

LIFE 360

COLLEGE OF HEALTH & HUMAN SCIENCES

GOODNIGHT

The surprising connection
between sleep and
children's weight



High-level Performer

Whether she's under the big top or in the boardroom, Kelsey Quin feels right at home. A pre-med senior in Health Sciences, Quin is the student representative to Purdue's Board of Trustees. What many might not know about Quin is that she grew up in Peru, Indiana, the "Circus Capital of the World," and has been a circus performer since age 7. Read her story on page 16. (Photo by Charles Jischke)

LIFE 360

COLLEGE OF HEALTH & HUMAN SCIENCES FALL 2014

STUDENTS

P.16 THE MIGHTY QUIN
Purdue student trustee and pre-med major Kelsey Quin (at left) juggles responsibilities and aspirations with the greatest of ease

P.18 PRACTICE MAKES PERFECT
Opportunities for experiential learning abound for HHS students

P.34 A UNIVERSAL LANGUAGE
Speech, Language, and Hearing Sciences students learn and serve in Zambia

DISCOVERY

P. 8 FEELING LEFT OUT
A science-based and solution-oriented look at ostracism

P.14 IS FAT THE 6TH TASTE?
A cross-country collaboration with a Denver museum

P.24 SECURING A BETTER LIFE
Financial tools to help the poor in developing countries

P.32 FOOD FOR THOUGHT
Purdue research explores nutrition information available in restaurants and the impact on menu choice

ALUMNI

P.13 JULIE EDDLEMAN
Understanding consumer behavior

P.31 GREGORY JONES
A nurse for change

P.36 DR. JUDITH MONROE
A champion for health

OUTREACH

P.25 EXTENSION PROGRAM HELPS STRUGGLING HOOSIERS

P.28 A WINNING 'RECIPE' FOR KID CUISINE

DEPARTMENTS

- 2 | FIRST IMPRESSIONS
- 3 | REVERBERATIONS
- 4 | 360° REVIEW
- 37 | GENERATIONS
- 40 | LIFELINES

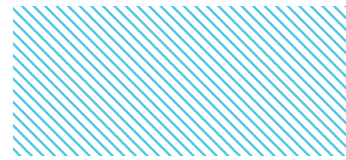
ON THE COVER P.26

AWAKENING TO THE NEED FOR SLEEP

In the fight against childhood obesity, sleep is a surprising weapon

(Photo by Charles Jischke)

F1RST IMPRESSIONS



We received hundreds of responses to our 2013 *Life 360* readership survey. Thank you! Overall, respondents were highly satisfied with the writing and design of our magazine, with almost 40 percent indicating they liked the publication as is. But some of you did offer suggestions for improvement. So, starting with this issue we've incorporated some of your suggestions, including "more stories about students."

Did you know that all 30+ HHS majors offer students an opportunity for hands-on learning, such as an internship, clinical experience or a co-op? And 30 percent of our majors require it. "Practice Makes Perfect" (page 18) explores the experiential learning of six HHS students and the variety of hands-on learning available in the college. "A Universal Language" (page 34) shows just how much impact a short-term service-learning program can have — on both students and those they serve. And "The Mighty Quin" (page 16) introduces you to Purdue student trustee Kelsey Quin. With her multidiscipline approach to learning, extracurricular leadership roles, and a desire to improve the health and wellness of people, Kelsey embodies what it means to be an HHS student.

Our feature story on ostracism (page 8) spotlights Kip Williams, a professor of psychological sciences who has studied ostracism for 20 years and is featured in the

documentary film "Reject." In addition, Professor Williams and the film's director/producer have partnered with HHS Extension to develop a program to address ostracism and other negative behaviors that hurt and exclude others.

The college's vision is to address a broad array of important public health issues, not just locally but nationally and globally as well. In July, we welcomed Rick Mattes, Distinguished Professor of Nutrition Science, as the first HHS director of public health. In this new role, he will lead the development of a college-wide interdisciplinary public health program. Professor Mattes is director of the Ingestive Behavior Research Center and his latest research project, in collaboration with the Denver Museum of Nature & Science, is highlighted in "Is Fat the 6th Taste?" (page 14).

Helping to support this vision is the new Lyles-Porter Hall, designed to promote strong interdisciplinary partnerships that enhance student training and promote new research collaborations. Located in Purdue's new Life and Health Sciences Park, the building houses the Department of Speech, Language, and Hearing Sciences; the IU School of Medicine-Lafayette; the A. H. Ismail Center for Health, Exercise and Nutrition; and clinics for psychology, nursing, nutrition science, audiology and speech-language. We'll be showing off this spectacular facility during an open house on Nov. 8 before the Purdue-Wisconsin game — I hope to see you there!

Hail Purdue!

Christine Ladisch
Dean

REVERBERATIONS



THE FOLLOWING COMMENTS REFER TO THE FALL 2013 ISSUE OF *LIFE 360*.

SPECIAL EXPERIENCE

I did not study abroad as a student, but as an alum I was a USAID volunteer in the food industry in a few developing nations — Russia, Poland (3 times), Palestine West Bank. Regardless of when the opportunity arises (as a student or alum) it is a life-altering experience to work with other people in other nations with the same interests (i.e. food and nutrition). Now, I travel to other countries on business (England, Germany, Iceland, Chile, Mexico, Colombia, China); and although the purpose of my trips is now professional, it is always a unique and special experience to share mutual passion for food and nutrition with those I meet, even if there is now an associated element of business.

THOMAS S. JONES, HK '73, MS NUTR '76
Meat Science Fellow, Kalsec Inc.
Kalamazoo, Michigan

PLEASED

It's good to learn the school is really progressing, along with all programs. As a medical school professor, I am also pleased Purdue maintains high standards in all fields. Keep up the good work. Keep me informed.

DAVID WAYNE SMITH, DED, DABPS, DACFE (HK '49)
Professor Emeritus/Research Specialist
Director, Disability Assessment Research Clinic
University of Arizona

EXCELLENT

I really enjoyed this issue and hope to continue getting the publication in the future. I loved seeing what students and teachers are doing at Purdue. Keep up the excellent work at providing such a wonderful publication.

CHRISTI MICHAELIS, SLHS '74
(Read more about Christi on page 37.)

UPLIFTING

I found the articles interesting and uplifting. "50 Years in the Making" was nostalgic. The articles on Parkinson's, autism and bariatric surgery weight loss were interesting to me because I have friends with these conditions.

JUDITH BOWLING, NUR '69
Retired Registered Nurse

IT IS BEAUTIFUL.

I just had a chance to read through the most recent *Life 360*. The design is extraordinary and enhances the fine content. Keep up all your good work, I appreciate it. I assume we all appreciate it.

RICHARD FEINBERG
Professor, Consumer Science
Purdue University

360° REVIEW

CONSUMER SCIENCE

The Sales Education Foundation named the department's selling and sales management program a "Top University Sales Program" for 2014.

The award recognizes programs that prepare students for professional selling careers. Purdue's Center for Professional Selling

supports the program and partners with companies to help students become career-ready through practical experiences in sales competitions, résumé critiques, mock interviews, speed selling contests, and business networking events. "Through the center, students graduate with practical, enriching experiences in sales leadership that enable them to contribute faster and more meaningfully as they start their careers," says Jane Anderson, associate director, Purdue Center for Professional Selling.



Photo by Mark Simons

HEALTH AND KINESIOLOGY

Researchers are using a modified smartphone to measure a person's walking gait in order to prevent falls in people with compromised balance, such as the elderly or those with Parkinson's disease. Shirley Rietdyk, associate professor, is collaborating on the project with Babak Ziaie, professor in the School of Electrical and Computer Engineering and the Weldon School of Biomedical



Photo by Mark Simons

Engineering (at bottom left, with doctoral student Albert Kim). The innovation, being commercialized as SmartGait, is designed as a tool to aid health care professionals in assessing a person's risk of falling and identifying ways to avoid injury. "We know that people who are more likely to fall have slower gait speeds and variable stride time, step length and step width," Rietdyk says. "But it's hard to gather that information in an everyday environment." Until now, there has been no portable user-friendly system that could be worn for a period of time to record a person's gait. The researchers adapted a conventional smartphone with a downward-looking, wide-angle lens and a special app that allows the phone to record and calculate gait measurements.

HEALTH SCIENCES

Linda Nie, assistant professor, has designed and built novel neutron-activated X-ray fluorescent equipment for quantification of manganese in human bone. The project has received a National Institutes of Health grant award of \$756,713. This first-ever transportable medical device makes it possible for real-time, noninvasive assessment of bone levels of manganese, aluminum and other essential metals in normal and diseased human subjects. It is particularly useful for bone manganese as biomarker for early diagnosis of manganese-induced Parkinsonian disorder.

Ulrike Dydak, associate professor, is a co-investigator on a five-year NIH grant awarded more than \$2.6 million. Her experience in magnetic resonance spectroscopy (MRS) will be utilized to measure a number of brain chemicals involved in a common neurological disorder called "essential tremor" in both patients and healthy subjects.



Photo by Mark Simons

Jennifer Freeman, assistant professor, received the 2014 Exceptional Early Career Teaching Award for tenure-track faculty at Purdue. She also was awarded the 2014 College of Health and Human Sciences Early Career Research Achievement Award. Her current research is focused on investigating the adverse health effects of exposure to environmental stressors on human and environmental health using the zebrafish model system.

HOSPITALITY AND TOURISM MANAGEMENT

The school's graduate programs are ranked first in the nation according to a research article published in the *Journal of Hospitality and Tourism Education* in December 2013. This study examined hospitality and tourism management graduate programs over a 10-year period in the United States and used a questionnaire adapted from the ranking methodology used by *U.S. News & World Report*. HTM was cited for having continuously advanced its master's program over the 10-year period — it ranked third in 2006 and fifth in 2002. The doctoral program also showed improvements in ranking, from fifth in 2002 to first in 2006.

HUMAN DEVELOPMENT AND FAMILY STUDIES

Shelley MacDermid Wadsworth was one of the distinguished set of reviewers for the National Academy of Sciences book *Preventing Psychological Disorders in Service Members and Their Families: An Assessment of Programs*. She is director of Purdue's Center for Families and the Military Family Research Institute.

Teachers in the 3- to 5-year-old classrooms in the department's Ben and Maxine Miller Child Development Laboratory School are experimenting with "smart boards" to expand upon interactive exercises in a group setting. Teachers have the opportunity to extend a topic and access information with the smart board, which resembles a large flat screen. "For example, when the children were talking about turtles and where different turtles live, they could pull up the Discovery Channel link and search information on turtles together using the interactive smart board," says Elizabeth Schlesinger-Devlin, the school's director. "We are exploring different ways to incorporate the smart board within the classroom setting and also for the students working on their practicums."

NURSING

Research by Elizabeth Richards, assistant professor, shows that the majority of people who walk their dogs regularly are more motivated to get moving for Fido's

health than their own. Richards leads the Dogs, Physical Activity and Walking (Dogs PAW) study at Purdue and is evaluating methods to encourage dog owners to walk more often. "Engaging in exercise can be intimidating for some if they feel overwhelmed by the gym environment or the amount of time or intensity they should achieve," she says. "But there is something accessible for many people when it comes to dog walking, and the bond between owner and pet is certainly part of that."



Photo by Mark Simons



Photo by Mark Simons

Cynthia Bozich Keith, clinical associate professor, received a 2014 Murphy Award. She was one of five professors recognized with Purdue's highest undergraduate teaching honor. Bozich Keith says her passion is shaping students' interest in psychiatric health into sharp clinical skills and attitudes that reflect professionalism, compassion and respect.

NUTRITION SCIENCE

Dennis Savaiano was named the Virginia C. Meredith Professor of Nutrition Policy. He has started a food policy initiative that will provide scientifically based information to local and international policymakers. Two courses have been created as part of the initiative, one on food policy and another on world food problems that involves five Purdue departments.



