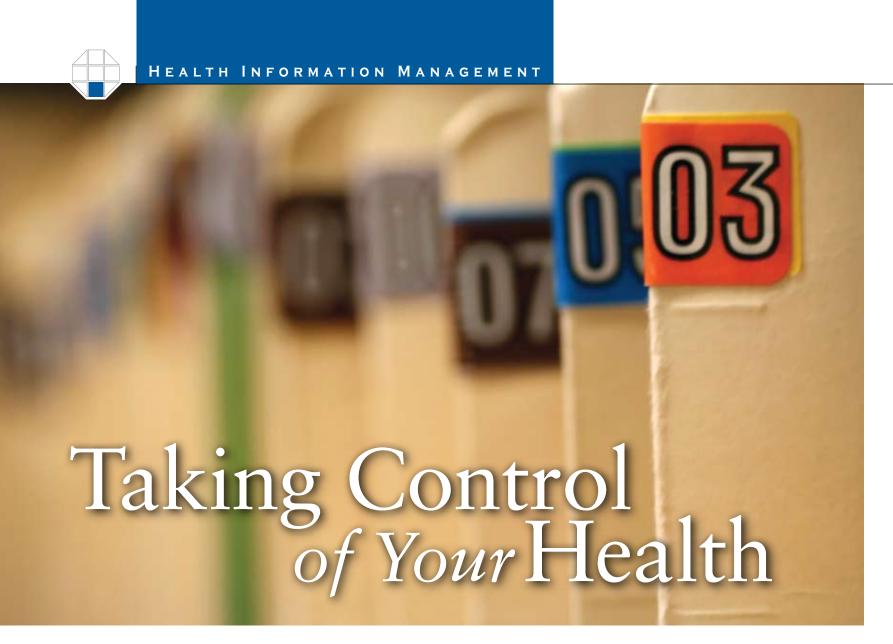
But more has changed in 30 years than the program's location and status. According to Stoy, the student body has evolved with the times as well.

"During the late '70s and early '80s, the field was faced with major manpower issues. To meet demand, we reached out and accepted students and young professionals who were very interested in the field but had little hands-on experience," Stoy explains. "But that has changed dramatically.

"Now, students enter the program with a solid understanding of what the training and practice of prehospital care entails, which is good considering how much more complex the curriculum and coursework have become."

Adds Stoy, "Forty percent of admissions to UPMC come through the emergency department, so, all along, we have attracted students with a drive and determination to help and heal. And it is our students, above all, who define our program and what we stand for, and share in our success."





dhe Information Age is here and it's here to stay. And few health care professionals know this better than Health Information Management (HIM) practitioners, whose job it is to help administrators, doctors, insurance interests, and patients manage and interpret the ever growing body of information that each of us accrues throughout our lives.

In the past, keeping patients' records and medical history organized and accurate as they maneuver through health plans and insurance carriers, health systems, and providers has been a challenge. Until recently, many systems to track and monitor patient information were paper-based, meaning the transfer of vital patient information was often done by fax, mail, or by hand, each of which was prone to improper transfer and human error. In addition, the fact that patient records are kept

in multiple places – from primary care physicians' offices to patients' own homes – has made it extremely difficult for even the most organized and astute patients to maintain a complete picture of their medical history.

But recently, HIM professionals have begun turning to a new, more organized, and more secure mechanism to record and track patient information - the personal health record (PHR). PHRs contain all of a patient's medical information from birth and chart all of the medical events in a person's life, from the minutia of annual checkups and screenings to physician notes from major medical events.

Why it's Important

More than a replacement of the formal records held by doctors and insurance carriers (which are still kept in the form of a patient's electronic

health record), the PHR is a new tool meant to empower the consumer. Patients can have access to their own vital information while traveling or when doctors' offices are closed. PHRs can help individuals prepare for an important appointment, work towards health-related goals, and monitor health progress in a more informed manner than ever before.

"PHRs allow patients to monitor lab testing results, immunizations, allergies, and summaries of past medical office visits," explains Dr. Valerie Watzlaf, associate professor, Department of Health Information Management. "Not only do they provide a new opportunity to give patients access and control over their medical history, they add a new level of security for who can access this information, something HIM professionals have been working to make a reality for some time."

But beyond allowing patient access and ease of sharing and storing, PHRs also can help patients make better, more informed, health care decisions. Watzlaf personal health habits such as whether continues, "Patients have always been responsible for their own medical

care; ultimately they're the ones with the final say over their treatment and care. But until now they have not had complete access to the information that can give them the big picture on their health and medical treatment. This new

level of access, coupled with the tools already available on the Internet to get secondary medical advice - WebMD for example – gives patients more power over their health and wellness than ever before. And they can keep all of this information on their own."

What it Contains

A PHR is essentially a digital record of your medical history, so it can be saved in a personal file on your home PC or be available on the Internet for your use when and where you need it. Supporters of PHRs even envision that one day you'll be able to download your information onto a flash drive and

take it to each doctor's visit. While the medical industry has yet to sanction "standard forms" for PHRs, myPHR.org, a Web site devoted to PHRs and sanctioned by the American Health Information Management Association (AHIMA), is a good reference for the type of information they often contain. According to Watzlaf, most PHRs contain important information like emergency contacts, insurance numbers, lists of illnesses, operations, regular prescription

medications you take, problem medications, allergy information, family medical history, and your you smoke, and information like blood pressure and cholesterol levels.

