Welcome to the first issue of “Health Research,” the biannual research newsletter of the Byrdine F. Lewis School of Nursing and Health Professions. I have been a member of Georgia State University’s faculty for only seven months, but I am pleased to say our school is already tackling the research growth goals outlined in the university’s strategic plan.

As a public research university, Georgia State makes research one of the cornerstones of its foundation and each college and school within are charged with producing meaningful research.

I hope this publication will give you a window into the research conducted by our faculty and staff every day. Much of our work is centered on patient care and the improvement of patient lives. It also focuses on the “how” and “why” of many health care issues in today’s society.

Our ultimate goal is to bring in funded research however; we recognize the need to grow research from the ground up, particularly by instilling an interest and love for research in our students.

In this pilot issue, you will learn about some of our research funded by national and/or international entities. You will also see the research pipeline in action and how our school develops and nurtures young researchers, including current undergraduate and graduate students.

I welcome your feedback on our presented research projects as well as any research contacts you may have to share.

Stay tuned, as the best is yet to come!

Andrew J. Butler, PhD, MBA, PT, FAHA
Associate Dean for Research and Professor
Can Robots Be Educational Playmates for Children with Cerebral Palsy?

Children with cerebral palsy (CP) face a range of developmental issues in both motor skills and control. Thanks to a National Science Foundation grant, one physical therapy assistant professor is developing a robotic therapy program that aims to strengthen the development of these skills in children with CP.

Cerebral palsy is an umbrella term for brain lesions resulting from injury or illness, whether pre-, peri-, or postnatal. The severity of these lesions varies from individual to individual, as does the impact of this diagnosis on these individuals’ lives. Fortunately, many people with CP impairment have successfully improved their daily living through robotic assistance therapy.

Yu-Ping Chen, assistant professor of physical therapy, along with researchers from the Georgia Tech Research Corporation, is exploring the rehabilitation activities of specially-designed robots for children. Current assistive (contact therapy) robots are designed for adults, not children, and lack the scale for a child’s use as well as appropriate developmental interactivity.

Chen and Ayanna Howard, a professor of robotics at Georgia Tech, are planning to build a playmate robot for children with CP. Unlike contact robots, which merely aid the user in motor activity, this playmate design will integrate therapy to improve motor skills and muscle control in children. Most importantly, this robot will be designed to resemble a toy in order to fully engage the child, as children are often drawn to animated, lifelike toys.

While the primary goal of the current grant is focused on creating and authenticating the technology to make the animated robots effective for children, Chen and Howard also hope to use the robot to record data. Video cameras will be put in the eyes to record the range and speed of the child’s movements in order to best evaluate the child’s therapy.

“Children with CP don’t have very much control over their movements,” says Chen. “Even though they see and understand, they can’t easily repeat modeled movements. So, we decided to use a robot as a playmate and at the same time ask the robot to become an evaluation tool.”

The research team believes bringing together programmable therapy and data collection will allow therapists to individualize therapy for children with CP.

Chen was invited as a co-investigator on the robotic playmate research team due to her clinical expertise with children with CP. This same team previously worked together on a grant to examine the effects of music therapy on virtual reality therapy for children with CP. That grant was funded by the Grammy Foundation.
Factors in Delay of Treatment for Acute Myocardial Infarction

Health care professionals make it abundantly clear that rapid treatment for heart attacks makes a difference in whether a patient lives, dies, or sustains permanent damage to the heart. However, the factors that play into the delay of treatment often vary and are complicated.

Nursing doctoral candidate Deonna Tanner seeks to identify these factors in treatment delay through her research. Tanner, who is also on faculty at Clayton State University, has treated numerous patients with acute myocardial infarction (AMI) in her career as an emergency department nurse.

Tanner selected data on participants from two groups: one that sought treatment within two hours or less of experiencing AMI symptoms, and another group that waited more than two hours to seek treatment after experiencing these symptoms. While there were no differences in the delay time due to gender, income, or education, Tanner found the older adults who had support from individuals they were close to at the time of AMI symptoms were more likely to seek treatment quickly.

In addition, Tanner found older adults who had previously experienced AMI were significantly less likely to delay treatment than those who had not experienced an episode. Ironically, the patients who contacted their physicians directly were among those who delayed seeking treatment in a timely manner.

“Few older adults contacted their health care providers at the onset of symptoms, but those who did (21 percent), were more likely to be in the longer delay group,” says Tanner.

Tanner notes that factors influencing delay to seek treatment for AMI are complex. She says many of her participants did not experience dramatic “Hollywood heart attacks,” but instead felt gradual symptoms that mimicked digestion issues during inactivity.

The results of the study are published in Tanner’s dissertation, “The Examination of Factors that Influence Treatment Seeking Delay Among Older Adults Diagnosed with Acute Myocardial Infarction.”

Honors College Facilitates Student Assistantships

Getting a college education can be expensive, and many of our students require financial assistance. With changes to the HOPE scholarship in particular, even some top students in the Byrdine F. Lewis School of Nursing and Health Professions (BFLSNHP) struggle to finance their educations.