The "Fish for Your Health" wallet card developed by Professor Charles Santerre is being used

by the Florida Department of Health to educate pregnant women on safe fish consumption. Working with the Centers for Disease Control, the Florida Department of Health created a YouTube video and is distributing the card as part of their educational campaign on seafood safety. For more about Fish for Your Health, visit Fish4Health.net.

Elderly women could benefit from consuming 29 percent more protein than the current nutrition guidelines recommend, according to new research from Professor Wayne Campbell. "The current dietary reference intakes for elderly adults rely on data collected from younger people and extrapolated to include elderly people," he explains. "Also, the scientific method used for the last 50 years to determine protein needs is not an ideal technique for older adults."

PSYCHOLOGICAL SCIENCES

Jeffrey Karpicke, the James V. Bradley Associate Professor of Psychological Sciences, received the Presidential Early Career Award for Scientists and Engineers, the highest honor bestowed by the United States government on science and engineering professionals in the early stages of their independent research careers. Karpicke was among the group of honorees recognized by President Barack Obama at the White House this spring. Karpicke's research is focused on human learning and memory, especially retrieval processes. He was nominated for the award by the National Science Foundation and the Department of Education.



Photo by Pete Souza, Official White House Photo



Photo by Mark Simons

SPEECH, LANGUAGE, AND HEARING SCIENCES

The SPEAKall! iPad application is garnering rave reviews. The app facilitates communication and language development for children and families affected by severe, nonverbal autism. *The App Magazine*, which gives it five stars, says, "We have reviewed thousands and thousands of apps here at *The App Magazine* and SPEAKall! is definitely one of the best!" The app is also featured on the Assistive Technology Radio website at www.AssistiveTechnologyRadio.com. Earlier this year, SPEAKall! was adopted for use at speech and language clinics at San Jose State University in California and the University of Central Florida in Orlando. Oliver Wendt, assistant professor, led development of the app with a group of 14 students in EPICS (Engineering Projects in Community Service). Wendt holds a joint appointment in the Department of Educational Studies.

Anne Smith, distinguished professor, received the Honors of the Association award from the American Speech-Language Hearing Association. This highest honor recognizes members for contributions to the discipline of communication sciences and disorders. Smith is co-director

of the Purdue Stuttering Project and is renowned for her research on how the brain controls speech production, especially for people who stutter. Her research has been supported by the NIH for over 25 years through more than \$13 million in grant awards.

Lisa Goffman, professor, received the 2014 College of Health and Human Sciences Research Achievement Award soon after her induction as Fellow of the American Speech-Language Hearing Association. Her research focuses on the relationship between speech, language, and overall motor development in infants and children.

LYLES-PORTER HALL

The new Lyles-Porter Hall is open for business! A building dedication was held Sept. 26 and an open house is planned for Nov. 8 before the Purdue football game. The facility is located on the southwest side of campus and houses the Department of Speech, Language, and Hearing Sciences along with other clinical facilities and research centers associated with HHS, including the A.H. Ismail Center. The Indiana University School of Medicine – Lafayette is also housed there. If you're returning to campus for the Purdue-Wisconsin game on Nov. 8, be sure to stop by the open house before the game.



Photo by Steven Yang

FOR THE LATEST HHS NEWS, VISIT WWW.PURDUE.EDU/HHS.

A man in a dark suit, white shirt, and striped tie stands in the center of a crowd. The crowd consists of several other people, mostly men, whose faces are blurred, creating a sense of being an individual in a large group. The lighting is soft, and the background is a plain, light color.

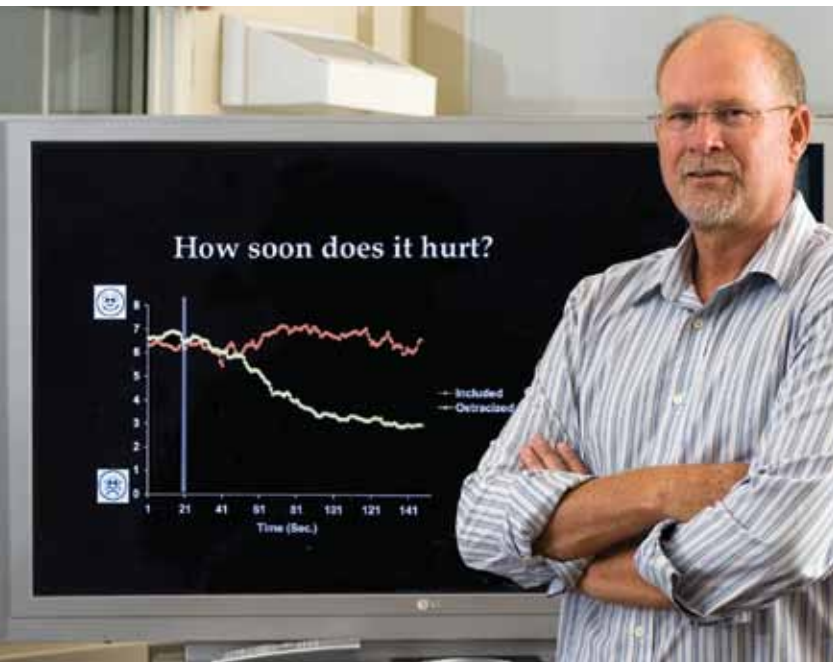
FEELING LEFT OUT

A SCIENCE-BASED AND SOLUTION-ORIENTED
LOOK AT OSTRACISM

By Chris Adam

An entry-level account executive not invited for the weekly lunch outing. A child not being included in a game of basketball during recess. From children to the elderly, from schools to offices, most people know the feeling of being left out or excluded.

For Kip Williams, a chance Frisbee game led to an increased curiosity about exclusion. Now, as a professor of psychological sciences, Williams is helping scientists better understand how ostracism works in the brain. He is also working with community groups to provide support for those affected by this social phenomenon.



Kip Williams, professor of psychological sciences, has found that ostracism resonates in the same area of the brain as physical pain, inciting anger and sadness. (Photo by Mark Simons)

Williams was working as an assistant professor of psychology at Drake University in Des Moines, Iowa, when an outing to the park with his dog turned into something much more. He was sitting on the ground when a Frisbee rolled and hit him in the back. He tossed the Frisbee back to its owners, who then began to engage Williams in their game. But after just a few tosses, they stopped including him.

“At first, it was sort of funny,” Williams says. “But when it became clear that they were not going to include me again, I felt foolish, awkward and hurt. I felt ostracized.”

That Frisbee incident further sparked his academic interest in the causes and effects of ostracism, which is defined simply as being ignored and excluded.

“Typically the term implies a situation in which a group is shunning an individual,” Williams says. “It can also describe the so-called silent treatment, where one person ignores another or a group excludes another group or even an individual rejects a group.”

Ancient Athenians coined the word “ostracism.” They wrote the name of the person they wished to banish on shards of clay, known as ostraca. But the phenomenon appears to have existed for as long as there have been social animals. Williams says many researchers believe the fear of being ostracized helped civilizations emerge.

“Fearing exclusion and being ignored within a group causes people to act within social norms,” he says. “Ostracism emerges for acting outside of these social norms. Knowing those possible outcomes keeps people acting in a civilized manner.”

Ostracism is not restricted to humans. Social animals from buffalo to bees can ostracize members of their groups. Williams says the reason for the ostracism is that it strengthens the groups because the animals get rid of any member who threatens their success.

The pain of rejection

Williams’ major focus in his ostracism research is how it affects people — particularly the impact on their brains, emotions, thinking and behavior. His research shows that ostracism resonates in the same area of the brain as physical pain and incites anger and sadness. This pain can be functional if it causes the person to evaluate the situation and decide if the best course of action is to change behavior or find another group in which to belong.

“We all feel the pain of ostracism just about equally, no matter how tough we may be,” he says. “After the pain, a person tries to deal with the impact of the ostracism episode.”

Williams developed a research tool to study the effects of ostracism in the lab. He re-creates his Frisbee game experience with a virtual tool called Cyberball wherein participants toss a virtual ball with two other players represented by animated characters on a computer screen. Some of the participants are ostracized — they receive the ball once or twice at the beginning of the game, but never again.

“It might surprise people at just how angry or sad the individuals became when they were ostracized, even in this simple virtual game,” Williams says. “This is experimental manipulation; it has nowhere near the same emotional impact as much larger situations such as when a father tells his son he is dead to him. Cyberball involves a small manipulation with large effects.”

(Continued on p. 12)

FOR PARENTS **Q&A** about Ostracism

Zoe Taylor, assistant professor of human development and family studies, examines resiliency and children. We talked to her about ostracism and the best approaches for dealing with affected children.

Q: What are the possible consequences of ostracism?

A: Ostracism is a serious risk for children with long-lasting developmental consequences. Peer rejection, bullying and isolation have been linked to maladjustment in multiple developmental areas such as poor psychological health, lower academic success and engagement, poor social competence, and higher levels of externalizing problems. Ostracism may be particularly detrimental for children’s competence as children who are ignored can feel non-existent, discounted and invisible. Also, children who are experiencing ostracism may be especially high-risk, as they lack one of the core strengths of resilience, that of positive social relations.

Q: What advice do you have for parents of children who are being ostracized?

A: Key findings across studies of resilience have clearly demonstrated that a primary component of resilient functioning is social relationships. For children experiencing high levels of adversity, peer relationships can be particularly protective. Some children may be rejected by their peers because they lack social confidence or are shy, whereas others may be ostracized because they are overly aggressive. The ways in which parents can aid their children depends on sensitivity to the situation. For timid children, parents could foster and encourage children’s self-esteem and self-efficacy. Parents can also help children reframe negative thoughts and perceptions that may be preventing their child from having successful friendships.

Children who are aggressive or who have poor self-regulation are often rejected by their peers, with studies clearly showing that these dysfunctional social exchanges result in isolation and sadness, which further jeopardizes future social interactions. In this situation, modeling and helping children regulate their emotions if they are susceptible to aggressive or other socially inappropriate behaviors is critical. It’s important to teach and help children recognize and talk about their own and others’ emotions. All of these techniques are associated with higher peer competence, and in turn resilience, in children and adolescents.

Chris Adam

Q: What are the best coping approaches for children who are being ostracized?

A: The best approach for a child who is being ostracized is for the child to find a source of support. Ideally this would be a parent. However, one potential confounding factor here is if the child’s home environment is also a risk factor. Some ostracized children may be having difficulty with peer social relationships because their family relationships at home are also problematic. Children who are excluded because they are overly aggressive or disruptive may have home environments with a lot of conflict present, or they might have parents who model inappropriate ways of coping with stress and challenges. Many children in poorer quality home environments have better outcomes if they have a friend network to turn to for support.

It’s vital for children to find a source of support or a place where they feel like they belong. This could be through a club at school or in the community, a teacher who can serve as a mentor, or a religious organization. Being able to ask others for help and not turning away from support helps children move out of stuck patterns and relationships. Social support, even from a single person, is incredibly effective against emotional problems such as depression, which is a common symptom of someone who is ostracized.

Unfortunately many of the personal characteristics that foster resilience and adaptation to adversity, such as sense of belonging, mastery, self-esteem, and perceiving life as meaningful, are also characteristics that are impeded by ostracism. If some of these traits can be maintained or fostered, particularly self-esteem and confidence, better developmental outcomes would be expected. Most important for children to remember is that resilience is not a unique or special characteristic, but something that every human has a capacity for utilizing and fostering in themselves.