"PHRs allow patients

to monitor lab testing

results, immunizations,

allergies, and summaries

of past medical

office visits."

Additionally, PHRs may include subjective physician information such as responses to treatment, opinions on treatment options (or several, where multiple opinions have been solicited), imaging and X-ray

reports, results of lab tests, and essential consent and authorization forms. "Ideally, a patient would want all the vital information about his or her medical history to be contained in their PHR," Watzlaf stresses.

decade and it is still not clear how greater dissemination of information will affect the privacy issues that we have tried so hard to protect," notes Watzlaf. "The primary argument is one of patients' rights; consumers should have responsibility for their own health information and should be the final say in who should have access to it and who should not."

Recently, technology giants Google and Microsoft have joined the fray, creating their own online storage sites for PHRs. If history can teach us any lessons, these companies surely know a good investment when they see one.

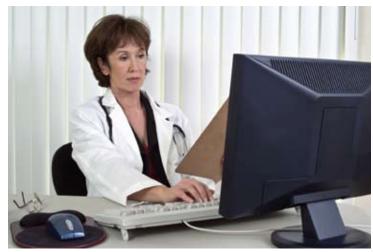
Additionally, the health care industry is toying with the idea of a health record bank – a storing house for PHRs that would allow consumers control over what data is held in storage as well as to whom and when information could be

released. "But this could be years away," notes Watzlaf. "If people want to take control over their medical history and be engaged in their present and future treatment, there is no time like the present to start a PHR and begin utilizing it every time they see a doctor."

While the debate over the future of the PHR is far from over, what's clear is that information and consumers' access to it will

never be the same. The Internet and the never-ending rise in health care costs will only continue to impact patient care and consumers' access to information. Ultimately, PHRs are just another product of our age - one of increased information, consumer interaction and use of this information, and choice.

For more information about PHRs and to learn how to start one for yourself, visit www.ahima.org or www.myPHR.com.



"The underlying purpose of the PHR is to centralize all of your medical information so it should be as complete as possible."

HIPAA and PHRs

But the PHR doesn't come without issues – most notably, patient privacy.

"The Health Insurance Portability and Accountability Act (HIPAA) has changed the health information landscape considerably over the past

28 | FACETS FALL/WINTER 2008



The good news? We're living longer. The bad news? We're living longer.

"I definitely believe with the latest innovations in health care, 100 will be the new 75," declares Dr. Ketki Raina, assistant professor in the Department of Occupational Therapy. "But living longer may also mean more older adults with disabilities, more people being relegated to institutional care.

"Occupational therapy (OT) can assist older clients by teaching them adaptive strategies, and suggesting environmental modifications so they can remain in their homes as long as possible."

Maintaining the ability to live independently has been the subject of multiple research projects undertaken by OT faculty and graduate students. Researchers were challenged to examine the influence of the environment on activity performance in older adults living in the community. In several projects, subjects were evaluated in a typical adapted rehabilitation clinic setting and then in their homes to determine which environment best supported their performance of activities of daily living (ADL).

"Rehabilitation professionals often assess clients' abilities in a clinical setting," says Raina. "In doing so, they may assume

that activity performance observed in the clinic accurately represents performance in the client's home."

The results can be less than desirable, says Dr. Margo Holm, professor and director of postprofessional education. "With older adults, we have found that performance in the clinic equals performance in the home about 50 percent of the time. When performance is not equal

and we use clinic performance to infer home performance, we run the risk of underestimating clients' abilities to better perform certain tasks at home, and we may recommend unneeded services," she notes. "On the other hand, if we overestimate their abilities to perform at home, we may put them at risk, and that is unacceptable."

Two recent studies that compared clinic and home performance were secondary analyses of data from a study funded by the National Institute on Aging and the Agency for Healthcare Research and Quality (AHRQ), "Assessing Elders' ADL/IADL: Equality of Methods & Costs" (Rogers, Holm & Schulz, Co-PIs).

Raina's study focused on women aged 70 and older who had heart failure. The second study focused on women 70 and older with late-life depression.

"Late-life depression is a debilitating diagnosis, particularly among women," states Holm, noting that in 1990, major depression was ranked fourth worldwide for disability-adjusted life years (a combination of projected years of life lost and projected years

lived with a disability). However, with the aging population, depression is estimated to be ranked second in disability-adjusted life years by 2020.





"We specifically chose to study older women because, frankly, we live longer," notes Holm, "and we are therefore more at risk for institutionalization." The average age of their study participants was 75.

"Before any patient is released from the hospital or rehabilitation facility, we prefer to assess them at home, or at least assess the home environment," says Raina. "Unfortunately, Medicare and many insurance companies don't pay for the assessment, and therapists have to assess clients' everyday activities in a clinic, and infer their performance in their homes. Our research is trying to shed light on the differences in performance to make therapists aware of potential gaps between settings, so that we can reduce that risk."