Student assistantships can help ease this financial burden for students in addition to fostering a valuable learning experience. Thanks to the Honors College, several scholarships of $2,500 per year are available to BFLSNHP undergraduate students. Students nominated must have at least a 3.50 GPA and be enrolled in the Honors College. The assistantships can be used for students in either directed study or research and laboratory work. Placements are based on student interest, major, and career goals.

As this program is a cost share between the university and our academic units, who fund $1,000 of each scholarship, please work with your unit’s assistant dean to ensure that your unit has budgeted for these assistantships. Questions about the program should be directed to Annahita Jimmerson, the educational program specialist with the Honors College.
What Do Today’s College Students Understand about Older Adults

According to the U.S. Census Bureau, growth of the population age 65 and older is expected to explode in the next 15 years, with the older adult population increasing by approximately 2.8 percent annually. Because this population will demand a lot from our health care system, it is important that future health care workers are prepared to care for patients in this rapidly changing population.

In order to assess future health care workers’ aptitude for caring for older adults, Allison Boyd, an honors undergraduate nursing student and her classmate, Kimberly Scarborough, conducted a study designed to assess college students’ knowledge and beliefs regarding older adults.

The student researchers selected two groups of students, those enrolled in health care related majors and those enrolled in a random variety of non-health care majors. Boyd used “Palmore’s Facts on Aging Quiz” and “Kogan’s Attitudes Toward Older People Scale” to develop a survey to measure each student group’s level of knowledge, attitudes, and beliefs about older adults.

Results showed at least 50 percent of students surveyed expressed an interest in working with older adults. Knowledge of elder issues was highest among nursing students, and positive attitudes about older adults were highest among nursing and social work students. Conversely, students who expressed no interest in working with the elderly had less positive attitudes and lower exposure rates to older adults. As expected, this group also had slightly lower than average knowledge scores on older adults than those who were interested in gerontology.

Boyd found her results demonstrated a clear need for all future workers, especially those in health care, to have a strong understanding of the needs of older adults.

“I would have to agree that health care workers need to be sensitive to each patient’s history and background, which are oftentimes influenced by the generation they were raised in,” says Boyd. “In my opinion, it is essential to be prepared for those differences, especially because it affects the way you provide for your patients’ needs.”

Boyd, the lead investigator, says that while she has planned for a career in health care for some time, she never considered research until she arrived at Georgia State. During her freshman year, she roomed with a student who was involved in research who in turn exposed Boyd to the experience.

Boyd and Scarborough published their research in the abstract “College Students’ Knowledge, Attitudes, and Beliefs about Older Adults” in the 2012 issue of “Discovery,” the Honors College research journal.
Pivot gives university professionals the edge to quickly and easily bring the right research opportunities, funding, and people together. It provides global and local connections that strengthen research by exploring new avenues for funding and collaboration for faculty, staff, and graduate students. This online resource provides the latest funding announcements from various sponsoring agencies (federal, non-federal, and non-profit). With a personalized experience through your own profile, Pivot pinpoints funding opportunities with searches that are accurate, automated, and focused.

The Byrdine F. Lewis School of Nursing and Health Professions would like faculty members to take advantage of this unlimited, world-class support by creating an account and adding keyword searches to obtain weekly funding announcements. You should receive a request from your grants and contracts officer regarding your membership and keyword searches. Instructions on how to create your account and add keywords to Pivot are listed below. To learn more about Pivot or for assistance, contact sstephens8@gsu.edu or lynnrhodes@gsu.edu.

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Significant Financial Interest Disclosure

Byrdine F. Lewis School of Nursing and Health Professions is in the process of complying with the new significant financial interest disclosure policy, which is based on federal requirements pertaining to “objectivity in research,” promulgated by the U.S. Public Health Service (P.H.S). A university employee who submits a grant, contract proposal, or conducts research under certain funding agencies’ grants or contracts must adhere to the applicable requirements of the funding agency and applicable state and federal requirements, including those involving the disclosure and regulation of outside activities and financial interests.

Georgia State University is fully committed to maintaining objectivity in research and upholding the highest scientific and ethical standards. The policy on financial disclosures in sponsored research promotes objectivity in university research by establishing processes that provide reasonable expectations that the design, conduct, and reporting of sponsored research are free from bias resulting from financial conflicts of interest of the university employee involved in the research. We encourage all faculty and staff to visit http://www.gsu.edu/research/conflicts_of_interest.html and read the information provided on this website to see how it affects your current and future research endeavors or contact your department grants and contracts officer for assistance.

Office for Research Calendar of Events

Grant Writing Consultations — Two Opportunities to Attend
March 7, 2013 — Individually Scheduled Appointments
Elizabeth Tornquist
Contact info: BFLSNHP Research and Scholarship Center - ULB 937

June 7, 2013 — Individually Scheduled Appointments
Elizabeth Tornquist
Contact info: BFLSNHP Research and Scholarship Center - ULB 937