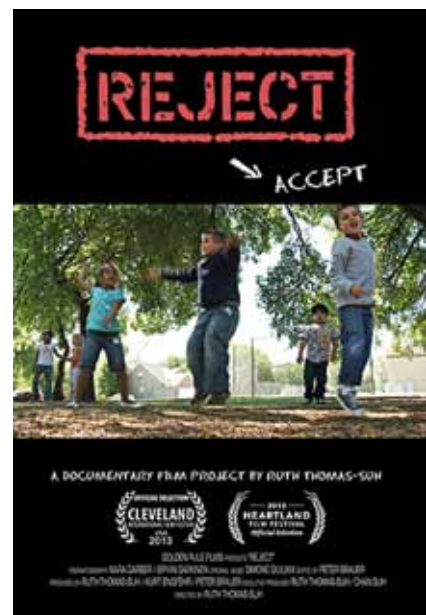
Williams says they have done other studies in which people report experiencing an average of one event per day where they feel rejected by groups or society. This can lead to a lack of meaning in and control over their lives. Even such seemingly small events can trigger strong emotional reactions.

While anyone can be ostracized, some are more at risk for chronic or daily ostracism, including minorities or those with mental or physical disabilities.

“When dealing with ostracized children, the key for parents is to be aware of what is going on,” Williams says. “Once there is awareness, then the adult can help the child figure out a strategy for dealing with the ostracism.” (See “Q&A about Ostracism” on the previous page for best approaches to dealing with ostracism in children.)

Film and community

Williams is one of the ostracism experts featured in the documentary *Reject*, which had its world premiere at the Cleveland International Film Festival in April 2013 and was also shown at the 2013 Heartland Film Festival in Indianapolis.



The film focuses on the stories of two American families affected by social rejection. The two personal stories featured in the film take very different paths. One involves a 17-year-old boy from a town outside of Cleveland who was bullied in his math class every day until he finally took his own life. In the other story, the film recounts the life of a 5-year-old boy in Oklahoma who is the son of Mexican immigrants. He is labeled a troublemaker, kicked out of kindergarten, and lands in a new classroom under the care of a teacher who

understands that the boy needs to feel accepted.

Along with Williams, the film features experts in education, medicine, neuroscience and juvenile justice. It takes a science-based and solution-oriented look at bullying behavior and violent behavior.

“The goal of the film is to make people aware of the impact of ostracism and rejection,” Williams says. “I often say that ostracism is the invisible stepchild of bullying. Ostracism can be much more difficult to document, such as when a child is being excluded by classmates, so it becomes a weapon of choice. This film is one way that we can help people understand the difference between bullying and ostracism.”

The film was directed and produced by Ruth Thomas-Suh, who partnered with Williams and Purdue Extension to develop a program called All In: Building a Positive Community. It is a three-part community forum that addresses ostracism and other negative behaviors that hurt and exclude others.

Parents, teachers and others who work with children can attend the community forums as a part of the program. The series includes a screening of the film *Reject*, a discussion by Williams and then an opportunity for the community partners to discuss an action plan.

“This is a great outreach program for Purdue Extension because we are already so closely connected to the groups in our communities,” says Joanne Lytton, a Purdue Extension educator in Carroll County, where one of the first community programs dealing with this issue was held. “This grassroots approach really helps us take what we know from working in the schools and team up with community groups to tackle issues like ostracism and rejection.”

As a result of the forum in Carroll County, Purdue Extension and community groups formed a mentoring program for young boys. Purdue Extension is also hosting training sessions with community members based on the ideas presented in “Reject,” particularly curriculum aimed at teaching children positive ways to deal with ostracism.

Dee Love, an Extension specialist in the Department of Human Development and Family Studies, says, “This outreach program is a natural fit for Purdue Extension because we are all about taking the great knowledge of our university into Indiana communities. In this particular case, with a topic as important as ostracism and our children, we can provide invaluable support to our schools and local communities.”

For more information on the Extension program All In: Building a Positive Community, contact Love at loved@purdue.edu. For upcoming screenings of *Reject*, visit www.rejectfilm.com.



JULIE EDDLEMAN UNDERSTANDING CONSUMER BEHAVIOR

Julie Eddleman describes herself as an “extremely curious person by nature.” That trait has served her well in the 19 years she’s delved into the minds of consumers at Cincinnati-based Procter & Gamble. Now, that natural curiosity is taking her in an entirely new direction.

In September, Eddleman joined Google’s new global brand team. In this role, she will serve as the global lead for Procter & Gamble, to help them utilize Google for strategic consumer messaging across all their brands and businesses. The new brand team was created to help companies grow their business with digital media and advise on all aspects of online business strategy.

“The culture at Google is one of extreme innovation and rapid growth,” Eddleman says. “That’s very exciting to me. They’re a young company, they’ve only been around for 15 years — they’re younger than my career at P&G.”

Eddleman cut her marketing teeth at P&G — starting as an assistant brand manager on Hawaiian Punch right after earning a master’s degree in consumer behavior at Purdue in 1995. An Indianapolis native, she had also attended Purdue for her undergraduate degree, earning a B.S. in Consumer Sciences and Retailing (now Consumer Science) in 1992.

She continually advanced at P&G, and over the years, guided P&G’s strategy for reaching an ever-changing audience in an increasingly digital world. Two years ago, she led the creation and implementation of P&G Brand Operations. As marketing director for North American Brand Operations, she worked with approximately 100 P&G brands, and she was responsible for a budget of over \$3 billion.

“My job was to understand how P&G consumers use media and how they want to get information, whether that’s through a smartphone, tablet or more traditional routes,” she says. “One of the biggest challenges we face is understanding media consumption and technology, and how quickly consumers will go to digital and mobile media.”

Leaving P&G wasn’t an easy decision, Eddleman says. “They are an amazing company, and I will always be extremely grateful for the opportunity to work there. P&G is family. It was a huge benefit knowing that in my new role at Google, I can continue to work with people I enjoy and respect at P&G.”

Another perk is that she doesn’t have to move from her home in Loveland, Ohio, located 45 minutes from Cincinnati. Eddleman describes Loveland, known as the “Sweetheart of Ohio,” as being very much like the fictional Mayberry. She lives there with her partner, Diane, also a P&G employee, and their blended family.

When asked what valuable lessons she learned at Purdue that have served her well over the years, her answer is particularly relevant for this stage of her life.

“Many Purdue mentors taught me that change is the only constant,” she says. “That’s been very true. What I told the Purdue students when I participated in Old Masters (Eddleman was in the 2013 class of honorees) was to be involved in student activities and leading organizations. It teaches you to think on your feet, to learn and learn quickly.”

Tammy Weaver-Stoike and Kim Delker



IS FAT THE 6TH TASTE?

Richard Mattes' research into humans' ability to taste fatty acids is building the case for the existence of a sixth basic taste: fat. Mattes is a distinguished professor in the Department of Nutrition Science and newly appointed director of public health in the College of Health and Human Sciences.

The five widely accepted primary or basic qualities of the sense of taste — sweet, sour, salty, bitter and umami (also characterized as meaty) — are some of the first biological concepts taught to young children.

"They are taught that these sensations influence food preferences and may account for individual differences in food choice and nutrient intake," Mattes says. "They also help to protect against ingestion of unwholesome or toxic chemicals in foods. The sense of taste is the dietary gatekeeper.

"In basic biology the discovery of another dimension of taste is equivalent to discovering a new basic color," Mattes says. "A consensus is emerging in the field of sensory science that fattiness is another dimension of taste."

Long-term impact

Mattes says understanding the taste of fat will provide insights about our biological systems, how to develop food products to optimize health, and improve public health recommendations about diet and chronic disease risk reduction.

His research could contribute to nutrition science by validating fat as the sixth basic taste and enhancing understanding of how the sensory system of taste influences what and how much we eat. Fat often has a negative health connotation, but fats are found in most foods including animal products, grains, fruits and vegetables. There are higher levels in some vegetables such as avocados, olives and soybeans, and lower, but still measurable, concentrations in others such as leafy green vegetables.

When people comment on how fat tastes, they often describe tactile sensations such as creaminess or viscosity. Consider how drinking whole milk versus skim milk feels. Though not often associated with fat, the strong odor of some foods such as ripe cheese also is derived from fats.

But Mattes has conducted an array of studies that indicate there also is a taste component to fat, or more specifically the fatty acids that makeup dietary fat. These studies focus not only on the sensations detected in the mouth, but also how the body responds physiologically to oral fat exposure. For example, when fat is being tasted it triggers a rapid and sustained elevation of blood lipids (triglycerides) linking taste to metabolism and possibly chronic disease risk. The odor and texture cues from fat are not as effective as taste

Inside the Genetics of Taste Lab at the Denver Museum of Nature & Science with lab technician Leta Keane (above left) and research manager Tiffany Nuessle (opposite page at top).

for driving these kinds of responses. Moreover, these responses differ in lean and obese individuals, he says. To better understand these mechanisms, Mattes is looking at the role genetics play in the taste of fat.

Cross-country collaboration

The laboratory contributing to this research is unlike most others — it's a public exhibit on the second floor of the Denver Museum of Nature & Science. The Genetics of Taste Lab is a community-based program in the museum's interactive exhibit of human biology, and Mattes is collaborating with Nicole Garneau, the museum's curator and department chair of health sciences. The work may be a groundbreaking population study because of the breadth and depth of data that will be collected from visitors interested in participating as they engage in the museum's interactive research study within the exhibition.

"In addition to the research, it's a vehicle for educating the population about this sensory system," says Mattes, who directs Purdue's Ingestive Behavior Research Center. He studies the controls of human feeding and the mechanisms and functions of taste, and is known for his related work specific to nuts and beverages.

The unique venue will allow the researchers to attract up to 3,000 participants ages 8 and older. During a 45-minute study session, the participants taste and rate a series of dissolvable taste strips, similar to breath mint strips, but containing different taste compounds including fatty acids, and answer questions related to taste such as intensity and quality. They also provide a swab taken from the inner cheek for DNA analysis. By early August, nearly 600 people had participated in the study.

"The response has been really rewarding for us not only as scientists who need data, but as educators interested in using taste as a vessel to teach people about their genetics in a way that is accessible and personally relevant to their everyday lives," Garneau says. "For me, the best stories are about young participants, under the age of 10, who just wow their parents with their curiosity and their ability to take in, process and then ask incredible questions — really nuanced questions, about genetics, taste and health."

Another advantage to this study design is that many people who visit museums do so in family groups, so the information collected, which remains anonymous, will provide a pool of information amenable to the study of genetic and environmental influences on perception. The researchers are especially interested in twins. Understanding the genetics could help the researchers determine whether the taste of fat is inherent or acquired and may explain the wide individual variability in responses to oral fat exposure.

"This may help to explain fat preferences and food choice," Mattes says. "Taste influences what and how much people eat as well as food digestion and use of the nutrients they contain."



Rick Mattes visited the Genetics of Taste Lab at the Denver Museum of Nature & Science in July. Mattes is collaborating with the museum on research related to whether humans can taste fatty acids. (Photos by Rick Wicker, Denver Museum of Nature & Science)

The information collected in this study will provide a large data resource that can be used for dozens of analyses. The research will be analyzed and then manuscripts of the findings will be submitted for publication in peer-reviewed professional journals. The evidence obtained will help to validate or refute the hypothesis that fat is a new taste quality.

Amy Patterson Neubert

The MIGHTY QUIN

Purdue student trustee juggles responsibilities and aspirations with the greatest of ease

As the state-appointed student representative on Purdue's Board of Trustees and a pre-professional medical student in the College of Health and Human Sciences with minors in organizational leadership and supervision, biology and psychology as well as plans to become both a doctor and a lawyer, Kelsey Quin is adept at juggling numerous roles and aspirations.

Quin grew up in Peru, Indiana, the "Circus Capital of the World" and began entertaining as a kiddy clown at age 4. She joined the Peru Amateur Circus as a performer at age 7, specializing in aerial silks (pictured inside the cover) and bungee trapeze.

"I was introduced to it at such a young age that it never seemed like a novelty to me. In Peru, going to circus practice is as common as going to Little League practice," says Quin, an accomplished athlete who also participated in soccer, track, cross country and basketball. "It's just what you do."