Things We Take for Granted

Both studies used the Performance Assessment of Self-Care Skills (PASS) to measure performance of everyday activity (see sidebar) and compare activity performance between the clinic and the home. Despite the fact that the women varied slightly in age and diagnosis, the results of the two studies were remarkably similar.

"We evaluated the activities using three criteria: independence, safety, and adequacy," states Raina. "Could they do it on their own or did they need help – did they need help with the can opener when preparing a bowl of soup? Did we observe something that might suggest a safety risk – did they turn off the stove burner when they were done? And finally did they perform the activity efficiently and was the end product of acceptable quality - was the soup burned?"

Not surprisingly, subjects were significantly more independent at home when it came to activities such as telephone use, dressing, mailing bills and checks,



trimming toenails, cleaning up after meals, and home safety. "It's really not difficult to understand; they are used to doing the same things in the same way and in the same place," Raina points out. "They have developed routines that work for them in their home environments, and those routines can be compensatory when skills are deteriorating."

However, Holm points out, stair use, oven use, and bathtub/shower transfers were accomplished significantly more independently in the clinic. "The clinic is an adapted environment; the tub and shower have grab bars, stair railings are secure and properly placed. Patients' homes, unfortunately, may not be adequately or safely equipped."

True Independent Living

Time was when a parent or grandparent got older, they would move in with a child or other relative. But this is becoming less and less the norm. Assisted living facilities are ideal for some people, but they are expensive, Holm points out. "The longer we can keep people safely in their homes, the better their quality of life, and frankly, the less expensive it is," she notes.

"Research such as these studies is vital to demonstrating to Medicare and the insurance industry that people, by and large, function better at home," Holm says. However, she notes that currently, there is little reimbursement available to modify homes for safety and accessibility.

Raina concludes, "We believe that further studies should replicate these methods with a wider range of diagnostic populations to assess if we can generalize our findings. Although what we are doing seems very intuitive, we have brought scientific method to the measurement of everyday activities that make the difference in determining whether a person can remain in the community longer - to 'age in place' - with a better quality of life."

The Performance Assessment of Self-Care Skills (PASS)

Functional Mobility

Bed transfers Stair use Toilet transfers Bathtub/shower transfers Indoor walking

Personal Care

Oral hygiene Toenail trimming Dressing

Cognitive Instrumental **Activities of Daily Living**

Shop with cash Pay bills by check Balance checkbook Mail bills and checks Telephone use Medication management Obtain information from a radio announcement Obtain information from a newspaper article Repair a flashlight Home safety Play bingo Oven use Stovetop use Use of sharp instruments

Physical Instrumental **Activities of Daily Living**

Clean up after meal preparation Bend, lift, and carry garbage Change bed linens Sweep

Living Longer, Living Independently



PHYSICAL THERAPY

t will come as no surprise that we slow down as we age. Our steps become more measured, our stride a little less stable. A plethora of variables can account for this: diseases such as Parkinson's or Huntington's, abnormalities such as peripheral neuropathy or impaired vision can be factors, as can depression.

But as Dr. Jennifer S. Brach, assistant professor, Department of Physical Therapy, is learning through her research, the variability and decrease in speed as we walk that we might experience as we age may lead to an increase in walking difficulty in the future.

"Older people take shorter steps and will often widen their stance," says Brach. "Some people will spend more time in double support – when both feet are on the ground. These are things people believe make them more stable, but actually don't."

Gait variability is related to future falls, but Brach and the research team set out to determine if there is an association between gait variability and future mobility disability.

They hypothesized that central nervous system impairments, such as executive functioning and central processing, would affect motor control, and therefore, stance time and step length variability. On the other hand, people with peripheral neuropathy, or poor vision, appear to have greater difficulty with their step width

Several studies have been conducted on gait speed and variability. As part of the 1998-1999 clinic visit at the Pittsburgh site of the Cardiovascular Health Study, gait characteristics were measured in more than 550 participants using a 12-footlong instrumented walkway. Called GaitMat II, the system is based on the opening and closing of pressure-sensitive switches that are represented on a computer screen as footprints when the participant walks on the device.

"We were primarily interested in gait speed and variability of step length, width, and stance time," Brach notes. "Step length and width represent spatial characteristics in two different planes." Step length, width, and stance time were specifically selected because they have been studied by previous investigators. The standard deviations of all of the steps recorded over two passes were used as measures of variability.



Their results? "Central nervous system impairment is, in fact, related to stance time variability, whereas sensory impairment is related to step width variability," Brach concluded.

"Stepping or walking is a pre-programmed, well-learned activity. You don't think about it. You just do it," says Brach. "If that timing or regularity is thrown off, you're at increased risk for developing disability in the future. We also demonstrated that the step-width variability is related to falls."

She notes that the fear of falling can be very limiting, and could spell the beginning of a

cycle. "If you're fearful, you do less, then you do less and become deconditioned and have problems walking," Brach suggests. "We ask about their fear and slowly introduce people to more challenges so they feel more comfortable and get their confidence back.'