Although Quin, now a senior, recently "retired" as a performer in her hometown circus, which is limited to youth under the age of 21, it will always be one of her passions. She continues to serve as a volunteer and proudly took part in Peru's annual "Circus City Festival" this July.

But make no mistake, it's not a circus act that defines Kelsey Quin, but rather a commitment to doing her best and moving the world forward. In fact, she discovered her first passion even younger in life.

"I've known I wanted to be a doctor since I was 3 years old," says Quin, whose father serves as the on-site physician for

Peru's circus as well as owning his own practice in internal medicine. She is considering specializing in dermatology, but also wants to earn a law degree and work in government health care policy and reform while still maintaining a medical practice.

So, why choose Purdue over Indiana University, which has both medical and law schools? For Quin, who was named the 2011 Distinguished Young Woman of Indiana and earned a scholarship to attend any college or university in the state, Purdue's rival in Bloomington was never a consideration.

"I was initially drawn to Purdue's strong tradition in science, especially biology, and when I came to West Lafayette for a campus tour I honestly and immediately fell in love," she says. "I knew it was the place for me to be and haven't regretted it a moment since."

"Although I'm obviously considering IU for medical school, I feel like a degree from Purdue is more prestigious globally and shows that you worked hard to earn what you actually learn."

Choosing to enroll in the newly formed College of Health and Human Sciences was also an easy decision. "I've always been interested in the human side of medicine, especially health and fitness, so it was perfect," she says.

Quin's path to Purdue's Board of Trustees was a bit more uncertain. After attending the 2013 Kent Weldon Conference for Higher Education in Indianapolis, she felt compelled to "do something" to help move Purdue and the world forward. After consulting with her advisors and

faculty mentors, she applied for the position and began the rigorous selection process. Then, one morning in June, she answered a call from Gov. Mike Pence.

He congratulated her on becoming one of only 10 finalists, praised her accomplishments and aspirations, and just as Quin was reaching for the tissue box in expectation of a generous "Thanks, but we've selected someone else," she was offered the position.

"I'm pretty sure I squeaked, but quickly gained my composure before thanking him and accepting what I consider to be a great honor."

Quin, whose two-year term as a Purdue trustee will end in June 2015, also gained quick footing in her responsibilities

to represent both the needs of the students as well as the best interests of the University as a whole.

"I expected a more limited role, but each of the key initiatives in Purdue Moves reflects a focus on students and is designed to change the world," she says.

"We are extremely blessed to have an administration that will do whatever it takes to help students and to build something better and stronger for all of Purdue. But even as accomplished alumni, business people and government leaders, they realize I offer a different perspective and allow me to bring the ideas of our generation to the discussion."

Eric Nelson



Girl on Fire

When it comes to her success, Kelsey Quin is quick to credit her immediate and extended family both at Purdue and the Peru Amateur Circus, where this photo was taken. Behind Quin is her brother, Connor (left), a freshman at Purdue, and high school senior Adam Kirk (right), whose brother, Austin, is also a Boilermaker. (Photo by Charles Jischke)



PRACTICE MAKES PERFECT

OPPORTUNITIES FOR
EXPERIENTIAL LEARNING
ABOUND FOR HHS STUDENTS



During the spring semester of her senior year, Anne Miltenberger didn't take a single class — yet she had never worked harder in school. Miltenberger graduated in May 2014 with a degree in early childhood education and exceptional needs, and spent her last semester student teaching preschool and prekindergarten special education at Frontier Elementary in Brookston, Indiana.

By the end of the semester, she was managing the classroom, creating and implementing lesson plans, and communicating with parents about their children's progress. These real-world responsibilities could easily have been overwhelming for a college student, but Miltenberger had an arsenal of experience to rely on. As a sophomore, she completed her first practicum at the Ben and Maxine Miller Child Development Laboratory School in the Department of Human Development and Family Studies. From that point on, she was in a classroom every semester, working

Student teacher Anne Miltenberger leads a classroom activity (at left) and spends some one-on-one time with a student (above) at Frontier Elementary in Brookston, Indiana. During the spring 2014 semester, she student-taught two classes four days a week with about 15 children, ages 3 to 6 years, in each class. (Photos by Steven Yang)

with preschoolers and kindergarteners, elementary school children and kids with special needs.

“Without the variety of hands-on experiences, I would not have been able to get the full scope of what my degree entails,” Miltenberger says. “The bookwork laid the foundation for my practice, but the real learning took place in the classrooms where I taught. Experiencing education creates the most fruitful learning.”

Miltenberger's experience is not unusual in the College of Health and Human Sciences. The majority of HHS students will graduate having had some sort of hands-on learning such as internships, undergraduate research, clinical experiences, student teaching or service learning. Thirty percent of majors in the college require an experiential learning component as a degree requirement.

In the recent Gallup-Purdue Index, a survey of more than 30,000 U.S. college graduates, findings showed that those who were closely engaged with faculty or had participated in experiential learning as a student were twice as likely to be engaged in their current work as those who did not have those experiences. The index seeks to measure the most important outcomes of higher education, including engagement in the workplace and high levels of well-being. The full report is available at www.gallup.com.



Diving into research

Undergraduate research is one of the ways students can gain hands-on experience while also working closely with faculty and graduate students. All academic units in the college offer this opportunity, some as early as a student's second semester. Psychological Sciences and Nutrition Science both offer research-focused honors programs for top students.

Alex Jones is a senior in the health sciences pre-professional program, but he had no research experience when, as a freshman, he started working in the lab of Wei Zheng, professor and head of the School of Health Sciences. The lab's research investigates how manganese affects the body and how it can produce many of the same symptoms and neurological problems as Parkinson's disease.

Jones' aspect of the project involves looking at how manganese is stored and released in bone tissue. He's done work to determine the rate at which the element accumulates in the bone and the rate at which it's released back into the body — important because it provides insight into how long manganese can remain in the body before having a toxic effect on the brain.

"Alex is a great example of a student knowing nothing about research, but who, through hands-on learning, will become an expert in a particular field," Zheng says. "In fact, his work has earned him a co-authorship on one of our recently accepted papers."

Senior Alex Jones is an undergraduate researcher in the lab of Wei Zheng, professor and head of the School of Health Sciences. Jones is investigating how manganese is stored and released in bone tissue. (Photo by Steven Yang)

Jones plans to attend medical school and says the medical field is the best possible way to combine his fascination with science, enthusiasm for people, and his problem-solving nature. He believes his exposure to research is critical to his future success. Already, he is benefiting from the ability to research scholarly articles, understand the material presented, and then use that information in his own projects.

"It has vastly expanded my understanding of how the scientific community operates and advances our knowledge of the world around us," he says. "The greatest surprises are the realizations that nothing ever proceeds as it was originally envisioned, and the amount of time and effort put into research is not always proportional to the quality of results. I've come to realize that these frustrations are nearly unavoidable and simply part of the scientific research process."

Beyond the classroom

Many HHS programs have hands-on learning built into the curriculum. A supervised field experience is required for all Consumer Science students and a similar 400-hour internship for Hospitality and Tourism Management majors. Clinical experiences or internships are embedded in such programs as Health and Kinesiology and Nursing.

Two new courses in Nutrition Science are providing a growing number of students interested in the field of sports nutrition the opportunity to work with Purdue student-athletes. Students are divided into four project groups: Fueling Station, Media, Team Nutrition, and Training Table.

Fueling stations are located in the training areas of Mollenkopf Athletic Center and Mackey Arena to supply custom shakes, foods and supplements to the athletes before, during and after workouts. Nutrition Science students staff the stations, helping to manage inventory and prepare the foods and supplements.

"I definitely learned the importance of thinking on my feet," says Elizabeth Piotrowicz, a senior with a dual major in dietetics and nutrition, fitness and health. She worked at the fueling station during her junior year and plans to pursue a career as a sports dietitian. "Schedules, tasks and needs can suddenly change, and I learned to quickly adjust and find a solution."

Students in the Media group reach out to more than 500 student-athletes daily with sports nutrition information. Students involved in Team Nutrition play a role in nutrition education, DEXA body composition analysis, and competition fueling requirements for each of Purdue's 18 varsity teams.

About 120 student-athletes eat dinner together five times a week at a small-scale dining facility on campus. Called the Training Table, it serves food that satisfies the athletes' extraordinary dietary needs. Nutrition Science students assigned to this group can try new recipes, formulate new

After seeing a pediatric patient at the Family Health Clinic of Carroll County, nursing student Kelly Dyer consults with Jennifer Coddington, clinical associate professor in the School of Nursing and certified pediatric nurse practitioner. (Photo by Steven Yang)

menus, manage point-of-service food labeling and create nutrition education pieces.

Carmen Cucalon, a junior majoring in dietetics and nutrition, fitness and health, says it was her love of sports from a young age that influenced her decision to study nutrition. She wants to be a sports dietitian and jumped at the chance to begin gaining experience outside of the classroom.

"I heard about this course my freshman year and knew it would be a great opportunity," she says. "I've been able to interact with athletes, coaches and other professionals. This has allowed me to get an idea of how athletics works and the role of a sports dietitian."

Serving while learning

Many students opt to participate in a variety of experiences. Nursing student Kelly Dyer not only did her required clinical experience but also completed a research project and traveled to the Dominican Republic as part of a service-learning project to develop a water treatment system in a local community.

Dyer graduated in May 2014 after completing her clinical work at the Family Health Clinic of Carroll County, one of two clinics operated by the School of Nursing. The clinics provide primary health care in two medically underserved communities while providing an outlet for students to gain experience in direct patient care.





As part of her clinical experience during her senior year, nursing student Kelly Dyer provided primary care to children and adults under the supervision of preceptor Deb Mears, R.N. (Photo by Steven Yang)

Before completing her senior capstone experience at the clinic, Dyer worked there on a quality improvement research project focused on self-management counseling, which refers to patients and providers working together to set personal health goals. For the research, she worked with Sara McComb, associate professor in the schools of Nursing and Industrial Engineering, and Jennifer Coddington, clinical associate professor in the School of Nursing and certified pediatric nurse practitioner at the clinic.

"Anyone with a chronic illness knows that taking care of their health primarily comes in the form of self-care and lifestyle habits, not office visits," Dyer says. "A lot of research is being done showing the impact of involving patients in their care and working with them to manage their own health."

Through interviews conducted with staff and her own observations, Dyer identified barriers to completing the self-management counseling. With the help of McComb and Coddington, she developed recommendations to improve the process and even conducted a training session for staff.

Dyer hopes to work in public health, especially with underserved populations around the world. This interest led to her two-year involvement in a service-learning project to bring clean water to a community in the Dominican Republic. She and three other nursing students teamed with students from Agricultural Economics, Food Science, Environmental and Ecological Engineering, and Civil Engineering to develop a water treatment system for a school in Las Canas. As nursing students, their role was to study the prevalence of waterborne illnesses and develop educational modules for the students on preventing germ transmission. They also created materials to train community health workers. After two years of planning, the team built the water treatment system this past summer.

"I have loved getting to learn about what other disciplines bring to the table and to see how nursing transcends hospitals and clinics," Dyer says. "We hope to take what we learn and build similar systems in other communities in the future."

Speech, Language, and Hearing Sciences offers a service-learning opportunity in Zambia. This is the second year

a student team has traveled to that country to provide hearing and speech services to children and adults. You can read more about the students' trip on page 34.

A world view

It seems the best of both worlds when students can combine experiential learning with the opportunity to engage with people and cultures different from their own. Expanding immersive study abroad opportunities for students is one way the University is hoping to transform education as part of its Purdue Moves initiative. International experiences lasting a semester or longer are emphasized, and increased scholarship support is available.

A good example of this type of holistic experience is the sponsored internship program in China available through the School of Hospitality and Tourism Management. Since 2000, about 120 students have completed the six-month internship offered at several five-star luxury hotels throughout China. They learn all aspects of hotel and restaurant management, work alongside their Chinese colleagues, take Chinese language classes, and have ample time for travel and sightseeing.

Christian Bencid had just finished his first year at Purdue when he took off for the Shangri-La Hotel in Guangzhou, China. He felt the experience would help him to become a well-rounded hotelier and improve his knowledge of other



Hospitality and Tourism Management student Christian Bencid completed a six-month internship in China. (Photo provided)

cultures. He also admits to wanting to push beyond his comfort zone and learn how to acclimate to new environments. The experience also revealed a potential career path.

"One of the things I learned about myself is that I genuinely enjoy being immersed in a different culture," says Bencid, a junior in hospitality and tourism management. "The experience is what made me realize that I want to be involved in the international luxury market segment of the hospitality industry."

Bencid just completed a second international internship this summer in Spain, where he worked with the financial controller and purchasing managers of two luxury hotels in Palma de Mallorca.

Workforce ready

It's this kind of experience that employers value. A *Wall Street Journal* survey of corporate recruiters ranks Purdue fourth in preparing students for the workforce.

Alan Tuttle of Marriott International agrees. He is a manager of university relations and talent acquisition at Marriott, and says the company started recruiting at Purdue in the late 1980s and keeps coming back. The draw is HTM's top national ranking and graduates who are prepared to hit the ground running in the fast-paced hospitality industry.

"Marriott continues our long relationship with Purdue due to the quality of students we have hired for internships and for our entry-level management program," he says. "Purdue students have a strong Midwestern work ethic and are excited about the industry."

It's this kind of response from employers who are hiring HHS graduates that signals the college is successfully preparing the next generation of health and human science professionals — graduates like Miltenberger, who had a job waiting for her when she graduated. She's now a teacher at Whitney Young Early Childhood Center in Fort Wayne, Indiana. And remember Jones, the Health Sciences student researching the effects of manganese? His research was recently published in the 2014 issue of the *Journal of Purdue Undergraduate Research*.

Tammy Weaver-Stoike



SECURING A BETTER LIFE

FINANCIAL TOOLS FOR
THOSE LIVING IN POVERTY



Photo by Mark Simons

Some families in the world's poorest countries may spend half of their yearly income on a funeral for a loved one. Those families struggle to develop plans to meet these expenses, particularly since they have limited access to loans and other financial services.

But thanks to research by Jonathan Bauchet, assistant professor of consumer science, families in that situation may now be better able to manage their financial needs and make the best of limited resources.

Bauchet is among a growing number of researchers taking a closer look at the financial life of those in impoverished households. Specifically, his recent research has focused on human behavior associated with saving, borrowing and purchasing of insurance in poor households in developing countries.

"We used to think these households were too poor to save and couldn't afford loans or insurance," Bauchet says. "But research in the last decade shows that's not the case at all. These families actually need to have access to a complete set of appropriate financial services because

A loan officer in Sonora, Mexico, explains insurance products using a poster created by assistant professor Jonathan Bauchet. His research has examined the demand for life microinsurance in developing countries. (Photo provided)

being poor means that their income is not only very low, but also highly irregular."

Bauchet's interest in the area of finance for poor households in developing countries stems from his time as a development worker in Haiti.

"I see my research as an effort to inform policy in order to increase its positive impacts on poor people's lives," he says. "I want to connect with policymakers and practitioners to figure out ways we can offer poor families financial tools to help them create better lives."

In particular, he has examined the demand for life microinsurance among microfinance borrowers in Mexico. Microinsurance is so-named because of its low premiums and payouts, specifically designed for poor households.

In the case of the life insurance product Bauchet studied, premiums are approximately \$4.50 for four months of coverage with a \$1,300 payout. Microinsurance also has very simple registration and payout options, and fewer conditions and exclusions than typical insurance products.

"Insurance companies want to make microinsurance plans as simple as possible to prevent confusion," Bauchet says. "Lack of understanding is one of the top reasons poor households do not use formal insurance products to protect themselves against the many risks they face. If they cannot understand the benefits of the insurance, they are not going to buy in."

"Poor households face many risks, particularly when it comes to health, yet many do not buy insurance. My research looks at why they don't buy and how providers can improve selling techniques because these insurance plans

are designed to help the families survive when they experience major health issues or the death of a loved one."

Bauchet analyzed the promotion techniques a bank in Mexico was using to sell life insurance to its poor clients. He discovered two very distinct selling mechanisms — one that focused on providing financial information and one that focused on emotions as a driver of purchases. The financial data-based technique promoted the monetary benefits of having life insurance versus the consequences of not having the insurance when the family experienced the loss of a loved one. Emotion-based selling used illustrated cartoons to advertise the peace of mind that the life insurance provides.

"We found that the financial information worked better for middle-aged adults, while the emotional message appealed to younger adults," Bauchet says. "This means that one size does not fit all, but the message must be tailored to the targeted population to help them see why microinsurance is a valuable tool."

Bauchet also studies the impact of saving and borrowing on people living in impoverished households. He says that in the 1960s many governments in poorer countries tried to establish banks to issue loans to poor families. But most of them were not successful because repayment rates were very low — in some cases, as low as 50 percent.

"That changed in the 1980s, when Muhammad Yunus established the Grameen Bank in Bangladesh to extend poor people small loans on easy terms," Bauchet says. "Instead of individual loans, he gave loans to entire groups of women from the same village, which meant people felt more compelled to pay back because of the peer pressure aspect."

Yunus and the Grameen Bank received the Nobel Peace Prize in 2006 for their work to create banking programs for the poor. The Grameen Bank served as the inspiration for hundreds of savings and loan companies to start operations in poor countries.

"It kicked off a movement of institutions offering poor families places to save and borrow within the formal financial system," Bauchet says.

In addition to planning another microinsurance experiment with a bank in Colombia, Bauchet is planning to take a closer look at mobile banking options in poor countries, such as the mobile phone-based money transfer and microfinancing service called M-Pesa in Kenya.

Chris Adam



Photo by Tom Campbell

EXTENSION PROGRAM HELPS STRUGGLING HOOSIERS

Larissa Williams of Huntington, Indiana, was in a canoe without a paddle when she showed up to the first day of a Getting Ahead class led by Purdue Extension.

A college-educated wife and mother of two, Williams (pictured above) was struggling to get back on her feet after a disability had kept her out of the workplace for several years. She wanted to become a certified nurse assistant, but life below the poverty line had bankrupted her self-esteem.

She expected the program, billed as a workshop to help those in poverty build resources, to offer tips for fine-tuning her résumé and building a budget, but the class surprised her.

"Getting Ahead is not just about getting a job," she says. "It teaches you social skills, how to network, how to build friendships and get the resources you need to make a better life for yourself. Getting Ahead shows you what you didn't know."

The class helped her regain a sense of self-worth, and she successfully completed her nursing assistant certification. She now works in home health care and is financially stable.

Leading the Getting Ahead program in Huntington County is Karen Hinshaw, a Purdue Extension Health and Human Sciences educator. A native of Huntington, she has watched the needs of her home county swell as local factories and companies close.

Hinshaw says rebuilding the financial stability of Hoosier families does not hinge solely on providing economic opportunities. The key to sustainable change is helping people in poverty identify and access the resources they need.

"To watch people come in feeling worthless and be able to encourage and empower them to figure out who they are, what they want and how to get there — there's nothing more rewarding than that."

To read the full story, visit <https://ag.purdue.edu/Pages/Poverty.html>

Natalie van Hoose
Reprinted courtesy of AGRICULTURES Magazine



AWAKENING TO THE **NEED FOR SLEEP**

CHILDREN NEED TO SLEEP MORE, EAT BETTER
AND TUNE OUT

By Amy Raley

Health experts agree that far too many children in the United States are obese; and every new obesity study only reveals more about its negative, lifelong consequences.

The Centers for Disease Control and Prevention reports that obesity — typically defined as being 20 percent above ideal weight for a particular height and age — has more than doubled in young children while quadrupling in adolescents during the past 30 years. The percentage of obese U.S. children ages 6-11 has risen from 7 percent in 1980 to nearly 18 percent in 2012.

The good news is that this is fixable; the bad news is that the fix is not easy.

Photo by Charles Jischke

Blake Jones, assistant professor of human development and family studies, explores obesity in children and says that a big step toward conquering the problem is, quite simply, a good night's sleep.

"We've found that one of the biggest predictors of obesity in children is insufficient sleep," Jones says. "We've been looking at stress, too. Kids who are stressed don't sleep as well, and kids who don't sleep enough are about three times more likely to be obese."

"The average 2- to 5-year-old should have a minimum of 10 hours of sleep and a max of 14 hours per night. What we're seeing is an average of nine hours, and for some groups, even less than that."

Biological dominoes

How does sleep deprivation result in obesity? Jones says that children's and adults' bodies react with the same biological domino effect when they don't get needed sleep.

"When you're sleep-deprived, your body needs extra energy to maintain the brain and muscle power to stay awake and keep moving," he says. "This stress tells your body to send chemical hormones such as cortisol into your system." Cortisol, a steroid hormone, increases blood sugar and suppresses the immune system.



Research by Blake Jones, assistant professor of human development and family studies, finds that one of the biggest predictors of obesity in children is insufficient sleep. (Photo by Mark Simons)

Jones says lack of sleep also diminishes the effectiveness of the body's leptin receptors, which tell the brain you've had enough to eat. "When you're under stress, your brain doesn't acknowledge that your stomach is full," Jones says. "And beyond that, another hormone called ghrelin, which tells you that you're hungry, starts to spike because your body needs more energy to compensate for the lack of sleep."

Aggravating matters even more, Jones says, is that sleep-deprived bodies want quick energy, so they crave high-calorie foods such as fats and sugars.

"And at the same time, cortisol is keeping your blood sugars high so that your body is on high alert to act. But you're not really acting a lot — not like you're running from an attacking bear — you're just sleep-deprived. So as these children maintain these high blood-sugar levels, that starts to negatively affect their insulin, which makes them more likely to get Type 2 diabetes. These are kids!"

Parents need help

It's one thing to understand that sleep deprivation causes children to gain unhealthy amounts of weight. It's quite another to get children the sleep they need.

"The issue is time," Jones says. "There is this big time crunch — especially for families of working single parents or dual-earner families. They are busy. They get home from work and they have a limited amount of time to hurry and get the kids fed, bathed, and get homework done. What we see is that all these things push bedtime later and later."

Mealtimes also get pushed later, he says. "So the busy parent says, 'The best thing I can do to eat sooner since my kid is complaining, is either let them snack on junk food so they're happy, or I'll just pick up dinner on the way home

— or make something from a box.' Parents say they just don't have time to make a healthy dinner."

Jones is using support from the USDA to develop a website that will help parents plan meals and also involve their children in the planning. The idea is that on Saturday the parent would plan meals for the coming week and allow the child to suggest some of the foods that are chosen. The child would then do age-appropriate tasks to help prepare the food.

"A lot of parents said that coming home and not having something planned to make for the night was the biggest challenge," Jones says. And with a plan in place, dinner can happen earlier, which can help bedtime happen earlier.

More sleep is good, but better sleep is best

Jones cites a recent sample of preschool children showing that 69 percent had TVs in their bedrooms. He says the figure was so dramatically high that some questioned it. Recently, however, Jones says a second statistic was reported that gave further credibility to the first. "Another published article found that almost 60 percent of 10- to 14-year-olds had a TV in their bedrooms, too."

The American Academy of Pediatrics has sounded the alarm on this topic, imploring parents to establish "screen-free" zones at home by making sure there are no televisions, computers or video games in children's bedrooms,



A WINNING 'RECIPE' FOR KID CUISINE

A program that inspires child care providers to serve up healthful meals and snacks as well as positive role modeling and education for children is getting rave reviews.