Funding from a Prestigious Source

In 2005, Brach was recognized by the Paul B. Beeson Career Development Awards in Aging Research Program and received a \$777,000, five-year grant for her research on gait variability. A joint endeavor of the National Institute on Aging, the NIH Office of Dietary Supplements, and several private foundations, the Beeson program encourages and assists in the development of future leaders in the field of aging. Dr. Beeson was "one of the great physician-scientists of the 20th century and a champion of geriatrics research and education," according to a report from the program.

"This is such a great honor and opportunity," says Brach of her award. "It's not just the money, which is of course helpful. Awardees are teamed up with internationally known leaders in aging research and other Beeson recipients and collaborate with them." For her part, Brach has consulted with Dr. Catherine Sarkisian, Geffen School of Medicine at the University of California, Los Angeles, and Dr. Joseph Verghese, Albert Einstein College of Medicine, both of whom were named Beeson awardees in 2004, and are looking at gait variability and mobility from their own scholarly perspective.

Brach was the first non-MD to receive the award and remains the only physical therapist to receive a Beeson in the program's 14-year history.

Prescribing the Correct Intervention

Brach sees patients at the Benedum Geriatric Clinic at UPMC and research subjects at the Claude D. Pepper Older Americans Independence Center, which was established in 2004 to provide support and resources for investigators to pursue research in the field of balance disorders in the

"New interventions for people with gait variability need to be devised - one size doesn't

"Older people take shorter

steps and will often widen their

stance," says Brach. "Some

people will spend more time in

double support - when both feet

are on the ground. These are

things people believe make them

more stable, but actually don't."

fit all," says Brach, noting that new research by colleague Dr. Jessie VanSwearingen has shown great promise. In the interim, "It's seems odd to suggest that people practice walking, but that's exactly what we have them do to correct gait variability," she explains. She may recommend walking on a treadmill, which can help reduce variability

once the patient has "reprogrammed" their walking. Brach goes on to site different balance exercises and stepping programs that might be recommended for patients.

"We have some patients who are fairly mobile so we give them a guided program they can do at a senior center or with SilverSneakers," she notes. There is also the tried and true walk in the mall.

And still, some patients will require an assistive device to get around safely. "We've been working with people trying to find assistive devices that are more acceptable than a traditional walker," she indicates. Rollators, for example, come in different colors, and look more like a shopping cart. She notes that one woman carries a Lucite cane that is barely detectable.

"We have one patient in her 90s who drives two hours to Pittsburgh to be seen at the Benedum Geriatric Center. She has a three-story home that she cares for and, until recently, played golf every week," recalls Brach. "When I suggested she might want to consider using a cane, she said 'canes are for old people."



t is quiet in Marcy DiMarco's home. Her primary caregiver left earlier in the day, just before noon, and she has been alone ever since. While on most days she would be enjoying an afternoon with Oprah beaming into her living room, today the room is silent – but not by choice. Two hours earlier, Marcy's remote slipped from her grasp onto the floor, which, given her limited mobility, made the two-foot distance seem like more than a mile. She would have to wait until her neighbor or mother stopped by before she would be able to turn on the television again.

While Marcy's dilemma is fictional, it illustrates a fact of life for many people with severe disabilities. With limited mobility, they rely on caregivers – who are available to most Americans for a mere four hours a day – for the

basics of life. But in relatively common situations like the one outlined above, many people with severe disabilities have little choice but to wait for help to arrive. Fortunately, help may be here.

Improving Access

Led by co-Directors Dr. Rory Cooper, chair, Department of Rehabilitation Science and Technology, and Takeo Kanade, Director of the Robotics Institute at Carnegie Mellon University, researchers at the Quality of Life Technology Center (QoLT), a National Science Foundation Engineering Research Center and a collaborative effort between the University of Pittsburgh and Carnegie Mellon University, are developing solutions that give newfound freedom to people with disabilities. The Personal Manipulation and

Mobility Assistance (PerMMA) Project is one of several research projects at QoLT whose objective is to increase mobility for people with disabilities and make their lives better.



At its core, the PerMMA Project aims to combine manipulation and mobility assistance with perception and decisionmaking wherever a person goes. In short, says Cooper, we want to create a wheelchair with technology that would reduce the restrictions of people with severe disabilities.

"Most people with disabilities especially those with severely limiting



disabilities – spend much of the day by themselves. They may have someone helping them from 6:00 o'clock in the morning, when they get out of bed and get ready for the day, until 10:00 a.m., during which time they have both breakfast and lunch," Cooper explains. "For many of these people, dinner may not come for seven or more hours, at 5:00 or 6:00 p.m. when a parent or sibling stops by for the final hours of the night."



And so was the solution, which is both simple and ingenious at the same time.

The initial prototype that the QoLT team devised is an integrated robotic powered wheelchair base and robotic arm that can be operated by a variety of user interfaces (or remotely for training purposes). The robotic system has four-inch-long grippers for grasping and a reach of eight feet, making it ideal for picking up a dropped remote



advanced technology behind the robotics is key to the success of the project. At this point, we've been able to open doors with the arm – a huge step – and one that will help transition people with severe disabilities from dependence in the confines of their homes, literally, to a more independent life out-of-doors."