In 2013, the RECIPE for Growing Healthy Children program, an effort between Purdue Extension and the Indiana Department of Education, received the Purdue Cooperative Extension Specialists Association's top award, the Hancock Award for excellence in programs for families. It's named for the late Ann Hancock, a former Purdue Extension program leader.

The winning program trains child care food preparers on planning and preparing meals and snacks that comply with the Dietary Guidelines for Americans.

"In just a few short years this program has shown improvement in the mealtime environment of children participating in child care programs," Angela Abbott, program leader and assistant director

of Health and Human Sciences Extension, wrote in a letter supporting the nomination of the team for the award. "This program is an important part of Purdue Extension's focus to deliver comprehensive, community-based health and nutrition programs."

Iris Hughes, a child care provider in Shelbyville, Indiana, is glad she attended RECIPE. Licensed for 18 years, Hughes runs a preschool and child care program in her home from 5 a.m. to 5:30 p.m. every weekday.

"I've taken a lot of nutrition classes over the years, and I really thought this was one of the most beneficial programs I've ever attended," Hughes says. "It was nice because we were able to see the food prepared and hear the different methods of how to prepare it. We also were able to sample the meals and participate in the preparation. I used a three-ring binder for the recipes and still use them regularly."

RECIPE stands for the program's six workshop sections: **R**ole models for children; **E**nvironment that encourages healthy behaviors; **C**reating nutritious meals and snacks; **I**nvolving children in food and fun; **P**artnering with parents; and **E**njoying eating together.

Sponsors are the Indiana Extension Educators Association, Purdue University Cooperative Extension Specialists Association and the Alpha Lambda chapter of Epsilon Sigma Phi, the Extension honor society.

Hughes laughs a little, noting one nutritional strategy she learned from RECIPE — a peanut butter and honey dip with fresh vegetables and fruits. "I have children eating things like radishes!" she says. "If it's dipped in peanut butter and honey, they'll eat almost anything!"

Amy Raley

and by turning off the TV during dinner. The academy says that children and teens should engage with entertainment media for no more than one or two hours per day, and that should be high-quality content. It says children should spend time on outdoor play, reading, hobbies and using their imaginations in free play.

This is easier said than done, Jones points out, citing comments from parents in lower-income, urban areas. "They say the bedroom TV is important because their neighborhoods aren't safe. They don't want to send their children outside, but they also don't want them hanging around them all the time because the parents have a lot of other responsibilities to handle at home in a short window of time.

"The problem with the TVs and other devices is if there's no way to cut it off, especially at night, and you're not really

sure if they're watching or what they're watching." Jones says that if older siblings share the bedroom they may stay up late watching shows that are inappropriate for the younger child, and if the younger child falls asleep, their sleep is not as sound with the noise and the changing light of the TV in the room.

With all healthy lifestyle changes, Jones acknowledges that it's far easier to embrace the logic than the actual practice.

"It's not just educating parents. It's trying to understand what their motivations are so we can address them. It's providing alternatives that keep parents from being stressed out by their kids, while letting the kids unwind and spend time with their parents in a positive way."



59%
OF KIDS
AGES 10-14
HAVE A TV
IN THEIR
BEDROOMS

JAMA Pediatrics, May 2014

A NURSE FOR CHANGE

HELPING HANDS, HEALTHY HEARTS

Gregory Jones (NUR '00) has a prescription for nurses. First, never forget why you became a nurse. If it's for any reason other than to help people then you are in the wrong field. Second, treat the person not the diagnosis. Third, let excellence and compassion guide your career. Last, always offer to others what you would want for yourself and loved ones.

Jones is a powerful example of this prescription. He currently works as a patient care supervisor of emergency services and Heart Safe coordinator at St. Francis Regional Medical Center in Shakopee, Minnesota, located just southwest of Minneapolis. Purdue's School of Nursing recently recognized him as one of the school's "50 Golden Graduates" in honor of its 50th anniversary. And in 2012, *Mpls. St. Paul Magazine* named him one of 20 outstanding nurses in the Twin Cities. The honor is especially meaningful since nominees are recommended by doctors, fellow nurses and patients.

"I feel this recognition has nothing to do with me, but rather is a reflection of dedication and perseverance to a cause," Jones says. "It's something anyone is capable of accomplishing."

One of his passions is education, and he is especially proud of St. Francis' Heart Safe designation for the cities it serves. The designation recognizes a Minnesota community's efforts to prepare its staff and citizens to recognize sudden cardiac arrest and how to respond.

As Heart Safe coordinator, he developed a community education campaign that helped 43 businesses and churches establish an emergency response team. During his nursing career, he has taught CPR to more than 10,000 people and heart health classes to more than 8,000.



Photo by Hannah Lynch

"Because of this work, rather than dying from a heart attack, there are dads who get to walk their daughters down wedding aisles and moms who get to bake cookies for their grandkids," he says. "Public education prevents many of those 'if only' conversations."

It may come as a surprise that Jones hasn't always been a nurse. He joined the U.S. Navy straight out of high school and worked as a naval aircrewman. In 1996, he decided to leave the military and searched for a career that would offer stability and more time to spend with his family. He also wanted something that would be mentally challenging and offer the opportunity to help others. Nursing seemed a good fit, and his initial concern of being a male in a predominantly female profession was soon dispelled.

Jones says he chose Purdue because it was a large university with a small-town feel, had an excellent reputation, and he could enroll directly into nursing school.

He credits his successful nursing career to his Purdue experience. "The Purdue nursing instructors made it very clear that excellence was not only a lifelong pursuit, but wholly expected in the here and now," he says. "I knew it was my duty as a Purdue nurse to carry on that legacy."

Paige Pope

FOOD FOR THOUGHT

PURDUE RESEARCHERS WEIGH IN ON CONSUMER BEHAVIOR AND HEALTH

Rising obesity rates and implementation of the federal Patient Protection and Affordable Care Act laws have shone a spotlight on calorie information as it relates to consumer food choices. A mandate from the Food and Drug Administration requires that restaurants with more than 20 outlets post this data.

Li Miao, associate professor of hospitality and tourism management, is conducting research on the topic and has found an interesting dilemma: Knowledge of disclosed calorie information alone may not lead necessarily to healthful choices.

“Food choice is ultimately a personal choice and is highly idiosyncratic,” Miao says. “Perceptions about food are often susceptible to cognitive biases and these biases influence food choices.”

Implications of menu labeling

The FDA-mandated deadline has been extended partially due to pushback from the restaurant industry. Miao says there is a general fear among restaurant operators that consumers will shy away from menu items with high calorie counts, affecting restaurants’ profitability. However, one study that Miao conducted found otherwise.

“The results actually showed that just adding the calorie information to the menu made some consumers perceive the same food items they normally ate to be instantly healthier,” she says. “It shows that knowledge of calorie information does not always lead to behavioral changes.”

New York Times food writer Mark Bittman recently chronicled a new movie titled *Fed Up* that is looking at standard American diet recommendations. Established in 1980, the findings recommended that Americans consume food lower in fat. That change, however, has led to a 25 percent increase in calories consumed due to added sugar, the author found.

Miao says Bittman makes a great point. “Calorie counts on menu labels are at best suggestive,” she says. “The actual calories provided by the same food can vary considerably from individual to individual depending on the makeup of the food and digestion process. Science related to such processes still leaves many unanswered questions.”

In hospitality management research like that being conducted by Miao, the focus is on how food served in restaurants affects consumer choices and well-being.



Li Miao (Photo by Mark Simons)

Changing perceptions to promote health

In one study, she observed the “halo effect” — the perceived healthfulness of food. Categorically, people tend to perceive food as healthier if a restaurant promotes a healthful image and the converse with perceived unhealthy options.

One hundred eighty-nine consumers in an Indiana town participated in a scenario-based, quick-service investigation. This Midwestern group was unlikely to have acquired accurate calorie information of menu items, though some

may have had sporadic exposure while traveling to regions where calorie information has been implemented.

The study used two quick-service restaurants to represent “unhealthful” and “healthful” establishments.

In restaurants perceived as healthful, like Subway and Panera Bread, those with access to calorie information chose food items with significantly lower calorie counts than those without such information. In contrast, in restaurants perceived as unhealthful, like Wendy’s, consumers with calorie information tended to choose menu items with higher calorie counts than those without such information, but the difference between the two groups was negligible.

Providing the science behind healthy eating

Wayne Campbell, professor of nutrition science, has focused his research on understanding how protein nutrition and exercise influence adult health as people age. He currently is serving on the U.S. government committee that is reviewing and advising on setting the nation’s dietary recommendation, *The Dietary Guidelines for Americans, 2015*. The guidelines are revised every five years based on the latest scientific data.

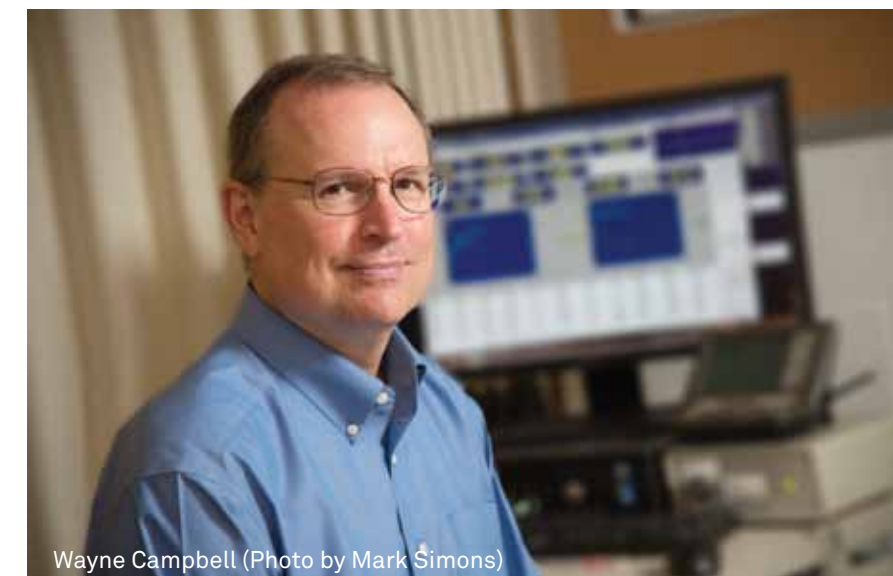
“The guidelines reflect the best science at the time for recommending a healthy diet for the American population,” Campbell says. “It is a basic framework for recommendations that have evolved over time as science has improved. The committee takes into account the food environment today and bases its assessment on the most rigorous science available.”

The dietary guidelines were first established in 1980. Since that time the food environment has changed remarkably, Campbell says.

“The scientific openness of the dietary guideline process now is unparalleled in the history of its development,” he says. “The recommendations today are clearly based on science, and when followed regularly, promote good health.”

The challenge, he says, is getting people to follow recommendations.

“The greater availability of good information and the ability to effectively communicate what it means is a challenge,” Campbell says. “The successful ways to help people consume a healthy diet and to get enough exercise aren’t currently being achieved.”



Wayne Campbell (Photo by Mark Simons)

The committee’s report to the secretaries of Health and Human Services and Agriculture is due by the end of 2014.

“The committee serves strictly in an advisory role to provide the best scientific evidence for those in government who set policies,” Campbell says.

Social aspects of food consumption

Miao has found that consumer behavior when it comes to eating in restaurants goes beyond calorie counts. Policymakers, restaurant operators and consumers need to be aware of the “murky relationships between food knowledge and food choices,” she says.

“Food is one of the most fundamental human needs and food consumption is social as well,” Miao says. “A great example is that a bottle of wine consumed at home costs significantly less than in a restaurant or bar, but people are willing to pay extra for the social experience.”

Like Campbell, Miao says exposure to useful information is a great start but there are many other challenges.

“The desire for indulgence in food often competes with the desire to eat healthfully,” Miao says. “Resolving the conflict between wanting to be healthy and wanting to satisfy one’s appetite in favor of the long-term health goal is often difficult and cognitively taxing.”

Della Pacheco



Senior Jessica Lorenz (at left) tests a child's hearing. Above, from left to right: Senior Alyssa Nymeyer meets her email buddy from the University of Zambia. Junior Megan O'Connell was only a sophomore when she traveled to Zambia with the first group of students in 2013. The infectious smiles and joy of the Zambian children. Senior Rachel Platt conducts a hearing screen. (Photos provided)

A UNIVERSAL LANGUAGE

LEARNING AND SERVING IN ZAMBIA

In just two weeks, Julia Bergmann learned an important lesson: Don't make assumptions based on someone's appearance. The junior in Speech, Language, and Hearing Sciences (SLHS) traveled to Zambia in May with fellow SLHS students and faculty to provide hearing and speech services to children in need. The service-learning program gives students an opportunity to serve others while gaining clinical experience and expanding their worldview.

"We had this amazing opportunity to work with children who had physical disabilities at a place called Cheshire Homes — and I was expecting to see children confined to wheelchairs or needing help to move around," Bergmann says. "Instead, children were racing around the room, using their arms to support their weight. I found myself not even noticing their disability. I learned right then not to have lower expectations of people based on appearances or stereotypes."

This is the second year for the program, and among the 24 students who have participated so far, there's agreement that they all learned so much more than they served.

"I'm amazed at the amount of life lessons, experiences and information I gained from each individual I met," says Anyea Livers, BS '13. She participated the first year and is now working on a master's in speech, language pathology at Florida State University. "Through this program, I learned

skills and lessons that simply cannot be taught in a traditional classroom."

During their two-week stay earlier this year, the students tested or screened more than 350 individuals, mostly children, at hospitals, schools and community centers. Undergraduates gained clinical experience in otoscopy, pure tone and otoacoustic emission screening procedures — something they wouldn't normally get to do until they are in graduate school. Under the supervision of program leaders Lata Krishnan, clinical professor, and Christi Masters, clinical assistant professor and speech pathologist, students as young as sophomores were conducting hearing screenings.

"This sort of experience is amazing and not practiced at the undergraduate level in the states," says junior Megan O'Connell. She was a sophomore when she participated in the 2013 program. She remembers being invited by a physician at Beit CURE Hospital in Lusaka to sit in on patient consultations. "I learned so much more than I ever thought I would."

Senior Rachel Platt says the clinical experience she gained boosted her confidence in her abilities and confirmed she was in the right major. "To have a study abroad program that applies to speech, language, and hearing sciences is not common at many universities," she says. "This was the most clinical experience I've ever had."

The Institute of ENT and Audiology at Beit CURE Hospital is the primary community partner organization for the service-learning program and serves as home base for the Purdue group. The institute provides high-quality, affordable ear, nose and throat care to those in need.

At Beit CURE, students have the opportunity to meet and work with Zambia's only audiologist, Alfred Mwamba, a 2004 Purdue graduate. Mwamba earned a master's in audiology and then returned to his home country to practice. Zambia is home to about 14 million people and nearly half are under 15 years old. Hearing screenings for school-age children are not common practice, and as a result, conditions that can lead to hearing impairment may go undiagnosed and untreated.

"From the beginning, our goal has not been to swoop in and provide our specialized services, but rather to carefully listen to Zambian providers about the needs in their country and see how we can fit our program to their goals," says Krishnan, who first visited Zambia in 2012 to plan the program. "As guests in their country, we feel strongly that we need to respect their decisions and acknowledge that Zambians know best what their country needs."

Just as in real life, the students learned that things don't always go as planned.

"Adaptation was crucial as we worked, something I hadn't experienced before going to Zambia," says senior Alyssa Nymeyer. "You never know what child or adult will walk through your door asking for help, and you may not have all of the tools necessary."

For most students, this experience was their first time to examine patients — and to add to the challenge, some children didn't speak English. Breanne Lawler, a doctor of audiology student, says, "The language barrier contributed to some difficulty in the screenings, but smiles are universal. Communication does not only occur in the form of a shared spoken language."

In addition to overcoming the language barrier with their young patients, the students also saw children with disabilities and learned to adapt testing as needed.

"I was surprised by how determined and inspirational the kids are," says sophomore Amanda Mueller. "They don't define disability the same way we do. Rather than thinking of it as something that prohibits us from doing things, they see it as just another individual trait — something that in no way stops them from being a kid."

Nymeyer agrees and says she had no experience interacting with children with disabilities before the trip to Zambia. "I was unsure how to interact with them, but these kids ended up teaching me so much. Against all odds, they were not being defined by their disability. Interacting with them allowed me to see that they are capable of so much more than I gave them credit."

Krishnan says the goal for the program is to sustain it long-term and expand opportunities as they can. In the program's second year, they were able to add some new clinical activities for students, provide training to Zambian staff on augmentative and alternative communication devices and stuttering, and add two new sites for hearing screenings.

Masters, who supervised the students and led speech and language therapy activities and training, says the number of students going each year isn't likely to increase because supervision of students is critical during the clinical activities.

"This is a rare opportunity for them to get significant hands-on clinical experience and learn more about themselves," she says. "I was really amazed at seeing the students grow substantially in clinical, professional and cultural knowledge in just two weeks."

A blog detailing the students' experiences while they were in Zambia is available at <http://slhsinzambia.wordpress.com/>.

Tammy Weaver-Stoike



A CHAMPION FOR HEALTH

DR. JUDITH MONROE RECEIVES HONORARY DOCTORATE

Photo by Charles Jischke

When Dr. Judith Monroe was appointed state health commissioner for Indiana, many told her that it would be a thankless job. Instead, she says, it became a platform for her to make significant improvements in the lives of Hoosier families.

"I found people were genuinely grateful for my efforts," Monroe says. "I think my greatest reward came from the comments and thanks from people I met around the state. Nothing is more rewarding for me than being part of a team that advances the health and safety of populations."

For her work to improve the health of Hoosiers, Purdue recognized Monroe with an honorary Doctor of Health and Human Sciences degree in May 2014.

Monroe served as health commissioner for Indiana from 2005 to 2010. Under her leadership, Indiana improved its obesity ranking from most obese in 2003 to 28th in 2009. Cigarette consumption also decreased by nearly 25 percent.

She says she first noticed the obesity problem, particularly among Indiana children, during her time as a physician and educator at St. Vincent Hospital in Indianapolis.

"I realized that these problems could not be solved one patient at a time and a public health approach was needed," Monroe says. "Then in early 2005, I received a call from then-Governor Mitch Daniels' office asking if I would consider the position of state health commissioner. Within three weeks I had left my work at St. Vincent to start a new chapter in my career."

Monroe says she is grateful for the support she received from Daniels (now Purdue University president) and organizations across the state, including Purdue. From the beginning of her tenure as state health commissioner,

Monroe partnered with Purdue faculty and staff for many different programs, including ones that aimed to improve nutrition education, physical fitness and local health department resources. She also worked closely with Purdue during the H1N1 flu pandemic in 2009.

"Dr. Monroe's lifelong dedication to improving the health and well-being of people so beautifully exemplifies the mission of the College of Health and Human Sciences," says Christine Ladisch, HHS dean. "I cannot think of a person more worthy, and we are very proud to recognize her with an honorary doctorate."

Monroe believes she had a much more positive experience than health commissioners in other states. "It was clear that Governor Daniels' leadership and management was superior to what my fellow health officers reported in their states," she says. "I had positive relationships across the state and that made all the difference."

Monroe is now working at a national level to improve the health of American families. She is at the Centers for Disease Control and Prevention (CDC) as a deputy director of the CDC and as director of the Office for State, Tribal, Local and Territorial Support. She is focused on a systems approach to developing more effective and efficient public health practices, innovative training for the future workforce, integrating medicine and public health, and improving population health.

"My office supports all of the nation's health departments and multiple national partners who provide technical assistance to the field," she says. "When health commissioners need assistance, they know they can call on me to work across the agency to get what they need."

Chris Adam

GENERATIONS

IN EACH ISSUE OF *LIFE 360* WE PUBLICIZE THE PROFESSIONAL ACHIEVEMENTS OF HHS ALUMNI. PLEASE SHARE YOUR NEWS WITH US AT WWW.PURDUE.EDU/HHSUPDATE.

1940s

MARY THAMAN, CSR '49, is a freelance home economist at Chief Supermarkets in Bryan, Ohio.

1960s

KATIE PORTA, SLHS '68, was commended in U.S. Congress this year for her commitment to championing the needs of developmentally disabled children and adults in central Florida.

JIM BROWN, HTM '69, is chief operating officer at Blackstone Consulting Inc. in Los Angeles.

SARAH (CAUBLE) JOHNSON, HE '69, received the 2013 David R. Prentkowski Distinguished Lifetime Member award from the National Association of College & University Food Services. The award honors individuals retired from a college or university food service leadership position or a position that has supported the betterment of college and university food services. Johnson retired in 2008 as director of dining services at Purdue University.

1970s

BARBARA SHANNON, NUTR '71, retired and is dean emerita at Pennsylvania State University.

DEE HARDY, HTM '76, is director of food and auxiliaries at University of Richmond in Virginia. She received the 2010 Silver Plate Award from the International Foodservice Manufacturers Association.

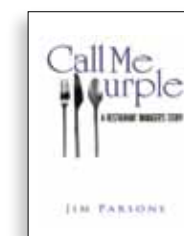
DENIS DURANTE, HTM '77, owns Direct to Chef's LLC in New York City.

CYNTHIA STATH, CSR '78, was elected international president of Sigma Phi Gamma International Sorority in July 2013. Stath is director of volunteer services at Girl Scouts of Greater Chicago and Northwest Indiana.

1980s

JEAN TAAFFE, CSR '81, relocated to Fort Collins, Colorado, to start a residential real estate investment business called Cottonwood Home Solutions.

KAREN WEAVER, HK '83, is principal of Conference Broadcasts in Philadelphia.



JIM PARSONS, HTM '88, is author of the book *Call Me Purple: A Restaurant Manager's Story* about his 25 years in the restaurant business. He is

culinary manager at Longhorn Steakhouse in Indianapolis.

HARRY THIBAUT, HK '88, is chairman of the Niles Charter Township Park Commission in Niles, Michigan. The commission recently completed the paved, off-road River Valley urban trail that runs 34 miles between Niles and Mishawaka, Indiana.

1990s

DINA POULOS AUGOUSTIS, HTM '90, is in fine wine sales at RNDC (formerly National Wine & Spirits) in Indianapolis.

KELLY (HOWELLS) MAY, NUR '90, is a house supervisor at Community Heart and Vascular Hospital in Indianapolis.

LESLIE DRAPER, CSR '94, is a wealth advisor at Regent Atlantic in Morristown, New Jersey.

JENNIFER (MAY) GUIDRY, HSCI '96, is vice president of Hercules Offshore in Houston.

CHRISTI MICHAELIS, SLHS '74, moved to Colorado after retiring from a 33-year career teaching early childhood special education. She and her husband, Randy, are CASA volunteers (court appointed special advocates) for foster families. They also volunteer for Project Worthmore, a nonprofit organization that helps Burma refugees in the Denver area by providing cultural mentorship and community support. "We moved out to Colorado four years ago and the opportunities to volunteer are endless," Michaelis says. "I didn't want to come to Colorado and just 'play.' I am still working, just not getting a paycheck."

GENERATIONS

JEREMY WARRINER, HTM '97, is a motivational speaker and freelance hospitality consultant in Indianapolis. He currently serves as the immediate past chairperson for the Indianapolis Mayor's Advisory Council on Disability.

PRITASH MATHUR, HTM '98, is chief operating officer, asset and wealth management at Deutsche Bank in Mumbai, India.