Making the Dream a Reality

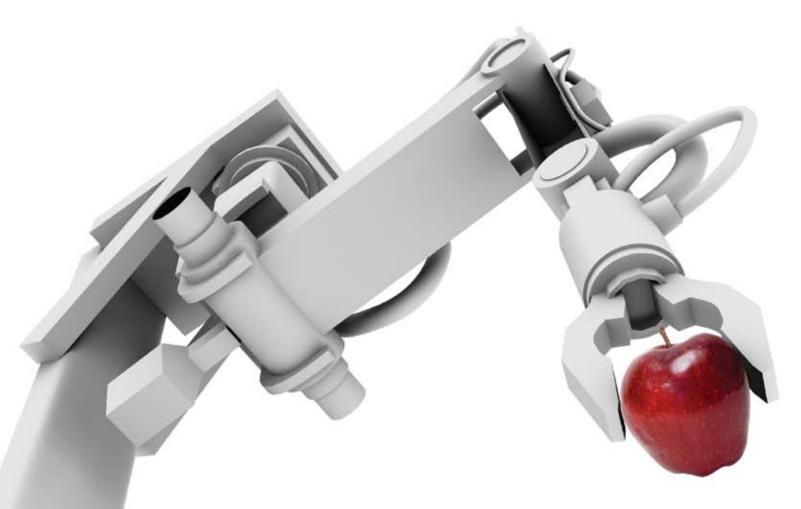
Based on his consumer forums, Cooper is pleasantly surprised by the reaction to the team's efforts, which, he admits, "may have been a bit more advanced than people may have been expecting." But feedback has been tremendously positive, with pre-orders for the prototype already being made by excited consumer forum participants.

And while Cooper does not expect the new prototype – or similarly advanced technology solutions that may come down the road – to completely replace attendant care, he believes that freeing-up time that was once used for mundane tasks will make a huge difference in peoples' lives. He contends, "If wheelchair users can save 15 minutes here and there through the use of improved technology, it would make the remaining time with a caregiver so much more productive."

The project has been in the works for 18 months and Cooper estimates that years are needed to perfect the algorithms, to develop more functional hardware, and have a completed prototype that is ready for rigorous consumer testing. But the progress made so far is more than enough to give people with severe disabilities hope.

To see the new prototype in action, visit www.cs.cmu.edu/~staszel/stuff/permma/.

Helping People with Disabilities Help Themselves



He continues, "There is not a lot of room for error for people with severe disabilities. If you drop your cell phone, you're on your own. If you want something to eat, you may be completely stuck."

Robo-tech

To help address these issues, Cooper and the team at the QoLT began surveying people with disabilities in small consumer forums. "The collaboration between Pitt and CMU has created some very unique synergies between robotics and artificial intelligence that should have an enormous impact on people with disabilities. We have a relatively good idea about how far we can take solutions, but rather than dreaming up ideas in a box, we wanted to assess what would help people the most and the best way to do this is by asking them."

For the team of researchers on the project, the challenges were clear.

or removing Tupperware from the refrigerator, heating it in the microwave, removing the lid, and setting it on the table to be served. The prototype can detect and predict user intent, provides coordinated movement between a power base and multiple manipulators, includes natural and intuitive user interfaces and control modes, and incorporates navigation and docking assistance, making the wheelchair even more effective in the real world.

Notes Cooper, "By combining advanced robotics with the work we have already learned from modernizing wheelchair design, we have come up with a transformative engineering solution to the access challenges people with severe disabilities face every day. This one solution has the potential to open up new worlds for people with severe disabilities."

It is the intuitive nature of PerMMA that shows the most long-term potential for end-users. "Designing a user interface for the robotic system is harder than it looks," Cooper cautions, "so the



magine swimming 2.4 miles, followed by 112 miles on a bicycle, and finally running a marathon – to refresh your memory, that's 26.2 miles. That's what competitors in Ironman Triathlons endure. And the races are

SPORTS MEDICINE AND NUTRITION

Testing for Improvement

considered by many to be the most arduous and grueling of any sport, and the Hawaiian Ironman the most prestigious.

Ironman competitions are becoming more numerous and the advent of the Ironman 70.3 – essentially half the distance of a traditional triathlon – has increased the number of elite athletes worldwide. They even have their own social networking site, IamTri.

The training triathletes undergo is understandably intense; but when training for three very different sporting events, athletes should be sure that their regimen is appropriate and their performance at peak.



The Department of Sports Medicine and Nutrition aids these elite athletes in enhancing their training by identifying barriers that may hinder peak performance. "In testing the athletes, we provide them with useful data that can be applied to their training," says Dr. John Abt, assistant professor of Sports Medicine and Nutrition in the Neuromuscular Research Lab. The athlete receives detailed information related to maximal oxygen consumption, lactate threshold, heart

rate, body composition, and power output for determining training zones. Continued monitoring of physiological data provides the athlete with a basis for modifying existing training to meet current demands by addressing identified deficits. The ultimate goal is to be able to peak at the desired time.