SCOTT SWIGER, HTM '98, is a business/systems analyst at GuestCounts Hospitality in Philadelphia.

ERIC GASS, HDFS MS '99, will serve as president of the Wisconsin Public Health Association in 2015. He is the public health research and policy director for the City of Milwaukee Health Department and an adjunct faculty member

for the Zilber School of Public Health, University of Wisconsin-Milwaukee.

2000s



GEOFFREY CAMPBELL, HTM '00, is resort manager at Resort at Paws Up, a luxury ranch in Greenough, Montana.

NICHOLAS KOONZ, HTM '00, is a rooms executive at Hyatt Regency Bethesda in Maryland.

STEPHANIE THURMAN EDWARDS, HDFS MS '02, completed a second bachelor's degree in nursing at Marian University. She is currently practicing

as a field nurse, doing home care in the Indianapolis area.

JENNIFER (BERRY) KERSEY, HK '02, is wellness and sports marketing coordinator at Saint Mary-of-the-Woods College in Indiana.

DENNIS SWENDER, HDFS '03, is director of operations at The Oaks Academy in Indianapolis.

KARI TERZINO, PSY '03, is a senior manager, custom research, at Halverson Group in Oak Park, Illinois.

JESSICA BUTCHER, CSR '04, is event marketing manager at Vail Resorts Inc. in Keystone, Colorado.

JESSE GOODMAN, CSR '05, works for APC by Scheider Electric and was promoted to district manager for south Texas.



NATALIE (MILLER) HARRIS, CSR '05, launched her own Made in USA wholesale collections of offbeat bridal and vintage-inspired cocktail dresses, Damsel White Label and Damsel Maids, in Houston. The bridal collection was recently showcased at the Bridal Extravaganza in Houston, the nation's largest bridal expo. The alternative styling and innovative designs were well received by press and brides alike. You can see Harris' designs at www.damselwhitelabel.com.

HILLARY GRAMM, CSR '05, was promoted to director of resource development at Communities In Schools-Bay Area.

JENNIFER HOCKEMA, HDFS '05, completed a master's in nonprofit management at DePaul University in June 2012 and now works as program manager at Near North Unity Program in Chicago.

AMBER (TULLY) MATTHEWS, HTM '05, is assistant general manager at Courtyard by Marriott in Indianapolis.

RISHI NIGAM, HTM '06, was promoted to vice president at International Speedway Corp. in Daytona Beach, Florida.

MATTHEW GEORGE, HSCI '07, earned a medical degree and is now doing his residency in internal medicine at Henry Ford Hospital in Detroit.

LINDSAY VAUGHN, HTM '07, is assistant director of revenue management at Hilton Atlanta in Georgia.

DEREK BASSETT, CSR '08, is a senior consultant at CVS Caremark in Northbrook, Illinois.

VALERIE (WATTERS) RYAN, CSR '08, is an inventory analyst at Gap Inc. in San Francisco.

GRETCHEN DAUMEN, HK '09, is a certified athletic trainer at AthletiCo in Aurora, Illinois.

2010s

IAN SCHALLER, HSCI '10, is a health physicist at Argonne National Laboratory in Lemont, Illinois.



CHELSEA HAYES, HK '11, was elected to the position of national second vice president of Delta Sigma Theta, the largest black sorority in the world. After gradu-

ating from Purdue, she received a master's degree in corporate communication from Northwestern University. She currently works in human resources at GE Capital in Chicago.

JANELLE WASHBURN, PSY '11, received a master's degree in clinical social work from University of Chicago School of Social Service Administration. She specialized in working with older adults and received the Sonia G. Berz Award for Outstanding Work and Promise in the Field of Aging by faculty nomination.

JELENA (TESOVIC) WRIGHT, PSY '11, is an information systems specialist at Cummins Behavioral Health Systems Inc. in Avon, Indiana.

COURTNEY (ELSTEN) GINDER, PSY '13, is a technical writer at LHP Telematics LLC in Westfield, Indiana.

MELISSA MILLER, HTM '13, is front desk manager at White Lodging Services, Aloft Chicago City Center.

Though their conferred degrees may have come from departments named differently at the time, the alumni listed in Generations are matched with the academic units by the current names.

CSR	CONSUMER SCIENCE
HK	HEALTH AND KINESIOLOGY
HSCI	HEALTH SCIENCES
HE	HOME ECONOMICS
HTM	HOSPITALITY AND TOURISM MANAGEMENT
HDFS	HUMAN DEVELOPMENT AND FAMILY STUDIES
NUR	NURSING
NUTR	NUTRITION SCIENCE
PSY	PSYCHOLOGICAL SCIENCES
SLHS	SPEECH, LANGUAGE, AND HEARING SCIENCES



SEARCH "PURDUE UNIVERSITY COLLEGE OF HEALTH AND HUMAN SCIENCES"

WE ♥ OUR MEMBERS

IF YOU ♥ PURDUE
you will love
MEMBERSHIP
in the
PURDUE ALUMNI ASSOCIATION

PURDUE P ALUMNI

BECOME A MEMBER TODAY!

call **(800) 414-1541** or visit purduealumni.org/member

LIFELINES

PLEASE CONSIDER SUPPORTING OUR 2014-15 FUNDING INITIATIVES.

DEAN'S STRATEGIC INITIATIVES

This new fund provides the dean with unrestricted funding to launch new programs such as the Public Health Initiative and experiential and global learning opportunities.

SCHOLARSHIPS

Gifts of any amount will build the HHS undergraduate scholarship fund and benefit students. Financial support for graduate student education and living stipends provides a competitive advantage among peer institutions.

ENDOWED PROFESSORSHIPS

Endowed professorships play a vital role in attracting and retaining top faculty in the competitive world of higher education. Endowed professorships cover part or all of a faculty member's salary, providing an important source of new funding. They also allow the college to reduce its student-to-faculty ratio (a statistic used for rankings and other institutional evaluations).

RESEARCH

HHS researchers — including faculty, graduate students and undergraduates — investigate Parkinson's disease, cancer, autism, brain trauma, chronic disease prevention and other global challenges. Funding supports equipment and technology, field data collection and other needs.

AWARDS

Monetary awards are given annually by the college to recognize faculty excellence and innovation in research, engagement and undergraduate teaching.

For more information, please call 800-535-7303.

MARK YOUR CALENDAR 2nd Annual Purdue DAY OF GIVING 04.30.15

purduedayofgiving.com

Create Your Legacy


Inspire tomorrow's leaders through a planned gift, just as John Purdue did more than one hundred and forty years ago.

Explore the benefits of a Charitable Gift Annuity.

Receive lifetime income and a current tax deduction while making a meaningful gift to Purdue.

65 years old - 4.7%
75 years old - 5.8%
85 years old - 7.8% Rates as of 7/31/2014

Call us at 800-677-8780
Email us at plangift@prf.org
visit purdue.giftlegacy.com

 'Like' Purdue Planned Giving on Facebook

EA/EOU

PURDUE
UNIVERSITY



ADMINISTRATION

Christine Ladisch, Dean

Tom Berndt, Senior Associate Dean for Academic Affairs and Administration

Liping Cai, Associate Dean for Diversity and International Programs

Dorothy Teegarden, Associate Dean for Research and Graduate Programs

DIRECTORS

Angie Abbott, Program Leader for HHS Extension and Associate Director of Purdue Extension

Denise Buhrmester, Director of Communications

Shane Hawkins-Wilding, Director of Student Services

Mona Holdcraft, Director of Financial Affairs

Richard Mattes, Director of Public Health

Judy Schumaker, Director of Advancement

Anita Tuttle, Director of Information Technology

UNIT HEADS

Chris Agnew, Psychological Sciences

Doran French, Human Development and Family Studies

Timothy Gavin, Health and Kinesiology

Rich Ghiselli, Hospitality and Tourism Management

Jane Kirkpatrick, Nursing

Keith Kluender, Speech, Language, and Hearing Sciences

Thomas Templin, Consumer Science (Interim)

Connie Weaver, Nutrition Science

Wei Zheng, Health Sciences

Comments? Contact Denise Buhrmester, Director of Communications, dmbuhrmester@purdue.edu, 765-496-3663.

Moving? Send change-of-address notices to Development and Alumni Information Services, Purdue University, 403 W. Wood St., West Lafayette, IN 47907.

PRODUCTION STAFF

Tammy Weaver-Stoike, Managing Editor

Olivia Sarault, Graphic Designer

Charles Jischke, Mark Simons, Steven Yang Photographers

Dan Howell, Copy Editor

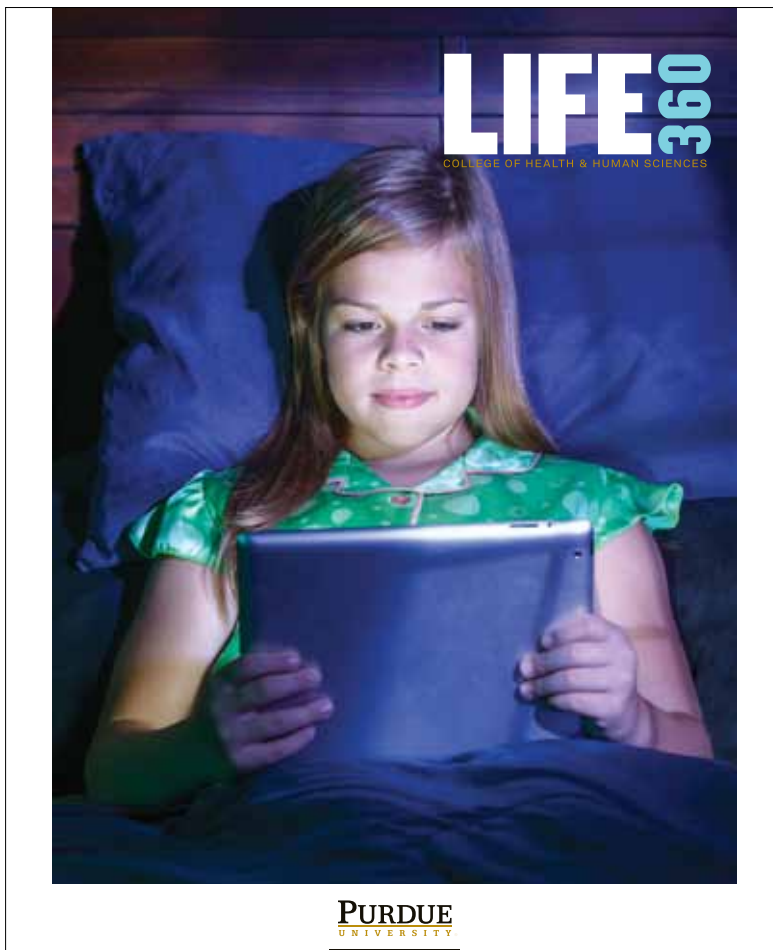
Contributing Writers: Chris Adam, Kim Medaris Delker, Eric Nelson, Della Pacheco, Amy Patterson Neubert, Paige Pope, Amy Raley, Tammy Weaver-Stoike

© 2014 by the Purdue University College of Health and Human Sciences. Please request permission before reprinting any portion of this publication.

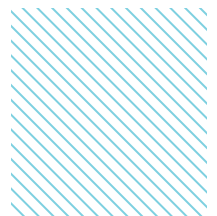
An equal access/equal opportunity university

Produced by Purdue Marketing and Media | HHS.14.4349

 **Mixed Sources**
Product group from well-managed forests, controlled sources and recycled wood or fiber
www.fsc.org Cert no.
© 1996 Forest Stewardship Council



GOODNIGHT, SLEEP TIGHT



It's no surprise that a growing number of children and adolescents in the United States are obese. But what may be surprising is that sleep, or the lack of it, is contributing to this national epidemic. In the fight against childhood obesity, kids need to sleep more, eat better and tune out. See our cover story "Awakening to the Need for Sleep" on page 26.