Lactate threshold refers to the sustainable intensity of exercise at which there is an abrupt increase in blood lactate levels. For the runner, this corresponds to approximately 15 kilometers and for the cyclist 40 kilometers. According to Abt, it is one of the most important determinants of success in endurance-related activities and events. "Lactate threshold can be improved with a combination of maximal steady-state, and interval workouts."

Abt and his colleagues use biomechanical and neuromuscular assessments, under sports-simulated environments, to explore specific variables including investigating the influence of weight distribution, muscle function, balance, flexibility, muscle memory, gender, aging, and fatigue. They also evaluate the effects of injury, surgery, and rehabilitation on joint stability. Deficiencies in body mechanics and muscle function are used to develop information gathered by Abt and his programs to improve performance and minimize injury potential.

Along with the elite athletes, members of the Pittsburgh Steelers and Penguins as well as some University of Pittsburgh athletes avail themselves of the array of services offered. "Teams have their own strength and conditioning staff, but they may send athletes to be tested to ensure that the training programs they recommend are meeting the needs of a particular athlete," Abt points out.

Aging weekend warriors have also been evaluated at the Sports Medicine

Complex. "They're not necessarily training for a race, but they're training to maintain their health and their lifestyle as they age," says Abt, noting, nonetheless, the increase in sports competitions like the Senior Games. When the Summer Senior Games were held in Pittsburgh in 2005, they



attracted more than 10,000 athletes over the age of 55. Two years later, an additional 2,100 competed in Louisville in a variety of sports from track and field to swimming to tennis.

Research Enhances Military Training to Reduce Injuries

While aiding the performance and training of athletes, all of the colleagues is also paying dividends to the Army and the Navy.

In 2005, the Department of Sports Medicine and Nutrition received a Department of Defense (DoD) grant to study injury prevention and performance optimization research with the U.S. Army 101st Airborne (Air Assault) at Fort Campbell, Ky. Earlier this year, an additional grant was received from the DoD to expand the project to the U.S. Naval Special Warfare (SEALS) special operation units at Little Creek, Va. Combined, these awards totaled \$4.85 million.

Because of the nature of their engagements and the cost of training and maintaining a member, SEALs are highly valued and the longer they can be kept in uniform the better. The Navy is also interested in ensuring the quality of life after leaving the service.

> "From what we've seen in the sports medicine world, we know that there are certain things that contribute to specific types of injuries," says Abt.

He uses the example of rotator cuff injuries, which can be caused by an imbalance in the muscles and may ultimately result in instability of the joint.

But just as swimmers train differently than marathoners, members of the 101st Airborne should train differently than Navy SEALS. But the military's attitude toward training has meant

traditional calisthenics and long runs, although it is open to changing the structure to improve military readiness.

Back at Home

While it may be hard to imagine, according to Abt, Pittsburgh is a hub for elite athletes. "There are a lot of local triathletes who are in the process of qualifying or who have already qualified for the Hawaiian Ironman in October. Many of them have been tested through our program and are using that data to tweak their training.

"Pittsburgh is a great triathlon community, a great cycling community, which is one of the reasons that our program has been so successful," posits Abt. He's pleased with the expansion of the bike trails and the recent announcement that Pittsburgh would become more bike-friendly. "It's great to see the transition in the city, taking on a healthier lifestyle, not just for athletes, but for average citizens as well."



espite America's growing interest in organic food and the preoccupation with the latest "diet-of-the-week," there is an obesity epidemic in this country. In 2007, more than 26 percent of adults nationwide had a Body Mass Index (BMI) over 30.0 kg/m2, a measure and wellness than the population as a of obesity. Another 37 percent had a BMI of 25-29 kg/m2, classifying them as overweight. According to the National Center for Chronic Disease Prevention & Health Promotion's Behavioral Risk Factor Surveillance System, fewer than a quarter of us eat the recommended five daily servings of fruits and vegetables. Twenty-one percent of adults have never had their cholesterol checked, and roughly the same number have not participated in any physical activity in the last month.

"We have a level of food illiteracy across all ages, across socioeconomic

These are among the people whom Dodd describes as the "new older adult." "They know they'll be living longer, so they're looking for prevention options," Dodd states. "They are more likely to focus on eating healthy and generally are more interested in health whole."

Helsel points out that many of them are looking to limit, or refrain from, reliance on medications to treat problems like high blood pressure or high cholesterol levels. "Older adults are looking for an alternative that gets back to the notion of wellness, wholeness, and functionality."

Dodd cautions that some of the nutritional options are more obvious than others. "A lot of people are aware of the importance of dietary fiber to help reduce the risk of coronary heart

What Ever Happened to Slow Food?

backgrounds," says Judith L. Dodd, adjunct assistant professor, Department of Sports Medicine and Nutrition. "However, older adults often ask me very insightful questions and are more apt to take time to learn more about nutrition because they may have the time."

Dr. Diane Helsel, assistant professor, recalls a 50-mile bike ride she took in Ligonier, where several of the riders were over 70 years of age. "These individuals were not at the back of the pack as some would expect. To the contrary, they were leading the group. Prior to retirement they were active, but now with more time to prioritize healthy eating and daily exercise, they are in the best shape of their lives."

disease and maintain a healthy digestive tract, but how many people know that eating vegetables like broccoli or kale may contribute to a healthy immune system?"

Dodd recommends consulting with a registered dietitian, who can assess lifestyle and physical condition and make recommendations regarding diet and nutrition. "There is no 'one-sizefits-all' approach to proper nutrition," Dodd continues. "Some people are comfortable with a low-fat approach, such as the one recommended by Dr. Dean Ornish, but that requires a complete lifestyle change, and even older adults wanting to get the most out of their remaining years may balk at such drastic measures."

Continued on page 40



Selected Functional Foods

Selected Functional Foods	
Source	Potential Benefit
Carrots, pumpkin, sweet potato, cantaloupe (beta-carotene)	Neutralize free radicals; bolster cellular antioxidant defenses
Oat bran, oatmeal, oat flour, barley (beta glucan)	May reduce risk of coronary heart disease (CHD)
Tree nuts, olive oil, canola oil (monounsaturated fats)	May reduce risk of CHD
Tea, cocoa, chocolate, apples, grapes (flavanols)	May contribute to maintenance of a healthy heart
Citrus fruits (flavanones)	Neutralize free radicals; bolster cellular antioxidant defenses
Sardines, spinach, yogurt, low-fat dairy (calcium)	May reduce risk of osteoporosis
Fish, red meat, grains, garlic, liver (selenium)	Neutralize free radicals; may contribute to healthy immune function
Soy beans and soy-based products (soy protein)	May reduce risk of CHD
Lean meats, eggs, green leafy vegetables (B2 riboflavin)	Help support cell growth; help regulate metabolism
Salmon, tuna, marine and other fish oils (Omega 3 fatty acids)	May reduce risk of CHD; may contribute to maintenance of mental and visual function
Liver, salmon, dairy, eggs, oysters (biotin)	Help regulate metabolism and hormone synthesis
Tomatoes, processed tomato products, watermelon, grapefruit (lycopene)	May contribute to maintenance of prostate health
Cereal grains, whole wheat bread, oatmeal, brown rice (whole grains)	May reduce risk of CHD and some types of cancer; may contribute to healthy blood glucose levels

38 | FACETS FALL/WINTER 2008 FACETS FALL/WINTER 2008 39



Instead, for most people, moderation in diet and the addition of physical activity, rate slows down. Nonetheless, their even for older adults, is the smart way to go – albeit not so simple if the goal is to avoid a "cookie cutter" approach. Helsel notes that "assessing individual nutrient needs depends on many factors such as age, gender, medical and family history, and lifestyle factors," such as tobacco and alcohol use, activity level, and diet. To be sure, the more we study and learn about "functional foods" foods or dietary components that may provide health benefits beyond basic nutrition – the more complicated things become. "As the benefits of new foods or nutrients are discovered, we must remember to consider these benefits within the context of the overall diet," says Helsel.

These changes have also impacted the lexicon of the profession, Dodd adds. "We no longer refer to 'low fat.' It's now 'healthy fat,' because, again, low fat requires a total lifestyle change, but also because there is a need for healthy fats in our diets, such as monounsaturated and Omega-3 fatty acids.

"The recommendation is that you should have two servings a week of fish that is high in Omega-3, but not all fish fits the bill," she cautions. "The ones that benefit you are the ones which people view as expensive and 'fishy,' like salmon, tuna, mackerel, and sardines." A registered dietitian can help you find other sources of Omega-3 that fit your lifestyle.

Nutrition Counseling for Older Americans

In recognition of the changing nutrition requirements of seniors, late last year, Tufts University updated its Food Guide Pyramid for Older Adults, now known at the U.S.D.A. as "MyPyramid." Helsel notes that "older adults often need fewer calories because, generally speaking, they are not as physically active as

they once were and their metabolic bodies still need the same, or even higher, levels of nutrients." For example, calcium, vitamin D, and vitamin B12 requirements can increase with age, making it difficult for some older adults to get adequate amounts of these nutrients from food alone, especially when calorie needs are decreasing.

What makes the modified "MyPyramid for Older Adults" different from the original is that it includes frozen and

canned vegetables and fruits as well as fresh, because the former are easier to prepare and have a longer shelf life. That's important for people who may not grocery shop as often as they once did. This pyramid also stresses the importance of drinking water. Helsel cautions, "Proper hydration is important for everyone, but total body water decreases

with age and the thirst mechanism becomes less precise, so dehydration can be a particular risk for older adults."

"One of the biggest complaints I get from older women in particular is that they don't know how to cook for just one or two people," says Dodd. "One easy strategy that is often overlooked is cooking in batches and freezing several portions. There also may be one or two dishes they no longer make because they don't work in small amounts or the ingredients are just too expensive. I tell them to find a restaurant that makes the dish the way they like it and treat themselves a couple times a year," she offers.

The "Take Out" Society

If older adults are confused about nutrition, imagine their grandchildren and great grandchildren who have grown up in an era when true home cooking is the exception, not the rule. Helsel is seeing the results of this generational shift when teaching classes in basic food preparation. "The result of kids being raised in take-out and convenience-food households is that they know less about conventional food preparation – which is the antithesis

> of the slow food movement."

Dodd has had a similar experience. "In teaching nutritional assessment, I used to have students conduct an assay on a case study diet. Now I have them look at their own diets. I began to realize some of these students were surviving on vitamin water and protein bars. They had no concept of their nutritional intake

or the value of real food, and these are people who are interested enough to study the subject."

So, where does this leave the general public with regard to getting back to a slow-foods approach? "It's not as discouraging as it may seem. Older and younger generations alike are realizing the benefits of eating whole foods - the interest has never been higher. It's an exciting time to work in the field of nutrition; if we 'strike while the iron is hot' and focus on the positive, it can be a win-win situation for all," Helsel concludes.



Dialogue A Conversation with Margaret Goshio Hanley

Margaret Goshio Hanley

With color commentary provided by her daughter, Rosemary Smith

Marge Hanley is one of this nation's 60,000 centenarians. She was born, raised and still lives in Glassport in the Mon Valley outside of Pittsburgh. When she was born in 1908, the life expectancy for women was only about 47 years. Her close-knit family and later her passion for politics have kept her active and engaged. To this day, Marge watches C-SPAN and CNN with a clipboard and a pen so she can make notes about the politics of the day.

Living to be 100 is a Herculean feat. As you look back, what factors do you believe have allowed you to live such a long and vibrant life?

M. My parents emigrated from Italy and established a grocery in Glassport. We always had healthful meals made with things like olive oil and garlic. There were always grapes around for making wine, so I guess it was an early version of the Mediterranean diet. For a while my father sold candy and ice cream in the store, but then stopped. He didn't think they were good for you, and they were more than a luxury, especially during the Depression. But we had fresh turkey, chicken, and rabbits that my mother dressed for the holidays. She made a wonderful dish of beans, dandelion greens, and tomato sauce. My mother and grandmother lived until their mid-80s, so I guess I inherited their genes.

R. Mother was always interested in vitamins and supplements. I can remember as a child we had an entire kitchen cupboard filled with them. We always ate healthy - I've said that mother invented stir fry before it was the rage. But my sister Nancy and I were the only kids in the neighborhood who didn't get homemade cookies or cakes or pies. Sweets weren't on the menu.

What role has exercise played in your life?

M. As a child I rode horses and loved to roller skate. But the best exercise is free - you only need a good pair of shoes – and that's walking. I walked anywhere from three to five miles virtually every day of my life. When I was attending St. Peter's High School, I got a job as a census taker, walking door-to-door in Glassport.

Once I was married, my husband Angus and I bought a house on the same street as the grocery store, and I'd walk back and forth. When I worked in Pittsburgh, I took the P&LE Railroad to what is now Station Square and walked across the Smithfield Street Bridge. Later, when I worked in East Liberty, it took three buses to get to my job, but it also required a lot of walking.

Have you been healthy all your life?

M. I've been blessed with good health for the most part. The usual colds and flu, and I did break my leg once. My hearing isn't too good anymore - my seven-year-old great grandson, who calls me Grammy Mummo, loves to talk on the phone, and knows he has to speak very loud so I can hear him.

I understand you're quite the extemporaneous speaker.

M. The Catholic Daughters of America held this lovely luncheon in honor of my birthday and the Grand Regent asked me if I'd like to say a few words, and of course I said yes. I was sitting between my daughters and after a few minutes, Rosemary was tugging on my jacket from one side and then Nancy started tugging on the other side. "Mother, the Grand Regent said a couple of words, you're talking too much." I said, "I'm not finished." When I was through, I said, "Well, I guess I should stop. My two daughters tell me I talked enough." And they still applauded like you've never heard. I took elocution lessons when I was young, and I think I'm still pretty good.

R. Mother also spoke at the party we threw for her 100th birthday. There were about 40 people there and she shared a personal anecdote about each person, a reason why they were special, some event in their lives. And she did it all without a single note.

Do you still cook for yourself?

M. No, I rely on Meals on Wheels, which is such a blessing. I'm fortunate that a church sponsors my program and those ladies make fabulous meals. You get a full dinner for lunch, but I had to cut back to three days a week there is just too much food. I've never had a big appetite – in my younger days, I would switch to a liquid diet on Mondays to cleanse my system. My daughters and grandchildren are always sending along food, too, so there is always plenty to eat - and I can't waste a thing.

You still seem very spry. How is your health today?

M. I do take some medications for osteoporosis, high blood pressure, and high cholesterol - my daughter says I'm in maintenance mode. I'm also sad to say I'm a little shorter than my all-time height of 5 feet. But I'm very lucky to have a wonderful doctor who doesn't rush me in and out, who really talks with me if I have an issue to discuss.

R. His name is Dr. David Harinstein. and he's a UPMC general practitioner and geriatrician. He really is an excellent physician and a very nice man. He sent a beautiful bouquet of flowers and called mother on her

What advice would you give to the younger people who may be reading this piece?

M. The things in life that sustain you are good friendship, good food, and trust in God, it's that simple. And remember, you are what you eat!



...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.



www.giveto.pitt.edu

University of Pittsburgh School of Health and Rehabilitation Sciences 4031 ForbesTower 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